



Client

Address

Project Name:

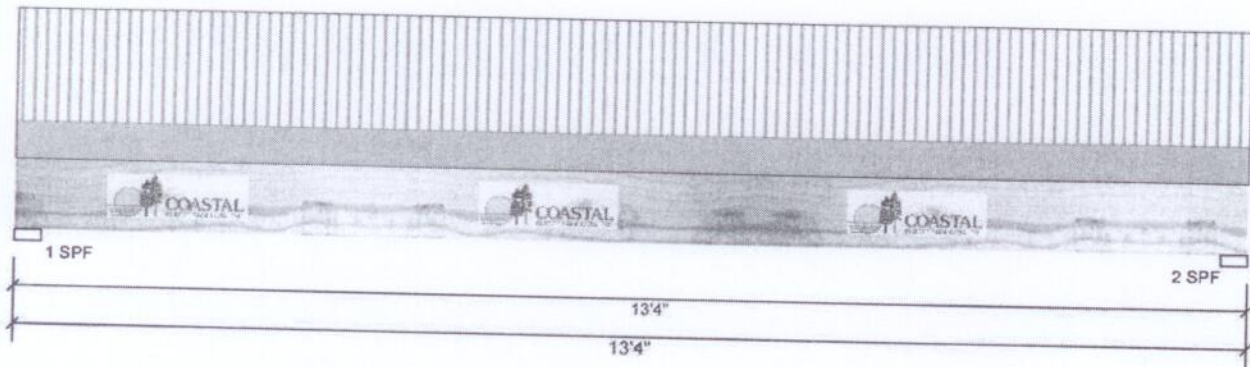
Job#:

Quantity 1 (3pcs.)

Description:

HILLSIDE 2.0E CP-LAM 1.75" X 9.5" 3-Ply

5/16/2012 8:12 AM
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Type: Girder
 Piles: 3
 Moisture Condition: Dry
 Deflection LL: 360
 Deflection TL: 240
 Importance: Normal
 Temperature: Temp <= 100°F

Application: Floor
 Design Method: ASD
 Building Code: IBC/IRC
 Load Sharing: Yes
 Deck: Not Checked
 Vibration: Not Checked

Reactions

Brg	Live	Dead	Snow	Wind	Const
1	2515	922	0	0	0
2	2515	922	0	0	0

Bearings

Bearing	Input Length	In Analysis	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	1.750"	88%	922 / 2515	3436	L	D+L
2 - SPF	3.500"	1.750"	88%	922 / 2515	3436	L	D+L

Analysis	Actual	Location	Allowed	Capacity	Load Comb.	Ld. Case
Moment	11079 ft-lb	6'5 3/8"	21863 ft-lb	0.507 (51%)	D+L	L
Shear	3015 lb	12'3 7/8"	9476.3 lb	0.318 (32%)	D+L	L
LL Defl inch	0.323 (L/478)	6'8"	0.430 (L/360)	0.750 (75%)	L	L
TL Defl inch	0.442 (L/350)	6'8"	0.645 (L/240)	0.690 (69%)	D+L	L

Design OK.

Design Notes

- Girders are designed to be supported on the bottom edge only.
- Multiple plies must be fastened together as per manufacturer's details.
- Top loads must be supported equally by all plies.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Const.	Comments
1	Uniform Self Weight		13-0-0	Top	10 PSF 12.95 PLF	30 PSF	0 PSF	0 PSF	0 PSF	

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

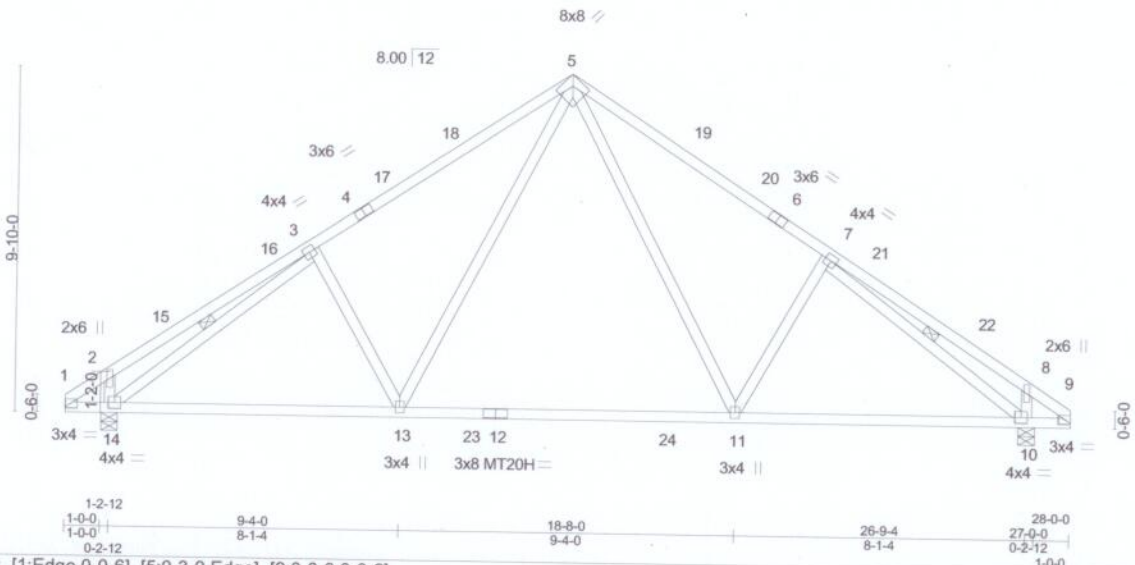
corrosive chemicals

Handling & Installation

- LVL beams must not be cut or drilled
- Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
- 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

Job 637700	Truss 001	Truss Type FINK	Qty 13	Ply 1	HILLSIDE, ANDERSON, 5-11-2012, BRYAN
Boise Structural Solutions, Biddeford, ME 04005					A_PMT_E125954_5/7/2012 12:49:00 PM
7-340 s Feb 24 2012 MiTek Industries, Inc. Mon May 07 14:02:30 2012 Page 1					Job Reference (optional)
1-2-12 6-10-8 14-0-0 21-1-9 26-9-4 28-0-0					ID:ugv0IAaU?SITE=MiTekMqsRL9kzvowg-Xp7x_ZaWzwyIPuQdeg6ewknT3tODIk?oMwnal4zltbx7
1-2-12 5-7-12 7-1-9 7-1-9 5-7-12 1-2-12					



Scale = 1:61.8

Plate Offsets (X,Y): [1:Edge,0-0-6], [5:0-3-0,Edge], [9:0-0-0,0-0-6]

LOADING (psf)	SPACING	CSI	DEFL	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 46.2 (Ground Snow=60.0)	2-0-0 Plates Increase 1.15 Lumber Increase 1.15 Rep Stress Incr YES Code IBC2009/TPI2007	TC 0.92 BC 0.80 WB 0.66 (Matrix)	Vert(LL) -0.44 11-13 Vert(TL) -0.66 11-13 Horz(TL) 0.07 10	>699	240	180	MT20 MT20H	169/123 148/108
TCDL 10.0								
BCLL 0.0 *								
BCDL 10.0								
							Weight: 119 lb	FT = 0%

LUMBER
TOP CHORD 2x4 SPF 2100F 1.8E *Except*
 T1,T4: 2x4 SPF 1650F 1.5E
BOT CHORD 2x4 SPF 1650F 1.5E
WEBS 2x4 SPF-S No.2 *Except*
 W5,W4: 2x4 SPF 1650F 1.5E

BRACING
TOP CHORD
BOT CHORD
WEBS

Structural wood sheathing directly applied or 2-2-0 oc purlins.
 Rigid ceiling directly applied or 10-0-0 oc bracing.
 1 Row at midpt 3-14, 7-10

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

REACTIONS (lb/size) 14=1963/0-5-8 (min. 0-3-1), 10=1963/0-5-8 (min. 0-3-1)
 Max Horz 14=-569(LC 6)
 Max Uplift 14=-620(LC 8), 10=-620(LC 9)

FORCES (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-15=-461/325, 15-16=-232/331, 3-16=-207/350, 3-4=-2118/778, 4-17=-1974/788,
 17-18=-1909/796, 5-18=-1761/821, 5-19=-1761/821, 19-20=-1909/796, 6-20=-1974/788,
 6-7=-2118/778, 7-21=-207/350, 21-22=-232/331, 8-22=-461/325
BOT CHORD 13-14=-494/1759, 13-23=-181/1282, 12-23=-181/1282, 12-24=-181/1282,
 11-24=-181/1282, 10-11=-372/1759
WEBS 5-11=-276/814, 7-11=-482/404, 5-13=-276/814, 3-13=-482/404, 3-14=-2015/498,
 7-10=-2015/498, 2-14=-599/556, 8-10=-599/556

NOTES (9)

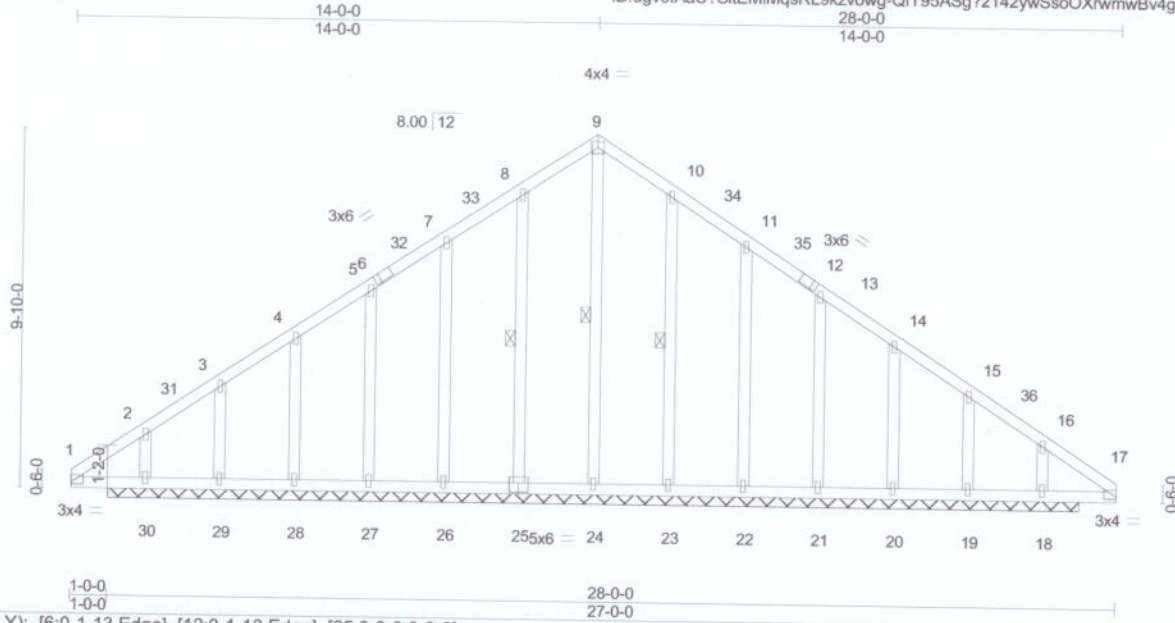
- 1) Wind: ASCE 7-05; 120mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Cat. II; Exp C; enclosed; MWFRS (low-rise) gable end zone and C-C Exterior(2) 0-0-0 to 3-0-0, Interior(1) 3-0-0 to 11-0-0, Exterior(2) 11-0-0 to 14-0-0, Interior(1) 17-0-0 to 25-0-0 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCLL: ASCE 7-05; Pg= 60.0 psf (ground snow); Pf=46.2 psf (flat roof snow); Category II; Exp C; Partially Exp.; Ct=1.1
- 3) Unbalanced snow loads have been considered for this design.
- 4) All plates are MT20 plates unless otherwise indicated.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 14=620, 10=620.
- 8) This truss is designed in accordance with the 2009 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
- 9) Drawing prepared exclusively for manufacturing by Boise Structural Solutions

LOAD CASE(S) Standard

Job 637700	Truss 002	Truss Type GESI	Qty 2	Ply 1	HILLSIDE, ANDERSON, 5-11-2012, BRYAN A_MGE_E125954_5/7/2012 12:49:00 PM Job Reference (optional)
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Boise Structural Solutions, Biddeford, ME 04005

7.340 s Feb 24 2012 MiTek Industries, Inc. Mon May 07 14:03:42 2012 Page 1
ID:ugv0IAaU?SitEMiMqsRL9kzvowg-QfT95ASg?2142ywSsoOXrnmwBv4g9N?Pw7DOHvzltw?



Scale = 1:59.4

Plate Offsets (X,Y): [6:0-1-13,Edge], [12:0-1-13,Edge], [25:0-3-0,0-3-0]

LOADING (psf)	SPACING	CSI	DEFL	PLATES	GRIP
TCLL 46.2 (Ground Snow=60.0)	Plates Increase 1.15 Lumber Increase 1.15	TC 0.26 BC 0.31 WB 0.33 (Matrix)	in (loc) l/defl L/d Vert(LL) n/a - n/a 999 Vert(TL) n/a - n/a 999 Horz(TL) 0.01 18 n/a n/a	MT20	169/123
TCDL 10.0	Rep Stress Incr YES				
BCLL 0.0 *	Code IBC2009/TPI2007				
BCDL 10.0				Weight: 128 lb	FT = 0%

LUMBER
TOP CHORD 2x4 SPF-S No.2
BOT CHORD 2x4 SPF 1650F 1.5E
OTHERS 2x4 SPF-S No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 8-6-11 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 9-24, 8-25, 10-23

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

REACTIONS All bearings 26-0-0.
(lb) - Max Horz 30=-569(LC 6)
Max Uplift All uplift 100 lb or less at joint(s) 23 except 25=-100(LC 7), 26=-126(LC 9), 27=-124(LC 7), 28=-129(LC 8), 29=-414(LC 7), 30=-293(LC 6), 22=-126(LC 8), 21=-123(LC 6), 20=-130(LC 9), 19=-388(LC 6), 18=-258(LC 7)
Max Grav All reactions 250 lb or less at joint(s) except 24=447(LC 9), 25=394(LC 2), 26=355(LC 2), 27=267(LC 2), 28=283(LC 2), 29=341(LC 6), 30=408(LC 2), 23=394(LC 3), 22=355(LC 3), 21=267(LC 3), 20=283(LC 3), 19=315(LC 7), 18=408(LC 3)

FORCES (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-321/297, 2-31=-307/342, 3-31=-301/354, 3-4=-161/287, 4-5=-90/290, 5-6=-2/330, 6-32=0/335, 7-32=0/342, 7-33=0/446, 8-33=0/452, 8-9=-6/547, 9-10=-6/547, 10-34=0/452, 11-34=0/446, 11-35=0/342, 12-35=0/335, 12-13=0/330, 13-14=-63/264, 14-15=-135/263, 15-36=-270/323, 16-36=-277/311, 16-17=-298/274
BOT CHORD 1-30=-267/325, 29-30=-245/303, 28-29=-245/303, 27-28=-245/303, 26-27=-245/303, 25-26=-245/303, 24-25=-245/303, 23-24=-245/303, 22-23=-245/303, 21-22=-245/303, 20-21=-245/303, 19-20=-245/303, 18-19=-245/303, 17-18=-245/303
WEBS 9-24=-430/0, 8-25=-354/146, 7-26=-314/175, 2-30=-280/188, 10-23=-354/146, 11-22=-314/175, 16-18=-280/189

- NOTES** (12)
- 1) Wind: ASCE 7-05; 120mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Cat. II; Exp C; enclosed; MWFRS (low-rise) gable end zone and C-C Exterior(2) 0-0-0 to 3-0-0, Interior(1) 3-0-0 to 11-0-0, Exterior(2) 11-0-0 to 14-0-0, Interior(1) 17-0-0 to 25-0-0 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
 - 3) TCLL: ASCE 7-05; Pg= 60.0 psf (ground snow); Pf=46.2 psf (flat roof snow); Category II; Exp C; Partially Exp.; Ct=1.1
 - 4) Unbalanced snow loads have been considered for this design.
 - 5) All plates are 1.5x4 MT20 unless otherwise indicated.
 - 6) Gable studs spaced at 2-0-0 oc.
 - 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - 8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.

Continued on page 2

Job 637700	Truss 002	Truss Type GESI	Qty 2	Ply 1	HILLSIDE, ANDERSON, 5-11-2012, BRYAN A_MGE_E125954_5/7/2012 12:49:00 PM Job Reference (optional)
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Boise Structural Solutions, Biddeford, ME 04005

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NOTES (12)

- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 23 except (jt=lb) 25=100, 26=126, 27=124, 28=129, 29=414, 30=293, 22=126, 21=123, 20=130, 19=388, 18=258.
- 10) Non Standard bearing condition. Review required.
- 11) This truss is designed in accordance with the 2009 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
- 12) Drawing prepared exclusively for manufacturing by Boise Structural Solutions

LOAD CASE(S) Standard