



MiTek USA, Inc.

7777 Greenback Lane
Suite 109
Citrus Heights, CA, 95610
Telephone 916/676-1900
Fax 916/676-1909

Re: 18-053858
Classic 220 B

The truss drawing(s) referenced below have been prepared by MiTek USA, Inc. under my direct supervision based on the parameters provided by BMC West-Fort Lupton, CO.

Pages or sheets covered by this seal: R54885974 thru R54885980

My license renewal date for the state of Colorado is October 31, 2019.



July 24, 2018

Hernandez, Marcos

IMPORTANT NOTE: Truss Engineer's responsibility is solely for design of individual trusses based upon design parameters shown on referenced truss drawings. Parameters have not been verified as appropriate for any use. Any location identification specified is for file reference only and has not been used in preparing design. Suitability of truss designs for any particular building is the responsibility of the building designer, not the Truss Engineer, per ANSI/TPI-1, Chapter 2.

Job 18-053858	Truss B1R	Truss Type Monopitch	Qty 13	Ply 1	Classic 220 B	R54885974
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BMC WEST TRUSS AND COMPONENTS, FORT LUPTON, CO 80621

8.130 s Mar 11 2018 MiTek Industries, Inc. Tue Jul 24 10:24:49 2018 Page 1
ID:sA0eYfSdFEL5pIlF1AHnQ4yBLJj-Z85BnKIDe_nCezRVsNBBfP8EowwHf2?7ygObqyutqy

4-0-6	7-11-0	14-10-12	21-10-8	22-8-8
4-0-6	3-10-10	6-11-12	6-11-12	0-10-0

4.00 |12

Scale = 1:46.2

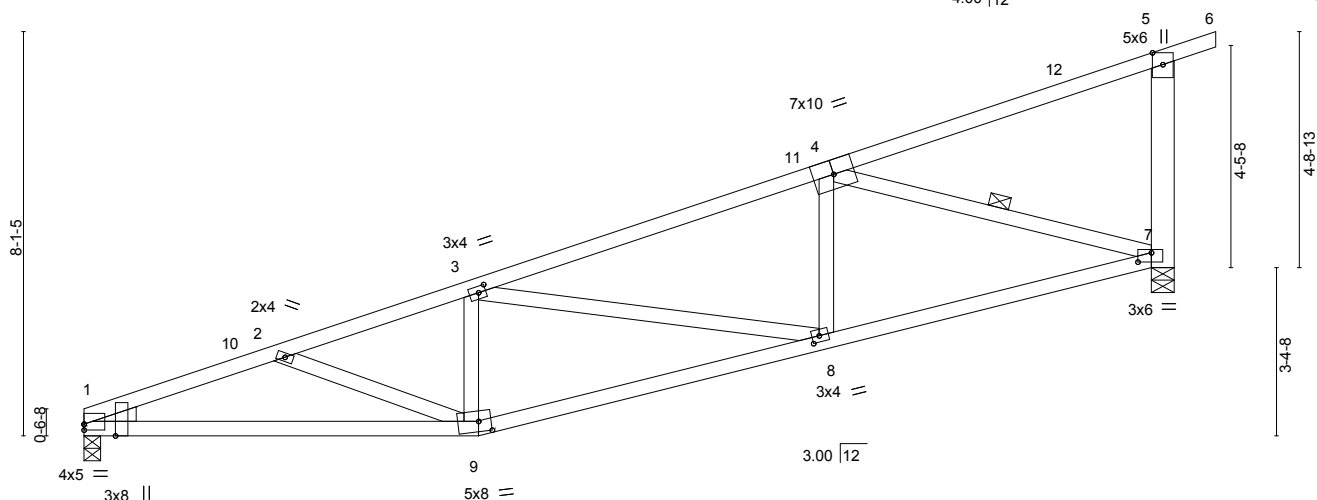


Plate Offsets (X,Y)--	[1:0-0-0,0-1-6], [1:0-2-13,Edge], [3:0-1-12,0-1-8], [7:0-3-4,0-2-4], [8:0-1-12,0-1-8], [9:0-3-0,0-2-8]
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LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 30.0	2-0-0	TC 0.58	in (loc) l/defl L/d	MT20	169/123
(Roof Snow=30.0)	Plate Grip DOL 1.15	BC 0.47	Vert(LL) -0.14 1-9 >999 240		
TCDL 7.5	Lumber DOL 1.15	WB 0.60	Vert(CT) -0.26 1-9 >992 180		
BCLL 0.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.02 7 n/a n/a		
BCDL 7.5	Code IRC2015/TPI2014			Weight: 95 lb	FT = 12%

LUMBER-

TOP CHORD 2x4 DF 1800F 1.6E or 2x4 DF No.1&Btr or 2x4 SPF 1650F 1.5E
BOT CHORD 2x4 DF 1800F 1.6E or 2x4 DF No.1&Btr or 2x4 SPF 1650F 1.5E
WEBS 2x4 SPF-S Stud *Except*
5-7: 2x6 DF 1800F 1.6E or 2x6 DF SS or 2x6 SPF 1650F 1.5E

WEDGE

Left: 2x4 SPF-S Stud

BRACING-

TOP CHORD Structural wood sheathing directly applied or 4-2-15 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 7-9-13 oc bracing.
WEBS 1 Row at midpt 4-7

REACTIONS.

(lb/size) 1=965/0-4-0, 7=1048/0-5-8
Max Horz 1=281(LC 11)
Max Uplift 1=-169(LC 10), 7=-249(LC 14)
Max Grav 1=1012(LC 21), 7=1333(LC 21)

FORCES.

(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-2213/572, 2-3=-2018/475, 3-4=-1772/388, 5-7=-472/204
BOT CHORD 1-9=-719/2010, 8-9=-615/1938, 7-8=-503/1663
WEBS 3-9=-308/166, 3-8=-367/163, 4-8=0/344, 4-7=-1568/445

NOTES-

- 1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=4.5psf; BCDL=4.5psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) and C-C Exterior(2) 0-3-8 to 3-3-8, Interior(1) 3-3-8 to 22-10-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
- 2) TCLL: ASCE 7-10; Pf=30.0 psf (flat roof snow); Category II; Exp C; Fully Exp.; Ct=1.1
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 16.0 psf or 1.00 times flat roof load of 30.0 psf on overhangs non-concurrent with other live loads.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) Bearing at joint(s) 7 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 1=169, 7=249.



July 24, 2018

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



7777 Greenback Lane
Suite 109
Citrus Heights, CA 95610

Job	Truss	Truss Type	Qty	Ply	Classic 220 B	R54885975
18-053858	B1RE	GABLE	1	1		

BMC WEST TRUSS AND COMPONENTS, FORT LUPTON, CO 80621

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ID:sA0eYfSdFEL5pIfF1AHnQ4yBLJj-jmKPMK6xv9nVRA4XVkuH2mID7_EsL1Gpwu2C9yutqv

Job Reference (optional)

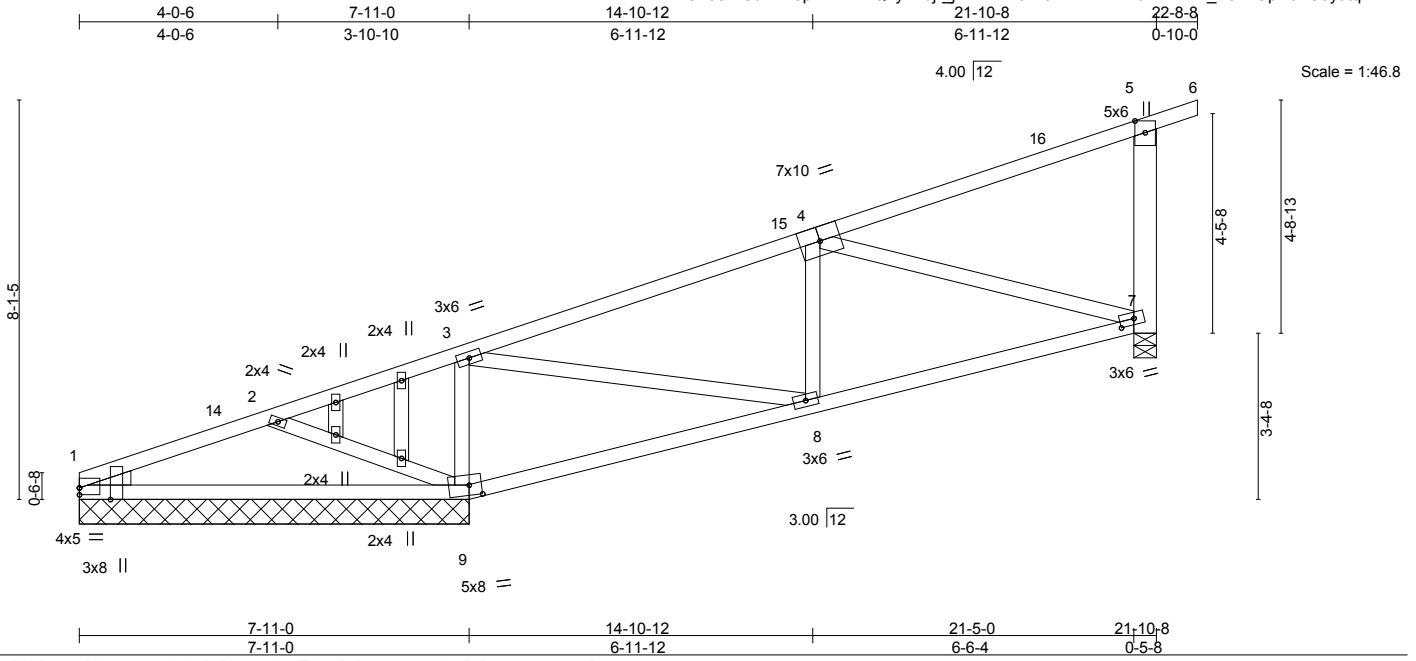


Plate Offsets (X,Y)-- [1:0-0-0,0-1-10], [1:0-2-13,Edge], [7:0-3-8,0-1-8], [9:0-3-0,0-2-8]											
LOADING (psf)		SPACING-		CSI.		DEFL.		PLATES		GRIP	
TCLL	30.0		2-0-0	TC	0.56	in (loc)	l/defl	L/d	MT20		169/123
(Roof Snow=30.0)		Plate Grip DOL	1.15	BC	0.33	Vert(LL)	-0.13 1-9	>745 240			
TCDL	7.5	Lumber DOL	1.15	WB	0.84	Vert(CT)	-0.23 1-9	>420 180			
BCLL	0.0	Rep Stress Incr	YES	Matrix-S		Horz(CT)	0.01 7	n/a n/a			
BCDL	7.5	Code IRC2015/TPI2014							Weight: 98 lb	FT = 12%	

LUMBER-
TOP CHORD 2x4 DF 1800F 1.6E or 2x4 DF No.1&Btr or 2x4 SPF 1650F 1.5E
BOT CHORD 2x4 DF 1800F 1.6E or 2x4 DF No.1&Btr or 2x4 SPF 1650F 1.5E
WEBS 2x4 SPF-S Stud *Except*
5-7: 2x6 DF 1800F 1.6E or 2x6 DF SS or 2x6 SPF 1650F 1.5E
OTHERS 2x4 DF 1800F 1.6E or 2x4 DF No.1&Btr or 2x4 SPF 1650F 1.5E
WEDGE
Left: 2x4 SPF-S Stud

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. (lb/size) 1=262/7-11-0, 9=1119/7-11-0, 7=646/0-5-8
Max Horz 1=281(LC 11)
Max Uplift 1=-8(LC 10), 9=-256(LC 10), 7=-157(LC 14)
Max Grav 1=262(LC 1), 9=1198(LC 21), 7=905(LC 21)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-287/66, 2-3=-298/251, 3-4=-891/142, 5-7=-473/204
BOT CHORD 1-9=-258/221, 7-8=-285/815
WEBS 2-9=-399/218, 3-9=-894/315, 3-8=-205/983, 4-8=-289/154, 4-7=-718/208

NOTES-
1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=4.5psf; BCDL=4.5psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) and C-C Exterior(2) 0-1-8 to 3-1-8, Interior(1) 3-1-8 to 22-10-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
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) TCLL: ASCE 7-10; Pf=30.0 psf (flat roof snow); Category II; Exp C; Fully Exp.; Ct=1.1
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 16.0 psf or 1.00 times flat roof load of 30.0 psf on overhangs non-concurrent with other live loads.
6) Gable studs spaced at 1-4-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) Bearing at joint(s) 7 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1 except (jt=lb) 9=256, 7=157.



July 24, 2018

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

Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



7777 Greenback Lane
Suite 109
Citrus Heights, CA 95610

Job 18-053858	Truss B2RE	Truss Type Monopitch Structural Gable	Qty 1	Ply 1	Classic 220 B	R54885976
Job Reference (optional)						

BMC WEST TRUSS AND COMPONENTS, FORT LUPTON, CO 80621

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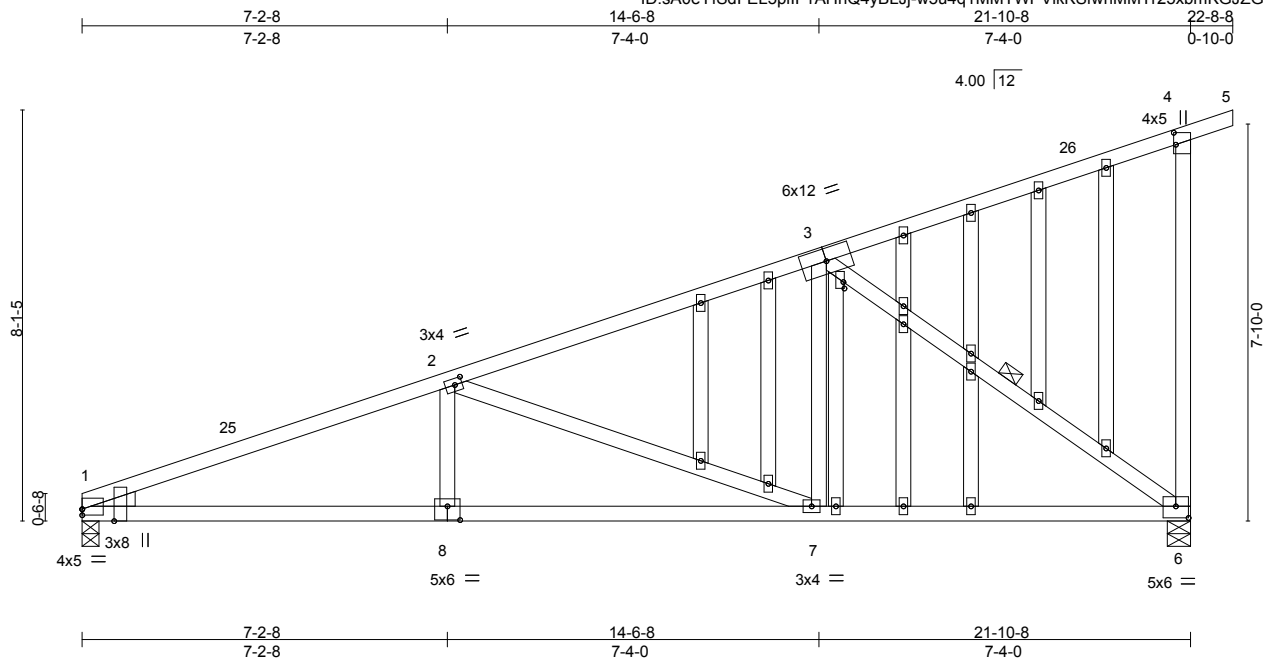


Plate Offsets (X,Y)-- [1:0-0-0,0-1-6], [1:0-2-13,Edge], [2:0-1-12,0-1-8], [4:0-2-13,0-0-8], [6:0-3-0,0-2-12], [8:0-3-0,0-3-4], [14:0-1-8,0-0-4]										
LOADING (psf)		SPACING-		CSI.		DEFL.		PLATES		GRIP
TCLL 30.0 (Roof Snow=30.0)		2-0-0 Plate Grip DOL 1.15 Lumber DOL 1.15		TC 0.73 BC 0.58 WB 0.79 Matrix-S		in (loc) l/def L/d Vert(LL) -0.12 1-8 >999 240 Vert(CT) -0.19 1-8 >999 180 Horz(CT) 0.06 6 n/a n/a		MT20		169/123
TCDL 7.5 BCLL 0.0 BCDL 7.5		Rep Stress Incr YES Code IRC2015/TPI2014						Weight: 144 lb		FT = 12%

LUMBER-

TOP CHORD 2x4 DF 1800F 1.6E or 2x4 DF No.1&Btr or 2x4 SPF 1650F 1.5E
 BOT CHORD 2x4 DF 1800F 1.6E or 2x4 DF No.1&Btr or 2x4 SPF 1650F 1.5E
 WEBS 2x4 DF 1800F 1.6E or 2x4 DF No.1&Btr or 2x4 SPF 1650F 1.5E *Except*
 2-8,3-7: 2x4 SPF-S Stud
 OTHERS 2x4 DF 1800F 1.6E or 2x4 DF No.1&Btr or 2x4 SPF 1650F 1.5E *Except*
 21-22: 2x4 SPF-S Stud

WEDGE
 Left: 2x4 SPF-S Stud

REACTIONS. (lb/size) 6=1045/0-5-8, 1=969/0-4-0
 Max Horz 1=336(LC 11)
 Max Uplift 6=242(LC 14), 1=176(LC 10)
 Max Grav 6=1325(LC 21), 1=1015(LC 21)

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

TOP CHORD 1-2=-2224/538, 2-3=-1283/319, 4-6=-477/211
 BOT CHORD 1-8=-709/2007, 7-8=-709/2007, 6-7=-408/1131
 WEBS 2-8=0/269, 2-7=-963/338, 3-7=-58/455, 3-6=-1361/380

NOTES-

- 1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=4.5psf; BCDL=4.5psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) and C-C Exterior(2) 0-3-8 to 3-3-8, Interior(1) 3-3-8 to 22-10-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
- 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) TCLL: ASCE 7-10; Pf=30.0 psf (flat roof snow); Category II; Exp C; Fully Exp.; Ct=1.1
- 4) Unbalanced snow loads have been considered for this design.
- 5) This truss has been designed for greater of min roof live load of 16.0 psf or 1.00 times flat roof load of 30.0 psf on overhangs non-concurrent with other live loads.
- 6) All plates are 2x4 MT20 unless otherwise indicated.
- 7) Gable studs spaced at 1-4-0 oc.
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 6=242, 1=176.



July 24, 2018

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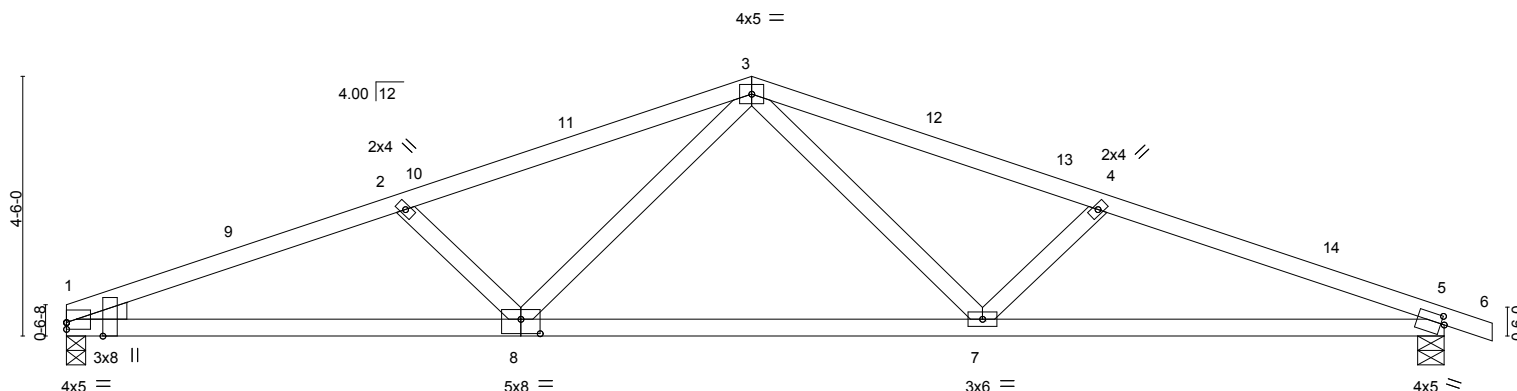
Job	Truss	Truss Type	Qty	Ply	Classic 220 B	R54885977
18-053858	B3RX	Common	6	1		

BMC WEST TRUSS AND COMPONENTS, FORT LUPTON, CO 80621

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ID:sA0eYfSdFEL5pIF1AHnQ4yBLJj-OIST1NN_EqXMMuueDdlbvgOGWLzN3q2iVu7ipTyutqs

5-10-8	11-10-8	17-10-8	23-10-8	24-8-8
5-10-8	6-0-0	6-0-0	6-0-0	0-10-0

Scale = 1:39.9



7-10-8	15-10-8	23-10-8
7-10-8	8-0-0	8-0-0

Plate Offsets (X,Y)-- [1:0-2-13,Edge], [1:0-0-0,0-1-6], [5:0-0-12,0-1-11], [8:0-4-0,0-3-0]

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 30.0 (Roof Snow=30.0)	2-0-0	TC 0.56	Vert(LL)	-0.15	7-8	>999	MT20	169/123
TCDL 7.5	Plate Grip DOL 1.15	BC 0.49	Vert(CT)	-0.25	7-8	>999		
BCLL 0.0	Lumber DOL 1.15	WB 0.37	Horz(CT)	0.07	5	n/a		
BCDL 7.5	Rep Stress Incr YES	Matrix-S						
	Code IRC2015/TPI2014						Weight: 85 lb	FT = 12%

LUMBER-

TOP CHORD 2x4 DF 1800F 1.6E or 2x4 DF No.1&Btr or 2x4 SPF 1650F 1.5E
BOT CHORD 2x4 DF 1800F 1.6E or 2x4 DF No.1&Btr or 2x4 SPF 1650F 1.5E
WEBS 2x4 SPF-S Stud
WEDGE
Left: 2x4 SPF-S Stud

BRACING-

TOP CHORD Structural wood sheathing directly applied or 3-8-13 oc purlins.
BOT CHORD Rigid ceiling directly applied or 8-5-9 oc bracing.

REACTIONS.

(lb/size) 5=1138/0-5-8, 1=1055/0-4-0
Max Horz 1=-58(LC 19)
Max Uplift 5=-233(LC 11), 1=-184(LC 10)

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

TOP CHORD 1-2=-2379/734, 2-3=-2073/654, 3-4=-2074/640, 4-5=-2397/722
BOT CHORD 1-8=-624/2176, 7-8=-369/1492, 5-7=-624/2179
WEBS 3-7=-131/669, 4-7=-500/236, 3-8=-132/682, 2-8=-511/237

NOTES-

- 1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=4.5psf; BCDL=4.5psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) and C-C Exterior(2) 0-3-8 to 3-3-8, Interior(1) 3-3-8 to 12-0-0, Exterior(2) 12-0-0 to 15-0-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
- 2) TCLL: ASCE 7-10; Pf=30.0 psf (flat roof snow); Category II; Exp C; Fully Exp.; Ct=1.1
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 16.0 psf or 1.00 times flat roof load of 30.0 psf on overhangs non-concurrent with other live loads.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 5=233, 1=184.



July 24, 2018

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Citrus Heights, CA 95610

Job	Truss	Truss Type	Qty	Ply	Classic 220 B	R54885978
18-053858	B3RXE	Common Supported Gable	1	1	Job Reference (optional)	

BMC WEST TRUSS AND COMPONENTS, FORT LUPTON, CO 80621

8.130 s Mar 11 2018 MiTek Industries, Inc. Tue Jul 24 10:24:57 2018 Page 1
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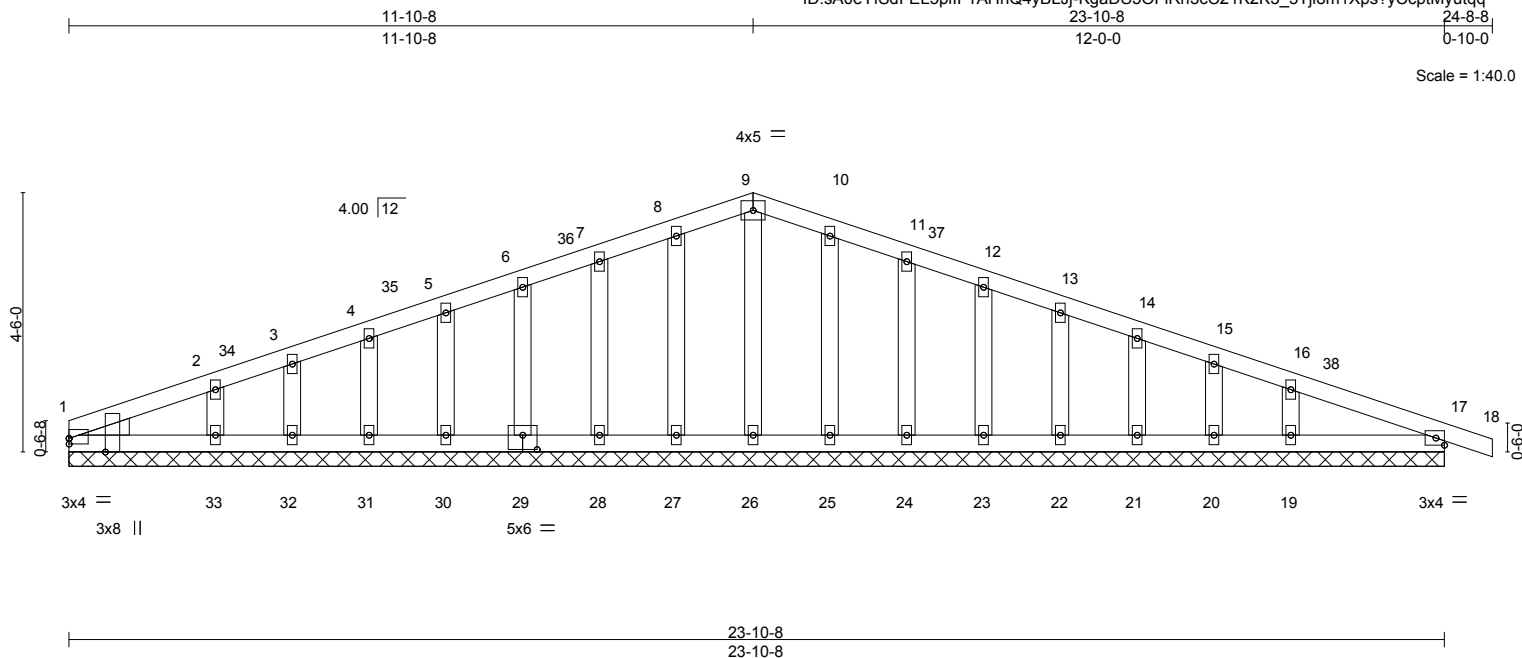


Plate Offsets (X,Y)-- [1:0-2-13,Edge], [1:0-0-0,0-1-2], [29:0-3-0,0-3-0]

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 30.0 (Roof Snow=30.0)	2-0-0 Plate Grip DOL 1.15	TC 0.07	Vert(LL) -0.00	17	n/r	120	MT20	169/123
TCDL 7.5	Lumber DOL 1.15	BC 0.03	Vert(CT) 0.00	17	n/r	90		
BCLL 0.0	Rep Stress Incr YES	WB 0.03	Horz(CT) 0.00	17	n/a	n/a		
BCDL 7.5	Code IRC2015/TPI2014	Matrix-S					Weight: 115 lb	FT = 12%

LUMBER-

TOP CHORD 2x4 DF 1800F 1.6E or 2x4 DF No.1&Btr or 2x4 SPF 1650F 1.5E
BOT CHORD 2x4 DF 1800F 1.6E or 2x4 DF No.1&Btr or 2x4 SPF 1650F 1.5E
OTHERS 2x4 DF 1800F 1.6E or 2x4 DF No.1&Btr or 2x4 SPF 1650F 1.5E
WEDGE
Left: 2x4 SPF-S Stud

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 23-10-8.
(lb) - Max Horz 1=-58(LC 15)
Max Uplift All uplift 100 lb or less at joint(s) 27, 28, 29, 30, 31, 32, 33, 25, 24, 23, 22, 21, 20, 19, 17, 1
Max Grav All reactions 250 lb or less at joint(s) 26, 27, 28, 29, 30, 31, 32, 33, 25, 24, 23, 22, 21, 20, 19, 17, 1

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

NOTES-

- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=4.5psf; BCDL=4.5psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) and C-C Corner(3) 0-1-8 to 3-1-8, Exterior(2) 3-1-8 to 12-0-0, Corner(3) 12-0-0 to 15-0-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
- 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.
- TCLL: ASCE 7-10; Pf=30.0 psf (flat roof snow); Category II; Exp C; Fully Exp.; Ct=1.1
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 16.0 psf or 1.00 times flat roof load of 30.0 psf on overhangs non-concurrent with other live loads.
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 1-4-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 27, 28, 29, 30, 31, 32, 33, 25, 24, 23, 22, 21, 20, 19, 17, 1.



July 24, 2018

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 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 fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



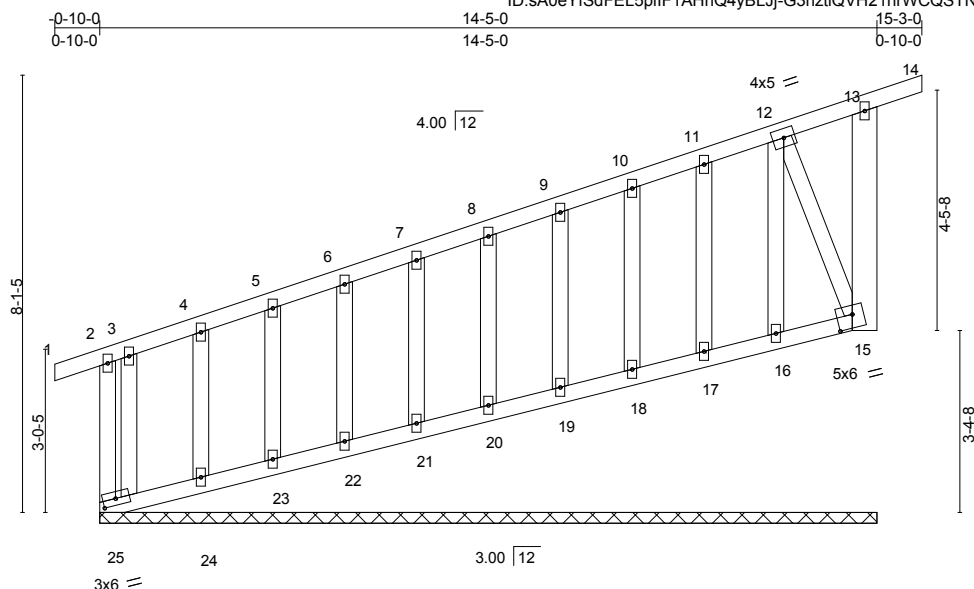
7777 Greenback Lane
Suite 109
Citrus Heights, CA 95610

Job 18-053858	Truss B4E	Truss Type GABLE	Qty 1	Ply 1	Classic 220 B	R54885979
Job Reference (optional)						

BMC WEST TRUSS AND COMPONENTS, FORT LUPTON, CO 80621

8.130 s Mar 11 2018 MiTek Industries, Inc. Tue Jul 24 10:24:59 2018 Page 1

ID:sA0eYfSdFEL5pIfF1AHnQ4yBLJj-G3hztIQVH21nrWCQSTNX3WY3SyQp?clIQW5wyFyutqo



Scale = 1:42.7

Plate Offsets (X,Y)-- [15:0-3-8,0-3-0], [25:0-2-14,0-1-8]

LOADING (psf)	SPACING-	CSI.	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 30.0 (Roof Snow=30.0)	2-0-0 Plate Grip DOL 1.15 Lumber DOL 1.15	TC 0.12 BC 0.08	Vert(LL) 0.00 Vert(CT) 0.00 Horz(CT) -0.01	13 13 15	n/r n/r n/a	120 90 n/a		MT20	169/123
TCDL 7.5 BCLL 0.0 BCDL 7.5	Rep Stress Incr YES Code IRC2015/TPI2014	WB 0.45 Matrix-S						Weight: 101 lb	FT = 12%

LUMBER-	
TOP CHORD	2x4 DF 1800F 1.6E or 2x4 DF No.1&Btr or 2x4 SPF 1650F 1.5E
BOT CHORD	2x4 DF 1800F 1.6E or 2x4 DF No.1&Btr or 2x4 SPF 1650F 1.5E
WEBS	2x4 DF 1800F 1.6E or 2x4 DF No.1&Btr or 2x4 SPF 1650F 1.5E *Except* 13-15: 2x6 DF 1800F 1.6E or 2x6 DF SS or 2x6 SPF 1650F 1.5E 12-15: 2x4 SPF-S Stud
OTHERS	2x4 DF 1800F 1.6E or 2x4 DF No.1&Btr or 2x4 SPF 1650F 1.5E

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 14-5-0.	
(lb) - Max Horz 25=275(LC 11)	
Max Uplift All uplift 100 lb or less at joint(s) 25, 20, 21, 22, 23, 24, 19, 18, 17 except 15=-512(LC 11)	
Max Grav All reactions 250 lb or less at joint(s) 25, 20, 21, 22, 23, 24, 19, 18, 17, 15 except 16=422(LC 11)	

FORCES.	
(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.	
TOP CHORD 2-25=-194/328, 10-11=-115/259, 11-12=-112/264	
BOT CHORD 24-25=-494/303, 23-24=-486/297, 22-23=-490/300, 21-22=-489/299, 20-21=-490/300, 19-20=-490/300, 18-19=-489/299, 17-18=-490/300, 16-17=-487/297, 15-16=-497/305	
WEBS 3-25=-304/163, 12-16=-827/404, 12-15=-486/962	

NOTES-

- 1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=4.5psf; BCDL=4.5psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) and C-C Corner(3) -0-10-0 to 1-10-8, Exterior(2) 1-10-8 to 15-3-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
- 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) TCLL: ASCE 7-10; Pf=30.0 psf (flat roof snow); Category II; Exp C; Fully Exp.; Ct=1.1
- 4) Unbalanced snow loads have been considered for this design.
- 5) This truss has been designed for greater of min roof live load of 16.0 psf or 1.00 times flat roof load of 30.0 psf on overhangs non-concurrent with other live loads.
- 6) All plates are 2x4 MT20 unless otherwise indicated.
- 7) Gable requires continuous bottom chord bearing.
- 8) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 9) Gable studs spaced at 1-4-0 oc.
- 10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 11) Bearing at joint(s) 25, 20, 21, 22, 23, 24, 19, 18, 17, 16, 15 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 25, 20, 21, 22, 23, 24, 19, 18, 17 except (jt=lb) 15=512.
- 13) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 20, 21, 22, 23, 24, 19, 18, 17, 16, 15.



July 24, 2018

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.

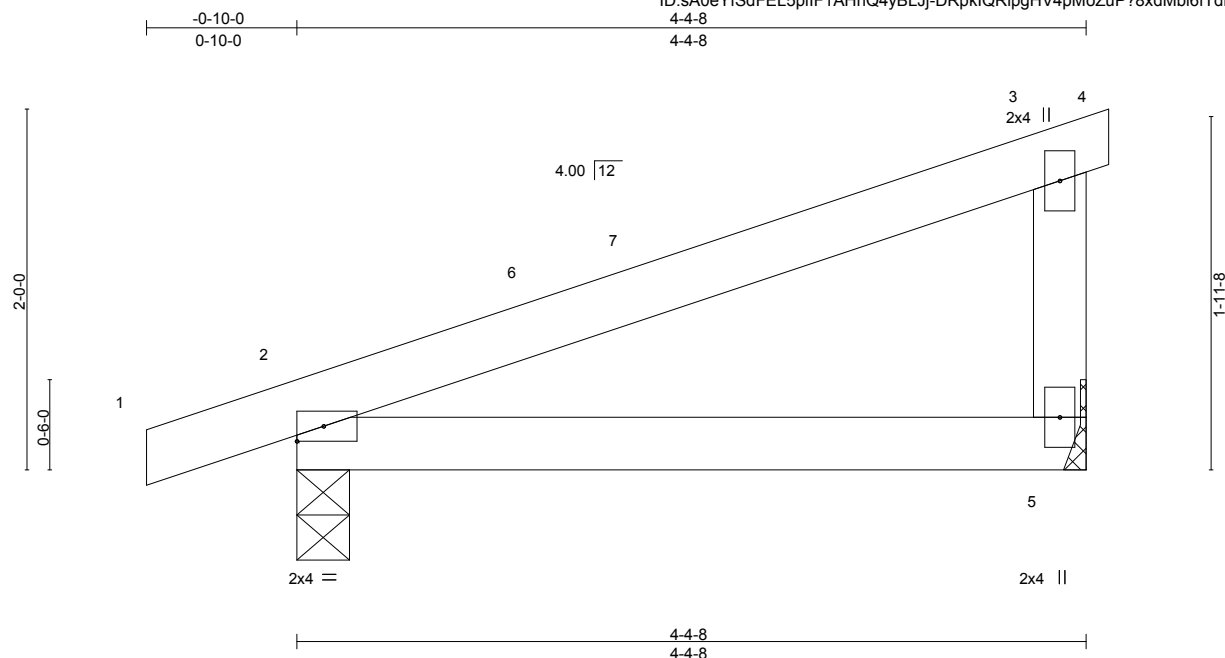
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall 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, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



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Citrus Heights, CA 95610

Job 18-053858	Truss BM5	Truss Type MONOPITCH	Qty 4	Ply 1	Classic 220 B	R54885980
BMC WEST TRUSS AND COMPONENTS, FORT LUPTON, CO 80621						Job Reference (optional)

8.130 s Mar 11 2018 MiTek Industries, Inc. Tue Jul 24 10:25:01 2018 Page 1
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Scale = 1:12.8

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 30.0 (Roof Snow=30.0)	2-0-0 Plate Grip DOL 1.15	TC 0.27	Vert(LL) -0.02	2-5	>999	240	MT20	169/123
TCDL 7.5	Lumber DOL 1.15	BC 0.12	Vert(CT) -0.03	2-5	>999	180		
BCLL 0.0	Rep Stress Incr YES	WB 0.00	Horz(CT) 0.00	5	n/a	n/a		
BCDL 7.5	Code IRC2015/TPI2014	Matrix-P					Weight: 15 lb	FT = 12%

LUMBER-

TOP CHORD 2x4 DF 1800F 1.6E or 2x4 DF No.1&Btr or 2x4 SPF 1650F 1.5E
BOT CHORD 2x4 DF 1800F 1.6E or 2x4 DF No.1&Btr or 2x4 SPF 1650F 1.5E
WEBS 2x4 SPF-S Stud

BRACING-

TOP CHORD Structural wood sheathing directly applied or 4-4-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (lb/size) 5=196/Mechanical, 2=265/0-3-8
Max Horz 2=72(LC 11)
Max Uplift 5=78(LC 14), 2=-112(LC 10)
Max Grav 5=218(LC 21), 2=272(LC 21)

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

NOTES-

- 1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=4.5psf; BCDL=4.5psf; h=25ft; Cat. II; Exp C; partially; MWFRS (envelope) and C-C Exterior(2) -0-10-0 to 2-2-0, Interior(1) 2-2-0 to 4-6-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
- 2) TCLL: ASCE 7-10; Pf=30.0 psf (flat roof snow); Category II; Exp C; Fully Exp.; Ct=1.1
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 16.0 psf or 1.00 times flat roof load of 30.0 psf on overhangs non-concurrent with other live loads.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 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) 5 except (jt=lb) 2=112.



July 24, 2018

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.

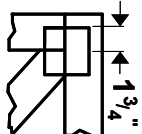
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



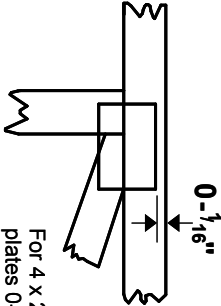
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Citrus Heights, CA 95610

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 2020 software** or upon request.

PLATE SIZE

4 X 4

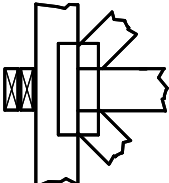
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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



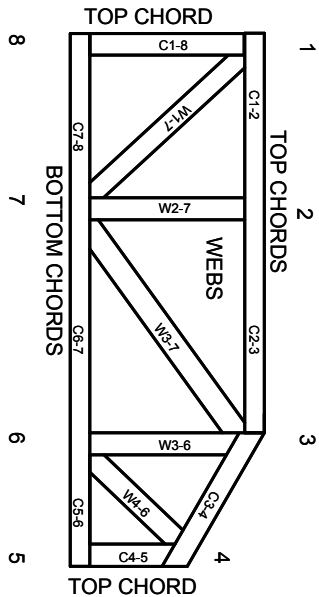
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TP11: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

Numbering System

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



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

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

PRODUCT CODE APPROVALS

ICC-ES Reports:

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

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

Lumber design values are in accordance with ANSI/TP1 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. 10/03/2015



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.