ENGINEERING BY
TRENCO
A MiTek Affiliate

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: Hayden BFK
Hayden BFK

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by 84 Components - #2383.

Pages or sheets covered by this seal: I59734309 thru I59734324

My license renewal date for the state of North Carolina is December 31, 2023.

North Carolina COA: C-0844

July 26,2023

Gilbert, Eric

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

Job	Truss	Truss Type	Qty	Ply	Hayden BFK
Hayden BFK	A	Common	4	1	I59734309
					Job Reference (optional)

84 Components (Dunn, NC), Dunn, NC - 28334,

Run: 8.71 S May 19 2023 Print: 8.710 S May 19 2023 MiTek Industries, Inc. Tue Jul 25 10:02:45 Page: 1
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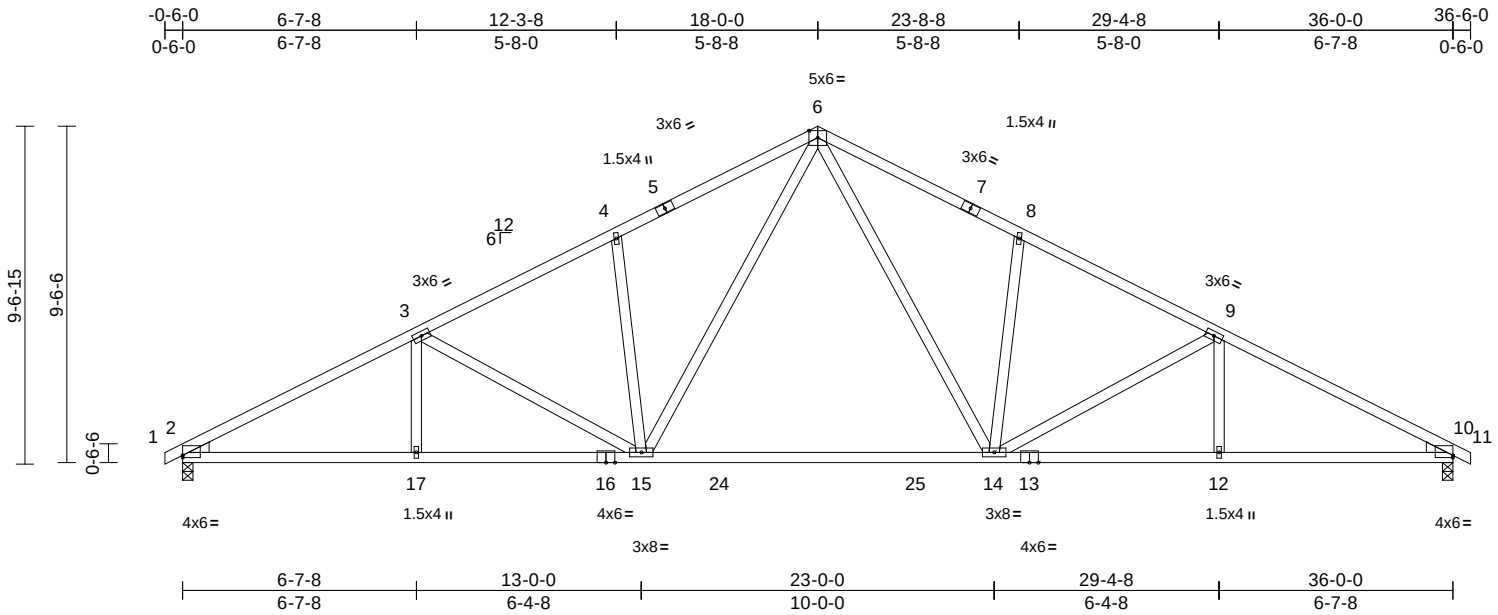

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Plate Offsets (X, Y): [2:Edge,0-0-12], [10:Edge,0-0-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.67	Vert(LL)	-0.38	14-15	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.80	Vert(CT)	-0.69	14-15	>630	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.48	Horz(CT)	0.10	10	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 196 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.1
WEBS 2x4 SP No.2 *Except* 3-17,9-12:2x4 SP No.3
WEDGE Left: 2x4 SP No.3
Right: 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-11-4 oc purlins.
BOT CHORD Rigid ceiling directly applied or 9-1-6 oc bracing.

REACTIONS (size) 2=0-3-8, 10=0-3-8
Max Horiz 2=-154 (LC 17)
Max Uplift 2=-179 (LC 12), 10=-179 (LC 13)
Max Grav 2=1470 (LC 1), 10=1470 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/13, 2-3=-2598/627, 3-4=-2136/575, 4-6=-2101/685, 6-8=-2101/685, 8-9=-2136/575, 9-10=-2598/627, 10-11=0/13
BOT CHORD 2-17=-461/2237, 15-17=-461/2237, 14-15=-145/1403, 12-14=-462/2237, 10-12=-462/2237
WEBS 6-15=-249/862, 6-14=-249/862, 8-14=-349/231, 3-17=0/198, 3-15=-469/197, 4-15=-349/231, 9-12=0/198, 9-14=-469/197

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 179 lb uplift at joint 2 and 179 lb uplift at joint 10.
6) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 26,2023

ENGINEERING BY TRENCO
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818 Soundside Road
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Job	Truss	Truss Type	Qty	Ply	Hayden BFK
Hayden BFK	A1	Common	5	1	I59734310
					Job Reference (optional)

84 Components (Dunn, NC), Dunn, NC - 28334,

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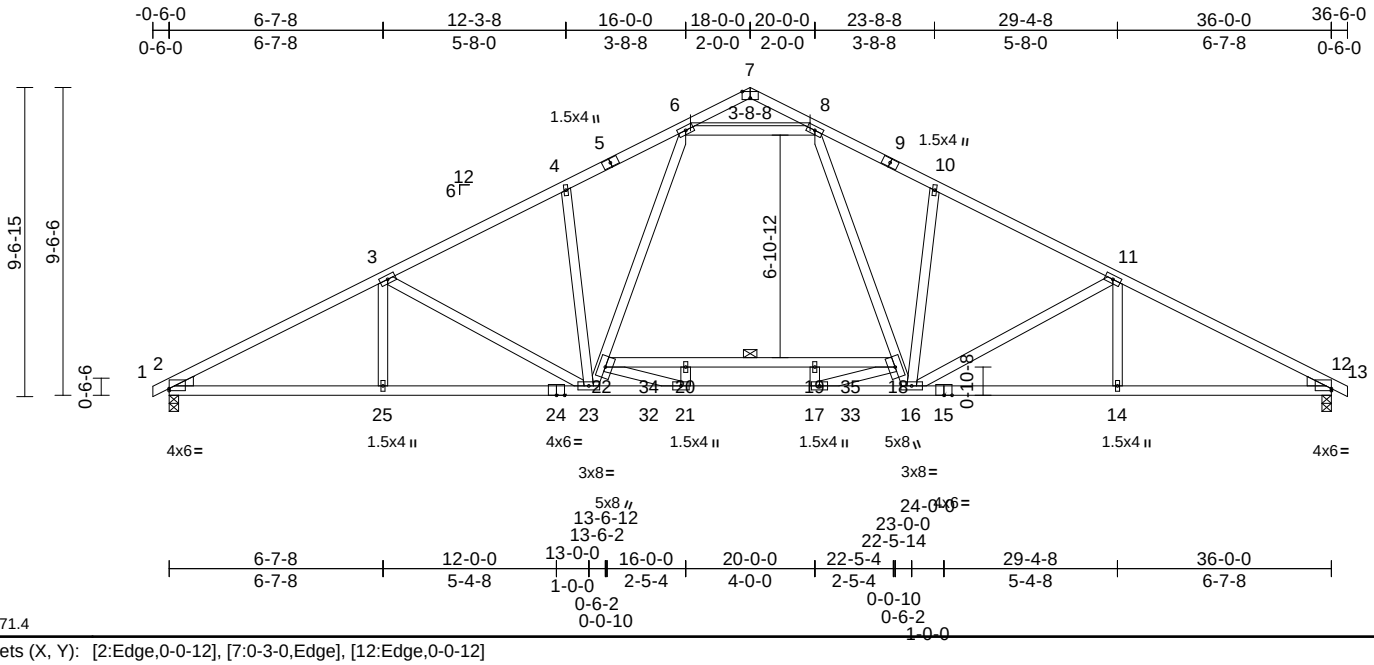

Scale = 1:71.4

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.71	Vert(LL)	-0.27	14-16	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.73	Vert(CT)	-0.44	14-16	>984	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.66	Horz(CT)	0.12	12	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 219 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.1 *Except* 22-18:2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 23-6,16-8,3-23,4-23,10-16,11-16:2x4 SP No.2

WEDGE Left: 2x4 SP No.3
Right: 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-8-9 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing. Except:
5-8-0 oc bracing: 18-22

REACTIONS (size) 2=0-3-8, 12=0-3-8
Max Horiz 2=-154 (LC 17)
Max Uplift 2=-124 (LC 12), 12=-124 (LC 13)
Max Grav 2=1564 (LC 2), 12=1564 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/13, 2-3=-2850/512, 3-4=-2458/460, 4-6=-2415/544, 6-7=-159/68, 7-8=-159/68, 8-10=-2415/544, 10-11=-2458/460, 11-12=-2850/512, 12-13=0/13
BOT CHORD 2-25=-360/2473, 23-25=-360/2473, 21-23=-70/1813, 17-21=0/2658, 16-17=-70/1813, 14-16=-361/2473, 12-14=-361/2473, 20-22=-1082/0, 19-20=-1082/0, 18-19=-1082/0
WEBS 22-23=-235/753, 6-22=-140/986, 8-18=-140/986, 16-18=-235/753, 3-25=0/220, 3-23=-493/203, 4-23=-381/213, 10-16=-381/213, 11-16=-493/203, 11-14=0/220, 6-8=-1699/443, 20-21=-193/0, 21-22=0/1088, 17-19=-193/0, 17-18=0/1088

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) All plates are 3x6 MT20 unless otherwise indicated.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 124 lb uplift at joint 2 and 124 lb uplift at joint 12.
7) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) ATTIC SPACE SHOWN IS DESIGNED AS UNINHABITABLE.

LOAD CASE(S) Standard

July 26,2023

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

Job	Truss	Truss Type	Qty	Ply	Hayden BFK
Hayden BFK	A2	Common	2	1	I59734311
					Job Reference (optional)

84 Components (Dunn, NC), Dunn, NC - 28334,

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Page: 1

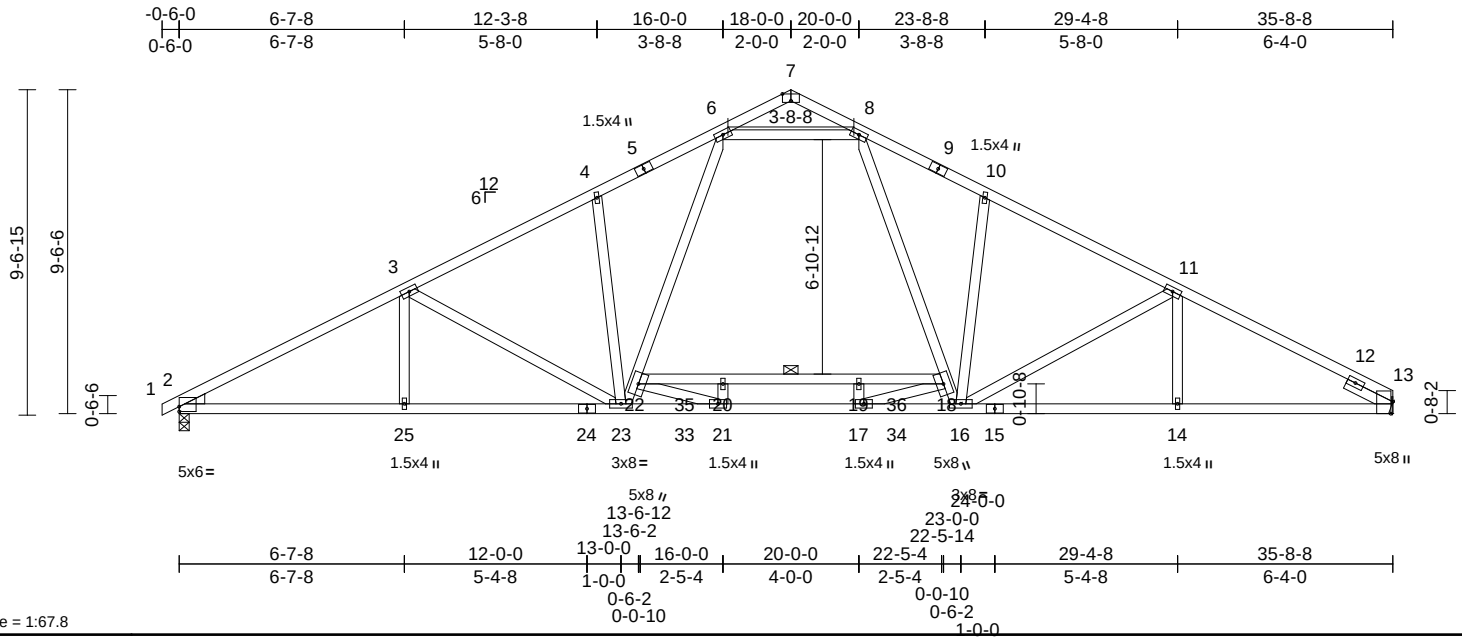

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Plate Offsets (X, Y): [2:Edge,0-1-12], [7:0-3-0,Edge], [13:0-4-4,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.82	Vert(LL)	-0.28	23-25	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	1.00	Vert(CT)	-0.46	23-25	>936	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.65	Horz(CT)	0.14	13	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 219 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2 *Except* 9-13:2x4 SP No.1
BOT CHORD 2x4 SP No.2 *Except* 15-13:2x4 SP No.1
WEBS 2x4 SP No.3 *Except* 23-6,16-8,23-3,4-23,10-16,11-16:2x4 SP No.2

WEDGE Left: 2x4 SP No.3
SLIDER Right 2x4 SP No.3 -- 1-6-0

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing. Except: 5-8-0 oc bracing: 18-22

REACTIONS (size) 2=0-3-8, 13= Mechanical
Max Horiz 2=162 (LC 12)
Max Uplift 2=-124 (LC 12), 13=-110 (LC 13)
Max Grav 2=1552 (LC 2), 13=1531 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/13, 2-3=-2826/507, 3-4=-2430/456, 4-6=-2391/540, 6-7=-160/69, 7-8=-167/68, 8-10=-2373/538, 10-11=-2411/452, 11-13=-2700/491
BOT CHORD 2-25=-372/2450, 23-25=-372/2450, 21-23=-81/1788, 17-21=0/2627, 16-17=-79/1777, 14-16=-352/2342, 13-14=-352/2342, 20-22=-1081/0, 19-20=-1081/0, 18-19=-1081/0
WEBS 22-23=-236/759, 6-22=-141/992, 8-18=-135/963, 16-18=-232/734, 3-23=-491/203, 3-25=0/225, 4-23=-388/214, 10-16=-398/218, 11-16=-396/182, 11-14=0/187, 6-8=-1667/437, 20-21=-189/0, 21-22=0/1085, 17-19=-195/0, 17-18=0/1093

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) All plates are 3x6 MT20 unless otherwise indicated.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 124 lb uplift at joint 2 and 110 lb uplift at joint 13.
8) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) ATTIC SPACE SHOWN IS DESIGNED AS UNINHABITABLE.

LOAD CASE(S) Standard

July 26,2023

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

Job	Truss	Truss Type	Qty	Ply	Hayden BFK
Hayden BFK	A3	Common	8	1	I59734312
					Job Reference (optional)

84 Components (Dunn, NC), Dunn, NC - 28334,

Run: 8.71 S May 19 2023 Print: 8.710 S May 19 2023 MiTek Industries, Inc. Tue Jul 25 10:02:48 Page: 1
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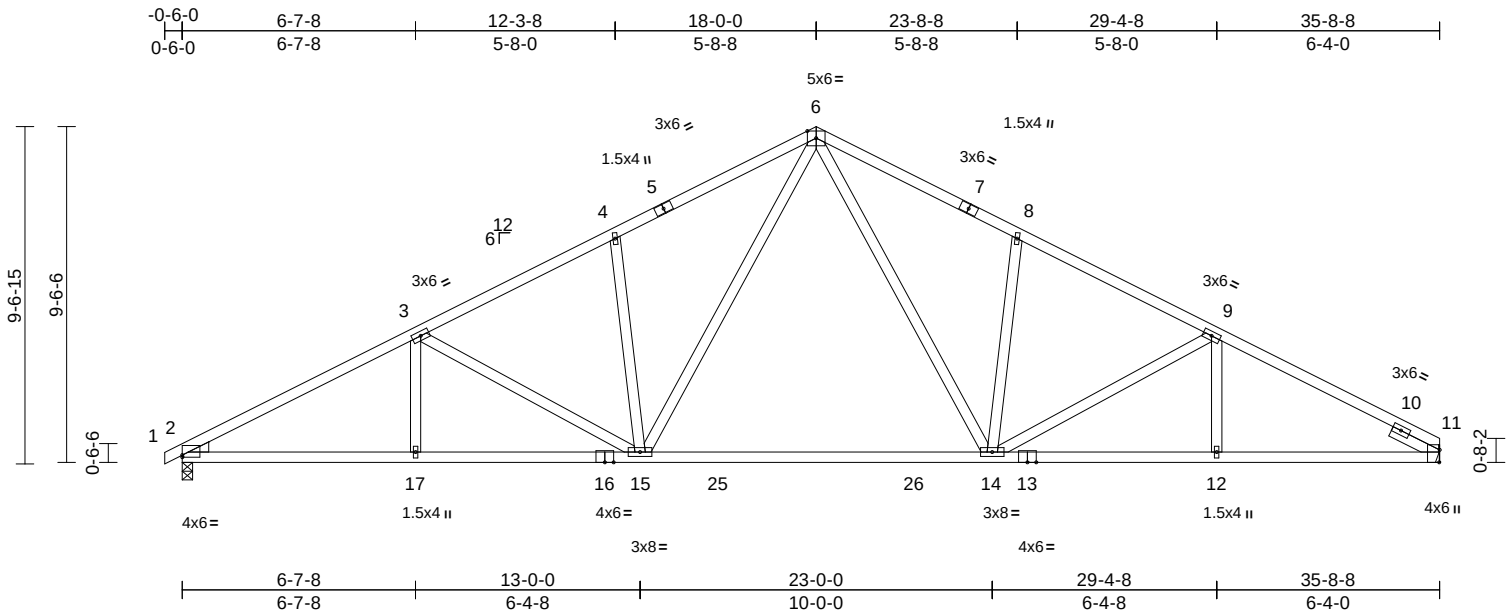

Scale = 1:65.4

Plate Offsets (X, Y): [2:Edge,0-0-12], [11:0-4-4,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.96	Vert(LL)	-0.38	14-15	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.94	Vert(CT)	-0.68	14-15	>627	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.48	Horz(CT)	0.11	11	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 196 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.1 *Except* 13-11:2x4 SP No.2
WEBS	2x4 SP No.2 *Except* 9-12,17-3:2x4 SP No.3
WEDGE	Left: 2x4 SP No.3
SLIDER	Right 2x4 SP No.3 -- 1-6-0

BRACING

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

REACTIONS (size) 2=0-3-8, 11= Mechanical
Max Horiz 2=162 (LC 12)
Max Uplift 2=-179 (LC 12), 11=-166 (LC 13)
Max Grav 2=1459 (LC 1), 11=1428 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/13, 2-3=-2574/622, 3-4=-2111/570, 4-6=-2076/679, 6-8=-2062/676, 8-9=-2091/565, 9-11=-2451/603
BOT CHORD	2-17=-473/2216, 15-17=-473/2216, 14-15=-155/1380, 12-14=-449/2116, 11-12=-449/2116
WEBS	6-15=-249/862, 6-14=-242/837, 8-14=-364/237, 9-14=-382/173, 9-12=0/168, 3-15=-470/197, 3-17=0/199, 4-15=-349/232

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 179 lb uplift at joint 2 and 166 lb uplift at joint 11.
7) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 26,2023

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

Job	Truss	Truss Type	Qty	Ply	Hayden BFK
Hayden BFK	A3E	Common Supported Gable	1	1	I59734313
					Job Reference (optional)

84 Components (Dunn, NC), Dunn, NC - 28334,

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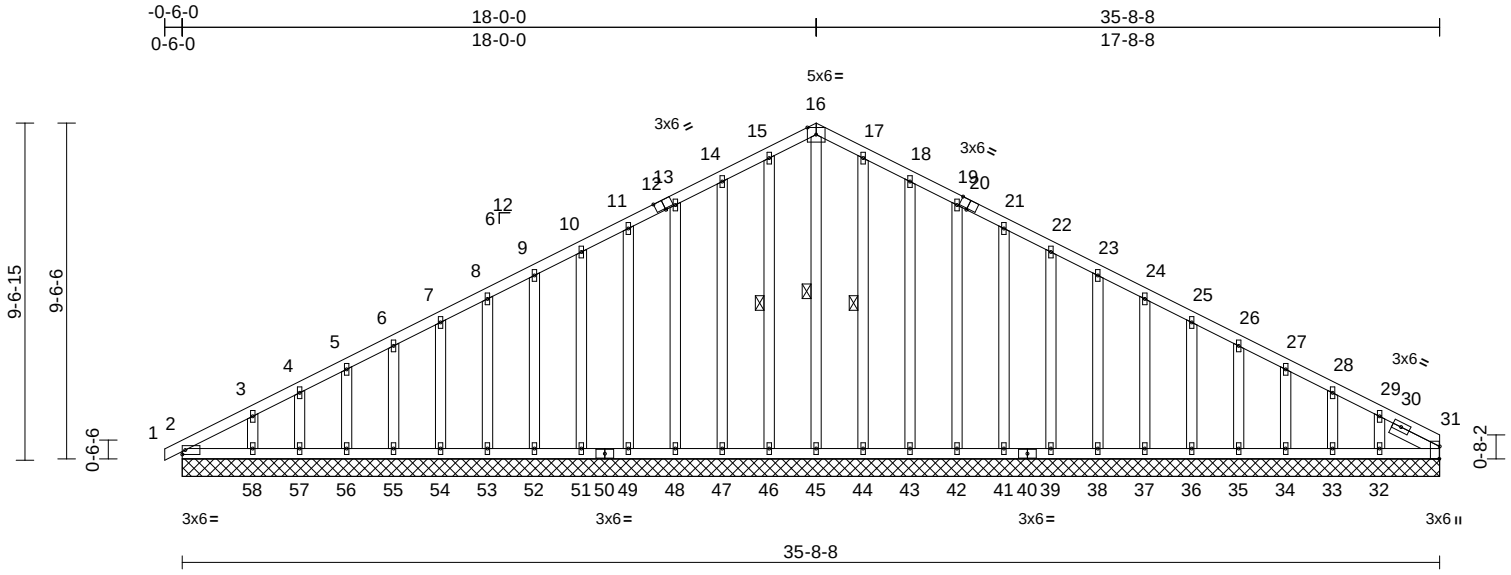

Scale = 1:65.4

Plate Offsets (X, Y): [12:0-3-0,Edge], [20:0-3-0,Edge], [31:0-4-4,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.09	Horz(CT)	0.01	31	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 295 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3 *Except* 45-16,46-15,47-14,48-13,49-11,44-17,43-18,42-19,41-21:2x4 SP No.2
SLIDER Right 2x4 SP No.3 -- 1-6-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 16-45, 15-46, 17-44

REACTIONS (size) 2=35-8-8, 31=35-8-8, 32=35-8-8, 33=35-8-8, 34=35-8-8, 35=35-8-8, 36=35-8-8, 37=35-8-8, 38=35-8-8, 39=35-8-8, 41=35-8-8, 42=35-8-8, 43=35-8-8, 44=35-8-8, 45=35-8-8, 46=35-8-8, 47=35-8-8, 48=35-8-8, 49=35-8-8, 51=35-8-8, 52=35-8-8, 53=35-8-8, 54=35-8-8, 55=35-8-8, 56=35-8-8, 57=35-8-8, 58=35-8-8, 59=35-8-8, 62=35-8-8
Max Horiz 2=162 (LC 12), 59=162 (LC 12)
Max Uplift 2=-12 (LC 8), 32=-85 (LC 13), 33=-20 (LC 13), 34=-35 (LC 13), 35=-32 (LC 13), 36=-33 (LC 13), 37=-32 (LC 13), 38=-33 (LC 13), 39=-32 (LC 13), 41=-32 (LC 13), 42=-32 (LC 13), 43=-40 (LC 13), 44=-11 (LC 13), 46=-17 (LC 12), 47=-38 (LC 12), 48=-32 (LC 12), 49=-33 (LC 12), 51=-32 (LC 12), 52=-33 (LC 12), 53=-32 (LC 12), 54=-33 (LC 12), 55=-31 (LC 12), 56=-37 (LC 12), 57=-12 (LC 12), 58=-88 (LC 12), 59=-12 (LC 8)
Max Grav 2=134 (LC 21), 31=95 (LC 22), 32=139 (LC 24), 33=98 (LC 1), 34=109 (LC 24), 35=106 (LC 1), 36=107 (LC 24), 37=107 (LC 1), 38=107 (LC 1), 39=106 (LC 24), 41=107 (LC 1), 42=106 (LC 1), 43=108 (LC 24), 44=109 (LC 24), 45=159 (LC 13), 46=109 (LC 23), 47=108 (LC 23), 48=106 (LC 1), 49=107 (LC 1), 51=106 (LC 23), 52=107 (LC 23), 53=107 (LC 1), 54=107 (LC 23), 55=106 (LC 1), 56=110 (LC 23), 57=91 (LC 1), 58=155 (LC 23), 59=134 (LC 21), 62=95 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/13, 2-3=-203/69, 3-4=-158/67, 4-5=-134/76, 5-6=-105/84, 6-7=-85/97, 7-8=-65/113, 8-9=-54/129, 9-10=-51/146, 10-11=-62/162, 11-13=-73/179, 13-14=-84/210, 14-15=-96/246, 15-16=-104/266, 16-17=-104/266, 17-18=-96/246, 18-19=-84/210, 19-21=-73/179, 21-22=-62/147, 22-23=-51/115, 23-24=-40/83, 24-25=-30/54, 25-26=-36/38, 26-27=-52/25, 27-28=-74/21, 28-29=-100/26, 29-31=-141/47
BOT CHORD 2-58=-100/135, 57-58=-37/135, 56-57=-37/135, 55-56=-37/135, 54-55=-37/135, 53-54=-37/135, 52-53=-37/135, 51-52=-37/135, 49-51=-37/135, 48-49=-37/135, 47-48=-37/135, 46-47=-37/135, 45-46=-37/135, 44-45=-37/135, 43-44=-37/135, 42-43=-37/135, 41-42=-37/135, 39-41=-37/135, 38-39=-37/135, 37-38=-37/135, 36-37=-37/135, 35-36=-37/135, 34-35=-37/135, 33-34=-37/135, 32-33=-37/135, 31-32=-37/135
WEBS 16-45=-165/32, 15-46=-82/33, 14-47=-81/64, 13-48=-80/55, 11-49=-80/55, 10-51=-80/55, 9-52=-80/55, 8-53=-80/55, 7-54=-80/55, 6-55=-80/55, 5-56=-82/57, 4-57=-71/47, 3-58=-108/83, 17-44=-82/28, 18-43=-81/64, 19-42=-80/55, 21-41=-80/55, 22-39=-80/55, 23-38=-80/55, 24-37=-80/55, 25-36=-80/55, 26-35=-80/55, 27-34=-81/56, 28-33=-76/49, 29-32=-96/88

NOTES

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Continued on page 3

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

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 1.5x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 1-4-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) N/a

10) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	Hayden BFK
Hayden BFK	AE	Common Supported Gable	1	1	I59734314
					Job Reference (optional)

84 Components (Dunn, NC), Dunn, NC - 28334,

Run: 8.7 S 0 Feb 21 2023 Print: 8.700 S Feb 21 2023 MiTek Industries, Inc. Wed Jul 26 14:49:27 Page: 1
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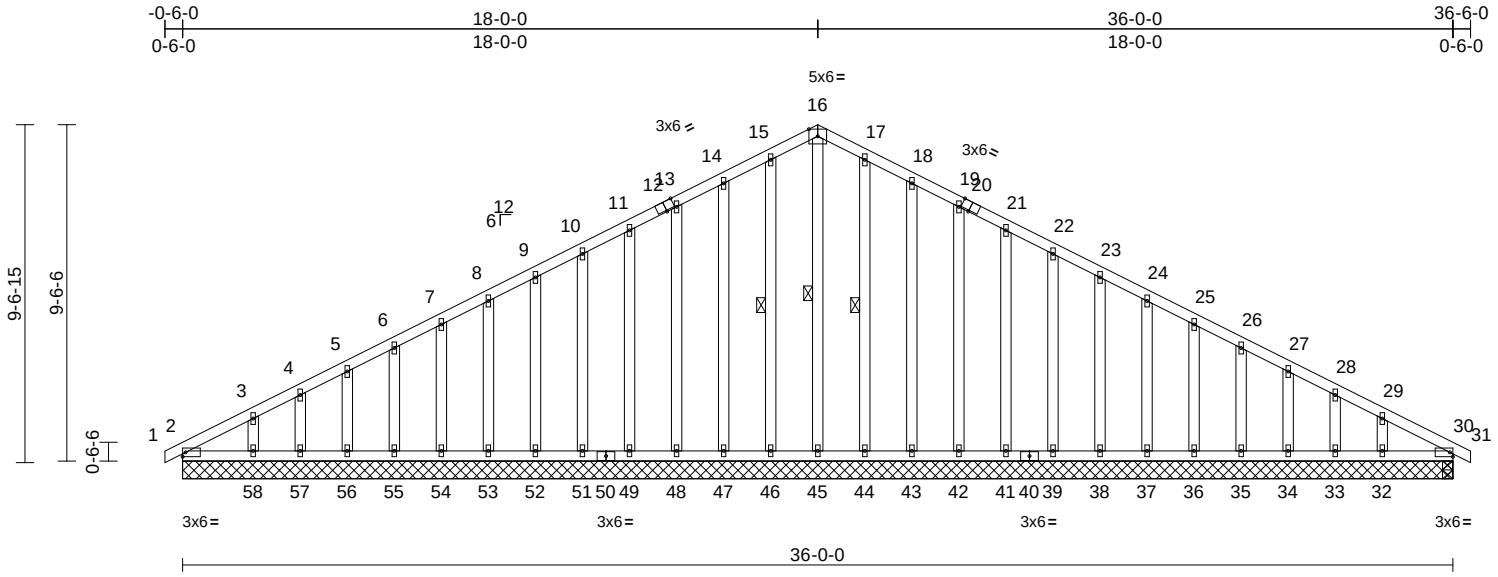

Scale = 1:65.3

Plate Offsets (X, Y): [12:0-3-0,Edge], [20:0-3-0,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	0.00	58-61	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	0.00	58-61	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.09	Horz(CT)	0.01	30	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 295 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3 *Except* 45-16,46-15,47-14,48-13,49-11,44-17,43-18, 42-19,41-21:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 16-45, 15-46, 17-44

REACTIONS All bearings 36-0-0.
(lb) - Max Horiz 2=154 (LC 12), 59=154 (LC 12)
Max Uplift All uplift 100 (lb) or less at joint(s) 2, 32, 33, 34, 35, 36, 37, 38, 39, 41, 42, 43, 44, 46, 47, 48, 49, 51, 52, 53, 54, 55, 56, 57, 58, 59
Max Grav All reactions 250 (lb) or less at joint (s) 2, 30, 32, 33, 34, 35, 36, 37, 38, 39, 41, 42, 43, 44, 45, 46, 47, 48, 49, 51, 52, 53, 54, 55, 56, 57, 58, 59, 62

FORCES (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 14-15=-100/257, 15-16=-107/277, 16-17=-107/277, 17-18=-100/257

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 1.5x4 MT20 unless otherwise indicated.
5) Gable studs spaced at 1-4-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 46, 47, 48, 49, 51, 52, 53, 54, 55, 56, 57, 58, 44, 43, 42, 41, 39, 38, 37, 36, 35, 34, 33, 32, 2.
9) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 26,2023

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

Job	Truss	Truss Type	Qty	Ply	Hayden BFK
Hayden BFK	B	Common	1	1	I59734315
					Job Reference (optional)

84 Components (Dunn, NC), Dunn, NC - 28334,

Run: 8.71 S May 19 2023 Print: 8.710 S May 19 2023 MiTek Industries, Inc. Tue Jul 25 10:02:50
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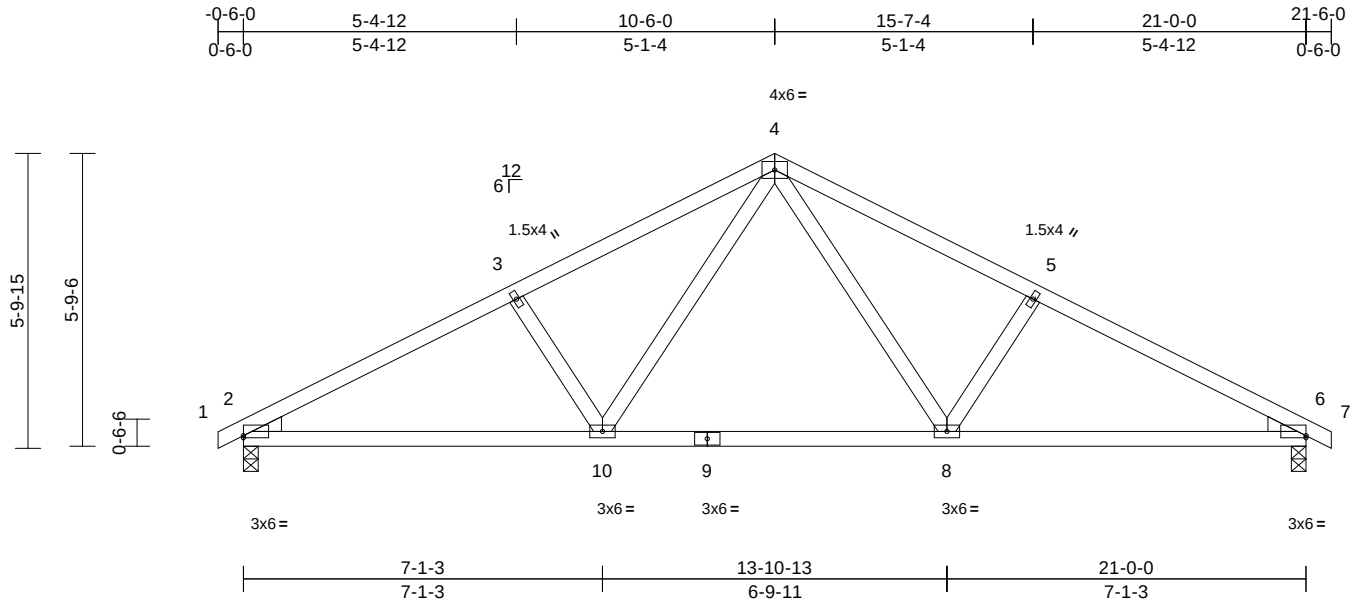

Scale = 1:45.5

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.32	Vert(LL)	-0.06	8-10	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.49	Vert(CT)	-0.13	8-10	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.03	6	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 98 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.2 *Except* 8-5,10-3:2x4 SP No.3
WEDGE	Left: 2x4 SP No.3 Right: 2x4 SP No.3

BRACING

TOP CHORD	Structural wood sheathing directly applied or 4-9-3 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-8, 6=0-3-8
Max Horiz 2=92 (LC 12)
Max Uplift 2=-109 (LC 12), 6=-109 (LC 13)
Max Grav 2=870 (LC 1), 6=870 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/13, 2-3=-1404/361, 3-4=-1240/371, 4-5=-1240/371, 5-6=-1404/361, 6-7=0/13
BOT CHORD	2-10=-243/1193, 8-10=-83/810, 6-8=-244/1193
WEBS	4-8=-103/460, 5-8=-299/201, 4-10=-103/460, 3-10=-299/201

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 109 lb uplift at joint 2 and 109 lb uplift at joint 6.
6) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 26,2023

ENGINEERING BY
TRENCO
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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Hayden BFK
Hayden BFK	BE	Common Supported Gable	1	1	I59734316
					Job Reference (optional)

84 Components (Dunn, NC), Dunn, NC - 28334,

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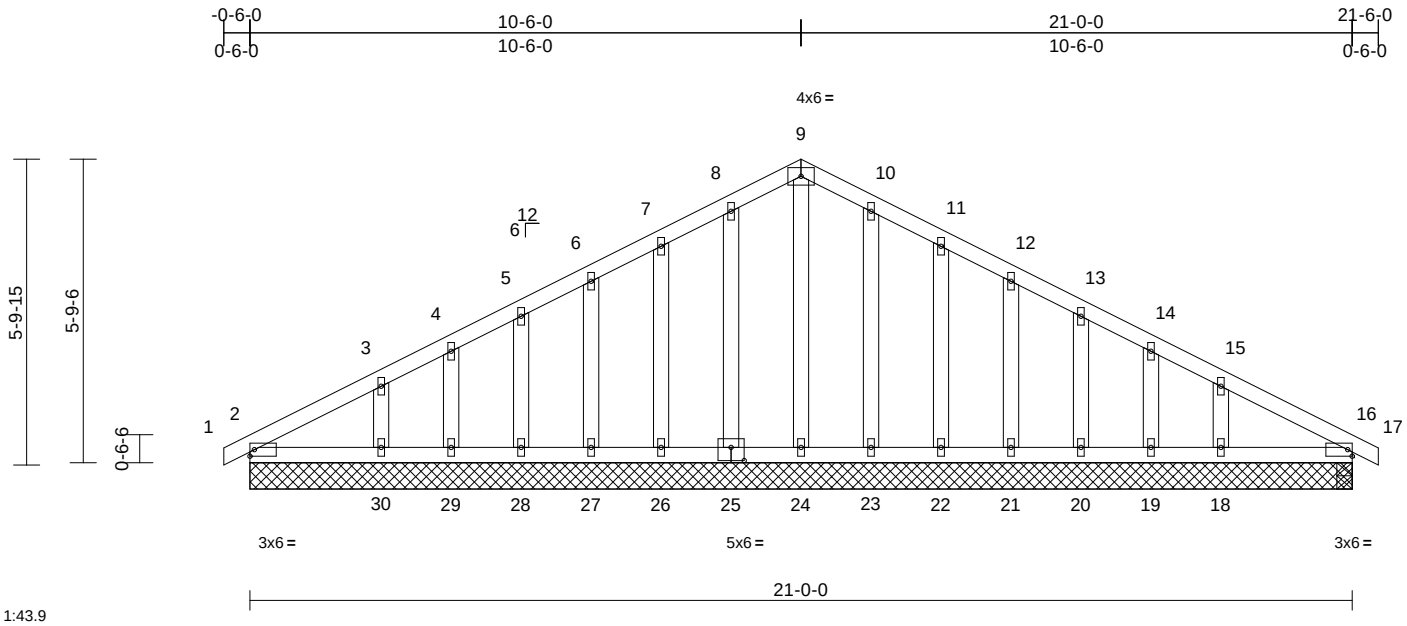

Scale = 1:43.9

Plate Offsets (X, Y): [25:0-3-0,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.05	Vert(LL)	0.00	30-33	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	0.00	30-33	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	16	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 128 lb	FT = 20%

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

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

REACTIONS All bearings 21-0-0.
(lb) - Max Horiz 2=92 (LC 12), 31=92 (LC 12)
Max Uplift All uplift 100 (lb) or less at joint(s) 2, 18, 19, 20, 21, 22, 23, 25, 26, 27, 28, 29, 30, 31
Max Grav All reactions 250 (lb) or less at joint (s) 2, 16, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 34

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

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 1.5x4 MT20 unless otherwise indicated.
5) Gable studs spaced at 1-4-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 25, 26, 27, 28, 29, 30, 23, 22, 21, 20, 19, 18, 2.
9) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 26,2023

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

Job	Truss	Truss Type	Qty	Ply	Hayden BFK
Hayden BFK	BGR	Common Girder	1	3	I59734317
					Job Reference (optional)

84 Components (Dunn, NC), Dunn, NC - 28334,

Run: 8.71 S May 19 2023 Print: 8.710 S May 19 2023 MiTek Industries, Inc. Tue Jul 25 10:02:50 Page: 1
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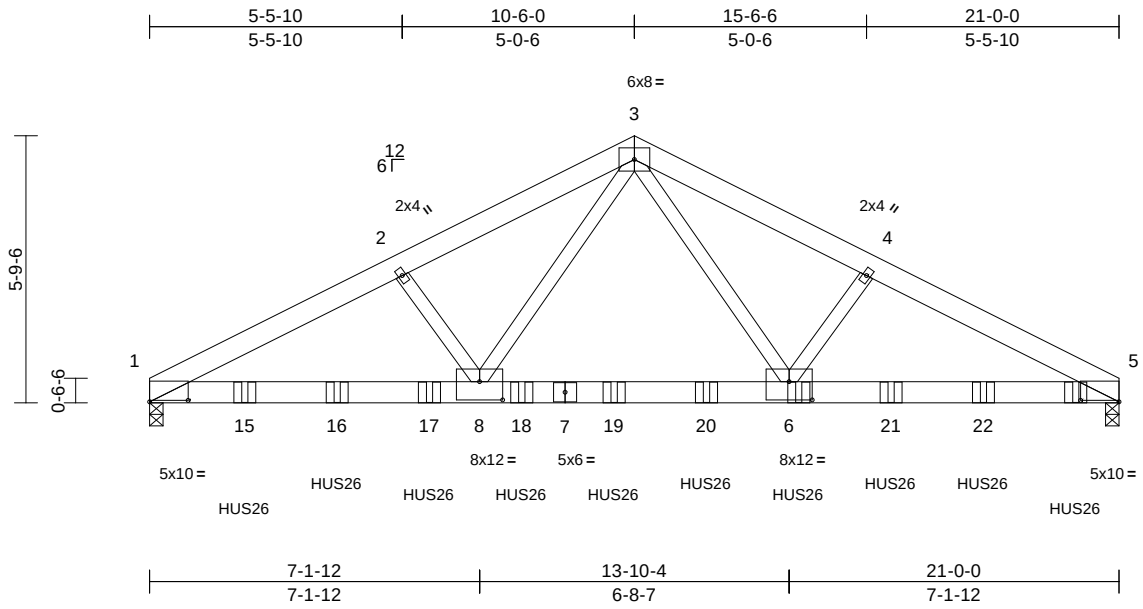

Scale = 1:49.9

Plate Offsets (X, Y): [1:0-10-0,0-0-6], [5:0-10-0,0-0-6], [6:0-6-0,0-4-12], [8:0-6-0,0-4-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.71	Vert(LL)	-0.12	6-8	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.68	Vert(CT)	-0.24	6-8	>999	180		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.93	Horz(CT)	0.05	5	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 393 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP DSS
WEBS 2x4 SP No.3

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

REACTIONS (size) 1=0-3-8, 5=0-3-8
Max Horiz 1=88 (LC 32)
Max Uplift 1=-932 (LC 12), 5=-933 (LC 13)
Max Grav 1=7530 (LC 1), 5=8417 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-13083/1820, 2-3=-12896/1820, 3-4=-12984/1787, 4-5=-13179/1786
BOT CHORD 1-8=-1571/11771, 6-8=-971/7961, 5-6=-1536/11880
WEBS 3-6=-831/6717, 4-6=-611/217, 3-8=-884/6577, 2-8=-551/228

NOTES
1) 3-ply truss to be connected together with 10d (0.148"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-6-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) Two H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1 and 5. This connection is for uplift only and does not consider lateral forces.
8) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Use Simpson Strong-Tie HUS26 (14-10d Girder, 4-10d Truss) or equivalent spaced at 2-0-0 oc max. starting at 2-0-12 from the left end to 20-0-12 to connect truss(es) to back face of bottom chord.
10) Fill all nail holes where hanger is in contact with lumber.

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-60, 3-5=-60, 9-12=-20
Concentrated Loads (lb)
Vert: 6=-1408 (B), 14=-1501 (B), 15=-1408 (B), 16=-1408 (B), 17=-1408 (B), 18=-1408 (B), 19=-1408 (B), 20=-1408 (B), 21=-1408 (B), 22=-1501 (B)

July 26,2023

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

Job	Truss	Truss Type	Qty	Ply	Hayden BFK
Hayden BFK	BV1	Roof Special	1	1	I59734318
					Job Reference (optional)

84 Components (Dunn, NC), Dunn, NC - 28334,

Run: 8.71 S May 19 2023 Print: 8.710 S May 19 2023 MiTek Industries, Inc. Tue Jul 25 10:02:51 Page: 1
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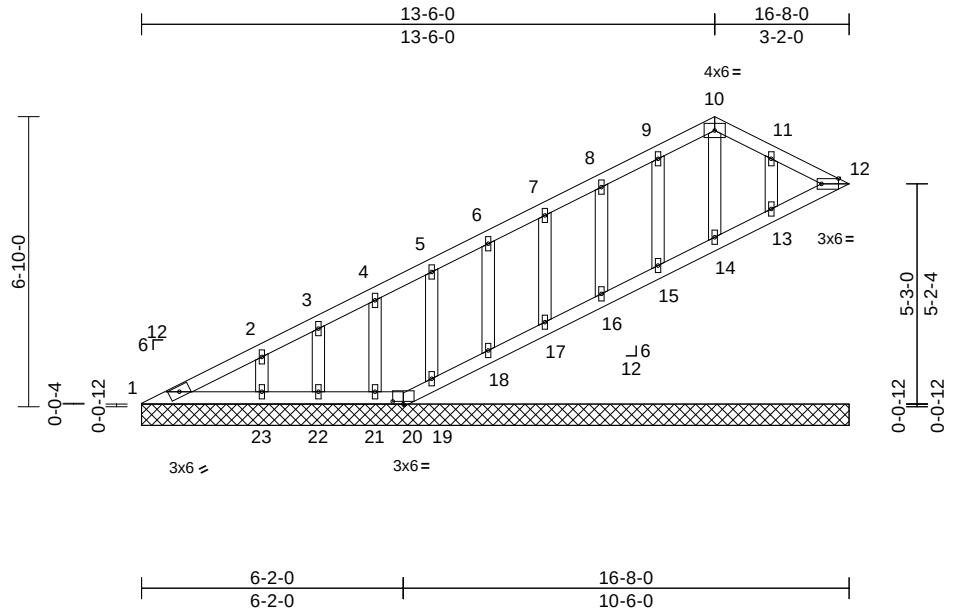

Scale = 1:54.3

Plate Offsets (X, Y): [12:0-4-13,Edge], [20:0-3-0,0-0-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.07	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	0.00	28	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 86 lb	FT = 20%

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

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

REACTIONS (size) 1=16-8-0, 12=16-8-0, 13=16-8-0, 14=16-8-0, 15=16-8-0, 16=16-8-0, 17=16-8-0, 18=16-8-0, 19=16-8-0, 20=16-8-0, 21=16-8-0, 22=16-8-0, 23=16-8-0, 28=16-8-0
Max Horiz 1=221 (LC 12)
Max Uplift 13=-52 (LC 13), 15=-36 (LC 12), 16=-32 (LC 12), 17=-33 (LC 12), 18=-32 (LC 12), 19=-34 (LC 12), 20=-5 (LC 13), 21=-36 (LC 12), 22=-28 (LC 12), 23=-46 (LC 12)
Max Grav 1=88 (LC 21), 13=172 (LC 24), 14=130 (LC 1), 15=120 (LC 1), 16=105 (LC 23), 17=107 (LC 1), 18=108 (LC 23), 19=106 (LC 1), 20=32 (LC 24), 21=116 (LC 23), 22=63 (LC 1), 23=220 (LC 23)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-226/134, 2-3=-187/108, 3-4=-156/102, 4-5=-124/90, 5-6=-92/88, 6-7=-60/87, 7-8=-31/87, 8-9=-2/88, 9-10=0/81, 10-11=0/80, 11-12=-6/94
BOT CHORD 1-23=-67/84, 22-23=-62/18, 21-22=-62/18, 20-21=-62/19, 19-20=-69/23, 18-19=-75/24, 17-18=-76/24, 16-17=-76/24, 15-16=-75/24, 14-15=-77/25, 13-14=-70/21, 12-13=-83/28
WEBS 10-14=-119/0, 9-15=-89/57, 8-16=-79/56, 7-17=-80/56, 6-18=-80/56, 5-19=-79/56, 4-21=-84/57, 3-22=-60/53, 2-23=-135/68, 11-13=-113/70

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 1.5x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 1-4-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 5 lb uplift at joint 20, 36 lb uplift at joint 15, 32 lb uplift at joint 16, 33 lb uplift at joint 17, 32 lb uplift at joint 18, 34 lb uplift at joint 19, 36 lb uplift at joint 21, 28 lb uplift at joint 22, 46 lb uplift at joint 23 and 52 lb uplift at joint 13.
10) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 12, 14, 15, 16, 17, 18, 19, 13.
11) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 26,2023

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

Job	Truss	Truss Type	Qty	Ply	Hayden BFK
Hayden BFK	BV2	Valley	1	1	I59734319
					Job Reference (optional)

84 Components (Dunn, NC), Dunn, NC - 28334,

Run: 8.71 S May 19 2023 Print: 8.710 S May 19 2023 MiTek Industries, Inc. Tue Jul 25 10:02:51 Page: 1
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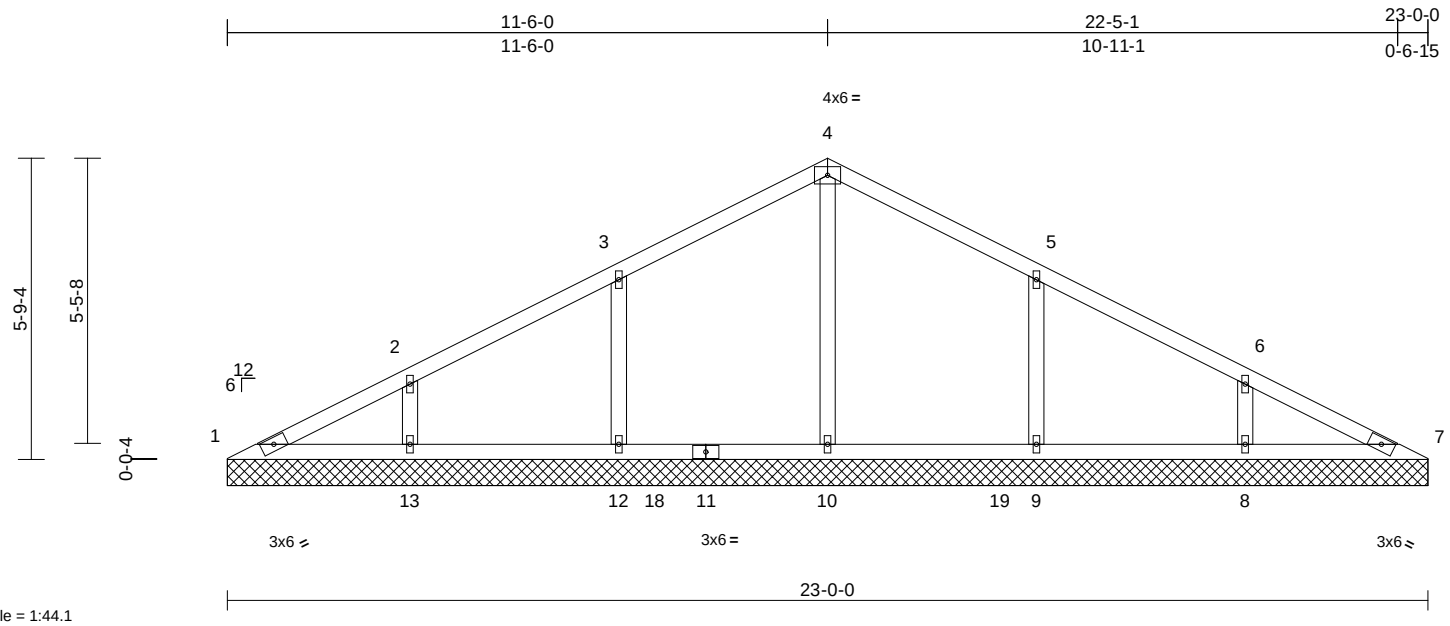

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.21	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.18	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.14	Horiz(TL)	0.00	7	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 91 lb	FT = 20%

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

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

REACTIONS (size) 1=23-0-0, 7=23-0-0, 8=23-0-0, 9=23-0-0, 10=23-0-0, 12=23-0-0, 13=23-0-0
Max Horiz 1=94 (LC 12)
Max Uplift 1=-12 (LC 13), 8=-88 (LC 13), 9=-110 (LC 13), 12=-110 (LC 12), 13=-90 (LC 12)
Max Grav 1=102 (LC 23), 7=102 (LC 24), 8=327 (LC 1), 9=339 (LC 24), 10=421 (LC 19), 12=339 (LC 23), 13=327 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-145/96, 2-3=-48/115, 3-4=-47/144, 4-5=-47/144, 5-6=-30/85, 6-7=-142/76
BOT CHORD 1-13=-46/137, 12-13=-46/84, 10-12=-46/84, 9-10=-46/84, 8-9=-46/84, 7-8=-46/121
WEBS 4-10=-238/0, 3-12=-263/179, 2-13=-228/145, 5-9=-263/179, 6-8=-228/145

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 1.5x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 4-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 12 lb uplift at joint 1, 110 lb uplift at joint 12, 90 lb uplift at joint 13, 110 lb uplift at joint 9 and 88 lb uplift at joint 8.
10) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 26,2023

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

Job	Truss	Truss Type	Qty	Ply	Hayden BFK
Hayden BFK	BV3	Valley	1	1	I59734320
					Job Reference (optional)

84 Components (Dunn, NC), Dunn, NC - 28334, Run: 8.71 S May 19 2023 Print: 8.710 S May 19 2023 MiTek Industries, Inc. Tue Jul 25 10:02:51 Page: 1
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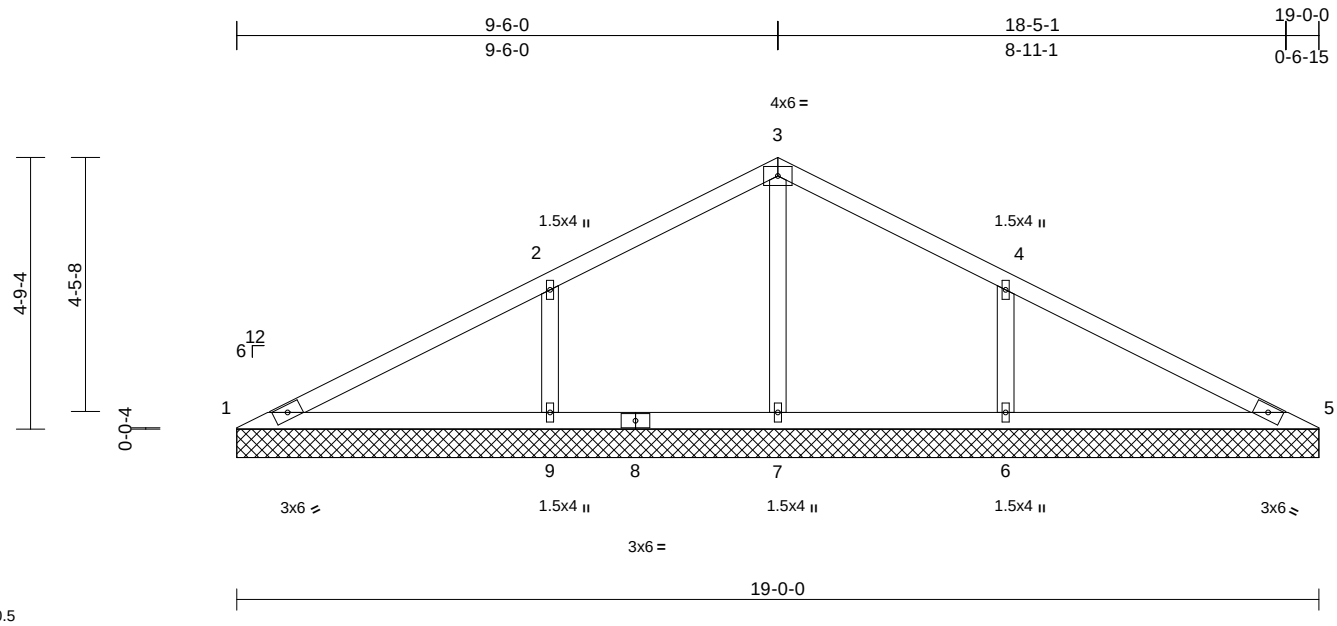

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.36	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.25	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.16	Horiz(TL)	0.00	9	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 71 lb	FT = 20%

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

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

REACTIONS (size) 1=19-0-0, 5=19-0-0, 6=19-0-0, 7=19-0-0, 9=19-0-0
Max Horiz 1=77 (LC 12)
Max Uplift 1=-1 (LC 13), 5=-10 (LC 13), 6=-139 (LC 13), 9=-140 (LC 12)
Max Grav 1=110 (LC 23), 5=110 (LC 24), 6=462 (LC 24), 7=430 (LC 1), 9=462 (LC 23)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-148/304, 2-3=0/270, 3-4=0/270, 4-5=-148/304
BOT CHORD 1-9=-205/127, 7-9=-205/126, 6-7=-205/126, 5-6=-205/127
WEBS 3-7=-389/67, 2-9=-320/198, 4-6=-320/198

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 4-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1 lb uplift at joint 1, 10 lb uplift at joint 5, 140 lb uplift at joint 9 and 139 lb uplift at joint 6.
9) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 26,2023

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

Job	Truss	Truss Type	Qty	Ply	Hayden BFK
Hayden BFK	BV4	Valley	1	1	I59734321
					Job Reference (optional)

84 Components (Dunn, NC), Dunn, NC - 28334,

Run: 8.71 S May 19 2023 Print: 8.710 S May 19 2023 MiTek Industries, Inc. Tue Jul 25 10:02:52 Page: 1
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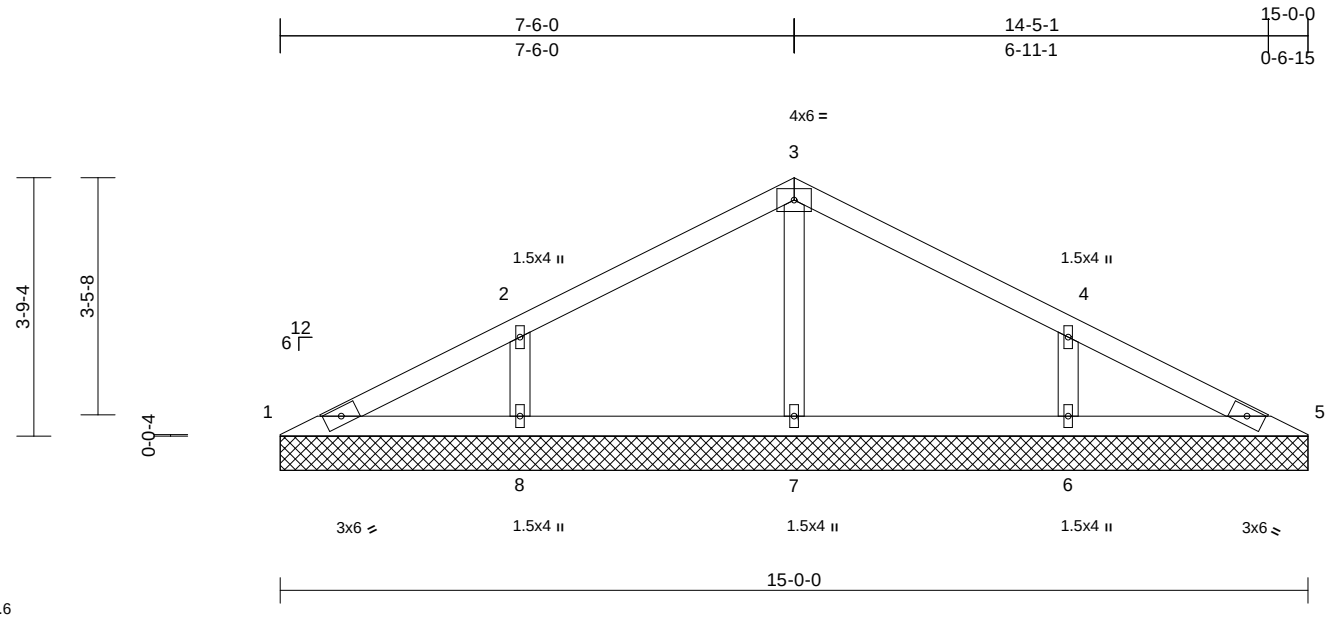

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.23	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.11	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.06	Horiz(TL)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MP							Weight: 54 lb	FT = 20%

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

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

REACTIONS (size) 1=15-0-0, 5=15-0-0, 6=15-0-0, 7=15-0-0, 8=15-0-0
Max Horiz 1=60 (LC 16)
Max Uplift 1=-8 (LC 13), 5=-6 (LC 13), 6=-115 (LC 13), 8=-116 (LC 12)
Max Grav 1=91 (LC 23), 5=91 (LC 24), 6=362 (LC 24), 7=301 (LC 1), 8=362 (LC 23)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-119/100, 2-3=-33/98, 3-4=-33/86, 4-5=-119/95
BOT CHORD 1-8=-46/103, 7-8=-46/55, 6-7=-46/55, 5-6=-46/101
WEBS 3-7=-225/35, 2-8=-271/187, 4-6=-271/187

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 4-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 8 lb uplift at joint 1, 6 lb uplift at joint 5, 116 lb uplift at joint 8 and 115 lb uplift at joint 6.
9) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 26,2023

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

Job	Truss	Truss Type	Qty	Ply	Hayden BFK
Hayden BFK	BV5	Valley	1	1	I59734322
					Job Reference (optional)

84 Components (Dunn, NC), Dunn, NC - 28334, Run: 8.71 S May 19 2023 Print: 8.710 S May 19 2023 MiTek Industries, Inc. Tue Jul 25 10:02:52 Page: 1
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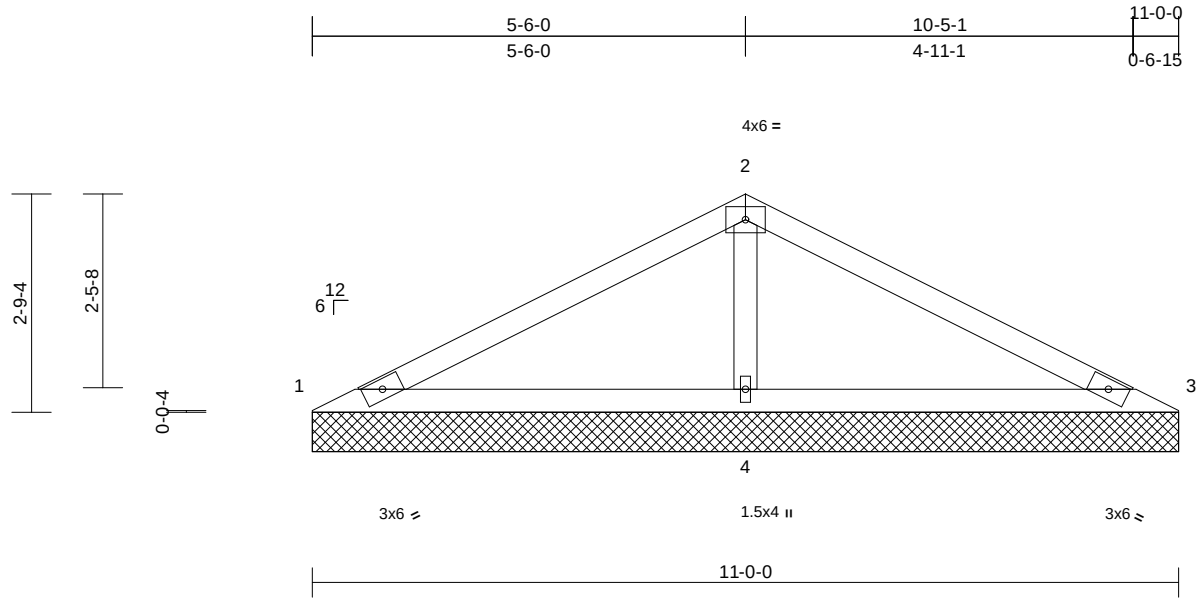

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.41	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.36	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.14	Horiz(TL)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MP							Weight: 36 lb	FT = 20%

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

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

REACTIONS (size) 1=11-0-0, 3=11-0-0, 4=11-0-0
Max Horiz 1=-44 (LC 13)
Max Uplift 1=-39 (LC 24), 3=-39 (LC 23), 4=-99 (LC 12)
Max Grav 1=71 (LC 23), 3=71 (LC 24), 4=841 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-184/482, 2-3=-184/482
BOT CHORD 1-4=-394/234, 3-4=-394/234
WEBS 2-4=-635/290

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 4-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 39 lb uplift at joint 1, 39 lb uplift at joint 3 and 99 lb uplift at joint 4.
9) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 26,2023

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

Job	Truss	Truss Type	Qty	Ply	Hayden BFK
Hayden BFK	BV6	Valley	1	1	I59734323
					Job Reference (optional)

84 Components (Dunn, NC), Dunn, NC - 28334,

Run: 8.71 S May 19 2023 Print: 8.710 S May 19 2023 MiTek Industries, Inc. Tue Jul 25 10:02:52 Page: 1
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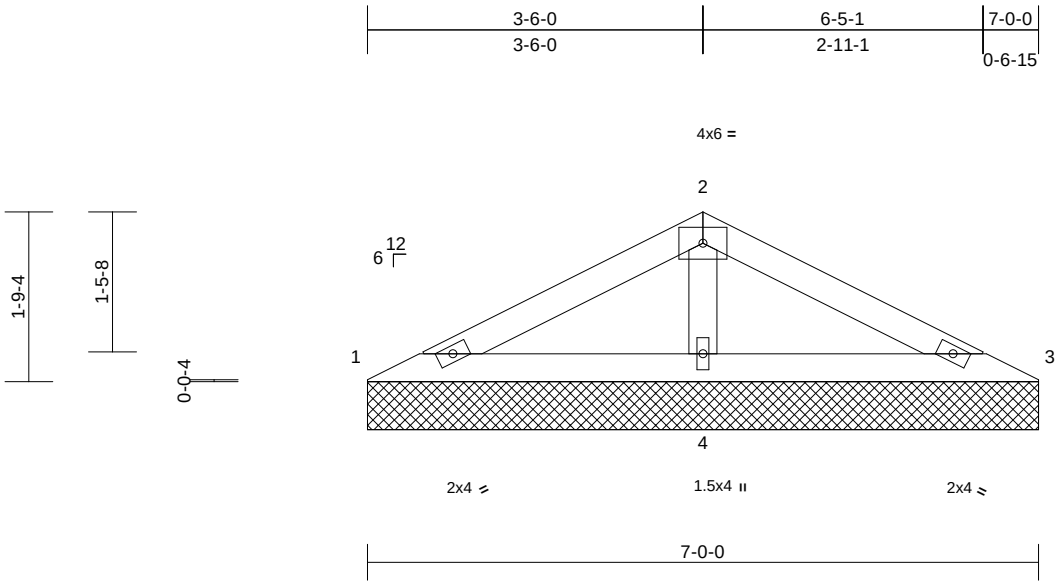

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.13	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.15	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.06	Horiz(TL)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MP							Weight: 22 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 7-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=7-0-0, 3=7-0-0, 4=7-0-0
Max Horiz 1=-27 (LC 13)
Max Uplift 1=-12 (LC 12), 3=-17 (LC 13), 4=-44 (LC 12)
Max Grav 1=78 (LC 23), 3=78 (LC 24), 4=445 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-86/201, 2-3=-86/201
BOT CHORD 1-4=-157/116, 3-4=-157/116
WEBS 2-4=-297/148

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 4-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 12 lb uplift at joint 1, 17 lb uplift at joint 3 and 44 lb uplift at joint 4.
9) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 26,2023

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

Job	Truss	Truss Type	Qty	Ply	Hayden BFK
Hayden BFK	P1	Monopitch	10	1	I59734324
					Job Reference (optional)

84 Components (Dunn, NC), Dunn, NC - 28334,

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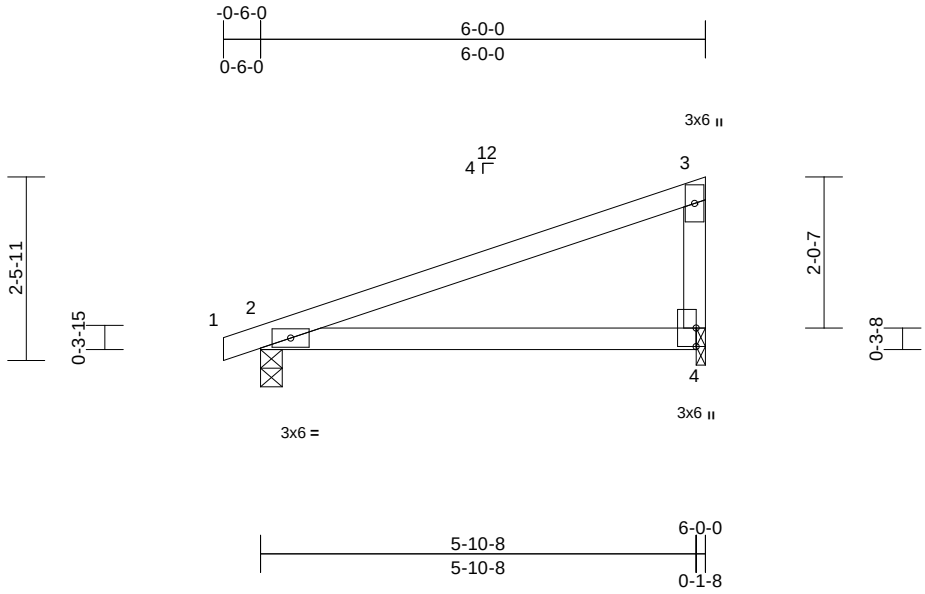

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.71	Vert(LL)	0.03	4-7	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.33	Vert(CT)	-0.06	4-7	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MR							Weight: 22 lb	FT = 20%

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

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

REACTIONS (size) 2=0-3-8, 4=0-1-8
Max Horiz 2=84 (LC 8)
Max Uplift 2=-51 (LC 8), 4=-55 (LC 12)
Max Grav 2=265 (LC 1), 4=233 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/9, 2-3=-178/31, 3-4=-137/117
BOT CHORD 2-4=-81/143

NOTES
1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Bearing at joint(s) 4 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
5) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 4.
6) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 4. This connection is for uplift only and does not consider lateral forces.
7) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

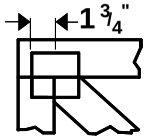
LOAD CASE(S) Standard

July 26,2023

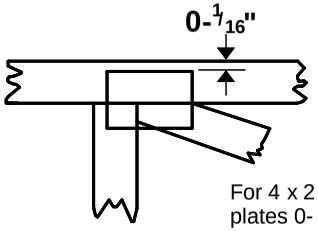
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Symbols

PLATE LOCATION AND ORIENTATION



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



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

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

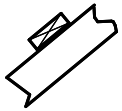
*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

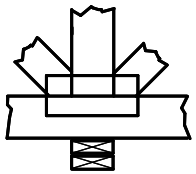
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



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

BEARING

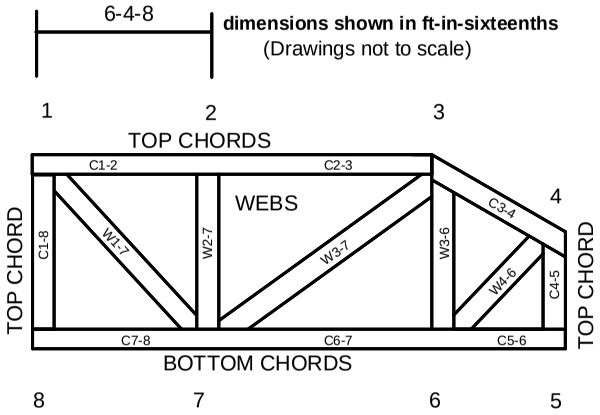


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing & 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-1311, ESR-1352, ESR1988
ER-3907, ESR-2362, ESR-1397, ESR-3282

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

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

MiTek Engineering Reference Sheet: MII-7473 rev. 5/19/2020

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/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.