



How To Read A Typical Alpine Component Drawing

Job Number: -Q10072 STD Loads Test Truss Label: Main Standard-2		Ply: 1 Qty: 1 Wgt: 253.3 lbs	SEQN: 3585 / T26 / COMN FROM:	DRW: ... / ... 02/09/17
---	--	------------------------------------	----------------------------------	-------------------------------

M 10'0" 10'6"

R 10'6"

S 38'

Loading Criteria (psf) TCLL: 50.00 TCDL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 70.00 NCBCLL: 0.00 Soffit: 2.00 Load Duration: 1.15 Spacing: 24.0 *	Wind Criteria Wind Std: ASCE 7-10 Speed: 115 mph Enclosure: Closed Risk Category: II EXP: C Mean Height: 15.00 ft TCDL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: 0 to h/2 C&C Dist a: 3.80 ft Loc. from endwall: Any GCpc: 0.18 Wind Duration: 1.33	Snow Criteria (Pg, Pf in PSF) Pg: 50.0 Ct: 1.1 CAT: II Pf: 38.5 Ce: 1.0 Lu: - Cs: used Snow Duration: 1.15 Code / Misc Criteria Bldg Code: IBC 2015 TPI Std: 2014 Rep Factors Used: Yes FT/RT: 20(0)/10(0) Plate Type(s): WAVE	Defl/CSI Criteria PP Deflection in loc L/defl L/# VERT(LL): 0.226 P 999 240 VERT(TL): 0.415 P 999 240 HORZ(LL): 0.111 L - - HORZ(TL): 0.157 L - - Creep Factor: 2.0 Max TC CSI: 0.727 Max BC CSI: 0.833 Max Web CSI: 0.835 Mfg Specified Camber: VIEW Ver: 18.00.00.0131.19	Maximum Reactions (lbs) <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Loc</th> <th>R</th> <th>/U</th> <th>/Rw</th> <th>/Rh</th> <th>/RL</th> <th>/W</th> </tr> </thead> <tbody> <tr> <td>B</td> <td>2580</td> <td>/121</td> <td>/877</td> <td>-</td> <td>/219</td> <td>/5.3</td> </tr> <tr> <td>L</td> <td>3083</td> <td>/128</td> <td>/1073</td> <td>-</td> <td>-</td> <td>/5.3</td> </tr> </tbody> </table> <p>Wind reactions based on MWFRS B Min Brg Width Req = 4.0 L Min Brg Width Req = 4.5 Bearings B & L are a rigid surface.</p> Maximum Top Chord Forces Per Ply (lbs) <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Chords</th> <th>Tens.</th> <th>Comp.</th> <th>Chords</th> <th>Tens.</th> <th>Comp.</th> </tr> </thead> <tbody> <tr> <td>A - B</td> <td>57</td> <td>0</td> <td>F - G</td> <td>554</td> <td>-2476</td> </tr> <tr> <td>B - C</td> <td>724</td> <td>-4375</td> <td>G - H</td> <td>534</td> <td>-2592</td> </tr> <tr> <td>C - D</td> <td>658</td> <td>-3540</td> <td>H - I</td> <td>552</td> <td>-3014</td> </tr> <tr> <td>D - E</td> <td>564</td> <td>-2596</td> <td>I - J</td> <td>1168</td> <td>-383</td> </tr> <tr> <td>E - F</td> <td>584</td> <td>-2480</td> <td>J - K</td> <td>53</td> <td>0</td> </tr> </tbody> </table> Maximum Bot Chord Forces Per Ply (lbs) <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Chords</th> <th>Tens.</th> <th>Comp.</th> <th>Chords</th> <th>Tens.</th> <th>Comp.</th> </tr> </thead> <tbody> <tr> <td>B - Q</td> <td>3740</td> <td>-516</td> <td>N - M</td> <td>2022</td> <td>-268</td> </tr> <tr> <td>Q - P</td> <td>3739</td> <td>-516</td> <td>M - L</td> <td>2020</td> <td>-268</td> </tr> <tr> <td>P - O</td> <td>3009</td> <td>-339</td> <td>L - J</td> <td>439</td> <td>-857</td> </tr> <tr> <td>O - N</td> <td>2534</td> <td>-293</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> Maximum Web Forces Per Ply (lbs) <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Webs</th> <th>Tens.</th> <th>Comp.</th> <th>Webs</th> <th>Tens.</th> <th>Comp.</th> </tr> </thead> <tbody> <tr> <td>Q - C</td> <td>154</td> <td>0</td> <td>O - H</td> <td>178</td> <td>-551</td> </tr> <tr> <td>C - P</td> <td>203</td> <td>-829</td> <td>H - N</td> <td>137</td> <td>-152</td> </tr> <tr> <td>P - D</td> <td>554</td> <td>-75</td> <td>N - I</td> <td>582</td> <td>-74</td> </tr> <tr> <td>D - O</td> <td>279</td> <td>-1229</td> <td>M - I</td> <td>133</td> <td>0</td> </tr> <tr> <td>F - O</td> <td>1414</td> <td>-280</td> <td>I - L</td> <td>826</td> <td>-4099</td> </tr> </tbody> </table>	Loc	R	/U	/Rw	/Rh	/RL	/W	B	2580	/121	/877	-	/219	/5.3	L	3083	/128	/1073	-	-	/5.3	Chords	Tens.	Comp.	Chords	Tens.	Comp.	A - B	57	0	F - G	554	-2476	B - C	724	-4375	G - H	534	-2592	C - D	658	-3540	H - I	552	-3014	D - E	564	-2596	I - J	1168	-383	E - F	584	-2480	J - K	53	0	Chords	Tens.	Comp.	Chords	Tens.	Comp.	B - Q	3740	-516	N - M	2022	-268	Q - P	3739	-516	M - L	2020	-268	P - O	3009	-339	L - J	439	-857	O - N	2534	-293				Webs	Tens.	Comp.	Webs	Tens.	Comp.	Q - C	154	0	O - H	178	-551	C - P	203	-829	H - N	137	-152	P - D	554	-75	N - I	582	-74	D - O	279	-1229	M - I	133	0	F - O	1414	-280	I - L	826	-4099
Loc	R	/U	/Rw	/Rh	/RL	/W																																																																																																																									
B	2580	/121	/877	-	/219	/5.3																																																																																																																									
L	3083	/128	/1073	-	-	/5.3																																																																																																																									
Chords	Tens.	Comp.	Chords	Tens.	Comp.																																																																																																																										
A - B	57	0	F - G	554	-2476																																																																																																																										
B - C	724	-4375	G - H	534	-2592																																																																																																																										
C - D	658	-3540	H - I	552	-3014																																																																																																																										
D - E	564	-2596	I - J	1168	-383																																																																																																																										
E - F	584	-2480	J - K	53	0																																																																																																																										
Chords	Tens.	Comp.	Chords	Tens.	Comp.																																																																																																																										
B - Q	3740	-516	N - M	2022	-268																																																																																																																										
Q - P	3739	-516	M - L	2020	-268																																																																																																																										
P - O	3009	-339	L - J	439	-857																																																																																																																										
O - N	2534	-293																																																																																																																													
Webs	Tens.	Comp.	Webs	Tens.	Comp.																																																																																																																										
Q - C	154	0	O - H	178	-551																																																																																																																										
C - P	203	-829	H - N	137	-152																																																																																																																										
P - D	554	-75	N - I	582	-74																																																																																																																										
D - O	279	-1229	M - I	133	0																																																																																																																										
F - O	1414	-280	I - L	826	-4099																																																																																																																										

Lumber
 Top chord 2x6 SPF #1/#2
 Bot chord 2x4 SPF 1650f-1.5E :B2 2x4 SPF #1/#2:
 Webs 2x4 SPF Stud :W10 2x6 SPF Stud:
 :L1 Wedge 2x4 SPF Stud:

Bracing
 (a) Continuous lateral restraint equally spaced on member.
 (b) #3 or better scab reinforcement. Same size & 80% length of web member. Attach with 10d Box or Gun (0.128"x3".min.nails @ 6" oc.

Plating Notes
 (I) - plates so marked were sized using 0% Fabrication Tolerance, 0 degrees Rotational Tolerance, and/or zero Positioning Tolerance.

Loading
 Truss designed for unbalanced snow loads.

Wind
 Wind loads based on MWFRS with additional C&C member design.
 Right cantilever is exposed to wind

****WARNING** READ AND FOLLOW ALL NOTES ON THIS DRAWING!**
****IMPORTANT** FURNISH THIS DRAWING TO ALL CONTRACTORS INCLUDING THE INSTALLERS**
 Trusses require extreme care in fabricating, handling, shipping, installing and bracing. Refer to and follow the latest edition of BCSI (Building Component Safety Information, by TPI and SBCA) for safety practices prior to performing these functions. Installers shall provide temporary bracing per BCSI. Unless noted otherwise, top chord shall have properly attached structural sheathing and bottom chord shall have a properly attached rigid ceiling. Locations shown for permanent lateral restraint of webs shall have bracing installed per BCSI sections B3, B7, or B10, as applicable. Apply plates to each face of truss and position as shown above and on the Joint Details, unless noted otherwise. Refer to drawings 160A-2 for standard plate positions.

Alpine, a division of ITW Building Components Group Inc. shall not be responsible for any deviation from this drawing, any failure to build the truss in conformance with ANSI/TPI 1, or for handling, shipping, installation and bracing of trusses. **A seal on this drawing or cover page listing this drawing, indicates acceptance of professional engineering responsibility solely for the design shown. The suitability and use of this drawing for any structure is the responsibility of the Building Designer per ANSI/TPI 1 Sec.2.**

For more information see this job's general notes page and these web sites: ALPINE: www.alpineitw.com; TPI: www.tpinet.org; SBCA: www.sbcindustry.com; ICC: www.iccsafe.org



A) Loading Criteria

Top & Bottom Chord live and dead loads. Non-concurrent Bottom Chord Live Load (NCBLL). Soffit Load. Load Duration Factor (an adjustment of allowable design values of lumber & fasteners). On-center component spacing.

B) Wind Criteria

Includes the ASCE Wind Load Standard. Wind Design Speed (mph), Building Type (Closed, Open, Partially Enclosed). Building Usage Risk Category. Mean Height of roof. TCDL (Roof dead load). BCDL (Ceiling dead load used in wind analysis). Wind Load pressure Analysis - Main Wind Force Resisting System (MWFRS) and Components & Cladding (C&C). Load Duration Factor used for wind load cases.

C) Snow Criteria

Ground Snow Load (P_g) varies by location - refer to ASCE GSL map. Thermal Factor (C_t) of the building. Exposure Factor (C_e) from ground surface, vegetation & constructed features. Category (CAT) or Importance Factor based on occupancy. Snow Duration Factor used solely for snow load cases.

D) Code / Misc. Criteria

Building Code & Truss Plate Institute (TPI) Standard used in the component design. Repetitive Factors or Load Sharing. Fabrication (FT) and Rotation Tolerances (RT) and Max. (#) indicates override values. Plate type(s) used in iDesign.

E) Deflection / CSI Criteria

Panel Point (PP) Deflection for the absolute maximum vertical deflection distance, the span/deflection ratio & the limits used for the design. Dead Load Creep Factor used in the component analysis. Maximum CSI (Combined Stress Index = combined maximum axial & bending stress with associated component type) acting on a member. Camber applied by manufacturer to the component design.

F) Maximum Reactions

- **R** = Maximum vertical reaction from a gravity load case.
- **U** = Maximum uplift reaction from a wind load case.
- **R_w** = Maximum downward reaction from a non-gravity load case (e.g. Wind or Drag load).
- **R_h** = Maximum horizontal reaction from a gravity load case.
- **RL** = Maximum horizontal reaction from a non-gravity load case (e.g. Wind or Drag load).
- **W** = Bearing Width.

G) Maximum Top Chord Forces per Ply (lbs.)

Maximum Tension and Compression forces for each top chord member, where member forces exceed 375 lbs.

H) Maximum Bottom Chord Forces per Ply (lbs.)

Maximum Tension and Compression forces for each bottom chord member, where member forces exceed 375 lbs.



- I) Maximum Web Forces per Ply (lbs.)**
Maximum Tension and Compression forces for each web member, where member forces exceed 375 lbs.
- J) Lumber**
Size, Species, and Grade for each member used in the analysis.
- K) Bracing**
Web bracing requirements are noted and referenced by a letter in parenthesis on the component drawing.
- L) Loading & Wind Notes**
Loading notes indicating additional loading conditions analyzed for the truss, including unbalanced loads, non-concurrent loads, drag loads, mechanical loads, etc.
- M) Heel Height**
The vertical measurement of the component from the bottom of the bottom chord to the top of the top chord at the outside edge of the heel.
- N) Member Label**
The member number (e.g. T# = Top Chord, B# = Bottom Chord, W# = Web) as specified by the member label in the Lumber note (refer to item **J** above).
- O) Joint Label**
All joints of the component are identified by a unique letter.
- P) Connector Plate**
Size and orientation of connector plate. Orientation indicates direction of slots on connector.
- Q) Slope**
The vertical rise in inches for every 12 inches of horizontal run.
- R) Overall Component Height**
The vertical dimension including the overhang of the component.
- S) Component Span & Panel Dimensions**
Horizontal measurements that provide both panel point dimensions and the running total of component span based on out-to-out dimensions of the top and bottom chord of the component.
- T) Engineers Seal**
Seal of the registered professional responsible for the design.
- U) Panel Splice**
The location within top chord and/or bottom chord panels where two chord members are joined together by a connector plate.