

		*						
Estimation								
Name	Selection	Formula	Calculation					
Roof Area	1st Floor	Roof Area	5099.67					
Roof Decking	1st Floor	Roof Decking	175 sheets					

PlotID	Length	Product	Plies	Net Qty
BM2	60' 0"	1-3/4"x 9-1/4" LVL Kerto-S	2	4
BM4	30' 0"	1-3/4"x 9-1/4" LVL Kerto-S	2	2
BM3	21' 0"	1-3/4"x 9-1/4" LVL Kerto-S	2	4
BM1	13' 0"	1-3/4"x 9-1/4" LVL Kerto-S	2	8
GDH1	36' 0"	1-3/4"x 11-7/8" LVL Kerto-S	2	2
GDH2	9' 0"	1-3/4"x 11-7/8" LVL Kerto-S	2	2

Truss Placement Plan SCALE: 3/16" = 1'-0"

▲= Denotes Left End of Truss (Reference Engineered Truss Drawing)

All Truss Reactions are Less than 3,000 lbs. Unless Noted Otherwise.

-- Denotes Reaction Greater than 3,000 lbs. Reaction / # of Studs

TRUSSES & BEAMS
Reilly Road Industrial Park
Fayetteville, N.C. 28309
Phone: (910) 864-8787

Fax: (910) 864-4444

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Lenny Norris

Lenny Morris

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1700	1	2550	1	3400	į
3400	2	5100	2	6800	į
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8500	5	12750	5	17000	d
10500	6	15300	6		
11900	7				
13600	6				
15300	9				

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iders, LLC	CTTY / CO.	CITY / CO. Dunn / Harnett	
s Garage	ADDRESS	ADDRESS 3943 Fairground Road	
N GARAGE	MODEL	ROOF	
ži.	DATE REV.	11	
	DRAWN BY	DRAWN BY Lenny Norris	
765	SAI ES DED	SALES DED Lonny Morris	

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BIM

Project:

Address: HARNETT Date:

6/18/2019

Page 1 of 2

Designer: Lenny Norris

Job Name: STEWART

J0619-2765 Project #:

Kerto-S LVL

1.750" X 9.250"

2-Ply - PASSED

Level: Level

m 1			
W le			
-	3 SPF End Grain	2 SPF End Grain	SPF End Grain
11			

Member Information					Reactions UNPATTERNED Ib (Uplift)						
Type:	Girder	Application:	Floor	Brg	Live	Dead	Snow	Wind	Const		
Plies:	2	Design Method:	ASD	1	0	665	631	0	0		
Moisture Condition	n: Dry	Building Code:	IBC/IRC 2015	2	0	2011	1907	0	0		
Deflection LL:	480	Load Sharing:	No	3	0	665	631	0	0		
Deflection TL:	360	Deck:	Not Checked								
Importance:	Normal										
Temperature:	Temp <= 100°F										
				Bearing	gs						

Analysis Res	sults					
Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-4565 ft-lb	12'	14423 ft-lb	0.316 (32%)	D+S	LL
Unbraced	-4565 ft-lb	12'	13568 ft-lb	0.336 (34%)	D+S	LL
Pos Moment	2780 ft-lb	4'11 1/16"	14423 ft-lb	0.193 (19%)	D+S	L_
Unbraced	2780 ft-lb	4'11 1/16"	8016 ft-lb	0.347 (35%)	D+S	L_
Shear	1758 lb	11'2 3/4"	7943 lb	0.221 (22%)	D+S	LL
LL Defl inch	0.074 (L/1884)	5'8 5/16"	0.290 (L/480)	0.250 (25%)	S	L_
TL Defl inch	0.135 (L/1035)	5'6 11/16"	0.387 (L/360)	0.350 (35%)	D+S	L_

Case	2 - SPF End Grain	5.500"
LL L_ L	3 - SPF End Grain	5.500"
LL L_		

Bearing Length

1 - SPF 5.500"

End Grain Cap. React D/L lb

661 / 675

2019 / 1915

661 / 675

8%

23%

Total Ld. Case

1335 L_

3934 LL

1335 _L

Ld. Comb.

D+S

D+S

D+S

Design Notes

- 1 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 2 Refer to last page of calculations for fasteners required for specified loads.
- 3 Girders are designed to be supported on the bottom edge only.
- 4 Top loads must be supported equally by all plies.
- 5 Top braced at bearings.
- 6 Bottom braced at bearings.
- 7 Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments	
1	Uniform			Тор	132 PLF	0 PLF	132 PLF	0 PLF	0 PLF	MONO	
	Self Weight				7 PLF						

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown, it is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

chemicals

1. UV, beams must not be cut or drilled
 2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
 2. Damaged Beams must not be used

Design assumes top edge is laterally restrained Provide lateral support at bearing points to avoid lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

This design is valid until 12/11/2021

Manufacturer Info Metsä Wood

301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us ICC-ES: ESR-3633

Comtech, Inc. 1001 S. Reilly Road, Suite #639 Fayetteville, NC USA 28314 910-864-TRUS





isDesign™

Client:

BIM

Project:

Address: HARNETT Date:

6/18/2019

Page 2 of 2

Designer: Lenny Norris

Job Name: STEWART

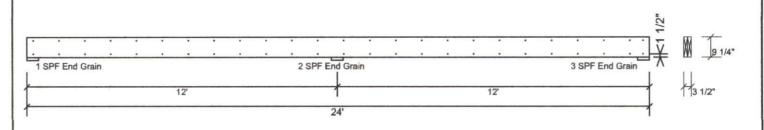
Project #: J0619-2765

Kerto-S LVL

1.750" X 9.250"

2-Ply - PASSED

Level: Level



Multi-Ply Analysis

Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6"

Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	163.7 PLF
Yield Limit per Fastener	81.9 lb.
Yield Mode	IV.
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

Notes

Calcusted Structured Designs is responsible only of the structural adequacy of this component based on the design ortiset and loadings shown. It is the responsibility of the customer and/or the contractor to resours the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

Handling & Installation

Handling & Installation

1. IVL beams must not be out or drilled

2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastering details, beam strength values, and code approvats

3. Damaged Beams must not be used

4. Design assumes top edge is laterally restrained

5. Provide lateral support at bearing points to avoid lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us ICC-ES: ESR-3633

Manufacturer Info

Comtech, Inc. 1001 S. Reilly Road, Suite #639 Fayetteville, NC 28314 910-864-TRUS



This design is valid until 12/11/2021



isDesign™

Client:

BIM

Project:

Address:

HARNETT

Date: 6/18/2019

Designer: Lenny Norris

Job Name: STEWART Project #: J0619-2765

1.750" X 9.250" 2-Ply - PASSED Kerto-S LVL

Level: Level

1 2 SPF End Grain 1 SPF End Grain 3 SPF End Grain 10'3" 10'2 1/2' 20'5 1/2"

Member I	nformatio	n
----------	-----------	---

Type:	Girder
Plies:	2
Moisture Condition:	Dry
Deflection LL:	480
Deflection TL:	360
Importance:	Normal

Temp <= 100°F

Application: Floor ASD Design Method: **Building Code: IBC/IRC 2015** Load Sharing: No Deck: Not Checked

Reactions UNPATTERNED Ib (Uplift) Brg Live Dead 1 0 1372 2 0 4060 3 0 1364

Wind Snow Const 1343 0 0 3972 0 0 1334 0 0

Page 1 of 2

Analysis Results

Temperature:

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-7943 ft-lb	10'3"	14423 ft-lb	0.551 (55%)	D+S	LL
Unbraced	-7943 ft-lb	10'3"	13784 ft-lb	0.576 (58%)	D+S	LL
Pos Moment	4874 ft-lb	4'2 15/16"	14423 ft-lb	0.338 (34%)	D+S	L_
Unbraced	4874 ft-lb	4'2 15/16"	9027 ft-lb	0.540 (54%)	D+S	L_
Shear	3538 lb	9'5 3/4"	7943 lb	0.445 (45%)	D+S	LL
LL Defl inch	0.099 (L/1193)	4'10 15/16"	0.246 (L/480)	0.400 (40%)	S	L_
TL Defl inch	0.179 (L/659)	4'9 11/16"	0.328 (L/360)	0.550 (55%)	D+S	L_

Bearings

searing:	searings										
Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.					
1 - SPF End Grain	5.500"	17%	1361 / 1430	2791	L_	D+S					
2 - SPF End Grain	5.500"	48%	4083 / 3995	8078	LL	D+S					
3 - SPF End Grain	5,500"	17%	1352 / 1424	2776	_L	D+S					

Design Notes

- 1 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 2 Refer to last page of calculations for fasteners required for specified loads.
- 5 Top braced at bearings.
- 6 Bottom braced at bearings.

Self Weight

3 Girders are designed to be supported on the bottom edge only. 4 Top loads must be supported equally by all plies.

7 Later	ral slenderness ratio based on s	ingle ply width.								
ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	
1	Uniform			Top	325 PLF	0 PLF	325 PLF	0 PLF	0 PLF	

Notes

Calcutated Structured Designs is responsible only of the structural adequacy of this component based on the design orteria and loadings shown. R, is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

chemicals

Handling & Installation

- Trainturing & Instanturin

 1. UV, beams must not be cut or drilled

 2. Refer to manufacturer's product information regarding installation requirements, multi-by festening details, beam strength values, and code approvets

 3. Damaged Beams must not be used
- Daniged Beams must not be used Design assumes top edge is laterally restrained Provide lateral support at bearing points to avoid lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

7 PLF

Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us ICC-ES: ESR-3633

Manufacturer Info

Comtech, Inc. 1001 S. Reilly Road, Suite #639 Fayatteville, NC USA 28314 910-864-TRUS

Comments **B2 TRUSS**



This design is valid until 12/11/2021



BIM

Project:

Address:

HARNETT

Date:

6/18/2019

Page 2 of 2

Designer: Lenny Norris

Job Name: STEWART

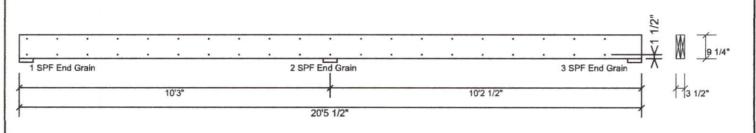
Project #:

Kerto-S LVL

1.750" X 9.250"

2-Ply - PASSED

J0619-2765



Multi-Ply Analysis

Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6"

Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	163.7 PLF
Yield Limit per Fastener	81.9 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design offeria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

chemicals

- Handling & Installation

 1. UVL beams must not be cut or drilled

 2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastering details, beam strength values, and code approvals

 3. Damaged Beams must not be used

 4. Design assumes top edge is laterally restrained

 5. Provide lateral support at bearing points to avoid lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us ICC-ES: ESR-3633

Manufacturer Info

Comtech, Inc. 1001 S. Reilly Road, Suite #639 Fayetteville, NC USA 28314 910-864-TRUS







Trenco

818 Soundside Rd Edenton, NC 27932

Re: J0619-2765

Bim Builders/Stewarts Garage/Harnett

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Comtech, Inc - Fayetteville.

Pages or sheets covered by this seal: E13181419 thru E13181424

My license renewal date for the state of North Carolina is December 31, 2019.

North Carolina COA: C-0844



June 19,2019

Strzyzewski, Marvin

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

Job	Truss	Truss Type	Otv	Plv	Bim Builders/Stewarts Garage/Harnett	
	1	Trust Type	Qty	riy		
J0619-2765	Δ1	GABLE			1	E13181419
50010 2100	A .	GABLE	2	1		
Countries Inc.	- w W No cons				Job Reference (optional)	
Comtech, Inc., F	ayetteville, NC 28309		8	.130 s Mar	11 2018 MiTek Industries, Inc. Tue Jun 18 15:02:21 2019	Page 1

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5x8 =

Scale = 1:76.1

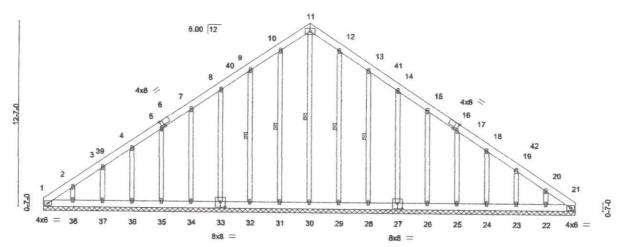


Plate Offsets (X,Y)-[6:0-2-9,Edge], [16:0-2-9,Edge], [27:0-4-0,0-4-8], [33:0-4-0,0-4-8] LOADING (psf) SPACING-2-0-0 CSI. DEFL in Vdef! L/d **PLATES** GRIP TCLL 20.0 Plate Grip DOL 1.15 TC 0.05 Vert(LL) n/a n/a 999 MT20 244/190 TCDL 10.0 Lumber DOL 1.15 BC 0.03 Vert(CT) n/a 999 n/a BCLL 0.0 Rep Stress Incr YES WB 0.18 Horz(CT) 0.01 21 n/a n/a BCDL 10.0 Code IRC2015/TPI2014 Matrix-S Weight: 339 lb FT = 20%

LUMBER-

TOP CHORD 2x6 SP No.1 **BOT CHORD** 2x6 SP No.1 OTHERS

2x4 SP No.3 *Except* 11-30,10-31,12-29: 2x4 SP No.2 BRACING-

TOP CHORD **BOT CHORD** WEBS

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

1 Row at midpt

11-30, 10-31, 9-32, 12-29, 13-28

REACTIONS. All bearings 36-0-0.

(lb) - Max Horz 1=-362(LC 8)

Max Uplift All uplift 100 lb or less at joint(s) 21, 31, 32, 33, 34, 35, 36, 37, 29, 27, 26, 25, 24, 23 except

1=-112(LC 10), 38=-112(LC 12), 28=-103(LC 13), 22=-109(LC 13)

Max Grav All reactions 250 lb or less at joint(s) 1, 21, 31, 32, 33, 34, 35, 36, 37, 38, 29, 28, 27, 26, 25, 24, 23, 22 except 30=278(LC 22)

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

1-2=-399/285, 2-3=-311/248, 3-4=-254/222, 9-10=-246/289, 10-11=-277/304, TOP CHORD

11-12=-277/290, 20-21=-316/207

1-38=-181/283, 37-38=-181/283, 36-37=-181/283, 35-36=-181/283, 34-35=-181/283, 33-34=-181/283, 32-33=-181/283, 31-32=-181/283, 30-31=-181/283, 29-30=-181/283,

28-29=-181/283, 27-28=-181/283, 26-27=-181/283, 25-26=-181/283, 24-25=-181/283,

23-24=-181/283, 22-23=-181/283, 21-22=-181/283

NOTES.

BOT CHORD

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

- 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-0-0 to 4-4-13, Interior(1) 4-4-13 to 18-0-0, Exterior(2) 18-0-0 to 22-4-13 zone; 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 with a clearance greater than 6-0-0 between the bottom chord and any other members, with BCDL = 10.0psf.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 21, 31, 32, 33, 34, 35, 36, 37, 29, 27, 26, 25, 24, 23 except (jt=lb) 1=112, 38=112, 28=103, 22=109.



MARNING - 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 end/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, DSB-89 and BCSI Building Compositely Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

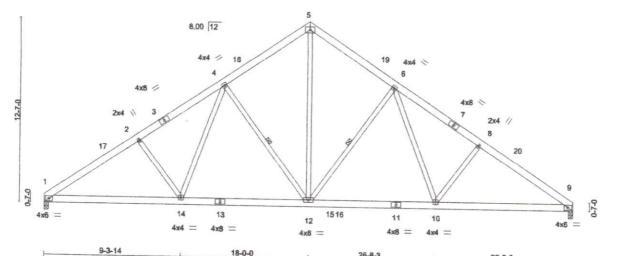


Edenton, NC 27932

Job Truss Truss Type Qty Bim Builders/Stewarts Garage/Harnett E13181420 J0619-2765 A2 MOD. QUEEN 1 Job Reference (optional) 8.130 s Mar 11 2018 MiTek Industries, Inc. Tue Jun 18 15:02:22 2019 Page 1 Comtech, Inc., Favetteville, NC 28309 ID:zLCNjAKxVfOawXx01CEUhkz5RyL-g4jQej7fkim0kYhhUAbxviapbLKpL3a0RJxs8Tz50EI 12-2-9 18-0-0 29-6-14 36-0-0 5-9-7 5-9-7

5x8 =

Scale = 1:76.6



	9-3-14	8-8-3	8-8-3		36-0-0 9-3-14	
LOADING (psf) TCLL 20.0 TCDL 10.0 BCLL 0.0 * BCDL 10.0	SPACING- 2-0-0 Plate Grip DOL 1.15 Lumber DOL 1.15 Rep Stress Incr YES	CSI. TC 0.20 BC 0.42 WB 0.79	Vert(LL) -0.11 12-14	Vdefl L/d >999 360 >999 240 n/a n/a	PLATES MT20	GRIP 244/190
BCDL 10.0	Code IRC2015/TPI2014	Matrix-S	115 1011	>999 240	Weight: 271 lb	FT = 20%

TOP CHORD 2x6 SP No.1 **BOT CHORD** 2x6 SP No.1 2x4 SP No.3 *Except* **WEBS**

5-12: 2x4 SP No.2

BRACING-

TOP CHORD **BOT CHORD WEBS**

Structural wood sheathing directly applied or 4-10-10 oc purlins. Rigid ceiling directly applied or 10-0-0 oc bracing.

1 Row at midpt 4-12, 6-12

REACTIONS. (lb/size) 1=1428/0-3-8, 9=1428/0-3-8

Max Horz 1=290(LC 9)

Max Uplift 1=-75(LC 12), 9=-75(LC 13) Max Grav 1=1579(LC 19), 9=1579(LC 20)

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

1-2=-2427/446, 2-4=-2264/482, 4-5=-1629/449, 5-6=-1629/449, 6-8=-2264/482, 8-9=-2428/446

BOT CHORD

1-14=-264/2143, 12-14=-109/1759, 10-12=-110/1637, 9-10=-263/1926 2-14=-368/233, 4-14=-81/609, 4-12=-690/258, 5-12=-315/1402, 6-12=-690/258,

6-10=-81/609, 8-10=-368/233

NOTES-

WEBS

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

- 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; enclosed; MWFRS (envelope) and C-C Exterior(2) 0-1-12 to 4-6-9, Interior(1) 4-6-9 to 18-0-0, Exterior(2) 18-0-0 to 22-4-13 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.
- 4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members, with BCDL = 10.0psf.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 9.



WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MIL-7473 rev. 10/03/2015 BEFORE USE. Design valid for use only with MITek® connectors. This design is based only upon perameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters shown, and is for an individual building component, not building design. Bracing indicated is to prevent building design. Bracing indicated is to prevent building 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 **ANSITEM* Quality Criteria, DSB-89 and BCSI Building Cos Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



Edenton, NC 27932

Job Truss Type Truss Qty Bim Builders/Stewarts Garage/Harnett F13181421 J0619-2765 A3 SCISSORS 15 1 Job Reference (optional) Comtech, Inc. Fayetteville, NC 28309 8.130 s Mar 11 2018 MiTek Industries, Inc. Tue Jun 18 15:02:23 2019 Page 1 ID:zLCNjAKxVfOewXx01CEUhkz5RyL-8GHps38HV0utLiGt2uGARv6zFleQ4ZY9gzgPgvz50Ek 12-1-3 18-0-0 23-10-13 29-9-11 36-0-0 5-10-13 5-10-13 5-10-13 Scale = 1:73.4 5x8 || 5 8.00 12 17 4x4 16 4x4 6 4x8 / 4x8 > 2x4 = 12 8 6x8 = 5-10-13 13 11 4x8 = 4x8 = 4.00 12 4×4 = 0-7-0 4x8 4x8 7 9-1-12 18-0-0 26-10-4 36-0-0 8-10-4 8-10-4 LOADING (psf) SPACING-2-0-0 CSI. DEFL in (loc) I/defl L/d **PLATES** GRIP TCLL 20.0 Plate Grip DOL 1,15 TC 0.27 Vert(LL) -0.21 12 >999 360 MT20 244/190 TCDI 10.0 Lumber DOL 1.15 BC 0.53 Vert(CT) -0.45 12-14 >956 240 BCLL Rep Stress Incr 0.0 YES WB 0.62 Horz(CT) 0.40 Q n/a n/a

Wind(LL)

BRACING-

TOP CHORD

BOT CHORD

0.15 12-14

>999

240

Structural wood sheathing directly applied or 3-8-3 oc purlins.

Rigid ceiling directly applied or 10-0-0 oc bracing.

Weight: 244 lb

FT = 20%

LUMBER-

BCDI

TOP CHORD 2x6 SP No.1 **BOT CHORD** 2x6 SP No.1 WERS

10.0

2x4 SP No.3 *Except*

5-12: 2x4 SP No.2

REACTIONS. (lb/size) 1=1428/0-3-8, 9=1428/0-3-8

Max Horz 1=-290(LC 10)

Max Uplift 1=-75(LC 12), 9=-75(LC 13)

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

Code IRC2015/TPI2014

TOP CHORD 1-2=-3999/733, 2-4=-3665/607, 4-5=-2624/408, 5-6=-2624/406, 6-8=-3665/606,

8-9=-3999/732

BOT CHORD 1-14=-544/3526, 12-14=-249/2942, 10-12=-251/2898, 9-10=-542/3418

5-12=-271/2462, 6-12=-805/316, 6-10=-71/596, 8-10=-357/274, 4-12=-805/316, WEBS

4-14=-71/596, 2-14=-357/274

NOTES-

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

2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; enclosed; MWFRS (envelope) and C-C Exterior(2) 0-1-12 to 4-6-9, Interior(1) 4-6-9 to 18-0-0, Exterior(2) 18-0-0 to 22-4-13 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

Matrix-S

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 with a clearance greater than 6-0-0 between the bottom chord and any other members.

5) Bearing at joint(s) 1, 9 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.

6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 9.



MARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 (ev. 10/03/2015 BEFORE USE. Design valid for use only with MITek® connectors. This design is based only upon parameters and properly incorporate this design into the overall 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

ANSITPH Quality Criterie, OSB-89 and BCSI Building Comp. Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



Edenton, NC 27932

Job Truss Truss Type Qty Bim Builders/Stewarts Garage/Harnett E13181422 J0619-2765 MOD. QUEEN 21 Job Reference (optional) Comtech, Inc., Favetteville NC 28300 8.130 s Mar 11 2018 MiTek Industries, Inc. Tue Jun 18 15:02:25 2019 Page 1 ID:zLCNjAKxVfOewXx01CEUhkz5RyL-4fOZGl9X1d8bb?QG9JleXKCCoYFqYTDS7G9Wkoz50Ei 11-10-4 18-0-0 24-1-12 28-9-1 6-1-12 6-1-12

4x8 =

Scale = 1:82.5

6-3-0

36.0.0

Structural wood sheathing directly applied or 4-2-15 oc purlins.

5-7

Rigid ceiling directly applied or 10-0-0 oc bracing.

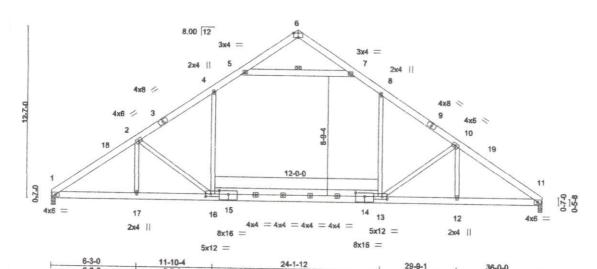


Plate Offsets (X,Y)	[6:0-4-0,Edge], [13:0-4-8,0	5-7- 0-2-4], [14:0-0-	.5 0,0-2-12], [14:0-8-0,0-3-	12-3-8 4], [15:0-0-0,0-2-1	2], [15:0-8-0,0-	5-7-5 3-4], [16:		6-3-0	
LOADING (psf) TCLL 20.0 TCDL 10.0 BCLL 0.0 * BCDL 10.0	SPACING- Plate Grip DOL Lumber DOL Rep Stress Incr Code IRC2015/TPI	2-0-0 1.15 1.15 YES	CSI. TC 0.71 BC 0.85 WB 0.60 Matrix-S	DEFL. Vert(LL) Vert(CT) Horz(CT) Wind(LL)	in (loc) -0,30 13-16 -0.46 13-16 0.07 11 0.25 16-17	l/defi >999 >942 n/a >999	L/d 360 240 n/a 240	PLATES MT20 Weight: 288 lb	GRIP 244/190 FT = 20%

BRACING-

WEBS

TOP CHORD

BOT CHORD

29-9-1

1 Row at midpt

LUMBER-

TOP CHORD 2x6 SP No.1 **BOT CHORD** 2x6 SP No.1 WEBS

2x4 SP No.3 *Except*

5-7: 2x6 SP No.1

REACTIONS. (lb/size) 1=1428/0-3-8, 11=1428/0-3-8

Max Horz 1=-290(LC 8)

Max Uplift 1=-75(LC 12), 11=-75(LC 13) Max Grav 1=1605(LC 19), 11=1605(LC 20)

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

TOP CHORD

1-2=-2530/435, 2-4=-2200/430, 4-5=-1581/432, 7-8=-1582/432, 8-10=-2203/430,

10-11=-2533/435

BOT CHORD WEBS

1-17=-260/2246, 16-17=-260/2246, 13-16=-92/1742, 12-13=-258/2031, 11-12=-258/2031 8-13=-26/838, 10-13=-661/238, 4-16=-26/836, 2-16=-661/234, 5-7=-1848/452

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

2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; enclosed; MWFRS (envelope) and C-C Exterior(2) 0-1-12 to 4-6-9, Interior(1) 4-6-9 to 18-0-0, Exterior(2) 18-0-0 to 22-3-4 zone; 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 30.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members, with BCDL = 10.0psf.

5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 11.



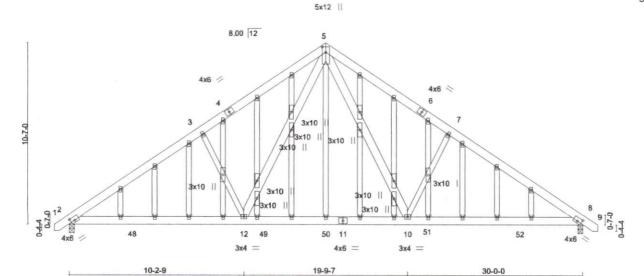
MARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE. MARNING—Verity design parameters and READ NOTES ON THIS AND INCLUDED MITER REFERENCE PAGE MIL-1413 rev. 10/03/2013 BEFORE U.S.C. Design valid for use only with MITek® connectors. 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. Bracking 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 properly damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSITPH Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Piste Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



lenton, NC 27932

Bim Builders/Stewarts Garage/Harnett Job Truss Truss Type Qty E13181423 GABLE J0619-2765 B1 1 Job Reference (optional) 8.130 s Mar 11 2018 MiTek Industries, Inc. Tue Jun 18 15:02:27 2019 Page 1 Fayetteville, NC 28309 Comtech, Inc. ID:zLCNjAKxVfOawXx01CEUhkz5RyL-02WJhRBnYEOJqJaeHkK6clHfFM2j0JLlbaecpgz50Eg 15-0-0 30-0-0 7-9-14 0-10-8 7-2-3 0-10-8

Scale = 1:65.8



[2:0-3-0,0-2-7], [5:0-3-12,0-2-8], [8:0-3-0,0-2-7] Plate Offsets (X,Y)-LOADING (psf) SPACING-2-0-0 CSI. DEFL in (loc) **Vdefi** L/d PLATES GRIP 20.0 Plate Grip DOL TCLL 1.15 TC 0.27 Vert(LL) -0.13 10-12 >999 360 MT20 244/190 TCDL Lumber DOL 10.0 BC 0.38 1.15 Vert(CT) -0.18 10-12 >999 240

9-6-14

BCLL 0.0 Rep Stress Incr WB 0.88 YES Horz(CT) 0.03 8 n/a n/a Code IRC2015/TPI2014 BCDL 10.0 Matrix-S Wind(LL) 0.15 8-10 >999 240

> TOP CHORD S BOT CHORD S

BRACING-

Structural wood sheathing directly applied or 5-7-9 oc purlins.

Weight: 326 lb

FT = 20%

10-2-9

HORD Rigid ceiling directly applied or 7-6-8 oc bracing.

LUMBER-

TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x6 SP No.1 *Except*

3-12.7-10: 2x4 SP No.3

OTHERS 2x4 SP No.3

REACTIONS. (lb/size) 2=1241/0-3-8, 8=1241/0-3-8

Max Horz 2=-314(LC 10)

Max Uplift 2=-254(LC 12), 8=-254(LC 13) Max Grav 2=1241(LC 1), 8=1288(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown. TOP CHORD 2-3=-1757/1285, 3-5=-1591/1387, 5-7=-1663/1387, 7-8=-1808/1285

10-2-9

BOT CHORD 2-12=-924/1371, 10-12=-453/916, 8-10=-919/1383

WEBS 3-12=-504/392, 5-12=-735/741, 5-10=-735/871, 7-10=-504/392

NOTES-

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

- 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) -0-8-12 to 3-8-1, Exterior(2) 3-8-1 to 15-0-0, Corner(3) 15-0-0 to 19-4-13 zone; porch 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 studs spaced at 2-0-0 oc.
- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members, with BCDL = 10.0psf.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=254, 8=254.



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



Truss Type Qty Ply Bim Builders/Stewarts Garage/Harnett Job Truss E13181424 J0619-2765 B2 GABLE 14 Job Reference (optional) 8,130 s Mar 11 2018 MiTek Industries, Inc. Tue Jun 18 15:02:28 2019 Page 1 Comtech, Inc., Favetteville, NC 28309 ID:zLCNjAKxVfOawXx01CEUhkz5RyL-UE4ivnCPJYW9ST8qrRrL8zprHmOvlvZupEOAL7z50Ef 30-0-0 30-10-8 -0-10-8 0-10-8 0-10-8 7-2-3 7-2-2 7-9-14 Scale = 1:65.3 5x5 = 8.00 12 5 4x6 15 4x6 6 2x4 2x4 // 16 0-Z-0 0-Z-0 12 11 10 3x4 = 4x6 = 3x4 = 19-9-7 30-0-0

LOADING (psf) SPACING-2-0-0 CSI TCLL 20.0 Plate Grip DOL 1.15 TC 0.25 TCDL 10.0 Lumber DOL 1.15 BC 0.38 **BCLL** 0.0 Rep Stress Incr YES WB 0.31 BCDL 10.0 Code IRC2015/TPI2014 Matrix-S

Wind(LL)

BRACING-

DEFL

Vert(LL)

Vert(CT)

Horz(CT)

(loc)

8

-0.14 10-12

-0.18 10-12

0.03

0.03 2-12

Vdefl

>999

>999

>999

n/a

TOP CHORD BOT CHORD Structural wood sheathing directly applied or 5-7-3 oc purlins.

PLATES

Weight: 226 lb

MT20

GRIP

244/190

FT = 20%

Rigid ceiling directly applied or 10-0-0 oc bracing.

10-2-9

L/d

360

240

n/a

240

LUMBER-

TOP CHORD 2x6 SP No.1 BOT CHORD 2x6 SP No.1 WEBS 2x6 SP No.1 *Except*

3-12,7-10: 2x4 SP No.3

REACTIONS. (lb/size) 2=1241/0-3-8, 8=1241/0-3-8

Max Horz 2=-251(LC 10)

Max Uplift 2=-75(LC 12), 8=-75(LC 13) Max Grav 2=1298(LC 19), 8=1298(LC 20)

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

TOP CHORD 2-3=-1836/362, 3-5=-1688/453, 5-7=-1688/453, 7-8=-1836/362

BOT CHORD 2-12=-157/1598, 10-12=0/1036, 8-10=-165/1428

WEBS 3-12=-505/297, 5-12=-166/863, 5-10=-166/864, 7-10=-505/297

NOTES-

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

- 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; enclosed; MWFRS (envelope) and C-C Exterior(2) -0-8-12 to 3-8-1, Interior(1) 3-8-1 to 15-0-0, Exterior(2) 15-0-0 to 19-4-13 zone; 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 with a clearance greater than 6-0-0 between the bottom chord and any other members, with BCDL = 10.0psf.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 8.



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

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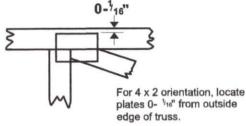
818 Soundside Road Edenton, NC 27932

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.



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

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

PLATE SIZE

4 x 4

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

LATERAL BRACING LOCATION



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

BEARING



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

Industry Standards:

ANSI/TPI1: National Design Specification for Metal

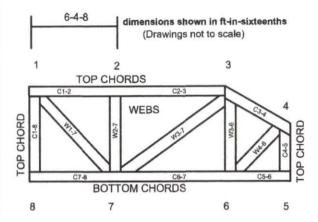
Plate Connected Wood Truss Construction.

DSB-89:

BCSI:

Design Standard for Bracing.
Building Component Safety Information,
Guide to Good Practice for Handling,
Installing & Bracing of Metal Plate
Connected Wood Trusses.

Numbering System



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

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

PRODUCT CODE APPROVALS

ICC-ES Reports:

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

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

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

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MiTek Engineering Reference Sheet: MII-7473 rev. 10/03/2015



General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

- Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
- 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.
- Never exceed the design loading shown and never stack materials on inadequately braced trusses.
- 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.
- Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI 1.
- Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI 1.
- Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
- Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
- Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
- Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
- Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
- Top chords must be sheathed or purlins provided at spacing indicated on design.
- 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.
- Do not cut or alter truss member or plate without prior approval of an engineer.
- 17. Install and load vertically unless indicated otherwise.
- Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
- Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
- Design assumes manufacture in accordance with ANSI/TPI 1 Quality Criteria.



BIM

Project: Address:

HARNETT

Date:

6/18/2019

Page 1 of 2

Designer: Lenny Norris

Job Name: STEWART

J0619-2765 Project #:

Kerto-S LVL

1.750" X 11.875"

2-Ply - PASSED

Level: Level

					ПП	1
	418 Levy	(# - F)	€ Parameter		\bigvee	11
1 SPF End Grain			2 SPF	End Grain	1.1	
	 13'				3 1	/2"
	13'		 			

							*			
Member Inform	Member Information				Reactions UNPATTERNED Ib (Uplift)					
Type:	Girder	Application:	Floor	Brg	Live	Dead	Snow	Wind	Const	
Plies:	2	Design Method:	ASD	1	0	3960	0	0	0	
Moisture Condition	n: Dry	Building Code:	IBC/IRC 2015	2	0	3960	0	0	0	
Deflection LL:	480	Load Sharing:	No							
Deflection TL:	360	Deck:	Not Checked							
Importance:	Normal									
Temperature:	Temp <= 100°F									
				Bearings	5		CONTRACTOR INCOME.			
1				Bearing	Length	Cap. Rea	ct D/L lb	Total Ld. Ca	se Ld. Comb).
				1 - SPF	3.500"	37%	3960 / 0	3960 Uniform	n D	

End Grain 2 - SPF 3.500"

End Grain

Analy	/sis	Resu	lts

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	11979 ft-lb	6'6"	17919 ft-lb	0.668 (67%)	D	Uniform
Unbraced	11979 ft-lb	6'6"	12018 ft-lb	0.997 (100%)	D	Uniform
Shear	3218 lb	1'2 5/8"	7980 lb	0.403 (40%)	D	Uniform
LL Defl inch	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
TL Defl inch	0.380 (L/396)	6'6"	0.418 (L/360)	0.910 (91%)	D	Uniform

Design Notes

- 1 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not
- 2 Refer to last page of calculations for fasteners required for specified loads.
- 3 Girders are designed to be supported on the bottom edge only.
- 4 Top loads must be supported equally by all plies.
- 5 Top must be laterally braced at a maximum of 6'10 1/8" o.c.
- 6 Bottom braced at bearings.
- 7 Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments	
1	Uniform			Тор	600 PLF	0 PLF	0 PLF	0 PLF	0 PLF	GABLE WEIGHT	
	Self Weight				9 PLF						

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design oritins and loadings shown. It is the responsibility of the customer and/or the contractor to ressure the component suitability of the intended application, and to verify the dimensions and loads.

Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

chemicals

- Handling & Installation

 1. LVL beams must not be cut or drilled

 2. Refer to manufacturer's product information regarding installation requirements, multi-oly fastening details, beam strength values, and code approvals

 3. Damaged Beams must not be used

 4. Design assumes top edge is laterally restrained

 5. Provide lateral support at bearing points to avoid lateral displacement and rotation

This design is valid until 12/11/2021

6. For flat roofs provide proper drainage to prevent ponding

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37%

3960 / 0

3960 Uniform

D

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isDesign™

Client:

BIM

Project: Address:

HARNETT

Date:

6/18/2019

Page 2 of 2

Designer: Lenny Norris

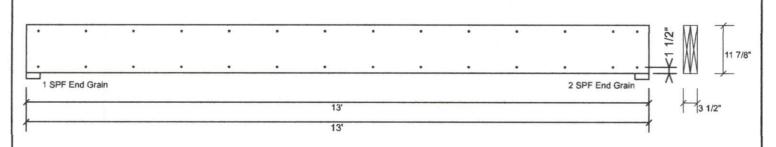
Job Name: STEWART

J0619-2765 Project #:

Kerto-S LVL

1.750" X 11.875"

2-Ply - PASSED Level: Level



Multi-Ply Analysis

Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6"

0.0 % Capacity Load 0.0 PLF Yield Limit per Foot 163.7 PLF Yield Limit per Fastener 81.9 lb. Yield Mode IV Edge Distance 1 1/2" Min. End Distance 3" Load Combination **Duration Factor** 1.00

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

chemicals

Handling & Installation

1. LVL beams must not be cut or drilled

2. Refer to manufacturer's product information regarding installation requirements, multi-opt featening details, beam strength values, and code approvals

3. Damaged Beams must not be used

4. Design assumes top edge is laterally restrained

5. Provide lateral support at bearing points to avoid lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

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Manufacturer Info

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BIM

Project:

Address: HARNETT Date:

Bearings Bearing Length

End Grain 2 - SPF 3.500"

End Grain

1 - SPF 3.500"

6/18/2019

Lenny Norris

Designer: Job Name: STEWART

Project #: J0619-2765

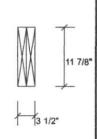
Kerto-S LVL

1.750" X 11.875"

2-Ply - PASSED

Level: Level

**************************				*************			
			1				
						• Survivine Co	- state of
			18 m		The last		
	•	•		- Lawrence		•	
1 SPF End Grain						2 SPF End	d Grain
			10'				



Ld. Comb.

D+S

D+S

Page 1 of 2

Member Inform	nation
Type:	Girder
Plies:	2
Moisture Condition:	Dry
Deflection LL:	480
Deflection TL:	360
Importance:	Normal
Temperature:	Temp <= 100°F

Application:	Floor
Design Method:	ASD
Building Code:	IBC/IRC 2015
Load Sharing:	No
Deck:	Not Checked

Reaction	ons UNPAT	TERNED I	(Uplift)			
Brg	Live	Dead	Snow	Wind	Const	
1	0	2841	2795	0	0	
2	0	2841	2795	0	0	
1						
1						

Total Ld. Case

5636 L

5636 L

Cap. React D/L lb

53% 2841 / 2795

53% 2841 / 2795

0 PLF

ŀ	analysis Results										
	Analysis	Actual	Location	Allowed	Capacity	Comb.	Case				
	Moment	12828 ft-lb	5'	22897 ft-lb	0.560 (56%)	D+S	L				
	Unbraced	12828 ft-lb	5'	12856 ft-lb	0.998 (100%)	D+S	L				
	Shear	4262 lb	1'2 5/8"	10197 lb	0.418 (42%)	D+S	L				
	LL Defl inch	0.124 (L/921)	5'	0.239 (L/480)	0,520 (52%)	S	L				
	TL Defl inch	0.251 (L/457)	5'	0.318 (L/360)	0.790 (79%)	D+S	L				

Design Notes

- 1 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 2 Refer to last page of calculations for fasteners required for specified loads.
- 3 Girders are designed to be supported on the bottom edge only.
- 4 Top loads must be supported equally by all plies.

Uniform

Self Weight

5 Top must be laterally braced at a maximum of 6'7 1/2" o.c.										
6 Bottom braced at bearings.										
7 Lateral slenderness ratio based on single ply width.										
ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Тор	395 PLF	0 PLF	395 PLF	0 PLF	0 PLF	A2 TRUSS

Top

Notes

2

Calcustated Structured Designs is responsible only of the structural adequacy of this component based on the design oritins and loadings shown. It is the responsibility of the customer and/or the contractor to ressure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

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- Handling & Installation

 1. LVL beams must not be out or drilled

 2. Refer to manufacturer's product information regarding installation requirements, multi-oply fastering details, beam strength values, and code approvats

 3. Damaged Beams must not be used

 4. Design assumes top edge is laterally restrained

 5. Provide lateral support at bearing points to avoid lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

164 PLF

9 PLF

0 PLF

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This design is valid until 12/11/2021

Manufacturer Info

164 PLF

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OPLE MONO







BIM

Project: Address:

Date:

6/18/2019

Page 2 of 2

Designer: Lenny Norris

Job Name: STEWART

Project #: J0619-2765

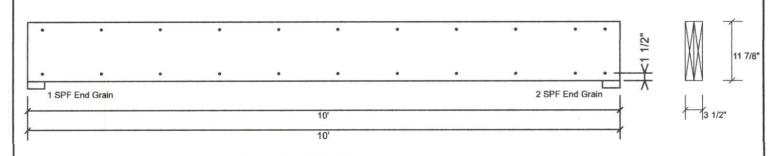
Kerto-S LVL

1.750" X 11.875"

HARNETT

2-Ply - PASSED

Level: Level



Multi-Ply Analysis

Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6"

Capacity 0.0 PLF Load Yield Limit per Foot 163.7 PLF Yield Limit per Fastener 81.9 lb. Yield Mode IV Edge Distance 1 1/2" Min. End Distance 3" Load Combination 1.00 **Duration Factor**

Notes

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chemicals

Handling & Installation

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