Trenco
818 Soundside Rd
Edenton, NC 27932

Re: 34894-34894A
21 SERENITY - ROOF

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

Pages or sheets covered by this seal: I55884965 thru I55884997

My license renewal date for the state of North Carolina is   December 31, 2022.

North Carolina COA: C-0844

NORTH CAROLINA
PROFESSIONAL
SEAL
036322
ERIC A. GILBERT
ENGINEER

December 27,2022

Gilbert, Eric

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

Job	Truss	Truss Type	Qty	Ply	21 SERENITY - ROOF	
34894-34894A	A1GE	Roof Special Supported Gable	1	1		I55884965
					Job Reference (optional)	

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

8.630 s Nov 19 2022 MiTek Industries, Inc. Fri Dec 23 17:42:05 2022 Page 1
ID:nxbot3WsxISjrAw_FcBFB3yorwP-_rw3yTNuiI7OaAs9?ei2iHXXYBCboR4KwW1CXjy606m
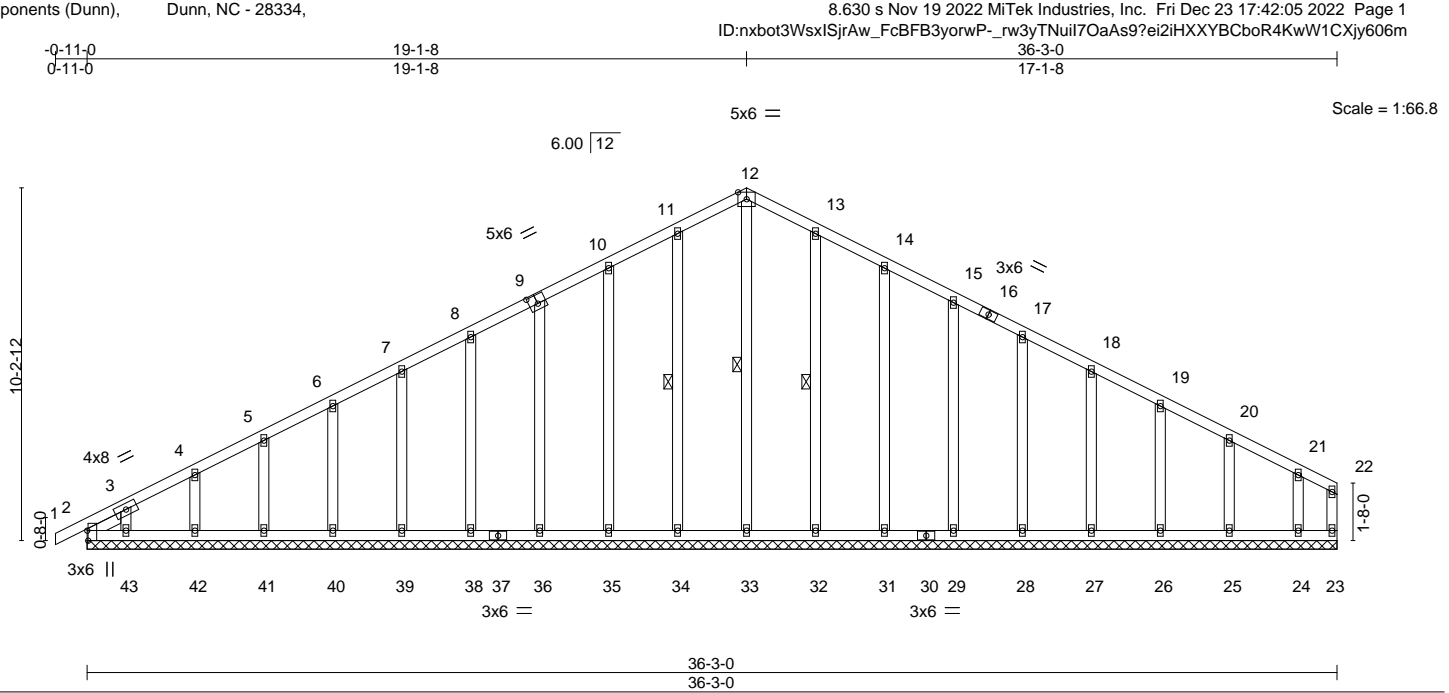
Plate Offsets (X,Y)--   [2:0-3-8,Edge], [9:0-3-0,0-3-0]

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	0.08	Vert(LL)	-0.00	1	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	-0.00	1	n/r	90		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.14	Horz(CT)	0.00	23	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 258 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 *Except*
12-33,11-34,10-35,9-36,13-32,14-31,15-29: 2x4 SP No.2
SLIDER   Left 2x4 SP No.3 1-1-6

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.
WEBS   1 Row at midpt   12-33, 11-34, 13-32

REACTIONS.   All bearings 36-3-0.
    (lb) -   Max Horz   2=148(LC 10)
        Max Uplift   All uplift 100 lb or less at joint(s) 2, 34, 35, 36, 38, 39, 40, 41, 42, 43, 32, 31, 29, 28, 27, 26, 25, 24
        Max Grav   All reactions 250 lb or less at joint(s) 23, 2, 33, 34, 35, 36, 38, 39, 40, 41, 42, 43, 32, 31, 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=-114/272, 11-12=-127/308, 12-13=-127/308, 13-14=-114/272

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=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 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) 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) 2, 34, 35, 36, 38, 39, 40, 41, 42, 43, 32, 31, 29, 28, 27, 26, 25, 24.

December 27,2022

ENGINEERING BY
TRENCO
A MiTek Affiliate

818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	21 SERENITY - ROOF	
34894-34894A	A2	Roof Special	1	1		I55884966
					Job Reference (optional)	

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

8.630 s Nov 19 2022 MiTek Industries, Inc. Fri Dec 23 17:42:07 2022 Page 1
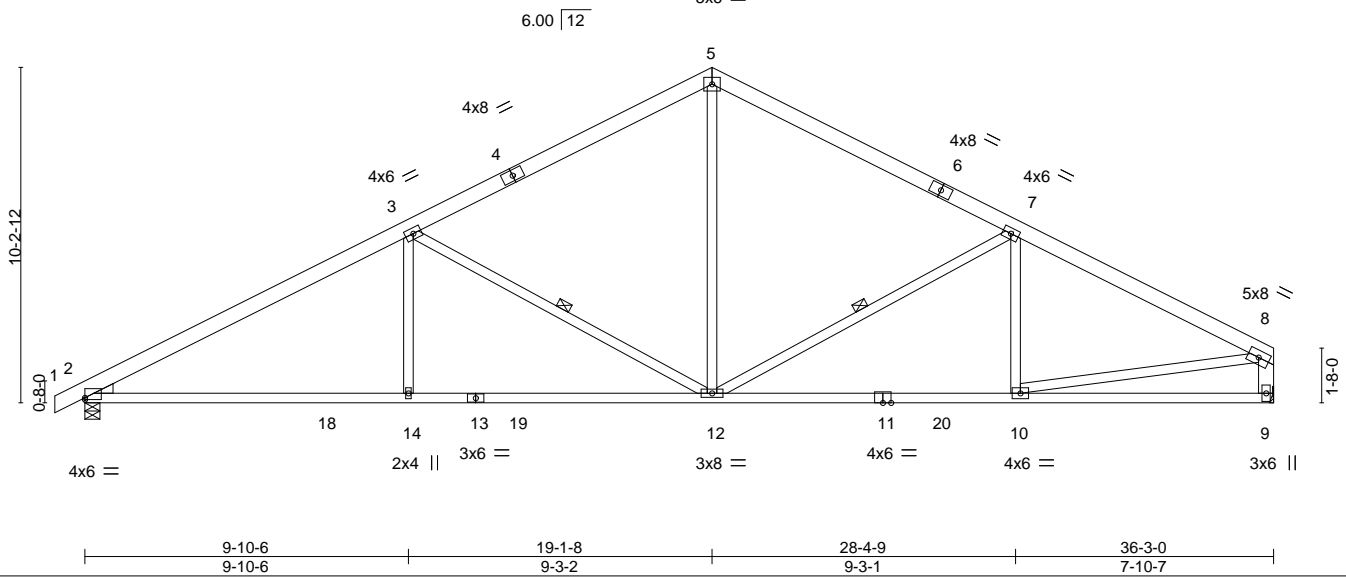ID:nxbot3WsxISjrAw_FcBFB3yorwP-wE2qN9P8EvN5pU0Y62kWnidnb?gJGGRdNqWJbcy606k

Scale = 1:70.3

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

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	0.49	Vert(LL)	-0.15	14-17	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.93	Vert(CT)	-0.33	14-17	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.47	Horz(CT)	0.09	9	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MS							Weight: 225 lb	FT = 20%

LUMBER-
TOP CHORD   2x6 SP No.2
BOT CHORD   2x4 SP No.2
WEBS   2x4 SP No.2 *Except*
            8-9: 2x6 SP No.2
WEDGE
Left: 2x4 SP No.3

BRACING-
TOP CHORD   Structural wood sheathing directly applied or 4-2-7 oc purlins, except end verticals.
BOT CHORD   Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS   1 Row at midpt   3-12, 7-12

REACTIONS.   (size) 2=0-5-8, 9=Mechanical
            Max Horz 2=150(LC 14)
            Max Uplift 2=-100(LC 10), 9=-71(LC 11)
            Max Grav 2=1497(LC 1), 9=1440(LC 1)

FORCES.   (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD   2-3=-2470/412, 3-5=-1649/368, 5-7=-1646/367, 7-8=-2064/359, 8-9=-1371/260
BOT CHORD   2-14=-262/2099, 12-14=-262/2099, 10-12=-207/1767
WEBS   3-14=0/377, 3-12=-908/253, 5-12=-105/859, 7-12=-548/190, 8-10=-199/1635

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=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 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) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 9 except (jt=lb) 2=100.

SEAL
036322

ERIC A. GILBERT

December 27,2022

ENGINEERING BY
TRENCO
A MiTek Affiliate

818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	21 SERENITY - ROOF	
34894-34894A	A3	Common	5	1		I55884967
					Job Reference (optional)	

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

8.630 s Nov 19 2022 MiTek Industries, Inc. Fri Dec 23 17:42:09 2022 Page 1
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Scale = 1:67.7

Plate Offsets (X,Y)-- [2:0-4-8,0-0-0], [2:0-4-8,0-1-12], [16:0-3-8,0-2-4], [19:0-1-8,0-1-8]

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	0.49	Vert(LL)	-0.23	12-14	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.83	Vert(CT)	-0.47	16-17	>918	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.50	Horz(CT)	0.18	11	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MS							Weight: 247 lb	FT = 20%

LUMBER-
TOP CHORD   2x4 SP No.2 *Except*
1-3: 2x10 SP DSS
BOT CHORD   2x4 SP No.2 *Except*
2-16: 2x4 SP No.1
WEBS   2x4 SP No.2 *Except*
10-11: 2x4 SP No.3
OTHERS   2x4 SP No.2
WEDGE
Left: 2x6 SP No.2

BRACING-
TOP CHORD   Structural wood sheathing directly applied or 3-1-8 oc purlins,
except end verticals.
BOT CHORD   Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS   1 Row at midpt   6-14, 7-14, 9-11

REACTIONS.   (size)   1=0-5-8, 11=Mechanical
Max Horz 1=140(LC 14)
Max Uplift 1=-74(LC 10), 11=-71(LC 11)
Max Grav 1=1452(LC 1), 11=1436(LC 1)

FORCES.   (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD   1-2=-641/113, 2-3=-3092/454, 3-4=-3216/562, 4-5=-2055/414, 5-6=-2025/490,
6-7=-1550/385, 7-9=-1918/385
BOT CHORD   2-17=-341/2856, 16-17=-248/2219, 12-14=-141/1587, 11-12=-212/1630
WEBS   3-17=-534/194, 4-17=-130/949, 4-16=-648/194, 14-16=0/1363, 6-16=-231/1250,
6-14=-90/281, 7-14=-484/178, 7-12=-6/270, 9-11=-1896/280

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=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope)
gable end zone and C-C Exterior(2) 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) All plates are 3x6 MT20 unless otherwise indicated.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide
will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) Refer to girder(s) for truss to truss connections.
7) Bearing at joint(s) 1 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify
capacity of bearing surface.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 11.

Job	Truss	Truss Type	Qty	Ply	21 SERENITY - ROOF	
34894-34894A	A4	COMMON	1	1		I55884968
					Job Reference (optional)	

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

8.630 s Nov 19 2022 MiTek Industries, Inc. Fri Dec 23 17:42:10 2022 Page 1
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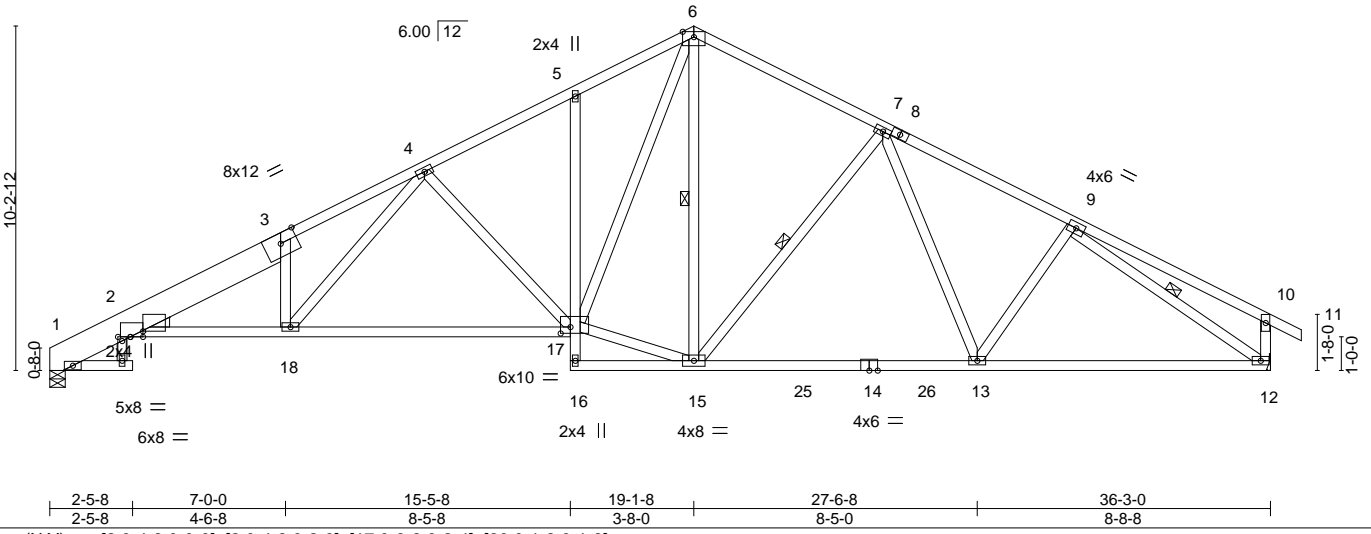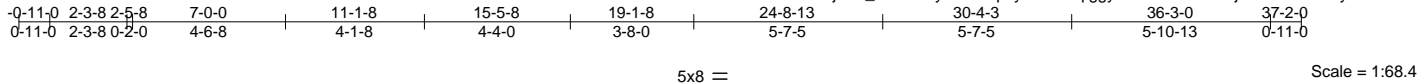
Plate Offsets (X,Y)--   [2:0-4-8,0-0-0], [2:0-4-8,0-2-0], [17:0-3-8,0-2-4], [20:0-1-8,0-1-8]

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	0.49	Vert(LL)	-0.23	13-15	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.83	Vert(CT)	-0.47	17-18	>918	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.50	Horz(CT)	0.18	12	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MS							Weight: 247 lb	FT = 20%

LUMBER-
TOP CHORD   2x4 SP No.2 *Except*
1-3: 2x10 SP DSS
BOT CHORD   2x4 SP No.2 *Except*
2-17: 2x4 SP No.1
WEBS   2x4 SP No.2 *Except*
10-12: 2x4 SP No.3
OTHERS   2x4 SP No.2 *Except*
20-21: 2x4 SP No.3
WEDGE
Left: 2x4 SP No.3

BRACING-
TOP CHORD   Structural wood sheathing directly applied or 3-1-8 oc purlins,
            except end verticals.
BOT CHORD   Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS   1 Row at midpt   6-15, 7-15, 9-12

REACTIONS.   (size)   1=0-5-8, 12=Mechanical
              Max Horz 1=133(LC 14)
              Max Uplift 1=-74(LC 10), 12=-88(LC 11)
              Max Grav 1=1451(LC 1), 12=1501(LC 1)

FORCES.   (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD   1-2=-641/140, 2-3=-3090/447, 3-4=-3213/552, 4-5=-2053/410, 5-6=-2023/487,
            6-7=-1549/386, 7-9=-1910/385, 10-12=-305/168
BOT CHORD   2-18=-302/2854, 17-18=-212/2217, 13-15=-112/1584, 12-13=-181/1620
WEBS   3-18=-534/190, 4-18=-124/948, 4-17=-648/191, 15-17=0/1361, 6-17=-221/1250,
            6-15=-95/280, 7-15=-482/179, 7-13=-5/267, 9-12=-1855/243

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=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope)
   gable end zone and C-C Exterior(2) 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) All plates are 3x6 MT20 unless otherwise indicated.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide
   will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) Refer to girder(s) for truss to truss connections.
7) Bearing at joint(s) 1 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify
   capacity of bearing surface.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 12.

NORTH CAROLINA
PROFESSIONAL
SEAL
036322
ENGINEER
ERIC A. GILBERT

December 27, 2022

ENGINEERING BY
TRENCO
A MiTek Affiliate

818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	21 SERENITY - ROOF	
34894-34894A	A5	ROOF SPECIAL	5	1		I55884969
					Job Reference (optional)	

84 Components (Dunn),   Dunn, NC - 28334,   8.630 s Nov 19 2022 MiTek Industries, Inc. Fri Dec 23 17:42:11 2022 Page 1

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Scale = 1:70.9

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

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	0.49	Vert(LL)	-0.15	15-18	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.93	Vert(CT)	-0.33	15-18	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.47	Horz(CT)	0.09	10	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MS							Weight: 228 lb	FT = 20%

LUMBER-
TOP CHORD   2x6 SP No.2
BOT CHORD   2x4 SP No.2
WEBS   2x4 SP No.2 *Except*
             8-10: 2x6 SP No.2
WEDGE
Left: 2x4 SP No.3

BRACING-
TOP CHORD   Structural wood sheathing directly applied or 4-2-7 oc purlins, except end verticals.
BOT CHORD   Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS   1 Row at midpt   3-13, 7-13

REACTIONS.   (size) 2=0-5-8, 10=Mechanical
Max Horz 2=142(LC 14)
Max Uplift 2=-101(LC 10), 10=-89(LC 11)
Max Grav 2=1495(LC 1), 10=1510(LC 1)

FORCES.   (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD   2-3=-2467/412, 3-5=-1647/369, 5-7=-1643/366, 7-8=-2060/361, 8-10=-1441/313
BOT CHORD   2-15=-230/2097, 13-15=-230/2097, 11-13=-173/1757
WEBS   3-15=0/377, 3-13=-908/253, 5-13=-104/855, 7-13=-539/188, 8-11=-158/1576

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=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 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) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 10 except (jt=lb) 2=101.

December 27,2022

ENGINEERING BY
TRENCO
A MiTek Affiliate

818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	21 SERENITY - ROOF	
34894-34894A	A6	GABLE	1	1		I55884970
					Job Reference (optional)	

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

8.630 s Nov 19 2022 MiTek Industries, Inc. Fri Dec 23 17:42:12 2022 Page 1
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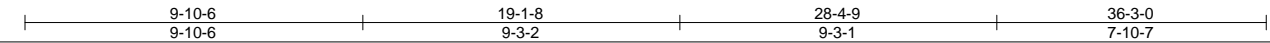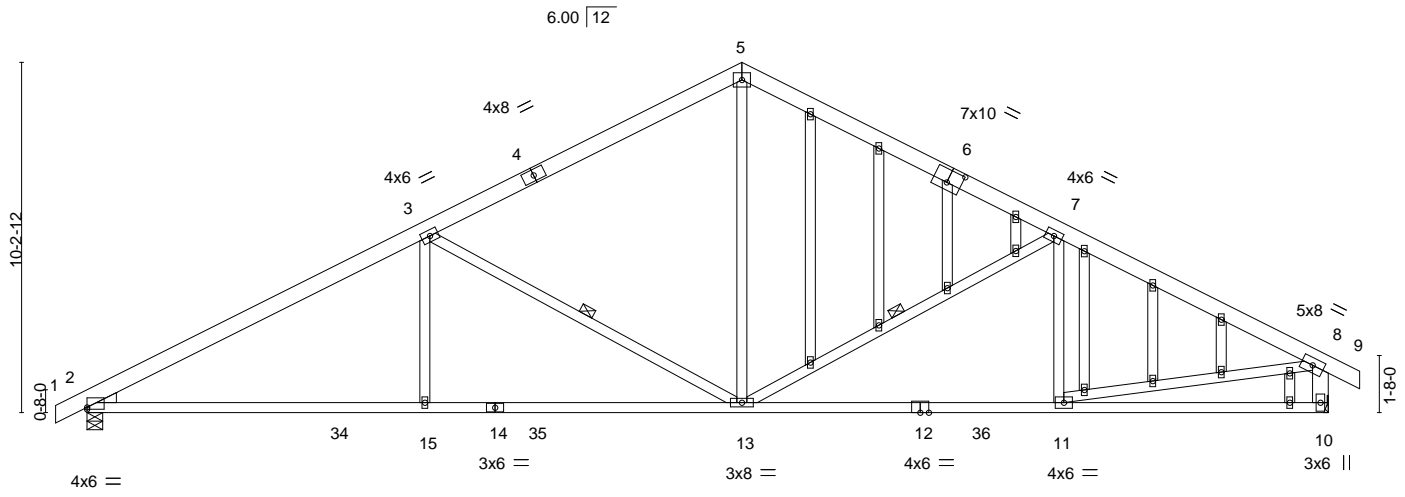
Plate Offsets (X,Y)--   [2:0-0-0,0-0-11], [6:0-5-0,0-4-8]

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	0.49	Vert(LL)	-0.15	15-33	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.93	Vert(CT)	-0.33	15-33	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.47	Horz(CT)	0.09	10	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MS							Weight: 267 lb	FT = 20%

LUMBER-
TOP CHORD   2x6 SP No.2
BOT CHORD   2x4 SP No.2
WEBS   2x4 SP No.2 *Except*
            8-10: 2x6 SP No.2
OTHERS   2x4 SP No.3 *Except*
            16-17: 2x4 SP No.2
WEDGE
Left: 2x4 SP No.3

BRACING-
TOP CHORD   Structural wood sheathing directly applied or 4-2-7 oc purlins, except end verticals.
BOT CHORD   Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS   1 Row at midpt   3-13, 7-13

REACTIONS.   (size)   2=0-5-8, 10=Mechanical
            Max Horz 2=142(LC 14)
            Max Uplift 2=-101(LC 10), 10=-89(LC 11)
            Max Grav 2=1495(LC 1), 10=1510(LC 1)

FORCES.   (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD   2-3=-2467/412, 3-5=-1647/369, 5-7=-1643/366, 7-8=-2060/361, 8-10=-1441/313
BOT CHORD   2-15=-230/2097, 13-15=-230/2097, 11-13=-173/1757
WEBS   3-15=0/377, 3-13=-908/253, 5-13=-104/855, 7-13=-539/188, 8-11=-158/1576

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=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 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 studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 10 except (jt=lb) 2=101.

NORTH CAROLINA
PROFESSIONAL
SEAL
036322
ENGINEER
ERIC A. GILBERT

December 27,2022

ENGINEERING BY
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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	21 SERENITY - ROOF	
34894-34894A	A7	Common	2	1		I55884971
					Job Reference (optional)	

8.630 s Nov 21 2022 MiTek Industries, Inc. Tue Dec 27 09:49:28 2022 Page 1
ID:nxbot3WsxISjrAw_FcBFB3yorwP-0vhXI8unYLiDLqO0lVaETwHzmmc4tV7jqmroiKy4ofr

Scale = 1:60.2

Plate Offsets (X,Y)-- [2:0-0-0,0-0-13], [10:Edge,0-0-13], [12:0-5-0,0-4-8], [13:0-5-0,0-4-8]

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	0.66	Vert(LL)	-0.15	12-13	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.73	Vert(CT)	-0.48	12-13	>849	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.25	Horz(CT)	0.07	10	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MS							Weight: 225 lb	FT = 20%

LUMBER-
TOP CHORD   2x4 SP No.2
BOT CHORD   2x6 SP No.2
WEBS   2x4 SP No.3 *Except*
             6-12,6-13: 2x4 SP No.2
WEDGE
Left: 2x4 SP No.3 , Right: 2x4 SP No.3

BRACING-
TOP CHORD   Structural wood sheathing directly applied or 2-11-0 oc purlins.
BOT CHORD   Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS.   (size)   2=0-5-8, 10=0-5-8
             Max Horz 2=128(LC 10)
             Max Grav 2=1525(LC 1), 10=1525(LC 1)

FORCES.   (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD   2-3=-2618/200, 3-5=-2299/131, 5-6=-2312/246, 6-7=-2312/246, 7-9=-2299/131,
             9-10=-2618/200
BOT CHORD   2-13=-78/2257, 12-13=0/1463, 10-12=-78/2257
WEBS   6-12=-47/1014, 7-12=-351/188, 9-12=-318/193, 6-13=-47/1014, 5-13=-351/188,
             3-13=-318/193

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=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope)
   gable end zone and C-C Exterior(2) 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) 200.0lb AC unit load placed on the bottom chord, 17-1-8 from left end, supported at two points, 5-0-0 apart.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide
   will fit between the bottom chord and any other members.
6) All bearings are assumed to be User Defined crushing capacity of 425 psi.
7) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced
   standard ANSI/TPI 1.

December 27,2022

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8.630 s Nov 21 2022 MiTek Industries, Inc. Tue Dec 27 09:51:08 2022 Page 1
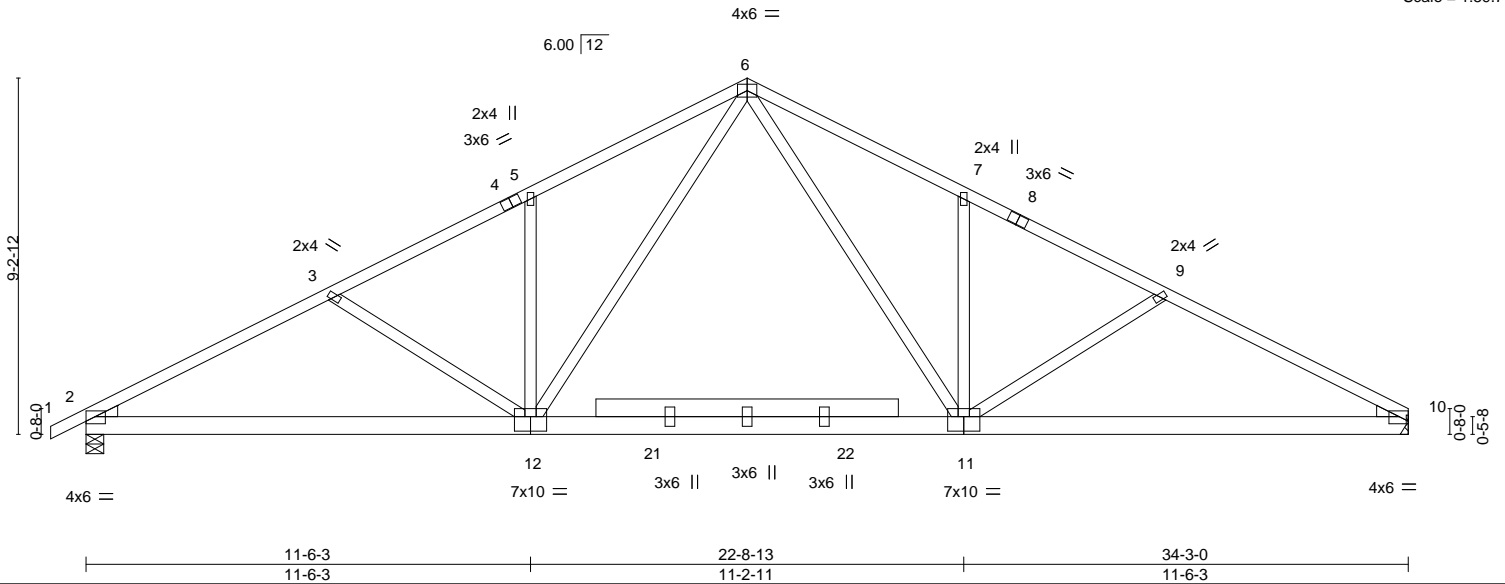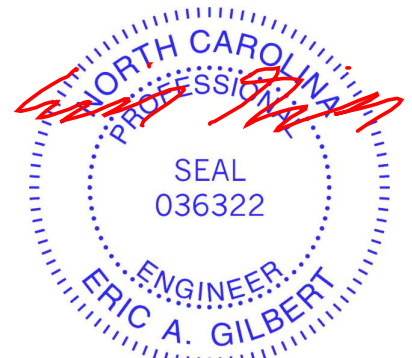ID:nxbot3WsxISjrAw_FcBFB3yorwP-58kKHL6W?3J1LC1EcVNhW?Q2X4kRIjtRqK35EXy4oeH
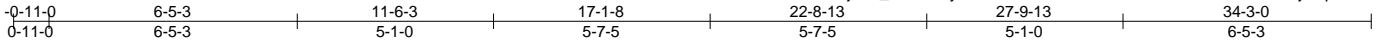
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Plate Offsets (X,Y)--   [2:0-0-0,0-0-13], [10:0-0-0,0-0-13], [11:0-5-0,0-4-8], [12:0-5-0,0-4-8]

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	0.66	Vert(LL)	-0.15	11-12	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.73	Vert(CT)	-0.48	11-12	>853	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.25	Horz(CT)	0.07	10	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MS							Weight: 223 lb	FT = 20%

LUMBER-
TOP CHORD   2x4 SP No.2
BOT CHORD   2x6 SP No.2
WEBS   2x4 SP No.3 *Except*
            6-11,6-12: 2x4 SP No.2
WEDGE
Left: 2x4 SP No.3 , Right: 2x4 SP No.3

BRACING-
TOP CHORD   Structural wood sheathing directly applied or 2-11-0 oc purlins.
BOT CHORD   Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS.   (size)   2=0-5-8, 10=Mechanical
            Max Horz 2=135(LC 10)
            Max Grav 2=1526(LC 1), 10=1469(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD   2-3=-2619/201, 3-5=-2300/132, 5-6=-2314/247, 6-7=-2316/248, 7-9=-2303/134,
             9-10=-2623/204
BOT CHORD   2-12=-105/2258, 11-12=0/1465, 10-11=-108/2262
WEBS   6-11=-50/1017, 7-11=-350/187, 9-11=-321/194, 6-12=-47/1014, 5-12=-351/188,
             3-12=-318/193

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=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 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) 200.0lb AC unit load placed on the bottom chord, 17-1-8 from left end, supported at two points, 5-0-0 apart.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) All bearings are assumed to be User Defined crushing capacity of 425 psi.
7) Refer to girder(s) for truss to truss connections.
8) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

NORTH CAROLINA PROFESSIONAL ENGINEER
SEAL 036322
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December 27,2022

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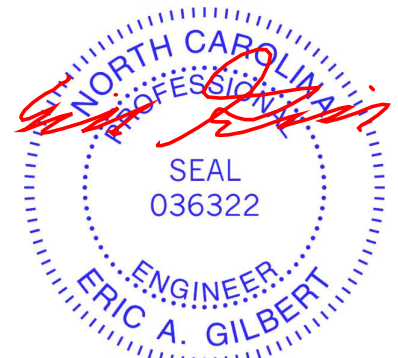| Job	Truss	Truss Type	Qty	Ply	21 SERENITY - ROOF	
34894-34894A	A9E	Common Supported Gable	1	1		I55884973
					Job Reference (optional)	

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

8.630 s Nov 19 2022 MiTek Industries, Inc. Fri Dec 23 17:42:17 2022 Page 1
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-0-11-0   17-1-8   34-3-0
0-11-0   17-1-8   17-1-8

4x6 =

6.00 |12

Scale = 1:61.3

9-2-12

4x8 =

3x6 ||

41 40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22

3x6 =   3x6 =

3x6 ||

5x6 =

3x6 =

3x6 ||

34-3-0
34-3-0

Plate Offsets (X,Y)--   [2:0-3-8,Edge], [8:0-3-0,0-3-0]

LOADING (psf)		SPACING-		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	1	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	-0.00	1	n/r	90		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.14	Horz(CT)	0.01	22	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 224 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 *Except*
            11-32,10-33,9-34,12-31,13-30: 2x4 SP No.2
SLIDER   Left 2x4 SP No.3 1-1-6

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.
WEBS   1 Row at midpt   11-32

REACTIONS.   All bearings 34-3-0.
   (lb) -   Max Horz 2=131(LC 14)
            Max Uplift   All uplift 100 lb or less at joint(s) 2, 33, 34, 36, 37, 38, 39, 40, 41,
                         31, 30, 28, 27, 26, 25, 24, 23
            Max Grav   All reactions 250 lb or less at joint(s) 22, 2, 32, 33, 34, 36, 37, 38, 39,
                        40, 41, 31, 30, 28, 27, 26, 25, 24, 23

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=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope)
   gable end zone and C-C Exterior(2) 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) 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) 2, 33, 34, 36, 37,
   38, 39, 40, 41, 31, 30, 28, 27, 26, 25, 24, 23.

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December 27,2022

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

8.630 s Nov 19 2022 MiTek Industries, Inc. Fri Dec 23 17:42:18 2022 Page 1
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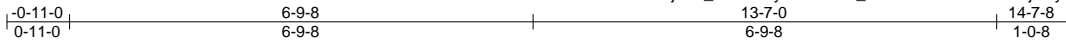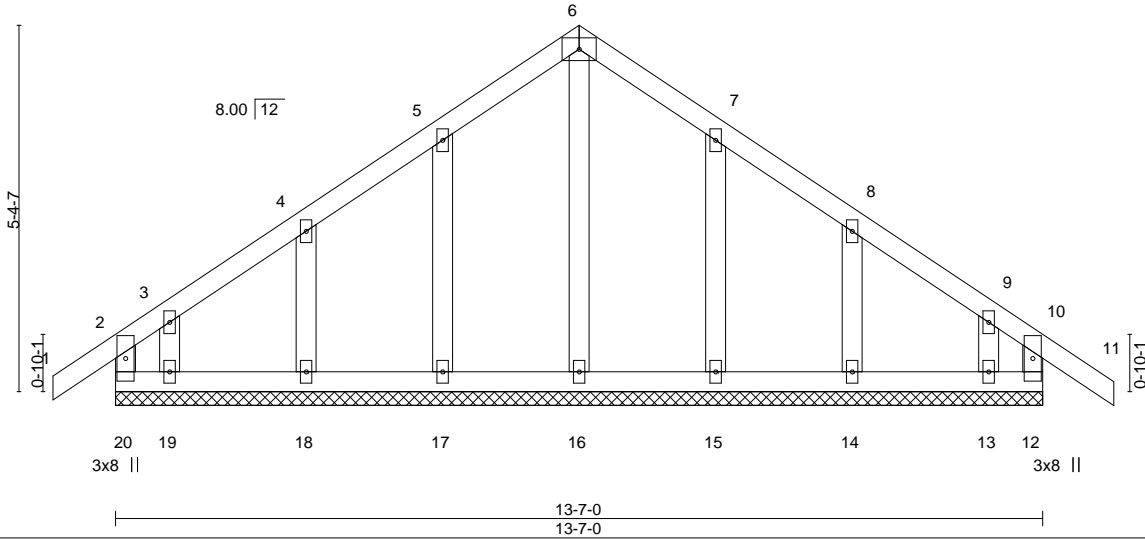
LOADING (psf)	SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC	0.10	Vert(LL)	-0.00	11	n/r	120	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	-0.01	11	n/r	90		
BCLL 0.0 *	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	12	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-R							Weight: 76 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 6-0-0 oc bracing.

REACTIONS.   All bearings 13-7-0.
   (lb) - Max Horz 20=-128(LC 8)
        Max Uplift   All uplift 100 lb or less at joint(s) 20, 12, 17, 18, 19, 15, 14, 13
        Max Grav   All reactions 250 lb or less at joint(s) 20, 12, 16, 17, 18, 19, 15, 14, 13

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=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 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) 20, 12, 17, 18, 19, 15, 14, 13.

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December 27,2022

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Job	Truss	Truss Type	Qty	Ply	21 SERENITY - ROOF	
34894-34894A	B2G	Common Girder	1	**2**		I55884975
					Job Reference (optional)	

84 Components (Dunn),   Dunn, NC - 28334,
8.630 s Nov 19 2022 MiTek Industries, Inc.   Fri Dec 23 17:42:20 2022   Page 1
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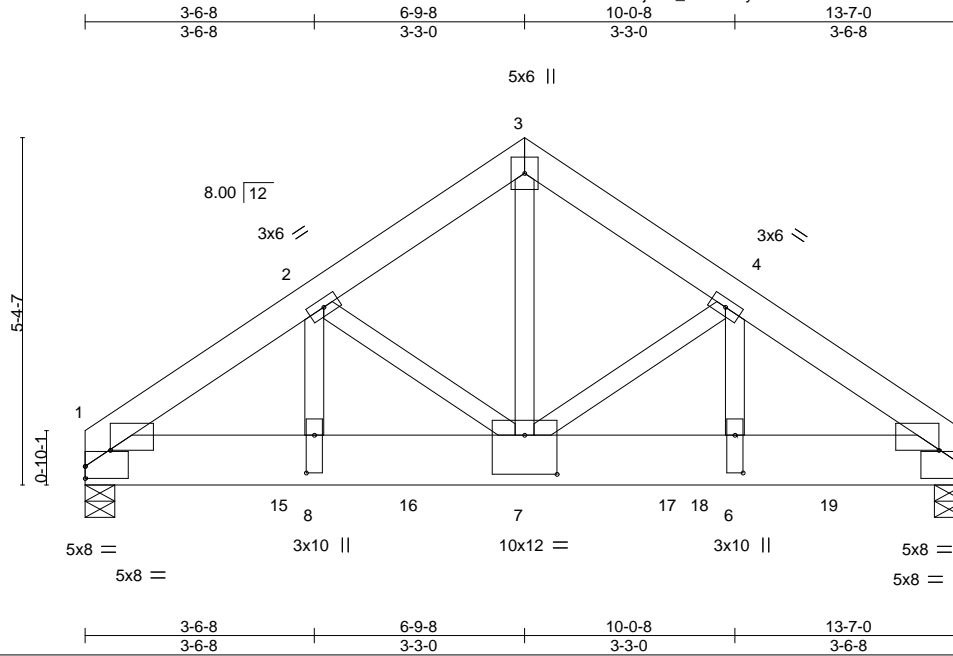
Scale = 1:35.6

Plate Offsets (X,Y)--   [1:0-0-0,0-2-4], [1:0-4-11,0-3-0], [5:0-0-0,0-2-4], [5:0-4-11,0-3-0], [6:0-7-0,0-1-8], [7:0-6-0,0-7-4], [8:0-7-0,0-1-8]

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	0.24	Vert(LL)	-0.04	6-7	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.33	Vert(CT)	-0.08	6-7	>999	180		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.70	Horz(CT)	0.02	5	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MS							Weight: 231 lb	FT = 20%

LUMBER-
TOP CHORD   2x6 SP No.2
BOT CHORD   2x10 SP DSS
WEBS   2x4 SP No.3 *Except*
          3-7: 2x4 SP No.2

BRACING-
TOP CHORD   Structural wood sheathing directly applied or 5-7-9 oc purlins.
BOT CHORD   Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS.   (size)   1=0-5-8, 5=0-5-8
      Max Horz   1=95(LC 26)
      Max Grav   1=5821(LC 1), 5=5411(LC 1)

FORCES.   (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD   1-2=-6841/0, 2-3=-5543/0, 3-4=-5538/0, 4-5=-7398/0
BOT CHORD   1-8=0/5622, 7-8=0/5622, 6-7=0/6068, 5-6=0/6068
WEBS   3-7=0/5715, 4-7=-1851/0, 4-6=0/2164, 2-7=-1285/0, 2-8=0/1487

NOTES-
1) 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.
   Bottom chords connected as follows: 2x10 - 2 rows staggered at 0-4-0 oc.
   Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to
   ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; 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
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) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1449 lb down at 1-0-4, 1449 lb
   down at 3-0-4, 1449 lb down at 5-0-4, 1449 lb down at 7-0-4, 1449 lb down at 9-0-4, and 1449 lb down at 9-6-4, and 1449 lb down
   at 11-6-4 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: 1-3=-60, 3-5=-60, 9-12=-20
   Concentrated Loads (lb)
       Vert: 7=-1449(F) 11=-1449(F) 15=-1449(F) 16=-1449(F) 17=-1449(F) 18=-1449(F) 19=-1449(F)

December 27,2022

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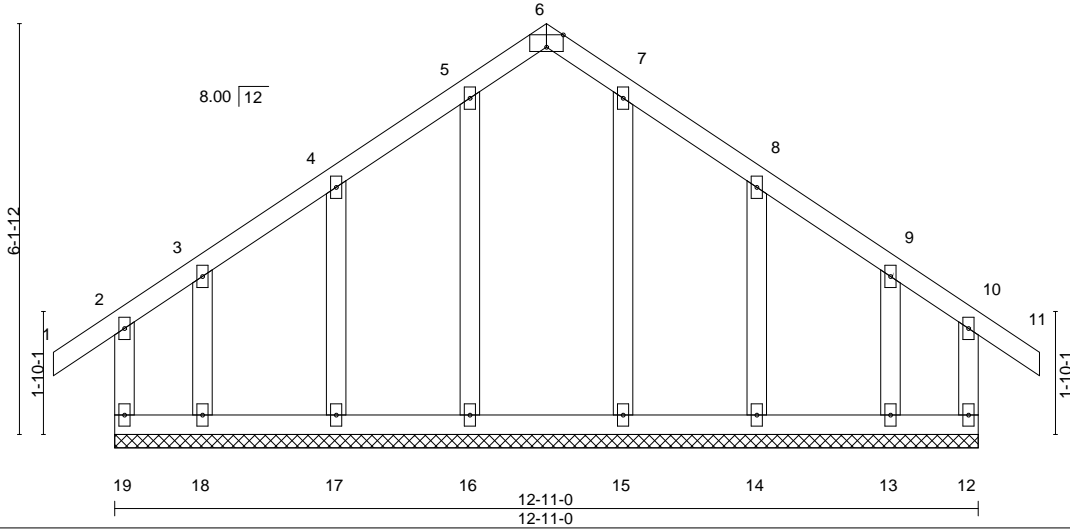| Job	Truss	Truss Type	Qty	Ply	21 SERENITY - ROOF	
34894-34894A	C1E	GABLE	1	1		I55884976
					Job Reference (optional)	

84 Components (Dunn),   Dunn, NC - 28334,   8.630 s Nov 19 2022 MiTek Industries, Inc. Fri Dec 23 17:42:21 2022 Page 1
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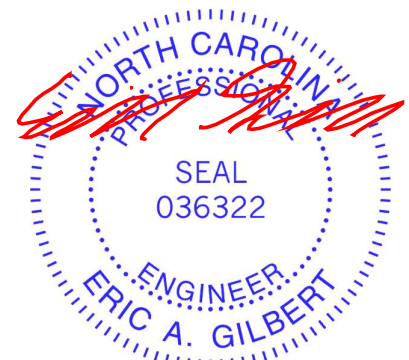
3x6 =

Scale = 1:34.5

8.00 ⎡12

Plate Offsets (X,Y)-- [6:0-3-0,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	0.16	Vert(LL)	-0.00	11	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.09	Vert(CT)	-0.00	11	n/r	90		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.07	Horz(CT)	-0.00	12	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-R							Weight: 82 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.
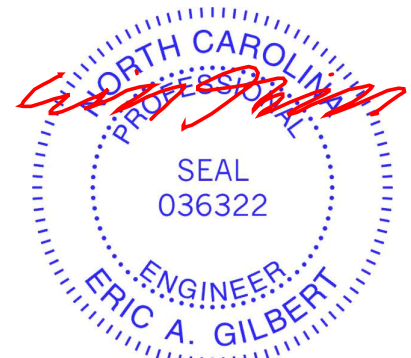BOT CHORD   Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS.   All bearings 12-11-0.
     (lb) -   Max Horz   19=-153(LC 8)
           Max Uplift   All uplift 100 lb or less at joint(s) 17, 14 except 19=-107(LC 6), 12=-100(LC 7), 18=-119(LC 7),
                    13=-113(LC 6)
           Max Grav   All reactions 250 lb or less at joint(s) 19, 12, 16, 17, 18, 15, 14, 13

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=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope)
    gable end zone and C-C Exterior(2) 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, with BCDL = 10.0psf.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 17, 14 except
    (jt=lb) 19=107, 12=100, 18=119, 13=113.

December 27, 2022

SEAL
036322
ERIC A. GILBERT

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	21 SERENITY - ROOF	
34894-34894A	C2	Common	3	1		I55884977
84 Components (Dunn),	Dunn, NC - 28334,				Job Reference (optional)	

8.630 s Nov 19 2022 MiTek Industries, Inc. Fri Dec 23 17:42:22 2022 Page 1
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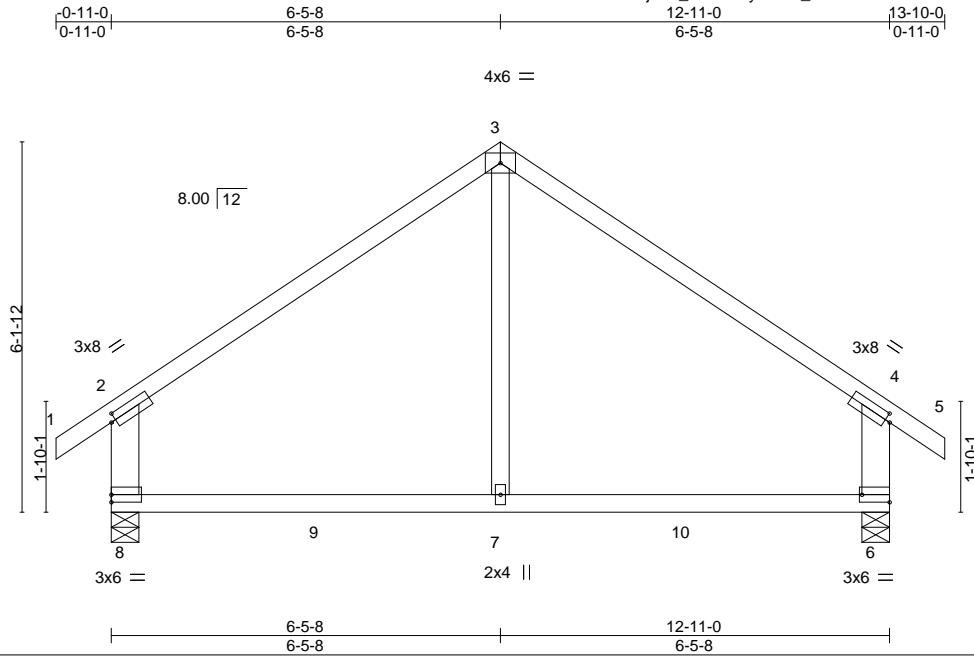
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Plate Offsets (X,Y)-- [2:0-1-0,0-1-8], [4:0-1-0,0-1-8], [6:Edge,0-1-8]

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	0.76	Vert(LL)	-0.10	7	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.47	Vert(CT)	-0.17	7	>874	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.10	Horz(CT)	0.01	6	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MR							Weight: 61 lb	FT = 20%

LUMBER-
TOP CHORD   2x4 SP No.2
BOT CHORD   2x4 SP No.2
WEBS   2x6 SP No.2 *Except*
            3-7: 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.   (size)   8=0-5-8, 6=0-5-8
            Max Horz   8=-155(LC 8)
            Max Uplift   8=-37(LC 10), 6=-37(LC 11)
            Max Grav   8=598(LC 17), 6=598(LC 18)

FORCES.   (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD   2-3=-515/109, 3-4=-515/109, 2-8=-498/148, 4-6=-498/148
BOT CHORD   7-8=0/361, 6-7=0/361
WEBS   3-7=0/273

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=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope)
   gable end zone and C-C Exterior(2) 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) 8, 6.

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Job	Truss	Truss Type	Qty	Ply	21 SERENITY - ROOF	
34894-34894A	C3G	Common Girder	1	**2**		I55884978
					Job Reference (optional)	

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

8.630 s Nov 19 2022 MiTek Industries, Inc. Fri Dec 23 17:42:23 2022 Page 1
ID:nxbot3WsxISjrAw_FcBFB3yorwP-SJ0tkdbATqOqkxEd2Q0GQ4HUkRCz0RBz2JP9Agy606U

	3-4-8	6-5-8	9-6-8	12-11-0
	3-4-8	3-1-0	3-1-0	3-4-8

4x6 ‖

Scale = 1:38.2

8.00 ⟍12

3x6 ‖   3x6 ‖

3x10 ‖   3x10 ‖

6-1-12   1-10-1   1-10-1

3x8 M18AHS ‖   6x8 =   6x8 =   6x8 =   3x8 M18AHS ‖

	3-4-8	6-5-8	9-6-8	12-11-0
	3-4-8	3-1-0	3-1-0	3-4-8
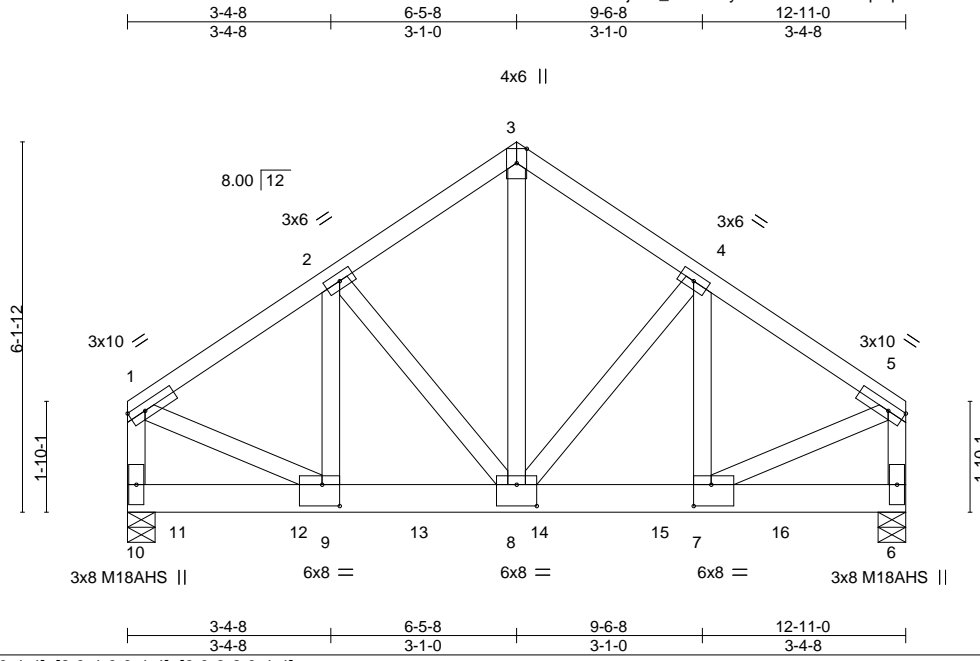
Plate Offsets (X,Y)--   [7:0-3-8,0-4-4], [8:0-4-0,0-4-4], [9:0-3-8,0-4-4]

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	0.61	Vert(LL)	-0.03	8-9	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.62	Vert(CT)	-0.06	8-9	>999	180	M18AHS	186/179
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.73	Horz(CT)	0.01	6	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MS							Weight: 196 lb	FT = 20%

LUMBER-
TOP CHORD   2x4 SP No.2
BOT CHORD   2x6 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 10-0-0 oc bracing.

REACTIONS.   (size)   10=0-5-8, 6=0-5-8
Max Horz 10=-136(LC 4)
Max Uplift 10=-290(LC 8), 6=-244(LC 9)
Max Grav 10=5163(LC 1), 6=4350(LC 1)

FORCES.   (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD   1-2=-4139/254, 2-3=-3432/257, 3-4=-3433/257, 4-5=-4080/251, 1-10=-3899/234, 5-6=-3860/232
BOT CHORD   8-9=-207/3389, 7-8=-179/3340
WEBS   3-8=-229/3546, 4-8=-817/117, 4-7=-83/857, 2-8=-893/121, 2-9=-88/950, 1-9=-176/3543, 5-7=-175/3531

NOTES-
1) 2-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 0-7-0 oc.
   Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; 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
5) All plates are MT20 plates unless otherwise indicated.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 10=290, 6=244.
9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1419 lb down and 88 lb up at 0-10-4, 1416 lb down and 91 lb up at 2-10-4, 1416 lb down and 91 lb up at 4-10-4, 1416 lb down and 91 lb up at 6-10-4, and 1416 lb down and 91 lb up at 8-10-4, and 1420 lb down and 91 lb up at 10-10-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S)   Standard

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Job	Truss	Truss Type	Qty	Ply	21 SERENITY - ROOF	
34894-34894A	C3G	Common Girder	1	**2**		I55884978
					Job Reference (optional)	

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

8.630 s Nov 19 2022 MiTek Industries, Inc. Fri Dec 23 17:42:24 2022 Page 2
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LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (plf)
        Vert: 1-3=-60, 3-5=-60, 6-10=-20
   Concentrated Loads (lb)
        Vert: 11=-1419(B) 12=-1416(B) 13=-1416(B) 14=-1416(B) 15=-1416(B) 16=-1420(B)

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84 Components (Dunn),   Dunn, NC - 28334,   8.630 s Nov 19 2022 MiTek Industries, Inc. Fri Dec 23 17:42:26 2022 Page 1
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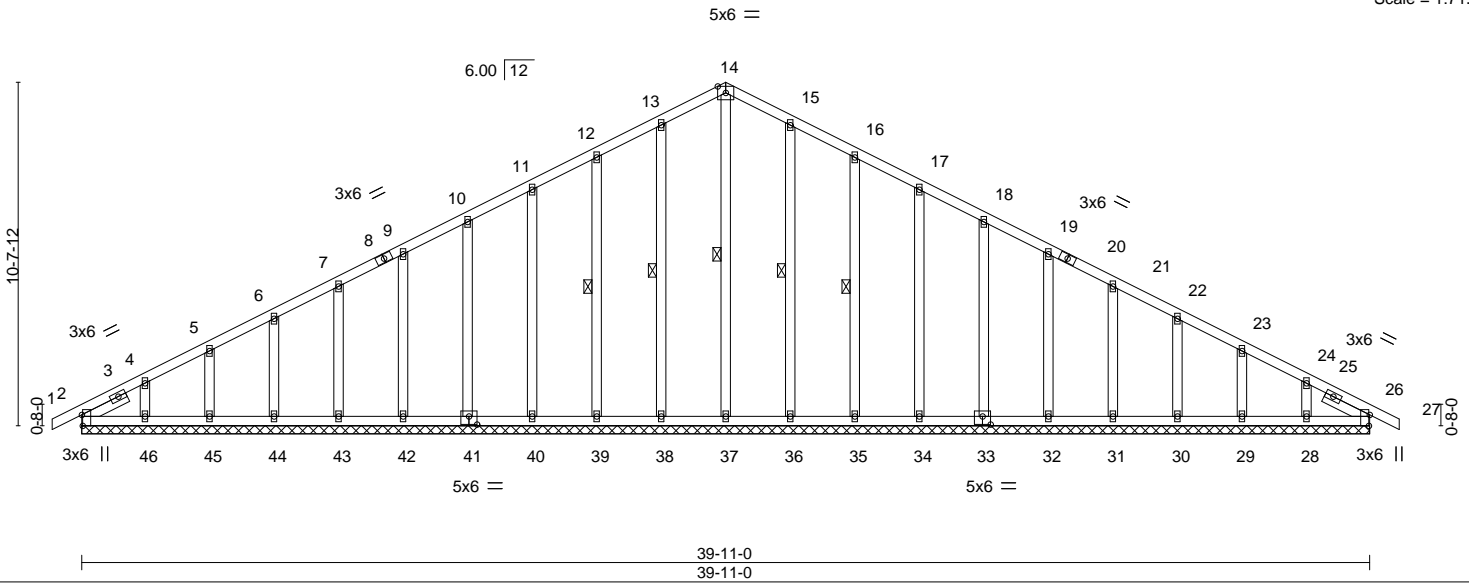
Plate Offsets (X,Y)--   [2:0-4-1,Edge], [26:0-4-1,Edge], [33:0-3-0,0-3-0], [41:0-3-0,0-3-0]

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	0.06	Vert(LL)	-0.00	26	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	-0.00	26	n/r	90		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.01	26	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 285 lb	FT = 20%

LUMBER-
TOP CHORD   2x4 SP No.2
BOT CHORD   2x4 SP No.2
OTHERS   2x4 SP No.3 *Except*
            14-37,13-38,12-39,11-40,10-41,15-36,16-35,17-34,18-33: 2x4 SP No.2
SLIDER   Left 2x4 SP No.3 1-6-7, Right 2x4 SP No.3 1-6-7

BRACING-
TOP CHORD   Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD   Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS   1 Row at midpt   14-37, 13-38, 12-39, 15-36, 16-35

REACTIONS.   All bearings 39-11-0.
    (lb) - Max Horz 2=-148(LC 11)
            Max Uplift All uplift 100 lb or less at joint(s) 2, 38, 39, 40, 41, 42, 43, 44, 45, 46, 36, 35, 34, 33, 32, 31, 30, 29, 28
            Max Grav All reactions 250 lb or less at joint(s) 2, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 36, 35, 34, 33, 32, 31, 30, 29, 28, 26

FORCES.   (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD   13-14=-103/259, 14-15=-103/259

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=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 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) 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) 2, 38, 39, 40, 41, 42, 43, 44, 45, 46, 36, 35, 34, 33, 32, 31, 30, 29, 28.

December 27,2022

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818 Soundside Road
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| Job	Truss	Truss Type	Qty	Ply	21 SERENITY - ROOF	
34894-34894A	D2	Common	4	1		I55884980
					Job Reference (optional)	

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

8.630 s Nov 19 2022 MiTek Industries, Inc. Fri Dec 23 17:42:27 2022 Page 1
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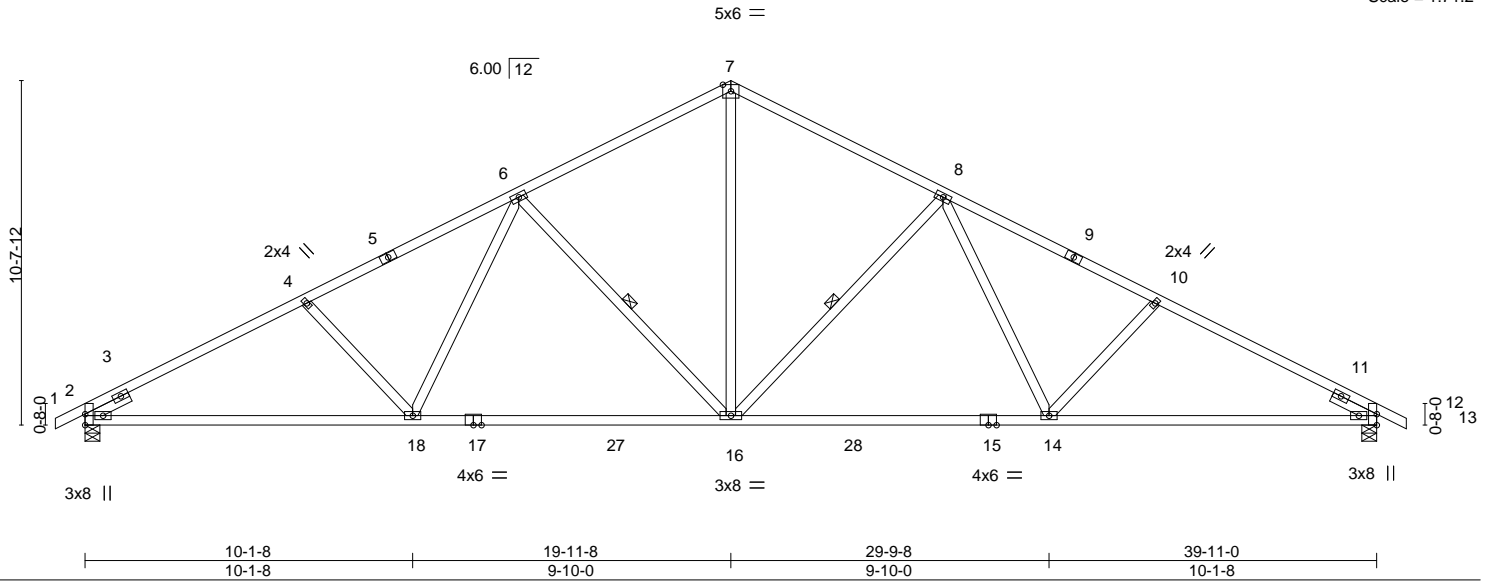
LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.89	Vert(LL)	-0.36	16-18	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.90	Vert(CT)	-0.62	16-18	>771	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.43	Horz(CT)	0.13	12	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MS							Weight: 213 lb	FT = 20%

LUMBER-
TOP CHORD   2x4 SP No.2 *Except*
1-5,9-13: 2x4 SP No.1
BOT CHORD   2x4 SP No.1
WEBS   2x4 SP No.2
SLIDER   Left 2x4 SP No.3 1-6-0, Right 2x4 SP No.3 1-6-0

BRACING-
TOP CHORD   Structural wood sheathing directly applied or 2-2-0 oc purlins.
BOT CHORD   Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS   1 Row at midpt   8-16, 6-16

REACTIONS.   (size)   2=0-5-8, 12=0-5-8
Max Horz 2=148(LC 10)
Max Uplift 2=-103(LC 10), 12=-103(LC 11)
Max Grav 2=1652(LC 1), 12=1652(LC 1)

FORCES.   (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD   2-4=-2783/482, 4-6=-2554/468, 6-7=-1851/427, 7-8=-1851/427, 8-10=-2554/468,
10-12=-2783/482
BOT CHORD   2-18=-319/2409, 16-18=-190/2035, 14-16=-190/2035, 12-14=-319/2409
WEBS   7-16=-226/1277, 8-16=-705/233, 8-14=-14/494, 10-14=-307/183, 6-16=-705/233,
6-18=-14/494, 4-18=-307/183

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=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope)
gable end zone and C-C Exterior(2) 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) All plates are 3x6 MT20 unless otherwise indicated.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide
will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb)
2=103, 12=103.

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Job	Truss	Truss Type	Qty	Ply	21 SERENITY - ROOF	
34894-34894A	E1E	Common Supported Gable	1	1		I55884981
					Job Reference (optional)	

84 Components (Dunn),   Dunn, NC - 28334,   8.630 s Nov 19 2022 MiTek Industries, Inc. Fri Dec 23 17:42:28 2022 Page 1
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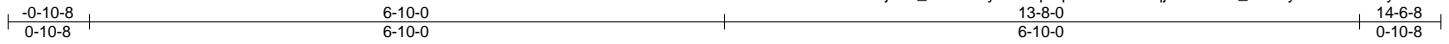
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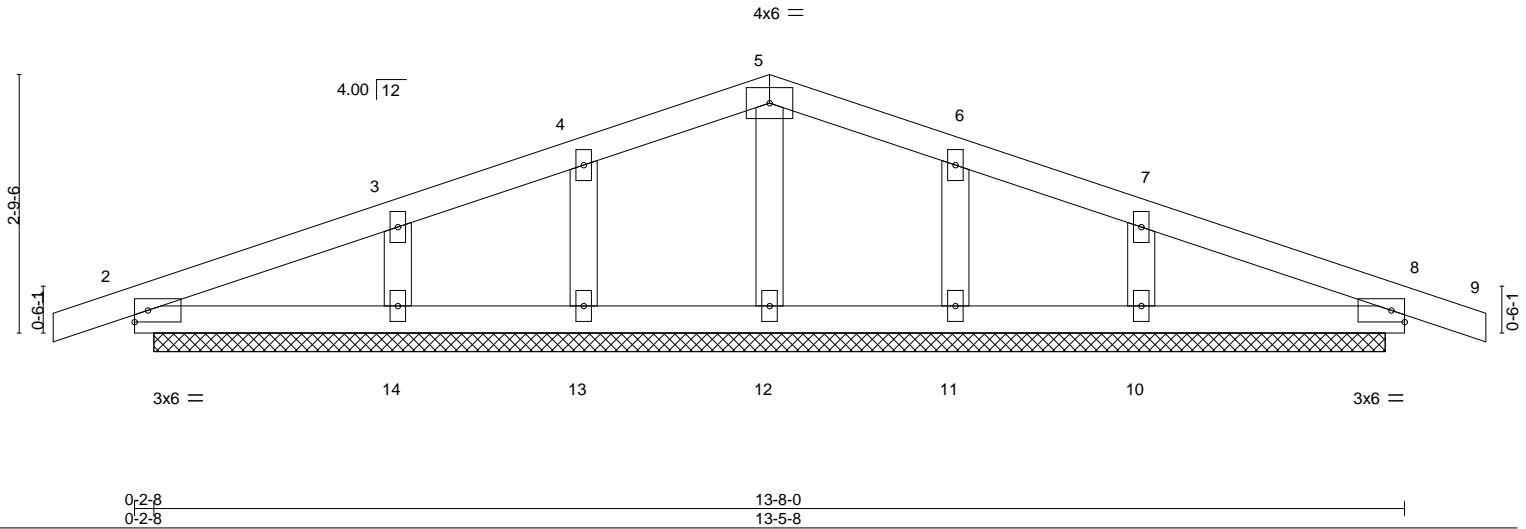
LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	0.00	8	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	0.00	9	n/r	90		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	8	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 55 lb	FT = 20%

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

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

REACTIONS.   All bearings 13-3-0.
        (lb) -   Max Horz   2=37(LC 10)
                Max Uplift   All uplift 100 lb or less at joint(s) 2, 8, 13, 14, 11, 10
                Max Grav   All reactions 250 lb or less at joint(s) 2, 8, 12, 13, 14, 11, 10

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=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope)
   gable end zone and C-C Exterior(2) 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 studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide
   will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 8, 13, 14, 11,
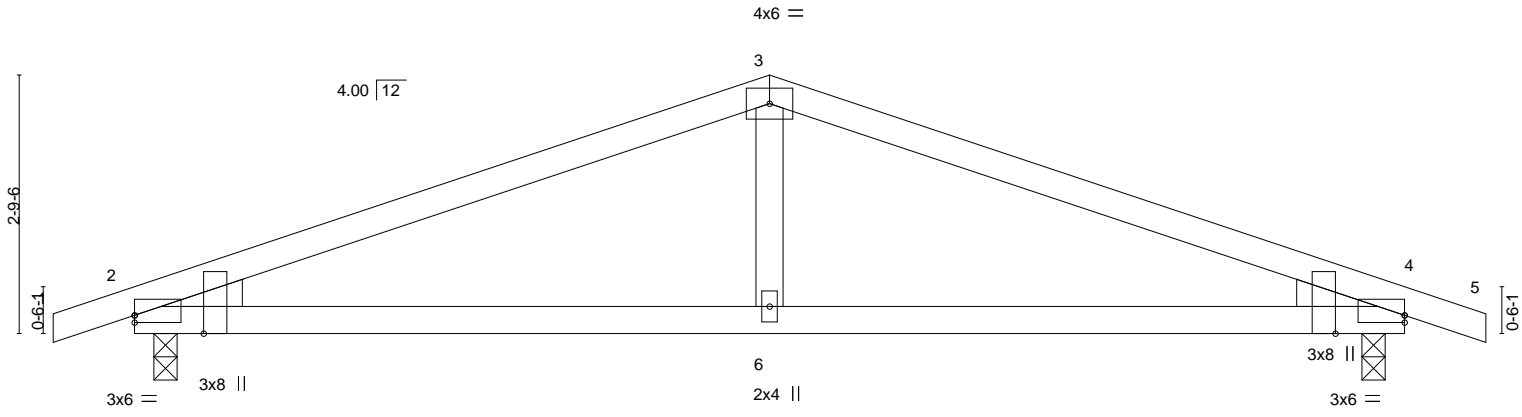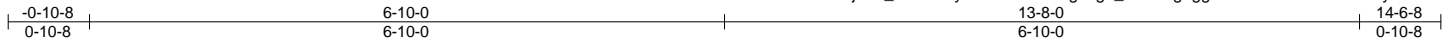   10.
9) Non Standard bearing condition. Review required.

December 27,2022

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Job	Truss	Truss Type	Qty	Ply	21 SERENITY - ROOF	
34894-34894A	E2	Common	4	1		I55884982
					Job Reference (optional)	

84 Components (Dunn),   Dunn, NC - 28334,   8.630 s Nov 19 2022 MiTek Industries, Inc. Fri Dec 23 17:42:29 2022 Page 1
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```
        -0-10-8                    6-10-0                                                    13-8-0                   14-6-8
         0-10-8                    6-10-0                                                    6-10-0                   0-10-8
```

Scale = 1:24.8

4x6 ═

4.00 ⎡12

2-9-6

0-6-1

3x8 ‖

3x6 ═

3x8 ‖

2x4 ‖

3x6 ═

0-6-1

```
        0-2-8                      6-10-0                                                    13-5-8                   13-8-0
        0-2-8                      6-7-8                                                     6-7-8                    0-2-8
```

Plate Offsets (X,Y)--   [2:0-0-0,0-0-15], [2:0-2-6,Edge], [4:Edge,0-0-15], [4:0-2-6,Edge]

LOADING (psf)		SPACING-		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.52	Vert(LL)	-0.07	6-12	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.53	Vert(CT)	-0.13	6-9	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.01	2	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MS							Weight: 51 lb	FT = 20%

LUMBER-
TOP CHORD   2x4 SP No.2
BOT CHORD   2x4 SP No.2
WEBS   2x4 SP No.3
WEDGE
Left: 2x4 SP No.3 , Right: 2x4 SP No.3

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

REACTIONS.   (size)   2=0-3-0, 4=0-3-0
              Max Horz 2=37(LC 14)
              Max Uplift 2=-69(LC 6), 4=-69(LC 7)
              Max Grav 2=599(LC 1), 4=599(LC 1)

FORCES.   (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD   2-3=-951/189, 3-4=-951/189
BOT CHORD   2-6=-100/855, 4-6=-100/855
WEBS   3-6=0/292

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=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope)
   gable end zone and C-C Exterior(2) 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.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 4.

NORTH CAROLINA
PROFESSIONAL SEAL
SEAL
036322
ENGINEER
ERIC A. GILBERT

December 27,2022

ENGINEERING BY
TRENCO
A MiTek Affiliate

818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	21 SERENITY - ROOF	
34894-34894A	M1	MONO TRUSS	6	1		I55884983
					Job Reference (optional)	

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

8.630 s Nov 19 2022 MiTek Industries, Inc. Fri Dec 23 17:42:30 2022 Page 1
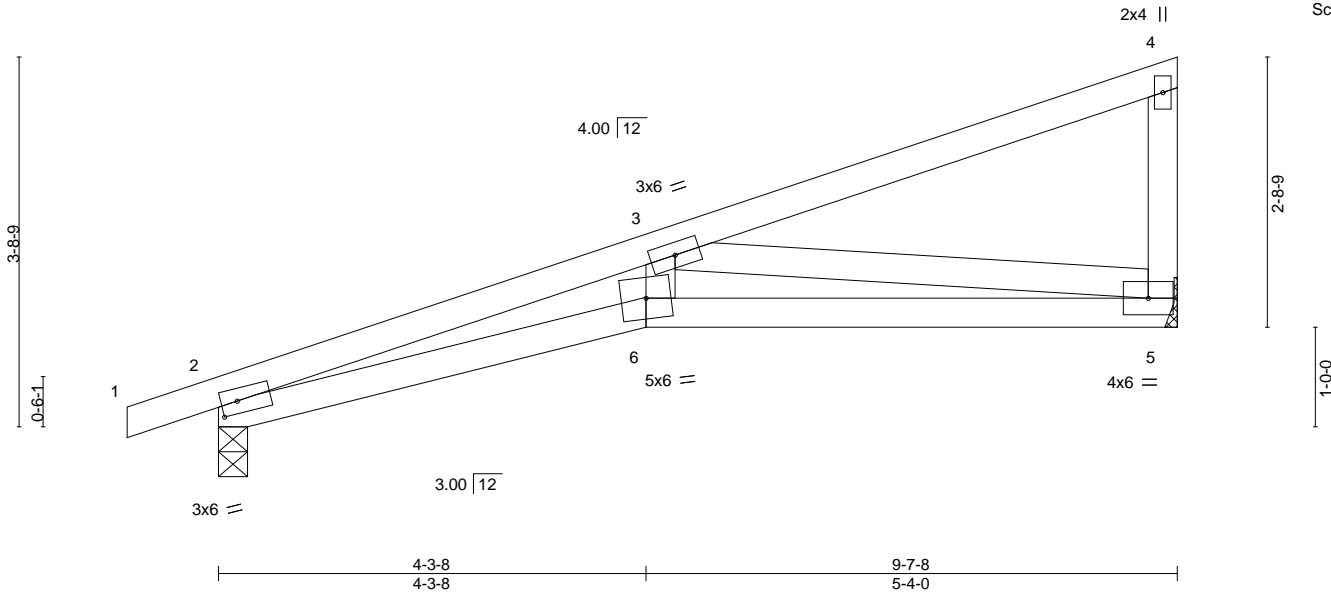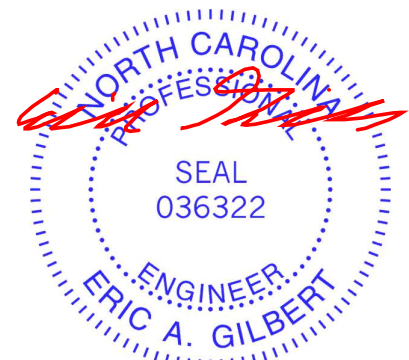ID:nxbot3WsxISjrAw_FcBFB3yorwP-IfxWC0hZqzGr40GzyOevCY4jOGbl9dv?fvb1vmy606N

Scale = 1:23.1

Plate Offsets (X,Y)-- [2:0-1-15,0-1-8]

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	0.39	Vert(LL)	-0.08	6	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.61	Vert(CT)	-0.16	5-6	>704	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.61	Horz(CT)	0.06	5	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MS							Weight: 42 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 4-7-6 oc purlins, except end verticals.
BOT CHORD   Rigid ceiling directly applied or 9-8-1 oc bracing.

REACTIONS.   (size)   5=Mechanical, 2=0-3-8
          Max Horz 2=108(LC 7)
          Max Uplift 5=-53(LC 10), 2=-62(LC 6)
          Max Grav 5=377(LC 1), 2=437(LC 1)

FORCES.   (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD   2-3=-1423/357
BOT CHORD   2-6=-370/1341, 5-6=-354/1227
WEBS   3-6=-18/392, 3-5=-1184/381

NOTES-
1) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 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) Refer to girder(s) for truss to truss connections.
5) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 2.

NORTH CAROLINA
PROFESSIONAL
SEAL
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ENGINEER
ERIC A. GILBERT

December 27,2022

ENGINEERING BY
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A MiTek Affiliate

818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	21 SERENITY - ROOF	
34894-34894A	M1A	MONO TRUSS	3	1		I55884984
					Job Reference (optional)	

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

8.630 s Nov 19 2022 MiTek Industries, Inc. Fri Dec 23 17:42:31 2022 Page 1
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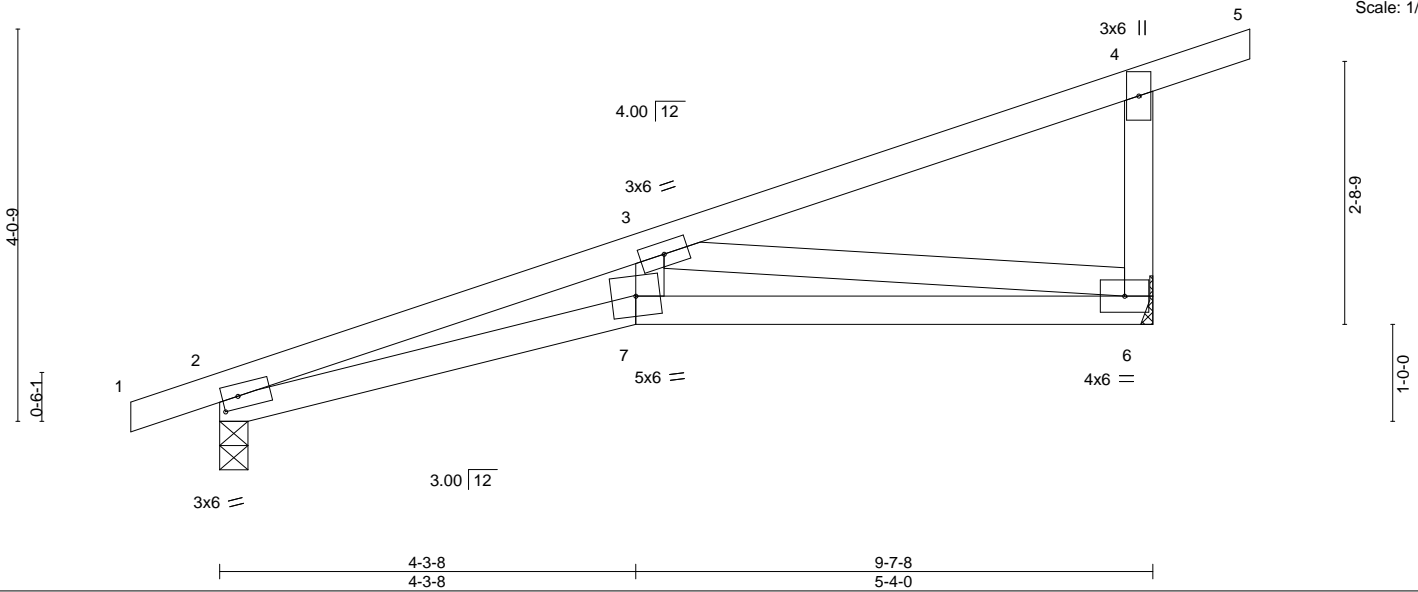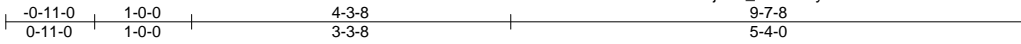
Scale: 1/2"=1'

Plate Offsets (X,Y)--   [2:0-1-15,0-1-8]

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	0.42	Vert(LL)	-0.08	7	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.58	Vert(CT)	-0.15	6-7	>734	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.59	Horz(CT)	0.06	6	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MS							Weight: 44 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 4-8-6 oc purlins,
             except end verticals.
BOT CHORD   Rigid ceiling directly applied or 9-11-14 oc bracing.

REACTIONS.   (size)   6=Mechanical, 2=0-3-8
              Max Horz 2=121(LC 7)
              Max Uplift 6=-77(LC 10), 2=-57(LC 6)
              Max Grav 6=449(LC 1), 2=433(LC 1)

FORCES.   (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD   2-3=-1384/310
BOT CHORD   2-7=-347/1302, 6-7=-331/1190
WEBS   3-7=-16/390, 3-6=-1141/359

NOTES-
1) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope)
   gable end zone and C-C Exterior(2) 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) Refer to girder(s) for truss to truss connections.
5) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify
   capacity of bearing surface.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 6, 2.

North Carolina Professional Engineer Seal 036322 — Eric A. Gilbert

December 27,2022

ENGINEERING BY
TRENCO
A MiTek Affiliate

818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	21 SERENITY - ROOF	
34894-34894A	M1GE	MONOPITCH SUPPORTED	1	1		I55884985
					Job Reference (optional)	

84 Components (Dunn),   Dunn, NC - 28334,   8.630 s Nov 19 2022 MiTek Industries, Inc. Fri Dec 23 17:42:32 2022 Page 1
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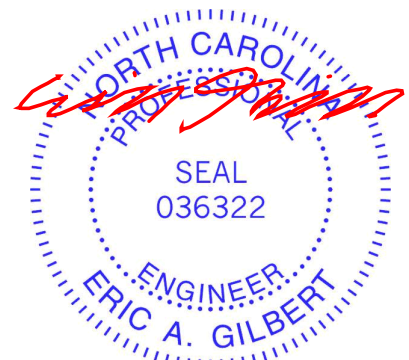
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0-11-0   9-7-8

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4.00 ⌐12

3-8-9

0-6-1

3x6 ≡
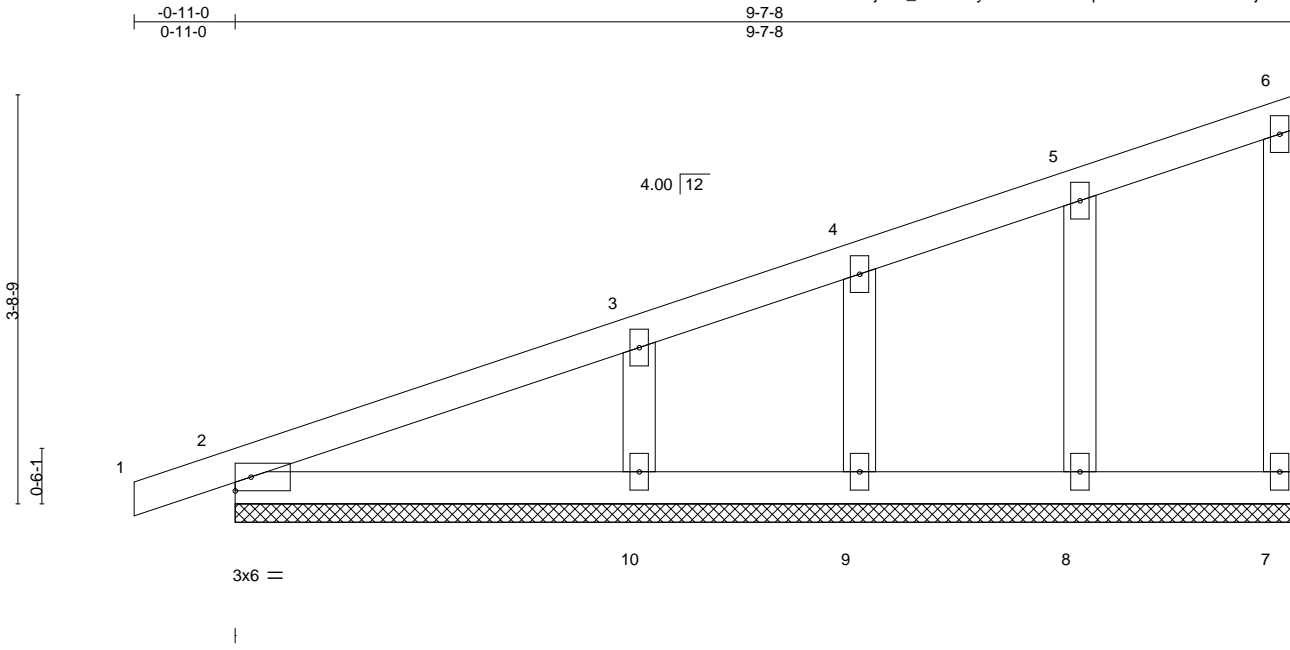
LOADING (psf)		**SPACING-**	2-0-0	**CSI.**		**DEFL.**	in	(loc)	l/defl	L/d	**PLATES**	**GRIP**
TCLL	20.0	Plate Grip DOL	1.15	TC	0.14	Vert(LL)	-0.00	1	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.10	Vert(CT)	0.00	1	n/r	90		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.04	Horz(CT)	-0.00	7	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 44 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 9-8-0.
        (lb) - Max Horz 2=123(LC 7)
            Max Uplift All uplift 100 lb or less at joint(s) 7, 2, 8, 9, 10
            Max Grav   All reactions 250 lb or less at joint(s) 7, 2, 8, 9 except 10=285(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=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope)
   gable end zone and C-C Exterior(2) 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) Gable studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide
   will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 7, 2, 8, 9, 10.
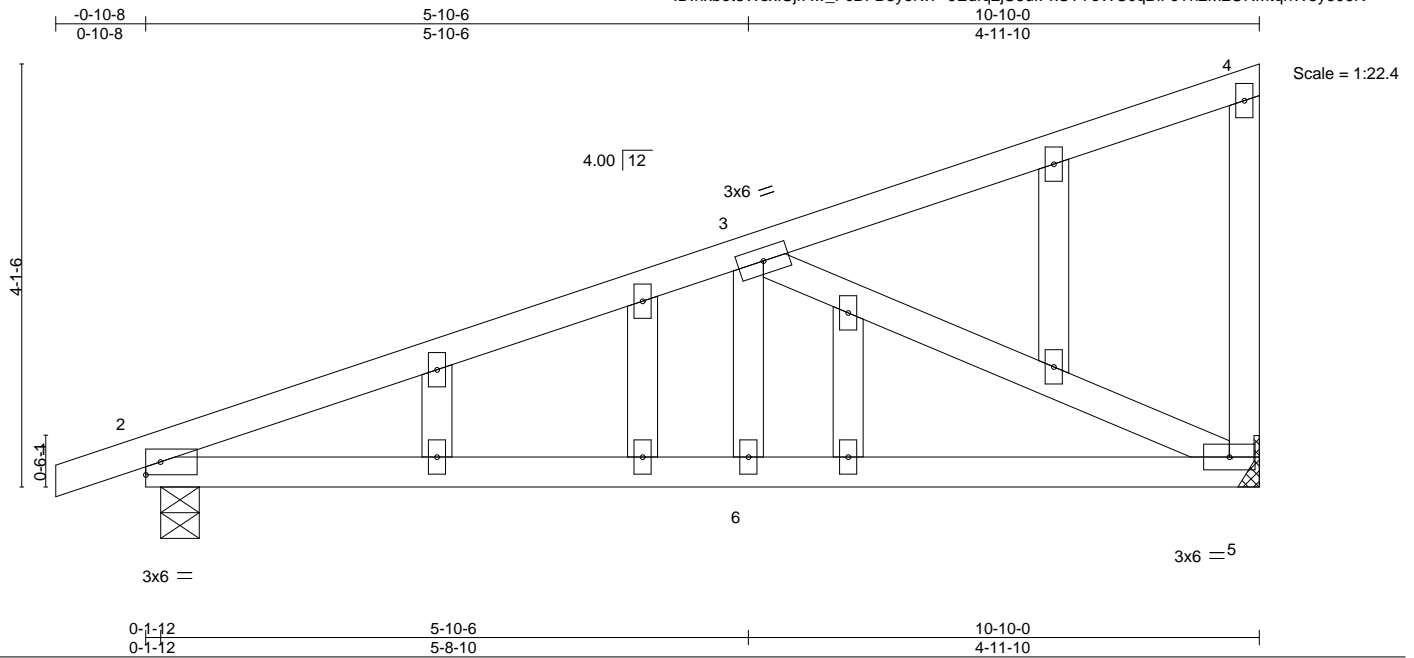
NORTH CAROLINA
PROFESSIONAL
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036322
ENGINEER
ERIC A. GILBERT

December 27,2022

ENGINEERING BY
TRENCO
A MiTek Affiliate

818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	21 SERENITY - ROOF	
34894-34894A	M2GE	GABLE	1	1	Job Reference (optional)	I55884986

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

8.630 s Nov 19 2022 MiTek Industries, Inc. Fri Dec 23 17:42:33 2022 Page 1
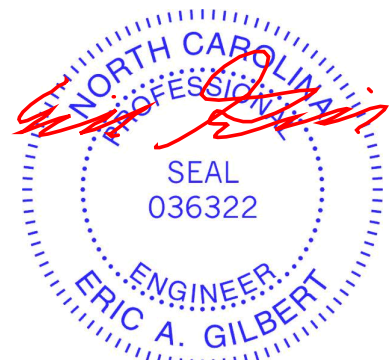ID:nxbot3WsxISjrAw_FcBFB3yorwP-9Edfq2jS6ufPxU?YeWCcqBiFJTh2M2URMtqhW5y606K

LOADING (psf)
TCLL 20.0
TCDL 10.0
BCLL 0.0 *
BCDL 10.0

SPACING- 2-0-0
Plate Grip DOL 1.15
Lumber DOL 1.15
Rep Stress Incr YES
Code IRC2015/TPI2014

CSI.
TC 0.34
BC 0.32
WB 0.36
Matrix-MS

DEFL.
	in	(loc)	l/defl	L/d
Vert(LL)	-0.02	6-17	>999	240
Vert(CT)	-0.06	6-17	>999	180
Horz(CT)	0.01	5	n/a	n/a

PLATES **GRIP**
MT20 244/190

Weight: 59 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. (size) 2=0-4-8, 5=Mechanical
Max Horz 2=138(LC 9)
Max Uplift 2=-66(LC 6), 5=-58(LC 10)
Max Grav 2=482(LC 1), 5=425(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-704/146
BOT CHORD 2-6=-119/622, 5-6=-119/622
WEBS 3-5=-667/191

NOTES-
1) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 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 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) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 5.

December 27,2022

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

Job	Truss	Truss Type	Qty	Ply	21 SERENITY - ROOF	
34894-34894A	M3	Monopitch	6	1		I55884987
					Job Reference (optional)	

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

8.630 s Nov 19 2022 MiTek Industries, Inc. Fri Dec 23 17:42:34 2022 Page 1
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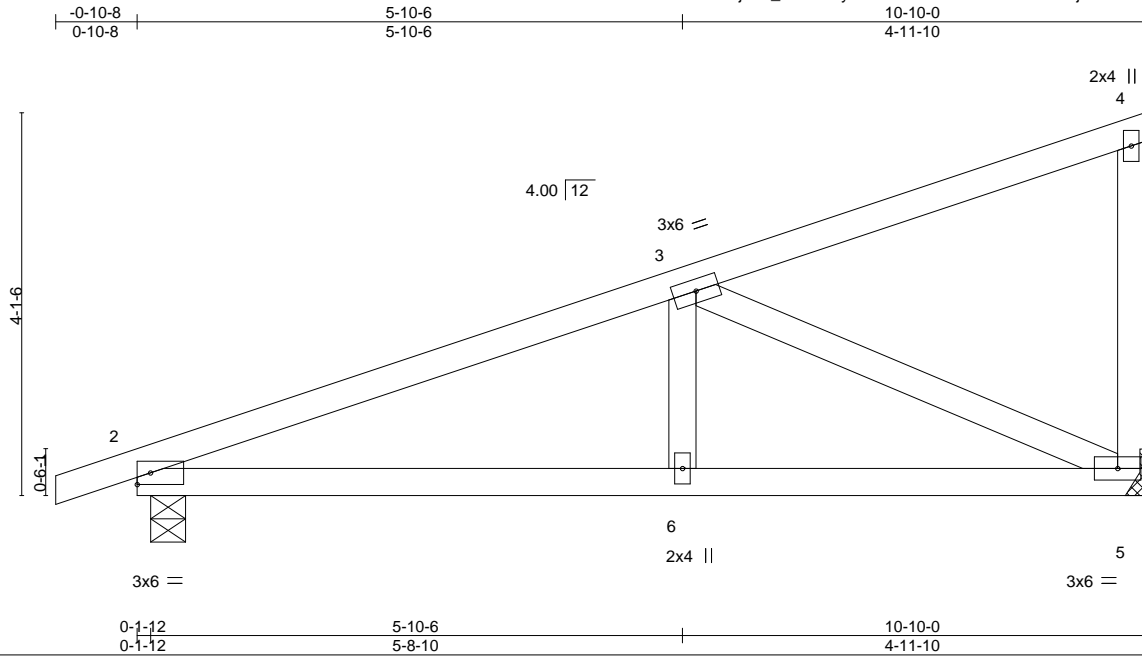
LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.34	Vert(LL)	-0.02	6-9	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.32	Vert(CT)	-0.06	6-9	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.36	Horz(CT)	0.01	5	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MS							Weight: 50 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 10-0-0 oc bracing.

REACTIONS.   (size)   2=0-4-8, 5=Mechanical
Max Horz   2=138(LC 9)
Max Uplift 2=-66(LC 6), 5=-58(LC 10)
Max Grav   2=482(LC 1), 5=425(LC 1)

FORCES.   (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD   2-3=-704/146
BOT CHORD   2-6=-119/622, 5-6=-119/622
WEBS   3-5=-667/191

NOTES-
1) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 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) 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) 2, 5.

NORTH CAROLINA
PROFESSIONAL
SEAL
036322
ERIC A. GILBERT
ENGINEER

December 27,2022

ENGINEERING BY
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Edenton, NC 27932

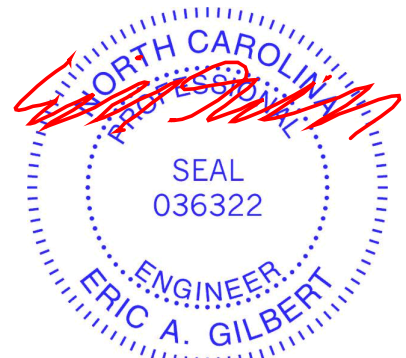| Job	Truss	Truss Type	Qty	Ply	21 SERENITY - ROOF	
34894-34894A	M3GE	Monopitch Structural Gable	1	1		I55884988
					Job Reference (optional)	

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

8.630 s Nov 19 2022 MiTek Industries, Inc. Fri Dec 23 17:42:35 2022 Page 1
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0-10-8 | 3-8-0

Scale = 1:11.4

4.00 |12

1-8-11

0-6-1

3-8-0
3-6-4

3x6 =

2x4 ||
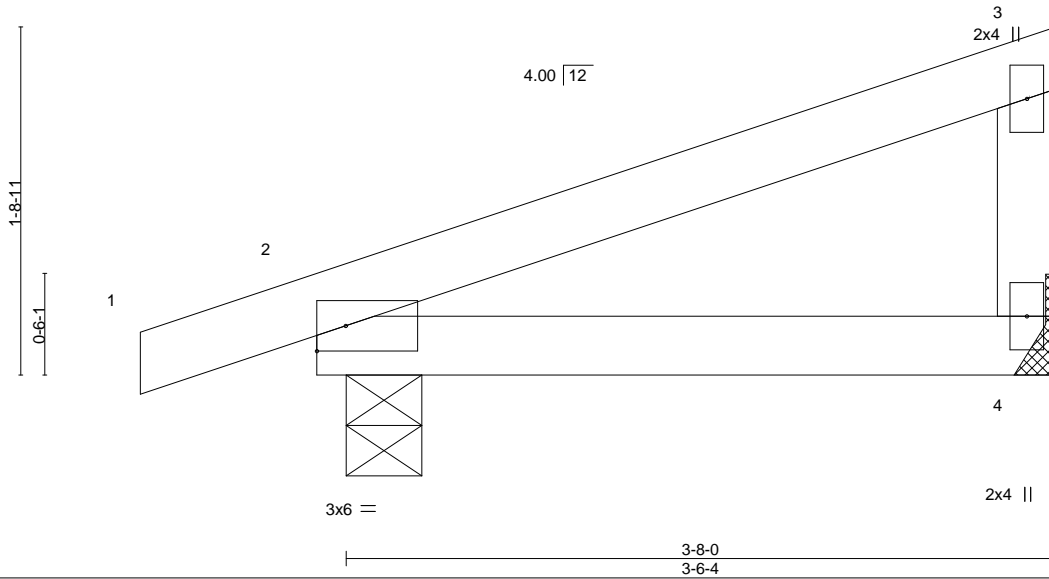
LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.17	Vert(LL)	-0.01	4-7	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.12	Vert(CT)	-0.01	4-7	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-MP							Weight: 14 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 3-8-0 oc purlins, except end verticals.
BOT CHORD   Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS.   (size)   4=Mechanical, 2=0-4-8
Max Horz   2=52(LC 9)
Max Uplift   4=-18(LC 10), 2=-43(LC 6)
Max Grav   4=134(LC 1), 2=200(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=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 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 studs spaced at 2-0-0 oc.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4, 2.

NORTH CAROLINA
PROFESSIONAL
SEAL
036322
ERIC A. GILBERT
ENGINEER

December 27,2022

ENGINEERING BY
TRENCO
A MiTek Affiliate

818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	21 SERENITY - ROOF	
34894-34894A	V1	Valley	1	1		I55884989
					Job Reference (optional)	

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

8.630 s Nov 19 2022 MiTek Industries, Inc. Fri Dec 23 17:42:35 2022 Page 1
ID:nxbot3WsxISjrAw_FcBFB3yorwP-6ckPFklieWv7An9wlxE4vcnYSHMdq0JkpBJob_y606I

6-10-15 / 6-10-15

13-9-14 / 6-10-15

Scale = 1:22.1

4x6 =

5.00 ⎡12

2-10-9

0-0-4

3x6 =   2x4 ‖   3x6 =

4

0-0-10 / 13-9-14
0-0-10 / 13-9-4

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	0.56	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.37	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.08	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 44 lb	FT = 20%

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

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

REACTIONS.   (size)   1=13-8-11, 3=13-8-11, 4=13-8-11
        Max Horz 1=-37(LC 15)
        Max Uplift 1=-29(LC 10), 3=-36(LC 11)
        Max Grav 1=222(LC 21), 3=222(LC 22), 4=551(LC 1)

FORCES.   (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS   2-4=-371/147

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=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope)
   gable end zone and C-C Exterior(2) 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) Gable requires continuous bottom chord bearing.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide
   will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
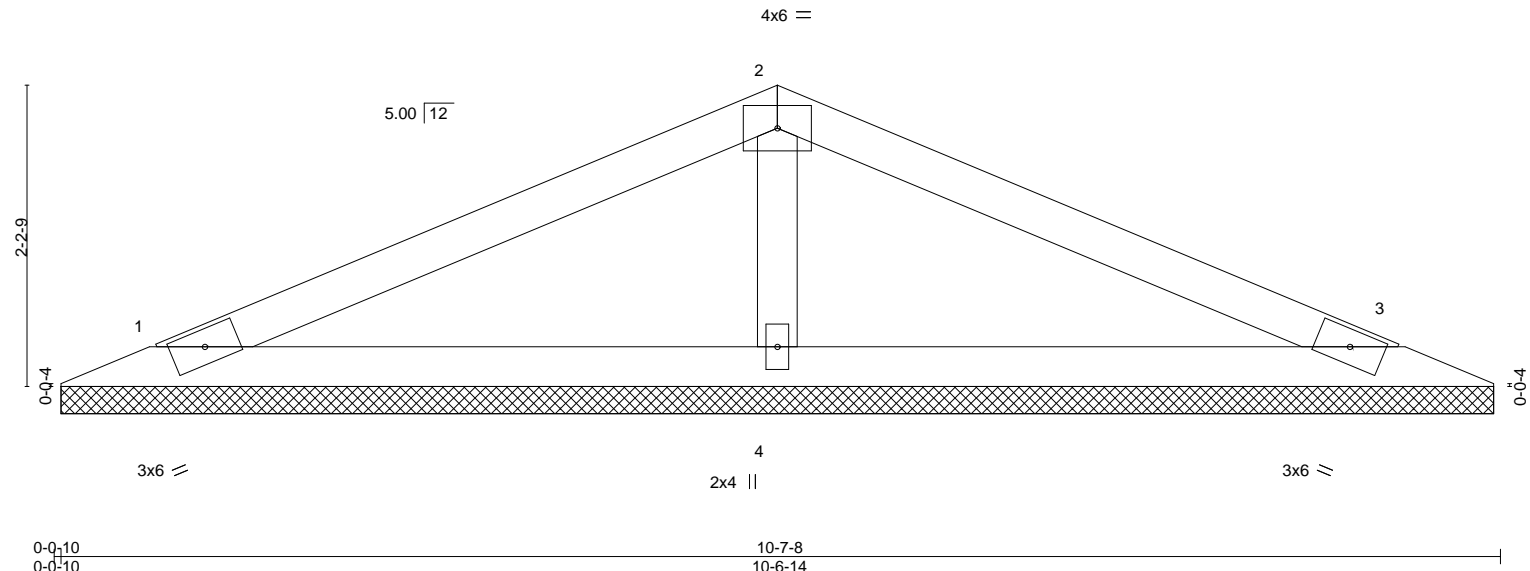

NORTH CAROLINA
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ERIC A. GILBERT
ENGINEER

December 27,2022

ENGINEERING BY
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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	21 SERENITY - ROOF	
34894-34894A	V2	Valley	1	1		I55884990
					Job Reference (optional)	

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

8.630 s Nov 19 2022 MiTek Industries, Inc. Fri Dec 23 17:42:36 2022 Page 1
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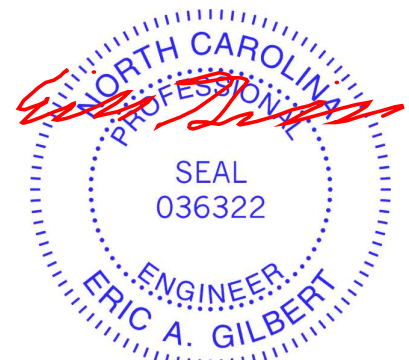
5-3-12 | 10-7-8
5-3-12 | 5-3-12

Scale = 1:16.9

4x6 ═

5.00 ⎡12

2-2-9

0-0-4

3x6 ⟋

2x4 ‖

3x6 ⟍

0-0-10 | 10-7-8
0-0-10 | 10-6-14

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	0.49	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.21	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 33 lb	FT = 20%

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

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

REACTIONS.   (size)   1=10-6-4, 3=10-6-4, 4=10-6-4
　　　　　Max Horz 1=27(LC 14)
　　　　　Max Uplift 1=-22(LC 10), 3=-26(LC 11)
　　　　　Max Grav 1=164(LC 21), 3=164(LC 22), 4=409(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS   2-4=-275/122

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=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 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) Gable requires continuous bottom chord bearing.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.

NORTH CAROLINA
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ENGINEER
ERIC A. GILBERT

December 27,2022

ENGINEERING BY
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818 Soundside Road
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Job	Truss	Truss Type	Qty	Ply	21 SERENITY - ROOF	
34894-34894A	V3	Valley	1	1		I55884991
					Job Reference (optional)	

84 Components (Dunn),   Dunn, NC - 28334,
8.630 s Nov 19 2022 MiTek Industries, Inc. Fri Dec 23 17:42:37 2022 Page 1
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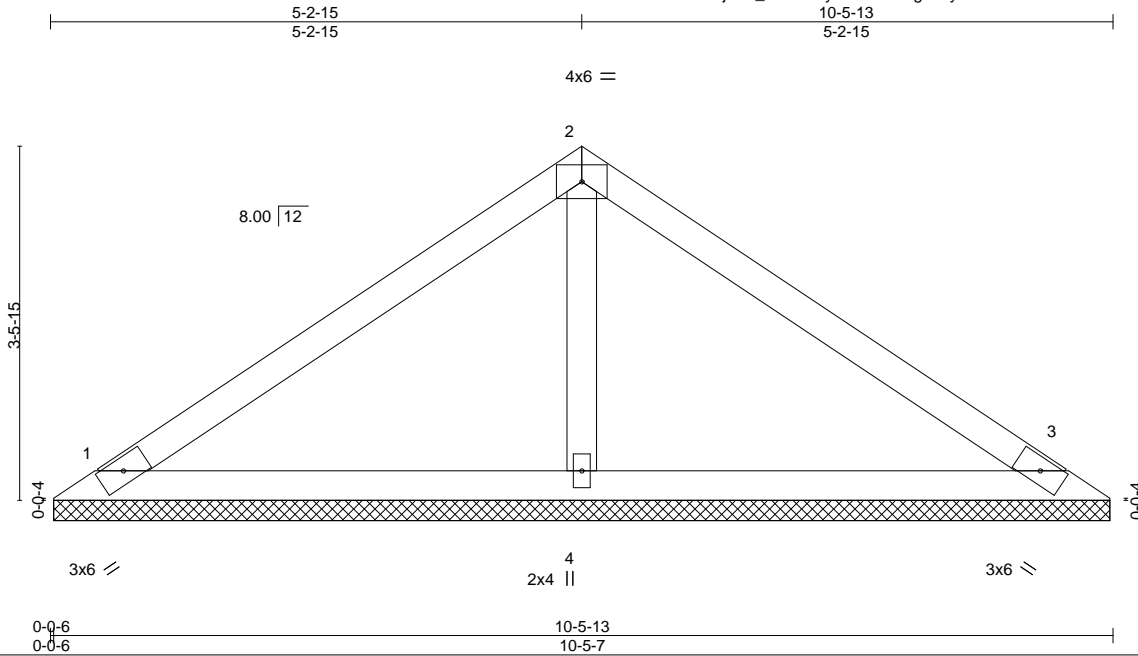
5-2-15
5-2-15
10-5-13
5-2-15

4x6 ═

Scale = 1:22.7

8.00 ⎡12

3-5-15

0-0-4

3x6 ⫽   2x4 ‖   3x6 ⟍

0-0-6
0-0-6
10-5-13
10-5-7

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	0.54	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.23	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 37 lb	FT = 20%

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

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

REACTIONS.   (size)   1=10-5-1, 3=10-5-1, 4=10-5-1
Max Horz 1=-67(LC 6)
Max Uplift 1=-22(LC 10), 3=-30(LC 11)
Max Grav 1=186(LC 1), 3=186(LC 1), 4=389(LC 1)

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=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 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) Gable requires continuous bottom chord bearing.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.

NORTH CAROLINA
PROFESSIONAL
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036322
ENGINEER
ERIC A. GILBERT

December 27,2022

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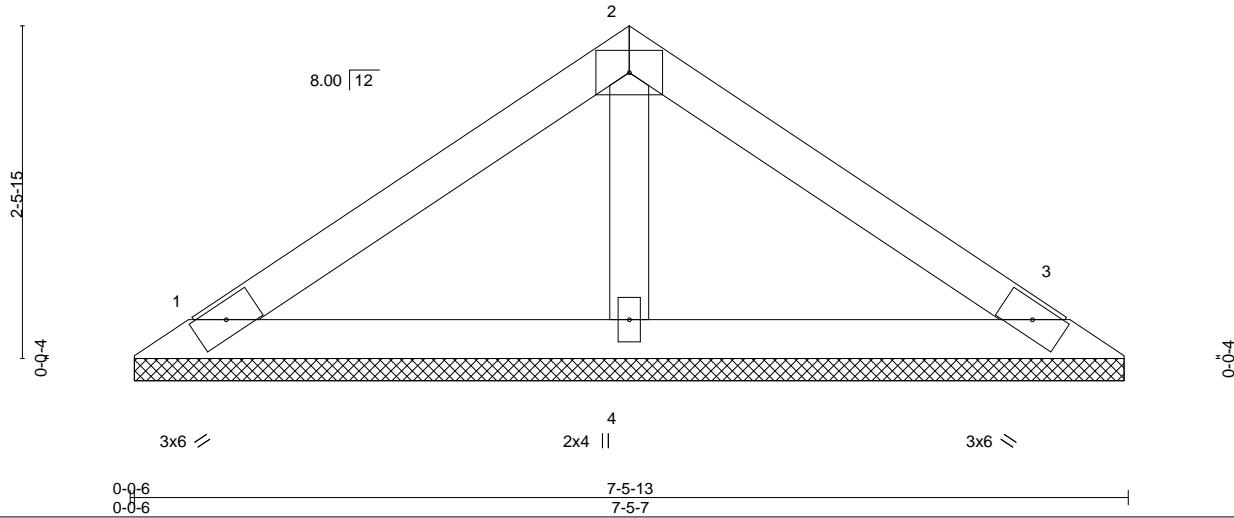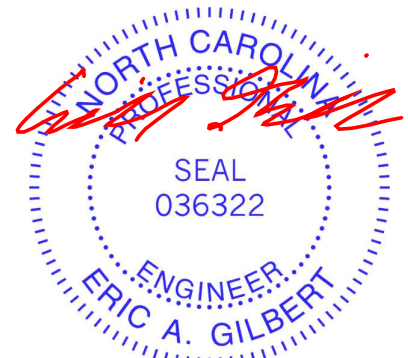| Job	Truss	Truss Type	Qty	Ply	21 SERENITY - ROOF	
34894-34894A	V4	Valley	1	1		I55884992
					Job Reference (optional)	

84 Components (Dunn),   Dunn, NC - 28334,   8.630 s Nov 19 2022 MiTek Industries, Inc. Fri Dec 23 17:42:38 2022 Page 1
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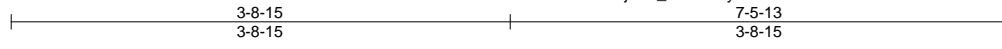
3-8-15

7-5-13

3-8-15

3-8-15

3-8-15

4x6 ═

Scale = 1:17.3

8.00 ⟍12

2-5-15

0-0-4

0-0-4

3x6 ⫽

2x4 ‖

3x6 ⟍

0-0-6

7-5-13

0-0-6

7-5-7

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	0.34	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.11	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-P							Weight: 26 lb	FT = 20%

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

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

REACTIONS.   (size)   1=7-5-1, 3=7-5-1, 4=7-5-1
                Max Horz 1=46(LC 7)
                Max Uplift 1=-21(LC 10), 3=-27(LC 11)
                Max Grav 1=140(LC 1), 3=140(LC 1), 4=242(LC 1)

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=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope)
    gable end zone and C-C Exterior(2) 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) Gable requires continuous bottom chord bearing.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide
    will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.

(Engineer's seal: NORTH CAROLINA PROFESSIONAL ENGINEER, SEAL 036322, ERIC A. GILBERT)

December 27,2022

TRENCO
ENGINEERING BY
A MiTek Affiliate

818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	21 SERENITY - ROOF	
34894-34894A	V5	Valley	1	1		I55884993
					Job Reference (optional)	

84 Components (Dunn),   Dunn, NC - 28334,   8.630 s Nov 19 2022 MiTek Industries, Inc. Fri Dec 23 17:42:39 2022 Page 1
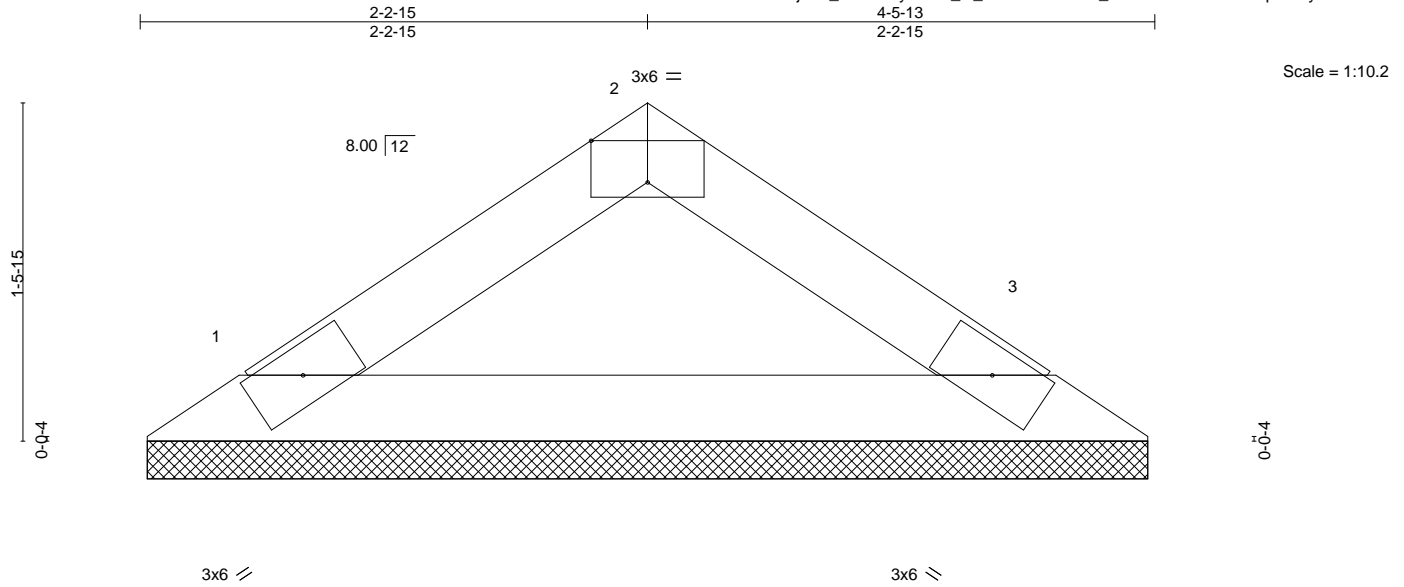ID:nxbot3WsxISjrAw_FcBFB3yorwP-_O_w55oDikPZfPSi_nJ04SxLoumPmrdKkpH?kly606E

Scale = 1:10.2

2-2-15   4-5-13
2-2-15   2-2-15

3x6 =

8.00 | 12

1-5-15

0-0-4   0-0-4

3x6 //   3x6 \\

0-0-6   4-5-13
0-0-6   4-5-7

Plate Offsets (X,Y)--   [2:0-3-0,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	0.09	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.26	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-P							Weight: 13 lb	FT = 20%

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

BRACING-
TOP CHORD   Structural wood sheathing directly applied or 4-5-13 oc purlins.
BOT CHORD   Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS.   (size)   1=4-5-1, 3=4-5-1
              Max Horz 1=25(LC 7)
              Max Uplift 1=-7(LC 10), 3=-7(LC 11)
              Max Grav 1=141(LC 1), 3=141(LC 1)

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=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope)
   gable end zone and C-C Exterior(2) 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) Gable requires continuous bottom chord bearing.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide
   will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.

December 27,2022

ENGINEERING BY
TRENCO
A MiTek Affiliate

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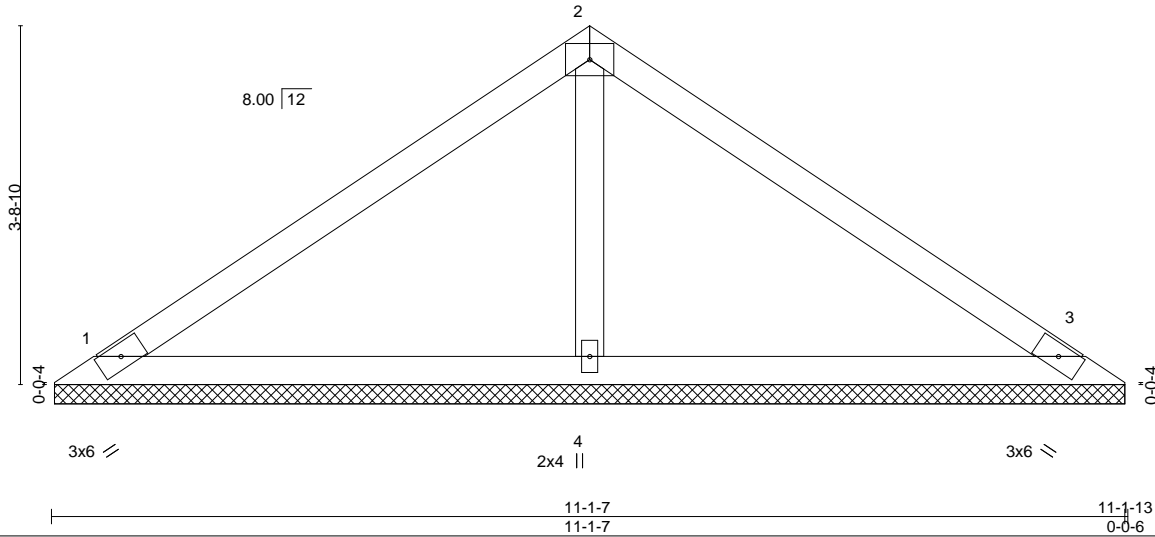| Job	Truss	Truss Type	Qty	Ply	21 SERENITY - ROOF	
34894-34894A	V6	Valley	1	1		I55884994
					Job Reference (optional)	

84 Components (Dunn), Dunn, NC - 28334,
8.630 s Nov 19 2022 MiTek Industries, Inc. Fri Dec 23 17:42:40 2022 Page 1
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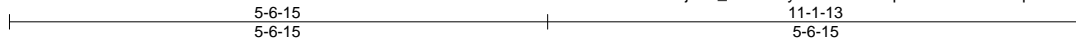
LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.37	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.26	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.07	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 39 lb	FT = 20%

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

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

REACTIONS.   (size)   1=11-1-1, 3=11-1-1, 4=11-1-1
Max Horz 1=-72(LC 6)
Max Uplift 1=-23(LC 10), 3=-33(LC 11)
Max Grav 1=201(LC 1), 3=201(LC 1), 4=414(LC 1)

FORCES.   (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS   2-4=-263/71

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=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 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) Gable requires continuous bottom chord bearing.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.

December 27,2022

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Edenton, NC 27932

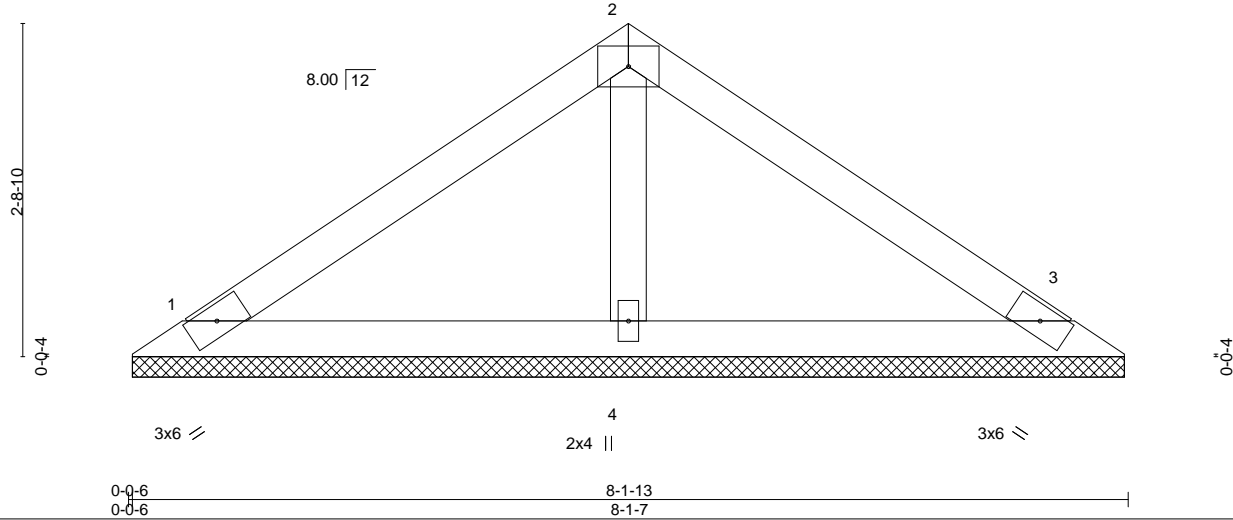| Job	Truss	Truss Type	Qty	Ply	21 SERENITY - ROOF	
34894-34894A	V7	Valley	1	1		I55884995
					Job Reference (optional)	

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

8.630 s Nov 19 2022 MiTek Industries, Inc. Fri Dec 23 17:42:41 2022 Page 1
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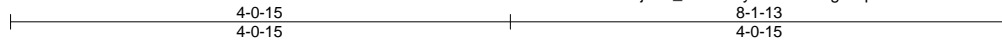
4-0-15
4-0-15

8-1-13
4-0-15

4x6 =

Scale = 1:18.8

8.00 ⌐12

2-8-10

0-0-4

1

2

3

0-0-4

4

3x6 ⫽

2x4 ‖

3x6 ⟍

0-0-6
0-0-6

8-1-13
8-1-7

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	0.41	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.13	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-P							Weight: 28 lb	FT = 20%

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

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

REACTIONS.   (size)   1=8-1-1, 3=8-1-1, 4=8-1-1
               Max Horz 1=-50(LC 6)
               Max Uplift 1=-23(LC 10), 3=-29(LC 11)
               Max Grav 1=154(LC 1), 3=154(LC 1), 4=266(LC 1)

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=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 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) Gable requires continuous bottom chord bearing.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.

NORTH CAROLINA
PROFESSIONAL
SEAL
036322
ERIC A. GILBERT
ENGINEER

December 27,2022

ENGINEERING BY
TRENCO
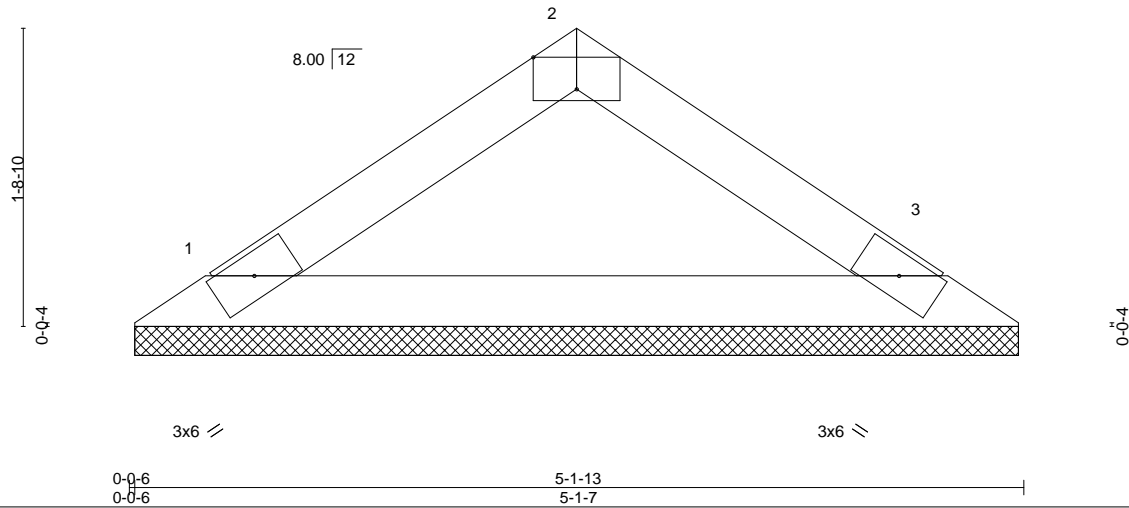A MiTek Affiliate

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

8.630 s Nov 19 2022 MiTek Industries, Inc. Fri Dec 23 17:42:42 2022 Page 1
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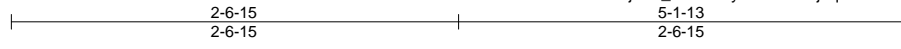
2-6-15 | 5-1-13
2-6-15 | 2-6-15

3x6 =

Scale = 1:13.3

8.00 [12]

1-8-10

0-0-4

3x6 ∥   3x6 ∖

0-0-6 | 5-1-13
0-0-6 | 5-1-7

Plate Offsets (X,Y)-- [2:0-3-0,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	0.13	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.37	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-P							Weight: 15 lb	FT = 20%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied or 5-1-13 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 1=5-1-1, 3=5-1-1
Max Horz 1=29(LC 7)
Max Uplift 1=-8(LC 10), 3=-8(LC 11)
Max Grav 1=168(LC 1), 3=168(LC 1)

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=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 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) Gable requires continuous bottom chord bearing.
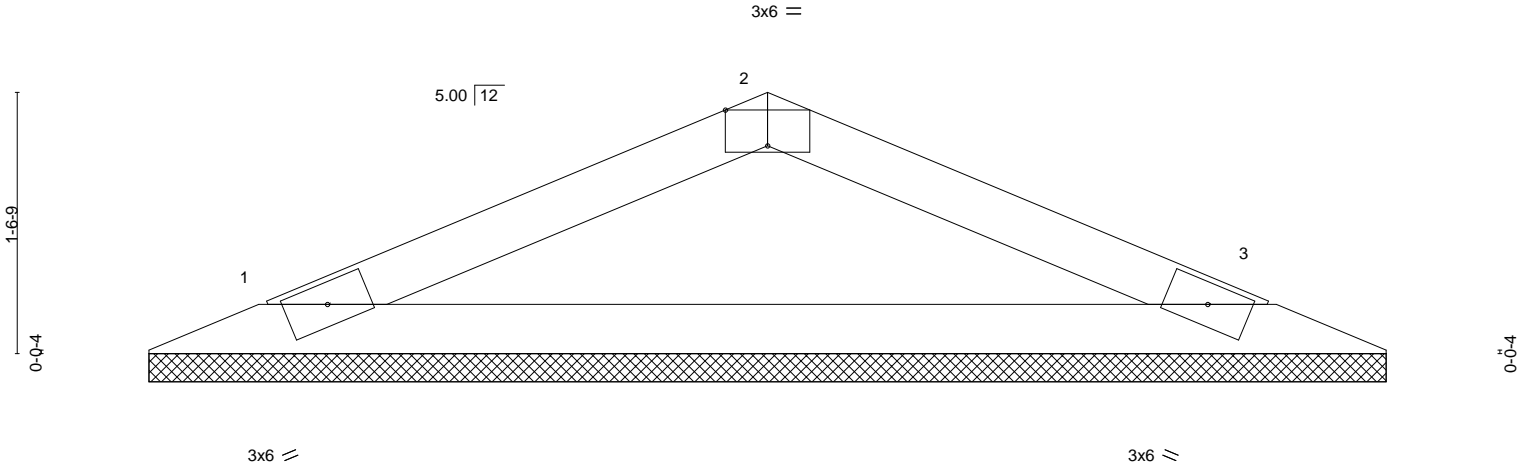4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.

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Scale = 1:13.6

Plate Offsets (X,Y)--   [2:0-3-0,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	0.27	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.46	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-P							Weight: 20 lb	FT = 20%

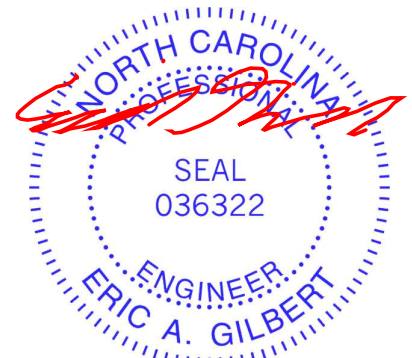LUMBER-
TOP CHORD   2x4 SP No.3
BOT CHORD   2x4 SP No.2

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

REACTIONS.   (size)   1=7-3-14, 3=7-3-14
Max Horz 1=-18(LC 15)
Max Uplift 1=-14(LC 10), 3=-14(LC 11)
Max Grav 1=237(LC 1), 3=237(LC 1)

FORCES.   (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD   1-2=-256/136, 2-3=-256/136

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=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 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) Gable requires continuous bottom chord bearing.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.

December 27,2022

ENGINEERING BY
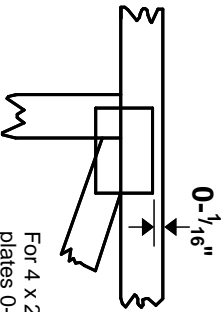TRENCO
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Symbols

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.

1 3/4"

0- 1/16"

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

=

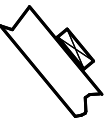This symbol indicates the required direction of slots in connector plates.

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

PLATE SIZE

4 x 4

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

LATERAL BRACING LOCATION

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

BEARING

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

Industry Standards:

ANSI/TPI1:   National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89:   Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

Numbering System

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

6-4-8

TOP CHORD

1

2 TOP CHORDS

3

TOP CHORD

8   7   BOTTOM CHORDS   6   5

C1-8   C1-2   W1-7   W2-7   WEBS   C2-3   W3-7   C6-7   W3-6   C3-4   W4-6   C5-6   C4-5

C7-8

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

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

PRODUCT CODE APPROVALS

ICC-ES Reports:

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

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

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

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

⚠ General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.

2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative T or I bracing should be considered.

3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.

4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.

5. Cut members to bear tightly against each other.

6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI 1.

7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI 1.

8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.

9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.

10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.

11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.

12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.

13. Top chords must be sheathed or purlins provided at spacing indicated on design.

14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.

15. Connections not shown are the responsibility of others.

16. Do not cut or alter truss member or plate without prior approval of an engineer.

17. Install and load vertically unless indicated otherwise.

18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.

19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.

20. Design assumes manufacture in accordance with ANSI/TPI 1 Quality Criteria.

21. The design does not take into account any dynamic or other loads other than those expressly stated.