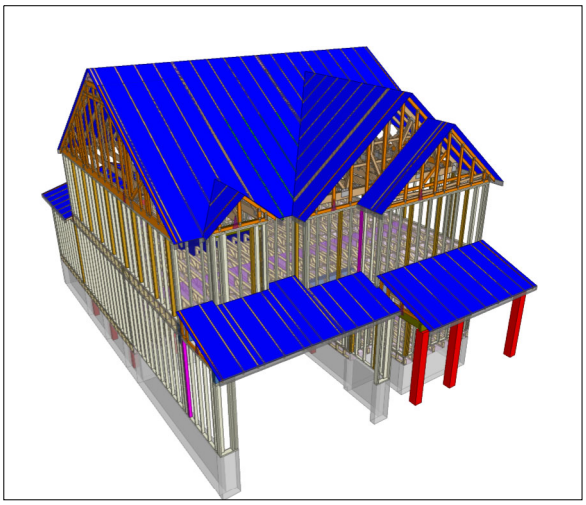
CARTER Lumber

Carter Sanford Component Plant
298 Harvey Faulk Rd
Sanford, NC 27332

Phone #:919-775-1450



Builder: **HH Hunt Homes Raleigh Durham**

Model: **Morgan HB 3FL TRAY NOOK FL GLH**

THE PLACEMENT PLAN NOTES:

1. The Placement Plan is a diagram for truss installation. It is not an engineered drawing and has not been reviewed by an engineer. The Owner/Building Designer is responsible for obtaining an engineer's review if one is required by the local jurisdiction.
2. The responsibilities of the Owner, Contractor, Building Designer, Component Designer and Component Manufacturer shall be as set forth in ANSI/TPI 1. Capitalized terms shall be as defined in ANSI/TP 1 unless otherwise indicated.
3. Each Component is designed as an individual component utilizing information provided by others. The Owner/Building Designer is responsible for reviewing all Component Submittal Packages and individual Component Design Drawings for compliance with the Construction Documents and compatibility with the overall Building design.
4. Contractor will not proceed with component installation until the Owner/Building Designer has reviewed the Component Submittal Package. Questions on the suitability of any Component will be resolved by the Building Designer.
5. The Building Designer and Contractor are responsible for all temporary and permanent bracing.
6. The Placement Plan assumes the building is dimensionally correct, structurally sound, and in a suitable condition to support each Component during installation and thereafter, including but not limited to installation of all bearing points. Proper design and construction of all structural components, including foundations, headers, beams, walls and columns are the responsibility of the Owner, Building Designer and Contractor.
7. Do not cut, drill, or modify any Component without first consulting the Component Manufacturer or Building Designer. Damaged Components shall not be installed unless directed by the Building Designer or approved by the Component Manufacturer.
8. Components must be handled and installed following all applicable safety standards and best practices, including but not limited to BCSI, OSHA, TPI and local codes. Failure to properly handle, brace or otherwise install Component can result in serious injury or death.
9. All uplift connectors shown within these documents are recommendations only. Per ANSI/TPI 1, all uplift connectors are the responsibility of the building designer and or contractor.

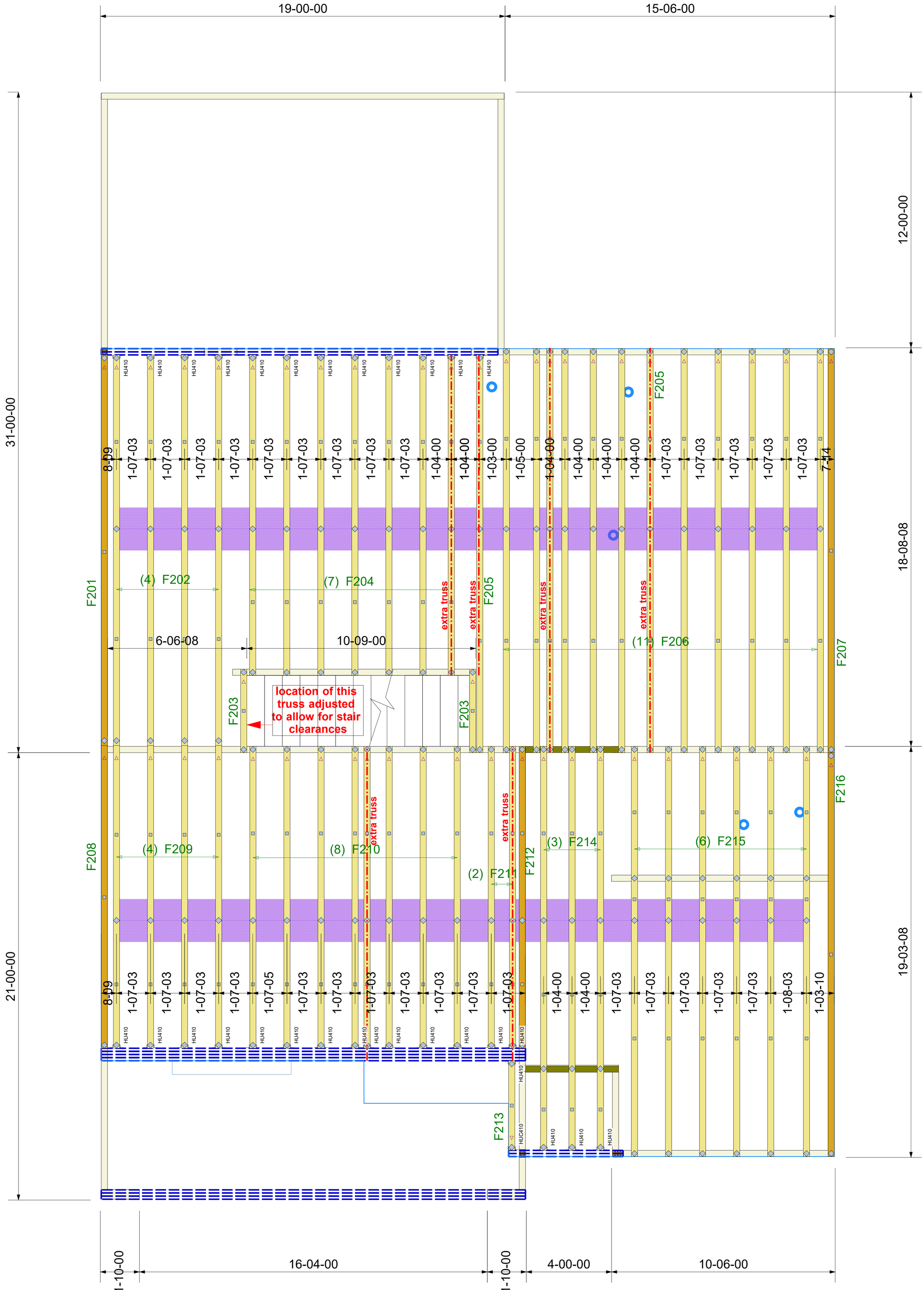
Approved By: _____ **Date:** _____

** FRAMER MUST REFER TO PLANS WHILE SETTING COMPONENTS. ** DAMAGED COMPONENTS SHOULD NOT BE INSTALLED UNLESS TOLD TO BY THE COMPONENT PLANT. ** ALL BEARING POINTS MUST BE INSTALLED PRIOR TO SETTING ANY COMPONENTS.

** TRIANGULAR SYMBOL NEAR END OF TRUSS INDICATES LEFT END OF TRUSS AS SHOWN ON INDIVIDUAL TRUSS DRAWINGS.

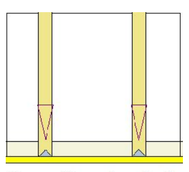
** PLUMBING DROPS NOTED ARE IN THE APPROXIMATE LOCATIONS PER PLAN. BUILDER TO VERIFY LOCATIONS BEFORE SETTING TRUSSES.

** REFER TO FINAL TRUSS ENGINEERING SHEETS FOR PLY TO PLY CONNECTIONS.

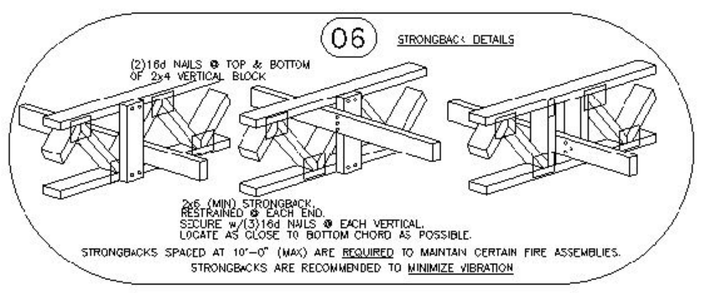


Products					
PlotID	Length	Product	Plies	Net Qty	Fab Type
FB1-2	20-00-00	2.0 RigidLam DF LVL 1-3/4 x 14	2	2	FF
FB4-3	20-00-00	2.1 RigidLam SP LVL 1-3/4 x 14	3	3	FF
FB2-2	6-00-00	2.1 RigidLam SP LVL 1-3/4 x 14	2	2	FF
FB3-4	20-00-00	2.1 RigidLam SP LVL 1-3/4 x 24	4	4	FF

Truss Connector Total List		
Manuf	Product	Qty
Simpson	HU410	30
Simpson	HUC410	1



Truss Drawing Left End Indicator



** GIRDERS MUST BE FULLY CONNECTED TOGETHER PRIOR TO ADDING ANY LOADS. ** DIMENSIONS ARE READ AS: FOOT-INCH-SIXTEENTH. ** TRUSS TO TRUSS CONNECTIONS ARE TOE-NAILED, UNLESS NOTED OTHERWISE.

General Notes:

** CUTTING OR DRILLING OF COMPONENTS SHOULD NOT BE DONE WITHOUT CONTACTING COMPONENT SUPPLIER FIRST. CUSTOMER TAKES FULL RESPONSIBILITY FOR COMPONENTS IF CUT BEFORE AUTHORIZATION.

** ALL POINT LOADS FROM ABOVE MUST BE TRANSFERRED TO BEARING FROM UNDER SIDE OF SHEATHING.

Scale: NTS
Date: 5/27/2025
Designer: Geoff Weston
Project Number: 25050180-A
Sheet Number: 1/1

HH Hunt Homes Raleigh Durham

53 Magnolia Acres-2nd Floor-Morgan HB
3FL TRAY NOOK FL GLH

FLOOR PLACEMENT PLAN

CARTER Lumber

THIS IS A TRUSS PLACEMENT DIAGRAM ONLY. These trusses are designed as individual components to be incorporated into the building design at the specification of the building designer. See Individual design sheets for each truss design identified on the placement drawing. The building designer is responsible for temporary and permanent bracing of the roof and floor systems and for the overall structure. The disign of the tuss support structure including headers, beams, walls, and columns is the responsibility of the building designer. For general guidance regarding the bracing, consult "Bracing of Wood Truss" available from the Truss Plate Institute, 583 D'Onifrio Drive: Madison, WI 53179

Revisions	
00/00/00	Name
00/00/00	Name
00/00/00	Name
00/00/00	Name
00/00/00	Name

ENGINEERING BY
TRENCO
A MiTek Affiliate

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: 25050180-A
53 Magnolia Acres-2nd Floor-Morgan HB 3FL TRAY NOOK FL GLH

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: I73770978 thru I73770993

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

North Carolina COA: C-0844

May 28,2025

Galinski, John

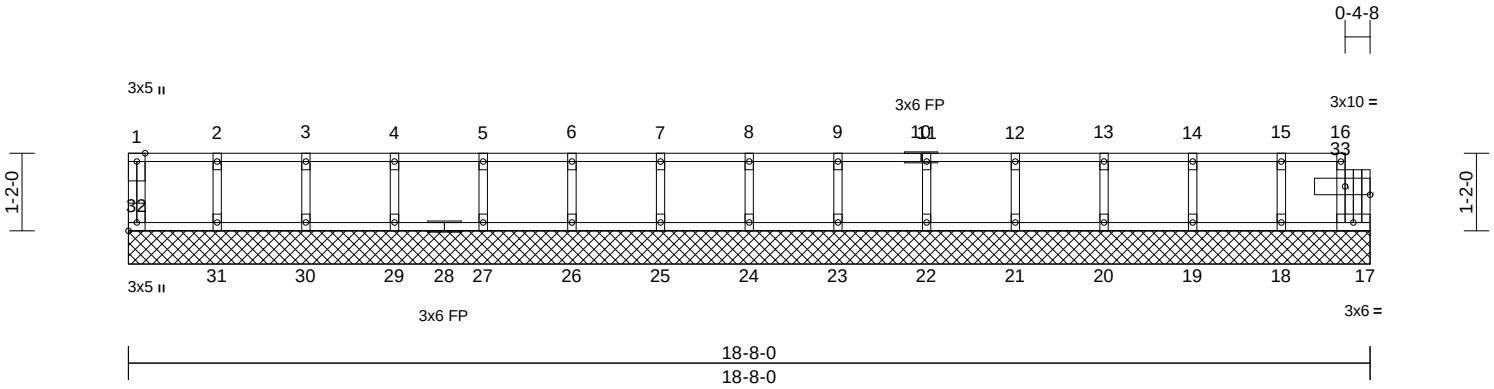
IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which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

Job	Truss	Truss Type	Qty	Ply	53 Magnolia Acres-2nd Floor-Morgan HB 3FL TRAY
25050180-A	F201	Floor Supported Gable	1	1	I73770978 Job Reference (optional)

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

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue May 27 14:15:02 ID:6fTYyePxGgXusDtLA6o0xGzCHdz-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:34.6

Plate Offsets (X, Y): [32:Edge,0-1-8], [33:0-4-8,0-1-8]

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	0.06	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.01	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.02	Horiz(TL)	0.00	17	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-MR							Weight: 80 lb	FT = 20%F, 11%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) 17=18-8-0, 18=18-8-0, 19=18-8-0, 20=18-8-0, 21=18-8-0, 22=18-8-0, 23=18-8-0, 24=18-8-0, 25=18-8-0, 26=18-8-0, 27=18-8-0, 29=18-8-0, 30=18-8-0, 31=18-8-0, 32=18-8-0
Max Grav 17=47 (LC 1), 18=108 (LC 1), 19=120 (LC 1), 20=117 (LC 1), 21=117 (LC 1), 22=117 (LC 1), 23=117 (LC 1), 24=117 (LC 1), 25=117 (LC 1), 26=117 (LC 1), 27=117 (LC 1), 29=117 (LC 1), 30=118 (LC 1), 31=113 (LC 1), 32=51 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 16-17=-46/0, 1-32=-46/0, 1-2=-9/0, 2-3=-9/0, 3-4=-9/0, 4-5=-9/0, 5-6=-9/0, 6-7=-9/0, 7-8=-9/0, 8-9=-9/0, 9-11=-9/0, 11-12=-9/0, 12-13=-9/0, 13-14=-9/0, 14-15=-9/0, 15-16=-9/0
BOT CHORD 31-32=0/9, 30-31=0/9, 29-30=0/9, 27-29=0/9, 26-27=0/9, 25-26=0/9, 24-25=0/9, 23-24=0/9, 22-23=0/9, 21-22=0/9, 20-21=0/9, 19-20=0/9, 18-19=0/9, 17-18=0/9
WEBS 15-18=-96/0, 14-19=-109/0, 13-20=-106/0, 12-21=-107/0, 11-22=-107/0, 9-23=-107/0, 8-24=-107/0, 7-25=-107/0, 6-26=-107/0, 5-27=-107/0, 4-29=-106/0, 3-30=-107/0, 2-31=-104/0

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) 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.
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

1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 17-32=-8, 1-16=-80
Concentrated Loads (lb)
Vert: 16=-18

May 28,2025

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

Job	Truss	Truss Type	Qty	Ply	53 Magnolia Acres-2nd Floor-Morgan HB 3FL TRAY
25050180-A	F202	Floor	4	1	I73770979 Job Reference (optional)

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

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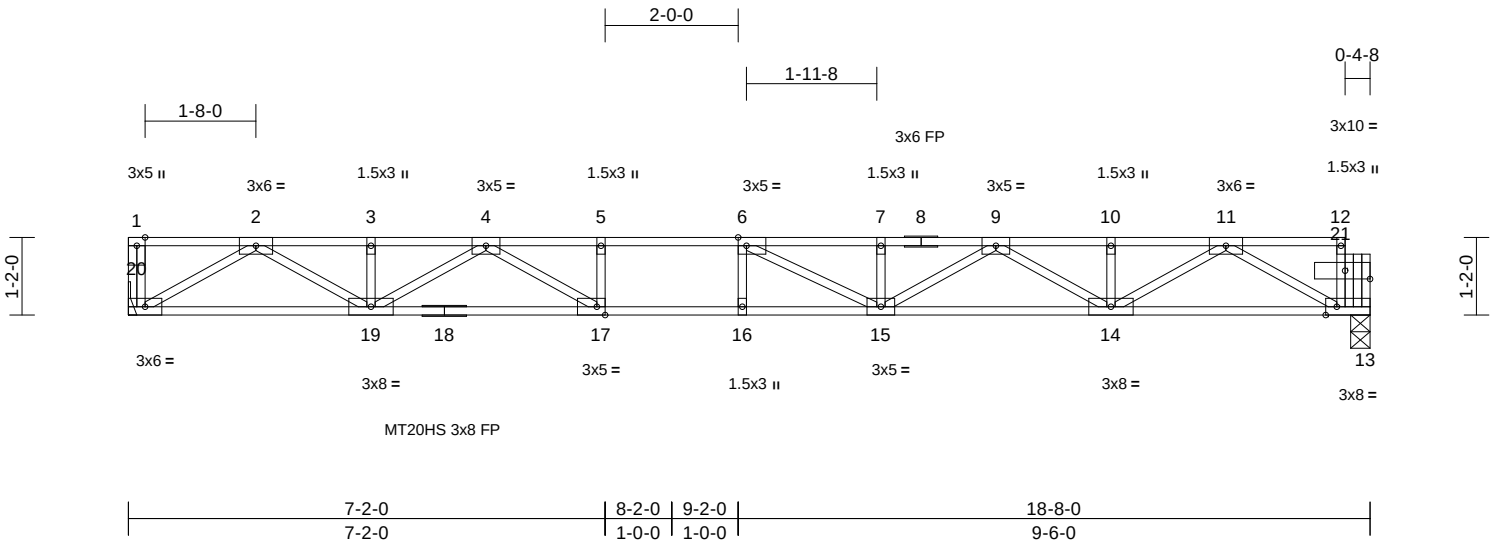

Scale = 1:34.6

Plate Offsets (X, Y): [6:0-1-8,Edge], [13:0-2-0,Edge], [17:0-1-8,Edge], [21:0-4-8,0-1-8]

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	0.79	Vert(LL)	-0.32	15-16	>676	480	MT20HS	187/143
TCDL	10.0	Lumber DOL	1.00	BC	0.78	Vert(CT)	-0.45	15-16	>493	360	MT20	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.53	Horz(CT)	0.05	13	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-MSH							Weight: 95 lb	FT = 20%F, 11%E

LUMBER
TOP CHORD 2x4 SP No.2(flat)
BOT CHORD 2x4 SP No.2(flat) *Except* 13-18:2x4 SP 2400F 2.0E(flat)
WEBS 2x4 SP No.3(flat)
OTHERS 2x4 SP No.3(flat)

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

REACTIONS (size) 13=0-3-8, 20= Mechanical
Max Grav 13=1345 (LC 1), 20=810 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 12-13=-659/0, 1-20=-60/0, 1-2=0/0, 2-3=-2223/0, 3-4=-2223/0, 4-5=-3484/0, 5-6=-3484/0, 6-7=-3448/0, 7-9=-3448/0, 9-10=-2345/0, 10-11=-2345/0, 11-12=-117/0
BOT CHORD 19-20=0/1263, 17-19=0/2926, 16-17=0/3484, 15-16=0/3484, 14-15=0/3003, 13-14=0/1422
WEBS 6-16=-157/60, 5-17=-265/0, 2-20=-1461/0, 2-19=0/1120, 3-19=-144/0, 4-19=-821/0, 4-17=0/818, 11-13=-1492/0, 11-14=0/1077, 10-14=-136/0, 9-14=-769/0, 9-15=0/519, 7-15=-222/4, 6-15=-468/277

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) All plates are MT20 plates unless otherwise indicated.
3) Refer to girder(s) for truss to truss connections.
4) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
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
1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 13-20=-8, 1-12=-80
Concentrated Loads (lb)
Vert: 12=-561

May 28,2025

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

Job	Truss	Truss Type	Qty	Ply	53 Magnolia Acres-2nd Floor-Morgan HB 3FL TRAY
25050180-A	F203	Floor	2	1	I73770980 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue May 27 14:15:03 Page: 1
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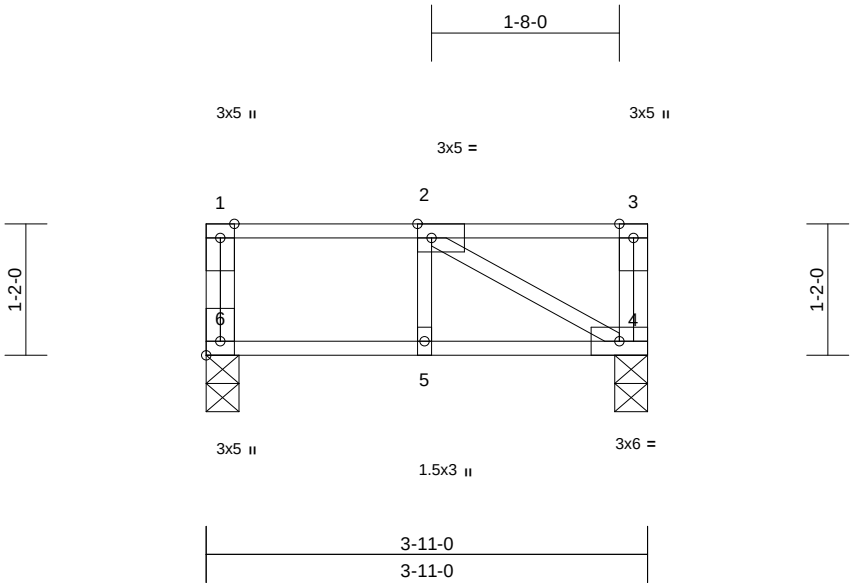

Scale = 1:20.4

Plate Offsets (X, Y): [2:0-1-8,Edge], [6:Edge,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	0.41	Vert(LL)	-0.09	5	>500	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.45	Vert(CT)	-0.12	5	>363	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.00	4	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-MSH							Weight: 21 lb	FT = 20%F, 11%E

LUMBER
TOP CHORD 2x4 SP No.2(flat)
BOT CHORD 2x4 SP No.1(flat)
WEBS 2x4 SP No.3(flat)

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

REACTIONS (size) 4=0-3-8, 6=0-3-8
Max Grav 4=161 (LC 1), 6=161 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-6=-101/0, 3-4=-103/0, 1-2=0/0, 2-3=0/0
BOT CHORD 5-6=0/0, 4-5=0/0
WEBS 2-4=0/0, 2-5=-89/0

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
3) 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

May 28,2025

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

Job	Truss	Truss Type	Qty	Ply	53 Magnolia Acres-2nd Floor-Morgan HB 3FL TRAY
25050180-A	F204	Floor	7	1	I73770981 Job Reference (optional)

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

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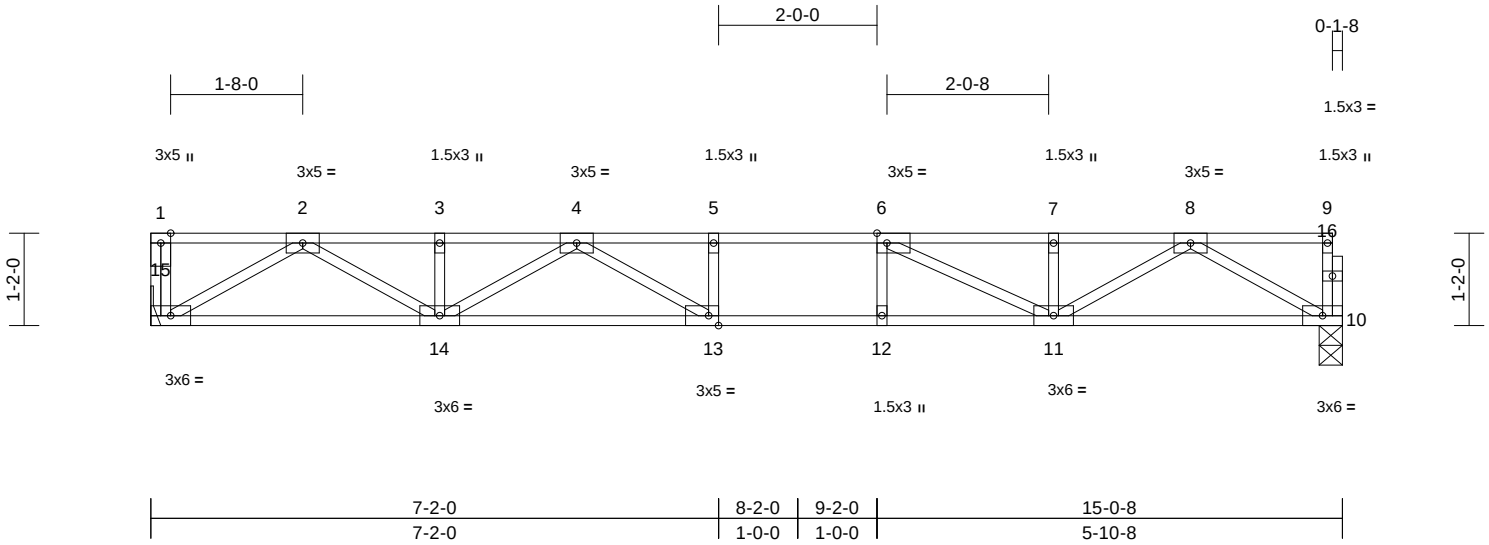

Scale = 1:29.1

Plate Offsets (X, Y): [6:0-1-8,Edge], [13:0-1-8,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	0.59	Vert(LL)	-0.20	13-14	>904	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.86	Vert(CT)	-0.26	13-14	>674	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.39	Horz(CT)	0.04	10	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-MSH							Weight: 75 lb	FT = 20%F, 11%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) 10=0-3-8, 15= Mechanical
Max Grav 10=645 (LC 1), 15=650 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-15=-58/0, 9-10=-58/0, 1-2=0/0, 2-3=-1696/0, 3-4=-1696/0, 4-5=-2263/0, 5-6=-2263/0, 6-7=-1685/0, 7-8=-1685/0, 8-9=-3/0
BOT CHORD 14-15=0/999, 13-14=0/2118, 12-13=0/2263, 11-12=0/2263, 10-11=0/992
WEBS 5-13=-154/0, 6-12=-29/105, 2-15=-1156/0, 2-14=0/813, 3-14=-124/0, 4-14=-493/0, 4-13=-51/406, 8-10=-1144/0, 8-11=0/809, 7-11=-175/39, 6-11=-762/0

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) Refer to girder(s) for truss to truss connections.
3) 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.
4) 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.
5) CAUTION, Do not erect truss backwards.

LOAD CASE(S) Standard

May 28,2025

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

Job	Truss	Truss Type	Qty	Ply	53 Magnolia Acres-2nd Floor-Morgan HB 3FL TRAY I73770982
25050180-A	F205	Floor	2	1	Job Reference (optional)

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

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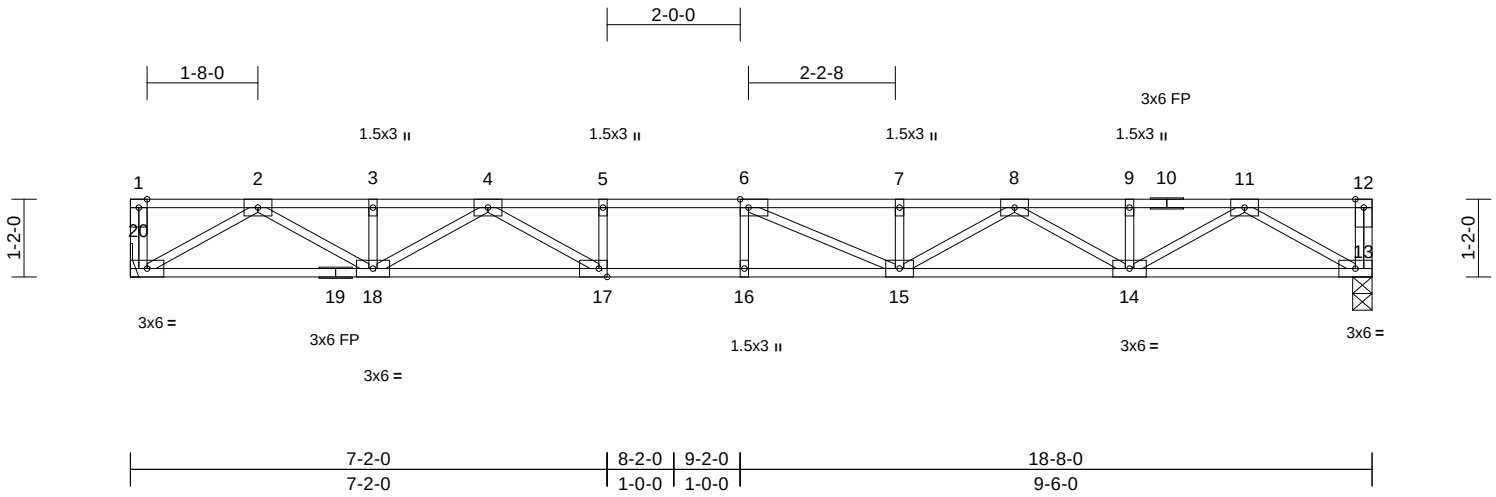

Scale = 1:34.6

Plate Offsets (X, Y): [6:0-1-8,Edge], [17:0-1-8,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	0.76	Vert(LL)	-0.30	15-16	>738	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.84	Vert(CT)	-0.41	15-16	>538	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.44	Horz(CT)	0.05	13	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-MSH							Weight: 94 lb	FT = 20%F, 11%E

LUMBER
TOP CHORD 2x4 SP No.2(flat)
BOT CHORD 2x4 SP No.2(flat) *Except* 19-13:2x4 SP No.1(flat)
WEBS 2x4 SP No.3(flat)

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-10-6 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 13=0-3-8, 20= Mechanical
Max Grav 13=675 (LC 1), 20=675 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-20=-50/0, 12-13=-49/0, 1-2=0/0, 2-3=-1853/0, 3-4=-1853/0, 4-5=-2908/0, 5-6=-2908/0, 6-7=-2845/0, 7-8=-2845/0, 8-9=-1857/0, 9-11=-1857/0, 11-12=0/0
BOT CHORD 18-20=0/1053, 17-18=0/2436, 16-17=0/2908, 15-16=0/2908, 14-15=0/2433, 13-14=0/1057
WEBS 5-17=-236/0, 6-16=-110/45, 2-20=-1218/0, 2-18=0/934, 3-18=-122/0, 4-18=-681/0, 4-17=0/694, 11-13=-1223/0, 11-14=0/934, 9-14=-116/0, 8-14=-673/0, 8-15=0/481, 7-15=-202/0, 6-15=-419/205

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) All plates are 3x5 MT20 unless otherwise indicated.
3) Refer to girder(s) for truss to truss connections.
4) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
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

May 28,2025

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

Job	Truss	Truss Type	Qty	Ply	53 Magnolia Acres-2nd Floor-Morgan HB 3FL TRAY
25050180-A	F206	Floor	11	1	I73770983 Job Reference (optional)

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

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue May 27 14:15:03 Page: 1
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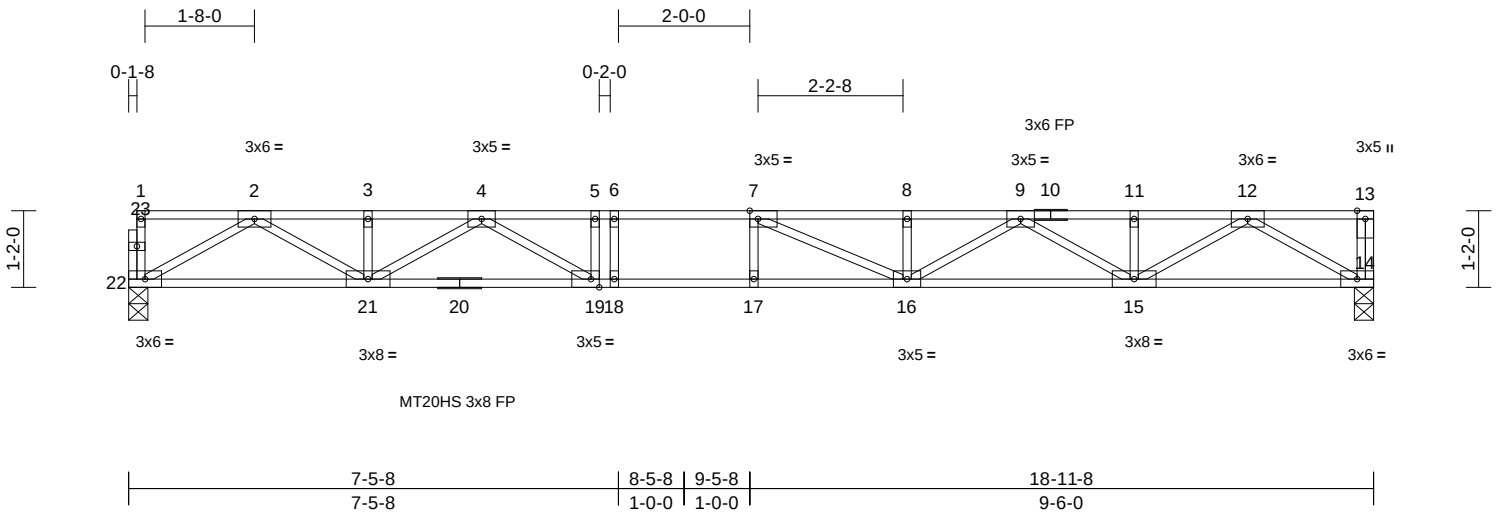

Scale = 1:35.1

Plate Offsets (X, Y): [7:0-1-8,Edge], [19:0-1-8,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	0.75	Vert(LL)	-0.34	16-17	>656	480	MT20HS	187/143
TCDL	10.0	Lumber DOL	1.00	BC	0.80	Vert(CT)	-0.47	16-17	>478	360	MT20	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.55	Horz(CT)	0.06	14	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-MSH							Weight: 96 lb	FT = 20%F, 11%E

LUMBER
TOP CHORD 2x4 SP No.1(flat) *Except* 10-13:2x4 SP No.2(flat)
BOT CHORD 2x4 SP No.2(flat) *Except* 20-14:2x4 SP 2400F 2.0E(flat)
WEBS 2x4 SP No.3(flat)
OTHERS 2x4 SP No.3(flat)

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-11-7 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 14=0-3-8, 22=0-3-8
Max Grav 14=823 (LC 1), 22=818 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-22=-58/0, 13-14=-58/0, 1-2=-3/0, 2-3=-2267/0, 3-4=-2267/0, 4-5=-3592/0, 5-6=-3592/0, 6-7=-3592/0, 7-8=-3498/0, 8-9=-3498/0, 9-11=-2268/0, 11-12=-2268/0, 12-13=0/0
BOT CHORD 21-22=0/1282, 19-21=0/2985, 18-19=0/3592, 17-18=0/3592, 16-17=0/3592, 15-16=0/2984, 14-15=0/1290
WEBS 6-18=0/47, 7-17=-153/0, 2-22=-1479/0, 2-21=0/1150, 3-21=-152/0, 4-21=-839/0, 4-19=0/889, 5-19=-340/0, 12-14=-1492/0, 12-15=0/1142, 11-15=-137/0, 9-15=-836/0, 9-16=0/600, 8-16=-243/0, 7-16=-103/263

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) All plates are MT20 plates unless otherwise indicated.
3) All plates are 1.5x3 MT20 unless otherwise indicated.
4) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
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

May 28,2025

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

Job	Truss	Truss Type	Qty	Ply	53 Magnolia Acres-2nd Floor-Morgan HB 3FL TRAY
25050180-A	F207	Floor Supported Gable	1	1	I73770984 Job Reference (optional)

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

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue May 27 14:15:03 Page: 1
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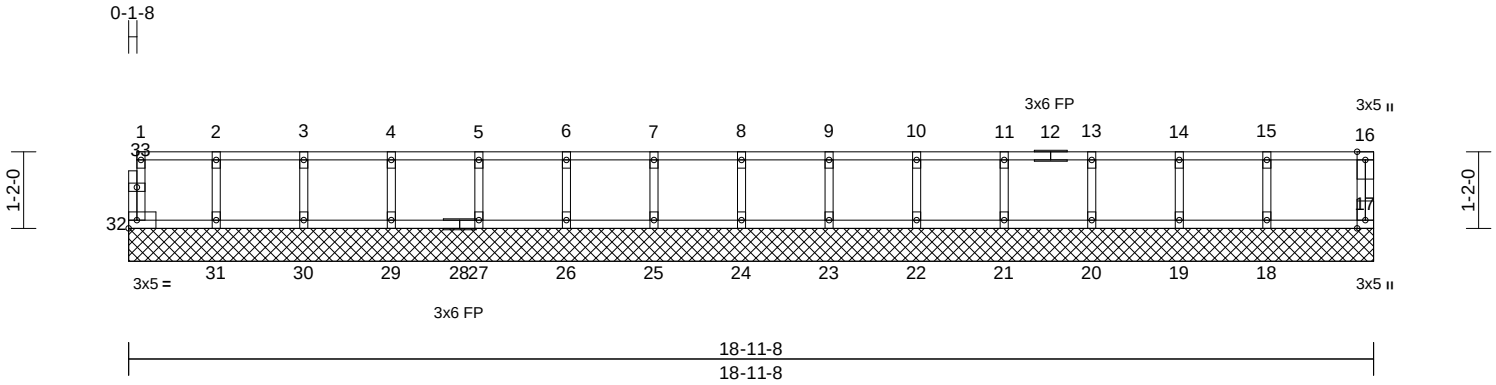

Scale = 1:35.1

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	0.07	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.02	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	0.00	17	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-MR							Weight: 79 lb	FT = 20%F, 11%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) 17=18-11-8, 18=18-11-8, 19=18-11-8, 20=18-11-8, 21=18-11-8, 22=18-11-8, 23=18-11-8, 24=18-11-8, 25=18-11-8, 26=18-11-8, 27=18-11-8, 29=18-11-8, 30=18-11-8, 31=18-11-8, 32=18-11-8
Max Grav 17=63 (LC 1), 18=131 (LC 1), 19=113 (LC 1), 20=118 (LC 1), 21=117 (LC 1), 22=117 (LC 1), 23=117 (LC 1), 24=117 (LC 1), 25=117 (LC 1), 26=117 (LC 1), 27=117 (LC 1), 29=117 (LC 1), 30=119 (LC 1), 31=110 (LC 1), 32=48 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-32=-43/0, 16-17=-58/0, 1-2=-11/0, 2-3=-11/0, 3-4=-11/0, 4-5=-11/0, 5-6=-11/0, 6-7=-11/0, 7-8=-11/0, 8-9=-11/0, 9-10=-11/0, 10-11=-11/0, 11-13=-11/0, 13-14=-11/0, 14-15=-11/0, 15-16=-11/0
BOT CHORD 31-32=0/11, 30-31=0/11, 29-30=0/11, 27-29=0/11, 26-27=0/11, 25-26=0/11, 24-25=0/11, 23-24=0/11, 22-23=0/11, 21-22=0/11, 20-21=0/11, 19-20=0/11, 18-19=0/11, 17-18=0/11
WEBS 2-31=-102/0, 3-30=-108/0, 4-29=-106/0, 5-27=-107/0, 6-26=-107/0, 7-25=-107/0, 8-24=-107/0, 9-23=-107/0, 10-22=-107/0, 11-21=-106/0, 13-20=-107/0, 14-19=-103/0, 15-18=-118/0

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) 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.
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

May 28,2025

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

Job	Truss	Truss Type	Qty	Ply	53 Magnolia Acres-2nd Floor-Morgan HB 3FL TRAY
25050180-A	F208	Floor Supported Gable	1	1	I73770985 Job Reference (optional)

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

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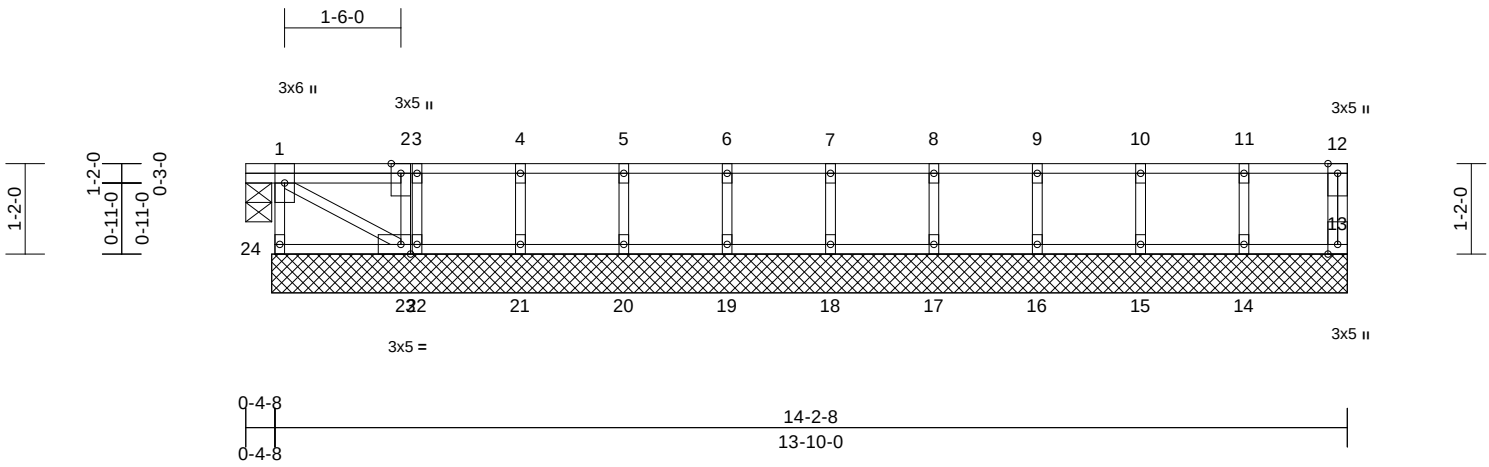

Scale = 1:29.7

Plate Offsets (X, Y): [23:0-1-8,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	0.07	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.01	Vert(CT)	0.00	23-24	>999	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.03	Horz(CT)	n/a	-	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-MSH							Weight: 65 lb	FT = 20%F, 11%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 10-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=0-4-0, 13=13-10-8, 14=13-10-8, 15=13-10-8, 16=13-10-8, 17=13-10-8, 18=13-10-8, 19=13-10-8, 20=13-10-8, 21=13-10-8, 22=13-10-8, 23=13-10-8, 24=13-10-8
Max Grav 1=57 (LC 1), 13=41 (LC 1), 14=125 (LC 1), 15=116 (LC 1), 16=118 (LC 1), 17=117 (LC 1), 18=117 (LC 1), 19=117 (LC 1), 20=117 (LC 1), 21=118 (LC 1), 22=40 (LC 1), 23=112 (LC 1), 24=5 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 12-13=-37/0, 1-24=0/0, 1-2=-2/3, 2-3=0/0, 3-4=0/0, 4-5=0/0, 5-6=0/0, 6-7=0/0, 7-8=0/0, 8-9=0/0, 9-10=0/0, 10-11=0/0, 11-12=0/0
BOT CHORD 23-24=0/0, 22-23=0/0, 21-22=0/0, 20-21=0/0, 19-20=0/0, 18-19=0/0, 17-18=0/0, 16-17=0/0, 15-16=0/0, 14-15=0/0, 13-14=0/0
WEBS 2-23=-93/0, 1-23=0/0, 11-14=-114/0, 10-15=-105/0, 9-16=-107/0, 8-17=-107/0, 7-18=-107/0, 6-19=-107/0, 5-20=-106/0, 4-21=-107/0, 3-22=-44/0

NOTES
1) All plates are 1.5x3 MT20 unless otherwise indicated.
2) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
3) Gable studs spaced at 1-4-0 oc.
4) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
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) Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.
7) CAUTION, Do not erect truss backwards.

LOAD CASE(S) Standard

May 28,2025

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

Job	Truss	Truss Type	Qty	Ply	53 Magnolia Acres-2nd Floor-Morgan HB 3FL TRAY
25050180-A	F209	Floor	4	1	I73770986 Job Reference (optional)

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

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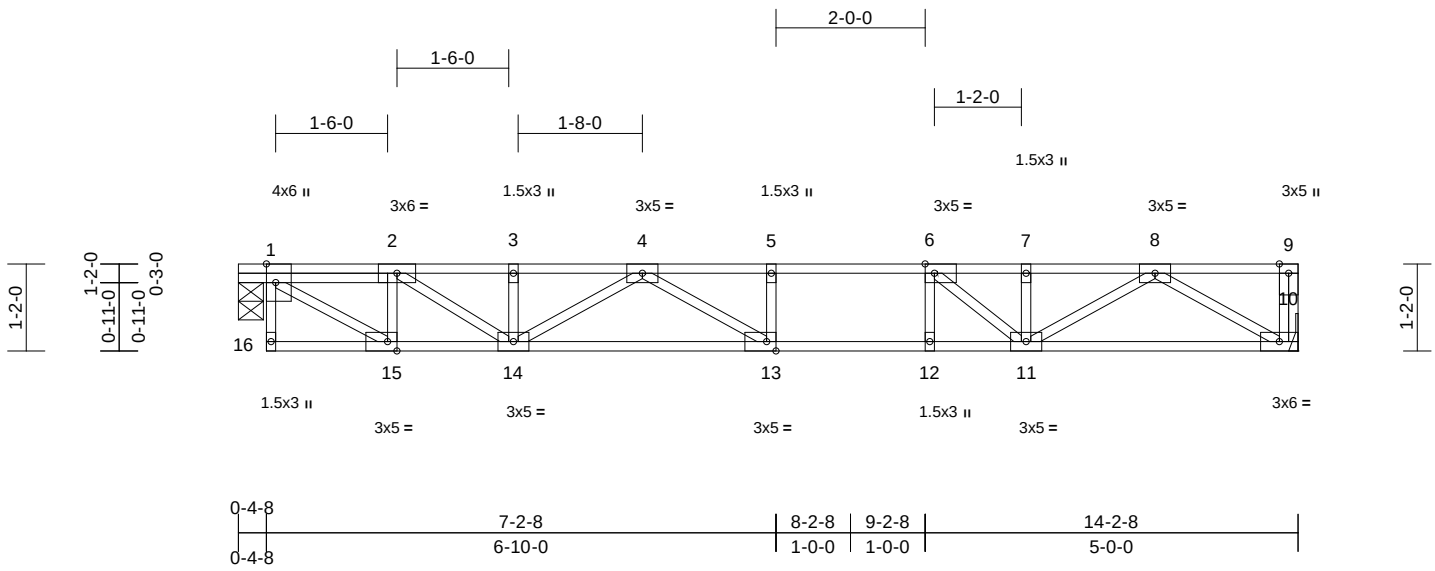

Scale = 1:30.9

Plate Offsets (X, Y): [1:0-3-0,Edge], [6:0-1-8,Edge], [13:0-1-8,Edge], [15:0-1-8,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)	-0.16	13-14	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.88	Vert(CT)	-0.22	13-14	>729	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.47	Horz(CT)	-0.01	10	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-MSH							Weight: 74 lb	FT = 20%F, 11%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) 1=0-4-0, 10= Mechanical
Max Grav 1=600 (LC 1), 10=600 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 9-10=-58/0, 1-16=0/10, 1-2=-839/0, 2-3=-1450/0, 3-4=-1450/0, 4-5=-1905/0, 5-6=-1905/0, 6-7=-1498/0, 7-8=-1498/0, 8-9=0/0
BOT CHORD 15-16=0/0, 14-15=0/837, 13-14=0/1826, 12-13=0/1905, 11-12=0/1905, 10-11=0/911
WEBS 2-15=-504/0, 1-15=0/977, 6-12=-17/135, 5-13=-127/0, 8-10=-1053/0, 8-11=0/685, 7-11=-111/95, 6-11=-648/0, 4-13=-73/322, 4-14=-439/0, 3-14=-122/0, 2-14=0/728

LOAD CASE(S) Standard

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) All plates are 3x5 MT20 unless otherwise indicated.
3) Refer to girder(s) for truss to truss connections.
4) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
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) Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.
7) CAUTION, Do not erect truss backwards.

May 28,2025

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

Job	Truss	Truss Type	Qty	Ply	53 Magnolia Acres-2nd Floor-Morgan HB 3FL TRAY
25050180-A	F210	Floor	8	1	I73770987 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue May 27 14:15:03 Page: 1
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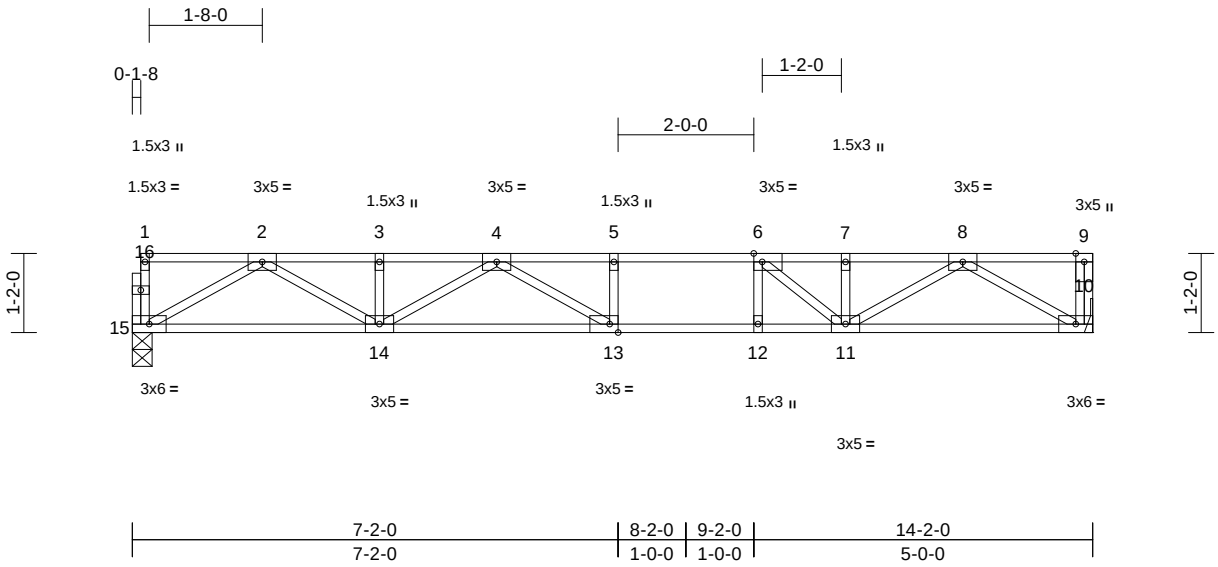

Scale = 1:34

Plate Offsets (X, Y): [6:0-1-8,Edge], [13:0-1-8,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	0.67	Vert(LL)	-0.18	13-14	>917	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.93	Vert(CT)	-0.25	13-14	>674	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.35	Horz(CT)	0.03	10	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-MSH							Weight: 72 lb	FT = 20%F, 11%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, Except:
2-2-0 oc bracing: 12-13.

REACTIONS (size) 10= Mechanical, 15=0-3-8
Max Grav 10=612 (LC 1), 15=607 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 9-10=-58/0, 1-15=-56/0, 1-2=-3/0, 2-3=-1569/0, 3-4=-1569/0, 4-5=-1973/0, 5-6=-1973/0, 6-7=-1535/0, 7-8=-1535/0, 8-9=0/0
BOT CHORD 14-15=0/934, 13-14=0/1925, 12-13=0/1973, 11-12=0/1973, 10-11=0/931
WEBS 6-12=-12/145, 5-13=-123/0, 2-15=-1077/0, 2-14=0/741, 3-14=-121/0, 4-14=-415/0, 4-13=-104/303, 8-10=-1077/0, 8-11=0/706, 7-11=-108/103, 6-11=-684/0

LOAD CASE(S) Standard

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) All plates are 3x5 MT20 unless otherwise indicated.
3) Refer to girder(s) for truss to truss connections.
4) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
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.

May 28,2025

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

Job	Truss	Truss Type	Qty	Ply	53 Magnolia Acres-2nd Floor-Morgan HB 3FL TRAY
25050180-A	F211	Floor	2	1	I73770988 Job Reference (optional)

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

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue May 27 14:15:03 Page: 1
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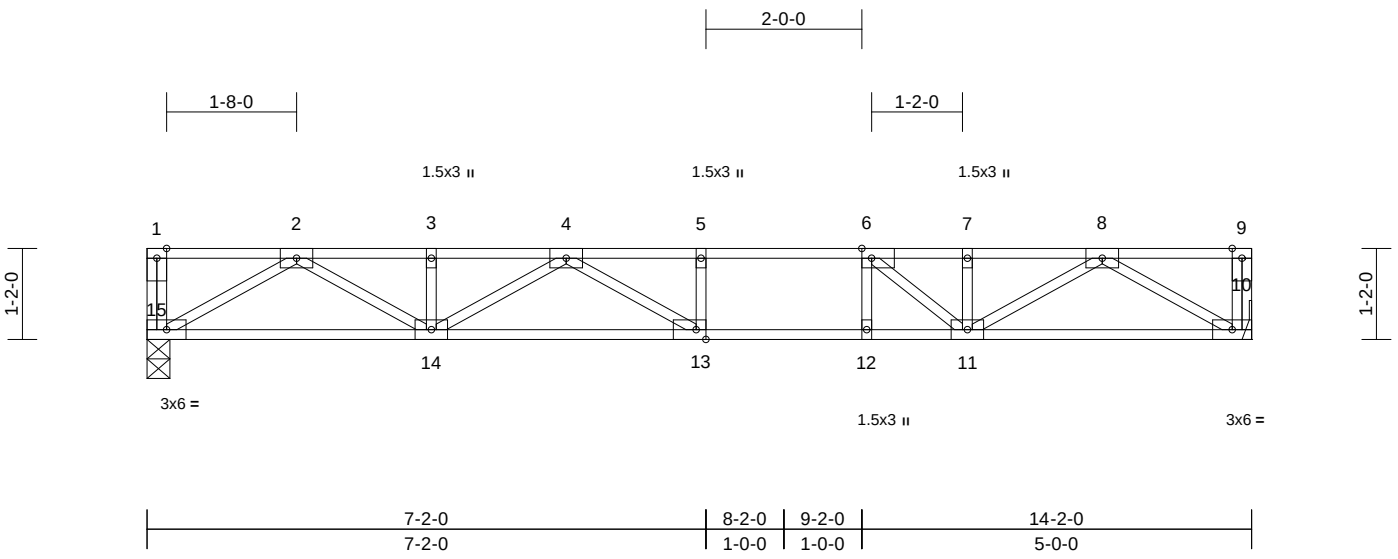


Scale = 1:29.5

Plate Offsets (X, Y): [6:0-1-8,Edge], [13:0-1-8,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	0.67	Vert(LL)	-0.18	13-14	>917	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.93	Vert(CT)	-0.25	13-14	>674	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.35	Horz(CT)	0.03	10	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-MSH							Weight: 72 lb	FT = 20%F, 11%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, Except:
2-2-0 oc bracing: 12-13.

REACTIONS (size) 10= Mechanical, 15=0-3-8
Max Grav 10=612 (LC 1), 15=612 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 9-10=-58/0, 1-15=-58/0, 1-2=0/0, 2-3=-1569/0, 3-4=-1569/0, 4-5=-1973/0, 5-6=-1973/0, 6-7=-1535/0, 7-8=-1535/0, 8-9=0/0
BOT CHORD 14-15=0/936, 13-14=0/1925, 12-13=0/1973, 11-12=0/1973, 10-11=0/931
WEBS 6-12=-12/145, 5-13=-123/0, 2-15=-1082/0, 2-14=0/739, 3-14=-119/0, 4-14=-416/0, 4-13=-104/303, 8-10=-1077/0, 8-11=0/706, 7-11=-108/103, 6-11=-684/0

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) All plates are 3x5 MT20 unless otherwise indicated.
3) Refer to girder(s) for truss to truss connections.
4) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
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

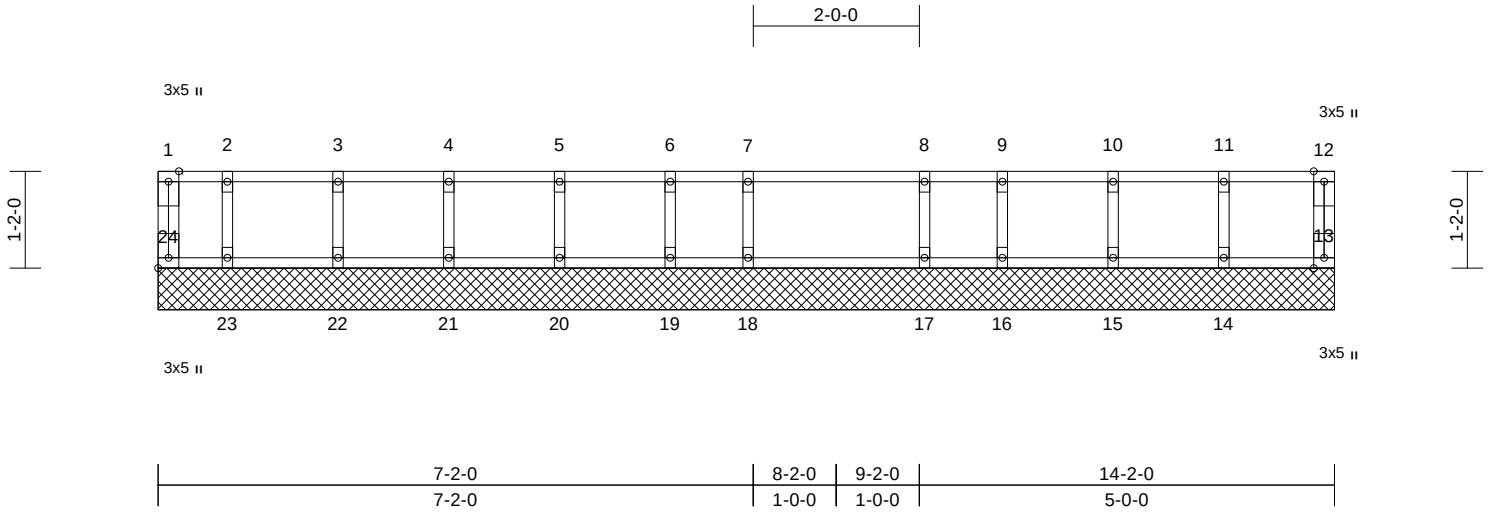
May 28,2025

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

Job	Truss	Truss Type	Qty	Ply	53 Magnolia Acres-2nd Floor-Morgan HB 3FL TRAY
25050180-A	F212	Floor	1	1	I73770989 Job Reference (optional)

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

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue May 27 14:15:03 Page: 1
ID:6fTYyePxGgXusDtLA6o0xGzCHdz-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:27.7

Plate Offsets (X, Y): [24:Edge,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	0.13	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.02	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	0.00	13	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-MR							Weight: 61 lb	FT = 20%F, 11%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) 13=14-2-0, 14=14-2-0, 15=14-2-0, 16=14-2-0, 17=14-2-0, 18=14-2-0, 19=14-2-0, 20=14-2-0, 21=14-2-0, 22=14-2-0, 23=14-2-0, 24=14-2-0
Max Grav 13=47 (LC 1), 14=116 (LC 1), 15=126 (LC 1), 16=70 (LC 1), 17=157 (LC 1), 18=157 (LC 1), 19=70 (LC 1), 20=126 (LC 1), 21=114 (LC 1), 22=123 (LC 1), 23=90 (LC 1), 24=27 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 12-13=-44/0, 1-24=-21/0, 1-2=-5/0, 2-3=-5/0, 3-4=-5/0, 4-5=-5/0, 5-6=-5/0, 6-7=-5/0, 7-8=-5/0, 8-9=-5/0, 9-10=-5/0, 10-11=-5/0, 11-12=-5/0
BOT CHORD 23-24=0/5, 22-23=0/5, 21-22=0/5, 20-21=0/5, 19-20=0/5, 18-19=0/5, 17-18=0/5, 16-17=0/5, 15-16=0/5, 14-15=0/5, 13-14=0/5
WEBS 8-17=-143/0, 7-18=-143/0, 11-14=-104/0, 10-15=-115/0, 9-16=-64/0, 6-19=-64/0, 5-20=-115/0, 4-21=-104/0, 3-22=-111/0, 2-23=-86/0

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) 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.
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.

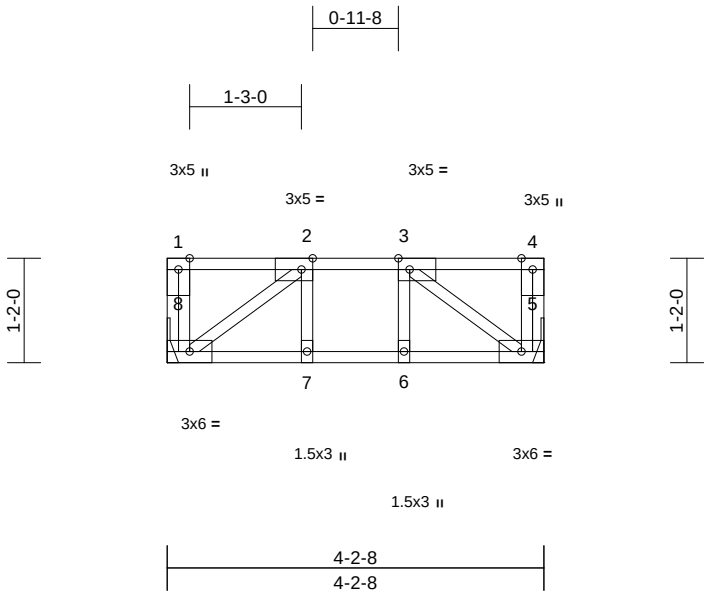
LOAD CASE(S) Standard

May 28,2025

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

Job	Truss	Truss Type	Qty	Ply	53 Magnolia Acres-2nd Floor-Morgan HB 3FL TRAY
25050180-A	F213	Floor	1	1	I73770990 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue May 27 14:15:03 Page: 1
ID:6fTYyePxGgXusDtLA6o0xGzCHdz-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:25.7

Plate Offsets (X, Y): [2:0-1-8,Edge], [3:0-1-8,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	0.10	Vert(LL)	0.00	7-8	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.08	Vert(CT)	0.00	7-8	>999	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	5	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-MSH							Weight: 25 lb	FT = 20%F, 11%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 4-2-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 5= Mechanical, 8= Mechanical
Max Grav 5=174 (LC 1), 8=174 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-8=-52/0, 4-5=-52/0, 1-2=0/0, 2-3=-165/0, 3-4=0/0
BOT CHORD 7-8=0/165, 6-7=0/165, 5-6=0/165
WEBS 3-5=-204/0, 2-8=-204/0, 2-7=-9/29, 3-6=-9/29

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) Refer to girder(s) for truss to truss connections.
3) 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.
4) 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

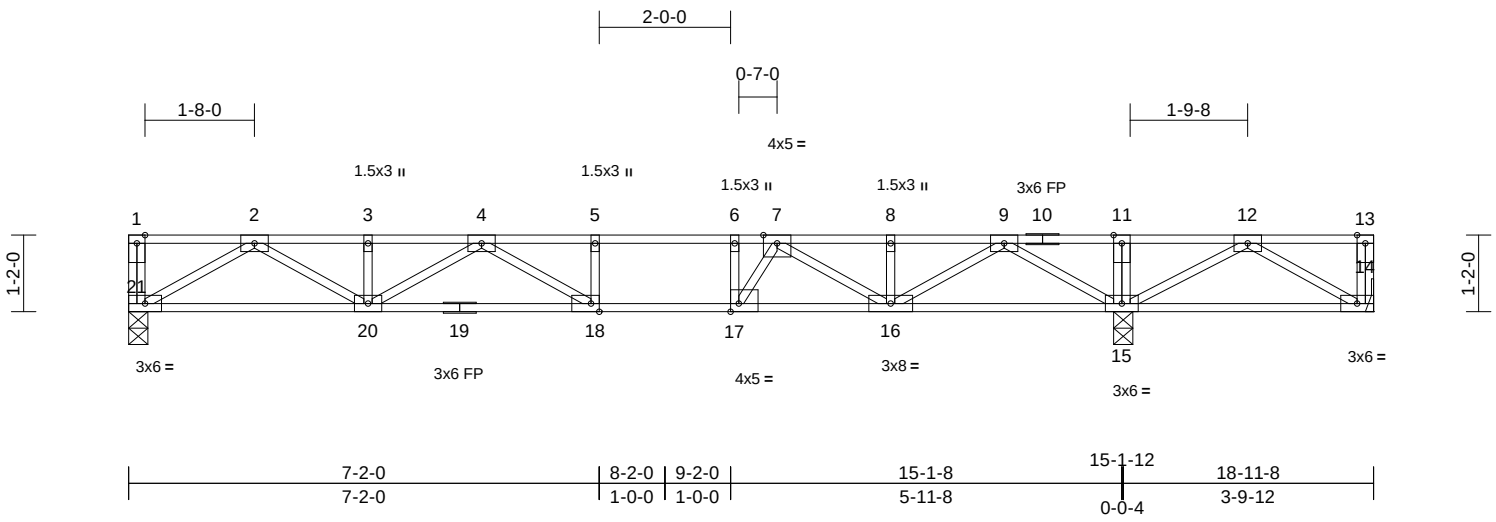
May 28,2025

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

Job	Truss	Truss Type	Qty	Ply	53 Magnolia Acres-2nd Floor-Morgan HB 3FL TRAY
25050180-A	F214	Floor	3	1	I73770991 Job Reference (optional)

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

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue May 27 14:15:03 Page: 1
ID:6fTYyePxGgXusDtLA6o0xGzCHdz-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:35.1

Plate Offsets (X, Y): [17:0-1-8,Edge], [18:0-1-8,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	0.93	Vert(LL)	-0.18	18-20	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.82	Vert(CT)	-0.25	18-20	>723	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.47	Horz(CT)	0.03	15	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-MSH							Weight: 97 lb	FT = 20%F, 11%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 2-2-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 14= Mechanical, 15=0-3-8, 21=0-3-8
Max Uplift 14=-279 (LC 3)
Max Grav 14=70 (LC 4), 15=1231 (LC 1), 21=580 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 13-14=-57/0, 1-21=-58/0, 1-2=0/0, 2-3=-1461/0, 3-4=-1461/0, 4-5=-1729/0, 5-6=-1729/0, 6-7=-1729/0, 7-8=-837/0, 8-9=-837/0, 9-11=0/1114, 11-12=0/1114, 12-13=0/0
BOT CHORD 20-21=0/882, 18-20=0/1765, 17-18=0/1729, 16-17=0/1437, 15-16=-151/60, 14-15=-518/7
WEBS 6-17=-444/0, 5-18=-86/15, 11-15=-161/0, 2-21=-1020/0, 2-20=0/676, 3-20=-114/0, 4-20=-355/0, 4-18=-145/189, 9-15=-1278/0, 9-16=0/987, 8-16=-159/0, 7-16=-702/0, 7-17=0/653, 12-14=-8/599, 12-15=-816/0

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) All plates are 3x5 MT20 unless otherwise indicated.
3) Refer to girder(s) for truss to truss connections.
4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 279 lb uplift at joint 14.
5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
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.

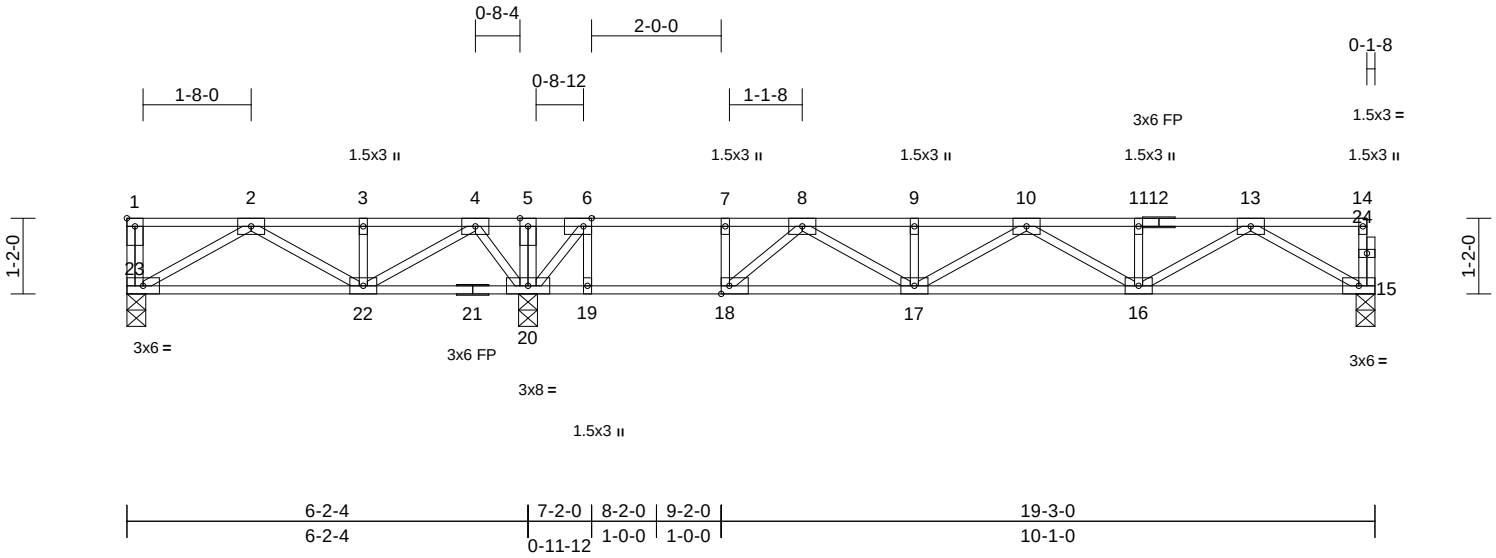
LOAD CASE(S) Standard

May 28,2025

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

Job	Truss	Truss Type	Qty	Ply	53 Magnolia Acres-2nd Floor-Morgan HB 3FL TRAY
25050180-A	F215	Floor	6	1	I73770992 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue May 27 14:15:04 Page: 1
ID:6fTYyePxGgXusDtLA6o0xGzCHdz-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:35.5

Plate Offsets (X, Y): [1:Edge,0-1-8], [6:0-1-8,Edge], [18:0-1-8,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	0.76	Vert(LL)	-0.24	17-18	>653	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.71	Vert(CT)	-0.33	17-18	>472	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.33	Horz(CT)	0.02	15	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-MSH							Weight: 100 lb	FT = 20%F, 11%E

LUMBER
TOP CHORD 2x4 SP 2400F 2.0E(flat) *Except* 14-12:2x4 SP No.2(flat)
BOT CHORD 2x4 SP No.2(flat) *Except* 15-21:2x4 SP 2400F 2.0E(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) 15=0-3-8, 20=0-3-8, 23=0-3-8
Max Grav 15=586 (LC 4), 20=786 (LC 1), 23=304 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 14-15=-56/0, 1-23=-58/0, 1-2=0/0, 2-3=-528/0, 3-4=-528/0, 4-5=-201/32, 5-6=-201/32, 6-7=-1150/0, 7-8=-1150/0, 8-9=-1938/0, 9-10=-1938/0, 10-11=-1482/0, 11-13=-1482/0, 13-14=-3/0
BOT CHORD 22-23=0/404, 20-22=0/376, 19-20=0/1150, 18-19=0/1150, 17-18=0/1714, 16-17=0/1834, 15-16=0/889
WEBS 7-18=0/302, 6-19=0/416, 5-20=0/400, 6-20=-1453/0, 2-23=-467/0, 2-22=0/145, 3-22=-133/0, 4-22=-7/250, 4-20=-376/0, 13-15=-1024/0, 13-16=0/693, 11-16=-130/0, 10-16=-411/0, 10-17=0/120, 9-17=-100/0, 8-17=0/274, 8-18=-767/0

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) All plates are 3x5 MT20 unless otherwise indicated.
3) 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.
4) 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.
5) CAUTION, Do not erect truss backwards.

LOAD CASE(S) Standard

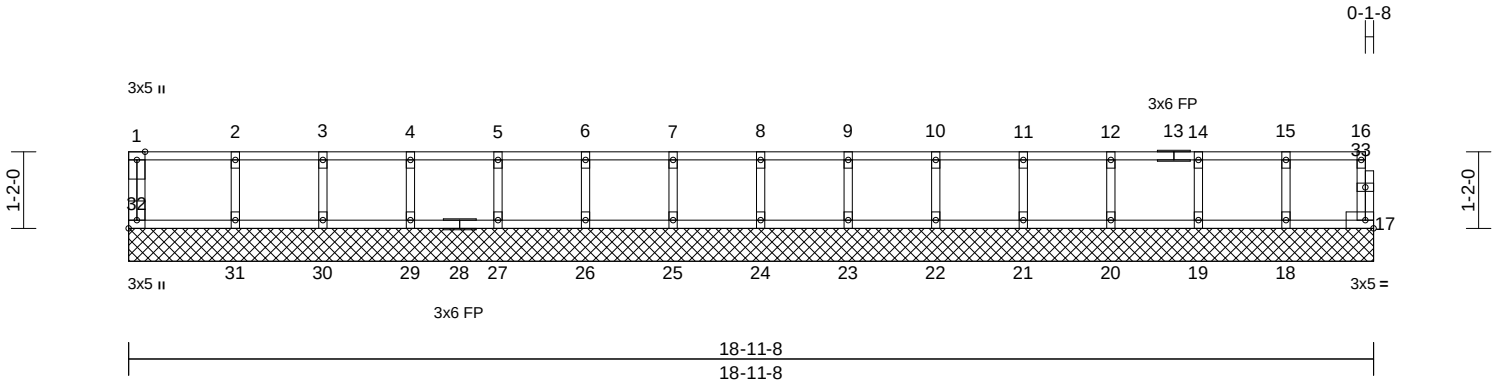
May 28,2025

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

Job	Truss	Truss Type	Qty	Ply	53 Magnolia Acres-2nd Floor-Morgan HB 3FL TRAY
25050180-A	F216	Floor Supported Gable	1	1	I73770993 Job Reference (optional)

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

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue May 27 14:15:04
ID:6fTYyePxGgXusDtLA6o0xGzCHdz-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:35.1

Plate Offsets (X, Y): [32:Edge,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	0.07	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.02	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	0.00	17	n/a	n/a		
BCDL	5.0	Code	IRC2018/TPI2014	Matrix-MR							Weight: 79 lb	FT = 20%F, 11%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) 17=18-11-8, 18=18-11-8, 19=18-11-8, 20=18-11-8, 21=18-11-8, 22=18-11-8, 23=18-11-8, 24=18-11-8, 25=18-11-8, 26=18-11-8, 27=18-11-8, 29=18-11-8, 30=18-11-8, 31=18-11-8, 32=18-11-8

Max Grav 17=48 (LC 1), 18=110 (LC 1), 19=119 (LC 1), 20=117 (LC 1), 21=117 (LC 1), 22=117 (LC 1), 23=117 (LC 1), 24=117 (LC 1), 25=117 (LC 1), 26=117 (LC 1), 27=117 (LC 1), 29=118 (LC 1), 30=113 (LC 1), 31=131 (LC 1), 32=63 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	16-17=-43/0, 1-32=-58/0, 1-2=-11/0, 2-3=-11/0, 3-4=-11/0, 4-5=-11/0, 5-6=-11/0, 6-7=-11/0, 7-8=-11/0, 8-9=-11/0, 9-10=-11/0, 10-11=-11/0, 11-12=-11/0, 12-14=-11/0, 14-15=-11/0, 15-16=-11/0
BOT CHORD	31-32=0/11, 30-31=0/11, 29-30=0/11, 27-29=0/11, 26-27=0/11, 25-26=0/11, 24-25=0/11, 23-24=0/11, 22-23=0/11, 21-22=0/11, 20-21=0/11, 19-20=0/11, 18-19=0/11, 17-18=0/11
WEBS	15-18=-102/0, 14-19=-108/0, 12-20=-106/0, 11-21=-107/0, 10-22=-107/0, 9-23=-107/0, 8-24=-107/0, 7-25=-107/0, 6-26=-107/0, 5-27=-106/0, 4-29=-107/0, 3-30=-103/0, 2-31=-118/0

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) 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.
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.

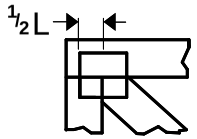
LOAD CASE(S) Standard

May 28,2025

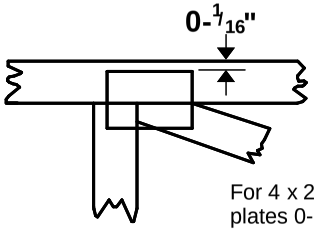
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

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.

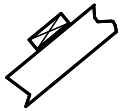
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

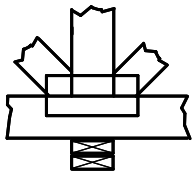
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

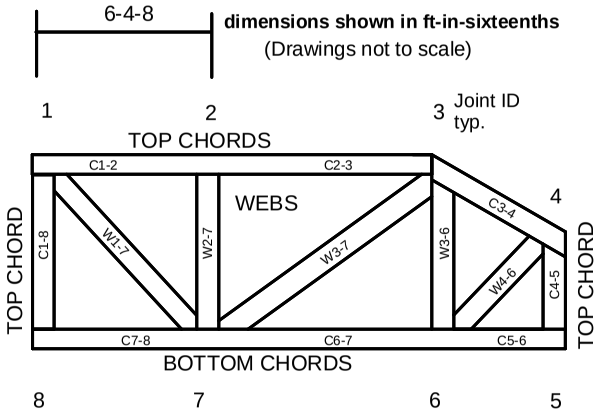


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

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.