

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: MasterR-120
Chesapeake 307D:Lot171 NeillsCreek

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: I64206481 thru I64206485

My license renewal date for the state of North Carolina is December 31, 2024.

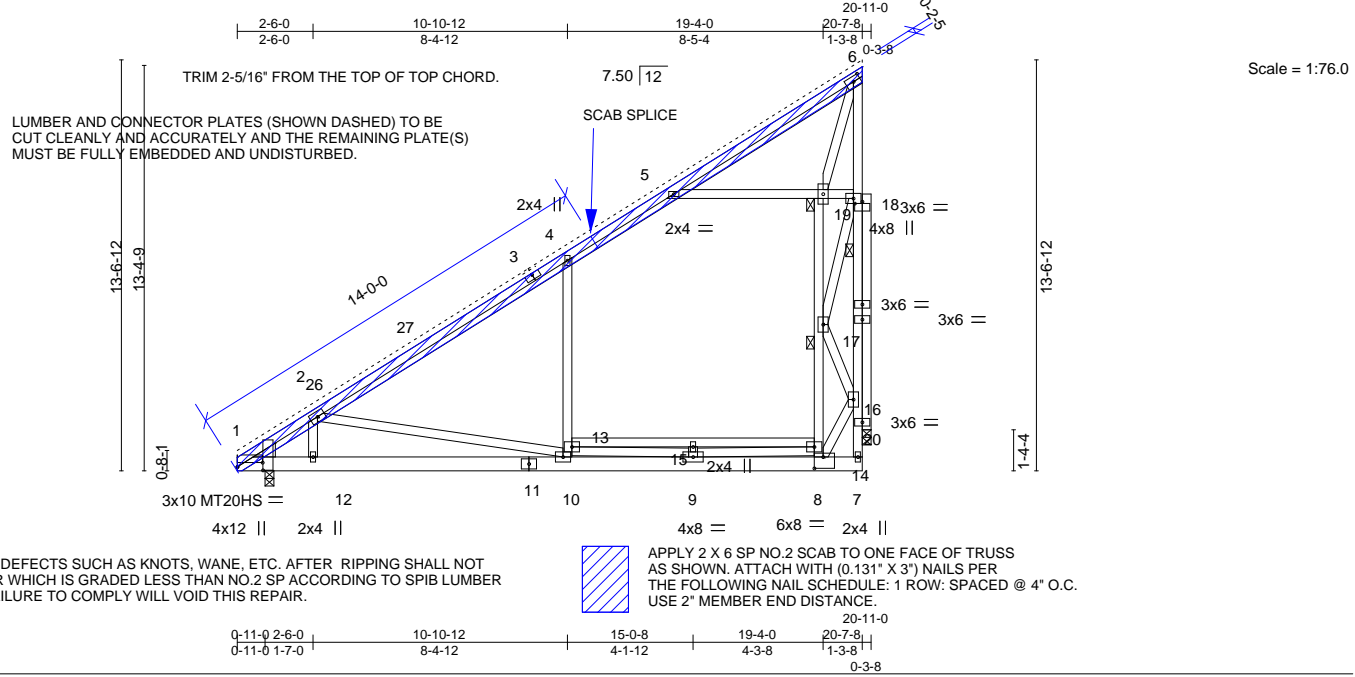
North Carolina COA: C-0844



March 14,2024

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.



LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.15	TC 0.41	Vert(LL) -0.14	10	>999	360	MT20	244/190
TCDL 11.5	Lumber DOL 1.15	BC 0.53	Vert(CT) -0.21	10-12	>999	240	MT20HS	187/143
BCLL 0.0 *	Rep Stress Incr YES	WB 0.72	Horz(CT) 0.01	20	n/a	n/a		
BCDL 11.5	Code IRC2015/TPI2014	Matrix-MS	Wind(LL) 0.05	10-12	>999	240		
							Weight: 453 lb	FT = 20%

LUMBER-
 TOP CHORD 2x6 SP No.2
 BOT CHORD 2x6 SP No.2
 WEBS 2x4 SP No.3 *Except*
 6-7: 2x4 SP No.2
 OTHERS 2x4 SP No.3
 WEDGE
 Left: 2x6 SP No.2

BRACING-
 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
 BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
 WEBS 1 Row at midpt 6-7
 JOINTS 1 Brace at Jt(s): 17, 19

REACTIONS. (size) 1=0-3-8, 20=0-3-8
 Max Horz 1=212(LC 11)
 Max Uplift 20=-46(LC 9)
 Max Grav 1=594(LC 19), 20=890(LC 19)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 1-2=-808/31, 2-4=-646/44, 4-5=-377/78, 5-6=-196/664, 7-20=-660/55, 16-20=-1553/159,
 16-18=-356/66, 6-18=-234/1164
 BOT CHORD 1-12=-223/826, 10-12=-223/826, 9-10=-141/706
 WEBS 4-13=0/351, 8-14=-82/500, 14-17=-76/658, 17-19=-1427/350, 13-15=-610/58,
 14-15=-610/58, 2-10=-383/126, 8-16=-182/872, 16-17=-659/86, 17-18=-178/1422,
 5-19=-964/135, 18-19=-513/115, 6-19=-1607/368, 9-14=-1/1115, 9-13=-228/410

- NOTES-**
- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
 Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
 Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 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.
 - Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-0-0 to 3-0-0, Interior(1) 3-0-0 to 20-5-12 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
 - All plates are MT20 plates unless otherwise indicated.
 - All plates are 4x6 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.
 - All bearings are assumed to be User Defined crushing capacity of 565 psi.
 - Bearing at joint(s) 20 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 46 lb uplift at joint 20.
 - 10) Load case(s) 2, 3, 18, 19, 20, 21, 22 has/have been modified. Building designer must review loads to verify that they are correct for this truss.



March 14, 2024

Job	Truss	Truss Type	Qty	Ply	Chesapeake 307D:Lot171 NeillsCreek	I64206481
MASTERR-120	C07GR	SPECIAL	1	2	Job Reference (optional)	

Builders FirstSource, Apex, NC 27523

8.630 s Feb 9 2023 MiTek Industries, Inc. Thu Mar 14 10:39:25 2024 Page 2
 ID:x1XjjwWBLqE?VCRReTaQN3tymvXu-neTqN69jSiM7H2mb1m2zO5GTD8dFi8kLX_lvyJzb2BG

LOAD CASE(S) Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (plf)

Vert: 1-6=-32, 7-21=-11

2) Dead + 0.75 Roof Live (balanced) + 0.75 Uninhab. Attic Storage + 0.75 Attic Floor: Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (plf)

Vert: 1-6=-26, 10-21=-11, 8-10=-56, 7-8=-11, 13-14=-30

3) Dead + Uninhabitable Attic Without Storage: Lumber Increase=1.25, Plate Increase=1.25

Uniform Loads (plf)

Vert: 1-6=-12, 7-21=-21, 13-14=-40

18) Dead + Uninhabitable Attic Storage: Lumber Increase=0.90, Plate Increase=0.90 Plt. metal=0.90

Uniform Loads (plf)

Vert: 1-6=-12, 10-21=-11, 8-10=-72, 7-8=-11, 13-14=-40

19) Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) Left): Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-6=-31, 16-20=-3, 6-18=-3, 10-21=-11, 8-10=-56, 7-8=-11, 13-14=-30

Horz: 1-6=5, 6-7=3

20) Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) Right): Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-6=-23, 16-20=9, 6-18=9, 10-21=-11, 8-10=-56, 7-8=-11, 13-14=-30

Horz: 1-6=-4, 6-7=-9

21) Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel): Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-27=-18, 6-27=-21, 16-20=-1, 6-18=-1, 10-21=-11, 8-10=-56, 7-8=-11, 13-14=-30

Horz: 1-27=-9, 6-27=-5, 6-7=1

22) Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75 Attic Floor + 0.75(0.6 MWFRS Wind (Neg. Int) 2nd Parallel): Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-6=-25, 16-20=6, 6-18=6, 10-21=-11, 8-10=-56, 7-8=-11, 13-14=-30

Horz: 1-6=-2, 6-7=-6

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 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/TPH Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



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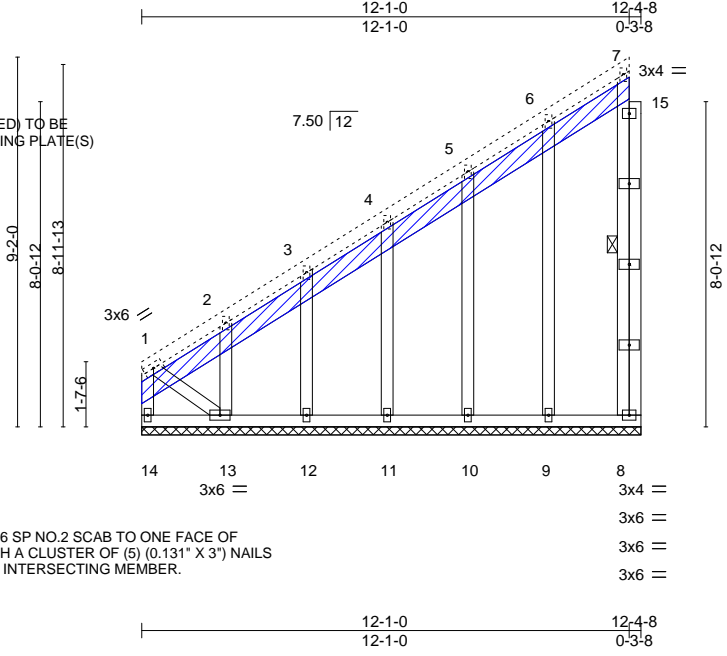
Job MASTERR-120	Truss M01G	Truss Type GABLE	Qty 1	Ply 1	Chesapeake 307D:Lot171 NeillsCreek Job Reference (optional)	I64206482 2 OF 5
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Builders FirstSource (Apex, NC), Apex, NC - 27523, 8.630 s Aug 30 2023 MiTek Industries, Inc. Wed Mar 13 08:54:50 2024 Page 1


ID:x1XjjwWBLqE?VCRreTaQN3tymvXu-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrcDoi7J4zJC?f

TRIM 5-1/16" FROM THE TOP OF TOP CHORD.

LUMBER AND CONNECTOR PLATES (SHOWN DASHED) TO BE CUT CLEANLY AND ACCURATELY AND THE REMAINING PLATE(S) MUST BE FULLY EMBEDDED AND UNDISTURBED.



Scale = 1:57.1

 ATTACH 2X6 SP NO.2 SCAB TO ONE FACE OF TRUSS WITH A CLUSTER OF (5) (0.131" X 3") NAILS INTO EACH INTERSECTING MEMBER.

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 0.33	Vert(LL)	n/a	-	n/a	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.20	Vert(CT)	n/a	-	n/a		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.18	Horz(CT)	-0.00	8	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S					Weight: 105 lb	FT = 20%

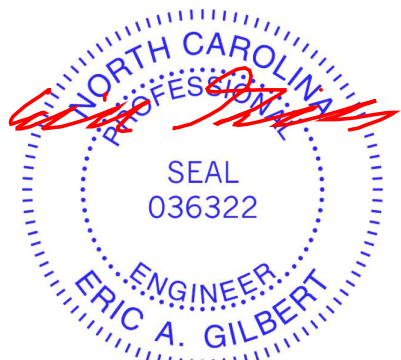
LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 9-1-2 oc bracing.
WEBS 2x4 SP No.3	WEBS 1 Row at midpt 7-8
OTHERS 2x4 SP No.3	

REACTIONS. All bearings 12-4-8.
 (lb) - Max Horz 14=285(LC 9)
 Max Uplift All uplift 100 lb or less at joint(s) 8, 9, 10, 11, 12 except 14=133(LC 10), 13=169(LC 12)
 Max Grav All reactions 250 lb or less at joint(s) 8, 9, 10, 11, 12 except 14=275(LC 9), 13=255(LC 19)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 1-14=-422/383, 1-2=-368/363, 2-3=-318/319, 3-4=-269/280
 BOT CHORD 13-14=-426/445
 WEBS 1-13=-404/422

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) 0-1-12 to 3-1-12, Exterior(2) 3-1-12 to 11-11-4 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) Provide adequate drainage to prevent water ponding.
- 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) 8, 9, 10, 11, 12 except (jt=lb) 14=133, 13=169.



March 14, 2024

Job	Truss	Truss Type	Qty	Ply	Chesapeake 307D:Lot171 NeillsCreek
MASTERR-120	M02	SPECIAL	1	1	164206483
					3 OF 5

Builders FirstSource (Apex, NC), Apex, NC - 27523, 8.630 s Aug 30 2023 MiTek Industries, Inc. Wed Mar 13 08:54:51 2024 Page 1

ID:x1XjjwWBLqE?VCRreTaQN3tyvmvXu-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCdoi7J4zJC?f

TRIM 5-1/16" FROM THE TOP OF TOP CHORD.

Scale = 1:57.0

LUMBER AND CONNECTOR PLATES (SHOWN DASHED) TO BE CUT CLEANLY AND ACCURATELY AND THE REMAINING PLATE(S) MUST BE FULLY EMBEDDED AND UNDISTURBED.

INSTALL 2 X 4 SPF/DF/SP NO.2 CUT TO FIT TIGHT.

ATTACH 7/16" OSB GUSSET (7/16" RATED SHEATHING 24/16 EXP 1) TO EACH FACE OF TRUSS WITH (0.131" X 2.5" MIN.) NAILS PER THE FOLLOWING NAIL SCHEDULE:
 2 X 3'S - 2 ROWS, 2 X 4'S - 3 ROWS, 2 X 6'S AND LARGER - 4 ROWS: SPACED @ 4" O.C.
 NAILS TO BE DRIVEN FROM BOTH FACES. STAGGER SPACING FROM FRONT TO BACK FACE FOR A NET 2" O.C. SPACING IN EACH COVERED TRUSS MEMBER. USE 2" MEMBER END DISTANCE.

GUSSET MAY BE TRIMMED TIGHT TO SINGLE PLY HANGER.

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

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.83	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.32	Vert(LL) -0.06 4-5 >999 360		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.29	Vert(CT) -0.13 4-5 >999 240		
BCDL 10.0	Rep Stress Incr NO	Matrix-MS	Horz(CT) 0.00 4 n/a n/a		
	Code IRC2015/TPI2014		Wind(LL) 0.08 5 >999 240	Weight: 95 lb	FT = 20%

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

BRACING-
 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
 BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
 WEBS 1 Row at midpt 3-8

REACTIONS. (size) 6=Mechanical, 4=0-3-8
 Max Horz 6=285(LC 9)
 Max Uplift 6=-2(LC 12), 4=-96(LC 12)
 Max Grav 6=492(LC 1), 4=979(LC 19)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 1-6=-431/77, 1-2=-501/70, 2-3=-483/188, 4-9=-868/224, 3-9=-420/86
 BOT CHORD 5-6=-398/489
 WEBS 1-5=-28/305, 2-5=-380/182, 5-9=-193/653

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) 0-1-12 to 3-1-12, Interior(1) 3-1-12 to 11-11-4 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, with BCDL = 10.0psf.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 6, 4.
- 6) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 7) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 418 lb down and 46 lb up at 11-11-4 on top 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: 1-3=-60, 4-6=-20
 Concentrated Loads (lb)
 Vert: 3=-383



March 14, 2024

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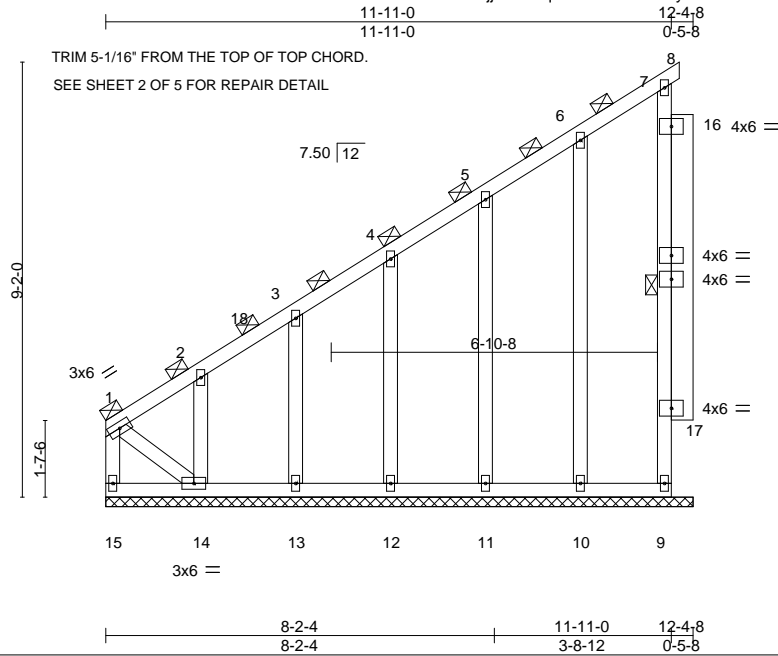


818 Soundside Road
 Edenton, NC 27932

Job MASTERR-120	Truss M04G	Truss Type GABLE	Qty 1	Ply 1	Chesapeake 307D:Lot171 NeillsCreek I64206484 Job Reference (optional) 4 OF 5
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Builders FirstSource (Apex, NC), Apex, NC - 27523, 8.630 s Aug 30 2023 MiTek Industries, Inc. Wed Mar 13 08:54:52 2024 Page 1

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LOADING (psf)	SPACING-	3-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.13	Vert(LL)	0.00	7	n/r	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.08	Vert(CT)	0.00	7	n/r		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.21	Horz(CT)	-0.00	9	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S					Weight: 107 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD 2-0-0 oc purlins (6-0-0 max.), except end verticals
BOT CHORD 2x4 SP No.2	(Switched from sheathed: Spacing > 2-8-0).
WEBS 2x4 SP No.3	Rigid ceiling directly applied or 9-11-3 oc bracing.
OTHERS 2x4 SP No.3 *Except*	WEBS 1 Row at midpt 7-9
16-17: 2x6 SP No.2	

REACTIONS. All bearings 12-4-8.
 (lb) - Max Horz 15=292(LC 12)
 Max Uplift All uplift 100 lb or less at joint(s) 9, 13, 12, 11, 10 except 15=-139(LC 10), 14=-300(LC 12)
 Max Grav All reactions 250 lb or less at joint(s) 9, 13, 12, 11 except 15=400(LC 12), 14=353(LC 19), 10=253(LC 19)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 1-15=-442/369, 1-2=-372/349, 2-3=-312/286, 3-4=-250/226
 BOT CHORD 14-15=-356/332
 WEBS 1-14=-414/445

- 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) 0-1-12 to 3-1-12, Interior(1) 3-1-12 to 12-1-0 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
 - 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) All plates are 2x4 MT20 unless otherwise indicated.
 - 4) Gable requires continuous bottom chord bearing.
 - 5) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
 - 6) Gable studs spaced at 2-0-0 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 3-6-0 tall by 2-0-0 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 100 lb uplift at joint(s) 9, 13, 12, 11, 10 except (jt=lb) 15=139, 14=300.
 - 10) Load case(s) 2, 3, 18, 19, 20, 21, 22 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.
 - 11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard
 1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
 Uniform Loads (plf)
 Vert: 1-8=-90, 9-15=-30



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Continued on page 2

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Job	Truss	Truss Type	Qty	Ply	Chesapeake 307D:Lot171 NeillsCreek	I64206484
MASTERR-120	M04G	GABLE	1	1	Job Reference (optional)	

Builders FirstSource (Apex, NC), Apex, NC - 27523,

8.630 s Aug 30 2023 MiTek Industries, Inc. Wed Mar 13 08:54:52 2024 Page 2
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LOAD CASE(S) Standard

- 2) Dead + 0.75 Roof Live (balanced) + 0.75 Uninhab. Attic Storage: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-8=-75, 9-15=-30
- 3) Dead + Uninhabitable Attic Without Storage: Lumber Increase=1.25, Plate Increase=1.25
Uniform Loads (plf)
Vert: 1-8=-30, 9-15=-60
- 18) Dead + Uninhabitable Attic Storage: Lumber Increase=0.90, Plate Increase=0.90 Plt. metal=0.90
Uniform Loads (plf)
Vert: 1-8=-30, 9-15=-30
- 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: 1-7=-89, 7-8=-83, 9-15=-30
Horz: 1-15=26, 1-7=14, 7-8=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: 1-7=-64, 7-8=-59, 9-15=-30
Horz: 1-15=-9, 1-7=-11, 7-8=-16
- 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: 1-4=-48, 4-7=-60, 7-8=-54, 9-15=-30
Horz: 1-15=24, 1-4=-27, 4-7=-15, 7-8=-21
- 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: 1-7=-69, 7-8=-64, 9-15=-30
Horz: 1-15=-3, 1-7=-6, 7-8=-11

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 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/TP1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



818 Soundside Road
Edenton, NC 27932

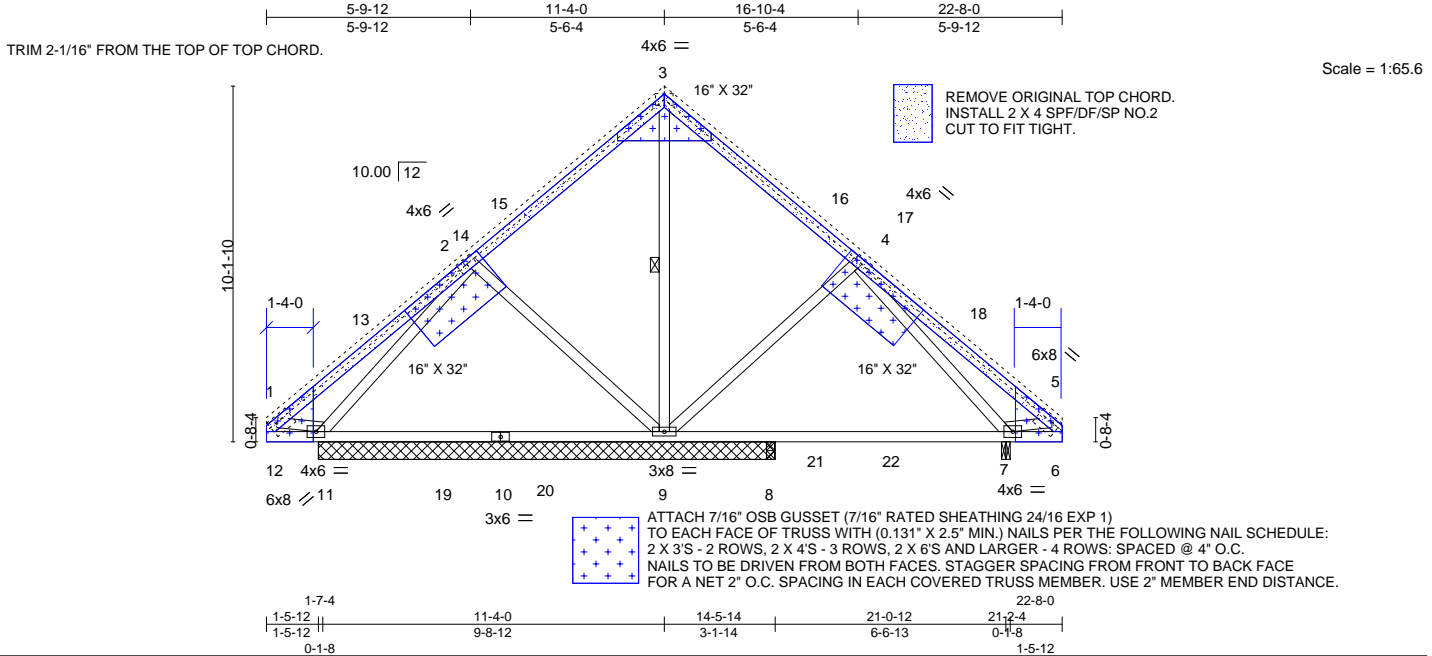


Plate Offsets (X,Y)-- [5:0-2-12,0-2-0], [12:0-2-12,0-2-0]

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 0.46	Vert(LL) -0.16	9-11 >720 360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.68	Vert(CT) -0.32	9-11 >362 240		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.33	Horz(CT) 0.00	7 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MS	Wind(LL) -0.00	9-11 >999 240		
						Weight: 138 lb	FT = 20%

LUMBER-	BRACING-	
TOP CHORD	TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD	BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS	WEBS	1 Row at midpt 3-9

REACTIONS. All bearings 13-0-0 except (jt=length) 7=0-3-0, 8=0-3-0.
 (lb) - Max Horz 11=-215(LC 8)
 Max Uplift All uplift 100 lb or less at joint(s) 9, 7
 Max Grav All reactions 250 lb or less at joint(s) 8 except 9=811(LC 1), 7=464(LC 24), 11=484(LC 23)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 BOT CHORD 9-11=-119/272
 WEBS 3-9=-342/37, 4-9=-283/176, 4-7=-328/68, 2-9=-301/175, 2-11=-272/108, 1-11=-110/272

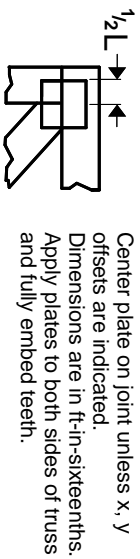
- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=32ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-1-12 to 3-1-12, Interior(1) 3-1-12 to 11-4-0, Exterior(2) 11-4-0 to 15-6-15, Interior(1) 15-6-15 to 22-6-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - 3) 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) All bearings are assumed to be User Defined crushing capacity of 565 psi.
 - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 9, 7.



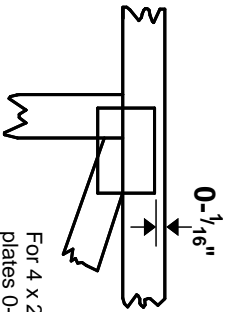
March 14, 2024

Symbols

PLATE LOCATION AND ORIENTATION



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



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



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

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

PLATE SIZE

4 X 4

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

LATERAL BRACING LOCATION



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

BEARING

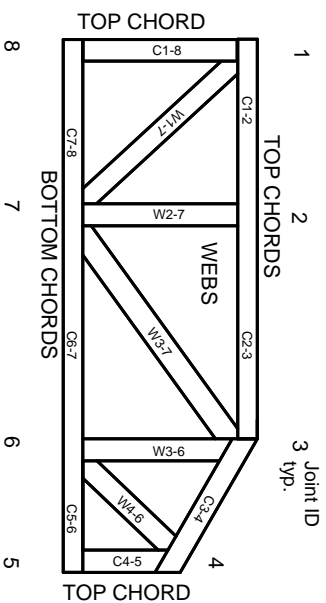


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TP1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-22: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



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

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

Product Code Approvals

ICC-ES Reports:

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

Design General Notes

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

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

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MITek

ENGINEERING BY
TRENGO
A MITek Affiliate

MITek Engineering Reference Sheet: MIL-7473 rev. 1/2/2023

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability/bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TP1 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TP1 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TP1 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.