

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: 23371-23371A
Penwell K Gable

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: I40178136 thru I40178144

My license renewal date for the state of North Carolina is December 31, 2020.

North Carolina COA: C-0844



February 6, 2020

Liu, Xuegang

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 23371-23371A	Truss A1	Truss Type Common	Qty 1	Ply 1	Penwell K Gable	140178137
---------------------	-------------	----------------------	----------	----------	-----------------	-----------

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

8.330 s Jan 22 2020 MiTek Industries, Inc. Thu Feb 6 11:55:33 2020 Page 1

ID:XkLF3_6q7xnlCmTW7ESYUdzntO7-7Yv7J55FQbTEI8R1Oy1GPYwYfUclWiyzQcLZH0znsre



Scale = 1:65.4

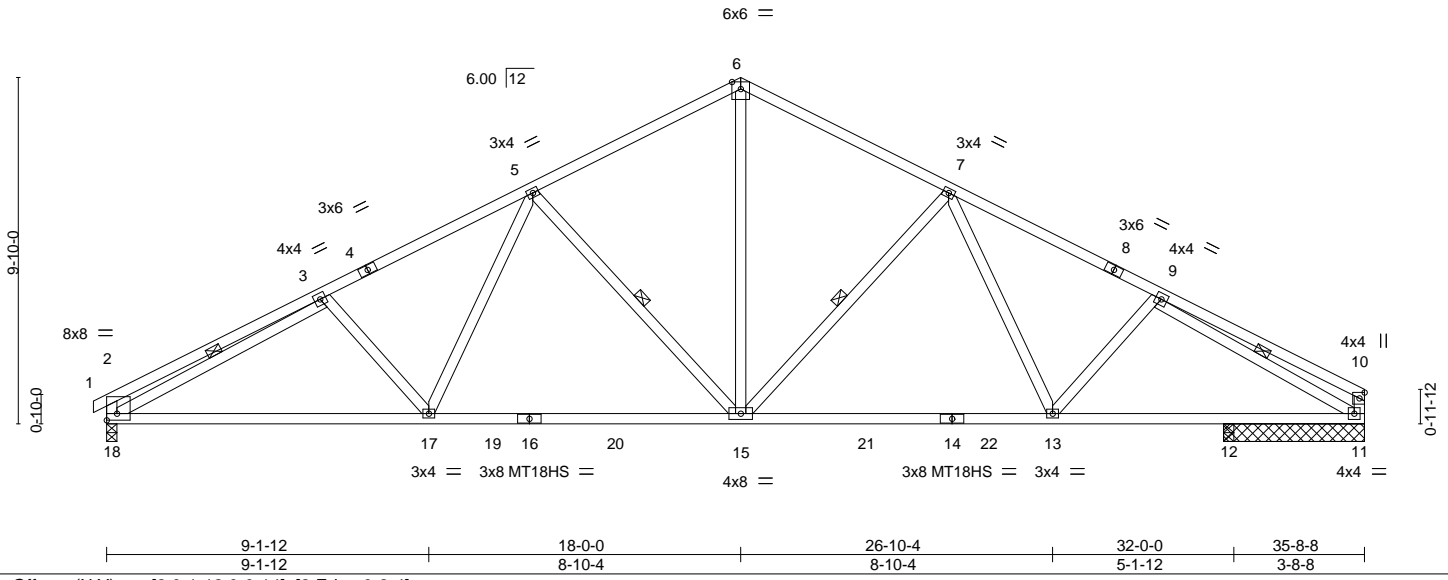


Plate Offsets (X,Y)--	[2:0-1,12,0-0-14], [2:Edge,0-2-4]				
LOADING (psf)	SPACING- 2-0-0	CSI.	DEFL. in (loc) l/defl L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.15	TC 0.81	Vert(LL) -0.22 15-17 >999 240	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.95	Vert(CT) -0.44 13-15 >867 180	MT18HS	244/190
BCLL 0.0 *	Rep Stress Incr YES	WB 0.55	Horz(CT) 0.10 11 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-AS			
				Weight: 207 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied.
WEBS 2x4 SP No.3	WEBS 1 Row at midpt 5-15, 7-15, 3-18, 9-11

REACTIONS. (lb/size)	18=1436/0-3-8, 11=1313/4-0-0, 12=115/0-3-8
	Max Horz 18=-164(LC 10)
	Max Uplift 18=-88(LC 12), 11=-104(LC 12)
	Max Grav 18=1436(LC 1), 11=1313(LC 1), 12=175(LC 3)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-734/161, 3-5=-2140/416, 5-6=-1563/385, 6-7=-1563/385, 7-9=-2036/426, 9-10=-336/141, 2-18=-514/156, 10-11=-288/120
BOT CHORD 17-18=-307/2040, 15-17=-195/1766, 13-15=-200/1656, 12-13=-310/1829, 11-12=-310/1829
WEBS 5-17=-12/406, 5-15=-601/199, 6-15=-195/1037, 7-15=-539/206, 7-13=-23/307, 3-18=-1627/271, 9-11=-1889/291

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TC DL=6.0psf; BCDL=6.0psf; h=30ft; B=45ft; L=45ft; eave=6ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) zone; end vertical left 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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
 - All bearings are assumed to be User Defined crushing capacity of 425 psi.
 - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 18. This connection is for uplift only and does not consider lateral forces.
 - One MTS12 Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 11. This connection is for uplift only and does not consider lateral forces.
 - 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.



February 6, 2020

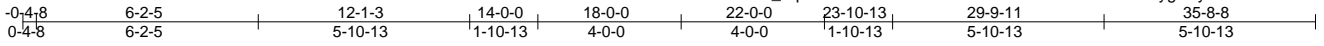
<p>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.</p> <p>Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.</p>	<p>ENGINEERING BY</p> <p>TRENCO</p> <p>A MiTek Affiliate</p> <p>818 Soundside Road Edenton, NC 27932</p>
---	---

Job 23371-23371A	Truss A2	Truss Type ROOF TRUSS	Qty 7	Ply 1	Penwell K Gable	140178138
---------------------	-------------	--------------------------	----------	----------	-----------------	-----------

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

8.330 s Jan 22 2020 MiTek Industries, Inc. Thu Feb 6 11:55:34 2020 Page 1

ID: XkLF3_6q7xnlCmTW7ESYUdzntO7-bkSVWR6uBvb5wI0EygZVyiTiAtxIF6l6fG56qSznrsd



Scale: 3/16"=1'

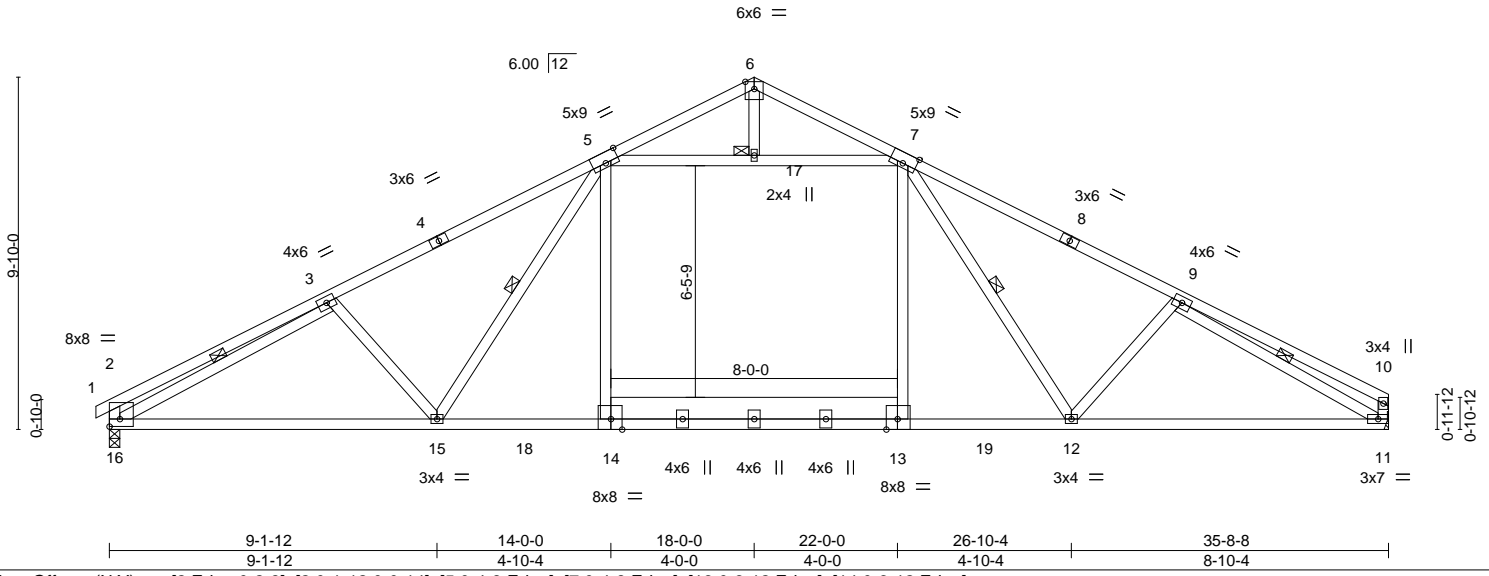


Plate Offsets (X,Y)--	[2:Edge,0-2-8], [2:0-1-12,0-0-14], [5:0-4-8,Edge], [7:0-4-8,Edge], [13:0-3-12,Edge], [14:0-3-12,Edge]
-----------------------	---

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 0.89	Vert(LL)	-0.53	14-15	>804	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.96	Vert(CT)	-0.66	14-15	>642		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.71	Horz(CT)	0.09	11	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-AS	Attic	-0.42	13-14	229	Weight: 233 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD 2x4 SP No.2 *Except* 14-16: 2x4 SP DSS, 13-14: 2x8 SP No.2, 11-13: 2x4 SP No.1	BOT CHORD Rigid ceiling directly applied.
WEBS 2x4 SP No.3	WEBS 1 Row at midpt 5-15, 7-12, 3-16, 9-11
	JOINTS 1 Brace at Jt(s): 17

REACTIONS.	(lb/size)
16=1600/0-3-8, 11=1571/Mechanical	
Max Horz 16=-164(LC 10)	
Max Grav 16=1648(LC 18), 11=1624(LC 19)	

FORCES.	(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD	2-3=-737/90, 3-5=-2613/191, 5-6=-386/42, 6-7=-389/43, 7-9=-2556/187, 9-10=-499/48, 2-16=-500/113, 10-11=-346/68
BOT CHORD	15-16=-120/2478, 14-15=0/2192, 13-14=0/2195, 12-13=0/2196, 11-12=-112/2273
WEBS	3-15=-284/219, 5-15=-98/472, 7-12=-139/382, 3-16=-2089/121, 9-11=-2255/149, 5-14=0/677, 7-13=0/697, 5-17=-1891/193, 7-17=-1891/193

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=45ft; L=45ft; eave=6ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) zone; end vertical left exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
 - Ceiling dead load (5.0 psf) on member(s). 5-17, 7-17; Wall dead load (5.0psf) on member(s).5-14, 7-13
 - Bottom chord live load (20.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 13-14
 - All bearings are assumed to be User Defined crushing capacity of 425 psi.
 - Refer to girder(s) for truss to truss connections.
 - 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.
 - ATTIC SPACE SHOWN IS DESIGNED AS UNINHABITABLE.



February 6, 2020

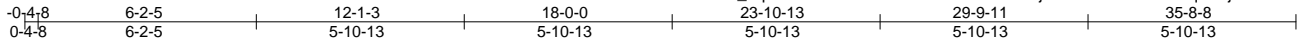
<p>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.</p> <p>Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.</p>	<p>818 Soundside Road Edenton, NC 27932</p>
---	---

Job 23371-23371A	Truss A3	Truss Type Common	Qty 2	Ply 1	Penwell K Gable	140178139
---------------------	-------------	----------------------	----------	----------	-----------------	-----------

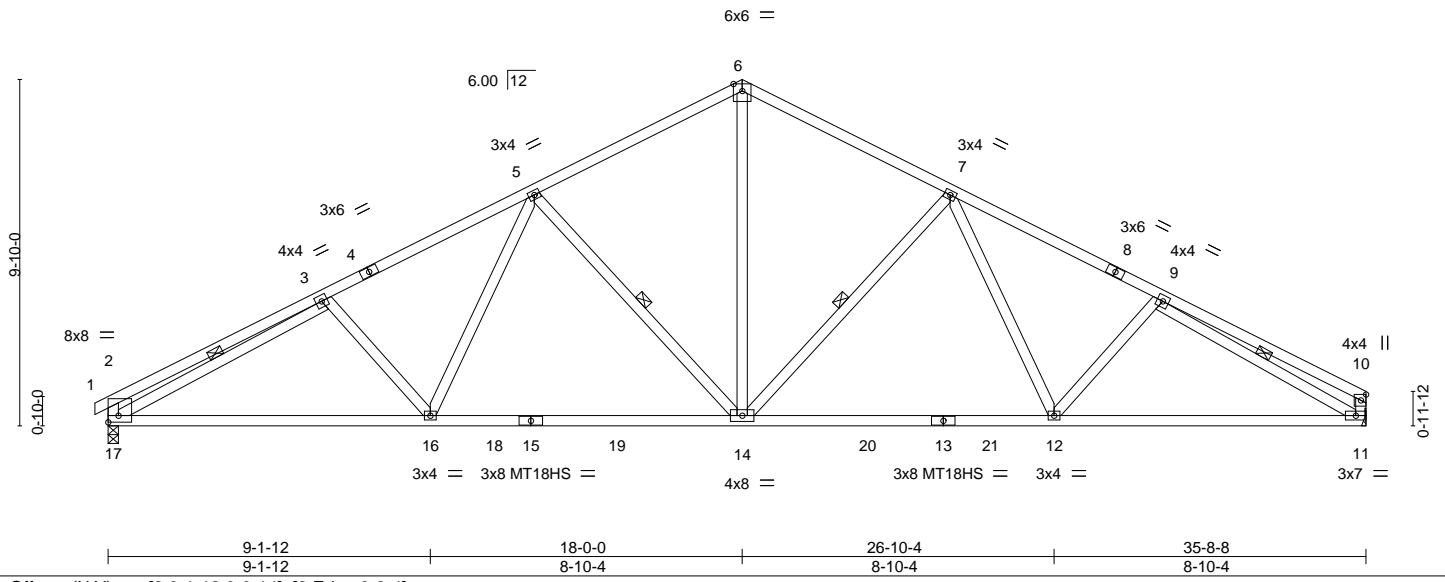
84 Components (Dunn), Dunn, NC - 28334,

8.330 s Jan 22 2020 MiTek Industries, Inc. Thu Feb 6 11:55:36 2020 Page 1

ID:XkLF3_6q7xnlCmTW7ESYUdzntO7-X7aFx778jWro9bAc44bz1AY3ghdXj31P6aaDuLznsrb



Scale = 1:65.4



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.15	TC 0.81	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.91	Vert(LL) -0.22 14-16 >999 240	MT18HS	244/190
BCLL 0.0 *	Rep Stress Incr YES	WB 0.53	Vert(CT) -0.40 12-14 >999 180		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-AS	Horz(CT) 0.11 11 n/a n/a		
				Weight: 207 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied.
WEBS 2x4 SP No.3	WEBS 1 Row at midpt 5-14, 7-14, 3-17, 9-11

REACTIONS. (lb/size) 17=1448/0-3-8, 11=1416/Mechanical
 Max Horz 17=-164(LC 10)
 Max Uplift 17=-84(LC 12), 11=-69(LC 12)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 2-3=-735/161, 3-5=-2164/408, 5-6=-1586/378, 6-7=-1586/378, 7-9=-2120/401,
 9-10=-493/97, 2-17=-514/156, 10-11=-358/100
 BOT CHORD 16-17=-301/2056, 14-16=-189/1783, 12-14=-186/1705, 11-12=-287/1910
 WEBS 5-16=-12/408, 5-14=-602/199, 6-14=-189/1053, 7-14=-571/193, 7-12=-4/372,
 3-17=-1645/264, 9-11=-1818/310

NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCCL=6.0psf; BCDL=6.0psf; h=30ft; B=45ft; L=45ft; eave=6ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) zone; end vertical left 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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- All bearings are assumed to be User Defined crushing capacity of 425 psi.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 11.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 17. This connection is for uplift only and does not consider lateral forces.
- 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.



February 6, 2020

<p>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.</p> <p>Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSI/TP1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.</p>	<p>ENGINEERING BY</p> <p>TRENCO</p> <p>A MiTek Affiliate</p> <p>818 Soundside Road Edenton, NC 27932</p>
--	---

Job 23371-23371A	Truss A3E	Truss Type Common Supported Gable	Qty 1	Ply 1	Penwell K Gable	140178140
84 Components (Dunn), Dunn, NC - 28334,					Job Reference (optional)	

8.330 s Jan 22 2020 MiTek Industries, Inc. Thu Feb 6 11:55:37 2020 Page 1
 ID:XkLF3_6q7xnIcmTW7ESYUdzntO7-?J8d9T8mUpzfnIodo6CZO5Pk5BEScUZLEJnQznrsra



Scale = 1:67.5

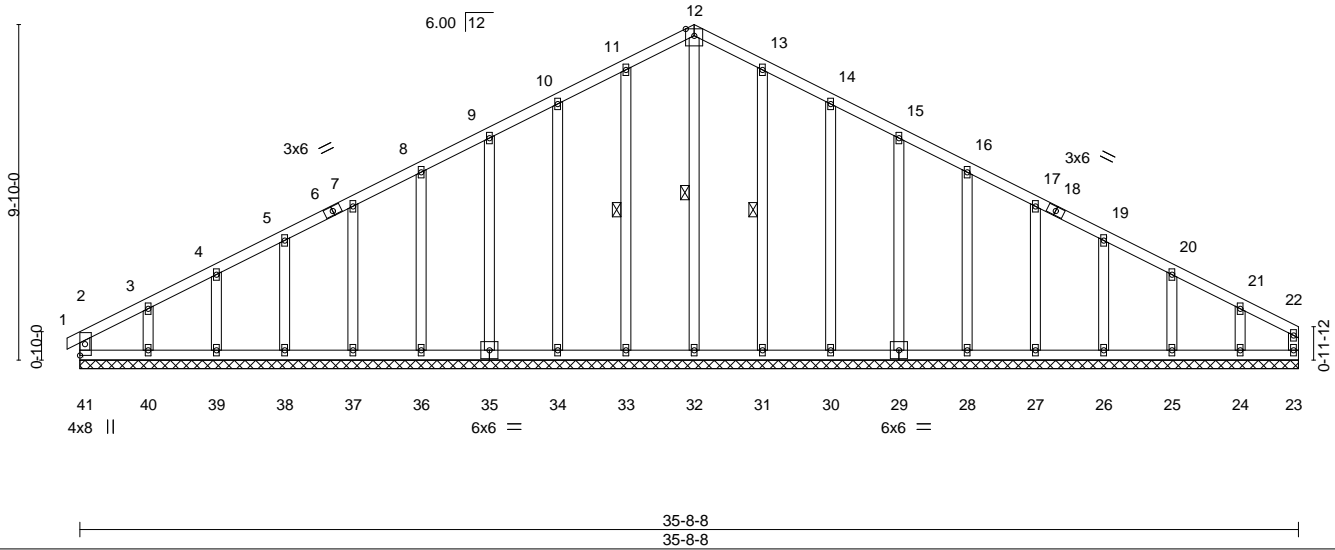


Plate Offsets (X,Y)--	[2:0-0-14,0-1-12], [41:0-0-0,0-1-12]				
LOADING (psf)	SPACING- 2-0-0	CSI.	DEFL. in (loc) l/def L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.15	TC 0.10	Vert(LL) -0.00 1 n/r 120	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.05	Vert(CT) 0.00 1 n/r 90		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.13	Horz(CT) 0.00 23 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-R		Weight: 242 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3	WEBS 1 Row at midpt 12-32, 11-33, 13-31
OTHERS 2x4 SP No.3	

REACTIONS. All bearings 35-8-8.
 (lb) - Max Horz 41=-164(LC 10)
 Max Uplift All uplift 100 lb or less at joint(s) 41, 23, 33, 34, 35, 36, 37, 38, 39, 40, 31, 30, 29, 28, 27, 26, 25, 24
 Max Grav All reactions 250 lb or less at joint(s) 41, 23, 32, 33, 34, 35, 36, 37, 38, 39, 40, 31, 30, 29, 28, 27, 26, 25, 24

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 11-12=-111/277, 12-13=-111/277

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCCL=6.0psf; BCDL=6.0psf; h=30ft; B=45ft; L=45ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) zone; end vertical left 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 on 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) All bearings are assumed to be User Defined crushing capacity of 425 psi.



February 6, 2020

<p>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.</p> <p>Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.</p>	<p>ENGINEERING BY</p> <p>TRENCO</p> <p>A MiTek Affiliate</p> <p>818 Soundside Road Edenton, NC 27932</p>
---	---

Job 23371-23371A	Truss AE	Truss Type Common Supported Gable	Qty 1	Ply 1	Penwell K Gable	140178141
84 Components (Dunn), Dunn, NC - 28334,					8.330 s Jan 22 2020 MiTek Industries, Inc. Thu Feb 6 11:55:40 2020 Page 1	
ID: XkLF3_6q7xnlCmTW7ESYUdztO7-QuqmnVAemkLEeDUNJwfvB0jw1DwfzE?1CYR16znsrX					Job Reference (optional)	

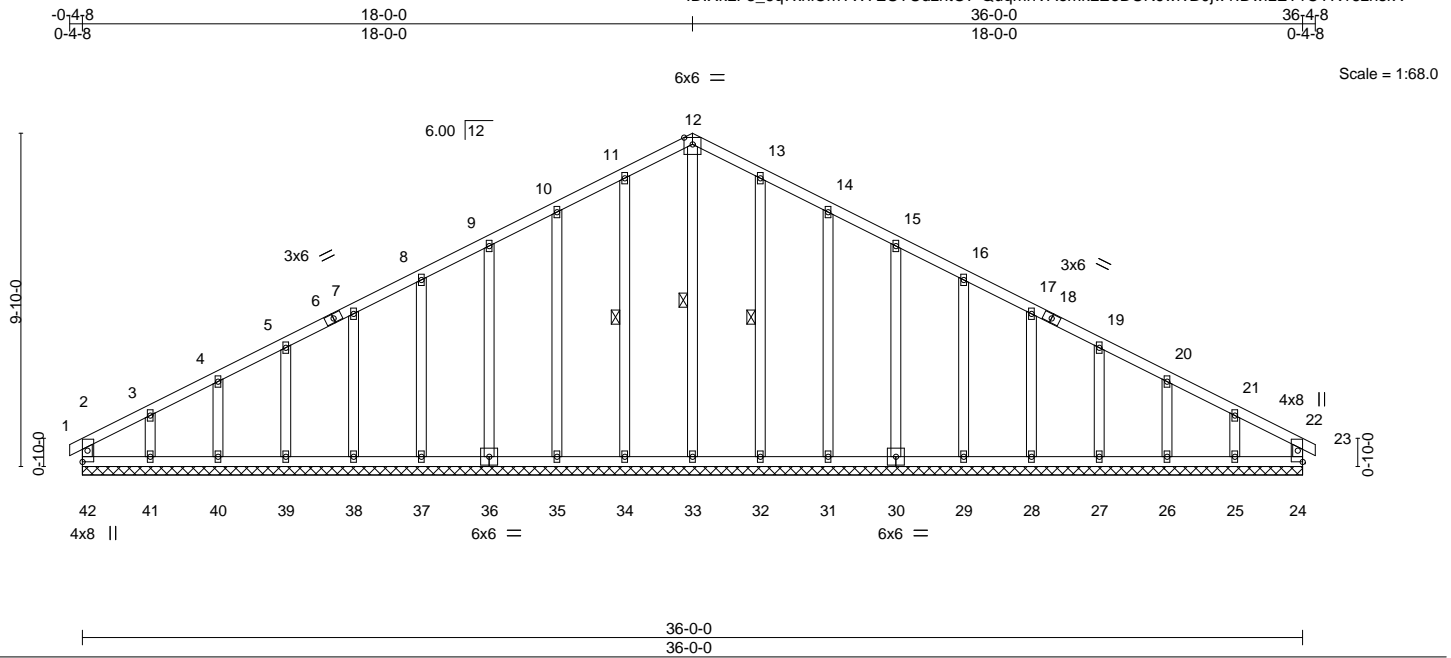


Plate Offsets (X,Y)--	[2:0-0-14,0-1-12], [22:0-0-14,0-1-12], [24:0-0-0,0-1-12], [42:0-0-0,0-1-12]				
LOADING (psf)	SPACING- 2-0-0	CSI.	DEFL. in (loc) l/def L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.15	TC 0.10	Vert(LL) 0.00 22 n/r 120	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.05	Vert(CT) 0.00 22 n/r 90		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.13	Horz(CT) 0.00 24 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-R		Weight: 244 lb	FT = 20%

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

REACTIONS. All bearings 36-0-0.
 (lb) - Max Horz 42=-173(LC 10)
 Max Uplift All uplift 100 lb or less at joint(s) 42, 34, 35, 36, 37, 38, 39, 40, 41, 32, 31, 30, 29, 28, 27, 26, 25
 Max Grav All reactions 250 lb or less at joint(s) 42, 24, 33, 34, 35, 36, 37, 38, 39, 40, 41, 32, 31, 30, 29, 28, 27, 26, 25

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 11-12=-113/278, 12-13=-113/278

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCCL=6.0psf; BCDL=6.0psf; h=30ft; B=45ft; L=45ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) 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) Truss to be fully sheathed on 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) All bearings are assumed to be User Defined crushing capacity of 425 psi.



February 6, 2020

<p>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.</p> <p>Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.</p>	<p>ENGINEERING BY</p> <p>TRENCO</p> <p>A MiTek Affiliate</p> <p>818 Soundside Road Edenton, NC 27932</p>
---	---

Job 23371-23371A	Truss BGR	Truss Type COMMON GIRDER	Qty 1	Ply 3	Penwell K Gable Job Reference (optional)	140178143
---------------------	--------------	-----------------------------	----------	----------	---	-----------

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

8.330 s Jan 22 2020 MiTek Industries, Inc. Thu Feb 6 11:55:45 2020 Page 1

ID:XkLF3_6q7xnlCmTW7ESYUdzntO7-msdfqCEnbH_Xk_ML5TF4u4QjGJgK6LkBUFCiJznsrS



6x6 =

Scale = 1:42.0

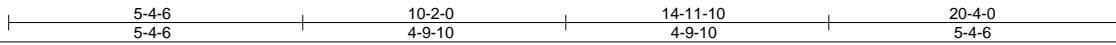
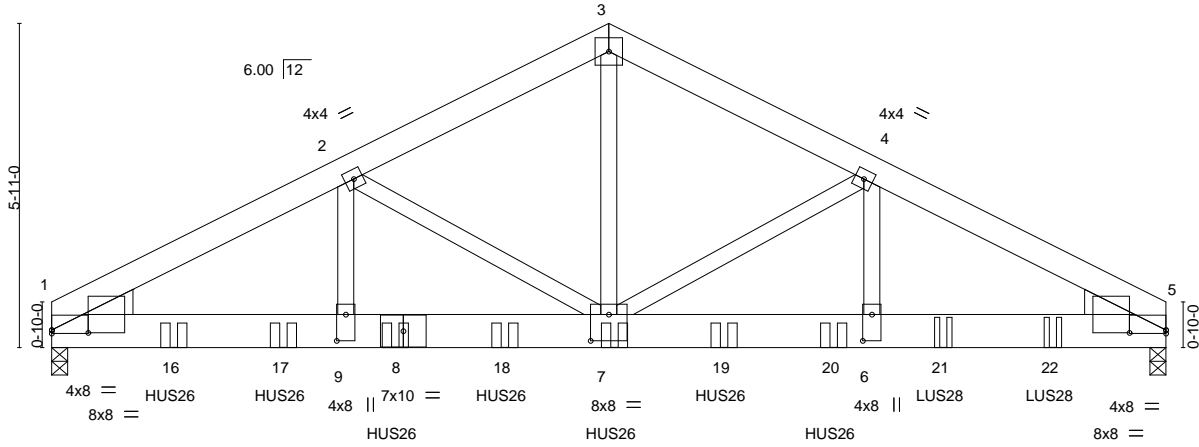


Plate Offsets (X,Y)--	[1:0-0-0,0-0-12], [1:0-8-0,0-0-10], [5:0-0-0,0-0-12], [5:0-8-0,0-0-10], [6:0-5-12,0-2-0], [7:0-4-0,0-5-12], [9:0-5-12,0-2-0]
-----------------------	--

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.26	Vert(LL)	-0.09	7-9	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.85	Vert(CT)	-0.19	7-9	>999		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.65	Horz(CT)	0.06	5	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MS						
								Weight: 453 lb	FT = 20%

LUMBER-
TOP CHORD 2x6 SP No.2
BOT CHORD 2x8 SP No.2
WEBS 2x4 SP No.3 *Except*
3-7: 2x4 SP No.2
WEDGE
Left: 2x6 SP No.2 , Right: 2x6 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. (lb/size) 1=7676/0-3-8 (req. 0-4-0), 5=7598/0-3-8 (req. 0-4-0)
Max Horz 1=86(LC 10)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-12827/0, 2-3=-9521/0, 3-4=-9521/0, 4-5=-12671/0
BOT CHORD 1-9=0/11349, 7-9=0/11349, 6-7=0/11210, 5-6=0/11210
WEBS 3-7=0/7949, 4-7=-3195/0, 4-6=0/3039, 2-7=-3359/0, 2-9=0/3233

- NOTES-**
- 3-ply truss to be connected together with 10d (0.120"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x8 - 3 rows staggered at 0-5-0 oc.
Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
 - All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
 - Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; B=45ft; L=45ft; eave=6ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
 - WARNING: Required bearing size at joint(s) 1, 5 greater than input bearing size.
 - All bearings are assumed to be User Defined crushing capacity of 425 psi.
 - Use Simpson Strong-Tie HUS26 (14-10d Girder, 4-10d Truss) or equivalent spaced at 2-0-8 oc max. starting at 2-2-12 from the left end to 14-3-4 to connect truss(es) to back face of bottom chord.
 - Use Simpson Strong-Tie LUS28 (6-SD9112 Girder, 4-SD9212 Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 16-3-4 from the left end to 18-3-4 to connect truss(es) to back face of bottom chord.
 - Fill all nail holes where hanger is in contact with lumber.

LOAD CASE(S) Standard



February 6, 2020

Continued on page 2

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.

ENGINEERING BY
TRENCO
A MiTek Affiliate

818 Soundside Road
Edenton, NC 27932

Job 23371-23371A	Truss BGR	Truss Type COMMON GIRDER	Qty 1	Ply 3	Penwell K Gable Job Reference (optional)	I40178143
---------------------	--------------	-----------------------------	----------	-----------------	---	-----------

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

8.330 s Jan 22 2020 MiTek Industries, Inc. Thu Feb 6 11:55:45 2020 Page 2
ID:XkLF3_6q7xnlCmTW7ESYUdzntO7-msdfqCEnbH_Xk_ML5TF4u4QjGJjgK6LkBUFCiJznsrS

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, 10-13=-20

Concentrated Loads (lb)

Vert: 8=-1551(B) 7=-1551(B) 16=-1551(B) 17=-1551(B) 18=-1551(B) 19=-1551(B) 20=-1551(B) 21=-1396(B) 22=-1396(B)

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/TP1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



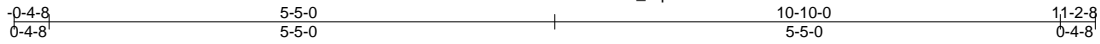
818 Soundside Road
Edenton, NC 27932

Job 23371-23371A	Truss CE	Truss Type Common Supported Gable	Qty 1	Ply 1	Penwell K Gable	140178144
---------------------	-------------	--------------------------------------	----------	----------	-----------------	-----------

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

8.330 s Jan 22 2020 MiTek Industries, Inc. Thu Feb 6 11:55:46 2020 Page 1

ID: XkLF3_6q7xnlCmTW7ESYUdzntO7-F2B11YFPMa6OM8xIFBmJRHzxBjFv3j8tP8?IFlznSR



4x4 =

Scale = 1:24.7

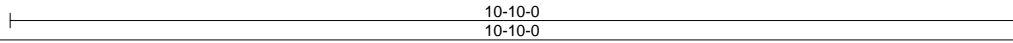
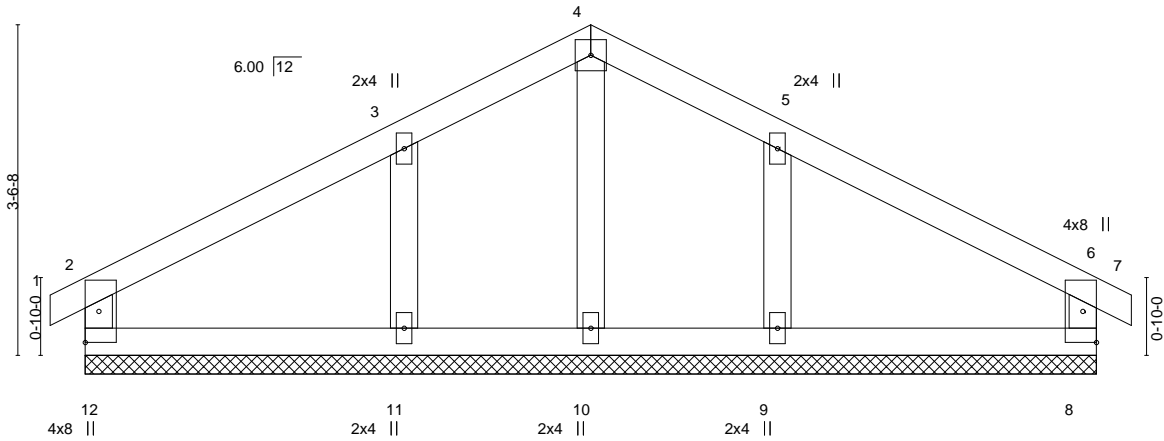


Plate Offsets (X,Y)--	[2:0-0-14,0-1-12], [6:0-0-14,0-1-12], [8:0-0-0,0-1-12], [12:0-0-0,0-1-12]
-----------------------	---

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 0.12	Vert(LL)	0.00	7	n/r	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.08	Vert(CT)	0.00	7	n/r		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.04	Horz(CT)	0.00	8	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-R					Weight: 47 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 10-10-0.
(lb) - Max Horz 12=66(LC 11)
Max Uplift All uplift 100 lb or less at joint(s) 12, 8, 11, 9
Max Grav All reactions 250 lb or less at joint(s) 12, 8, 10 except 11=253(LC 21), 9=253(LC 22)

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

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TC DL=6.0psf; BC DL=6.0psf; h=30ft; B=45ft; L=45ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2) 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.
 - Gable requires continuous bottom chord bearing.
 - Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
 - 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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
 - All bearings are assumed to be User Defined crushing capacity of 425 psi.



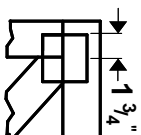
February 6, 2020

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.

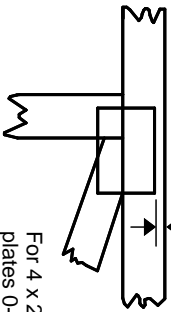
ENGINEERING BY
TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

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 **MITrak 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



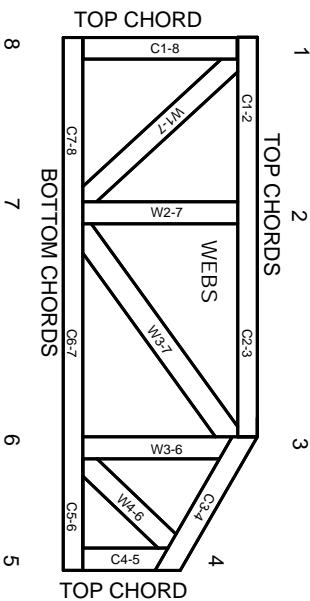
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TP1: 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 section 6.3 These truss designs rely on Lumber values established by others.

© 2012 MITTEK® All Rights Reserved



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.