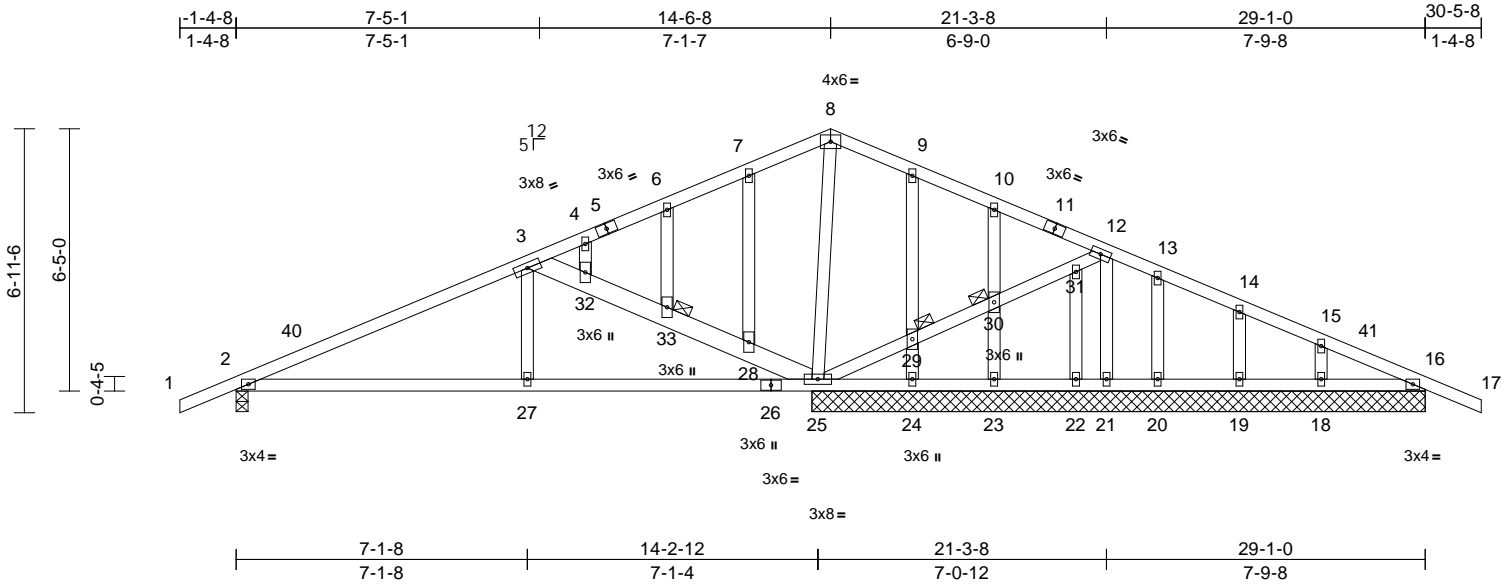


Job 4111083	Truss A01	Truss Type Common	Qty 1	Ply 1	5011 Ray Rd Spring Lake, NC Job Reference (optional)	167367519
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Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8:63 S Jul 12 2024 Print: 8:630 S Jul 12 2024 MiTek Industries, Inc. Tue Aug 06 13:20:52
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Page: 1



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.61	Vert(LL)	-0.05	27-36	>999	360	MT20 244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.46	Vert(CT)	-0.12	27-36	>999	240	
BCLL	0.0*	Rep Stress Incr	YES	WB	0.29	Horz(CT)	0.01	25	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS		Wind(LL)	0.08	27-36	>999	240	Weight: 177 lb FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 3-25:2x6 SP No.2
OTHERS 2x4 SP No.3
BRACING
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied.
JOINTS 1 Brace at Jt(s): 29, 30, 33

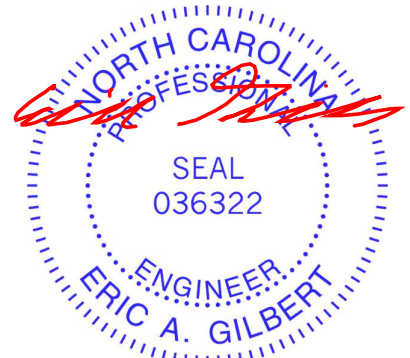
WEBS
7-28=-94/73, 24-29=-111/77, 23-30=-148/142, 22-31=-10/8, 13-20=-75/65, 14-19=-126/120, 15-18=-127/111, 3-32=-845/471, 32-33=-791/426, 28-33=-839/472, 25-28=-880/504, 8-25=-399/120, 25-29=-203/201, 29-30=-201/199, 30-31=-201/198, 12-31=-204/202, 12-21=-44/104, 4-32=-115/140, 6-33=-125/117, 9-29=-113/79, 10-30=-150/143, 3-27=0/310

9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
LOAD CASE(S) Standard

REACTIONS (size)
2=0-3-8, 16=15-0-0, 18=15-0-0, 19=15-0-0, 20=15-0-0, 21=15-0-0, 22=15-0-0, 23=15-0-0, 24=15-0-0, 25=15-0-0, 37=15-0-0
Max Horiz 2=-149 (LC 13)
Max Uplift 2=-184 (LC 12), 16=-83 (LC 9), 18=-76 (LC 13), 19=-80 (LC 13), 20=-38 (LC 13), 21=-93 (LC 25), 23=-90 (LC 13), 24=-79 (LC 13), 25=-330 (LC 12), 37=-83 (LC 9)
Max Grav 2=530 (LC 25), 16=179 (LC 26), 18=177 (LC 1), 19=164 (LC 1), 20=111 (LC 26), 21=56 (LC 26), 22=57 (LC 3), 23=200 (LC 1), 24=115 (LC 26), 25=1039 (LC 1), 37=179 (LC 26)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/32, 2-3=-575/284, 3-4=-84/244, 4-6=-116/329, 6-7=-67/327, 7-8=-31/342, 8-9=-13/315, 9-10=-28/304, 10-12=-64/316, 12-13=0/137, 13-14=0/121, 14-15=-25/109, 15-16=-100/112, 16-17=0/32
BOT CHORD 2-27=-179/487, 25-27=-181/481, 24-25=-95/148, 23-24=-95/148, 22-23=-95/148, 21-22=-95/148, 20-21=-95/148, 19-20=-95/148, 18-19=-95/148, 16-18=-95/148

- NOTES**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) 1-4-8 to 1-7-8, Exterior(2N) 1-7-8 to 14-6-8, Corner(3R) 14-6-8 to 17-6-8, Exterior (2N) 17-6-8 to 30-5-8 zone; 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
 - 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.
 - All plates are 2x4 MT20 unless otherwise indicated.
 - Gable studs spaced at 2-0-0 oc.
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 184 lb uplift at joint 2, 83 lb uplift at joint 16, 79 lb uplift at joint 24, 90 lb uplift at joint 23, 38 lb uplift at joint 20, 80 lb uplift at joint 19, 76 lb uplift at joint 18, 330 lb uplift at joint 25, 93 lb uplift at joint 21 and 83 lb uplift at joint 16.



August 6, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



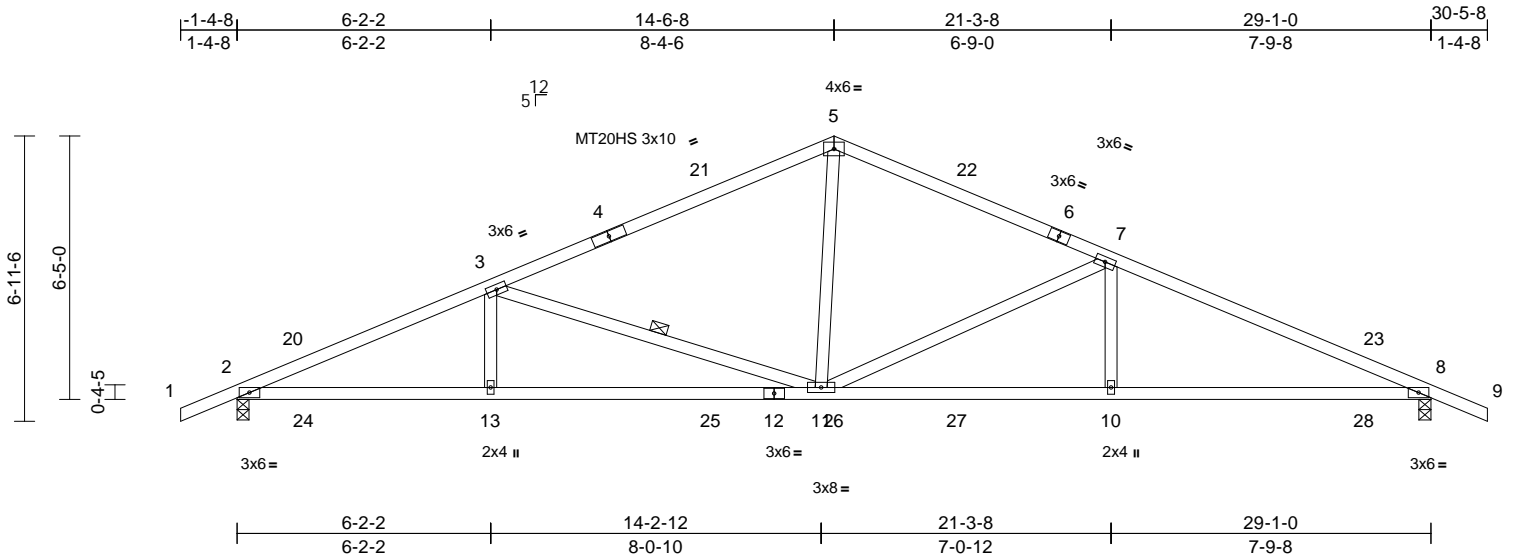
818 Soundside Road
Edenton, NC 27932

Job 4111083	Truss A02	Truss Type Common	Qty 2	Ply 1	5011 Ray Rd Spring Lake, NC Job Reference (optional)	167367520
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Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Tue Aug 06 13:20:53
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Page: 1



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Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.86	Vert(LL)	0.48	11-13	>725	240	MT20HS	187/143
TCDL	10.0	Lumber DOL	1.15	BC	0.77	Vert(CT)	-0.34	11-13	>999	240	MT20	244/190
BCLL	0.0*	Rep Stress Incr	YES	WB	0.93	Horz(CT)	-0.10	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS								Weight: 135 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.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 3-11

REACTIONS

(size) 2=0-3-8, 8=0-3-8
Max Horiz 2=-149 (LC 13)
Max Uplift 2=-605 (LC 8), 8=-605 (LC 9)
Max Grav 2=1246 (LC 1), 8=1246 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/32, 2-3=-2503/3014, 3-5=-1664/2053,
5-7=-1603/1996, 7-8=-2353/2815, 8-9=0/32
BOT CHORD 2-13=-2692/2266, 11-13=-2692/2266,
10-11=-2506/2105, 8-10=-2506/2105
WEBS 3-13=-469/291, 3-11=-886/1099,
5-11=-1287/756, 7-11=-806/1010,
7-10=-489/299

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust)
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;
Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-4-8 to 1-7-8, Interior (1) 1-7-8 to 14-6-8, Exterior(2R) 14-6-8 to 17-6-8, Interior (1) 17-6-8 to 30-5-8 zone; end vertical left and right exposed; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- All plates are MT20 plates unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 605 lb uplift at joint 2 and 605 lb uplift at joint 8.
 - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
 - This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- LOAD CASE(S)** Standard



August 6, 2024

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Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

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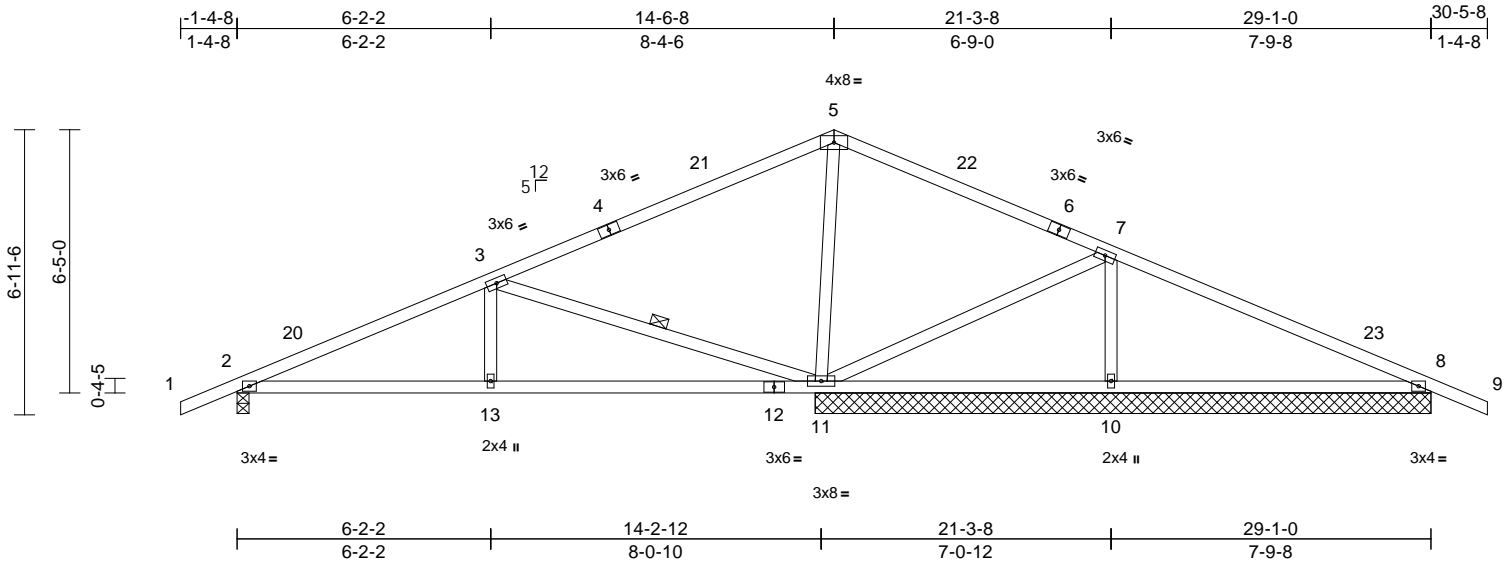
818 Soundside Road
Edenton, NC 27932

Job 4111083	Truss A03	Truss Type Common	Qty 1	Ply 1	5011 Ray Rd Spring Lake, NC Job Reference (optional)	167367521
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Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

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Page: 1



Scale = 1:56.1

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.68	Vert(LL)	-0.08	11-13	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.49	Vert(CT)	-0.18	10-19	>528	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.48	Horz(CT)	0.01	17	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS		Wind(LL)	0.10	10-19	>919	240	Weight: 135 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.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 3-11

REACTIONS (size) 2=0-3-8, 8=15-0-0, 10=15-0-0, 11=15-0-0, 17=15-0-0
Max Horiz 2=-149 (LC 13)
Max Uplift 2=-174 (LC 12), 8=-163 (LC 13), 10=-179 (LC 13), 11=-381 (LC 12), 17=-163 (LC 13)
Max Grav 2=513 (LC 1), 8=371 (LC 26), 10=506 (LC 26), 11=1222 (LC 1), 17=371 (LC 26)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/32, 2-3=-648/187, 3-5=-122/425, 5-7=-58/361, 7-8=-129/115, 8-9=0/32
BOT CHORD 2-13=-226/572, 11-13=-226/572, 10-11=-44/74, 8-10=-44/90
WEBS 3-13=0/304, 3-11=-928/450, 5-11=-657/276, 7-11=-322/177, 7-10=-325/244

- NOTES**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-4-8 to 1-7-8, Interior (1) 1-7-8 to 14-6-8, Exterior(2R) 14-6-8 to 17-6-8, Interior (1) 17-6-8 to 30-5-8 zone; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 174 lb uplift at joint 2, 163 lb uplift at joint 8, 381 lb uplift at joint 11, 179 lb uplift at joint 10 and 163 lb uplift at joint 8.
 - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
 - This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- LOAD CASE(S)** Standard



August 6, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

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A MiTek Affiliate

818 Soundside Road
Edenton, NC 27932

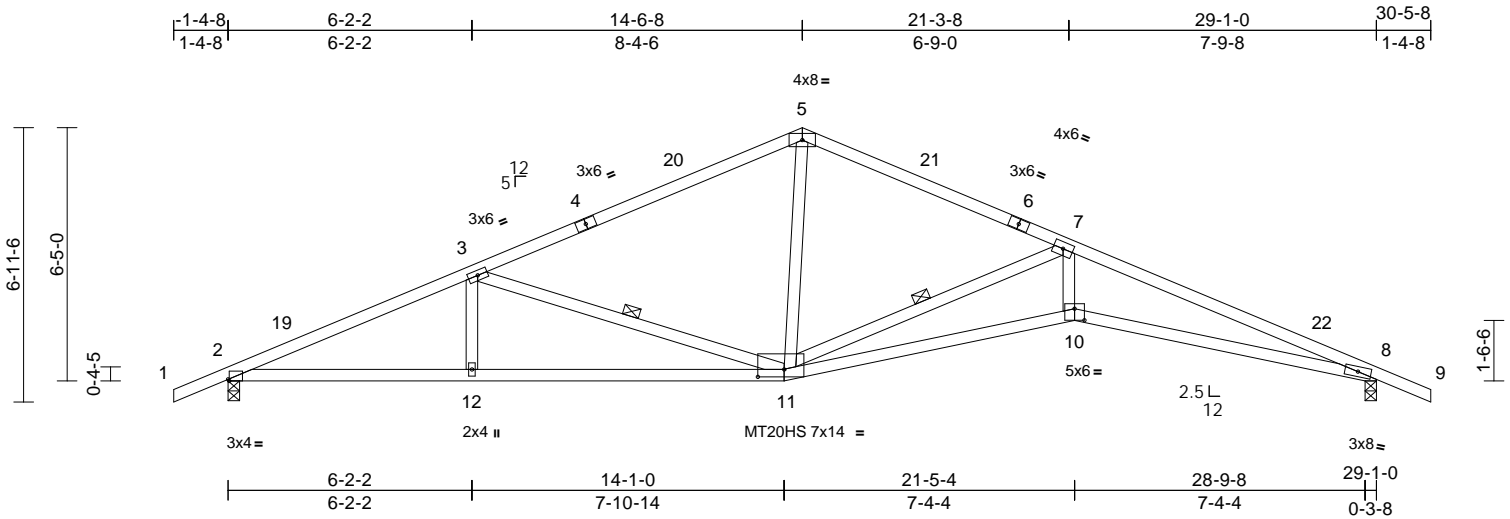
Job 4111083	Truss A04	Truss Type Roof Special	Qty 12	Ply 1	5011 Ray Rd Spring Lake, NC Job Reference (optional)	167367522
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Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Tue Aug 06 13:20:54

Page: 1

ID:i_vFlj8HsZGHVqaJnKUuz_AVD-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWRCDoi7J4zJC?f



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Plate Offsets (X, Y): [2:0-0-6,Edge], [10:0-3-0,0-3-8], [11:0-8-0,0-2-4]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.94	Vert(LL)	-0.32	10-11	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.77	Vert(CT)	-0.67	10-11	>524	240	MT20HS	187/143
BCLL	0.0*	Rep Stress Incr	YES	WB	0.88	Horz(CT)	0.28	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS		Wind(LL)	0.32	10	>999	240	Weight: 133 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
 BOT CHORD 2x4 SP No.1 *Except* 2-11:2x4 SP No.2
 WEBS 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied.
 BOT CHORD Rigid ceiling directly applied.
 WEBS 1 Row at midpt 3-11, 7-11

REACTIONS

(size) 2=0-3-8, 8=0-3-8
 Max Horiz 2=-149 (LC 13)
 Max Uplift 2=-359 (LC 12), 8=-359 (LC 13)
 Max Grav 2=1246 (LC 1), 8=1246 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=0/32, 2-3=-2499/650, 3-5=-1676/487,
 5-7=-1590/489, 7-8=-4277/991, 8-9=0/32
 BOT CHORD 2-12=-653/2263, 11-12=-653/2263,
 10-11=-813/3822, 8-10=-834/3967
 WEBS 3-12=0/292, 3-11=-876/431, 5-11=-102/736,
 7-11=-2564/754, 7-10=-251/1714

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-4-8 to 1-7-8, Interior (1) 1-7-8 to 14-6-8, Exterior(2R) 14-6-8 to 17-6-8, Interior (1) 17-6-8 to 30-5-8 zone; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- All plates are MT20 plates unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Bearing at joint(s) 8 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 359 lb uplift at joint 2 and 359 lb uplift at joint 8.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



August 6, 2024

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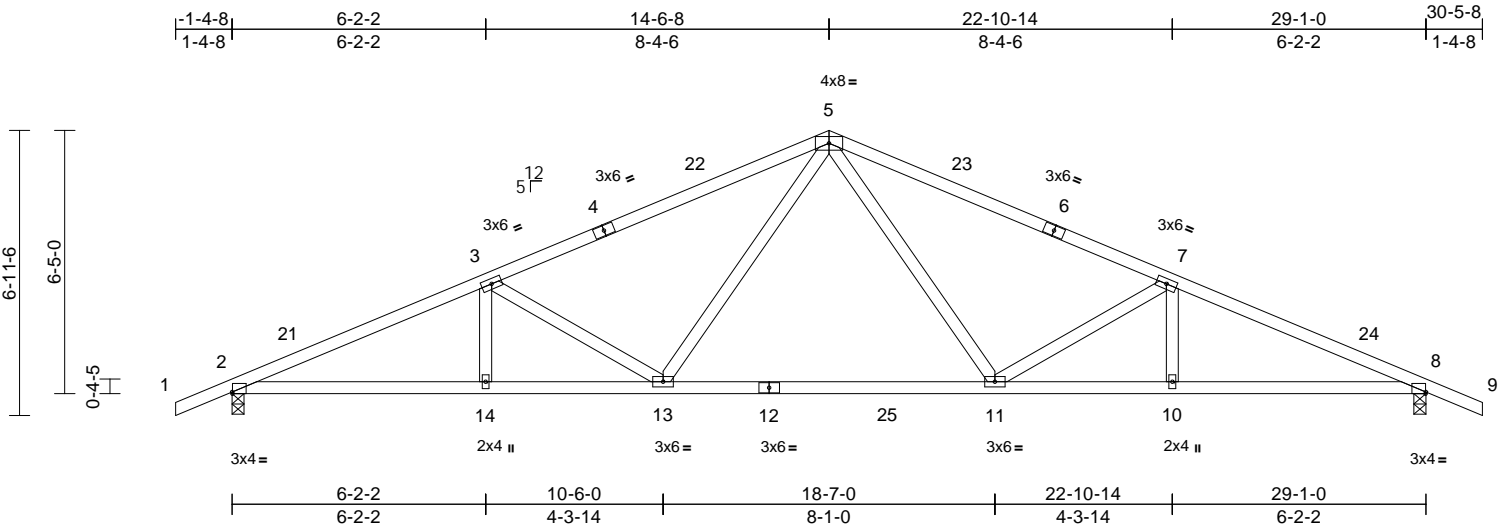
818 Soundside Road
 Edenton, NC 27932

Job 4111083	Truss A05	Truss Type Common	Qty 11	Ply 1	5011 Ray Rd Spring Lake, NC Job Reference (optional)	167367523
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Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Tue Aug 06 13:20:54
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Page: 1



Scale = 1:56.1

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.83	Vert(LL)	-0.26	11-13	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.88	Vert(CT)	-0.47	11-13	>740	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.34	Horz(CT)	0.10	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS		Wind(LL)	0.13	13	>999	240	Weight: 137 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.
BOT CHORD Rigid ceiling directly applied.

REACTIONS

(size) 2=0-3-8, 8=0-3-8
Max Horiz 2=-149 (LC 13)
Max Uplift 2=-359 (LC 12), 8=-359 (LC 13)
Max Grav 2=1326 (LC 2), 8=1326 (LC 2)

FORCES

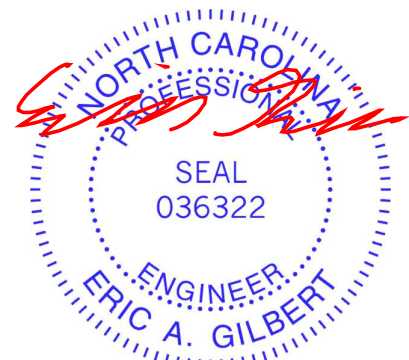
(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/32, 2-3=-2649/665, 3-5=-2147/538,
5-7=-2147/538, 7-8=-2649/666, 8-9=0/32
BOT CHORD 2-14=-665/2422, 13-14=-665/2422,
11-13=-253/1518, 10-11=-517/2422,
8-10=-517/2422
WEBS 3-14=0/168, 3-13=-649/388, 5-13=-145/717,
5-11=-146/717, 7-11=-649/389, 7-10=0/168

NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-4-8 to 1-7-8, Interior (1) 1-7-8 to 14-6-8, Exterior(2R) 14-6-8 to 17-6-8, Interior (1) 17-6-8 to 30-5-8 zone; 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.

- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 359 lb uplift at joint 2 and 359 lb uplift at joint 8.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 7) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



August 6, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPH Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



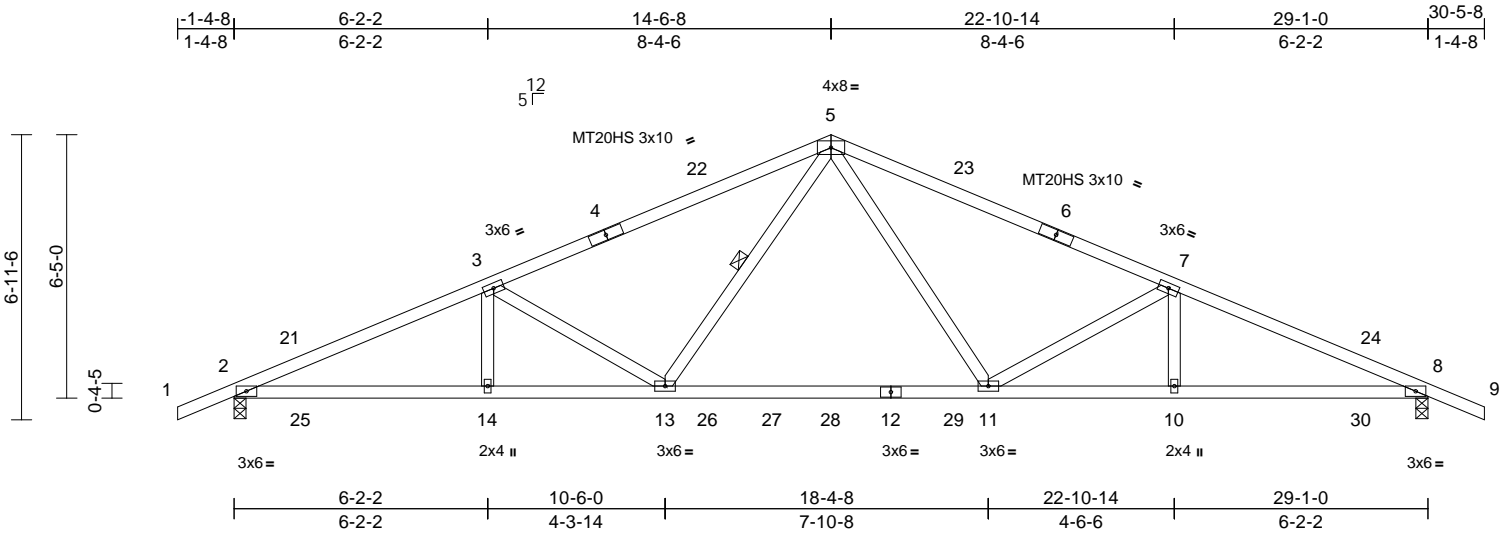
818 Soundside Road
Edenton, NC 27932

Job 4111083	Truss A06	Truss Type Common	Qty 2	Ply 1	5011 Ray Rd Spring Lake, NC Job Reference (optional)	I67367524
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Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Tue Aug 06 13:20:54
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Page: 1



Scale = 1:56.1

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.83	Vert(LL)	-0.25	11-13	>999	360	MT20HS 187/143
TCDL	10.0	Lumber DOL	1.15	BC	0.87	Vert(CT)	-0.45	11-13	>772	240	MT20 244/190
BCLL	0.0*	Rep Stress Incr	YES	WB	0.98	Horz(CT)	0.10	8	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS		Wind(LL)	0.51	11-13	>691	240	Weight: 137 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.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 5-13

REACTIONS

(size) 2=0-3-8, 8=0-3-8
Max Horiz 2=-149 (LC 13)
Max Uplift 2=-605 (LC 8), 8=-547 (LC 8)
Max Grav 2=1326 (LC 2), 8=1326 (LC 2)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/32, 2-3=-2650/2936, 3-5=-2145/2484,
5-7=-2124/2458, 7-8=-2651/2937, 8-9=0/32
BOT CHORD 2-14=-2624/2422, 13-14=-2624/2422,
11-13=-1533/1519, 10-11=-2639/2423,
8-10=-2639/2423
WEBS 3-14=-263/172, 3-13=-651/662,
5-13=-977/710, 5-11=-968/701,
7-11=-664/684, 7-10=-272/178

NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-4-8 to 1-7-8, Interior (1) 1-7-8 to 14-6-8, Exterior(2R) 14-6-8 to 17-6-8, Interior (1) 17-6-8 to 30-5-8 zone; end vertical left and right exposed; porch left exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) All plates are MT20 plates unless otherwise indicated.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- 5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 605 lb uplift at joint 2 and 547 lb uplift at joint 8.
- 7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 8) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



August 6, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



818 Soundside Road
Edenton, NC 27932

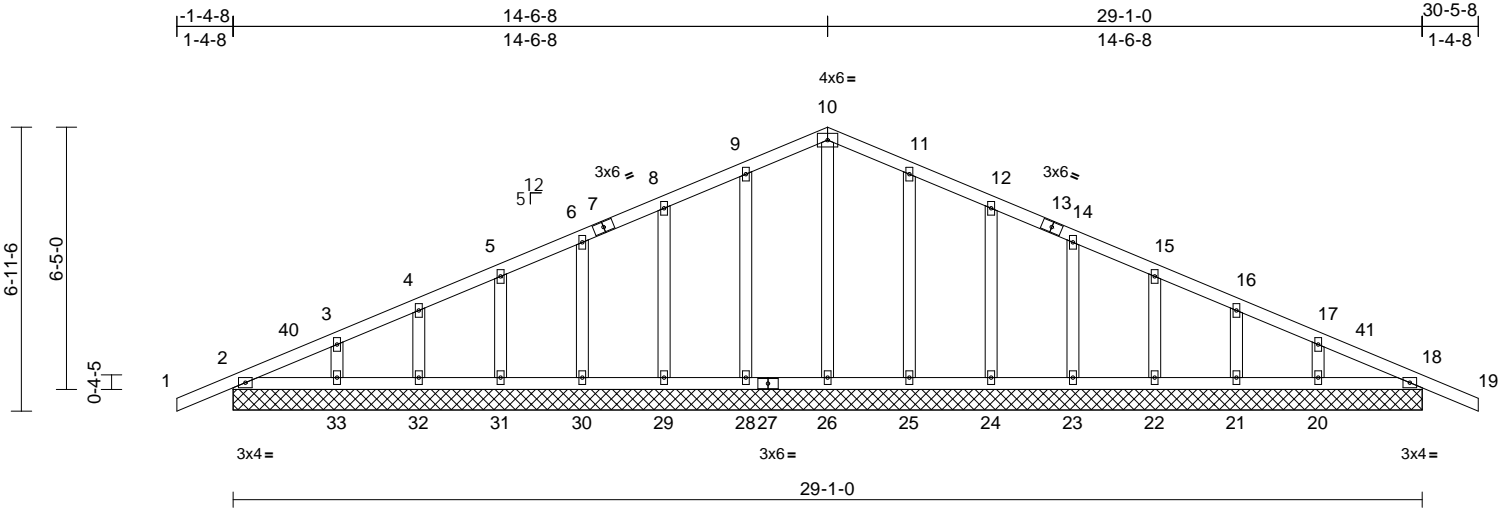
Job 4111083	Truss A07	Truss Type Common Supported Gable	Qty 1	Ply 1	5011 Ray Rd Spring Lake, NC Job Reference (optional)	167367525
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Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Tue Aug 06 13:20:54

Page: 1

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Scale = 1:56.4

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.14	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.09	Horz(CT)	0.01	37	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS								

Weight: 156 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.
BOT CHORD Rigid ceiling directly applied.

REACTIONS (size)
2=29-1-0, 18=29-1-0, 20=29-1-0,
21=29-1-0, 22=29-1-0, 23=29-1-0,
24=29-1-0, 25=29-1-0, 26=29-1-0,
28=29-1-0, 29=29-1-0, 30=29-1-0,
31=29-1-0, 32=29-1-0, 33=29-1-0,
34=29-1-0, 37=29-1-0

Max Horiz 2=-149 (LC 13), 34=-149 (LC 13)

Max Uplift 2=-71 (LC 8), 18=-77 (LC 9),

20=-79 (LC 13), 21=-73 (LC 13),

22=-75 (LC 13), 23=-74 (LC 13),

24=-77 (LC 13), 25=-72 (LC 13),

28=-74 (LC 12), 29=-76 (LC 12),

30=-74 (LC 12), 31=-75 (LC 12),

32=-73 (LC 12), 33=-81 (LC 12),

34=-71 (LC 8), 37=-77 (LC 9)

Max Grav 2=198 (LC 1), 18=198 (LC 1),

20=176 (LC 26), 21=155 (LC 1),

22=161 (LC 1), 23=160 (LC 26),

24=159 (LC 1), 25=167 (LC 26),

26=172 (LC 22), 28=167 (LC 25),

29=159 (LC 1), 30=160 (LC 25),

31=161 (LC 1), 32=155 (LC 1),

33=176 (LC 25), 34=198 (LC 1),

37=198 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD
1-2=0/32, 2-3=-150/81, 3-4=-103/90,
4-5=-71/112, 5-6=-46/138, 6-8=-62/169,
8-9=-81/222, 9-10=-98/272, 10-11=-98/272,
11-12=-81/222, 12-14=-62/169,
14-15=-44/117, 15-16=-34/65, 16-17=-47/25,
17-18=-100/37, 18-19=0/32

BOT CHORD 2-33=-37/149, 32-33=-36/149,
31-32=-36/149, 30-31=-36/149,
29-30=-36/149, 28-29=-36/149,
26-28=-36/149, 25-26=-36/149,
24-25=-36/149, 23-24=-36/149,
22-23=-36/149, 21-22=-36/149,
20-21=-36/149, 18-20=-37/149

WEBS
10-26=-132/0, 9-28=-127/105,
8-29=-119/114, 6-30=-120/110,
5-31=-121/111, 4-32=-118/112,
3-33=-128/112, 11-25=-127/105,
12-24=-119/114, 14-23=-120/110,
15-22=-121/111, 16-21=-118/112,
17-20=-128/113

NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -1-4-8 to 1-7-8, Exterior(2N) 1-7-8 to 14-6-8, Corner(3R) 14-6-8 to 17-6-8, Exterior (2N) 17-6-8 to 30-5-8 zone; 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.

- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 71 lb uplift at joint 2, 77 lb uplift at joint 18, 74 lb uplift at joint 28, 76 lb uplift at joint 29, 74 lb uplift at joint 30, 75 lb uplift at joint 31, 73 lb uplift at joint 32, 81 lb uplift at joint 33, 72 lb uplift at joint 25, 77 lb uplift at joint 24, 74 lb uplift at joint 23, 75 lb uplift at joint 22, 73 lb uplift at joint 21, 79 lb uplift at joint 20, 71 lb uplift at joint 2 and 77 lb uplift at joint 18.
- 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 11) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



August 6, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

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818 Soundside Road
Edenton, NC 27932

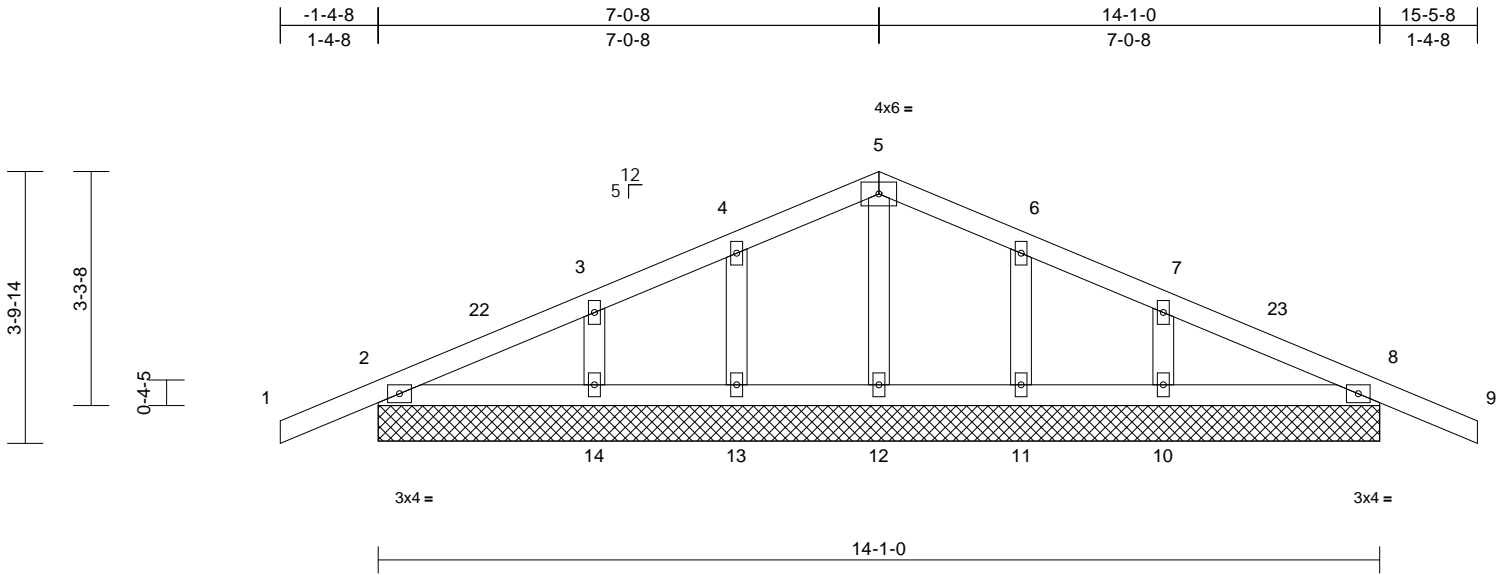
Job 4111083	Truss B01	Truss Type Common Supported Gable	Qty 1	Ply 1	5011 Ray Rd Spring Lake, NC Job Reference (optional)	167367526
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Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Tue Aug 06 13:20:54

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Scale = 1:32.4

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.14	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	19	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS							Weight: 61 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.
BOT CHORD Rigid ceiling directly applied.

REACTIONS (size)
2=14-1-0, 8=14-1-0, 10=14-1-0,
11=14-1-0, 12=14-1-0, 13=14-1-0,
14=14-1-0, 15=14-1-0, 19=14-1-0
Max Horiz 2=79 (LC 12), 15=79 (LC 12)
Max Uplift 2=-91 (LC 8), 8=-95 (LC 9), 10=-94
(LC 13), 11=-71 (LC 13), 13=-71
(LC 12), 14=-95 (LC 12), 15=-91
(LC 8), 19=-95 (LC 9)
Max Grav 2=213 (LC 1), 8=213 (LC 1),
10=214 (LC 1), 11=148 (LC 26),
12=149 (LC 1), 13=148 (LC 25),
14=214 (LC 1), 15=213 (LC 1),
19=213 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/32, 2-3=-85/57, 3-4=-49/106,
4-5=-65/170, 5-6=-65/170, 6-7=-48/105,
7-8=-81/30, 8-9=0/32
BOT CHORD 2-14=-29/108, 13-14=-14/94, 12-13=-14/94,
11-12=-14/94, 10-11=-14/94, 8-10=-29/116
WEBS 5-12=-104/7, 4-13=-117/144, 3-14=-151/177,
6-11=-117/144, 7-10=-151/177

NOTES
1) Unbalanced roof live loads have been considered for this design.

- Wind: ASCE 7-16; Vult=130mph (3-second gust)
Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=25ft;
Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) 1-4-8 to 1-7-8, Exterior(2N) 1-7-8 to 7-0-8, Corner(3R) 7-0-8 to 10-0-8, Exterior(2N) 10-0-8 to 15-5-8 zone; 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
- 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.
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 91 lb uplift at joint 2, 95 lb uplift at joint 8, 71 lb uplift at joint 13, 95 lb uplift at joint 14, 71 lb uplift at joint 11, 94 lb uplift at joint 10, 91 lb uplift at joint 2 and 95 lb uplift at joint 8.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



August 6, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

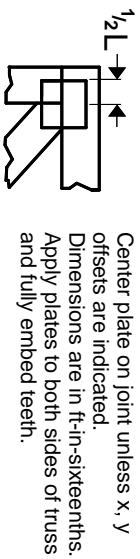
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

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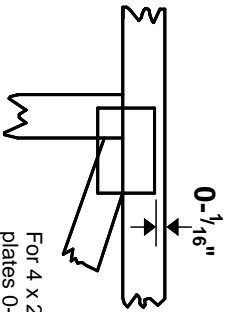
818 Soundside Road
Edenton, NC 27932

Symbols

PLATE LOCATION AND ORIENTATION



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



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



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

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

PLATE SIZE

4 X 4

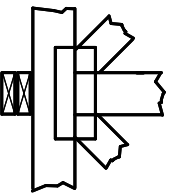
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



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

BEARING



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

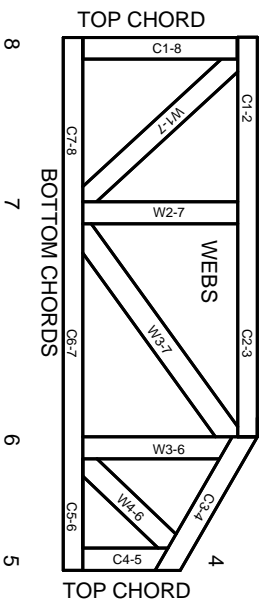
Industry Standards:

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

Numbering System



1 TOP CHORDS
2 Joint ID
3 typ.



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

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

Product Code Approvals

ICC-ES Reports:

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

Design General Notes

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

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

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General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

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

MITek

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