

Trenco

818 Soundside Rd
Edenton, NC 27932

Re: Master120
Hayden 120 Roof

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

Pages or sheets covered by this seal: 158754004 thru 158754018

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

North Carolina COA: C-0844



June 6,2023

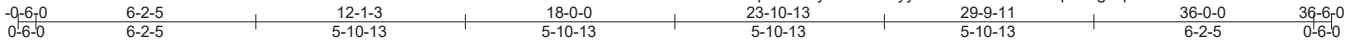
Gilbert, Eric

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 MASTER120	Truss A01	Truss Type COMMON	Qty 1	Ply 1	Hayden 120 Roof	158754004
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Builders FirstSource (Apex, NC), Apex, NC - 27523, 8.630 s Nov 19 2022 MiTek Industries, Inc. Tue Jun 6 07:31:01 2023 Page 1

ID:QnmXaPRpGXrA8yoS4zaUOyyf5FE-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



5x6 =

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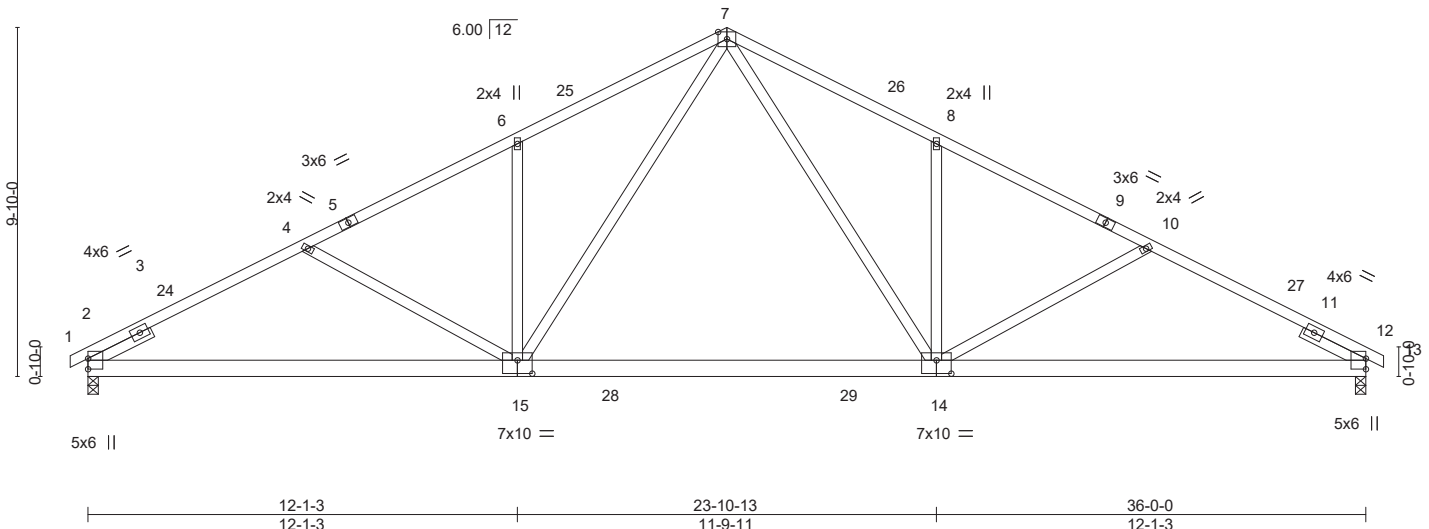


Plate Offsets (X,Y)--	[14:0-5-0,0-4-8], [15:0-5-0,0-4-8]
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LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.75	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.79	Vert(LL) -0.36 14-15 >999 360		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.39	Vert(CT) -0.56 14-15 >772 240		
BCDL 10.0	Rep Stress Incr YES	Matrix-MS	Horz(CT) 0.07 12 n/a n/a		
	Code IRC2015/TPI2014		Wind(LL) 0.08 14-15 >999 240	Weight: 222 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 2-5-1 oc purlins.
BOT CHORD 2x6 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3	
SLIDER Left 2x4 SP No.3 1-11-12, Right 2x4 SP No.3 1-11-12	

REACTIONS. (size) 2=0-3-8, 12=0-3-8
Max Horz 2=-113(LC 13)
Max Uplift 2=-2(LC 12), 12=-2(LC 13)
Max Grav 2=1470(LC 1), 12=1470(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-4=-2413/199, 4-6=-2128/167, 6-7=-2144/259, 7-8=-2144/259, 8-10=-2128/167, 10-12=-2413/199
BOT CHORD 2-15=-93/2096, 14-15=0/1363, 12-14=-93/2096
WEBS 7-14=-80/938, 8-14=-401/164, 10-14=-315/139, 7-15=-80/938, 6-15=-401/164, 4-15=-315/139

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=32ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-6-0 to 2-6-0, Interior(1) 2-6-0 to 18-0-0, Exterior(2) 18-0-0 to 22-2-15, Interior(1) 22-2-15 to 36-6-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - 3) 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 3-6-0 tall by 2-0-0 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 2 lb uplift at joint 2 and 2 lb uplift at joint 12.



Job	Truss	Truss Type	Qty	Ply	Hayden 120 Roof	158754005
MASTER120	A01A	COMMON	1	1	Job Reference (optional)	

Builders FirstSource, Apex, NC 27523

ID:QnmXaPRpGXrA8yoS4zaUOyyf5FE-s?XcAKT290ZGagFizdAitIK3U7BPTkuLAP6?04z92Nr

8.630 s Mar 9 2023 MITek Industries, Inc. Tue Jun 6 09:19:52 2023 Page 1

0-6-0	6-2-5	12-1-3	18-0-0	23-10-13	29-9-11	36-0-0	36-6-0
0-6-0	6-2-5	5-10-13	5-10-13	5-10-13	5-10-13	6-2-5	0-6-0

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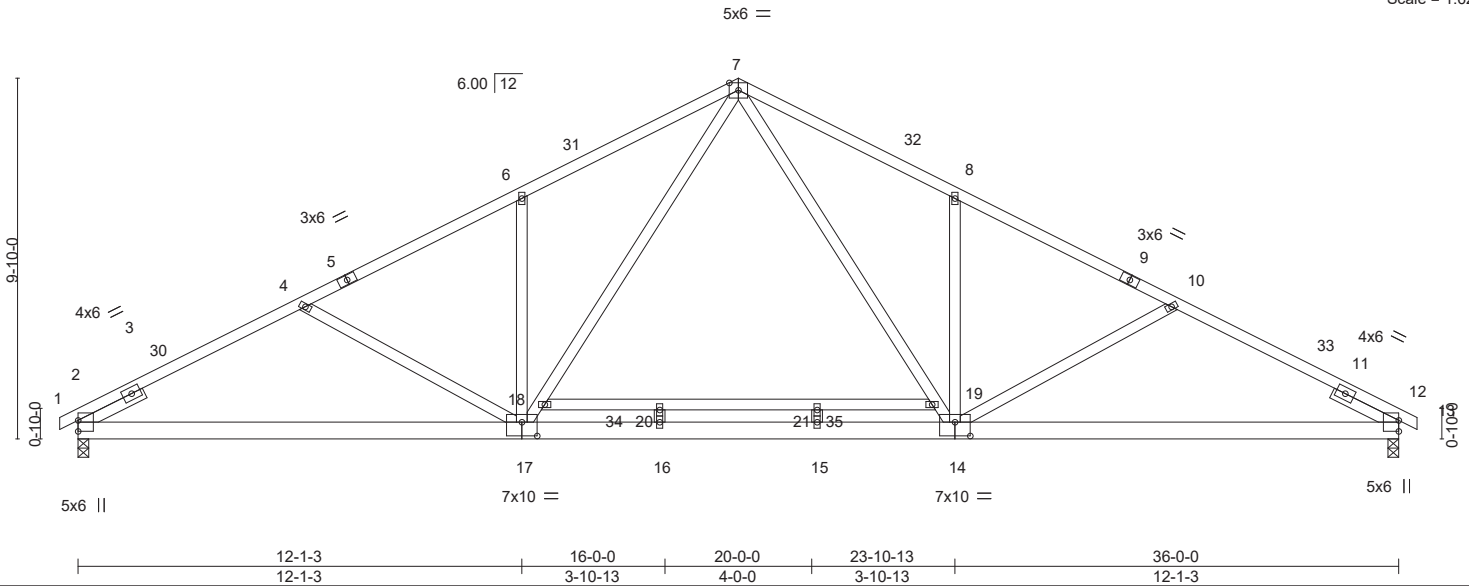


Plate Offsets (X,Y)--	[14:0-5-0,0-4-8], [17:0-5-0,0-4-8]				
LOADING (psf)	SPACING- 2-0-0	CSI.	DEFL. in (loc) l/defl L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.15	TC 0.84	Vert(LL) -0.34 15-16 >999 360	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.86	Vert(CT) -0.53 15-16 >817 240		
BCLL 0.0 *	Rep Stress Incr NO	WB 0.83	Horz(CT) 0.07 12 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-MS	Wind(LL) 0.08 15-16 >999 240		Weight: 239 lb FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 2-7-4 oc purlins.
BOT CHORD 2x6 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3	
SLIDER Left 2x4 SP No.3 1-11-12, Right 2x4 SP No.3 1-11-12	

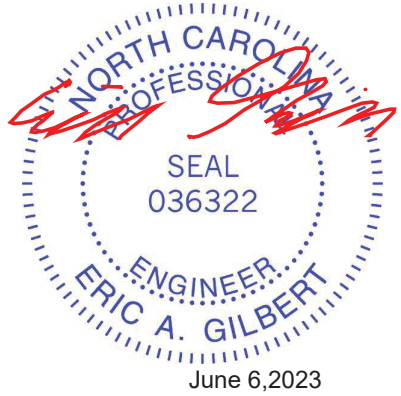
REACTIONS. (lb/size) 2=1470/0-3-8 (min. 0-1-12), 12=1470/0-3-8 (min. 0-1-12)
 Max Horz 2=-113(LC 13)
 Max Uplift 2=-2(LC 12), 12=-2(LC 13)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 2-3=-1036/0, 3-30=-2411/175, 4-30=-2385/200, 4-5=-2125/142, 5-6=-2053/167,
 6-31=-2141/231, 7-31=-2053/259, 7-32=-2053/259, 8-32=-2141/231, 8-9=-2053/167,
 9-10=-2125/142, 10-33=-2385/200, 11-33=-2411/175, 11-12=-1038/0
 BOT CHORD 2-17=-93/2094, 16-17=0/1342, 15-16=0/1342, 14-15=0/1342, 12-14=-94/2094
 WEBS 7-19=-80/918, 14-19=-82/919, 8-14=-401/164, 10-14=-316/139, 17-18=-82/920,
 7-18=-80/930, 6-17=-401/164, 4-17=-316/138

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-10; VuIt=120mph Vasd=95mph; TCdL=6.0psf; BCdL=6.0psf; h=32ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-6-0 to 2-6-0, Interior(1) 2-6-0 to 18-0-0, Exterior(2) 18-0-0 to 22-2-15, Interior(1) 22-2-15 to 36-6-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - All plates are 2x4 MT20 unless otherwise indicated.
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 2 lb uplift at joint 2 and 2 lb uplift at joint 12.
 - 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.
 - N/A
 - In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S)

- Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
 Uniform Loads (plf)
 Vert: 1-7=-60, 7-13=-60, 22-26=-20



June 6, 2023

Continued on page 2

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.
 Design valid for use only with MITek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



Job	Truss	Truss Type	Qty	Ply	Hayden 120 Roof	158754005
MASTER120	A01A	COMMON	1	1	Job Reference (optional)	

Builders FirstSource, Apex, NC 27523

8.630 s Mar 9 2023 MiTek Industries, Inc. Tue Jun 6 09:19:52 2023 Page 2
ID:QnmXaPRpGXrA8yoS4zaUOyyf5FE-s?XcAKT290ZGagFizdAitiK3U7BPTkuLAP6?04z92Nr

LOAD CASE(S)

- 2) Dead + 0.75 Roof Live (balanced) + 0.75 Uninhab. Attic Storage: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-7=-50, 7-13=-50, 22-26=-20, 34-35=-30(F)
- 3) Dead + Uninhabitable Attic Without Storage: Lumber Increase=1.25, Plate Increase=1.25
Uniform Loads (plf)
Vert: 1-7=-20, 7-13=-20, 22-26=-40, 34-35=-40(F)
- 4) Dead + 0.6 C-C Wind (Pos. Internal) Case 1: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=47, 2-30=25, 7-30=14, 7-32=25, 12-32=14, 12-13=9, 22-26=-12
Horz: 1-2=-59, 2-30=-37, 7-30=-26, 7-32=37, 12-32=26, 12-13=21
- 5) Dead + 0.6 C-C Wind (Pos. Internal) Case 2: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=9, 2-31=14, 7-31=25, 7-33=14, 12-33=25, 12-13=47, 22-26=-12
Horz: 1-2=-21, 2-31=-26, 7-31=-37, 7-33=26, 12-33=37, 12-13=59
- 6) Dead + 0.6 C-C Wind (Neg. Internal) Case 1: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-12, 2-7=-33, 7-12=-33, 12-13=-28, 22-26=-20
Horz: 1-2=-8, 2-7=13, 7-12=-13, 12-13=-8
- 7) Dead + 0.6 C-C Wind (Neg. Internal) Case 2: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-28, 2-7=-33, 7-12=-33, 12-13=-12, 22-26=-20
Horz: 1-2=8, 2-7=13, 7-12=-13, 12-13=8
- 8) Dead + 0.6 MWFRS Wind (Pos. Internal) Left: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=9, 2-7=-2, 7-12=9, 12-13=4, 22-26=-12
Horz: 1-2=-21, 2-7=-10, 7-12=21, 12-13=16
- 9) Dead + 0.6 MWFRS Wind (Pos. Internal) Right: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=4, 2-7=9, 7-12=-2, 12-13=9, 22-26=-12
Horz: 1-2=-16, 2-7=-21, 7-12=10, 12-13=21
- 10) Dead + 0.6 MWFRS Wind (Neg. Internal) Left: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-15, 2-7=-20, 7-12=-9, 12-13=-4, 22-26=-20
Horz: 1-2=-5, 2-7=0, 7-12=11, 12-13=16
- 11) Dead + 0.6 MWFRS Wind (Neg. Internal) Right: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-4, 2-7=9, 7-12=-20, 12-13=-15, 22-26=-20
Horz: 1-2=-16, 2-7=-11, 7-12=0, 12-13=5
- 12) Dead + 0.6 MWFRS Wind (Pos. Internal) 1st Parallel: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=17, 2-4=22, 4-7=11, 7-12=3, 12-13=-2, 22-26=-12
Horz: 1-2=-29, 2-4=-34, 4-7=-23, 7-12=15, 12-13=10
- 13) Dead + 0.6 MWFRS Wind (Pos. Internal) 2nd Parallel: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-2, 2-7=3, 7-10=11, 10-12=22, 12-13=17, 22-26=-12
Horz: 1-2=-10, 2-7=-15, 7-10=23, 10-12=34, 12-13=29
- 14) Dead + 0.6 MWFRS Wind (Pos. Internal) 3rd Parallel: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=7, 2-7=11, 7-12=3, 12-13=-2, 22-26=-12
Horz: 1-2=-19, 2-7=-23, 7-12=15, 12-13=10
- 15) Dead + 0.6 MWFRS Wind (Pos. Internal) 4th Parallel: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-2, 2-7=3, 7-12=11, 12-13=7, 22-26=-12
Horz: 1-2=-10, 2-7=-15, 7-12=23, 12-13=19
- 16) Dead + 0.6 MWFRS Wind (Neg. Internal) 1st Parallel: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=9, 2-4=4, 4-7=-6, 7-12=-15, 12-13=-10, 22-26=-20
Horz: 1-2=-29, 2-4=-24, 4-7=-14, 7-12=5, 12-13=10
- 17) Dead + 0.6 MWFRS Wind (Neg. Internal) 2nd Parallel: Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-10, 2-7=-15, 7-10=-6, 10-12=4, 12-13=9, 22-26=-20
Horz: 1-2=-10, 2-7=-5, 7-10=14, 10-12=24, 12-13=29
- 18) Dead + Uninhabitable Attic Storage: Lumber Increase=0.90, Plate Increase=0.90 Plt. metal=0.90
Uniform Loads (plf)
Vert: 1-7=-20, 7-13=-20, 22-26=-20, 34-35=-40(F)
- 19) Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) Left): Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-46, 2-7=-50, 7-12=-42, 12-13=-38, 22-26=-20, 34-35=-30(F)
Horz: 1-2=-4, 2-7=0, 7-12=8, 12-13=12
- 20) Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) Right): Lumber Increase=1.60, Plate Increase=1.60
Uniform Loads (plf)
Vert: 1-2=-38, 2-7=-42, 7-12=-50, 12-13=-46, 22-26=-20, 34-35=-30(F)
Horz: 1-2=-12, 2-7=-8, 7-12=0, 12-13=4

Continued on page 3

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

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



818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Hayden 120 Roof	158754005
MASTER120	A01A	COMMON	1	1	Job Reference (optional)	

Builders FirstSource, Apex, NC 27523

8.630 s Mar 9 2023 MiTek Industries, Inc. Tue Jun 6 09:19:52 2023 Page 3
 ID:QnmXaPRpGXrA8yoS4zaUOyfyf5FE-s?XcAKT290ZGagFizdAitiK3U7BPTkuLAP6?04z92Nr

LOAD CASE(S)

- 21) Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel): Lumber Increase=1.60, Plate Increase=1.60
 Uniform Loads (plf)
 Vert: 1-2=-28, 2-4=-32, 4-7=-40, 7-12=-46, 12-13=-43, 22-26=-20, 34-35=-30(F)
 Horz: 1-2=-22, 2-4=-18, 4-7=-10, 7-12=4, 12-13=7
- 22) Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) 2nd Parallel): Lumber Increase=1.60, Plate Increase=1.60
 Uniform Loads (plf)
 Vert: 1-2=-43, 2-7=-46, 7-10=-40, 10-12=-32, 12-13=-28, 22-26=-20, 34-35=-30(F)
 Horz: 1-2=-7, 2-7=-4, 7-10=10, 10-12=18, 12-13=22
- 23) 1st Dead + Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15
 Uniform Loads (plf)
 Vert: 1-7=-60, 7-13=-20, 22-26=-20
- 24) 2nd Dead + Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15
 Uniform Loads (plf)
 Vert: 1-7=-20, 7-13=-60, 22-26=-20
- 25) 3rd Dead + 0.75 Roof Live (unbalanced) + 0.75 Uninhab. Attic Storage: Lumber Increase=1.15, Plate Increase=1.15
 Uniform Loads (plf)
 Vert: 1-7=-50, 7-13=-20, 22-26=-20, 34-35=-30(F)
- 26) 4th Dead + 0.75 Roof Live (unbalanced) + 0.75 Uninhab. Attic Storage: Lumber Increase=1.15, Plate Increase=1.15
 Uniform Loads (plf)
 Vert: 1-7=-20, 7-13=-50, 22-26=-20, 34-35=-30(F)

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

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818 Soundside Road
 Edenton, NC 27932

Job MASTER120	Truss A01G	Truss Type GABLE	Qty 1	Ply 1	Hayden 120 Roof 158754006
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Builders FirstSource (Apex, NC), Apex, NC - 27523, 8.630 s Nov 19 2022 MiTek Industries, Inc. Tue Jun 6 07:31:05 2023 Page 1

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5x6 =

Scale = 1:64.9

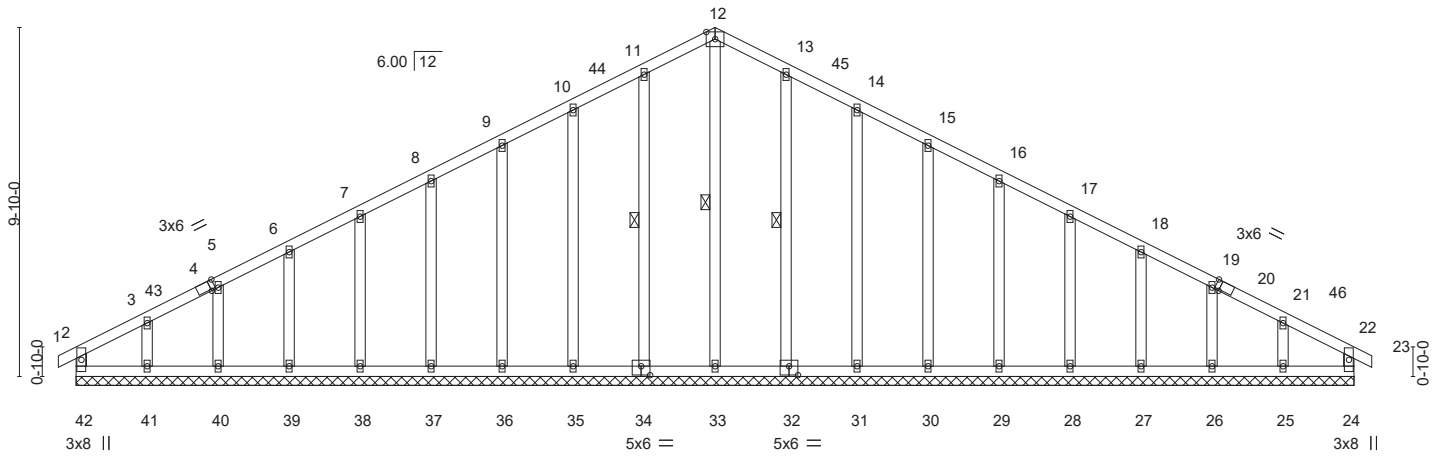


Plate Offsets (X,Y)--	[4:0-1-9,Edge], [20:0-1-9,Edge], [32:0-3-0,0-3-0], [34:0-3-0,0-3-0]
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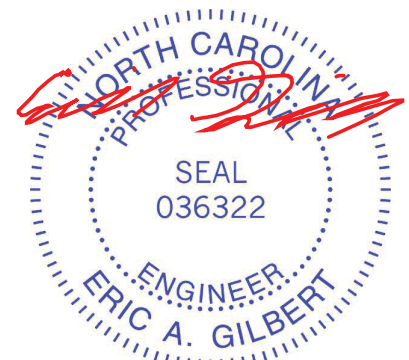
LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.09	Vert(LL)	-0.00	22	n/r	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.07	Vert(CT)	0.00	22	n/r		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.13	Horz(CT)	0.01	24	n/a		
BCDL 10.0	Code IRC2015/TP12014		Matrix-R						
								Weight: 244 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.2	WEBS 1 Row at midpt 12-33, 11-34, 13-32
OTHERS 2x4 SP No.3	

REACTIONS. All bearings 36-0-0.
 (lb) - Max Horz 42=-117(LC 13)
 Max Uplift All uplift 100 lb or less at joint(s) 42, 24, 34, 35, 36, 37, 38, 39, 40, 41, 32, 31, 30, 29, 28, 27, 26, 25
 Max Grav All reactions 250 lb or less at joint(s) 42, 24, 33, 34, 35, 36, 37, 38, 39, 40, 41, 32, 31, 30, 29, 28, 27, 26, 25

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 10-11=-101/277, 11-12=-115/313, 12-13=-115/308, 13-14=-101/271

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=32ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) -0-6-0 to 2-6-0, Exterior(2) 2-6-0 to 18-0-0, Corner(3) 18-0-0 to 21-0-0, Exterior(2) 21-0-0 to 36-6-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
 - 4) All plates are 2x4 MT20 unless otherwise indicated.
 - 5) Gable requires continuous bottom chord bearing.
 - 6) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
 - 7) Gable studs spaced at 2-0-0 oc.
 - 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - 9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
 - 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 42, 24, 34, 35, 36, 37, 38, 39, 40, 41, 32, 31, 30, 29, 28, 27, 26, 25.



June 6, 2023

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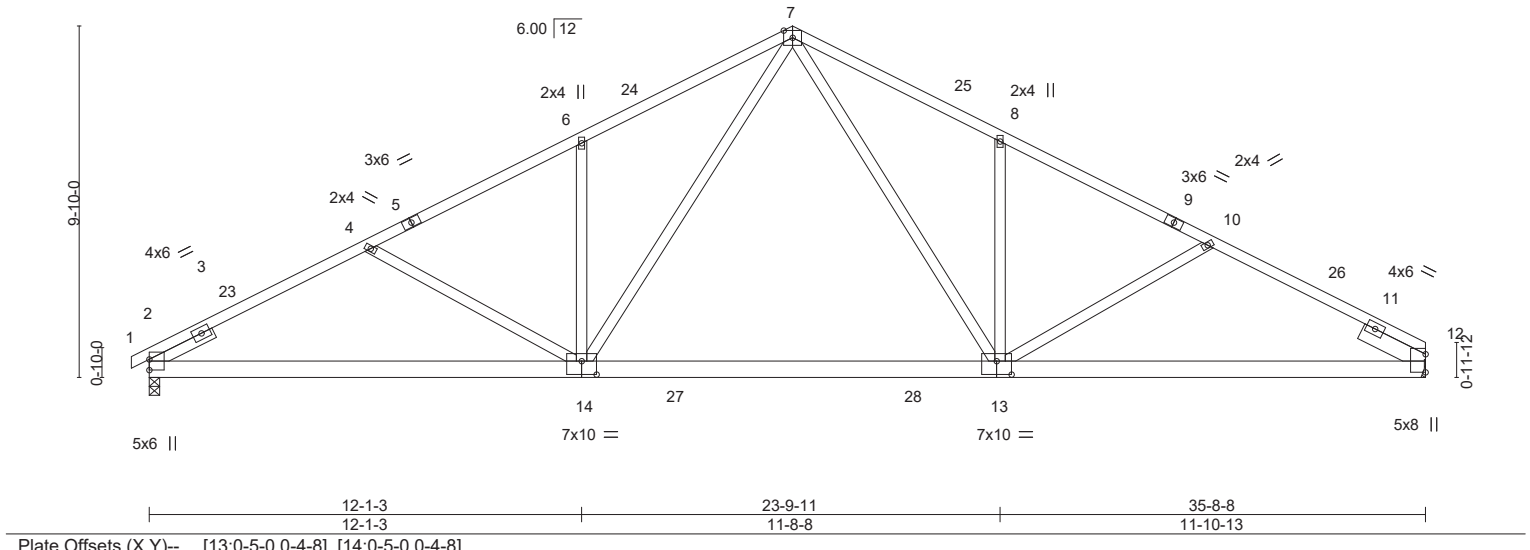
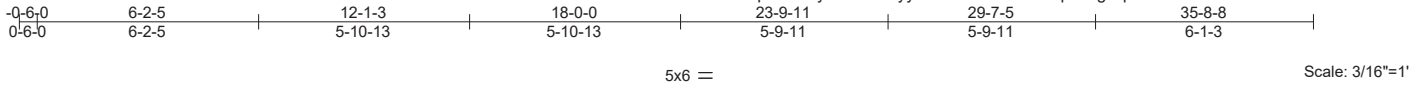
ENGINEERING BY
TRENCO
 A MITEK AFFILIATE

818 Soundside Road
 Edenton, NC 27932

Job MASTER120	Truss A02	Truss Type COMMON	Qty 1	Ply 1	Hayden 120 Roof	158754007
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Builders FirstSource (Apex, NC), Apex, NC - 27523, 8.630 s Nov 19 2022 MiTek Industries, Inc. Tue Jun 6 07:31:07 2023 Page 1

ID:QnmXaPRpGXrA8yoS4zaUOyyf5FE-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 1.00	Vert(LL)	-0.36	13-14	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.78	Vert(CT)	-0.56	13-14	>767		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.39	Horz(CT)	0.09	12	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MS	Wind(LL)	0.09	13-14	>999	Weight: 222 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3
SLIDER Left 2x4 SP No.3 1-11-12, Right 2x6 SP No.2 1-11-12

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

REACTIONS. (size) 2=0-3-8, 12=Mechanical
Max Horz 2=117(LC 12)
Max Uplift 2=-3(LC 12)
Max Grav 2=1459(LC 1), 12=1428(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-4=-2390/198, 4-6=-2105/166, 6-7=-2121/259, 7-8=-2072/256, 8-10=-2059/169, 10-12=-2314/199
BOT CHORD 2-14=-109/2076, 13-14=0/1340, 12-13=-103/1996
WEBS 4-14=-315/138, 6-14=-402/164, 7-14=-81/937, 7-13=-76/888, 8-13=-400/162, 10-13=-274/135

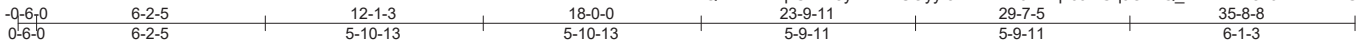
- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=32ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-6-0 to 2-6-0, Interior(1) 2-6-0 to 18-0-0, Exterior(2) 18-0-0 to 22-2-15, Interior(1) 22-2-15 to 35-8-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
 - Refer to girder(s) for truss to truss connections.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2.



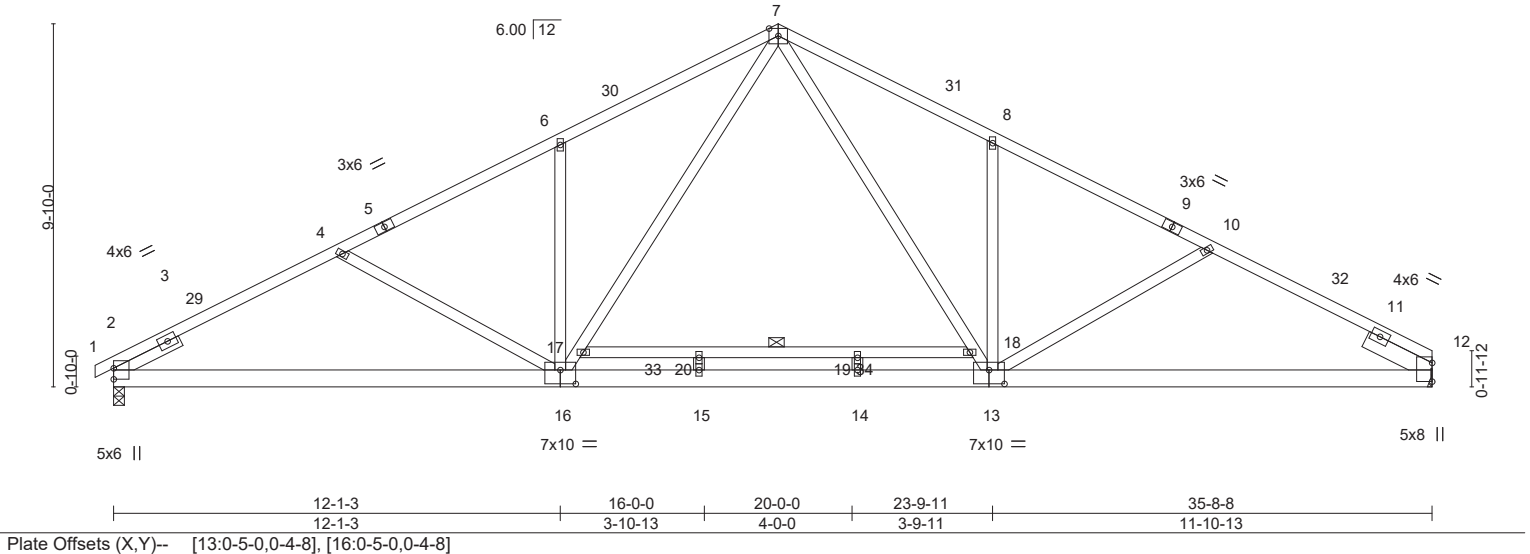
Job MASTER120	Truss A02A	Truss Type COMMON	Qty 1	Ply 1	Hayden 120 Roof	158754008
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Builders FirstSource, Apex, NC 27523

8.630 s Mar 9 2023 MiTek Industries, Inc. Tue Jun 6 09:20:06 2023 Page 1
 ID:QnmXaPRpGXRa8yoS4zaUOyyf5FE-RiNv6WeqsJHGqJOnaQ_SfwTEnz8k6ePPaVIVGz92Nd



Scale = 1:62.4



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.82	Vert(LL)	-0.30	14-15	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.83	Vert(CT)	-0.48	14-15	>890		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.75	Horz(CT)	0.08	12	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MS	Wind(LL)	0.08	14-15	>999		
								Weight: 238 lb	FT = 20%

LUMBER-

TOP CHORD 2x4 SP No.2 *Except*
 9-12: 2x4 SP No.1
 BOT CHORD 2x6 SP No.2
 WEBS 2x4 SP No.3
 SLIDER Left 2x4 SP No.3 1-11-12, Right 2x6 SP No.2 1-11-12

BRACING-

TOP CHORD Structural wood sheathing directly applied or 2-9-3 oc purlins.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
 WEBS 1 Row at midpt 17-18

REACTIONS. (lb/size) 2=1459/0-3-8 (min. 0-1-12), 12=1428/Mechanical
 Max Horz 2=117(LC 12)
 Max Uplift 2=-3(LC 12)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 2-3=-1039/0, 3-29=-2388/174, 4-29=-2363/199, 4-5=-2102/141, 5-6=-2030/166,
 6-30=-2118/231, 7-30=-2030/260, 7-31=-1982/257, 8-31=-2069/229, 8-9=-1989/169,
 9-10=-2057/140, 10-32=-2272/199, 11-32=-2312/175, 11-12=-841/0
 BOT CHORD 2-16=-110/2075, 15-16=0/1362, 14-15=0/1362, 13-14=0/1362, 12-13=-103/1994
 WEBS 4-16=-316/138, 6-16=-401/164, 16-17=-81/908, 7-17=-81/920, 7-18=-77/868,
 13-18=-76/844, 8-13=-398/161, 10-13=-276/135

NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=32ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-6-0 to 2-6-0, Interior(1) 2-6-0 to 18-0-0, Exterior(2) 18-0-0 to 22-2-15, Interior(1) 22-2-15 to 35-8-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- All plates are 2x4 MT20 unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 3 lb uplift at joint 2.
- 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.
- N/A
- In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S)

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
 Uniform Loads (plf)
 Vert: 1-7=-60, 7-12=-60, 21-25=-20



Continued on page 2

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818 Soundside Road
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Hayden 120 Roof	158754008
MASTER120	A02A	COMMON	1	1	Job Reference (optional)	

Builders FirstSource, Apex, NC 27523

8.630 s Mar 9 2023 MiTek Industries, Inc. Tue Jun 6 09:20:07 2023 Page 2
 ID:QnmXaPRpGXrA8yoS4zaUOyyf5FE-vuxHJsfSddR8tzbLHxD_tSe_AJNTZuYdEEI2iz92Nc

LOAD CASE(S)

- 2) Dead + 0.75 Roof Live (balanced) + 0.75 Uninhab. Attic Storage: Lumber Increase=1.15, Plate Increase=1.15
 Uniform Loads (plf)
 Vert: 1-7=-50, 7-12=-50, 21-25=-20, 33-34=-30(F)
- 3) Dead + Uninhabitable Attic Without Storage: Lumber Increase=1.25, Plate Increase=1.25
 Uniform Loads (plf)
 Vert: 1-7=-20, 7-12=-20, 21-25=-40, 33-34=-40(F)
- 4) Dead + 0.6 C-C Wind (Pos. Internal) Case 1: Lumber Increase=1.60, Plate Increase=1.60
 Uniform Loads (plf)
 Vert: 1-2=47, 2-29=25, 7-29=14, 7-31=25, 12-31=14, 21-25=-12
 Horz: 1-2=-59, 2-29=-37, 7-29=-26, 7-31=37, 12-31=26
- 5) Dead + 0.6 C-C Wind (Pos. Internal) Case 2: Lumber Increase=1.60, Plate Increase=1.60
 Uniform Loads (plf)
 Vert: 1-2=9, 2-30=14, 7-30=25, 7-32=14, 12-32=25, 21-25=-12
 Horz: 1-2=-21, 2-30=-26, 7-30=-37, 7-32=26, 12-32=37
- 6) Dead + 0.6 C-C Wind (Neg. Internal) Case 1: Lumber Increase=1.60, Plate Increase=1.60
 Uniform Loads (plf)
 Vert: 1-2=-12, 2-7=-33, 7-12=-33, 21-25=-20
 Horz: 1-2=-8, 2-7=13, 7-12=-13
- 7) Dead + 0.6 C-C Wind (Neg. Internal) Case 2: Lumber Increase=1.60, Plate Increase=1.60
 Uniform Loads (plf)
 Vert: 1-2=-28, 2-7=-33, 7-12=-33, 21-25=-20
 Horz: 1-2=8, 2-7=13, 7-12=-13
- 8) Dead + 0.6 MWFRS Wind (Pos. Internal) Left: Lumber Increase=1.60, Plate Increase=1.60
 Uniform Loads (plf)
 Vert: 1-2=9, 2-7=-2, 7-12=9, 21-25=-12
 Horz: 1-2=-21, 2-7=-10, 7-12=21
- 9) Dead + 0.6 MWFRS Wind (Pos. Internal) Right: Lumber Increase=1.60, Plate Increase=1.60
 Uniform Loads (plf)
 Vert: 1-2=4, 2-7=9, 7-12=-2, 21-25=-12
 Horz: 1-2=-16, 2-7=-21, 7-12=10
- 10) Dead + 0.6 MWFRS Wind (Neg. Internal) Left: Lumber Increase=1.60, Plate Increase=1.60
 Uniform Loads (plf)
 Vert: 1-2=-15, 2-7=-20, 7-12=-9, 21-25=-20
 Horz: 1-2=-5, 2-7=0, 7-12=11
- 11) Dead + 0.6 MWFRS Wind (Neg. Internal) Right: Lumber Increase=1.60, Plate Increase=1.60
 Uniform Loads (plf)
 Vert: 1-2=-4, 2-7=9, 7-12=-20, 21-25=-20
 Horz: 1-2=-16, 2-7=-11, 7-12=0
- 12) Dead + 0.6 MWFRS Wind (Pos. Internal) 1st Parallel: Lumber Increase=1.60, Plate Increase=1.60
 Uniform Loads (plf)
 Vert: 1-2=17, 2-4=22, 4-7=11, 7-12=3, 21-25=-12
 Horz: 1-2=-29, 2-4=-34, 4-7=-23, 7-12=15
- 13) Dead + 0.6 MWFRS Wind (Pos. Internal) 2nd Parallel: Lumber Increase=1.60, Plate Increase=1.60
 Uniform Loads (plf)
 Vert: 1-2=-2, 2-7=3, 7-10=11, 10-12=22, 21-25=-12
 Horz: 1-2=-10, 2-7=-15, 7-10=23, 10-12=34
- 14) Dead + 0.6 MWFRS Wind (Pos. Internal) 3rd Parallel: Lumber Increase=1.60, Plate Increase=1.60
 Uniform Loads (plf)
 Vert: 1-2=7, 2-7=11, 7-12=3, 21-25=-12
 Horz: 1-2=-19, 2-7=-23, 7-12=15
- 15) Dead + 0.6 MWFRS Wind (Pos. Internal) 4th Parallel: Lumber Increase=1.60, Plate Increase=1.60
 Uniform Loads (plf)
 Vert: 1-2=-2, 2-7=3, 7-12=11, 21-25=-12
 Horz: 1-2=-10, 2-7=-15, 7-12=23
- 16) Dead + 0.6 MWFRS Wind (Neg. Internal) 1st Parallel: Lumber Increase=1.60, Plate Increase=1.60
 Uniform Loads (plf)
 Vert: 1-2=9, 2-4=4, 4-7=-6, 7-12=-15, 21-25=-20
 Horz: 1-2=-29, 2-4=-24, 4-7=-14, 7-12=5
- 17) Dead + 0.6 MWFRS Wind (Neg. Internal) 2nd Parallel: Lumber Increase=1.60, Plate Increase=1.60
 Uniform Loads (plf)
 Vert: 1-2=-10, 2-7=-15, 7-10=-6, 10-12=4, 21-25=-20
 Horz: 1-2=-10, 2-7=-5, 7-10=14, 10-12=24
- 18) Dead + Uninhabitable Attic Storage: Lumber Increase=0.90, Plate Increase=0.90 Plt. metal=0.90
 Uniform Loads (plf)
 Vert: 1-7=-20, 7-12=-20, 21-25=-20, 33-34=-40(F)
- 19) Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) Left): Lumber Increase=1.60, Plate Increase=1.60
 Uniform Loads (plf)
 Vert: 1-2=-46, 2-7=-50, 7-12=-42, 21-25=-20, 33-34=-30(F)
 Horz: 1-2=-4, 2-7=0, 7-12=8
- 20) Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) Right): Lumber Increase=1.60, Plate Increase=1.60
 Uniform Loads (plf)
 Vert: 1-2=-38, 2-7=-42, 7-12=-50, 21-25=-20, 33-34=-30(F)
 Horz: 1-2=-12, 2-7=-8, 7-12=0

Continued on page 3

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818 Soundside Road
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Hayden 120 Roof	158754008
MASTER120	A02A	COMMON	1	1	Job Reference (optional)	

Builders FirstSource, Apex, NC 27523

8.630 s Mar 9 2023 MiTek Industries, Inc. Tue Jun 6 09:20:07 2023 Page 3
 ID:QnmXaPRpGXrA8yoS4zaUOyyf5FE-vuxHJsfSddR8tzubLHxD_tSe_AJNTZuYdEEI2iz92Nc

LOAD CASE(S)

- 21) Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel): Lumber Increase=1.60, Plate Increase=1.60
 Uniform Loads (plf)
 Vert: 1-2=-28, 2-4=-32, 4-7=-40, 7-12=-46, 21-25=-20, 33-34=-30(F)
 Horz: 1-2=-22, 2-4=-18, 4-7=-10, 7-12=4
- 22) Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) 2nd Parallel): Lumber Increase=1.60, Plate Increase=1.60
 Uniform Loads (plf)
 Vert: 1-2=-43, 2-7=-46, 7-10=-40, 10-12=-32, 21-25=-20, 33-34=-30(F)
 Horz: 1-2=-7, 2-7=-4, 7-10=10, 10-12=18
- 23) 1st Dead + Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15
 Uniform Loads (plf)
 Vert: 1-7=-60, 7-12=-20, 21-25=-20
- 24) 2nd Dead + Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15
 Uniform Loads (plf)
 Vert: 1-7=-20, 7-12=-60, 21-25=-20
- 25) 3rd Dead + 0.75 Roof Live (unbalanced) + 0.75 Uninhab. Attic Storage: Lumber Increase=1.15, Plate Increase=1.15
 Uniform Loads (plf)
 Vert: 1-7=-50, 7-12=-20, 21-25=-20, 33-34=-30(F)
- 26) 4th Dead + 0.75 Roof Live (unbalanced) + 0.75 Uninhab. Attic Storage: Lumber Increase=1.15, Plate Increase=1.15
 Uniform Loads (plf)
 Vert: 1-7=-20, 7-12=-50, 21-25=-20, 33-34=-30(F)

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818 Soundside Road
 Edenton, NC 27932

Job MASTER120	Truss A02G	Truss Type GABLE	Qty 1	Ply 1	Hayden 120 Roof Job Reference (optional)	158754009
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Builders FirstSource (Apex, NC), Apex, NC - 27523,

8.630 s Nov 19 2022 MiTek Industries, Inc. Tue Jun 6 07:31:10 2023 Page 1

ID:QnmXaPRpGXrA8yoS4zaUOyyf5FE-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

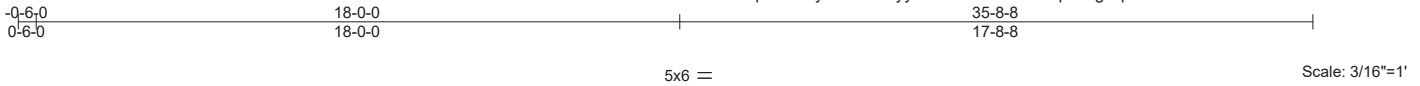


Plate Offsets (X, Y)--	[4:0-1-9,Edge], [20:0-1-9,Edge], [32:0-2-8,0-1-8], [34:0-3-0,0-3-0]
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LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.10	Vert(LL)	-0.00	1	n/r	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.07	Vert(CT)	-0.00	1	n/r		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.13	Horz(CT)	0.00	23	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-R						
								Weight: 243 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.2 *Except*	WEBS 1 Row at midpt 12-33, 11-34, 13-31
OTHERS 22-23: 2x4 SP No.3	
OTHERS 2x4 SP No.3	

REACTIONS. All bearings 35-8-8.
 (lb) - Max Horz 42=122(LC 12)
 Max Uplift All uplift 100 lb or less at joint(s) 42, 23, 34, 35, 36, 37, 38, 39, 40, 31, 30, 29, 28, 27, 26, 25, 24 except 41=101(LC 12)
 Max Grav All reactions 250 lb or less at joint(s) 42, 23, 33, 34, 35, 36, 37, 38, 39, 40, 41, 31, 30, 29, 28, 27, 26, 25, 24

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 10-11=-103/282, 11-12=-117/318, 12-13=-117/309, 13-14=-104/273

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=32ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) -0-6-0 to 2-6-0, Exterior(2) 2-6-0 to 18-0-0, Corner(3) 18-0-0 to 21-0-0, Exterior(2) 21-0-0 to 35-6-12 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - 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 2x4 MT20 unless otherwise indicated.
 - 5) Gable requires continuous bottom chord bearing.
 - 6) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
 - 7) Gable studs spaced at 2-0-0 oc.
 - 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - 9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
 - 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 42, 23, 34, 35, 36, 37, 38, 39, 40, 31, 30, 29, 28, 27, 26, 25, 24 except (jt=lb) 41=101.



Job MASTER120	Truss B01	Truss Type COMMON	Qty 1	Ply 1	Hayden 120 Roof	158754010
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Builders FirstSource (Apex, NC), Apex, NC - 27523, 8.630 s Nov 19 2022 MiTek Industries, Inc. Tue Jun 6 07:31:12 2023 Page 1

ID:QnmXaPRpGXrA8yoS4zaUOyyf5FE-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

-0-6-0 0-6-0	5-4-12 5-4-12	10-6-0 5-1-4	15-7-4 5-1-4	21-0-0 5-4-12	21-6-0 0-6-0
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4x6 =

Scale = 1:39.6

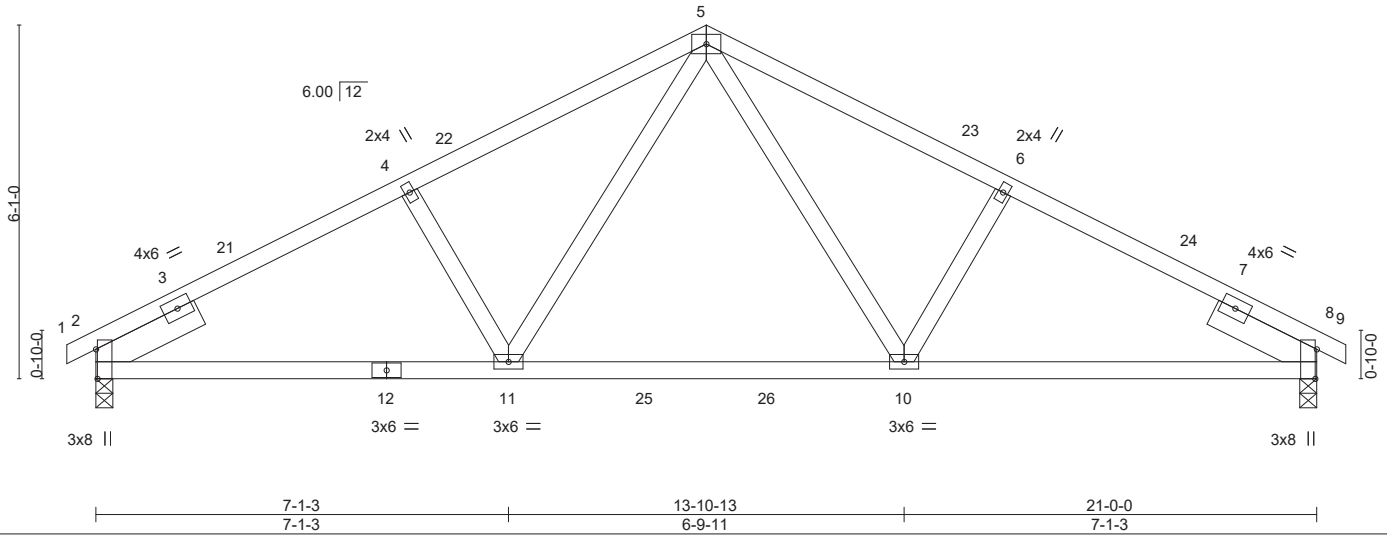


Plate Offsets (X,Y)--	[2:0-6-1,Edge], [8:0-6-1,Edge]				
LOADING (psf)	SPACING- 2-0-0	CSI.	DEFL. in (loc) l/defl L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.15	TC 0.40	Vert(LL) -0.11 10-11 >999 360	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.50	Vert(CT) -0.19 10-11 >999 240		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.17	Horz(CT) 0.04 8 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-MS	Wind(LL) 0.03 10-11 >999 240	Weight: 107 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 4-7-0 oc purlins.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3	
SLIDER Left 2x6 SP No.2 1-11-12, Right 2x6 SP No.2 1-11-12	

REACTIONS. (size) 2=0-3-8, 8=0-3-8
 Max Horz 2=82(LC 12)
 Max Uplift 2=-23(LC 12), 8=-23(LC 13)
 Max Grav 2=870(LC 1), 8=870(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 2-4=-1250/131, 4-5=-1137/154, 5-6=-1137/154, 6-8=-1250/131
 BOT CHORD 2-11=-58/1066, 10-11=0/768, 8-10=-58/1066
 WEBS 5-10=-44/401, 6-10=-250/129, 5-11=-44/401, 4-11=-250/129

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=32ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-6-0 to 2-6-0, Interior(1) 2-6-0 to 10-6-0, Exterior(2) 10-6-0 to 14-8-15, Interior(1) 14-8-15 to 21-6-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - 3) 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 3-6-0 tall by 2-0-0 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 100 lb uplift at joint(s) 2, 8.



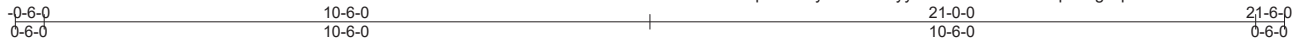
Job MASTER120	Truss B01G	Truss Type GABLE	Qty 1	Ply 1	Hayden 120 Roof	158754011
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Builders FirstSource (Apex, NC),

Apex, NC - 27523,

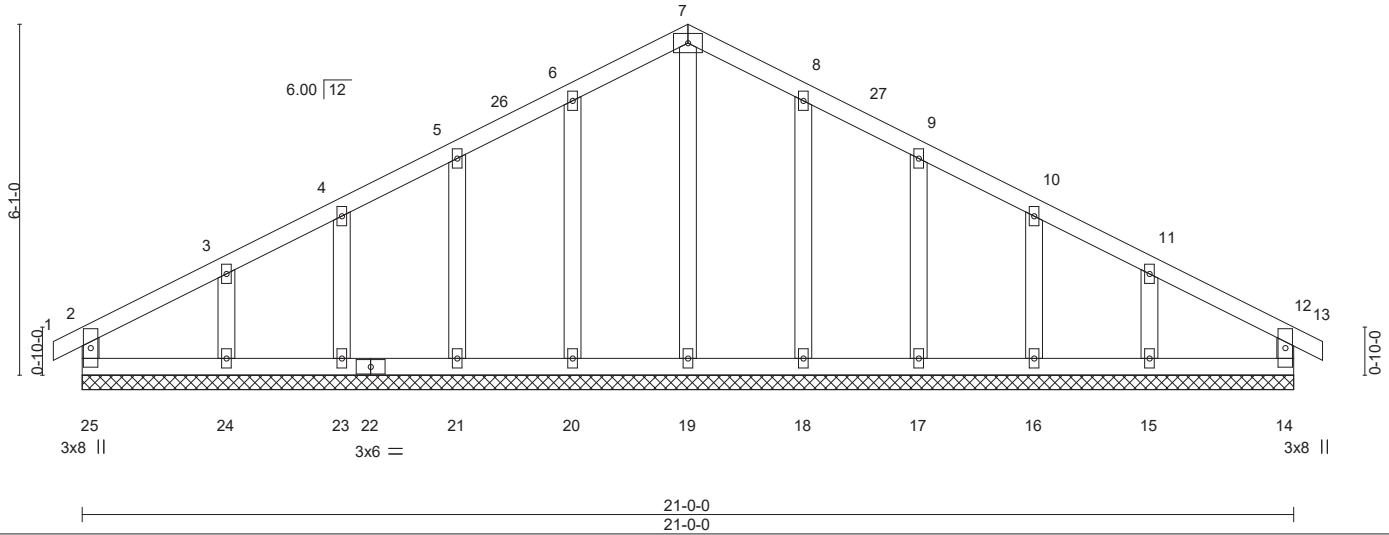
8.630 s Nov 19 2022 MiTek Industries, Inc. Tue Jun 6 07:31:13 2023 Page 1

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4x6 =

Scale = 1:39.9



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.06	Vert(LL)	0.00	12	n/r	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.05	Vert(CT)	0.00	12	n/r		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.07	Horz(CT)	0.00	14	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-R						
								Weight: 114 lb	FT = 20%

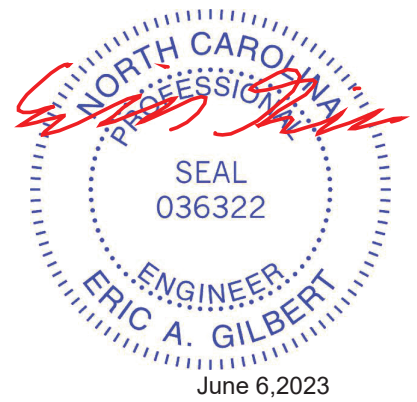
LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.2	
OTHERS 2x4 SP No.3	

REACTIONS. All bearings 21-0-0.
 (lb) - Max Horz 25=77(LC 11)
 Max Uplift All uplift 100 lb or less at joint(s) 25, 14, 20, 21, 23, 24, 18, 17, 16, 15
 Max Grav All reactions 250 lb or less at joint(s) 25, 14, 19, 20, 21, 23, 24, 18, 17, 16, 15

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=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=32ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) 0-6-0 to 2-6-0, Exterior(2) 2-6-0 to 10-6-0, Corner(3) 10-6-0 to 13-6-0, Exterior(2) 13-6-0 to 21-6-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) All plates are 2x4 MT20 unless otherwise indicated.
- 5) Gable requires continuous bottom chord bearing.
- 6) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 7) Gable studs spaced at 2-0-0 oc.
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 25, 14, 20, 21, 23, 24, 18, 17, 16, 15.



Job MASTER120	Truss B01GR	Truss Type COMMON	Qty 1	Ply 3	Hayden 120 Roof	I58754012
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Builders FirstSource (Apex, NC), Apex, NC - 27523, 8.630 s Nov 19 2022 MiTek Industries, Inc. Tue Jun 6 07:31:15 2023 Page 1

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4x6 ||

Scale = 1:39.1

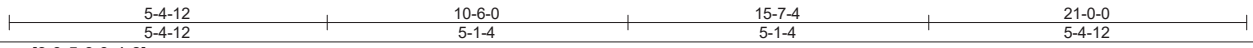
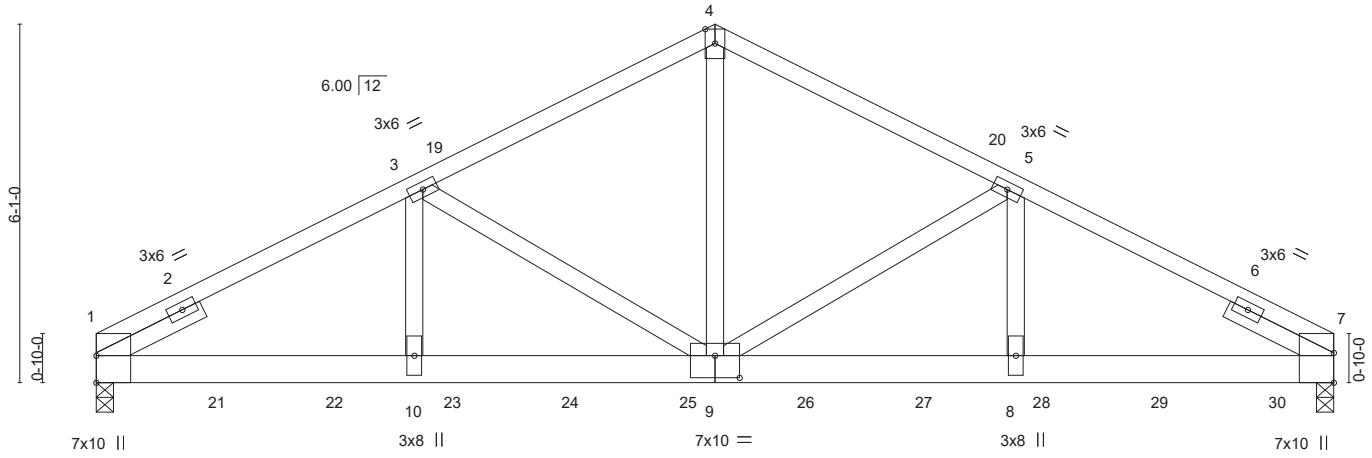


Plate Offsets (X, Y)-- [9:0-5-0,0-4-8]

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.97	Vert(LL)	-0.13	9-10	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.60	Vert(CT)	-0.26	9-10	>983		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.61	Horz(CT)	0.06	7	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MS	Wind(LL)	0.01	9	>999		
								Weight: 369 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 4-0-8 oc purlins.
BOT CHORD 2x6 SP DSS	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3 *Except*	
4-9: 2x4 SP No.2	
SLIDER Left 2x4 SP No.2 1-11-12, Right 2x4 SP No.2 1-11-12	

REACTIONS. (size) 1=0-3-8, 7=0-3-8
 Max Horz 1=76(LC 8)
 Max Grav 1=7473(LC 1), 7=8226(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 1-3=-11837/0, 3-4=-8886/0, 4-5=-8888/0, 5-7=-11934/0
 BOT CHORD 1-10=0/10470, 9-10=0/10470, 8-9=0/10563, 7-8=0/10563
 WEBS 4-9=0/7486, 5-9=-3131/0, 5-8=0/2919, 3-9=-3022/0, 3-10=0/2834

- NOTES-**
- 3-ply truss to be connected together with 10d (0.131"x3") nails as follows:
 Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
 Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-5-0 oc.
 Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
 - All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
 - Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=32ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
 - Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1402 lb down at 2-0-12, 1402 lb down at 4-0-12, 1402 lb down at 6-0-12, 1402 lb down at 8-0-12, 1402 lb down at 10-0-12, 1402 lb down at 12-0-12, 1402 lb down at 14-0-12, 1402 lb down at 16-0-12, and 1402 lb down at 18-0-12, and 1404 lb down at 20-0-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard
 1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
 Uniform Loads (plf)
 Vert: 1-4=-60, 4-7=-60, 11-15=-20



Continued on page 2

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

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

Job MASTER120	Truss B01GR	Truss Type COMMON	Qty 1	Ply 3	Hayden 120 Roof Job Reference (optional)	I58754012
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Builders FirstSource (Apex, NC), Apex, NC - 27523,

8.630 s Nov 19 2022 MiTek Industries, Inc. Tue Jun 6 07:31:15 2023 Page 2
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LOAD CASE(S) Standard

Concentrated Loads (lb)

Vert: 21=-1402(B) 22=-1402(B) 23=-1402(B) 24=-1402(B) 25=-1402(B) 26=-1402(B) 27=-1402(B) 28=-1402(B) 29=-1402(B) 30=-1404(B)

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

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



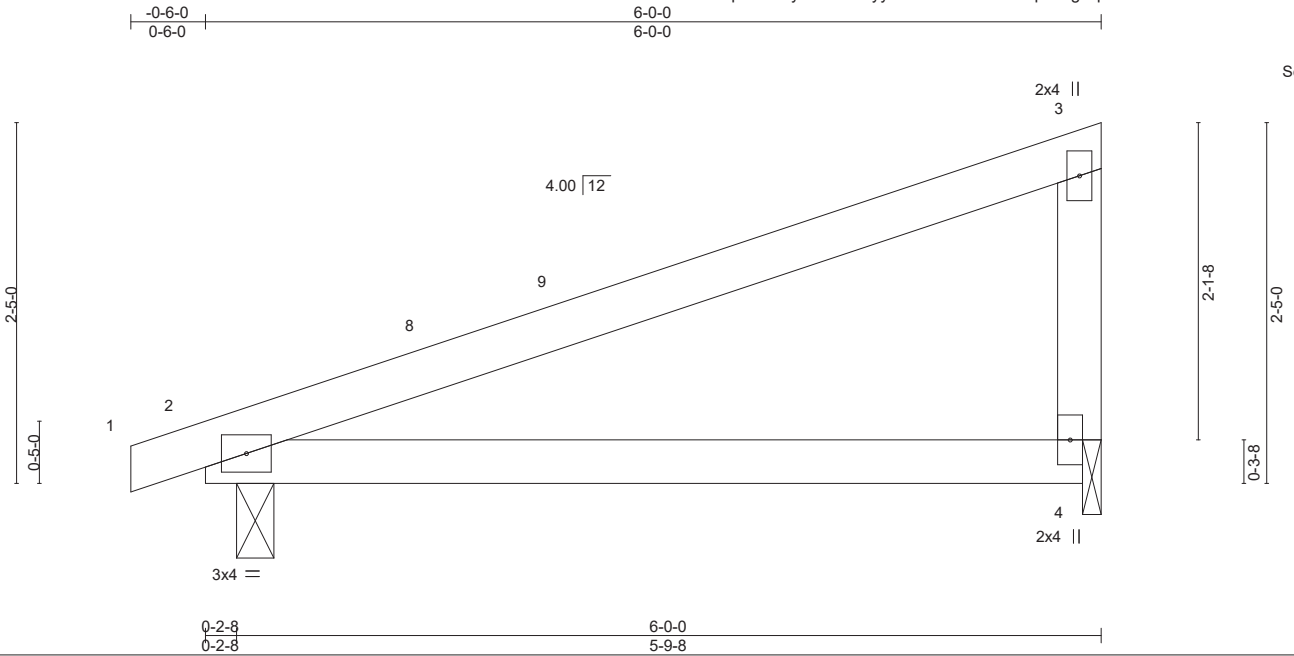
818 Soundside Road
Edenton, NC 27932

Job MASTER120	Truss P02	Truss Type JACK	Qty 1	Ply 1	Hayden 120 Roof	158754015
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Builders FirstSource (Apex, NC), Apex, NC - 27523,

8.630 s Nov 19 2022 MiTek Industries, Inc. Tue Jun 6 07:31:18 2023 Page 1

ID:QnmXaPRpGXrA8yoS4zaUOyyf5FE-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCdoi7J4zJC?f



LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.53	Vert(LL)	-0.05 4-7	>999	360	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.41	Vert(CT)	-0.12 4-7	>570	240		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.00	Horz(CT)	0.01 2	n/a	n/a		
BCDL 10.0	Rep Stress Incr YES	Matrix-MP	Wind(LL)	0.05 4-7	>999	240	Weight: 22 lb	FT = 20%
	Code IRC2015/TPI2014							

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3	

REACTIONS. (size) 2=0-3-0, 4=0-1-8
 Max Horz 2=77(LC 11)
 Max Uplift 2=39(LC 8), 4=34(LC 12)
 Max Grav 2=265(LC 1), 4=233(LC 1)

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

- NOTES-**
- 1) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=32ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-6-0 to 2-6-0, Interior(1) 2-6-0 to 5-10-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - 2) 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 3-6-0 tall by 2-0-0 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 4.



Job MASTER120	Truss P02G	Truss Type GABLE	Qty 1	Ply 1	Hayden 120 Roof Job Reference (optional)	158754016
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Builders FirstSource (Apex, NC),

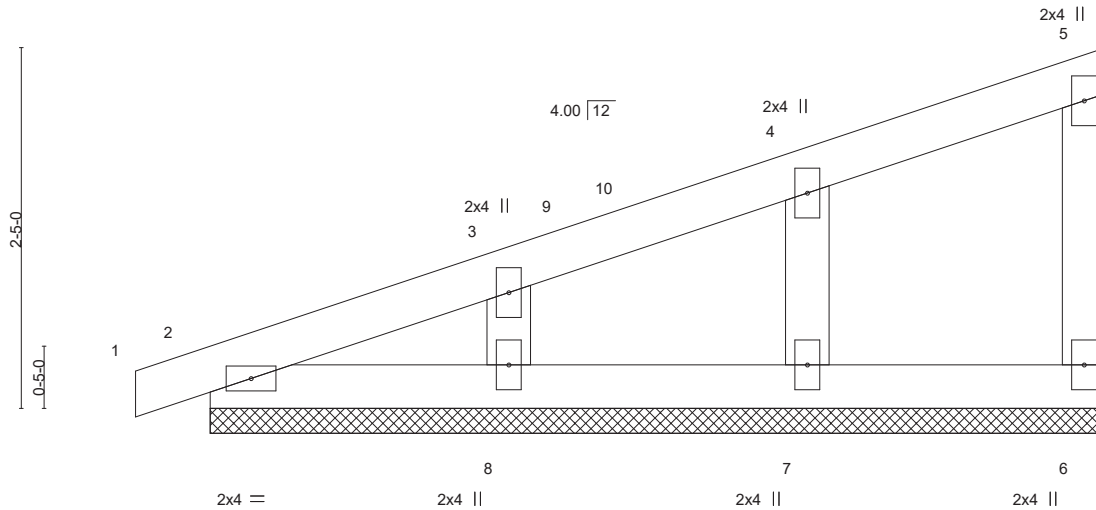
Apex, NC - 27523,

8.630 s Nov 19 2022 MiTek Industries, Inc. Tue Jun 6 07:31:19 2023 Page 1

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Scale = 1:15.4



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP	
TCLL 20.0	Plate Grip DOL	1.15	TC 0.07	Vert(LL)	-0.00	1	n/r	120	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.04	Vert(CT)	0.00	1	n/r	120		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.04	Horz(CT)	0.00	6	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-P						Weight: 25 lb	FT = 20%

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

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

REACTIONS. All bearings 6-0-0.
 (lb) - Max Horz 2=77(LC 9)
 Max Uplift All uplift 100 lb or less at joint(s) 6, 2, 7, 8
 Max Grav All reactions 250 lb or less at joint(s) 6, 2, 7, 8

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

NOTES-

- 1) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=32ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) -0-6-0 to 2-6-0, Exterior(2) 2-6-0 to 5-10-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) Gable requires continuous bottom chord bearing.
- 4) Gable studs spaced at 2-0-0 oc.
- 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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 6, 2, 7, 8.



June 6, 2023

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

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

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

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



818 Soundside Road
 Edenton, NC 27932

Job MASTER120	Truss P03G	Truss Type GABLE	Qty 1	Ply 1	Hayden 120 Roof Job Reference (optional)	158754017
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Builders FirstSource (Apex, NC),

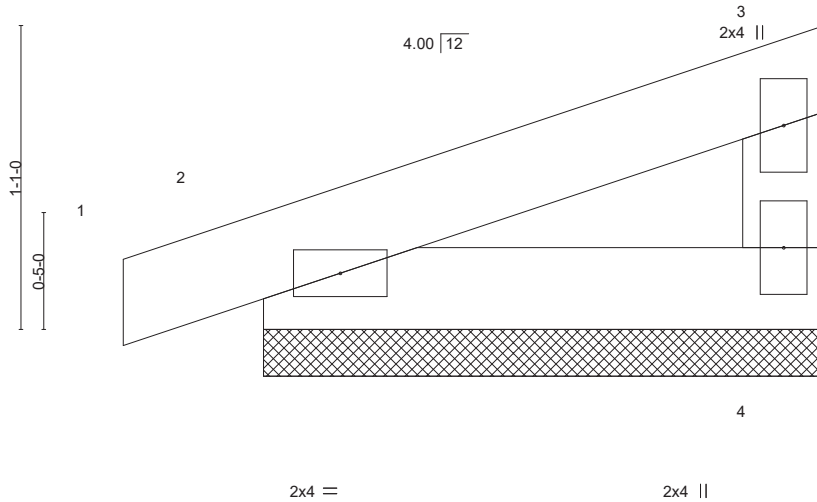
Apex, NC - 27523,

8.630 s Nov 19 2022 MiTek Industries, Inc. Tue Jun 6 07:31:20 2023 Page 1

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Scale = 1:8.2



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP	
TCLL 20.0	Plate Grip DOL	1.15	TC 0.05	Vert(LL)	-0.00	1	n/r	120	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.04	Vert(CT)	0.00	1	n/r	120		
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-P						Weight: 8 lb	FT = 20%

LUMBER-

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

BRACING-

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

REACTIONS.

(size) 4=2-0-0, 2=2-0-0
 Max Horz 2=28(LC 9)
 Max Uplift 4=-10(LC 12), 2=-25(LC 8)
 Max Grav 4=70(LC 1), 2=108(LC 1)

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

NOTES-

- 1) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=32ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) Gable requires continuous bottom chord bearing.
- 4) Gable studs spaced at 1-4-0 oc.
- 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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4, 2.



June 6, 2023

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

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

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

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



818 Soundside Road
 Edenton, NC 27932

Job MASTER120	Truss V05	Truss Type GABLE	Qty 1	Ply 1	Hayden 120 Roof Job Reference (optional)	158754018
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Builders FirstSource (Apex, NC),

Apex, NC - 27523,

8.630 s Nov 19 2022 MiTek Industries, Inc. Tue Jun 6 07:31:21 2023 Page 1

ID:QnmXaPRpGXrA8yoS4zaUOyyf5FE-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

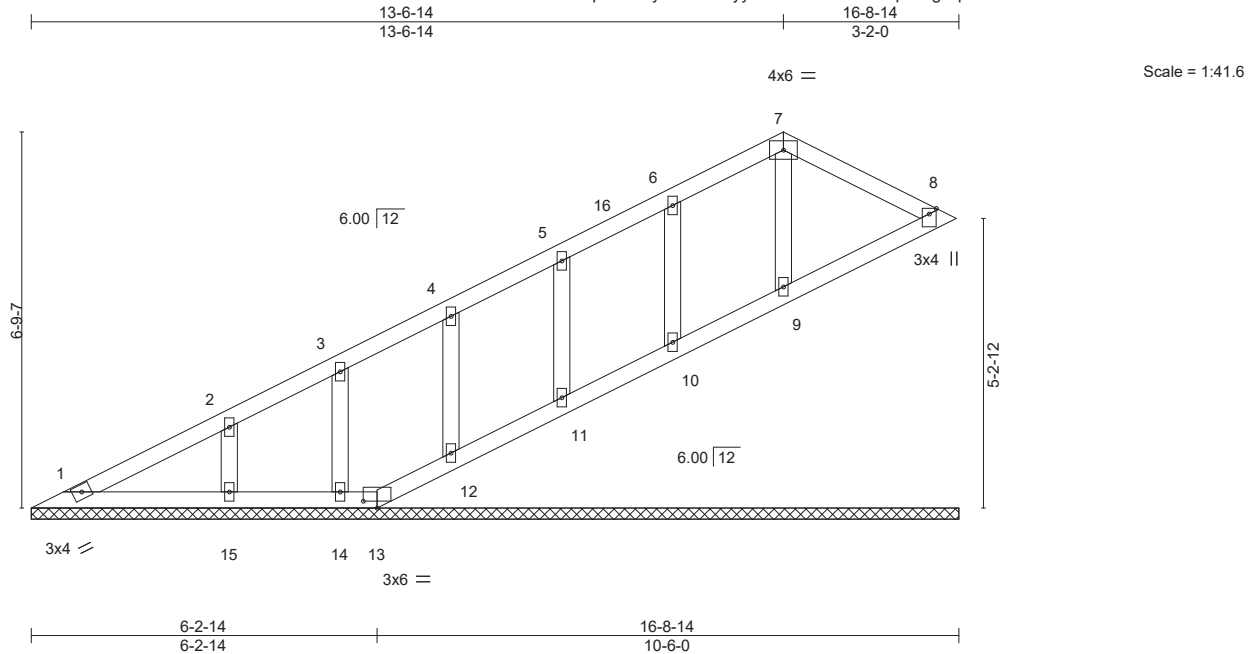


Plate Offsets (X,Y)--	[13:0-3-0,0-1-8]						
LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d
TCLL 20.0	Plate Grip DOL	1.15	TC 0.10	Vert(LL)	n/a	-	n/a 999
TCDL 10.0	Lumber DOL	1.15	BC 0.07	Vert(CT)	n/a	-	n/a 999
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.04	Horz(CT)	-0.00	8	n/a n/a
BCDL 10.0	Code	IRC2015/TPI2014	Matrix-S				
							PLATES
							MT20
							GRIP
							244/190
							Weight: 74 lb
							FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
OTHERS 2x4 SP No.3	

REACTIONS. All bearings 16-8-14.
 (lb) - Max Horz 1=191(LC 12)
 Max Uplift All uplift 100 lb or less at joint(s) 8, 10, 11, 12, 14, 15
 Max Grav All reactions 250 lb or less at joint(s) 1, 8, 13, 9, 10, 11, 12, 14, 15

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

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=32ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-7-7 to 3-6-14, Interior(1) 3-6-14 to 13-6-14, Exterior(2) 13-6-14 to 16-4-7 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - All plates are 2x4 MT20 unless otherwise indicated.
 - Gable requires continuous bottom chord bearing.
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 8, 10, 11, 12, 14, 15.
 - Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 8, 9, 10, 11, 12.

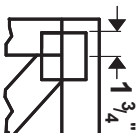


June 6, 2023

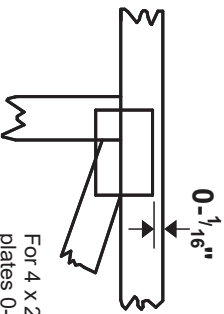
<p>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.</p> <p>Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601</p>	<p>ENGINEERING BY</p> <p>TRENCO</p> <p>A MiTek Affiliate</p> <p>818 Soundside Road Edenton, NC 27932</p>
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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

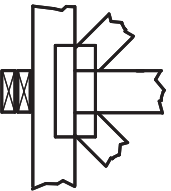
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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



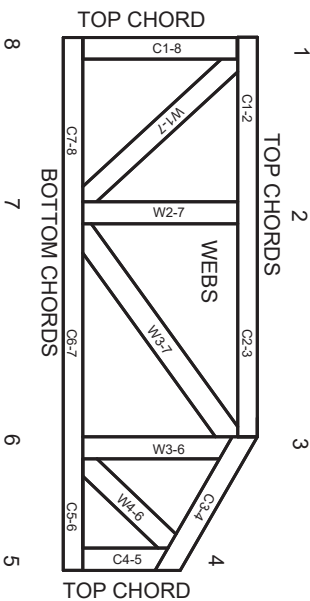
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TFP 1: 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

6-4-8
dimensions shown in ft-in-sixteenths
(Drawings not to scale)



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

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

PRODUCT CODE APPROVALS

ICC-ES Reports:

ESR-1311, ESR-1352, ESR1988
ER-3907, ESR-2362, ESR-1397, ESR-3282

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

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

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MITek Engineering Reference Sheet: MIL-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/TFP 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TFP 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. Rewriting pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TFP 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.