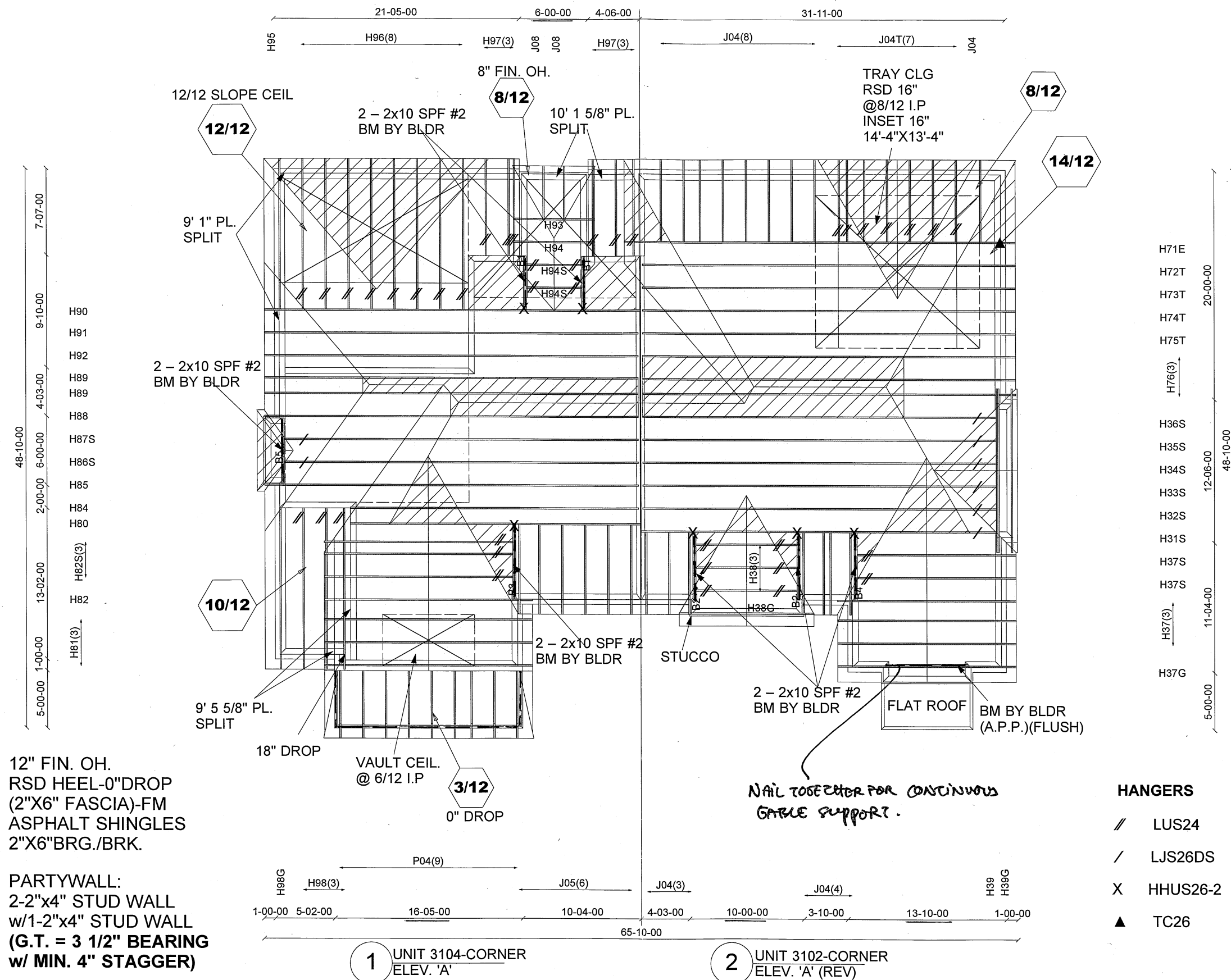




E21103967 - E21103972
 E21103977 - E21103985
 E21104028 - E21104030
 E21104078 - E21104080
 E21104082 - E21104083
 E21104086 - E21104098
 E21104137 - E21104153
 E21104141 - E21104142
 E21104157 - E21104163

PL: 111206(TYP.), 114170E

ALL CONVENTIONAL FRAMING TO CONFORM WITH PART 9 O.B.C. LATEST EDITION. ROOF RAFTERS THAT CROSS OVER TRUSSES TO BE 2X4 SPF #2 @ 24" O.C WITH A VERT. POST TO THE TRUSS UNDERNEATH AT EACH CROSS POINT. VERT. POSTS LONGER THAN 6' TO HAVE LATERAL BRACING SO THAT THE DISTANCE BETWEEN END POINTS & BETWEEN ROWS OF BRACING DOES NOT EXCEED 6'

Mitek V. 8.2.0

CONVEN
FRAMING
OTHERS



Job Track: **45147**
 Layout ID: **336332**
 Plan Log: **113188**

Builder / Location:
GOLD PARK HOMES / VAUGHAN
 Project: **PINE VALLEY**
 Date: **9/28/2021**

Designer: **JBURROWS/C**

Model / Elevation:
BLOCK 12 / UNIT 1-2

THESE DRAWINGS CONSTITUTE THE PROPERTY OF ALPA ROOF TRUSSES INC., SHALL NOT BE REPRODUCED, PUBLISHED, OR REDISTRIBUTED IN ANY MANNER OR UTILIZED FOR ANY PURPOSE OTHER THAN THE MANUFACTURE OF TRUSSES BY ALPA ROOF TRUSSES INC AND WILL BE RETRACTED BY ALPA ROOF TRUSSES INC IF UTILIZED FOR ANY OTHER PURPOSE.

EWP DESIGN INC.

(905) 832-2250

FAX (905) 832-0286

RESPONSIBILITIES AND SPECIFICATIONS

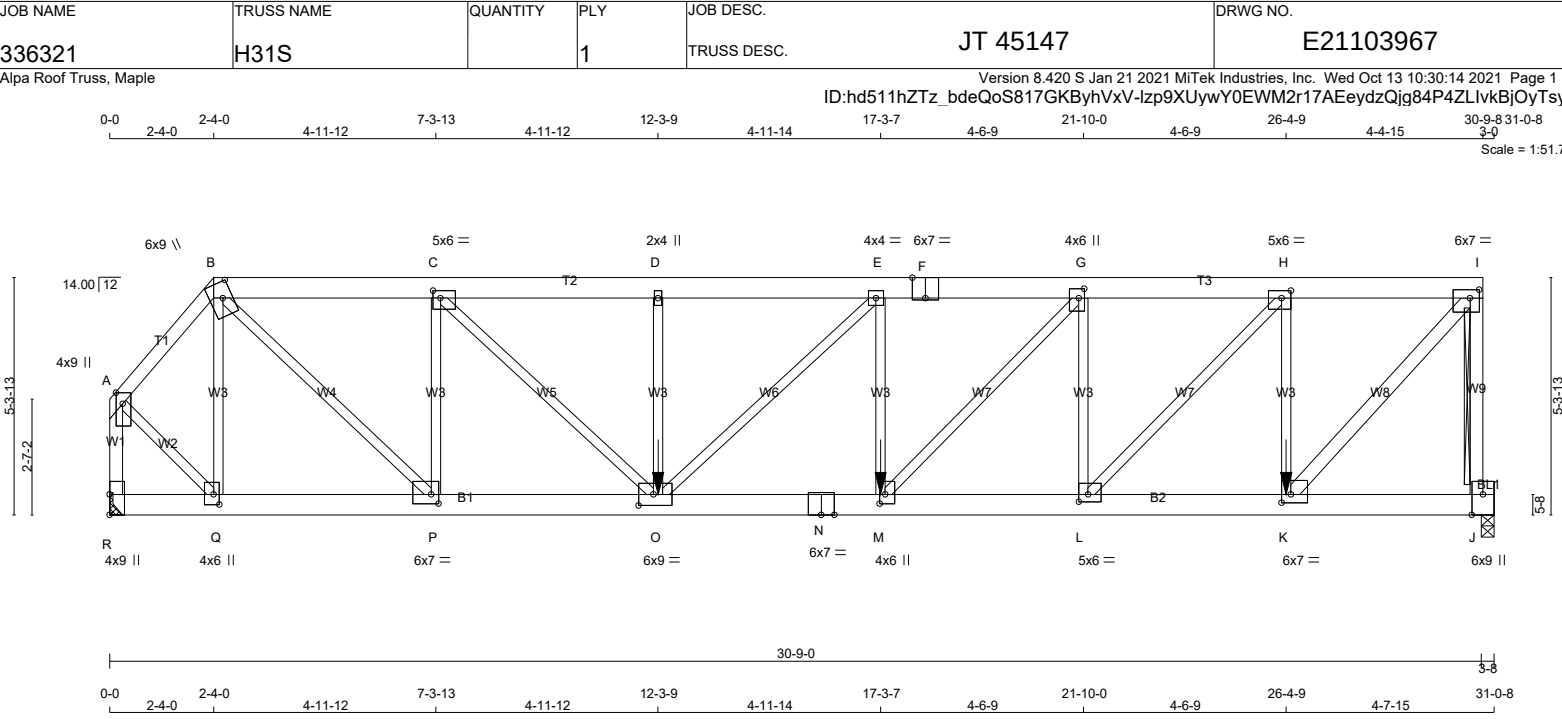
RESPONSIBILITIES

1. EWP DESIGN INC. is responsible for the design of trusses as individual components.
2. It is the responsibility of others to ascertain that the design loads utilized on each drawing meet or exceed the actual dead load imposed by the structure, the live load imposed by the intended use and the snow load imposed by local building code or authorities with jurisdictions.
3. All dimensions are to be verified by the owner, contractor, architect or other authorities with jurisdictions before truss fabrication.
4. EWP DESIGN INC. bears no responsibility for the erection of trusses. Persons erecting trusses are cautioned to seek professional advice regarding the temporary and permanent bracing for the system. Bracing shown on EWP DESIGN INC. drawing is specified for the truss as a component only and forms an integral part of the truss design.
5. It is the truss manufacturer's responsibility to ensure that trusses are manufactured in conformance with specifications of EWP DESIGN INC. as outlined below.

SPECIFICATIONS

1. Trusses designed by EWP DESIGN INC. conform to the relevant section of the Ontario Building Code of Canada (Part 9 or Part 4) or to the Canadian code for farm buildings, whichever applies to the building type, as indicated on the EWP DESIGN INC. drawings, and conform to the design procedures established by the Truss Plate Institute of Canada. Unit stresses used for truss designs are as per the edition of CSA-O86 shown on EWP DESIGN INC. drawings.
2. Lumber is to be the size, species and grade as specified on EWP DESIGN INC. drawings.
3. Moisture content of lumber shall not exceed 19% in service unless specified otherwise.
4. Metal connector plates shall be applied to both faces of truss at each joint and shall be positioned as specified.
5. Top chords of trusses are assumed to be continuously braced laterally by roof sheathing or by purlins at intervals not exceeding 12.5 times the thickness of top chord member.
6. Bottom chords shall be laterally braced at intervals not exceeding 3M (10') o.c., where rigid ceiling is not applied directly to the underside of chords.

THESE DRAWINGS CONSTITUTE THE PROPERTY OF EWP DESIGN INC., SHALL NOT BE REPRODUCED, PUBLISHED, OR REDISTRIBUTED IN ANY MANNER OR UTILIZED FOR ANY PURPOSE OTHER THAN THE MANUFACTURE OF TRUSSES BY THE ALPA LUMBER GROUP, AND WILL BE RETRACTED BY EWP DESIGN INC. IF UTILIZED FOR ANY OTHER PURPOSE.



LUMBER			
N. L. G. A. RULES			
CHORDS	SIZE	LUMBER	DESCR.
A - B	2x4	DRY	No.2
A - F	2x6	DRY	No.2
F - I	2x6	DRY	No.2
J - I	2x4	DRY	No.2
R - A	2x4	DRY	No.2
R - N	2x6	DRY	No.2
N - J	2x6	DRY	No.2
BEARING BLOCKS			
BL1	2x4	DRY	No.2
ALL WEBS EXCEPT			
K - I	2x4	DRY	No.2
DRY: SEASONED LUMBER.			

PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y X
A	TMVW+p	MT20	4.0	9.0	3.00 1.75
B	TTWW+m	MT20	6.0	9.0	4.25 2.50
C	TMWW-t	MT20	5.0	6.0	2.00 2.00
D	TMW+w	MT20	2.0	4.0	
E	TMWW-t	MT20	4.0	4.0	
F	TS-t	MT20	6.0	7.0	Edge 3.50
G	TMWW+t	MT20	4.0	6.0	2.50 1.50
H	TMWW-t	MT20	5.0	6.0	2.00 2.50
I	TMVW-t	MT20	6.0	7.0	2.25 2.50
J	BMVK1+t	MT20	6.0	9.0	Edge 3.00
K	BMWW-t	MT20	6.0	7.0	2.25 2.50
L	BMWW-t	MT20	5.0	6.0	2.00 2.50
M	BMWW+t	MT20	4.0	6.0	2.50 1.50
N	BS-t	MT20	6.0	7.0	
O	BMWWW-t	MT20	6.0	9.0	3.00 4.00
P	BMWW-t	MT20	6.0	7.0	2.50 2.00
Q	BMWW+t	MT20	4.0	6.0	2.75 1.50
R	BMV1+t	MT20	4.0	9.0	5.50

Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2



DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER

FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT		REQRD	
JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX
J	3614	0	3614	0	0	3-8	3-8
R	2817	0	2817	0	0	MECHANICAL	

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT R. MINIMUM BEARING LENGTH AT JOINT R = 3-8.

UNFACTORED REACTIONS

1ST LCASE	MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD
J	2577	1575 / 0	0 / 0	0 / 0	0 / 0	1002 / 0
R	2008	1225 / 0	0 / 0	0 / 0	0 / 0	783 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) J
BEARING SIZE FACTOR = 1.15 AT JNT(S) J (BASED ON SUPPORT DEPTH = 1-8)

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.31 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT. OR RIGID CEILING DIRECTLY APPLIED.
ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

2x3 DRY SPF No.2 T-BRACE AT I-J

FASTEN T AND I-BRACES TO NARROW EDGE OF WEB WITH ONE ROW PER PLY OF 3" COMMON WIRE NAILS @ 6" O.C. WITH 3" MINIMUM END DISTANCE. BRACE MUST COVER 90% OF WEB LENGTH.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

LOADING

TOTAL LOAD CASES: (4)

CHORDS			WEBS		
MEMB.	FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. UNBRAC LENGTH	MEMB.	FORCE (LBS)
FR-TO		FROM TO		FR-TO	
A - B	-2061 / 0	-78.0 -78.0 0.14 (1)	4.58	Q - B	-1052 / 0
B - C	-3735 / 0	-78.0 -78.0 0.24 (1)	4.24	B - P	0 / 3376
C - D	-5646 / 0	-78.0 -78.0 0.35 (1)	3.45	P - C	-2275 / 0
D - E	-5646 / 0	-156.0 -156.0 0.47 (1)	3.31	C - O	0 / 2669
E - F	-5778 / 0	-78.0 -78.0 0.38 (1)	3.38	O - D	-580 / 0
F - G	-5778 / 0	-78.0 -78.0 0.38 (1)	3.38	O - E	-185 / 0
G - H	-4477 / 0	-78.0 -78.0 0.31 (1)	3.85	M - E	-483 / 0
H - I	-2845 / 0	-153.5 -153.5 0.26 (1)	4.70	M - G	0 / 1905
I - J	-3541 / 0	0.0 0.0 0.87 (1)	5.95	L - G	-1665 / 0
R - A	-2834 / 0	0.0 0.0 0.40 (1)	5.05	L - H	0 / 2388
				K - H	-2353 / 0
R - Q	0 / 0	-18.5 -18.5 0.07 (1)	10.00	K - I	0 / 4390
Q - P	0 / 1319	-18.5 -18.5 0.24 (1)	10.00	A - Q	0 / 1786
P - O	0 / 3735	-18.5 -18.5 0.55 (1)	10.00		
O - N	0 / 5778	-37.3 -37.3 0.87 (1)	10.00		
N - M	0 / 5778	-37.3 -37.3 0.87 (1)	10.00		
M - L	0 / 4477	-18.5 -18.5 0.63 (1)	10.00		
L - K	0 / 2845	-18.5 -18.5 0.41 (1)	10.00		
K - J	-106 / 0	-36.4 -36.4 0.08 (4)	6.25		

FACTORED CONCENTRATED LOADS (LBS)							
JT	LOC.	LC1	MAX-	MAX+	FACE	DIR.	TYPE
K	26-4-9	-769	-769	---	FRONT	VERT	TOTAL
M	17-3-7	-769	-769	---	FRONT	VERT	TOTAL
O	12-3-9	-1034	-1034	---	FRONT	VERT	TOTAL

CONNECTION REQUIREMENTS

1) C1: A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED.

DESIGN CRITERIA

*** SPECIAL LOADS ANALYSIS ***
GEOMETRY AND/OR BASIC LOADS CHANGED BY USER.
LOADS WERE DERIVED FROM USER INPUT
NO FURTHER MODIFICATIONS WERE MADE

SPECIFIED LOADS:		
TOP CH.	LL =	21.0 PSF
	DL =	6.0 PSF
BOT CH.	LL =	0.0 PSF
	DL =	7.4 PSF
TOTAL LOAD	=	34.4 PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM

GIRDER TYPE: CPrimeHip
LEFT SETBACK = 2-4-0
RIGHT SETBACK = 0-0
END SETBACK = 5-10-8
END WALL WIDTH = 0-0
CORNER FRAMING TYPE: CONVENTIONAL
END JACK TYPE: CONVENTIONAL
APPLIED TO FRONT SIDE
- ADDTL LOADS BASED ON 55 % OF GSL.
LOADS APPLIED TO FIRST 4-7-15 OF SPAN MEASURED FROM THE RIGHT.

*** NON STANDARD GIRDER ***
ADDTL USER-DEFINED LOADS APPLIED TO ALL LOAD CASES.

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015

THIS DESIGN COMPLIES WITH:
- PART 9 OF CBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.02")
CALCULATED VERT. DEFL.(LL)= L/ 999 (0.21")
ALLOWABLE DEFL.(TL)= L/360 (1.02")
CALCULATED VERT. DEFL.(TL)= L/ 901 (0.41")

CSI: TC=0.87/1.00 (I-J-1) , BC=0.87/1.00 (M-O-1) ,
WB=0.89/1.00 (H-K-1) , SSI=0.26/1.00 (D-E-1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.00
COMP=1.00 SHEAR=1.00 TENS= 1.00

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES					
PLATE	GRIP(DRY)	SHEAR	SECTION		
	(PSI)	(PLI)	(PLI)		
	MAX	MIN	MAX	MIN	MAX
MT20	650	371	1747	788	1987

Structural drawing of a roof truss system. The drawing shows a series of truss members (W1, W2, W3, W4, W5, W6) and joints (A, B, C, D, E, F, G, H, I, J, K, L, M, N). Dimensions are provided for various parts of the structure, including member lengths and joint positions. The drawing is labeled with a scale of 1:51.2.

Scale = 1:51.2

TOTAL WEIGHT = 134 lb

JT	TYPE	PLATES	W	LEN	Y	X
A	TMWw+p	MT20	4.0	6.0	2.25	2.00
B	TTWWw+m	MT20	5.0	6.0	1.75	1.25
C	TMWW-t	MT20	4.0	4.0		
D	TMWw	MT20	2.0	4.0		
E	TS-t	MT20	3.0	6.0		
F	TMWW-t	MT20	4.0	4.0		
G	TMWw-t	MT20	4.0	6.0	1.75	2.50
H	BMV1+p	MT20	2.0	4.0		
I	BMWW-t	MT20	4.0	6.0	1.75	2.50
J	BMWWw-t	MT20	5.0	6.0		
K	BS-t	MT20	3.0	6.0		
L	BMWW-t	MT20	4.0	4.0	1.75	1.50
M	BMWW-t	MT20	4.0	4.0		
N	BMV1+p	MT20	2.0	4.0		

TOTAL LOAD CASES: (4)

CHORDS				WEB S			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. CS1 (LC)	MAX. UNBRAC	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. CS1 (LC)
FR-TO		FROM	TO	LENGTH	FR-TO		
A-B	-1148 / 0	-78.0	-78.0 0.19 (1)	5.72	M-B	-351 / 0	0.26 (1)
B-C	-1686 / 0	-78.0	-78.0 0.69 (1)	4.28	B-L	0 / 1286	0.29 (1)
C-D	-1833 / 0	-78.0	-78.0 0.70 (1)	4.11	L-C	-739 / 0	0.54 (1)
D-E	-1833 / 0	-78.0	-78.0 0.70 (1)	4.11	C-J	0 / 201	0.05 (1)
E-F	-1833 / 0	-78.0	-78.0 0.70 (1)	4.11	J-D	-489 / 0	0.36 (1)
F-G	-1330 / 0	-78.0	-78.0 0.64 (1)	4.74	J-F	0 / 689	0.15 (1)
H-G	-1438 / 0	0.0	0.0 0.29 (1)	5.44	I-F	-1081 / 0	0.79 (1)
N-A	-1473 / 0	0.0	0.0 0.20 (1)	6.74	I-G	0 / 1808	0.41 (1)
					A-M	0 / 875	0.20 (1)
N-M	0 / 0	-18.5	-18.5 0.13 (4)	10.00			
M-L	0 / 737	-18.5	-18.5 0.25 (4)	10.00			
L-K	0 / 1686	-18.5	-18.5 0.36 (1)	10.00			
K-J	0 / 1686	-18.5	-18.5 0.36 (1)	10.00			
J-I	0 / 1330	-18.5	-18.5 0.34 (4)	10.00			
I-H	0 / 0	-18.5	-18.5 0.21 (4)	10.00			

JSI GRIP= 0.90 (G) (INPUT = 0.90)
JSI METAL= 0.49 (K) (INPUT = 1.00)

The diagram illustrates a roof truss system with the following components and dimensions:

- Top Chords:**
 - Members: T1, T2, T3
 - Dimensions: 4-7-7, 4-7-7, 6-7-7, 11-2-14, 6-6-3, 17-9-0, 6-6-3, 24-3-3, 6-7-7, 30-10-10
- Bottom Chords:**
 - Members: B1, B2
 - Dimensions: 4-7-7, 4-7-7, 6-7-7, 11-2-14, 6-6-3, 17-9-0, 6-6-3, 24-3-3, 6-7-7, 30-10-10
- Vertical Members:**
 - Members: W1, W2, W3, W4, W5, W6
 - Dimensions: 4-7-7, 4-7-7, 6-7-7, 11-2-14, 6-6-3, 17-9-0, 6-6-3, 24-3-3, 6-7-7, 30-10-10
- Diagonal Members:**
 - Members: W1, W2, W3, W4, W5, W6
 - Dimensions: 4-7-7, 4-7-7, 6-7-7, 11-2-14, 6-6-3, 17-9-0, 6-6-3, 24-3-3, 6-7-7, 30-10-10
- Supports:**
 - Members: N, M, L, K, J, I, H
 - Dimensions: 4-7-7, 4-7-7, 6-7-7, 11-2-14, 6-6-3, 17-9-0, 6-6-3, 24-3-3, 6-7-7, 30-10-10
- Other Members:**
 - Members: 5x6, 4x4, 2x4, 3x6, 4x4, 4x6, 2x4
 - Dimensions: 4-7-7, 4-7-7, 6-7-7, 11-2-14, 6-6-3, 17-9-0, 6-6-3, 24-3-3, 6-7-7, 30-10-10

Scale = 1:51.3

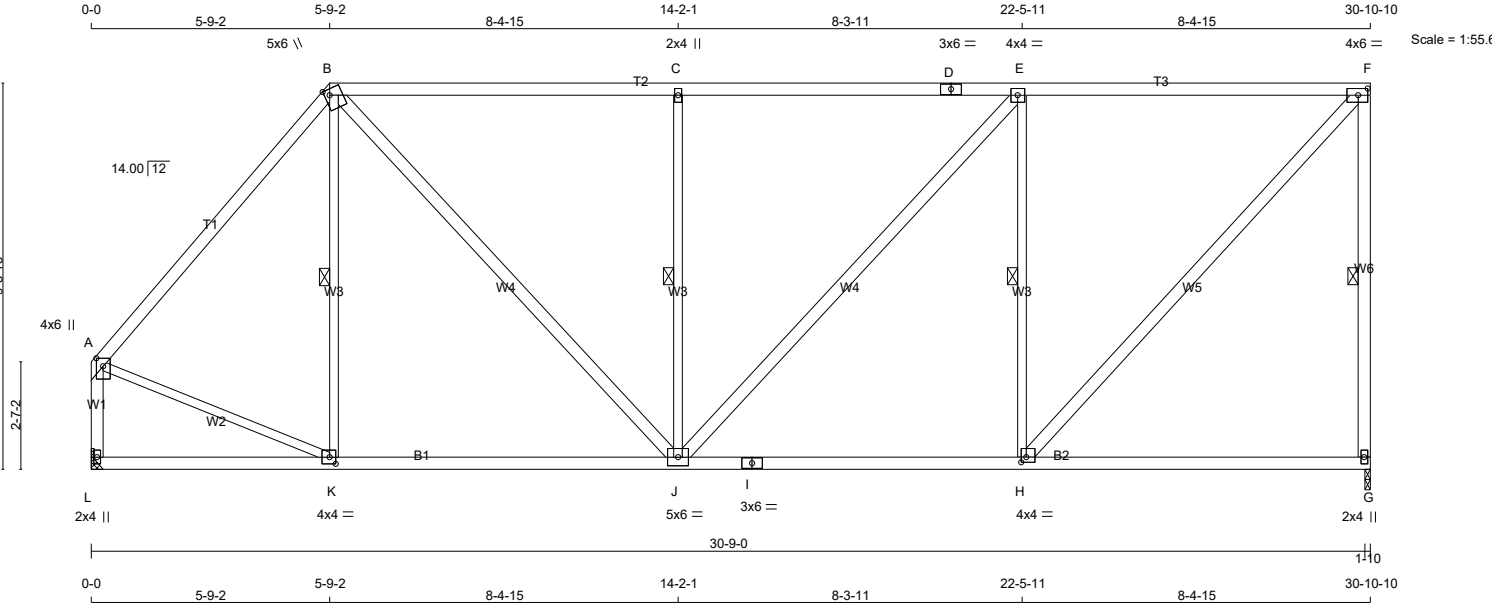
JSI GRIP= 0.88 (L) (INPUT = 0.90)
JSI METAL= 0.47 (K) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336321	H34S		1	TRUSS DESC. JT 45147	E21103970

Alpa Roof Truss, Maple

Version 8.420 S Jan 21 2021 MiTek Industries, Inc. Wed Oct 13 10:30:26 2021 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-PHXi2a5SjilpoulKqiSSR9TTRVMSDag62nep7hyTsx



LUMBER				
N. L. G. A. RULES				
CHORDS	SIZE	LUMBER	DESCR.	
A - B	2x4	DRY	No.2	SPF
B - D	2x4	DRY	No.2	SPF
D - F	2x4	DRY	No.2	SPF
G - F	2x4	DRY	No.2	SPF
L - A	2x4	DRY	No.2	SPF
L - I	2x4	DRY	No.2	SPF
I - G	2x4	DRY	No.2	SPF
ALL WEBS EXCEPT	2x3	DRY	No.2	SPF
B - J	2x4	DRY	No.2	SPF
J - E	2x4	DRY	No.2	SPF
H - F	2x4	DRY	No.2	SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y X
A	TMVW+p	MT20	4.0	6.0	2.25 2.00
B	TTWW+m	MT20	5.0	6.0	1.75 1.50
C	TMW+w	MT20	2.0	4.0	
D	TS-t	MT20	3.0	6.0	
E	TMWW-t	MT20	4.0	4.0	
F	TMVW-t	MT20	4.0	6.0	2.00 2.75
G	BMV1+p	MT20	2.0	4.0	
H	BMWW-t	MT20	4.0	4.0	1.50 1.50
I	BS-t	MT20	3.0	6.0	
J	BMWWW-t	MT20	5.0	6.0	
K	BMWW-t	MT20	4.0	4.0	2.00 1.75
L	BMV1+p	MT20	2.0	4.0	

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2



DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER							
BEARINGS							
	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG	REQRD BRG	
	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX
JT							
G	1490	0	1490	0	0	1-10	1-10
L	1490	0	1490	0	0	MECHANICAL	

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT L. MINIMUM BEARING LENGTH AT JOINT L = 1-10.

UNFACTORED REACTIONS							
1ST LCASE	MAX./MIN. COMPONENT REACTIONS						
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
G	1062	648 / 0	0 / 0	0 / 0	0 / 0	414 / 0	0 / 0
L	1062	648 / 0	0 / 0	0 / 0	0 / 0	414 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) G

BRACING
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.08 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

1 LATERAL BRACE(S) AT 1/2 LENGTH OF F-G, B-K, C-J, E-H.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

LOADING									
TOTAL LOAD CASES: (4)									

CHORDS					WEBS				
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX LC1 (LC)	MAX LC2 (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX LC1 (LC)	MAX LC2 (LC)	
FR-TO		FROM TO			FR-TO				
A-B	-1218 / 0	-78.0	-78.0	0.60 (1)	5.11	K-B	-152 / 45	0.09 (1)	
B-C	-1335 / 0	-78.0	-78.0	0.95 (1)	4.10	B-J	0 / 801	0.13 (1)	
C-D	-1336 / 0	-78.0	-78.0	0.95 (1)	4.08	J-C	-709 / 0	0.40 (1)	
D-E	-1336 / 0	-78.0	-78.0	0.95 (1)	4.08	J-E	0 / 371	0.06 (1)	
E-F	-1085 / 0	-78.0	-78.0	0.90 (1)	4.49	H-E	-989 / 0	0.56 (1)	
G-F	-1428 / 0	0.0	0.0	0.58 (1)	5.46	H-F	0 / 1591	0.26 (1)	
L-A	-1452 / 0	0.0	0.0	0.20 (1)	6.79	A-K	0 / 845	0.19 (1)	
L-K	0 / 0	-18.5	-18.5	0.22 (4)	10.00				
K-J	0 / 789	-18.5	-18.5	0.31 (4)	10.00				
J-I	0 / 1085	-18.5	-18.5	0.42 (4)	10.00				
I-H	0 / 1085	-18.5	-18.5	0.42 (4)	10.00				
H-G	0 / 0	-18.5	-18.5	0.32 (4)	10.00				

DESIGN CRITERIA

SPECIFIED LOADS:			
TOP CH.	LL = 21.0	PSF	
	DL = 6.0	PSF	
BOT CH.	LL = 0.0	PSF	
	DL = 7.4	PSF	
TOTAL LOAD	= 34.4	PSF	

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015

THIS DESIGN COMPLIES WITH:
- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.03")
CALCULATED VERT. DEFL.(LL)= L/ 999 (0.06")
ALLOWABLE DEFL.(TL)= L/360 (1.03")
CALCULATED VERT. DEFL.(TL)= L/ 999 (0.16")

CSI: TC=0.95/1.00 (B-C:1) , BC=0.42/1.00 (H-J:4) , WB=0.56/1.00 (E-H:1) , SSI=0.31/1.00 (E-F:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10 COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES					
PLATE	GRIP(DRY)	SHEAR	SECTION		
	(PSI)	(PLI)	(PLI)		
	MAX MIN	MAX MIN	MAX MIN		
MT20	650	371	1747	788	1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

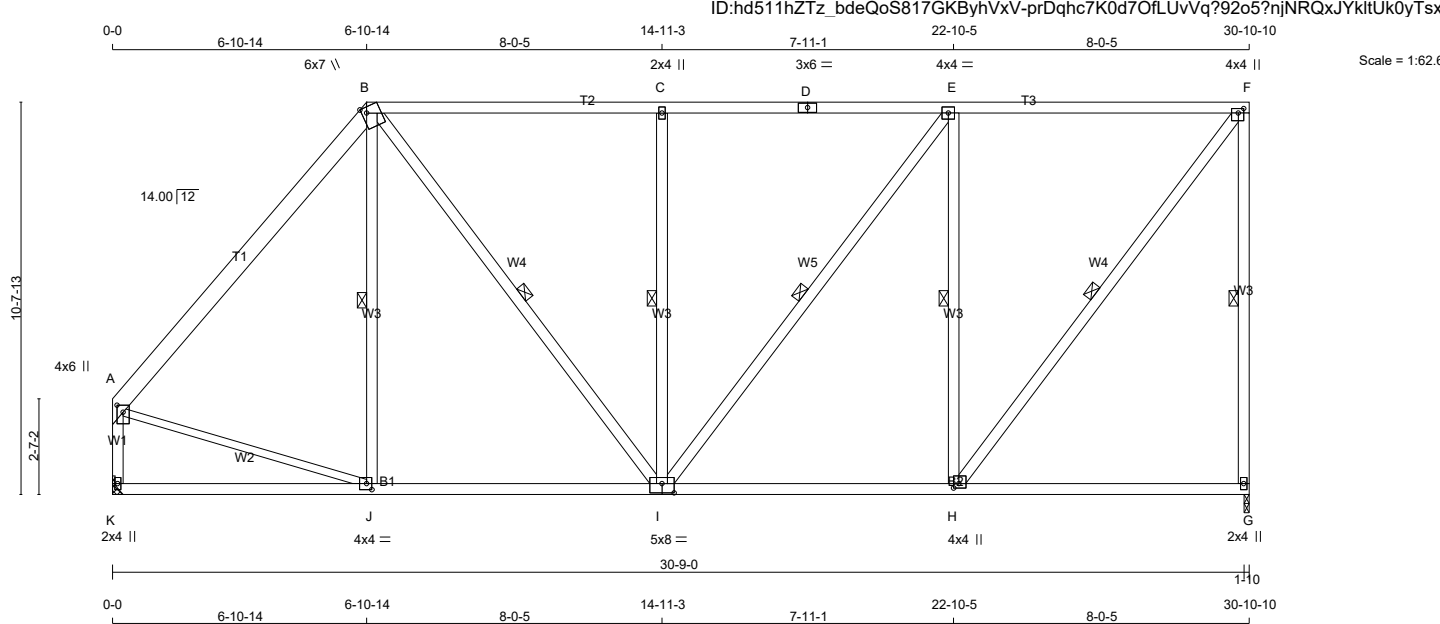
JSI GRIP= 0.88 (F) (INPUT = 0.90)
JSI METAL= 0.46 (A) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336321	H35S		1	TRUSS DESC. JT 45147	E21103971

Alpa Roof Truss, Maple

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ID:hd511hZTz_bdeQoS817GKByhVxV-prDqhc7K0d7OfLUvVq92o5?njNRQxJYkItUk0yTsxu



TOTAL WEIGHT = 179 lb

LUMBER				N. L. G. A. RULES			
CHORDS	SIZE	LUMBER	DESCR.	CHORDS	SIZE	LUMBER	DESCR.
A - B	2x6	DRY	No.2	SPF			
B - D	2x4	DRY	No.2	SPF			
D - F	2x4	DRY	No.2	SPF			
G - F	2x4	DRY	No.2	SPF			
K - A	2x4	DRY	No.2	SPF			
K - I	2x4	DRY	No.2	SPF			
I - G	2x4	DRY	No.2	SPF			
ALL WEBS	2x4	DRY	No.2	SPF			
EXCEPT							
A - J	2x3	DRY	No.2	SPF			

DRY: SEASONED LUMBER.

PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y X
A	TMVW+p	MT20	4.0	6.0	2.25 2.00
B	TTWW+m	MT20	6.0	7.0	Edge 1.50
C	TMW+w	MT20	2.0	4.0	
D	TS-t	MT20	3.0	6.0	
E	TMWW-t	MT20	4.0	4.0	
F	TMVW+p	MT20	4.0	4.0	1.50 1.75
G	BMV1+p	MT20	2.0	4.0	
H	BMWW+t	MT20	4.0	4.0	1.50 1.75
I	BSWWW-l	MT20	5.0	8.0	3.00 4.00
J	BMWW-t	MT20	4.0	4.0	2.00 1.75
K	BMV1+p	MT20	2.0	4.0	

Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.

DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER

BEARINGS		FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT		REQRD	
JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX	BRG	BRG
G	1490	0	1490	0	0	1-10	1-10		
K	1490	0	1490	0	0	MECHANICAL			

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT K. MINIMUM BEARING LENGTH AT JOINT K = 1-10.

UNFACTORED REACTIONS		1ST LCASE MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
G	1062	648 / 0	0 / 0	0 / 0	0 / 0	414 / 0	0 / 0
K	1062	648 / 0	0 / 0	0 / 0	0 / 0	414 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) G

BRACING
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.61 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

1 LATERAL BRACE(S) AT 1/2 LENGTH OF F-G, B-J, B-I, C-I, E-I, E-H, F-H.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

LOADING
TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. FACTORED CSI (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. FACTORED CSI (LC)	
FR-TO		FROM TO		FR-TO			
A-B	-1228 / 0	-78.0 -78.0	0.35 (1)	6.25	J-B	-64 / 99	0.04 (1)
B-C	-1156 / 0	-78.0 -78.0	0.82 (1)	4.63	B-I	0 / 591	0.09 (1)
C-D	-1157 / 0	-78.0 -78.0	0.82 (1)	4.61	I-C	-668 / 0	0.38 (1)
D-E	-1157 / 0	-78.0 -78.0	0.82 (1)	4.61	I-E	0 / 396	0.06 (1)
E-F	-916 / 0	-78.0 -78.0	0.78 (1)	5.08	H-E	-998 / 0	0.57 (1)
G-F	-1433 / 0	0.0 0.0	0.82 (1)	5.46	H-F	0 / 1495	0.24 (1)
K-A	-1443 / 0	0.0 0.0	0.18 (1)	6.81	A-J	0 / 828	0.19 (1)
K-J	0 / 0	-18.5 -18.5	0.30 (4)	10.00			
J-I	0 / 792	-18.5 -18.5	0.38 (4)	10.00			
I-H	0 / 916	-18.5 -18.5	0.43 (4)	10.00			
H-G	0 / 0	-18.5 -18.5	0.34 (4)	10.00			

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2



DESIGN CRITERIA

SPECIFIED LOADS:			
TOP CH.	LL	= 21.0	PSF
	DL	= 6.0	PSF
BOT CH.	LL	= 0.0	PSF
	DL	= 7.4	PSF
TOTAL LOAD	=	34.4	PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCS 2015

THIS DESIGN COMPLIES WITH:
- PART 9 OF CBCS 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.03")
CALCULATED VERT. DEFL.(LL)= L/ 999 (0.05")
ALLOWABLE DEFL.(TL)= L/360 (1.03")
CALCULATED VERT. DEFL.(TL)= L/ 999 (0.16")

CSI: TC=0.82/1.00 (B-C:1) , BC=0.43/1.00 (H-I:4) , WB=0.57/1.00 (E-H:1) , SSI=0.29/1.00 (E-F:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10 COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

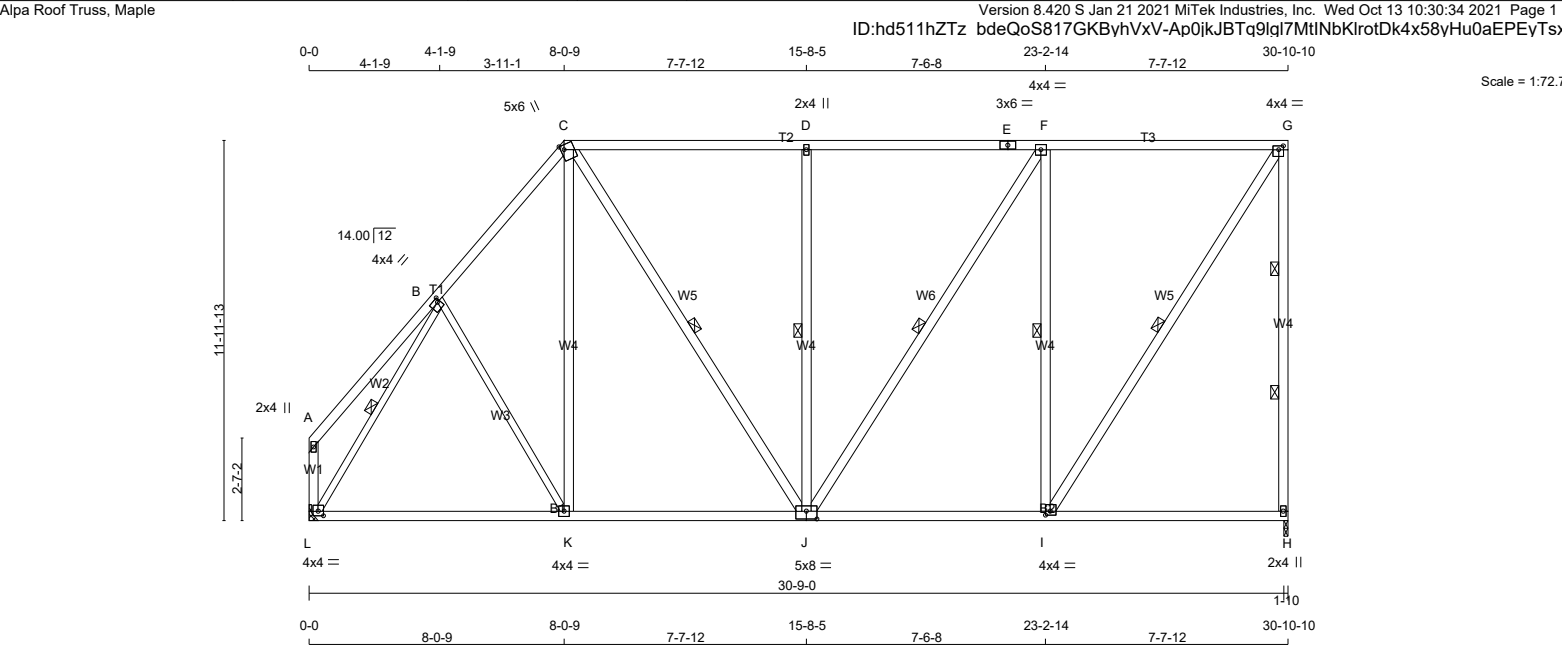
NAIL VALUES					
PLATE	GRIP(DRY)	SHEAR	SECTION	(PSI)	(PLI)
MT20	650	371	1747	788	1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.88 (F) (INPUT = 0.90)
JSI METAL= 0.48 (A) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336321	H36S		1	TRUSS DESC. JT 45147	E21103972



LUMBER				
N. L. G. A. RULES				
CHORDS	SIZE	LUMBER	DESCR.	
A - C	2x4	DRY	No.2	SPF
A - E	2x4	DRY	No.2	SPF
E - G	2x4	DRY	No.2	SPF
H - G	2x4	DRY	No.2	SPF
L - A	2x4	DRY	No.2	SPF
L - J	2x4	DRY	No.2	SPF
J - H	2x4	DRY	No.2	SPF
ALL WEBS EXCEPT	2x4	DRY	No.2	SPF
B - K	2x3	DRY	No.2	SPF
L - B	2x3	DRY	No.2	SPF
DRY: SEASONED LUMBER.				

PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y X
A	TMV+p	MT20	2.0	4.0	
B	TMWW-t	MT20	4.0	4.0	1.50 1.00
C	TTWW+m	MT20	5.0	6.0	1.75 1.25
D	TMW+w	MT20	2.0	4.0	
E	TS-t	MT20	3.0	6.0	
F	TMWW-t	MT20	4.0	4.0	
G	TMVW-t	MT20	4.0	4.0	1.50 1.75
H	BMV1+p	MT20	2.0	4.0	
I	BMWW-t	MT20	4.0	4.0	1.50 1.75
J	BSWWW-I	MT20	5.0	8.0	3.00 4.00
K	BMWW-t	MT20	4.0	4.0	
L	BMVW1-t	MT20	4.0	4.0	1.75 2.00

LATERAL BRACE(S) SHOWN SHALL BE
2X4 SPF#2



DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER							
<u>BEARINGS</u>							
	FACTORED		MAXIMUM FACTORED		INPUT	REQRD	
	GROSS REACTION		GROSS REACTION		BRG	BRG	
JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX
H	1490	0	1490	0	0	1-10	1-10
L	1490	0	1490	0	0	MECHANICAL	

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT L. MINIMUM BEARING LENGTH AT JOINT L = 1-10.

UNFACTORED REACTIONS							
	1ST LCASE	MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
H	1062	648 / 0	0 / 0	0 / 0	0 / 0	414 / 0	0 / 0
L	1062	648 / 0	0 / 0	0 / 0	0 / 0	414 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) H

BRACING
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.06 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

2 LATERAL BRACE(S) AT 1/3 LENGTH OF G-H.
1 LATERAL BRACE(S) AT 1/2 LENGTH OF C-J, D-J, F-J, F-I, G-I, B-L.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

LOADING
TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 MAX CSI (LC)	MAX. UNBRAC LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
FR-TO		FROM TO			FR-TO		
A-B	0 / 28	-78.0 -78.0	0.20 (1)	10.00	B-K	0 / 50	0.02 (4)
B-C	-1218 / 0	-78.0 -78.0	0.24 (1)	5.54	K-C	0 / 161	0.04 (4)
C-D	-1021 / 0	-78.0 -78.0	0.71 (1)	5.07	C-J	0 / 452	0.07 (1)
D-E	-1021 / 0	-78.0 -78.0	0.71 (1)	5.06	J-D	-645 / 0	0.51 (1)
E-F	-1021 / 0	-78.0 -78.0	0.71 (1)	5.06	J-F	0 / 441	0.07 (1)
F-G	-782 / 0	-78.0 -78.0	0.68 (1)	5.63	I-F	-1022 / 0	0.80 (1)
H-G	-1436 / 0	0.0 0.0	0.47 (1)	5.45	I-G	0 / 1429	0.23 (1)
L-A	-118 / 0	0.0 0.0	0.02 (1)	7.81	L-B	-1517 / 0	0.64 (1)
L-K	0 / 760	-18.5 -18.5	0.40 (4)	10.00			
K-J	0 / 774	-18.5 -18.5	0.41 (4)	10.00			
J-I	0 / 782	-18.5 -18.5	0.38 (4)	10.00			
I-H	0 / 0	-18.5 -18.5	0.31 (4)	10.00			

DESIGN CRITERIA			
SPECIFIED LOADS:			
TOP CH.	LL	=	21.0 PSF
	DL	=	6.0 PSF
BOT CH.	LL	=	0.0 PSF
	DL	=	7.4 PSF
TOTAL LOAD	=	34.4 PSF	

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCS 2015

THIS DESIGN COMPLIES WITH:
- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.03")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.05")
ALLOWABLE DEFL.(TL)= L/360 (1.03")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.15")

CSI: TC=0.71/1.00 (D-F:1) , BC=0.41/1.00 (J-K:4) , WB=0.80/1.00 (F-I:1) , SSI=0.28/1.00 (F-G:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES			
PLATE GRIP(DRY)	SHEAR (PSI)	SECTION (PLI)	
MAX MIN	MAX MIN	MAX MIN	
MT20	650 371	1747 788	1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

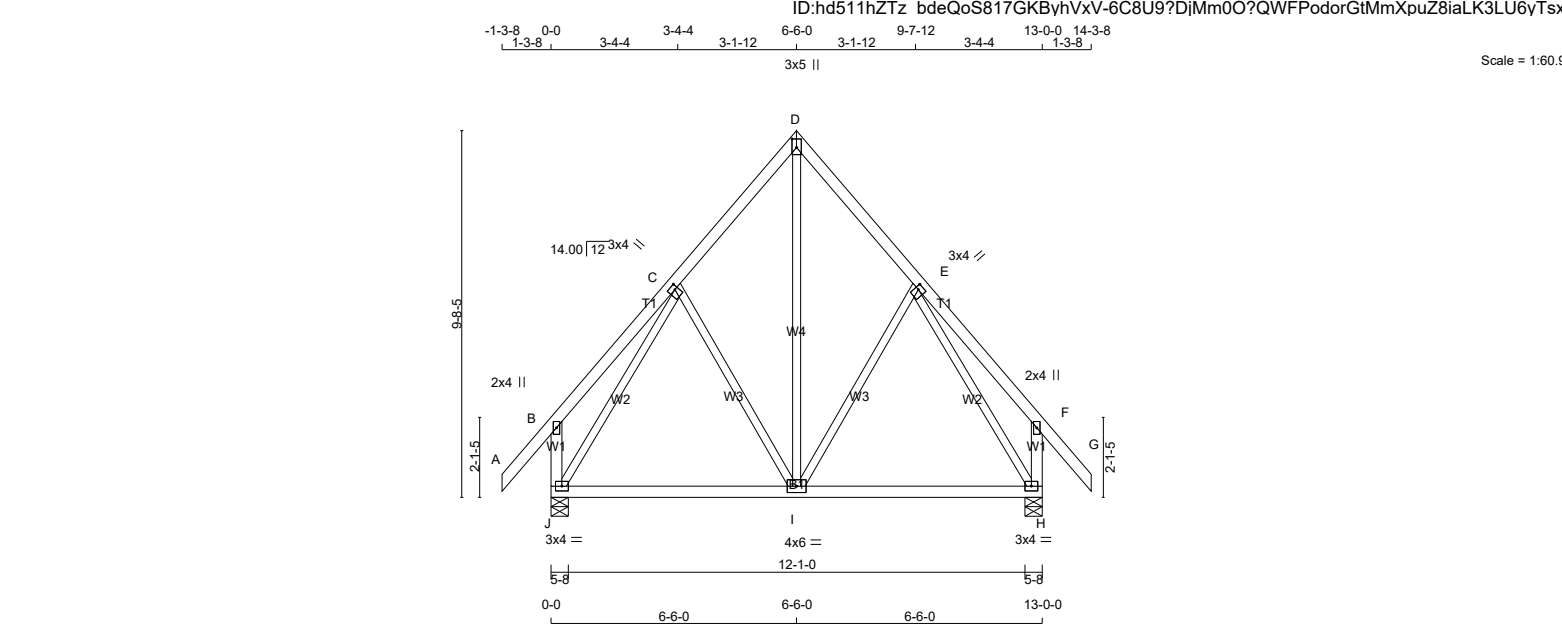
PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (C) (INPUT = 0.90)
JSI METAL= 0.51 (B) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336321	H37		1	TRUSS DESC. JT 45147	E21103979

Alpa Roof Truss, Maple

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LUMBER				DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER				DESIGN CRITERIA			
N. L. G. A. RULES				BEARINGS				SPECIFIED LOADS:			
CHORDS	SIZE	LUMBER	DESCR.	FACTORED	MAXIMUM FACTORED	INPUT	REQRD	TOP CH.	LL	PSF	
A - D	2x4	DRY	No.2	GROSS REACTION	GROSS REACTION	BRG	BRG	DL	6.0	PSF	
D - G	2x4	DRY	No.2	VERT	HORZ	DOWN	HORZ	BOT CH.	LL	0.0	PSF
J - B	2x4	DRY	No.2	JT	J	736	0	DL	7.4	PSF	
H - F	2x4	DRY	No.2	H	H	736	0	TOTAL LOAD	34.4	PSF	
J - H	2x4	DRY	No.2								

ALL WEBS	2x3	DRY	No.2	SPF
EXCEPT				

DRY: SEASONED LUMBER.

UNFACTORED REACTIONS			
1ST LCASE	MAX./MIN.	COMPONENT REACTIONS	
JT	COMBINED	SNOW	LIVE
J	523	332 / 0	0 / 0
H	523	332 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) J, H

BRACING
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

LOADING			
TOTAL LOAD CASES: (4)			

CHORDS				WEBS			
MEMB.	MAX. FACTORED	FACTORED		MEMB.	MAX. FACTORED		
	FORCE	VERT. LOAD	LC1 MAX		FORCE		
	(LBS)	(PLF)	CSI (LC)		(LBS)		
FR-TO		FROM TO		FR-TO			
A-B	0 / 42	-78.0 -78.0	0.11 (1)	I-D	0 / 332	0.07 (1)	
B-C	0 / 22	-78.0 -78.0	0.13 (1)	I-E	-107 / 0	0.08 (1)	
C-D	-373 / 0	-78.0 -78.0	0.10 (1)	C-I	-107 / 0	0.08 (1)	
D-E	-373 / 0	-78.0 -78.0	0.10 (1)	J-C	-563 / 0	0.40 (1)	
E-F	0 / 22	-78.0 -78.0	0.13 (1)	E-H	-563 / 0	0.40 (1)	
F-G	0 / 42	-78.0 -78.0	0.11 (1)				
J-B	-204 / 0	0.0 0.0	0.02 (1)				
H-F	-204 / 0	0.0 0.0	0.02 (1)				
J-I	0 / 284	-18.5 -18.5	0.25 (4)				
I-H	0 / 284	-18.5 -18.5	0.25 (4)				

ALLOWABLE DEFL.(LL)= L/360 (0.43")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.01")
ALLOWABLE DEFL.(TL)= L/360 (0.43")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.04")
CSI: TC=0.13/1.00 (E-F:1) , BC=0.25/1.00 (I-J:4) ,
WB=0.40/1.00 (E-H:1) , SSI=0.10/1.00 (H-I:4)
DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10
COMP=1.10 SHEAR=1.10 TENS= 1.10
COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES
PLATE GRIP(DRY) SHEAR SECTION
(PSI) (PLI) (PLI)
MAX MIN MAX MIN MAX MIN
MT20 650 371 1747 788 1987 1873

PLATE PLACEMENT TOL. = 0.250 inches
PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.80 (C) (INPUT = 0.90)
JSI METAL= 0.34 (E) (INPUT = 1.00)

LATERAL BRACE(S) SHOWN SHALL BE
2X4 SPF#2

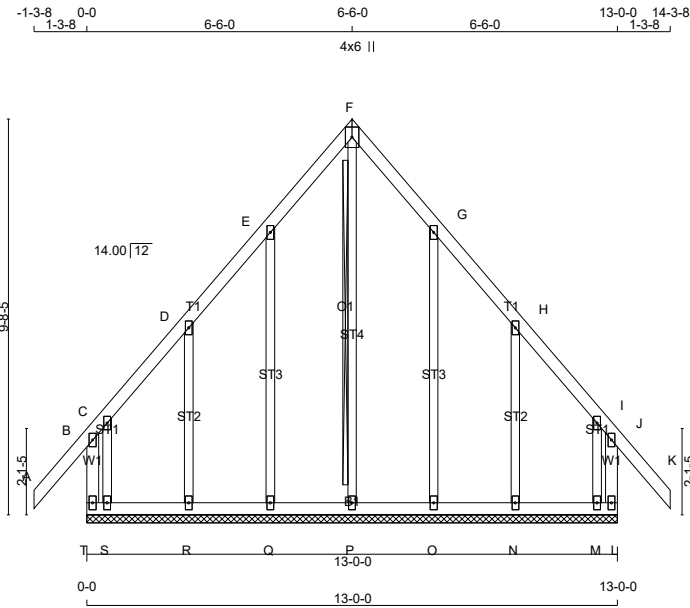


JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336321	H37G		1	TRUSS DESC. JT 45147	E21103980

Alpa Roof Truss, Maple

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ID:hd511hZTz bdeQoS817GKByhVxV-2aGEahEzuOG6EkqeXDqGwhzjbLY 164tpeYSY?yTsxI



TOTAL WEIGHT = 76 lb

LUMBER				
N. L. G. A. RULES				
CHORDS	SIZE		LUMBER	DESCR.
T - B	2x4	DRY	No.2	SPF
A - F	2x4	DRY	No.2	SPF
F - K	2x4	DRY	No.2	SPF
L - J	2x4	DRY	No.2	SPF
T - L	2x4	DRY	No.2	SPF
ALL WEBS	2x3	DRY	No.2	SPF
ALL GABLE WEBS	2x3	DRY	No.2	SPF
DRY: SEASONED LUMBER.				
GABLE STUDS SPACED AT 2-0-0 OC.				

PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y X
B	TMV+p	MT20	2.0	4.0	
C, D, E, G, H, I					
C	TMW+w	MT20	2.0	4.0	
F	TTW+p	MT20	4.0	6.0	
J	TMV+p	MT20	2.0	4.0	
L	BMV1+p	MT20	2.0	4.0	
M, N, O, P, Q, R, S					
M	BMW1+w	MT20	2.0	4.0	
T	BMV1+p	MT20	2.0	4.0	

DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER

BEARINGS

THIS TRUSS DESIGNED FOR CONTINUOUS BEARINGS.

THIS TRUSS REQUIRES RIGID SHEATHING ON EXPOSED FACE.

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S)

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.

MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT. OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

2x4 DRY SPF No.2 T-BRACE AT F-P

FASTEN T AND I-BRACES TO NARROW EDGE OF WEB WITH ONE ROW PER PLY OF 3" COMMON WIRE NAILS @ 6" O.C. WITH 3" MINIMUM END DISTANCE. BRACE MUST COVER 90% OF WEB LENGTH.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

LOADING				CHORDS				WEBS			
TOTAL LOAD CASES: (4)				MEMB.	MAX. FACTORED FORCE (LBS)	VERT. LOAD (PLF)	FACTORED LC1 MAX CSI (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. UNBRACED LENGTH	FACTORED MAX CSI (LC)
FR-TO		FROM	TO								
T-B	-221 / 0	0.0	0.0	0.02 (1)	7.81	P-F	-183 / 0	0.13 (1)			
A-B	0 / 42	-78.0	-78.0	0.11 (1)	10.00	Q-E	-160 / 0	0.15 (1)			
B-C	-71 / 0	-78.0	-78.0	0.09 (1)	6.25	R-D	-150 / 0	0.06 (1)			
C-D	0 / 5	-78.0	-78.0	0.04 (1)	10.00	S-C	0 / 7	0.00 (1)			
D-E	0 / 11	-78.0	-78.0	0.04 (1)	10.00	O-G	-160 / 0	0.15 (1)			
E-F	0 / 13	-78.0	-78.0	0.04 (1)	10.00	N-H	-150 / 0	0.06 (1)			
F-G	0 / 13	-78.0	-78.0	0.04 (1)	10.00	M-I	0 / 7	0.00 (1)			
G-H	0 / 11	-78.0	-78.0	0.04 (1)	10.00						
H-I	0 / 5	-78.0	-78.0	0.04 (1)	10.00						
I-J	-71 / 0	-78.0	-78.0	0.09 (1)	6.25						
J-K	0 / 42	-78.0	-78.0	0.11 (1)	10.00						
L-J	-221 / 0	0.0	0.0	0.02 (1)	7.81						
T-S	-3 / 0	-18.5	-18.5	0.01 (4)	10.00						
S-R	-3 / 0	-18.5	-18.5	0.02 (4)	10.00						
R-Q	-7 / 0	-18.5	-18.5	0.02 (4)	10.00						
Q-P	-9 / 0	-18.5	-18.5	0.01 (4)	10.00						
P-O	-9 / 0	-18.5	-18.5	0.01 (4)	10.00						
O-N	-7 / 0	-18.5	-18.5	0.02 (4)	10.00						
N-M	-3 / 0	-18.5	-18.5	0.02 (4)	10.00						
M-L	-3 / 0	-18.5	-18.5	0.01 (4)	10.00						

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH. LL = 21.0 PSF

DL = 6.0 PSF

BOT CH. LL = 0.0 PSF

DL = 7.4 PSF

TOTAL LOAD = 34.4 PSF

SPACING = 24.0 IN./C

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015

THIS DESIGN COMPLIES WITH:

- PART 9 OF CBC 2018, ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

DESIGN ASSUMPTIONS

-OVERHANG NOT TO BE ALTERED OR CUT OFF.

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

CSI: TC=0.11/1.00 (A-B:1), BC=0.02/1.00 (N-O:4), WB=0.15/1.00 (G-O:1), SSI=0.06/1.00 (B-C:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10 COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES

PLATE	GRIP(DRY)	SHEAR	SECTION
	(PSI)	(PLI)	(PLI)
MT20	650	371	1747 788 1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.18 (J) (INPUT = 0.90)

JSI METAL= 0.11 (B) (INPUT = 1.00)

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2

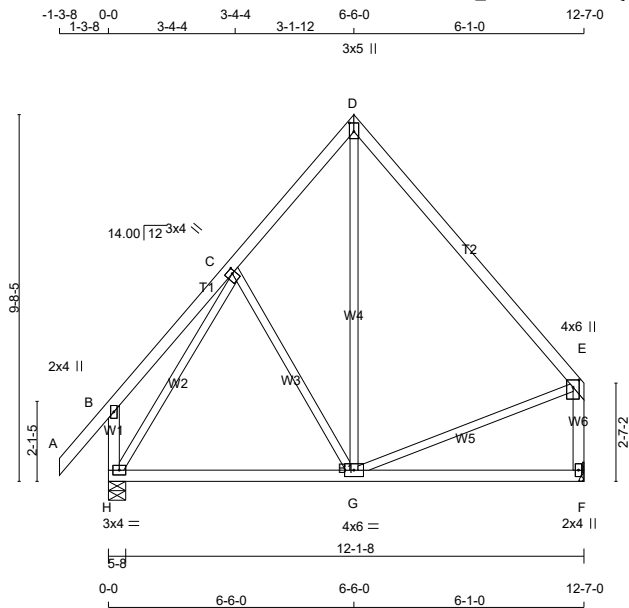


JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336321	H37S		1	TRUSS DESC. JT 45147	E21103981

Alpa Roof Truss, Maple

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Scale = 1:60.9

TOTAL WEIGHT = 2 X 66 = 132 lb
[M][F]

LUMBER				
N. L. G. A. RULES				
CHORDS	SIZE	LUMBER		DESCR.
A - D	2x4	DRY	No.2	SPF
D - E	2x4	DRY	1650F 1.5E	SPF
H - B	2x4	DRY	No.2	SPF
F - E	2x4	DRY	No.2	SPF
H - F	2x4	DRY	No.2	SPF
ALL WEBS	2x3	DRY	No.2	SPF
EXCEPT				
DRY: SEASONED LUMBER.				

PLATES (table is in inches)						
JT	TYPE	PLATES	W	LEN	Y	X
B	TMV+p	MT20	2.0	4.0		
C	TMWW+t	MT20	3.0	4.0	1.50	1.00
D	TTW+p	MT20	3.0	5.0	2.75	1.50
E	TMVW+p	MT20	4.0	6.0	2.25	2.00
F	BMV1+p	MT20	2.0	4.0		
G	BMWWW-t	MT20	4.0	6.0		
H	BMVW1-t	MT20	3.0	4.0		

DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER

	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG	REQRD BRG
	VERT	HORZ	DOWN	HORZ	IN-SX	IN-SX
JT	607	0	607	0	MECHANICAL	
F	607	0	607	0	MECHANICAL	
H	716	0	716	0	5-8	1-8

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT F. MINIMUM BEARING LENGTH AT JOINT F = 1-8.

UNFACTORED REACTIONS

	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS					
		SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
JT	433	264 / 0	0 / 0	0 / 0	0 / 0	169 / 0	0 / 0
F	508	323 / 0	0 / 0	0 / 0	0 / 0	185 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) H

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

LOADING

TOTAL LOAD CASES: (4)

CHORDS					WEBS				
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1	MAX CSI (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)		
FR-TO		FROM TO			FR-TO				
A-B	0 / 42	-78.0	-78.0	0.11 (1)	10.00	C-G	-112 / 0	0.08 (1)	
B-C	0 / 23	-78.0	-78.0	0.13 (1)	10.00	G-D	0 / 162	0.05 (4)	
C-D	-351 / 0	-78.0	-78.0	0.10 (1)	6.25	H-C	-540 / 0	0.38 (1)	
D-E	-329 / 0	-78.0	-78.0	0.31 (1)	6.25	G-E	0 / 228	0.05 (1)	
H-B	-204 / 0	0.0	0.0	0.02 (1)	7.81				
F-E	-565 / 0	0.0	0.0	0.08 (1)	7.81				
H-G	0 / 272	-18.5	-18.5	0.23 (4)	10.00				
G-F	0 / 0	-18.5	-18.5	0.21 (4)	10.00				

DESIGN CRITERIA

SPECIFIED LOADS:		
TOP CH.	LL = 21.0	PSF
	DL = 6.0	PSF
BOT CH.	LL = 0.0	PSF
	DL = 7.4	PSF
TOTAL LOAD	= 34.4	PSF

SPACING = 24.0 IN./C

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015

THIS DESIGN COMPLIES WITH:
- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.42")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.01")
ALLOWABLE DEFL.(TL)= L/360 (0.42")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.04")

CSI: TC=0.31/1.00 (D-E:1) , BC=0.23/1.00 (G-H:4) ,
WB=0.38/1.00 (C-H:1) , SSI=0.12/1.00 (D-E:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES			
PLATE	GRIP(DRY)	SHEAR	SECTION
	(PSI)	(PLI)	(PLI)
	MAX MIN	MAX MIN	MAX MIN
MT20	650 371	1747 788	1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.77 (C) (INPUT = 0.90)
JSI METAL= 0.33 (C) (INPUT = 1.00)

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2



Alpa Roof Truss, Maple



TOTAL WEIGHT = $12 \times 43 = 521 \text{ lb}$

DESCR.
SPF
SPF
SPF
SPF
SPF

SPF

SPF

JT	TYPE	PLATES	W	LEN	Y	X
A	TMVW+p	MT20	4.0	6.0	2.25	2.00
B	TTW+p	MT20	4.0	6.0		
C	TMVW+p	MT20	4.0	6.0	2.25	2.00
D	BMV1+p	MT20	2.0	4.0		
E	BMWWW-t	MT20	5.0	6.0		
F	BMV1+p	MT20	2.0	4.0		

BEARINGS

JT	VER
F	426
D	426

JT	VER
F	426
D	426

UNFACTORED REACTIONS	
1ST LCASE	MAX./MIN. COMPONENT REACTIONS

1ST LEASE		MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
F	304	185/0	0/0	0/0	0/0	118/0	0/0
D	304	185/0	0/0	0/0	0/0	118/0	0/0

BRACING
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.

BRACING
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.

BRACING
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.

TOTAL LOAD CASES: (4)

TOTAL LOAD CASES: (4)									
CHORDS					WEB S				
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 MAX CSI (LC)	MAX. UNBRAC	MEMB.	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)		
FR-TO		FROM TO		LENGTH FR-TO					
A-B	-213 / 0	-78.0	-78.0 0.19 (1)	6.25	E-B	-21 / 62	0.02 (4)		
B-C	-213 / 0	-78.0	-78.0 0.19 (1)	6.25	A-E	0 / 151	0.03 (1)		
F-A	-395 / 0	0.0	0.0 0.05 (1)	7.81	E-C	0 / 151	0.03 (1)		
D-C	-395 / 0	0.0	0.0 0.05 (1)	7.81					
F-E	0 / 0	-18.5	-18.5 0.10 (4)	10.00					
E-D	0 / 0	-18.5	-18.5 0.10 (4)	10.00					

TOP	CH.	LL =	21.0	PSF
		DL =	6.0	PSF
BOT	CH.	LL =	0.0	PSF
		DL =	7.4	PSF
TOTAL LOAD		=	34.4	PSF

TOP	CH.	LL =	21.0	PSF
		DL =	6.0	PSF
BOT	CH.	LL =	0.0	PSF
		DL =	7.4	PSF
TOTAL LOAD		=	34.4	PSF

SPACING 24.0 IN. 0/0

SPACING 24.0 IN. 0/0

9, NBCC 2015

- 9, NBCC 2015

9, NBCC 2015

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

NAME	VALUES
PLATE GRIP(DRY)	SHEAR SECTION

PLATE	GRIP(DRY)		SHEAR		SECTION	
	(PSI)		(PLI)		(PLI)	
	MAX	MIN	MAX	MIN	MAX	MIN
MT20	650	371	1747	788	1987	1873

NAME	VALUES
PLATE GRIP(DRY)	SHEAR SECTION

PLATE	GRIP(DRY)	SHEAR	SECTION
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NAME	VALUES
PLATE GRIP(DRY)	SHEAR SECTION

LATERAL BRACE(S) SHOWN SHALL BE
2X4 SPF#2

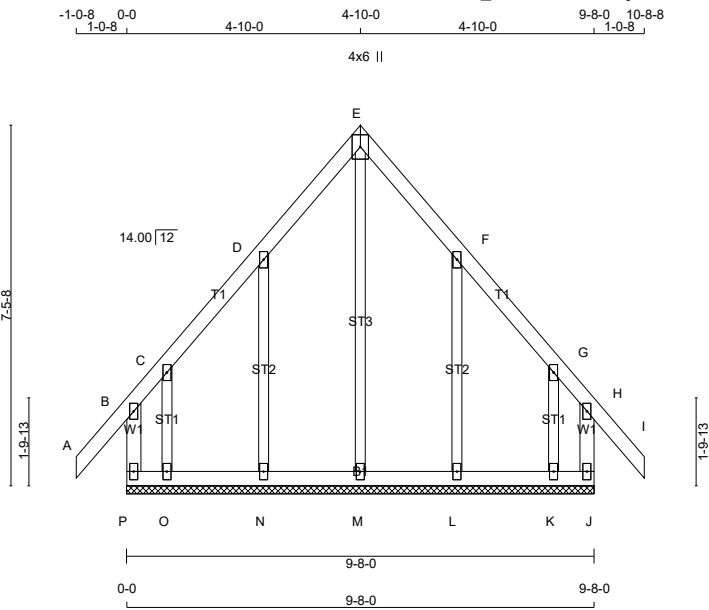


JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336321	H38G		1	TRUSS DESC. JT 45147	E21103983

Alpa Roof Truss, Maple

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TOTAL WEIGHT = 4 X 52 = 208 lb

LUMBER				
N. L. G. A. RULES				
CHORDS	SIZE		LUMBER	DESCR.
P - B	2x4	DRY	No.2	SPF
A - E	2x4	DRY	No.2	SPF
E - I	2x4	DRY	No.2	SPF
J - H	2x4	DRY	No.2	SPF
P - J	2x4	DRY	No.2	SPF
ALL WEBS	2x3	DRY	No.2	SPF
ALL GABLE WEBS	2x3	DRY	No.2	SPF
DRY: SEASONED LUMBER.				
GABLE STUDS SPACED AT 2'-0-0 OC.				

DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER

BEARINGS

THIS TRUSS DESIGNED FOR CONTINUOUS BEARINGS.

THIS TRUSS REQUIRES RIGID SHEATHING ON EXPOSED FACE.

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S)

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.

MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT. OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH. LL = 21.0 PSF

DL = 6.0 PSF

BOT CH. LL = 0.0 PSF

DL = 7.4 PSF

TOTAL LOAD = 34.4 PSF

SPACING = 24.0 IN./C

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015

PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y X
B	TMV+p	MT20	2.0	4.0	
C, D, F, G					
C	TMW+w	MT20	2.0	4.0	
E	TTW+p	MT20	4.0	6.0	
H	TMV+p	MT20	2.0	4.0	
J	BMV1+p	MT20	2.0	4.0	
K, L, M, N, O					
K	BMW1+w	MT20	2.0	4.0	
P	BMV1+p	MT20	2.0	4.0	

CHORDS					WEBS				
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1	MAX CSI (LC)	MAX. UNBRACED LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)	
FR-TO					FR-TO				
P-B	-154 / 0	0.0	0.0	0.01 (1)	7.81	M-E	-178 / 0	0.17 (1)	
A-B	0 / 34	-78.0	-78.0	0.08 (1)	10.00	N-D	-166 / 0	0.06 (1)	
B-C	-27 / 0	-78.0	-78.0	0.06 (1)	6.25	O-C	-58 / 0	0.01 (1)	
C-D	0 / 11	-78.0	-78.0	0.04 (1)	10.00	L-F	-166 / 0	0.06 (1)	
D-E	0 / 10	-78.0	-78.0	0.04 (1)	10.00	K-G	-58 / 0	0.01 (1)	
E-F	0 / 10	-78.0	-78.0	0.04 (1)	10.00				
F-G	0 / 11	-78.0	-78.0	0.04 (1)	10.00				
G-H	-27 / 0	-78.0	-78.0	0.06 (1)	6.25				
H-I	0 / 34	-78.0	-78.0	0.08 (1)	10.00				
J-H	-154 / 0	0.0	0.0	0.01 (1)	7.81				
P-O	0 / 0	-18.5	-18.5	0.01 (1)	10.00				
O-N	-3 / 0	-18.5	-18.5	0.02 (4)	10.00				
N-M	-7 / 0	-18.5	-18.5	0.02 (4)	10.00				
M-L	-7 / 0	-18.5	-18.5	0.02 (4)	10.00				
L-K	-3 / 0	-18.5	-18.5	0.02 (4)	10.00				
K-J	0 / 0	-18.5	-18.5	0.01 (1)	10.00				

THIS DESIGN COMPLIES WITH:

- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

DESIGN ASSUMPTIONS

-OVERHANG NOT TO BE ALTERED OR CUT OFF.

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

CSI: TC=0.08/1.00 (H-I:1) , BC=0.02/1.00 (L-M:4) , WB=0.17/1.00 (E-M:1) , SSI=0.05/1.00 (H-I:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10 COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES

PLATE	GRIP(DRY)	SHEAR	SECTION
	(PSI)	(PLI)	(PLI)
	MAX	MIN	MAX
MT20	650	371	1747
		788	1987
			1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

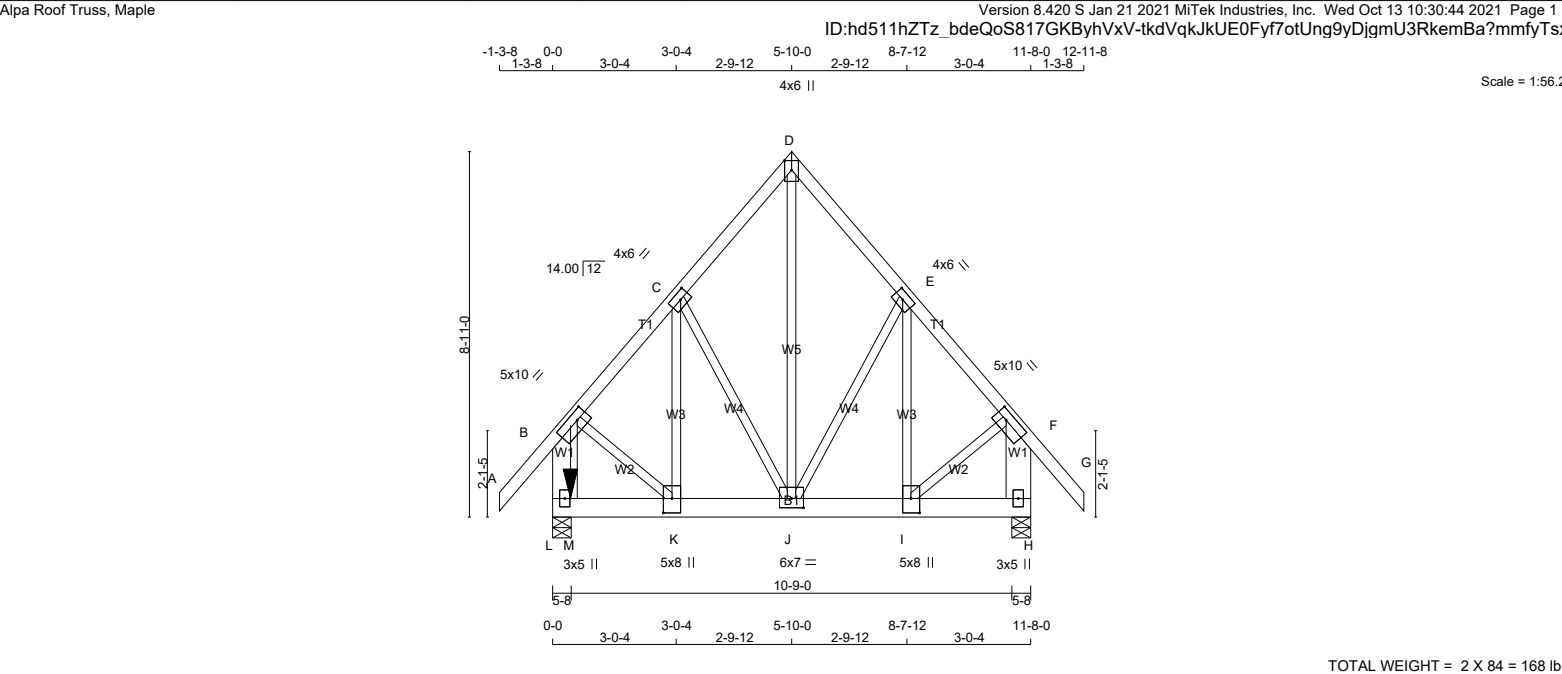
JSI GRIP= 0.13 (D) (INPUT = 0.90)

JSI METAL= 0.08 (D) (INPUT = 1.00)

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2



JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336321	H39		2	TRUSS DESC. JT 45147	E21103984



LUMBER N. L. G. A. RULES CHORDS SIZE LUMBER DESCR. A - D 2x4 DRY No.2 SPF D - G 2x4 DRY No.2 SPF L - B 2x8 DRY No.2 SPF H - F 2x8 DRY No.2 SPF L - H 2x6 DRY No.2 SPF ALL WEBS 2x3 DRY No.2 SPF EXCEPT DRY: SEASONED LUMBER. DESIGN CONSISTS OF <u>2</u> TRUSSES BUILT SEPARATELY THEN FASTENED TOGETHER AS FOLLOWS: CHORDS #ROWS SURFACE SPACING (IN) LOAD(PLF) TOP CHORDS : (0.122"x3") SPIRAL NAILS A- D 1 12 TOP D- G 1 12 TOP L- B 3 2 SIDE(628.0) H- F 2 12 TOP BOTTOM CHORDS : (0.122"x3") SPIRAL NAILS L- H 2 8 SIDE(348.3) WEBS : (0.122"x3") SPIRAL NAILS 2x3 1 6 NAILS TO BE DRIVEN FROM ONE SIDE ONLY. GIRDER NAILING ASSUMES NAILED HANGERS ARE FASTENED WITH MIN. 3-0 INCH NAILS. TOP - COMPONENTS ARE LOADED FROM THE TOP AND MUST BE PLACED ON TOP EDGE OF ALL PLIES FOR THE LOAD TO BE TRANSFERRED TO EACH PLY. SIDE - PLF SHOWN IS THE EQUIVALENT UDL APPLIED TO ONE SIDE THAT THE CORRESPONDING NAILING PATTERN SHALL BE CAPABLE OF TRANSFERING. REMAINING PLF MUST BE APPLIED ON THE OPPOSITE SIDE OR ON THE TOP. PLATES (table is in inches) JT TYPE PLATES W LEN Y X B TMVW-t MT20 5.0 10.0 2.25 3.25 C TMWW-t MT20 4.0 6.0 2.00 2.75					
DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER BEARINGS FACTORED MAXIMUM FACTORED INPUT REQD GROSS REACTION GROSS REACTION BRG BRG JT VERT HORZ DOWN HORZ UPLIFT IN-SX IN-SX L 7138 0 7138 0 5-8 4-6 H 4835 0 4835 0 5-8 2-10 UNFACTORED REACTIONS 1ST LCASE MAX./MIN. COMPONENT REACTIONS JT COMBINED SNOW LIVE PERM.LIVE WIND DEAD SOIL L 5087 3117 / 0 0 / 0 0 / 0 1969 / 0 0 / 0 H 3445 2115 / 0 0 / 0 0 / 0 1330 / 0 0 / 0 BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) L, H BRACING TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.91 FT. MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED. ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED. LOADING TOTAL LOAD CASES: (4) C H O R D S W E B S MAX. FACTORED MAX. FACTORED MAX. FACTORED MEMB. FORCE VERT. LOAD LC1 MAX. MEMB. FORCE MAX. (LBS) (PLF) CSI (LC) UNBRAC LENGTH FR-TO (LBS) CSI (LC) FR-TO FROM TO A- B 0 / 42 -78.0 -78.0 0.06 (1) 10.00 J- D 0 / 3774 0.47 (1) B- C -3532 / 0 -78.0 -78.0 0.11 (1) 4.91 J- E -929 / 0 0.28 (1) C- D -2625 / 0 -78.0 -78.0 0.08 (1) 5.55 I- E 0 / 1090 0.13 (1) D- E -2625 / 0 -78.0 -78.0 0.08 (1) 5.55 C- J -1252 / 0 0.38 (1) E- F -3294 / 0 -78.0 -78.0 0.10 (1) 5.06 K- C 0 / 1556 0.19 (1) F- G 0 / 42 -78.0 -78.0 0.06 (1) 10.00 B- K 0 / 2625 0.32 (1) L- B -4168 / 0 0.0 0.0 0.14 (1) 7.77 I- F 0 / 2449 0.30 (1) H- F -3902 / 0 0.0 0.0 0.13 (1) 7.81 L- M 0 / 0 -18.5 -18.5 0.48 (1) 10.00 M- K 0 / 0 -715.1 -715.1 0.48 (1) 10.00 K- J 0 / 2302 -715.1 -715.1 0.40 (1) 10.00 J- I 0 / 2148 -715.1 -715.1 0.30 (1) 10.00 I- H 0 / 0 -715.1 -715.1 0.22 (1) 10.00 FACTORED CONCENTRATED LOADS (LBS) JT LOC. LC1 MAX- MAX+ FACE DIR. TYPE HEEL CONN. M 5-4 -2807 -2807 --- FRONT VERT TOTAL --- C1					
CONNECTION REQUIREMENTS 1) C1: A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED.					
LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2					
DESIGN CRITERIA *** SPECIAL LOADS ANALYSIS *** GEOMETRY AND/OR BASIC LOADS CHANGED BY USER. LOADS WERE DERIVED FROM USER INPUT NO FURTHER MODIFICATIONS WERE MADE SPECIFIED LOADS: TOP CH. LL = 21.0 PSF DL = 6.0 PSF BOT CH. LL = 0.0 PSF DL = 7.4 PSF TOTAL LOAD = 34.4 PSF SPACING = 24.0 IN./C GIRDER TYPE: CSStdGirder START DISTANCE = 5-4 START SPAN CARRIED = 30-10-10 END DISTANCE = 11-8-0 END SPAN CARRIED = 30-10-10 END WALL WIDTH = 0-0 APPLIED TO FRONT SIDE OF BOTTOM CHORD. - ADDT'L LOADS BASED ON 55 % OF GSL. *** NON STANDARD GIRDER *** ADDT'L USER-DEFINED LOADS APPLIED TO ALL LOAD CASES. THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCS 2015 THIS DESIGN COMPLIES WITH: - PART 9 OF BCBC 2018 , ABC 2019 - PART 9 OF OBC 2012 (2019 AMENDMENT) - CSA 086-14 - TPIC 2014 (55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD ALLOWABLE DEFL.(LL)= L/360 (0.39") CALCULATED VERT. DEFL.(LL)= L/ 999 (0.03") ALLOWABLE DEFL.(TL)= L/360 (0.39") CALCULATED VERT. DEFL.(TL)= L/ 999 (0.05") CSI: TC=0.14/1.00 (B-L:1) , BC=0.48/1.00 (K-L:1) , WB=0.47/1.00 (D-J:1) , SSI=0.98/1.00 (K-L:1) DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.00 COMP=1.00 SHEAR=1.00 TENS=1.00 COMPANION LIVE LOAD FACTOR = 1.00 AUTOSOLVE HEELS OFF TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT . NAIL VALUES PLATE GRIP(DRY) SHEAR SECTION (PSI) (PLI) (PLI) MAX MIN MAX MIN MAX MIN MT20 650 371 1747 788 1987 1873 PLATE PLACEMENT TOL. = 0.250 inches PLATE ROTATION TOL. = 5.0 Deg.					
CONTINUED ON PAGE 2					

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336321	H39		2	JT 45147	E21103984(2)

Alpa Roof Truss, Maple

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PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
D	TTW+p	MT20	4.0	6.0	2.75	2.00
E	TMWW-t	MT20	4.0	6.0	2.00	2.75
F	TMVW-t	MT20	5.0	10.0	2.25	3.25
H	BMV1+p	MT20	3.0	5.0		
I	BMWW+t	MT20	5.0	8.0	4.25	2.50
J	BMWW-t	MT20	6.0	7.0	2.75	3.50
K	BMWW+t	MT20	5.0	8.0	4.25	2.50
L	BMV1+p	MT20	3.0	5.0		

JSI GRIP= 0.84 (D) (INPUT = 0.90)
JSI METAL= 0.41 (I) (INPUT = 1.00)

LATERAL BRACE(S) SHOWN SHALL BE
2X4 SPF#2

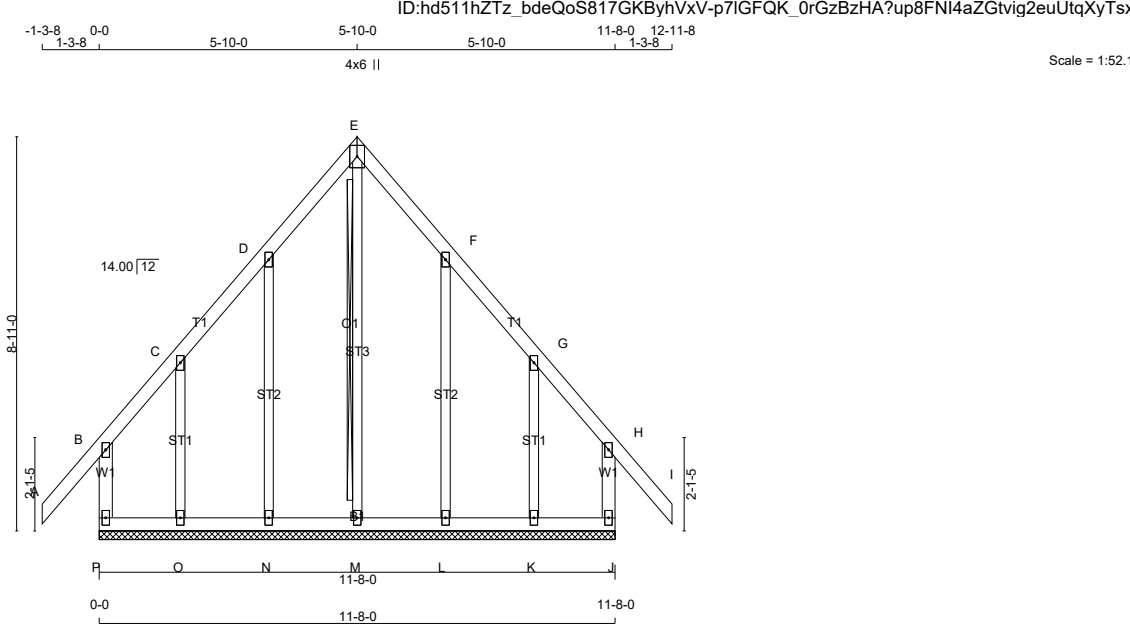


JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336321	H39G		1	TRUSS DESC. JT 45147	E21103985

Alpa Roof Truss, Maple

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TOTAL WEIGHT = 65 lb

LUMBER				
N. L. G. A. RULES				
CHORDS	SIZE		LUMBER	DESCR.
P - B	2x4	DRY	No.2	SPF
A - E	2x4	DRY	No.2	SPF
E - I	2x4	DRY	No.2	SPF
J - H	2x4	DRY	No.2	SPF
P - J	2x4	DRY	No.2	SPF
ALL WEBS	2x3	DRY	No.2	SPF
ALL GABLE WEBS	2x3	DRY	No.2	SPF
DRY: SEASONED LUMBER.				
GABLE STUDS SPACED AT 2-0-0 OC.				

PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y X
B	TMV+p	MT20	2.0	4.0	
C, D, F, G					
C	TMW+w	MT20	2.0	4.0	
E	TTW+p	MT20	4.0	6.0	
H	TMV+p	MT20	2.0	4.0	
J	BMV1+p	MT20	2.0	4.0	
K, L, M, N, O					
K	BMW1+w	MT20	2.0	4.0	
P	BMV1+p	MT20	2.0	4.0	

DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER

BEARINGS

THIS TRUSS DESIGNED FOR CONTINUOUS BEARINGS.

THIS TRUSS REQUIRES RIGID SHEATHING ON EXPOSED FACE.

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S)

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 10.00 FT.

MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

2x3 DRY SPF No.2 T-BRACE AT E-M

FASTEN T AND I-BRACES TO NARROW EDGE OF WEB WITH ONE ROW PER PLY OF 3" COMMON WIRE NAILS @ 6" O.C. WITH 3" MINIMUM END DISTANCE. BRACE MUST COVER 90% OF WEB LENGTH.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	VERT. LOAD (PLF)	FACTORED LC1 MAX CSI (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX UNBRAC LENGTH	FACTORED MAX CSI (LC)
FR-TO		FROM TO		FR-TO			
P-B	-187 / 0	0.0	0.0 0.03 (1)	M-E	-197 / 0	7.81	0.24 (1)
A-B	0 / 42	-78.0	-78.0 0.11 (1)	N-D	-168 / 0	10.00	0.12 (1)
B-C	-2 / 0	-78.0	-78.0 0.07 (1)	O-C	-111 / 0	10.00	0.03 (1)
C-D	0 / 27	-78.0	-78.0 0.05 (1)	L-F	-168 / 0	10.00	0.12 (1)
D-E	0 / 23	-78.0	-78.0 0.05 (1)	K-G	-111 / 0	10.00	0.03 (1)
E-F	0 / 23	-78.0	-78.0 0.05 (1)				
F-G	0 / 27	-78.0	-78.0 0.05 (1)				
G-H	-2 / 0	-78.0	-78.0 0.07 (1)				
H-I	0 / 42	-78.0	-78.0 0.11 (1)				
J-H	-187 / 0	0.0	0.0 0.03 (1)			7.81	
P-O	-10 / 0	-18.5	-18.5 0.01 (4)			6.25	
O-N	-13 / 0	-18.5	-18.5 0.01 (4)			6.25	
N-M	-16 / 0	-18.5	-18.5 0.01 (4)			6.25	
M-L	-16 / 0	-18.5	-18.5 0.01 (4)			6.25	
L-K	-13 / 0	-18.5	-18.5 0.01 (4)			6.25	
K-J	-10 / 0	-18.5	-18.5 0.01 (4)			6.25	

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH. LL = 21.0 PSF

DL = 6.0 PSF

BOT CH. LL = 0.0 PSF

DL = 7.4 PSF

TOTAL LOAD = 34.4 PSF

SPACING = 24.0 IN./C

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015

THIS DESIGN COMPLIES WITH:

- PART 9 OF CBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

DESIGN ASSUMPTIONS

-OVERHANG NOT TO BE ALTERED OR CUT OFF.

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

CSI: TC=0.11/1.00 (H-I:1) , BC=0.01/1.00 (N-O:4) , WB=0.24/1.00 (E-M:1) , SSI=0.06/1.00 (H-I:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10 COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES

PLATE	GRIP(DRY)	SHEAR	SECTION
	(PSI)	(PLI)	(PLI)
	MAX MIN	MAX MIN	MAX MIN
MT20	650	371	1747 788 1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

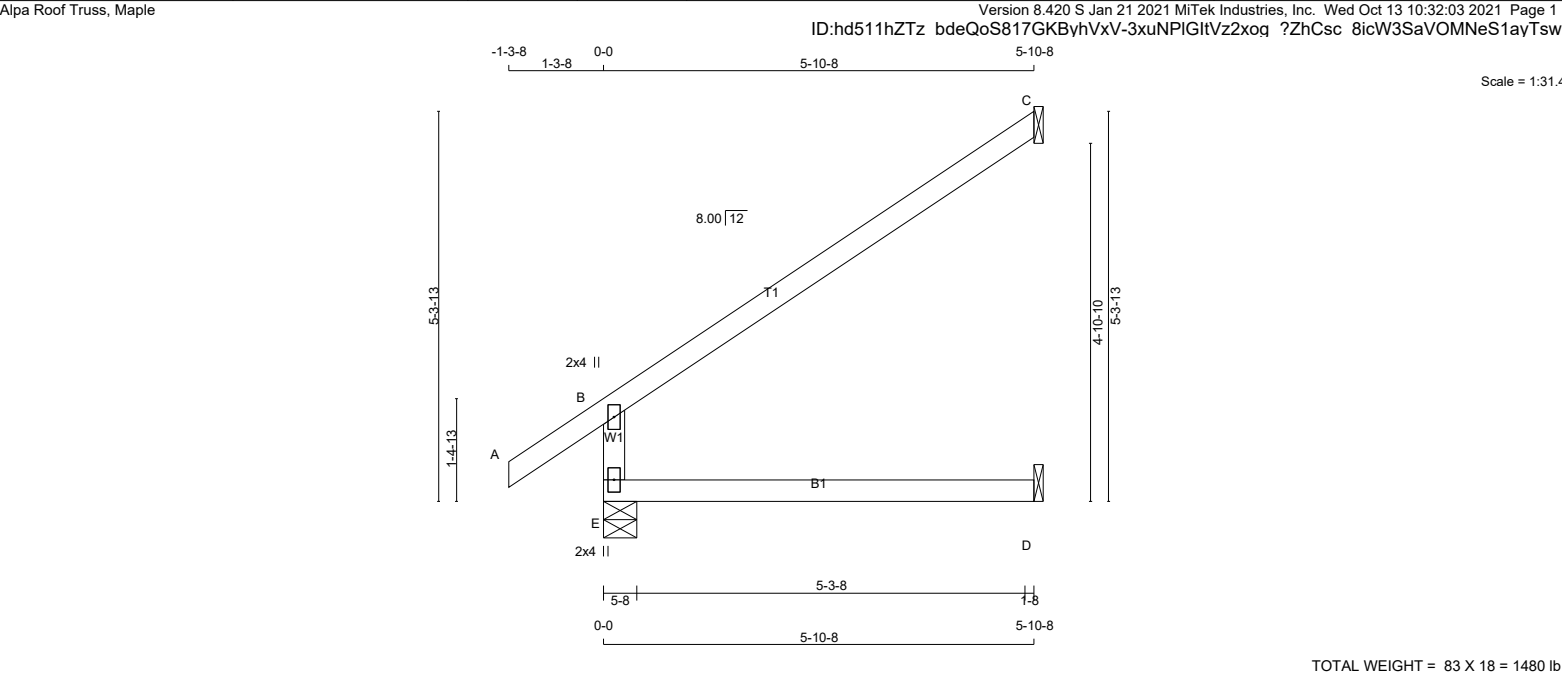
JSI GRIP= 0.14 (B) (INPUT = 0.90)

JSI METAL= 0.09 (B) (INPUT = 1.00)

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2

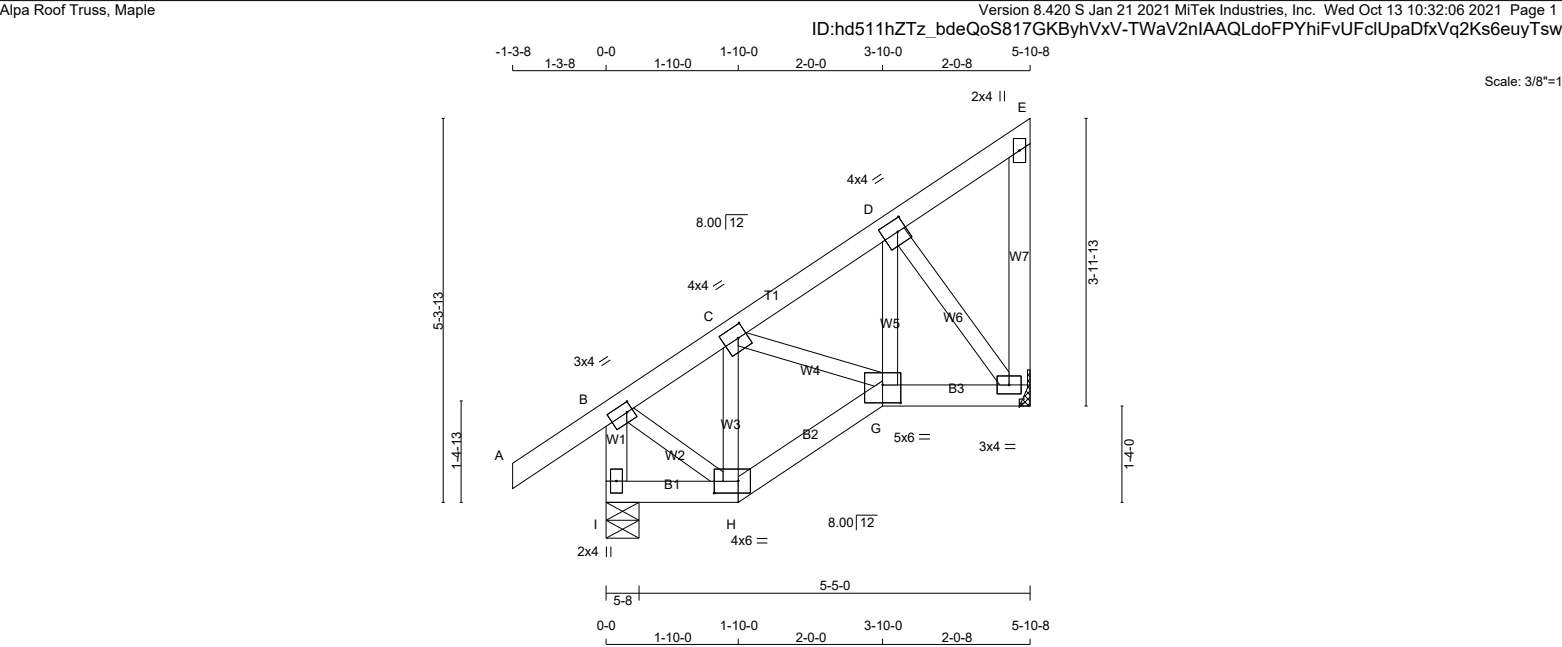


JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336321	J04		1	TRUSS DESC. JT 45147	E21104028



LUMBER N. L. G. A. RULES CHORDS SIZE						
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JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336321	J04T		1	TRUSS DESC. JT 45147	E21104029



LUMBER			
N. L. G. A. RULES			
CHORDS	SIZE	LUMBER	DESCR.
I - B	2x4	DRY No.2	SPF
A - E	2x4	DRY No.2	SPF
F - E	2x4	DRY No.2	SPF
I - H	2x4	DRY No.2	SPF
H - G	2x4	DRY No.2	SPF
G - F	2x4	DRY No.2	SPF
ALL WEBS 2x3 DRY No.2			
SPF DRY: SEASONED LUMBER.			

PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y X
B	TMVW-t	MT20	3.0	4.0	1.50 1.00
C	TMWW-t	MT20	4.0	4.0	2.00 1.50
D	TMWW-t	MT20	4.0	4.0	2.00 1.50
E	TMV+p	MT20	2.0	4.0	
F	BMVW1-t	MT20	3.0	4.0	
G	BBWW-I	MT20	5.0	6.0	3.00 3.00
H	BBWW-I	MT20	4.0	6.0	2.00 4.00
I	BMV1+p	MT20	2.0	4.0	

DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER

	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG IN-SX	REQRD BRG IN-SX
	VERT	HORZ	DOWN	HORZ		
JT	403	0	403	0	5-8	1-8
F	271	0	271	0	MECHANICAL	

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT F. MINIMUM BEARING LENGTH AT JOINT F = 1-8.

UNFACTORED REACTIONS

	1ST LCASE COMBINED		MAX./MIN. COMPONENT REACTIONS				DEAD	SOIL
	SNOW	LIVE	PERM.LIVE	WIND	WIND	WIND		
JT	285	188 / 0	0 / 0	0 / 0	0 / 0	0 / 0	97 / 0	0 / 0
F	193	117 / 0	0 / 0	0 / 0	0 / 0	0 / 0	77 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) I

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 MAX CSI (LC)	MAX. UNBRACED LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
FR-TO		FROM TO			FR-TO		
I-B	-386 / 0	0.0 0.0 0.04 (1)	7.81		B-H	0 / 161	0.04 (1)
A-B	0 / 30	-78.0 -78.0 0.10 (1)	10.00		H-C	-134 / 0	0.02 (1)
B-C	-188 / 0	-78.0 -78.0 0.10 (1)	6.25		C-G	0 / 35	0.01 (1)
C-D	-192 / 0	-78.0 -78.0 0.05 (1)	6.25		G-D	0 / 114	0.03 (4)
D-E	-10 / 0	-78.0 -78.0 0.05 (1)	6.25		D-F	-254 / 0	0.05 (1)
F-E	-57 / 0	0.0 0.0 0.01 (1)	7.81				
I-H	0 / 0	-18.5 -18.5 0.02 (4)	10.00				
H-G	0 / 160	-18.5 -18.5 0.04 (1)	10.00				
G-F	0 / 160	-18.5 -18.5 0.04 (1)	10.00				

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL = 21.0	PSF
	DL = 6.0	PSF
BOT CH.	LL = 0.0	PSF
	DL = 7.4	PSF
TOTAL LOAD	= 34.4	PSF

SPACING = 24.0 IN. C/C

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015

THIS DESIGN COMPLIES WITH:

- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

DESIGN ASSUMPTIONS

-OVERHANG NOT TO BE ALTERED OR CUT OFF.

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.20")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")
ALLOWABLE DEFL.(TL)= L/360 (0.20")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.00")

CSI: TC=0.10/1.00 (A-B:1) , BC=0.04/1.00 (F-G:1) ,
WB=0.05/1.00 (D-F:1) , SSI=0.07/1.00 (A-B:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES

PLATE GRIP(DRY) SHEAR (PSI)	SECTION (PLI)	SECTION (PLI)
	MAX MIN	MAX MIN
MT20	650 371	1747 788 1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.50 (B) (INPUT = 0.90)
JSI METAL= 0.10 (B) (INPUT = 1.00)

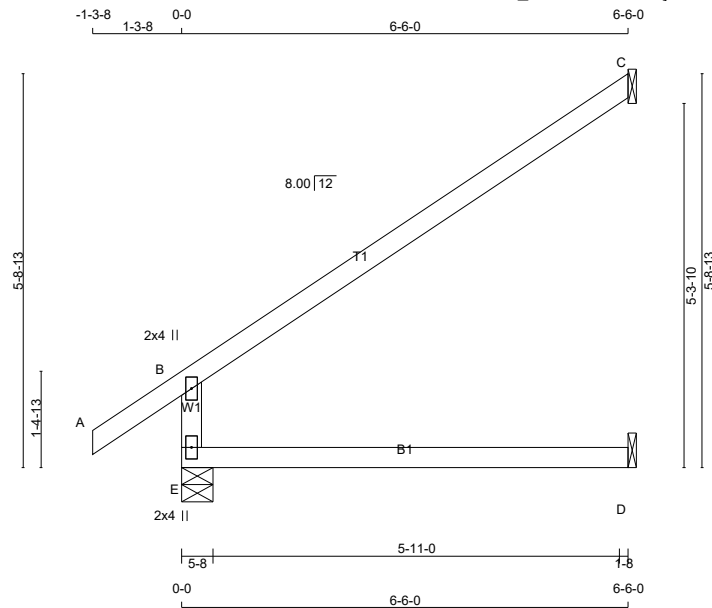
LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2



Alpa Roof Truss, Maple

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Scale = 1:33.5



TOTAL WEIGHT = $17 \times 19 = 330 \text{ lb}$

DRY: SEASONED LUMBER.

JT	TYPE	PLATES	W	LEN	Y	X
B	TMV+p	MT20	2.0	4.0		
E	BMV1+p	MT20	2.0	4.0		

CHORDS				WEBS			
MEMB.	MAX. FACTORED (LBS)	FACTORED (PLF)	MAX. FACTORED (LBS)	MEMB.	MAX. FACTORED (LBS)	FACTORED (LBS)	MAX. FACTORED (LBS)
FR-TO		VERT. LOAD (PLF)	MAX. FACTORED (LBS)	FR-TO			
E-B	-424 / 0	0.0	0.0	13 (4)	7.81		
A-B	0 / 30	-78.0	-78.0	0.10 (1)	10.00		
B-C	-35 / 0	-78.0	-78.0	0.44 (1)	6.25		
E-D	0 / 0	-18.5	-18.5	0.16 (4)	10.00		

JSI GRIP= 0.26 (B) (INPUT = 0.90)
JSI METAL= 0.22 (B) (INPUT = 1.00)

Scale = 1:64.7

TOTAL WEIGHT = $3 \times 81 = 243 \text{ lb}$

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX LC1 CSI (LC)	MAX. UNBRAC	MEMB.	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
FR-TO		FROM TO		LENGTH	FR-TO		
A-B	0 / 39	-78.0	-78.0 0.11 (1)	10.00	L-E	0 / 465	0.10 (1)
B-P	0 / 145	-78.0	-78.0 0.13 (1)	10.00	L-F	-119 / 0	0.05 (1)
P-C	0 / 215	-78.0	-78.0 0.06 (1)	10.00	K-F	-158 / 0	0.06 (1)
C-D	-409 / 0	-78.0	-78.0 0.12 (1)	6.25	K-G	-4 / 36	0.01 (1)
D-E	-500 / 0	-78.0	-78.0 0.15 (1)	6.25	J-G	-54 / 19	0.01 (1)
E-F	-501 / 0	-78.0	-78.0 0.15 (1)	6.25	D-L	0 / 37	0.01 (1)
F-G	-596 / 0	-78.0	-78.0 0.13 (1)	6.25	M-D	-375 / 0	0.13 (1)
G-R	-652 / 0	-78.0	-78.0 0.06 (1)	6.25	C-M	0 / 519	0.12 (1)
R-H	-960 / 0	-78.0	-78.0 0.09 (1)	6.25	N-C	-865 / 0	0.09 (1)
H-I	0 / 39	-78.0	-78.0 0.11 (1)	10.00	O-P	-6 / 20	0.00 (1)
					Q-R	0 / 305	0.00 (1)
B-O	-147 / 0	-18.5	-18.5 0.01 (1)	6.25			
O-N	-147 / 0	-18.5	-18.5 0.03 (1)	6.25			
N-M	-147 / 0	-18.5	-18.5 0.03 (1)	6.25			
M-L	0 / 313	-18.5	-18.5 0.12 (4)	10.00			
L-K	0 / 462	-18.5	-18.5 0.13 (4)	10.00			
K-J	0 / 387	-18.5	-18.5 0.10 (1)	10.00			
J-Q	0 / 387	-18.5	-18.5 0.14 (1)	10.00			
Q-H	0 / 387	-18.5	-18.5 0.14 (1)	10.00			

SPECIFIED LOADS:

TOP	CH.	LL	=	21.0	PSF
		DL	=	6.0	PSF
BOT	CH.	LL	=	0.0	PSF
		DL	=	7.4	PSF
TOTAL LOAD				=	34.4 PSF

THIS TRUSS IS DESIGNED FOR RESIDENTIAL
OR SMALL BUILDING REQUIREMENTS OF PART
9, NBCC 2015

THIS DESIGN COMPLIES WITH:

- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

DESIGN ASSUMPTIONS
-OVERHANG NOT TO BE ALTERED OR CUT OFF.

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= $L/360$ (0.48")
 CALCULATED VERT. DEFL.(LL) = $L/999$ (0.01")
 ALLOWABLE DEFL.(TL)= $L/360$ (0.48")
 CALCULATED VERT. DEFL.(TL) = $L/999$ (0.03")

CANTILEVER DEFLECTION:
ALLOWABLE DEFL.(LL)= $L/120$ (0.19")
CALCULATED VERT. DEFL.(LL)= $L/999$ (0.00")
ALLOWABLE DEFL.(TL)= $L/120$ (0.19")
CALCULATED VERT. DEFL.(TL)= $L/999$ (0.00")

CSI: TC=0.15/1.00 (D-E:1) , BC=0.14/1.00 (J-Q:1) ,
WB=0.13/1.00 (D-M:1) , SSI=0.17/1.00 (H-Q:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES

PLATE	GRIP(DRY)		SHEAR		SECTION	
	(PSI)		(PLI)		(PLI)	
	MAX	MIN	MAX	MIN	MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.73 (M) (INPUT = 0.90)
JSI METAL= 0.31 (B) (INPUT = 1.00)

LATERAL BRACE(S) SHOWN SHALL BE
2X4 SPF#2

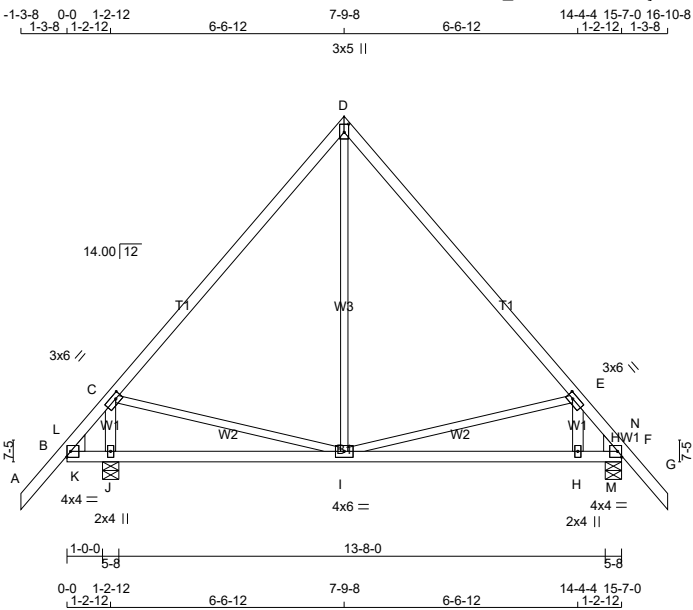


JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336324	H82		1	TRUSS DESC. JT 45147	E21104079

Alpa Roof Truss, Maple

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Scale = 1:64.7

TOTAL WEIGHT = 73 lb
[M][F]

LUMBER				
N. L. G. A. RULES				
CHORDS	SIZE	LUMBER		DESCR.
A - D	2x4	DRY	No.2	SPF
D - G	2x4	DRY	No.2	SPF
B - F	2x4	DRY	No.2	SPF
ALL WEBS	2x3	DRY	No.2	SPF
EXCEPT				
H - E	2x4	DRY	No.2	SPF
J - C	2x4	DRY	No.2	SPF
DRY: SEASONED LUMBER.				

PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y X
B	TMBH-I	MT20	4.0	4.0	Edge
C	TMWW-t	MT20	3.0	6.0	1.50 2.00
D	TTW+p	MT20	3.0	5.0	2.75 1.50
E	TMWW-t	MT20	3.0	6.0	1.50 2.00
F	TMBH1-I	MT20	4.0	4.0	Edge
H	BMW+w	MT20	2.0	4.0	
I	BMWWW-t	MT20	4.0	6.0	
J	BMW1+w	MT20	2.0	4.0	

Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.

DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER

BEARINGS									
	FACTORED		MAXIMUM FACTORED		INPUT		REQRD		
	GROSS REACTION		GROSS REACTION		BRG		BRG		HEEL
JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX		WEDGE
F	787	0	787	0	0	5-8	1-8		2x6 R
J	935	0	935	0	0	5-8	1-8		2x6 L

UNFACTORED REACTIONS							
JT	1ST LCASE	MAX./MIN.	COMPONENT	REACTIONS			
F	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
F	559	353 / 0	0 / 0	0 / 0	0 / 0	206 / 0	0 / 0
J	664	419 / 0	0 / 0	0 / 0	0 / 0	245 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) F, J

BRACING
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.24 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

LOADING									
TOTAL LOAD CASES: (4)									
CHORDS					WEBS				
MEMB.	MAX. FACTORED	FACTORED			MEMB.	MAX. FACTORED			
	FORCE	VERT. LOAD	LC1	MAX		FORCE	MAX		
	(LBS)	(PLF)	CSI (LC)	UNBRAC		(LBS)	CSI (LC)		
FR-TO		FROM	TO	LENGTH	FR-TO				
A-B	0 / 39	-78.0	-78.0	0.11 (1)	10.00	I-D	0 / 186	0.06 (4)	
B-L	-391 / 0	-78.0	-78.0	0.08 (1)	6.25	I-E	-375 / 0	0.32 (1)	
L-C	-4 / 177	-78.0	-78.0	0.52 (1)	10.00	H-E	-142 / 66	0.02 (4)	
C-D	-431 / 0	-78.0	-78.0	0.43 (1)	6.25	C-I	0 / 192	0.04 (1)	
D-E	-429 / 0	-78.0	-78.0	0.43 (1)	6.25	J-C	-981 / 0	0.10 (1)	
E-N	-709 / 0	-78.0	-78.0	0.36 (1)	6.25	K-L	0 / 645	0.00 (1)	
N-F	-1521 / 0	-78.0	-78.0	0.10 (1)	5.24	M-N	0 / 939	0.00 (1)	
F-G	0 / 39	-78.0	-78.0	0.11 (1)	10.00				
B-K	0 / 67	-18.5	-18.5	0.20 (1)	10.00				
K-J	0 / 67	-18.5	-18.5	0.20 (1)	10.00				
J-I	0 / 67	-18.5	-18.5	0.18 (4)	10.00				
I-H	0 / 617	-18.5	-18.5	0.23 (4)	10.00				
H-M	0 / 617	-18.5	-18.5	0.37 (1)	10.00				
M-F	0 / 617	-18.5	-18.5	0.37 (1)	10.00				

DESIGN CRITERIA

SPECIFIED LOADS:
TOP CH. LL = 21.0 PSF
DL = 6.0 PSF
BOT CH. LL = 0.0 PSF
DL = 7.4 PSF
TOTAL LOAD = 34.4 PSF

SPACING = 24.0 IN./C

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015

THIS DESIGN COMPLIES WITH:
- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

DESIGN ASSUMPTIONS
-OVERHANG NOT TO BE ALTERED OR CUT OFF.

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.48")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.02")
ALLOWABLE DEFL.(TL)= L/360 (0.48")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.06")

CANTILEVER DEFLECTION:
ALLOWABLE DEFL.(LL)= L/120 (0.19")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")
ALLOWABLE DEFL.(TL)= L/120 (0.19")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.00")

CSI: TC=0.52/1.00 (C-L:1) , BC=0.37/1.00 (F-M:1) ,
WB=0.32/1.00 (E-I:1) , SSI=0.57/1.00 (F-M:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES
PLATE GRIP(DRY) SHEAR SECTION
(PSI) (PLI) (PLI)
MAX MIN MAX MIN MAX MIN
MT20 650 371 1747 788 1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.68 (E) (INPUT = 0.90)
JSI METAL= 0.33 (F) (INPUT = 1.00)

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2

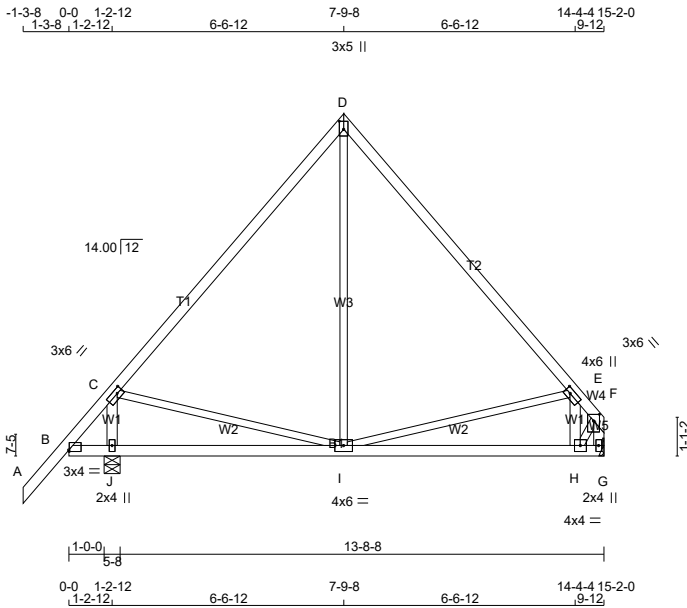


JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336324	H82S		1	TRUSS DESC. JT 45147	E21104080

Alpa Roof Truss, Maple

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Scale = 1:65.3

TOTAL WEIGHT = 2 X 70 = 139 lb

LUMBER				
N. L. G. A. RULES				
CHORDS	SIZE	LUMBER		DESCR.
A - D	2x4	DRY	No.2	SPF
D - F	2x4	DRY	No.2	SPF
G - F	2x4	DRY	No.2	SPF
B - G	2x4	DRY	No.2	SPF
ALL WEBS	2x3	DRY	No.2	SPF
EXCEPT				
J - C	2x4	DRY	No.2	SPF
H - E	2x4	DRY	No.2	SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMB-I	MT20	3.0	4.0	0.50	0.25
C	TMWW-t	MT20	3.0	6.0	1.50	2.00
D	TTW+p	MT20	3.0	5.0	2.75	1.50
E	TMWW-t	MT20	3.0	6.0	1.50	2.00
F	TMVW+p	MT20	4.0	6.0	2.25	2.00
G	BMV1+p	MT20	2.0	4.0		
H	BMWW-t	MT20	4.0	4.0		
I	BMWW-t	MT20	4.0	6.0		
J	BMW1+w	MT20	2.0	4.0		

DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER

	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG	REQRD BRG	
	VERT	HORZ	DOWN	HORZ		IN-SX	IN-SX
JT	652	0	652	0	MECHANICAL		
G	652	0	652	0	5-8	1-8	
J	921	0	921	0			

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT G. MINIMUM BEARING LENGTH AT JOINT G = 1-8.

UNFACTORED REACTIONS

	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS					
		SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
JT	465	282 / 0	0 / 0	0 / 0	0 / 0	183 / 0	0 / 0
G	654	413 / 0	0 / 0	0 / 0	0 / 0	240 / 0	0 / 0
J							

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) J

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

LOADING

TOTAL LOAD CASES: (4)

CHORDS					WEBS				
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 MAX	CS1 (LC)	MAX. UNBRAC LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX	CS1 (LC)
FR-TO		FROM TO				FR-TO			
A-B	0 / 39	-78.0 -78.0	0.11 (1)	10.00	J-C	-801 / 0	0.08 (1)		
B-C	-25 / 54	-78.0 -78.0	0.48 (1)	6.25	C-I	0 / 175	0.04 (1)		
C-D	-411 / 0	-78.0 -78.0	0.43 (1)	6.25	I-D	0 / 160	0.05 (4)		
D-E	-413 / 0	-78.0 -78.0	0.43 (1)	6.25	I-E	-307 / 0	0.26 (1)		
E-F	-489 / 0	-78.0 -78.0	0.38 (1)	6.25	H-E	-367 / 0	0.04 (1)		
G-F	-696 / 0	0.0 0.0	0.07 (1)	7.81	H-F	0 / 723	0.16 (1)		
B-J	0 / 72	-18.5 -18.5	0.14 (4)	10.00					
J-I	0 / 72	-18.5 -18.5	0.18 (4)	10.00					
I-H	0 / 539	-18.5 -18.5	0.22 (4)	10.00					
H-G	0 / 0	-18.5 -18.5	0.12 (4)	10.00					

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL = 21.0	PSF
	DL = 6.0	PSF
BOT CH.	LL = 0.0	PSF
	DL = 7.4	PSF
TOTAL LOAD	= 34.4	PSF

SPACING = 24.0 IN./C

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015

THIS DESIGN COMPLIES WITH:
- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

DESIGN ASSUMPTIONS
-OVERHANG NOT TO BE ALTERED OR CUT OFF.

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.46")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.01")
ALLOWABLE DEFL.(TL)= L/360 (0.46")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.04")

CANTILEVER DEFLECTION:
ALLOWABLE DEFL.(LL)= L/120 (0.19")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")
ALLOWABLE DEFL.(TL)= L/120 (0.19")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.00")

CSI: TC=0.48/1.00 (B-C:1) , BC=0.22/1.00 (H-I:4) , WB=0.26/1.00 (E-I:1) , SSI=0.24/1.00 (E-F:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES		PLATE GRIP(DRY)		SHEAR (PSI)		SECTION (PLI)	
		MAX	MIN	MAX	MIN	MAX	MIN
MT20		650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.78 (H) (INPUT = 0.90)
JSI METAL= 0.20 (H) (INPUT = 1.00)

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2



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PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y X
A	TMWV+p	MT20	4.0	6.0	2.25 2.00
B	TTWV+m	MT20	5.0	6.0	1.75 1.50
C	TMW+w	MT20	2.0	4.0	
D	TS-t	MT20	3.0	6.0	
E	TMWV-t	MT20	4.0	4.0	
F	TMW-t	MT20	4.0	4.0	1.50 1.75
G	BMV1+p	MT20	2.0	4.0	
H	BMWV-t	MT20	4.0	4.0	1.75 1.50
I	BS-t	MT20	3.0	6.0	
J	BMWVWV-t	MT20	5.0	6.0	
K	BMWV-t	MT20	4.0	4.0	
L	BMV1+p	MT20	2.0	4.0	

UNFACTORED REACTIONS							
	1ST LCASE	MAX./MIN. COMPONENT REACTIONS					
	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
JT							
G	864	528 / 0	0 / 0	0 / 0	0 / 0	337 / 0	0 / 0
L	864	528 / 0	0 / 0	0 / 0	0 / 0	337 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) G, L

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.91 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE LATERALLY RESTRAINED

1 LATERAL BRACE(S) AT 1/2 LENGTH OF F-G.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

LOADING

TOTAL LOAD CASES: (4)

CHORDS					WEBS				
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 MAX. CSI (LC)	MAX. UNBRAC	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. CSI (LC)		
FR-TO		FROM TO		LENGTH	FR-TO				
A-B	-1052 / 0	-78.0	-78.0	0.27 (1)	5.80	K-B	-105 / 42	0.08 (1)	
B-C	-1251 / 0	-78.0	-78.0	0.61 (1)	4.92	B-J	0 / 770	0.17 (1)	
C-D	-1252 / 0	-78.0	-78.0	0.61 (1)	4.91	J-C	-589 / 0	0.43 (1)	
D-E	-1252 / 0	-78.0	-78.0	0.61 (1)	4.91	J-E	0 / 291	0.07 (1)	
E-F	-1037 / 0	-78.0	-78.0	0.59 (1)	5.30	H-E	-794 / 0	0.58 (1)	
G-F	-1160 / 0	0.0	0.0	0.24 (1)	5.91	H-F	0 / 1399	0.31 (1)	
L-A	-1188 / 0	0.0	0.0	0.13 (1)	7.32	A-K	0 / 717	0.16 (1)	
L-K	0 / 0	-18.5	-18.5	0.15 (4)	10.00				
K-J	0 / 679	-18.5	-18.5	0.23 (4)	10.00				
J-I	0 / 1037	-18.5	-18.5	0.32 (4)	10.00				
I-H	0 / 1037	-18.5	-18.5	0.32 (4)	10.00				
H-G	0 / 0	-18.5	-18.5	0.22 (4)	10.00				

DESIGN CRITERIA

SPECIFIED LOADS

TOP	CH.	LL =	21.0	PSF
		DL =	6.0	PSF
BOT	CH.	LL =	0.0	PSF
		DL =	7.4	PSF

TOTAL LOAD = 34.4 PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE
OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL
OR SMALL BUILDING REQUIREMENTS OF PART
9, NBCC 2015

THIS DESIGN COMPLIES WITH:

- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= $L/360$ (0.84")
 CALCULATED VERT. DEFL.(LL) = $L/999$ (0.05")
 ALLOWABLE DEFL.(TL)= $L/360$ (0.84")
 CALCULATED VERT. DEFL.(TL) = $L/999$ (0.10")

CSI: TC=0.61/1.00 (C-E:1), BC=0.32/1.00 (H-J:4),
WB=0.58/1.00 (E-H:1), SSI=0.26/1.00 (E-F:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

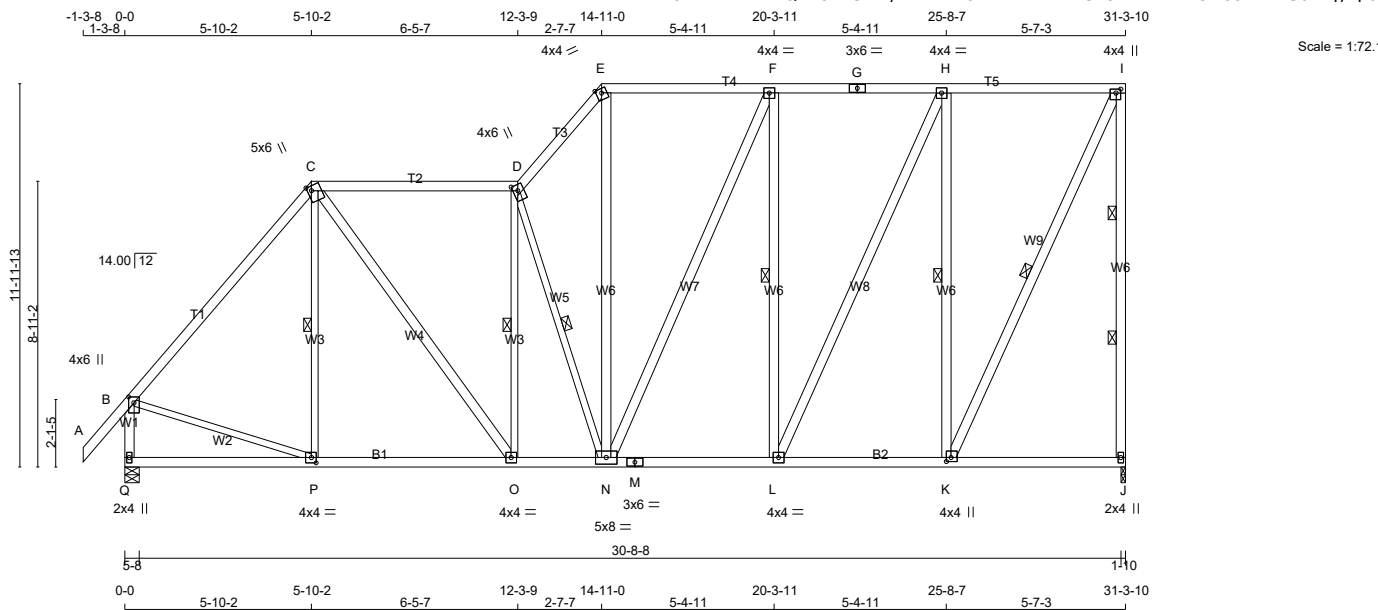
NAIL VALUES						
PLATE	GRIP(DRY)		SHEAR		SECTION	
	(PSI)		(PLI)		(PLI)	
	MAX	MIN	MAX	MIN	MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (F) (INPUT = 0.90)
JSI METAL= 0.39 (A) (INPUT = 1.00)

JSI GRIP= 0.88 (C) (INPUT = 0.90)
JSI METAL= 0.48 (M) (INPUT = 1.00)



TOTAL WEIGHT = 213 lb

LUMBER				
N. L. G. A. RULES				
CHORDS	SIZE		LUMBER	DESCR
A - C	2x4	DRY	No.2	SPF
C - D	2x4	DRY	No.2	SPF
D - E	2x4	DRY	No.2	SPF
E - G	2x4	DRY	No.2	SPF
G - I	2x4	DRY	No.2	SPF
J - I	2x4	DRY	No.2	SPF
Q - B	2x4	DRY	No.2	SPF
Q - M	2x4	DRY	No.2	SPF
M - J	2x4	DRY	No.2	SPF
ALL WEBS EXCEPT	2x4	DRY	No.2	SPF
P - C	2x3	DRY	No.2	SPF
O - D	2x3	DRY	No.2	SPF
D - N	2x3	DRY	No.2	SPF
B - P	2x3	DRY	No.2	SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y X
B	TMWV+p	MT20	4.0	6.0	2.25 2.00
C	TTWW+m	MT20	5.0	6.0	1.75 1.50
D	TTWW+m	MT20	4.0	6.0	2.25 1.75
E	TTW-m	MT20	4.0	4.0	Edge
F	TMWV-t	MT20	4.0	4.0	
G	TS-t	MT20	3.0	6.0	
H	TMWV-t	MT20	4.0	4.0	
I	TMWV+p	MT20	4.0	4.0	1.50 1.75
J	BMV1+p	MT20	2.0	4.0	
K	BMWV+t	MT20	4.0	4.0	1.50 1.75
L	BMWV-t	MT20	4.0	4.0	
M	BS-t	MT20	3.0	6.0	
N	BMWVW-t	MT20	5.0	8.0	
O	BMWV-t	MT20	4.0	4.0	
P	BMWV-t	MT20	4.0	4.0	2.00 1.75
Q	BMV1+p	MT20	2.0	4.0	

Edge - INDICATES REFERENCE CORNER OF PLATE
TOUCHES EDGE OF CHORD.

LATERAL BRACE(S) SHOWN SHALL BE
2X4 SPF#2



DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER
BEARINGS

	FACTORED		MAXIMUM FACTORED			INPUT	REQRD
	GROSS REACTION		GROSS REACTION			BRG	BRG
JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX
J	1510	0	1510	0	0	1-10	1-10
Q	1619	0	1619	0	0	5-8	1-12

UNFACTORED REACTIONS

1ST LCASE		MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
J	1076	657 / 0	0 / 0	0 / 0	0 / 0	419 / 0	0 / 0
Q	1152	716 / 0	0 / 0	0 / 0	0 / 0	436 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) J, Q

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.71 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE LATERALLY RESTRAINED.

2 LATERAL BRACE(S) AT 1/3 LENGTH OF I-J.

1 LATERAL BRACE(S) AT 1/2 LENGTH OF C-P, D-O, D-N, F-L, H-K, I-K.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

LOADING

TOTAL LOAD CASES: (4)

C H O R D S				W E B S			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 MAX CSI (LC)	MAX. UNBRAC	MEMB.	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
FR-TO		FROM TO		LENGTH	FR-TO		
A-B	0 / 42	-78.0	-78.0	0.11 (1)	10.00	P-C	-113 / 50 0.06 (1)
B-C	-1304 / 0	-78.0	-78.0	0.64 (1)	4.94	C-O	0 / 779 0.13 (1)
C-D	-1307 / 0	-78.0	-78.0	0.65 (1)	4.71	O-D	-550 / 0 0.28 (1)
D-E	-1538 / 0	-78.0	-78.0	0.12 (1)	5.19	D-N	-1021 / 0 0.57 (1)
E-F	-1012 / 0	-78.0	-78.0	0.32 (1)	5.79	N-E	0 / 888 0.14 (1)
F-G	-943 / 0	-78.0	-78.0	0.35 (1)	5.90	N-F	0 / 170 0.04 (1)
G-H	-943 / 0	-78.0	-78.0	0.35 (1)	5.90	L-F	-604 / 0 0.47 (1)
H-I	-619 / 0	-78.0	-78.0	0.34 (1)	6.25	L-H	0 / 773 0.12 (1)
J-I	-1468 / 0	0.0	0.0	0.48 (1)	5.41	K-H	-1177 / 0 0.92 (1)
Q-B	-1577 / 0	0.0	0.0	0.19 (1)	6.57	K-I	0 / 1432 0.23 (1)
						B-P	0 / 881 0.20 (1)
Q-P	0 / 0	-18.5	-18.5	0.18 (4)	10.00		
P-O	0 / 844	-18.5	-18.5	0.26 (4)	10.00		
O-N	0 / 1314	-18.5	-18.5	0.24 (1)	10.00		
N-M	0 / 943	-18.5	-18.5	0.20 (1)	10.00		
M-L	0 / 943	-18.5	-18.5	0.20 (1)	10.00		
L-K	0 / 619	-18.5	-18.5	0.19 (4)	10.00		
K-J	0 / 0	-18.5	-18.5	0.14 (4)	10.00		

DESIGN CRITERIA

SPECIFIED LOADS:

TOP	CH.	LL	=	21.0	PSF
		DL	=	6.0	PSF
BOT	CH.	LL	=	0.0	PSF
		DL	=	7.4	PSF
TOTAL LOAD				=	34.4 PSF

SPACING = 24.0 IN. C/C

LOADING IN ALL FLAT SECTIONS BASED ON A
SLOPE OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL
OR SMALL BUILDING REQUIREMENTS OF PART
9, NBCC 2015

THIS DESIGN COMPLIES WITH:

- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.04")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.07")
ALLOWABLE DEFL.(TL)= L/360 (1.04")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.14")

CSI: TC=0.65/1.00 (C-D:1), BC=0.26/1.00 (O-P:4),
WB=0.92/1.00 (H-K:1), SSI=0.20/1.00 (H-I:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

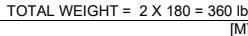
NAIL VALUES

PLATE	GRIP(DRY) (PSI)		SHEAR (PLI)		SECTION (PLI)	
	MAX	MIN	MAX	MIN	MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.89 (B) (INPUT = 0.90)
JSI METAL= 0.52 (B) (INPUT = 1.00)

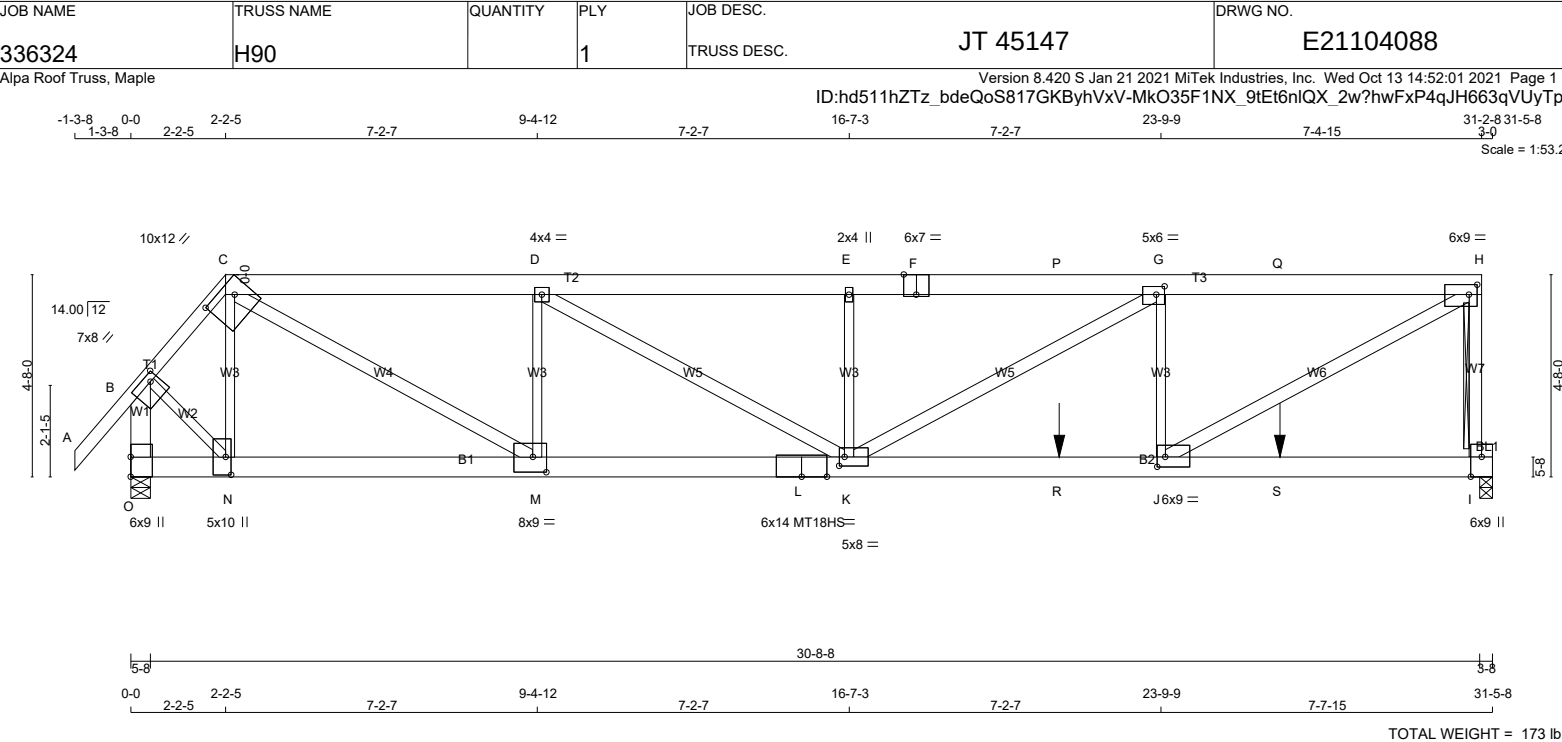


Edge - INDICATES REFERENCE CORNER OF PLATE
TOUCHES EDGE OF CHORD.

LATERAL BRACE(S) SHOWN SHALL BE
2X4 SPF#2

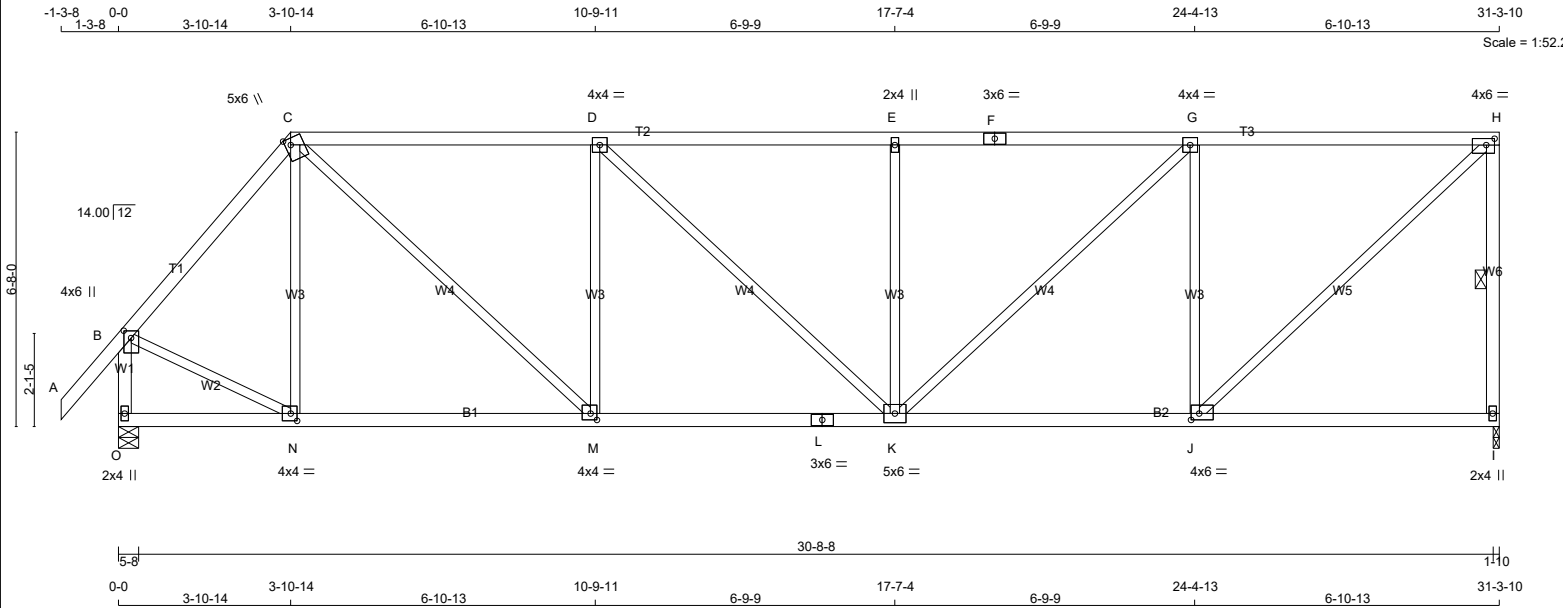
C H O R D S				W E B S			
MAX. FACTORED		FACTORED		MAX. FACTORED			
MEMB.	FORCE	VERT. LOAD	LC1	MAX	MAX.	MEMB.	FORCE
	(LBS)	(PLF)	CSI (LC)	UNBRAC			(LBS)
FR-TO		FROM	TO	LENGTH	FR-TO		
A-B	0 / 42	-78.0	-78.0	0.11 (1)	10.00	C-N	0 / 48
B-C	0 / 24	-78.0	-78.0	0.16 (1)	10.00	N-D	0 / 139
C-D	-1308 / 0	-78.0	-78.0	0.20 (1)	5.45	D-L	0 / 597
D-E	-1201 / 0	-78.0	-78.0	0.83 (1)	4.54	L-E	-678 / 0
E-F	-1202 / 0	-78.0	-78.0	0.83 (1)	4.53	L-G	0 / 436
F-G	-1202 / 0	-78.0	-78.0	0.83 (1)	4.53	J-G	-1030 / 0
G-H	-936 / 0	-78.0	-78.0	0.79 (1)	5.03	J-H	0 / 1521
I-H	-1451 / 0	0.0	0.0	0.82 (1)	5.43	O-C	-1576 / 0
O-B	-217 / 0	0.0	0.0	0.03 (1)	7.81		
O-N	0 / 816	-18.5	-18.5	0.34 (4)	10.00		
N-M	0 / 833	-18.5	-18.5	0.35 (4)	10.00		
M-L	0 / 833	-18.5	-18.5	0.35 (4)	10.00		
L-K	0 / 936	-18.5	-18.5	0.38 (4)	10.00		
K-J	0 / 936	-18.5	-18.5	0.38 (4)	10.00		
J-I	0 / 0	-18.5	-18.5	0.29 (4)	10.00		

JSI GRIP= 0.90 (H) (INPUT = 0.90)
JSI METAL= 0.53 (C) (INPUT = 1.00)



LUMBER N. L. G. A. RULES CHORDS SIZE LUMBER DESCR.				DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER BEARINGS										DESIGN CRITERIA									
A - C	2x4	DRY	No.2	SPF	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG		REQRD BRG		*** SPECIAL LOADS ANALYSIS *** GEOMETRY AND/OR BASIC LOADS CHANGED BY USER. LOADS WERE DERIVED FROM USER INPUT NO FURTHER MODIFICATIONS WERE MADE										
C - F	2x6	DRY	1650F 1.5E	SPF	JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX	SPECIFIED LOADS:										
I - H	2x4	DRY	No.2	SPF	I	3675	0	3675	0	0	3-8	3-8	TOP CH. LL = 21.0 PSF										
O - B	2x6	DRY	No.2	SPF	O	4844	0	4844	0	0	5-8	5-8	DL = 6.0 PSF										
O - L	2x6	DRY	2100F 1.8E	SPF									BOT CH. LL = 0.0 PSF										
L - I	2x6	DRY	2100F 1.8E	SPF									DL = 7.4 PSF										
												TOTAL LOAD = 34.4 PSF											
BEARING BLOCKS BL1 2x4 DRY No.2 SPF														SPACING = 24.0 IN./C									
ALL WEBS EXCEPT C - M 2x4 DRY No.2 SPF D - K 2x4 DRY 1650F 1.5E SPF K - G 2x4 DRY 1650F 1.5E SPF J - H 2x4 DRY 1650F 1.5E SPF														LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM									
DRY: SEASONED LUMBER.														GIRDER TYPE: CStdGirder START DISTANCE = 0-0 START SPAN CARRIED = 11-10-8 END DISTANCE = 16-6-0 END SPAN CARRIED = 11-10-8 END WALL WIDTH = 0-0 APPLIED TO FRONT SIDE OF BOTTOM CHORD. - ADDTL LOADS BASED ON 55 % OF GSL.									
PLATES (table is in inches)														GIRDER TYPE: CPrimeHip LEFT SETBACK = 2-2-5 RIGHT SETBACK = 0-0 END SETBACK = 4-8-8 END WALL WIDTH = 0-0 CORNER FRAMING TYPE: CONVENTIONAL END JACK TYPE: CONVENTIONAL APPLIED TO FRONT SIDE - ADDTL LOADS BASED ON 55 % OF GSL. LOADS APPLIED TO FIRST 4-10-15 OF SPAN MEASURED FROM THE RIGHT.									
JT	TYPE	PLATES	W	LEN	Y	X									*** NON STANDARD GIRDER *** ADDT'L USER-DEFINED LOADS APPLIED TO ALL LOAD CASES.								
B	TMVW-t	MT20	7.0	8.0	2.00	2.25									THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015								
C	TTWW-h	MT20	10.0	12.0	3.75	8.00									THIS DESIGN COMPLIES WITH: - PART 9 OF CBC 2018 , ABC 2019 - PART 9 OF OBC 2012 (2019 AMENDMENT) - CSA 086-14 - TPIC 2014								
D	DTMW-t	MT20	4.0	4.0											(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD								
E	TMW+w	MT20	2.0	4.0											ALLOWABLE DEFL.(LL)= L/360 (1.04") CALCULATED VERT. DEFL.(LL) = L/ 999 (0.33") ALLOWABLE DEFL.(TL)= L/360 (1.04") CALCULATED VERT. DEFL.(TL) = L/ 581 (0.64")								
F	TS-t	MT20	5.0	7.0	Edge	3.50									CSI: TC=0.68/1.00 (H-I:1), BC=0.83/1.00 (K-M:1), WB=1.00/1.00 (C-M:1), SSI=0.66/1.00 (K-M:1)								
G	TMWW-t	MT20	6.0	6.0	2.25	2.25									DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.00 COMP=1.00 SHEAR=1.00 TENS= 1.00								
H	TMVW-t	MT20	6.0	9.0	2.75	2.25									COMPANION LIVE LOAD FACTOR = 1.00								
I	BMVK1+t	MT20	6.0	9.0	Edge	3.00																	
J	BMWW-t	MT20	6.0	9.0	2.75	2.25																	
K	BMWWW-t	MT20	5.0	8.0	2.50	1.50																	
L	BS-t	MT18HS	6.0	14.0																			
M	BMWW-t	MT20	8.0	9.0	4.25	3.75																	
N	BMWW-t	MT20	5.0	10.0	5.00	1.50																	
O	BMV1+t	MT20	6.0	9.0	5.50																		
Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.																							
LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2																							
																							
							CHORDS MEMB. MAX. FACTORED FORCE (LBS) FACTORED VERT. LOAD (PLF) MAX. CSI (LC) UNBRAC LENGTH FROM TO FR-TO																
							A-B 0 / 42 -78.0 -78.0 0.12 (1) 10.00 N-C -260 / 0 0.08 (1)																
							B-C -3851 / 0 -78.0 -78.0 0.27 (1) 3.36 C-M 0 / 5660 1.00 (1)																
							C-D -7387 / 0 -78.0 -78.0 0.41 (1) 3.49 M-D -914 / 0 0.27 (1)																
							D-E -7922 / 0 -78.0 -78.0 0.39 (1) 3.41 D-K 0 / 619 0.08 (1)																
							E-F -7922 / 0 -137.2 -137.2 0.57 (1) 3.23 K-E -713 / 0 0.21 (1)																
							F-P -7922 / 0 -137.2 -137.2 0.57 (1) 3.23 K-G 0 / 2988 0.38 (1)																
							P-G -7922 / 0 -78.0 -78.0 0.57 (1) 3.23 J-G -2372 / 0 0.70 (1)																
							G-Q -5342 / 0 -78.0 -78.0 0.43 (1) 3.95 J-H 0 / 6282 0.80 (1)																
							Q-H -5342 / 0 -130.8 -130.8 0.43 (1) 3.95 B-N 0 / 3092 0.77 (1)																
							I-H -3483 / 0 0.0 0.0 0.68 (1) 6.00																
							O-B -4925 / 0 0.0 0.0 0.40 (1) 4.81																
							O-N 0 / 0 -256.7 -256.7 0.35 (1) 10.00																
							N-M 0 / 2502 -256.7 -256.7 0.57 (1) 10.00																
							M-L 0 / 7387 -256.7 -256.7 0.83 (1) 10.00																
							L-K 0 / 7387 -256.7 -256.7 0.83 (1) 10.00																
							K-R 0 / 5342 -33.5 -33.5 0.50 (1) 10.00																
							R-J 0 / 5342 -18.5 -18.5 0.50 (1) 10.00																
							J-S -121 / 0 -18.5 -18.5 0.22 (1) 6.25																
							S-I -121 / 0 -31.0 -31.0 0.22 (1) 6.25																
							FACTORED CONCENTRATED LOADS (LBS)																
							JT LOC. LC1 MAX- MAX+ FACE DIR. TYPE HEEL CONN.																
							R 21-5-7 -393 -393 --- FRONT VERT TOTAL --- C1																
							S 26-6-9 -393 -393 --- FRONT VERT TOTAL --- C1																
							CONNECTION REQUIREMENTS																
							1) C1: A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED.																

CONTINUED ON PAGE



TOTAL WEIGHT = 138 lb

LUMBER

N. L. G. A. RULES

CHORDS	SIZE	LUMBER	DESCR
A - C	2x4	DRY No.2	SPF
C - F	2x4	DRY No.2	SPF
F - H	2x4	DRY No.2	SPF
I - H	2x4	DRY No.2	SPF
O - B	2x4	DRY No.2	SPF
O - L	2x4	DRY No.2	SPF
L - I	2x4	DRY No.2	SPF

ALL WEBS EXCEPT	2x3	DRY	No.2	SPF
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DRY: SEASONED LUMBER.

PLATES (table is in inches)

J	T	TYPE	PLATES	W	LEN	Y	X
B	T	TMVW+p	MT20	4.0	6.0	2.00	2.00
C	T	TTWW+m	MT20	5.0	6.0	1.75	1.50
D	T	TMVW-t	MT20	4.0	4.0		
E	T	TMVW+w	MT20	2.0	4.0		
F	T	TS-t	MT20	3.0	6.0		
G	T	TMVW-t	MT20	4.0	4.0		
H	T	TMVW-t	MT20	4.0	6.0	1.75	2.25
I	T	BMV1+p	MT20	2.0	4.0		
J	T	K BMVW-t	MT20	4.0	6.0	1.75	2.25
K	T	MBMVWVW-t	MT20	5.0	6.0		
L	T	BS-t	MT20	3.0	6.0		
M	T	MBMVW-t	MT20	4.0	4.0	1.75	1.75
N	T	MBMVW-t	MT20	4.0	4.0	2.00	1.75
O	T	BMV1+p	MT20	2.0	4.0		

LATERAL BRACE(S) SHOWN SHALL BE
2X4 SPF#2



DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER

BEARINGS

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION			INPUT BRG	REQRD BRG
	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX
I	1510	0	1510	0	0	1-10	1-10
O	1619	0	1619	0	0	5-8	1-12

UNFACTORED REACTIONS

1ST LCASE		MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
I	1076	657 / 0	0 / 0	0 / 0	0 / 0	419 / 0	0 / 0
O	1152	716 / 0	0 / 0	0 / 0	0 / 0	436 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) I, O

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.08 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

1 LATERAL BRACE(S) AT 1/2 LENGTH OF H-I.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

LOADING

TOTAL LOAD CASES: (4)

C H O R D S					W E B S			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1	MAX. CSI (LC)	MAX. UNBRAC	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. CSI (LC)
FR-TO		FROM	TO		LENGTH	FR-TO		
A-B	0 / 42	-78.0	-78.0	0.11 (1)	10.00	N-C	-246 / 0	0.18 (1)
B-C	-1280 / 0	-78.0	-78.0	0.25 (1)	5.43	C-M	0 / 1251	0.28 (1)
C-D	-1746 / 0	-78.0	-78.0	0.70 (1)	4.21	M-D	-717 / 0	0.53 (1)
D-E	-1871 / 0	-78.0	-78.0	0.71 (1)	4.08	D-K	0 / 170	0.04 (1)
E-F	-1871 / 0	-78.0	-78.0	0.71 (1)	4.08	K-E	-489 / 0	0.36 (1)
F-G	-1871 / 0	-78.0	-78.0	0.71 (1)	4.08	K-G	0 / 718	0.16 (1)
G-H	-1348 / 0	-78.0	-78.0	0.64 (1)	4.72	J-G	-1102 / 0	0.81 (1)
I-H	-1458 / 0	0.0	0.0	0.30 (1)	5.42	J-H	0 / 1835	0.41 (1)
O-B	-1597 / 0	0.0	0.0	0.19 (1)	6.54	B-N	0 / 904	0.20 (1)
O-N	0 / 0	-18.5	-18.5	0.13 (4)	10.00			
N-M	0 / 825	-18.5	-18.5	0.25 (4)	10.00			
M-L	0 / 1747	-18.5	-18.5	0.37 (1)	10.00			
L-K	0 / 1747	-18.5	-18.5	0.37 (1)	10.00			
K-J	0 / 1348	-18.5	-18.5	0.34 (4)	10.00			
J-I	0 / 0	-18.5	-18.5	0.21 (4)	10.00			

DESIGN CRITERIA

SPECIFIED LOADS:

TOP	CH.	LL	=	21.0	PSF
		DL	=	6.0	PSF
BOT	CH.	LL	=	0.0	PSF
		DL	=	7.4	PSF
TOTAL LOAD				=	34.4 PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE
OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL
OR SMALL BUILDING REQUIREMENTS OF PART
9, NBCC 2015

THIS DESIGN COMPLIES WITH:

- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= $L/360$ (1.04")
 CALCULATED VERT. DEFL.(LL) = $L/999$ (0.09")
 ALLOWABLE DEFL.(TL)= $L/360$ (1.04")
 CALCULATED VERT. DEFL.(TL) = $L/999$ (0.19")

CSI: TC=0.71/1.00 (E-G:1) , BC=0.37/1.00 (K-M:1) ,
WB=0.81/1.00 (G-J:1) , SSI=0.25/1.00 (G-H:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

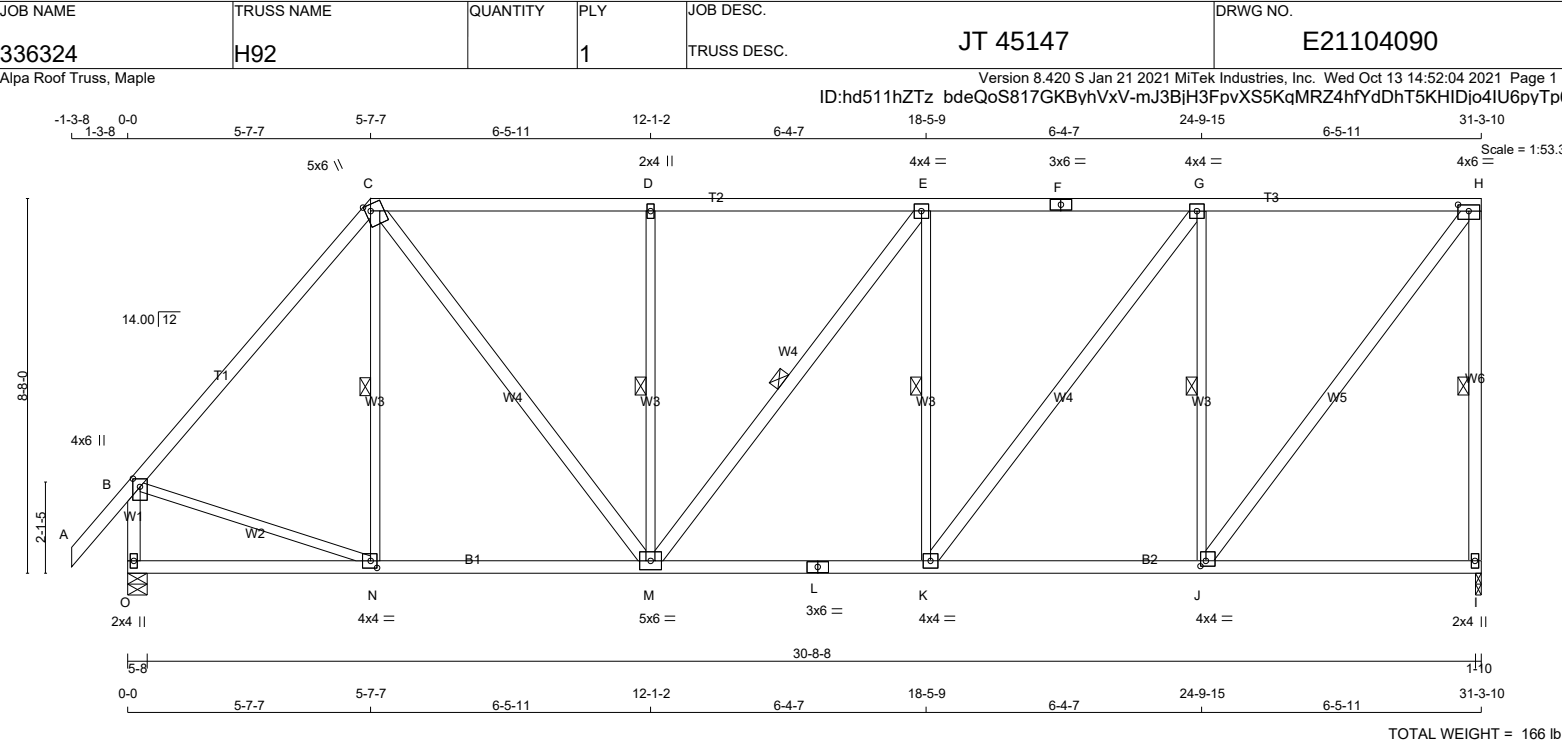
TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES						
PLATE	GRIP(DRY)		SHEAR		SECTION	
	(PSI)		(PLI)		(PLI)	
	MAX	MIN	MAX	MIN	MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (H) (INPUT = 0.90)
JSI METAL= 0.54 (L) (INPUT = 1.00)



LUMBER

N. L. G. A. RULES

CHORDS	SIZE	LUMBER	DESCR.
A - C	2x4	DRY No.2	SPF
C - F	2x4	DRY No.2	SPF
F - H	2x4	DRY No.2	SPF
I - H	2x4	DRY No.2	SPF
O - B	2x4	DRY No.2	SPF
O - L	2x4	DRY No.2	SPF
L - I	2x4	DRY No.2	SPF

ALL WEBS EXCEPT	2x3	DRY	No.2	SPF
C - M	2x4	DRY	No.2	SPF
M - E	2x4	DRY	No.2	SPF
K - G	2x4	DRY	No.2	SPF
J - H	2x4	DRY	No.2	SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMVW+p	MT20	4.0	6.0	2.25	2.00
C	TTWW+m	MT20	5.0	6.0	1.75	1.50
D	TMW+w	MT20	2.0	4.0		
E	TMWW-t	MT20	4.0	4.0		
F	TS-t	MT20	3.0	6.0		
G	TMWW-t	MT20	4.0	4.0		
H	TMVW-t	MT20	4.0	6.0	1.75	3.00
I	BMV1+p	MT20	2.0	4.0		
J	BMWW-t	MT20	4.0	4.0	1.50	1.50
K	BMWW-t	MT20	4.0	4.0		
L	BS-t	MT20	3.0	6.0		
M	BMWWW-t	MT20	5.0	6.0		
N	BMWW-t	MT20	4.0	4.0	2.00	1.75
O	BMV1+p	MT20	2.0	4.0		

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2



DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER

BEARINGS

	FACTORED GROSS REACTION	MAXIMUM FACTORED GROSS REACTION	INPUT BRG	REQRD BRG
JT	VERT 1510	HORZ 0	DOWN 1510	HORZ 0
I	1510	0	0	1-10
O	1619	0	0	5-8

UNFACTORED REACTIONS

	1ST LCASE COMBINED	MAX./MIN. SNOW	MIN. LIVE	MAX. PERM. LIVE	WIND	DEAD	SOIL
JT	1076	657 / 0	0 / 0	0 / 0	0 / 0	419 / 0	0 / 0
I	1152	716 / 0	0 / 0	0 / 0	0 / 0	436 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) I, O

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.79 FT.

MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

1 LATERAL BRACE(S) AT 1 / 2 LENGTH OF H-I, C-N, D-M, E-M, E-K, G-J.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. LC1 CSI (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. UNBRACED LENGTH	MEMB. MAX. FACTORED FORCE (LBS)
FR-TO		FROM TO		FR-TO			
A- B	0 / 42	-78.0 -78.0	0.11 (1)	10.00	N- C	-131 / 38	0.06 (1)
B- C	-1304 / 0	-78.0 -78.0	0.58 (1)	5.02	C- M	0 / 881	0.14 (1)
C- D	-1384 / 0	-78.0 -78.0	0.56 (1)	4.81	M- D	-563 / 0	0.27 (1)
D- E	-1385 / 0	-78.0 -78.0	0.55 (1)	4.81	M- E	-22 / 0	0.01 (1)
E- F	-1398 / 0	-78.0 -78.0	0.56 (1)	4.79	K- E	-442 / 0	0.21 (1)
F- G	-1398 / 0	-78.0 -78.0	0.56 (1)	4.79	K- G	0 / 698	0.11 (1)
G- H	-975 / 0	-78.0 -78.0	0.52 (1)	5.54	J- G	-1127 / 0	0.54 (1)
I- H	-1462 / 0	0.0 0.0	0.50 (1)	5.41	J- H	0 / 1595	0.26 (1)
O- B	-1578 / 0	0.0 0.0	0.19 (1)	6.57	B- N	0 / 884	0.20 (1)
O- N	0 / 0	-18.5 -18.5	0.16 (4)	10.00			
N- M	0 / 844	-18.5 -18.5	0.24 (4)	10.00			
M- L	0 / 1398	-18.5 -18.5	0.30 (1)	10.00			
L- K	0 / 1398	-18.5 -18.5	0.30 (1)	10.00			
K- J	0 / 975	-18.5 -18.5	0.28 (4)	10.00			
J- I	0 / 0	-18.5 -18.5	0.19 (4)	10.00			

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL = 21.0	PSF
	DL = 6.0	PSF
BOT CH.	LL = 0.0	PSF
	DL = 7.4	PSF
TOTAL LOAD	= 34.4	PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBC 2015

THIS DESIGN COMPLIES WITH:

- PART 9 OF CBC 2018 , ABC 2019

- PART 9 OF OBC 2012 (2019 AMENDMENT)

- CSA 086-14

- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.04")

CALCULATED VERT. DEFL.(LL) = L/ 999 (0.06")

ALLOWABLE DEFL.(TL)= L/360 (1.04")

CALCULATED VERT. DEFL.(TL) = L/ 999 (0.13")

CSI: TC=0.58/1.00 (B-C:1) , BC=0.30/1.00 (K-M:1) , WB=0.54/1.00 (G-J:1) , SSI=0.24/1.00 (G-H:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10

COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES

PLATE	GRIP(DRY)	SHEAR (PSI)	SECTION (PLI)
	MAX MIN	MAX MIN	MAX MIN
MT20	650 371	1747 788	1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.89 (B) (INPUT = 0.90)

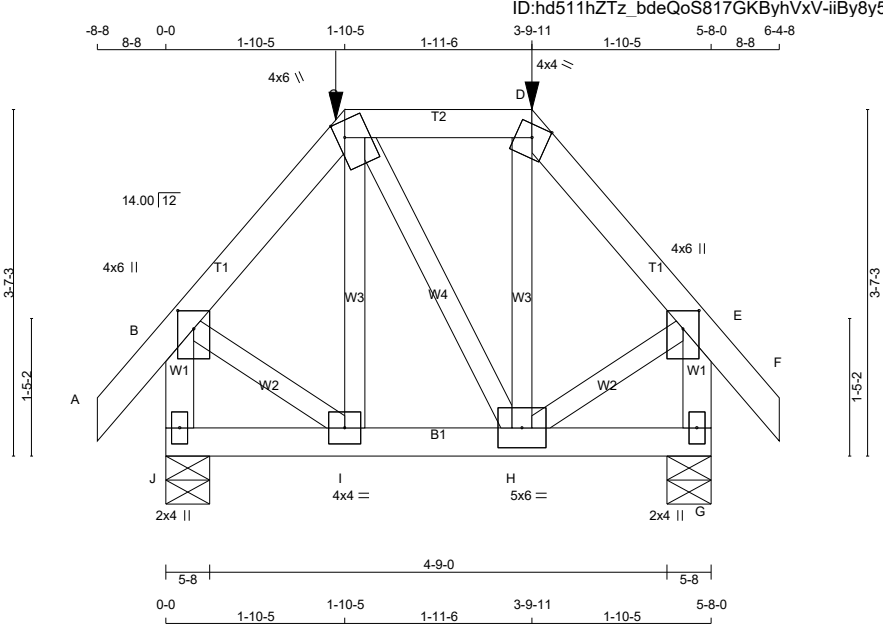
JSI METAL= 0.52 (B) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336324	H93		1	TRUSS DESC. JT 45147	E21104091

Alpa Roof Truss, Maple

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ID:hd511hZTz_bdeQoS817GKByhVxV-iiBy8y5VLXn9Le_IY_79lzhzGqtlKQ0GOnbAiyTp6d



TOTAL WEIGHT = 32 lb [M]

LUMBER			
N. L. G. A. RULES			
CHORDS	SIZE	LUMBER	DESCR.
A - C	2x4	DRY No.2	SPF
C - D	2x4	DRY No.2	SPF
D - F	2x4	DRY No.2	SPF
J - B	2x4	DRY No.2	SPF
G - E	2x4	DRY No.2	SPF
J - G	2x4	DRY No.2	SPF
ALL WEBS EXCEPT	2x3	DRY No.2	SPF
DRY: SEASONED LUMBER.			

PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y X
B	TMVW+p	MT20	4.0	6.0	2.25 2.00
C	TTWW+m	MT20	4.0	6.0	2.00 1.00
D	TTW-m	MT20	4.0	4.0	Edge
E	TMVW+p	MT20	4.0	6.0	2.25 2.00
G	BMV1+p	MT20	2.0	4.0	
H	BMWW-t	MT20	5.0	6.0	
I	BMWW-t	MT20	4.0	4.0	
J	BMV1+p	MT20	2.0	4.0	

Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.

DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER

BEARINGS		FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG IN-SX		REQRD BRG IN-SX	
JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX	IN-SX	IN-SX
J	455	0	455	0	0	5-8	1-8	1-8	1-8
G	455	0	455	0	0	5-8	1-8	1-8	1-8

UNFACTORED REACTIONS		1ST LCASE		MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL	DEAD	SOIL
J	323	203 / 0	0 / 0	0 / 0	0 / 0	120 / 0	0 / 0	120 / 0	0 / 0
G	323	203 / 0	0 / 0	0 / 0	0 / 0	120 / 0	0 / 0	120 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) J, G

BRACING
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

LOADING				TOTAL LOAD CASES: (4)			
CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 MAX CSI (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. FACTORED CSI (LC)	
FR-TO		FROM TO		FR-TO			
A-B	0 / 24	-78.0 -78.0	0.04 (1)	I-C	-38 / 25	0.01 (4)	
B-C	-265 / 0	-78.0 -78.0	0.05 (1)	C-H	0 / 0	0.00 (1)	
C-D	-169 / 0	-114.5 -114.5	0.08 (1)	H-D	-39 / 26	0.01 (4)	
D-E	-265 / 0	-78.0 -78.0	0.05 (1)	B-I	0 / 194	0.05 (1)	
E-F	0 / 24	-78.0 -78.0	0.04 (1)	H-E	0 / 194	0.05 (1)	
J-B	-431 / 0	0.0 0.0	0.05 (1)				
G-E	-431 / 0	0.0 0.0	0.05 (1)				
J-I	0 / 0	-27.2 -27.2	0.02 (4)				
I-H	0 / 170	-27.2 -27.2	0.04 (4)				
H-G	0 / 0	-27.2 -27.2	0.02 (4)				

FACTORED CONCENTRATED LOADS (LBS)							
JT	LOC.	LC1	MAX- MAX+	FACE	DIR.	TYPE	HEEL CONN.
C	1-10-5	-57	-57	FRONT	VERT	TOTAL	--- C1
D	3-9-11	-57	-57	FRONT	VERT	TOTAL	--- C1

DESIGN CRITERIA

SPECIFIED LOADS:		
TOP CH.	LL = 21.0	PSF
	DL = 6.0	PSF
BOT CH.	LL = 0.0	PSF
	DL = 7.4	PSF
TOTAL LOAD	= 34.4	PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM

GIRDER TYPE: CPrimeHip
SIDE SETBACK = 1-10-5
END SETBACK = 3-10-8
END WALL WIDTH = 0-0
CORNER FRAMING TYPE: CONVENTIONAL
END JACK TYPE: CONVENTIONAL
APPLIED TO FRONT SIDE
- ADDTL LOADS BASED ON 55 % OF GSL.

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015

THIS DESIGN COMPLIES WITH:
- PART 9 OF CBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.19")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")
ALLOWABLE DEFL.(TL)= L/360 (0.19")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.00")

CSI: TC=0.08/1.00 (C-D:1) , BC=0.04/1.00 (H-I:4) , WB=0.05/1.00 (B-I:1) , SSI=0.10/1.00 (C-D:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.00
COMP=1.00 SHEAR=1.00 TENS= 1.00

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES			
PLATE GRIP(DRY)	SHEAR	SECTION	
(PSI)	(PLI)	(PLI)	
MAX MIN	MAX MIN	MAX MIN	
MT20	650 371	1747 788	1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.24 (B) (INPUT = 0.90)
JSI METAL= 0.12 (B) (INPUT = 1.00)

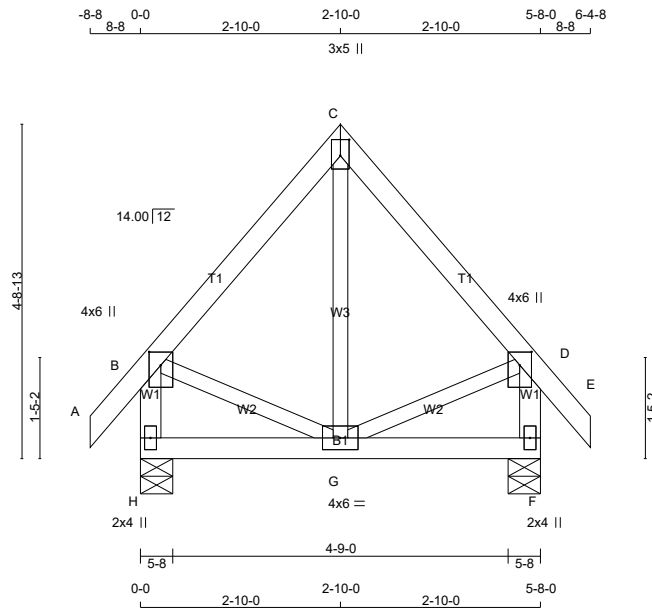
LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2



Alpa Roof Truss, Maple

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Scale = 1:32.6



TOTAL WEIGHT = 30 lb

N. L. G. A. RULES				
CHORDS	SIZE		LUMBER	DESCR.
A - C	2x4	DRY	No.2	SPF
C - E	2x4	DRY	No.2	SPF
H - B	2x4	DRY	No.2	SPF
F - D	2x4	DRY	No.2	SPF
H - F	2x4	DRY	No.2	SPF
ALL WEBS EXCEPT	2x3	DRY	No.2	SPF

DRY: SEASONED LUMBER.

JT	TYPE	PLATES	W	LEN	Y	X
B	TMVW+p	MT20	4.0	6.0	2.25	2.00
C	TTW+p	MT20	3.0	5.0	2.75	1.50
D	TMVW+p	MT20	4.0	6.0	2.25	2.00
F	BMV1+p	MT20	2.0	4.0		
G	BMVWW-t	MT20	4.0	6.0		
H	BMV1+p	MT20	2.0	4.0		

BEARINGS		FACTORED			MAXIMUM FACTORED			INPUT	REQD
	GROSS REACTION		GROSS REACTION			BRG		BRG	
JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX		IN-SX	
H	337	0	337	0	0	5-8		1-8	
F	337	0	337	0	0	5-8		1-8	

1ST LCASE		MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
H	239	153 / 0	0 / 0	0 / 0	0 / 0	86 / 0	0 / 0
F	239	153 / 0	0 / 0	0 / 0	0 / 0	86 / 0	0 / 0

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

TOTAL LOAD CASES: (4)

CHORDS					WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 MAX	MAX. UNBRAC	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. FACTORED CSI (LC)	
FR-TO		FROM TO		LENGTH	FR-TO			
A-B	0 / 24	-78.0	-78.0	0.04 (1)	10.00	G-C	-6 / 43 0.01 (4)	
B-C	-142 / 0	-78.0	-78.0	0.08 (1)	6.25	B-G	0 / 98 0.02 (1)	
C-D	-142 / 0	-78.0	-78.0	0.08 (1)	6.25	G-D	0 / 98 0.02 (1)	
D-E	0 / 24	-78.0	-78.0	0.04 (1)	10.00			
H-B	-316 / 0	0.0	0.0	0.03 (1)	7.81			
F-D	-316 / 0	0.0	0.0	0.03 (1)	7.81			
H-G	0 / 0	-18.5	-18.5	0.04 (4)	10.00			
G-F	0 / 0	-18.5	-18.5	0.04 (4)	10.00			

SPECIFIED LOADS:				
TOP	CH.	LL =	21.0	PSF
		DL =	6.0	PSF
BOT	CH.	LL =	0.0	PSF
		DL =	7.4	PSF
TOTAL LOAD		=	34.4	PSF

THIS TRUSS IS DESIGNED FOR RESIDENTIAL
OR SMALL BUILDING REQUIREMENTS OF PART
9, NBCC 2015

THIS DESIGN COMPLIES WITH:

- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.19")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")
ALLOWABLE DEFL.(TL)= L/360 (0.19")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.00")

CSI: TC=0.08/1.00 (C-D:1), BC=0.04/1.00 (F-G:4),
WB=0.02/1.00 (B-G:1), SSI=0.06/1.00 (C-D:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES					
PLATE	GRIP(DRY)		SHEAR		SECTION
	(PSI)		(PLI)		(PLI)
	MAX	MIN	MAX	MIN	MAX MIN
MT20	650	371	1747	788	1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

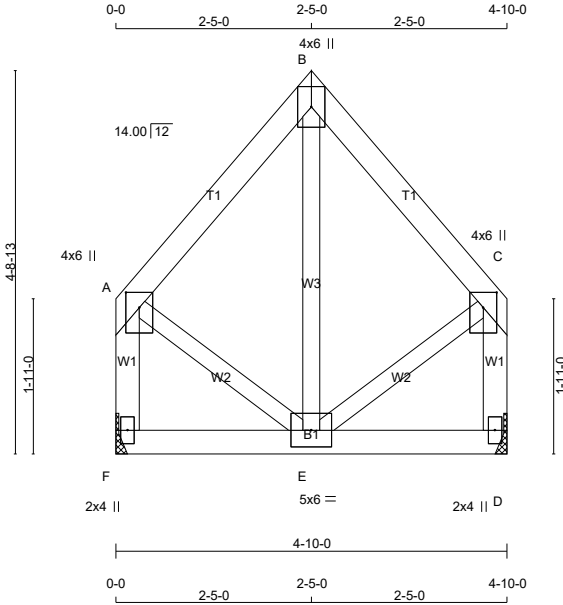
JSI GRIP= 0.18 (D) (INPUT = 0.90)
JSI METAL= 0.09 (B) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336324	H94S		1	TRUSS DESC. JT 45147	E21104093

Alpa Roof Truss, Maple

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ID:hd511hZTz_bdeQoS817GKByhVxV-f4JiZe6mt81tay88gO9dqOo2q4WWDEPJjiGiFayTp6b



TOTAL WEIGHT = 2 X 26 = 51 lb

[M][F]

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
A - B	2x4	DRY	No.2	SPF
B - C	2x4	DRY	No.2	SPF
F - A	2x4	DRY	No.2	SPF
D - C	2x4	DRY	No.2	SPF
F - D	2x4	DRY	No.2	SPF
ALL WEBS EXCEPT	2x3	DRY	No.2	SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
A	TMVW+p	MT20	4.0	6.0	2.25	2.00
B	TTW+p	MT20	4.0	6.0		
C	TMVW+p	MT20	4.0	6.0	2.25	2.00
D	BMV1+p	MT20	2.0	4.0		
E	BMWVW-t	MT20	5.0	6.0		
F	BMV1+p	MT20	2.0	4.0		

DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER

BEARINGS

	FACTORED GROSS REACTION	MAXIMUM FACTORED GROSS REACTION	INPUT BRG	REQRD BRG
JT	VERT	HORZ	DOWN	HORZ
F	233	0	233	0
D	233	0	233	0

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT F, D. MINIMUM BEARING LENGTH AT JOINT F = 1-8, JOINT D = 1-8.

UNFACTORED REACTIONS

1ST LCASE	MAX./MIN. COMPONENT REACTIONS						
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
F	166	101 / 0	0 / 0	0 / 0	0 / 0	65 / 0	0 / 0
D	166	101 / 0	0 / 0	0 / 0	0 / 0	65 / 0	0 / 0

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.

MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 MAX CSI (LC)	MAX. UNBRAC LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
FR-TO		FROM TO			FR-TO		
A- B	-103 / 0	-78.0 -78.0	0.06 (1)	6.25	E- B	-32 / 25	0.01 (1)
B- C	-103 / 0	-78.0 -78.0	0.06 (1)	6.25	A- E	0 / 80	0.02 (1)
F- A	-215 / 0	0.0 0.0	0.02 (1)	7.81	E- C	0 / 80	0.02 (1)
D- C	-215 / 0	0.0 0.0	0.02 (1)	7.81			
F- E	0 / 0	-18.5 -18.5	0.03 (4)	10.00			
E- D	0 / 0	-18.5 -18.5	0.03 (4)	10.00			

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH. LL = 21.0 PSF

DL = 6.0 PSF

BOT CH. LL = 0.0 PSF

DL = 7.4 PSF

TOTAL LOAD = 34.4 PSF

SPACING = 24.0 IN./C/C

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015

THIS DESIGN COMPLIES WITH:

- PART 9 OF CBC 2018 , ABC 2019

- PART 9 OF OBC 2012 (2019 AMENDMENT)

- CSA 086-14

- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.19")

CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")

ALLOWABLE DEFL.(TL)= L/360 (0.19")

CALCULATED VERT. DEFL.(TL) = L/ 999 (0.00")

CSI: TC=0.06/1.00 (A-B:1) , BC=0.03/1.00 (E-F:4) ,

WB=0.02/1.00 (C-E:1) , SSI=0.05/1.00 (A-B:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10

COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES

PLATE GRIP(DRY) SHEAR SECTION

(PSI) (PLI) (PLI)

MAX MIN MAX MIN MAX MIN

MT20 650 371 1747 788 1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.12 (C) (INPUT = 0.90)

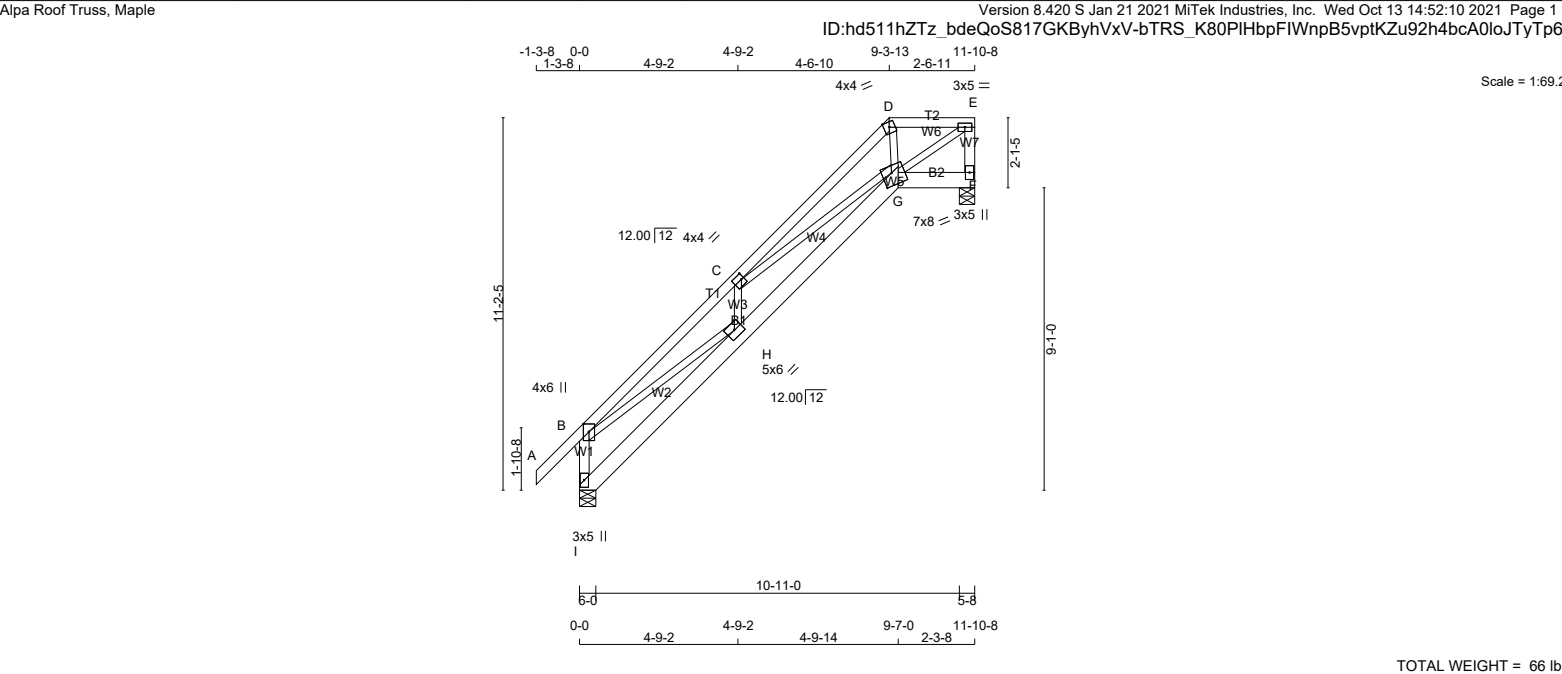
JSI METAL= 0.06 (A) (INPUT = 1.00)

LATERAL BRACE(S) SHOWN SHALL BE

2X4 SPF#2



JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336324	H95		1	TRUSS DESC. JT 45147	E21104094



TOTAL WEIGHT = 66 lb [M][F]

N. L. G. A. RULES				BUILDING DESIGNER										DESIGN CRITERIA							
CHORDS SIZE				LUMBER		DESCR.		BEARINGS								SPECIFIED LOADS:					
I - B	2x4	DRY	No.2	SPF		FACTORED				MAXIMUM FACTORED				INPUT		REQRD		TOP CH.	LL =	21.0	PSF
A - D	2x4	DRY	No.2	SPF		GROSS REACTION				GROSS REACTION				BRG				DL =	6.0	PSF	
D - E	2x4	DRY	No.2	SPF		JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX					BOT CH.	LL =	0.0	PSF
F - E	2x4	DRY	No.2	SPF		I	682	0	682	0	0	6-0	1-8					DL =	7.4	PSF	
I - G	2x6	DRY	No.2	SPF		F	573	0	573	0	0	5-8	1-8					TOTAL LOAD	=	34.4	PSF
G - F	2x6	DRY	No.2	SPF																	
ALL WEBS 2x3 DRY				No.2		SPF		UNFACTORED REACTIONS													
DRY: SEASONED LUMBER.						1ST LCASE MAX./MIN. COMPONENT REACTIONS															

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMVW+p	MT20	4.0	6.0	2.75	2.00
C	TMWW-t	MT20	4.0	4.0	2.00	1.00
D	TTW-m	MT20	4.0	4.0	Edge	
E	TMVW-t	MT20	3.0	5.0		
F	BMV1+p	MT20	3.0	5.0		
G	BBWWW-m	MT20	7.0	8.0	4.50	3.50
H	BMWW-t	MT20	5.0	6.0		
I	BMV1+p	MT20	3.0	5.0		

Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2

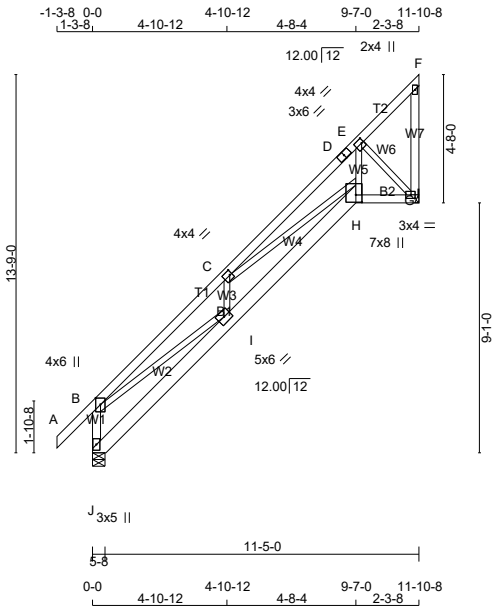


JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336324	H96		1	TRUSS DESC. JT 45147	E21104095

Alpa Roof Truss, Maple

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ID:hd511hZTz_bdeQoS817GKByhVxV-XrYDO0AGxNYJ3ZRvvEEZ_EzgvhqX9_9ueKEvOLyTp6X



TOTAL WEIGHT = 8 X 69 = 556 lb

LUMBER				
N. L. G. A. RULES				
CHORDS	SIZE	LUMBER	DESCR.	
J - B	2x4	DRY	No.2	SPF
A - D	2x4	DRY	No.2	SPF
D - F	2x4	DRY	No.2	SPF
G - F	2x4	DRY	No.2	SPF
J - H	2x6	DRY	No.2	SPF
H - G	2x4	DRY	No.2	SPF
ALL WEBS 2x3 DRY No.2 SPF				
DRY: SEASONED LUMBER.				

PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y X
B	TMVW+p	MT20	4.0	6.0	2.75 2.00
C	TMWW-t	MT20	4.0	4.0	2.00 1.00
D	TS-t	MT20	3.0	6.0	
E	TMWW-t	MT20	4.0	4.0	2.00 1.00
F	TMV+p	MT20	2.0	4.0	
G	BMVW1-t	MT20	3.0	4.0	1.50 1.75
H	BBWW+p	MT20	7.0	8.0	3.25 2.75
I	BMWW-t	MT20	5.0	6.0	
J	BMV1+p	MT20	3.0	5.0	

DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER

	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG	REQD BRG
	VERT	HORZ	DOWN	HORZ	IN-SX	IN-SX
JT	682	0	682	0	5-8	1-8
G	573	0	573	0	MECHANICAL	

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT G. MINIMUM BEARING LENGTH AT JOINT G = 1-8.

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS					DEAD	SOIL
		SNOW	LIVE	PERM.LIVE	WIND			
J	484	308 / 0	0 / 0	0 / 0	0 / 0	176 / 0	0 / 0	0 / 0
G	408	249 / 0	0 / 0	0 / 0	0 / 0	159 / 0	0 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) J

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.29 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

LOADING

TOTAL LOAD CASES: (4)

CHORDS					WEBS				
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1	MAX CSI (LC)	MAX. UNBRAC LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)	
FR-TO		FROM	TO			FR-TO			
J-B	-622 / 0	0.0	0.0	0.07 (1)	7.81	B-I	0 / 1181	0.27 (1)	
A-B	0 / 38	-78.0	-78.0	0.11 (1)	10.00	I-C	-242 / 0	0.04 (1)	
B-C	-1383 / 0	-78.0	-78.0	0.24 (1)	5.29	C-H	-416 / 0	0.29 (1)	
C-D	-850 / 0	-78.0	-78.0	0.19 (1)	6.25	H-E	0 / 819	0.18 (1)	
D-E	-850 / 0	-78.0	-78.0	0.19 (1)	6.25	E-G	-770 / 0	0.14 (1)	
E-F	-35 / 0	-78.0	-78.0	0.11 (1)	6.25				
G-F	-36 / 0	0.0	0.0	0.01 (1)	7.81				
J-I	-9 / 2	-18.5	-18.5	0.07 (1)	10.00				
I-H	0 / 1342	-18.5	-18.5	0.22 (1)	10.00				
H-G	0 / 553	-18.5	-18.5	0.11 (1)	10.00				

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	21.0	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.4	PSF
TOTAL LOAD	=	34.4	PSF	

SPACING = 24.0 IN./C

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015

THIS DESIGN COMPLIES WITH:
- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 20.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.40")
CALCULATED VERT. DEFL.(LL)= L/ 999 (0.05")
ALLOWABLE DEFL.(TL)= L/360 (0.40")
CALCULATED VERT. DEFL.(TL)= L/ 999 (0.09")

CSI: TC=0.24/1.00 (B-C:1) , BC=0.22/1.00 (H-I:1) ,
WB=0.29/1.00 (C-H:1) , SSI=0.12/1.00 (B-C:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES					
PLATE	GRIP(DRY)	SHEAR	SECTION		
	(PSI)	(PLI)	(PLI)		
	MAX	MIN	MAX	MIN	MAX
MT20	650	371	1747	788	1987

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.83 (E) (INPUT = 0.90)
JSI METAL= 0.59 (B) (INPUT = 1.00)

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2

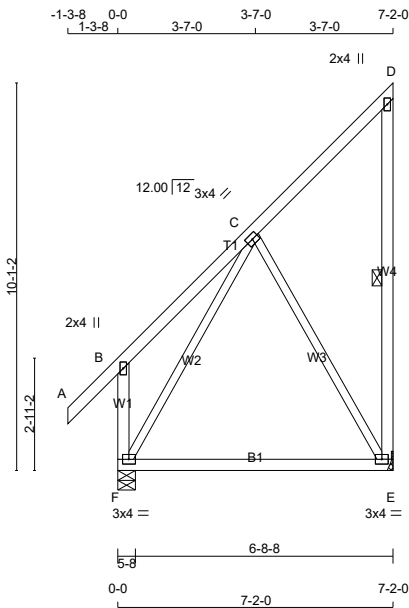


JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336324	H97		1	TRUSS DESC. JT 45147	E21104096

Alpa Roof Truss, Maple

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ID:hd511hZTz bdeQoS817GKByhVxV-?26bcMAuiggAqi05SyloXSVso59iuT?2tzzTwoyTp6W



TOTAL WEIGHT = 6 X 47 = 279 lb

[M][F]

LUMBER				
N. L. G. A. RULES				
CHORDS	SIZE	LUMBER	DESCR.	
A - D	2x4	DRY	No.2	SPF
E - D	2x4	DRY	No.2	SPF
F - B	2x4	DRY	No.2	SPF
F - E	2x4	DRY	No.2	SPF
ALL WEBS	2x3	DRY	No.2	SPF
EXCEPT				
DRY: SEASONED LUMBER.				

PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y X
B	TMV+p	MT20	2.0	4.0	
C	TMWW-t	MT20	3.0	4.0	
D	TMV+p	MT20	2.0	4.0	
E	BMVW1-t	MT20	3.0	4.0	
F	BMVW1-t	MT20	3.0	4.0	

DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER

BEARINGS

	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG	REQRD BRG	
	VERT	HORZ	DOWN	HORZ		IN-SX	IN-SX
JT							
E	346	0	346	0	0	MECHANICAL	
F	454	0	454	0	0	5-8	1-8

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT E. MINIMUM BEARING LENGTH AT JOINT E = 1-8.

UNFACTORED REACTIONS

	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS					
		SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
JT	246	150 / 0	0 / 0	0 / 0	0 / 0	96 / 0	0 / 0
F	322	209 / 0	0 / 0	0 / 0	0 / 0	113 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) F

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

1 LATERAL BRACE(S) AT 1/2 LENGTH OF D-E.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)		MAX. UNBRAC LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
		FROM	TO				
FR-TO							
A-B	0 / 38	-78.0	-78.0	0.11 (1)	10.00	C-E -199 / 0	0.19 (1)
B-C	0 / 25	-78.0	-78.0	0.17 (1)	10.00	F-C -205 / 0	0.18 (1)
C-D	-24 / 0	-78.0	-78.0	0.13 (1)	6.25		
E-D	-109 / 0	0.0	0.0	0.05 (1)	6.25		
F-B	-210 / 0	0.0	0.0	0.03 (1)	7.81		
F-E	0 / 102	-18.5	-18.5	0.28 (4)	10.00		

DESIGN CRITERIA

SPECIFIED LOADS:

TOP	CH.	LL	=	21.0	PSF
		DL	=	6.0	PSF
BOT	CH.	LL	=	0.0	PSF
		DL	=	7.4	PSF
TOTAL LOAD				=	34.4 PSF

SPACING = 24.0 IN. C/C

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015

THIS DESIGN COMPLIES WITH:

- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(TL)= L/360 (0.24")
CALCULATED VERT. DEFL.(TL) = L/723 (0.12")

CSI: TC=0.17/1.00 (B-C:1) , BC=0.28/1.00 (E-F:4) ,
WB=0.19/1.00 (C-E:1) , SSI=0.10/1.00 (C-D:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES

PLATE	GRIP(DRY)	SHEAR	SECTION
	(PSI)	(PLI)	(PLI)
	MAX	MIN	MAX MIN
MT20	650	371	1747 788 1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.32 (C) (INPUT = 0.90)
JSI METAL= 0.11 (B) (INPUT = 1.00)

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2

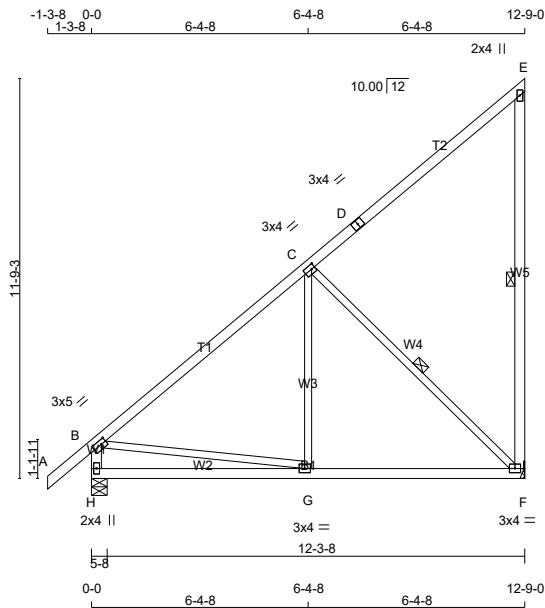


JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336324	H98		1	TRUSS DESC. JT 45147	E21104097

Alpa Roof Truss, Maple

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TOTAL WEIGHT = 3 X 66 = 197 lb

[M][F]

LUMBER				
N. L. G. A. RULES				
CHORDS	SIZE	LUMBER	DESCR.	
A - D	2x4	DRY	No.2	SPF
D - E	2x4	DRY	No.2	SPF
F - E	2x4	DRY	No.2	SPF
H - B	2x4	DRY	No.2	SPF
H - F	2x4	DRY	No.2	SPF
ALL WEBS	2x3	DRY	No.2	SPF
EXCEPT				
DRY: SEASONED LUMBER.				

PLATES (table is in inches)						
JT	TYPE	PLATES	W	LEN	Y	X
B	TMVW-t	MT20	3.0	5.0	1.50	1.75
C	TMWW-t	MT20	3.0	4.0	1.50	1.25
D	TS-t	MT20	3.0	4.0		
E	TMV+p	MT20	2.0	4.0		
F	BMVW1-t	MT20	3.0	4.0		
G	BMWW-t	MT20	3.0	4.0		
H	BMV1+p	MT20	2.0	4.0		

DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER

BEARINGS

	FACTORED GROSS REACTION	MAXIMUM FACTORED GROSS REACTION	INPUT	REQRD
JT	VERT	HORZ	DOWN	HORZ
F	615	0	615	0
H	723	0	723	0

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT F. MINIMUM BEARING LENGTH AT JOINT F = 1-8.

UNFACTORED REACTIONS

1ST LCASE	MAX./MIN. COMPONENT REACTIONS						
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
F	438	268 / 0	0 / 0	0 / 0	0 / 0	171 / 0	0 / 0
H	513	326 / 0	0 / 0	0 / 0	0 / 0	187 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) H

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

1 LATERAL BRACE(S) AT 1/2 LENGTH OF E-F, C-F.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. CSI (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. CSI (LC)	
FR-TO		FROM TO		LENGTH FR-TO			
A-B	0 / 35	-78.0 -78.0	0.11 (1)	10.00	G-C	0 / 145	0.05 (4)
B-C	-480 / 0	-78.0 -78.0	0.43 (1)	6.25	C-F	-553 / 0	0.29 (1)
C-D	-39 / 0	-78.0 -78.0	0.42 (1)	6.25	B-G	0 / 402	0.09 (1)
D-E	-39 / 0	-78.0 -78.0	0.42 (1)	6.25			
F-E	-187 / 0	0.0 0.0	0.14 (1)	6.25			
H-B	-678 / 0	0.0 0.0	0.07 (1)	7.81			
H-G	0 / 0	-18.5 -18.5	0.21 (4)	10.00			
G-F	0 / 399	-18.5 -18.5	0.25 (4)	10.00			

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	21.0	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.4	PSF
TOTAL LOAD	=	34.4	PSF	

SPACING = 24.0 IN./C

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015

THIS DESIGN COMPLIES WITH:
- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.42")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.01")
ALLOWABLE DEFL.(TL)= L/360 (0.42")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.04")

CSI: TC=0.43/1.00 (B-C:1) , BC=0.25/1.00 (F-G:4) ,
WB=0.29/1.00 (C-F:1) , SSI=0.19/1.00 (B-C:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES					
PLATE GRIP(DRY)	SHEAR	SECTION			
(PSI)	(PLI)	(PLI)			
MAX MIN	MAX MIN	MAX MIN			
MT20	650	371	1747	788	1987

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.68 (C) (INPUT = 0.90)
JSI METAL= 0.20 (B) (INPUT = 1.00)

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2

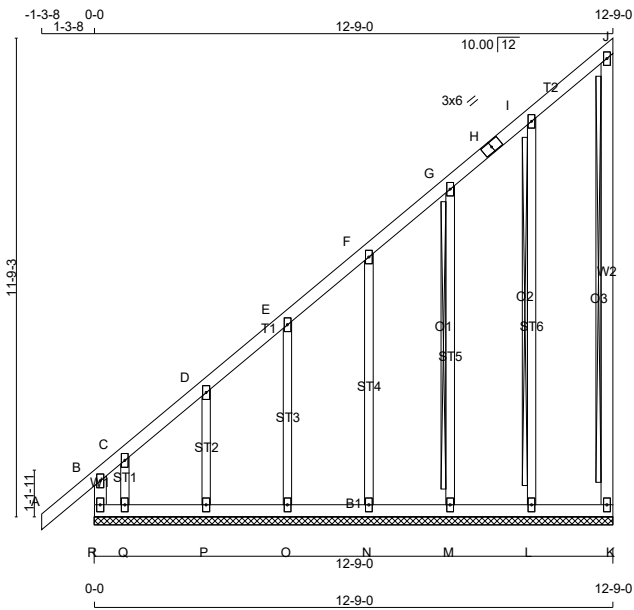


JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336324	H98G		1	TRUSS DESC. JT 45147	E21104098

Alpa Roof Truss, Maple

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ID:hd511hZTz bdeQoS817GKByhVxV-QdokENDn b2IXAlq84IV847O1IFi5p1UZxC7X7yTp6T



TOTAL WEIGHT = 75 lb [M]

LUMBER				
N. L. G. A. RULES				
CHORDS	SIZE	LUMBER	DESCR.	
R - B	2x4 DRY	No.2	SPF	
A - H	2x4 DRY	No.2	SPF	
H - J	2x4 DRY	No.2	SPF	
K - J	2x4 DRY	No.2	SPF	
R - K	2x4 DRY	No.2	SPF	
ALL WEBS	2x3 DRY	No.2	SPF	
ALL GABLE WEBS	2x3 DRY	No.2	SPF	
DRY: SEASONED LUMBER.				
GABLE STUDS SPACED AT 2'-0" O.C.				

PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y X
B	TMV+p	MT20	2.0	4.0	
C, D, E, F, G, I					
C	TMW+w	MT20	2.0	4.0	
H	TS-t	MT20	3.0	6.0	
J	TMV+p	MT20	2.0	4.0	
K	BMV1+p	MT20	2.0	4.0	
L, M, N, O, P, Q					
L	BMW1+w	MT20	2.0	4.0	
R	BMV1+p	MT20	2.0	4.0	

DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER BEARINGS

THIS TRUSS DESIGNED FOR CONTINUOUS BEARINGS.

THIS TRUSS REQUIRES RIGID SHEATHING ON EXPOSED FACE.

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S)

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT. OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

2x4 DRY SPF No.2 T-BRACE AT J-K, I-L
2x3 DRY SPF No.2 T-BRACE AT G-M

FASTEN T AND I-BRACES TO NARROW EDGE OF WEB WITH ONE ROW PER PLY OF 3"
COMMON WIRE NAILS @ 6" O.C. WITH 3" MINIMUM END DISTANCE. BRACE MUST COVER 90% OF WEB LENGTH.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN
THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 MAX CSI (LC)	MAX. UNBRACED LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
FR-TO		FROM TO			FR-TO		
R-B	-223 / 0	0.0 0.0	0.03 (1)	7.81	L-I	-169 / 0	0.13 (1)
A-B	0 / 35	-78.0 -78.0	0.11 (1)	10.00	M-G	-153 / 0	0.17 (1)
B-C	-70 / 0	-78.0 -78.0	0.09 (1)	6.25	N-F	-155 / 0	0.12 (1)
C-D	-15 / 0	-78.0 -78.0	0.04 (1)	6.25	O-E	-152 / 0	0.06 (1)
D-E	-14 / 0	-78.0 -78.0	0.04 (1)	6.25	P-D	-161 / 0	0.03 (1)
E-F	-9 / 0	-78.0 -78.0	0.04 (1)	10.00	Q-C	-19 / 0	0.00 (1)
F-G	-6 / 0	-78.0 -78.0	0.04 (1)	10.00			
G-H	-3 / 0	-78.0 -78.0	0.04 (1)	10.00			
H-I	-3 / 0	-78.0 -78.0	0.04 (1)	10.00			
I-J	-8 / 0	-78.0 -78.0	0.04 (1)	10.00			
K-J	-71 / 0	0.0 0.0	0.02 (1)	7.81			
R-Q	0 / 16	-18.5 -18.5	0.03 (1)	10.00			
Q-P	0 / 15	-18.5 -18.5	0.02 (4)	10.00			
P-O	0 / 10	-18.5 -18.5	0.02 (4)	10.00			
O-N	0 / 7	-18.5 -18.5	0.02 (4)	10.00			
N-M	0 / 4	-18.5 -18.5	0.02 (4)	10.00			
M-L	0 / 3	-18.5 -18.5	0.02 (4)	10.00			
L-K	0 / 1	-18.5 -18.5	0.02 (4)	10.00			

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH. LL = 21.0 PSF
DL = 6.0 PSF
BOT CH. LL = 0.0 PSF
DL = 7.4 PSF
TOTAL LOAD = 34.4 PSF

SPACING = 24.0 IN./C

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015

THIS DESIGN COMPLIES WITH:
- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

DESIGN ASSUMPTIONS
-OVERHANG NOT TO BE ALTERED OR CUT OFF.

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

CSI: TC=0.11/1.00 (A-B:1) , BC=0.03/1.00 (Q-R:1) ,
WB=0.17/1.00 (G-M:1) , SSI=0.06/1.00 (A-B:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES
PLATE GRIP(DRY) SHEAR SECTION
(PSI) (PLI) (PLI)
MAX MIN MAX MIN MAX MIN
MT20 650 371 1747 788 1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.17 (B) (INPUT = 0.90)
JSI METAL= 0.13 (B) (INPUT = 1.00)

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2



Alpa Roof Truss, Maple Version 8.420 S Jan 21 2021 MiTek Industries, Inc. Wed Oct 13 14:53:20 2021 Page 1



TOTAL WEIGHT = 2 X 12 = 23 lb

DRY: SEASONED LUMBER.

JT	TYPE	PLATES	W	LEN	Y	X
B	TMV+p	MT20	2.0	4.0		
E	BMV1+p	MT20	2.0	4.0		

	FACTORED		MAXIMUM FACTORED		INPUT	REQD
	GROSS REACTION		GROSS REACTION		BRG	BRG
JT	VERT	HORZ	DOWN	HORZ	IN-SX	IN-SX
E	292	0	292	0	5-8	1-8
C	113	0	113	0	1-8	1-8
D	30	0	34	0	1-8	1-8

SEE MITEK STANDARD DETAIL B97791H FOR CONNECTION TO JOINT(S) C , D

1ST LCASE		MAX MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
E	207	135 / 0	0 / 0	0 / 0	0 / 0	72 / 0	0 / 0
C	78	61 / 0	0 / 0	0 / 0	0 / 0	17 / 0	0 / 0
D	24	0 / 0	0 / 0	0 / 0	0 / 0	24 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) E

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE LATERALLY RESTRAINED.

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 MAX CSI (LC)	MAX. UNBRAC LENGTH	MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX. FACTORED CSI (LC)
FR-TO		FROM TO					
E-B	-250 / 0	0.0	0.0	0.04 (4)	7.81		
A-B	0 / 17	-78.0	-78.0	0.04 (1)	10.00		
B-C	-21 / 0	-78.0	-78.0	0.15 (1)	6.25		
E-D	0 / 0	-18.5	-18.5	0.06 (4)	10.00		

SPECIFIED LOADS:				
TOP	CH.	LL =	21.0	PSF
		DL =	6.0	PSF
BOT	CH.	LL =	0.0	PSF
		DL =	7.4	PSF
TOTAL LOAD		=	34.4	PSF

THIS TRUSS IS DESIGNED FOR RESIDENTIAL
OR SMALL BUILDING REQUIREMENTS OF PART
9, NBCC 2015

THIS DESIGN COMPLIES WITH:

- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

-OVERHANG NOT TO BE ALTERED OR CUT OFF.

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.19")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")
ALLOWABLE DEFL.(TL)= L/360 (0.19")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.01")

CSI: TC=0.15/1.00 (B-C:1), BC=0.06/1.00 (D-E:4), WB=0.00/1.00 (n/a:0), SSI=0.12/1.00 (B-C:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

AUTOSOLVE RIGHT HEEL ONLY

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT.

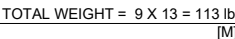
NAIL VALUES						
PLATE	GRIP(DRY)		SHEAR		SECTION	
	(PSI)		(PLI)		(PLI)	
	MAX	MIN	MAX	MIN	MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.15 (B) (INPUT = 0.90)
JSI METAL= 0.13 (B) (INPUT = 1.00)

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PLATES (table is in inches)						
JT	TYPE	PLATES	W	LEN	Y	X
B						
E						
E	TMBMV1+p	MT20	3.0	6.0	3.25	1.50

JT	FACTORED		MAXIMUM FACTORED		INPUT	REQD
	GROSS REACTION		GROSS REACTION		BRG	BRG
	VERT	HORZ	DOWN	HORZ	IN-SX	IN-SX
E	377	0	377	0	0	1-8
C	134	0	134	0	0	1-8
D	34	0	39	0	0	1-8

SEE MITEK STANDARD DETAIL B97791H FOR CONNECTION TO JOINT(S) C , D

1ST LCASE		MAX/MIN COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
E	266	176 / 0	0 / 0	0 / 0	0 / 0	91 / 0	0 / 0
C	93	72 / 0	0 / 0	0 / 0	0 / 0	21 / 0	0 / 0
D	28	0 / 0	0 / 0	0 / 0	0 / 0	28 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) E

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	FACTORED CS1 (LC)	MAX. UNBRAC LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. FACTORED CS1 (LC)
FR-TO		FROM	TO		FR-TO		
E-B	-327 / 0	0.0	0.0	0.09 (4)	7.81		
A-B	0 / 13	-78.0	-78.0	0.10 (1)	10.00		
B-C	-11 / 0	-78.0	-78.0	0.28 (1)	6.25		
E-D	0 / 0	-18.5	-18.5	0.09 (4)	10.00		

LATERAL BRACE(S) SHOWN SHALL BE
2X4 SPF#2



DESIGN CRITERIA

SPECIFIED LOADS:

TOP	CH.	LL	=	21.0	PSF
		DL	=	6.0	PSF
BOT	CH.	LL	=	0.0	PSF
		DL	=	7.4	PSF
TOTAL LOAD				=	34.4 PSF

SPACING = 24.0 IN. C/C

THIS TRUSS IS DESIGNED FOR RESIDENTIAL
OR SMALL BUILDING REQUIREMENTS OF PART
9, NBCC 2015

THIS DESIGN COMPLIES WITH:

- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

DESIGN ASSUMPTIONS

-OVERHANG NOT TO BE ALTERED OR CUT OFF.

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= $L/360$ (0.19")
 CALCULATED VERT. DEFL.(LL) = $L/999$ (0.00")
 ALLOWABLE DEFL.(TL)= $L/360$ (0.19")
 CALCULATED VERT. DEFL.(TL) = $L/999$ (0.01")

CSI: TC=0.28/1.00 (B-C:1) , BC=0.09/1.00 (D-E:4) ,
WB=0.00/1.00 (n/a:0) , SSI=0.17/1.00 (B-C:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

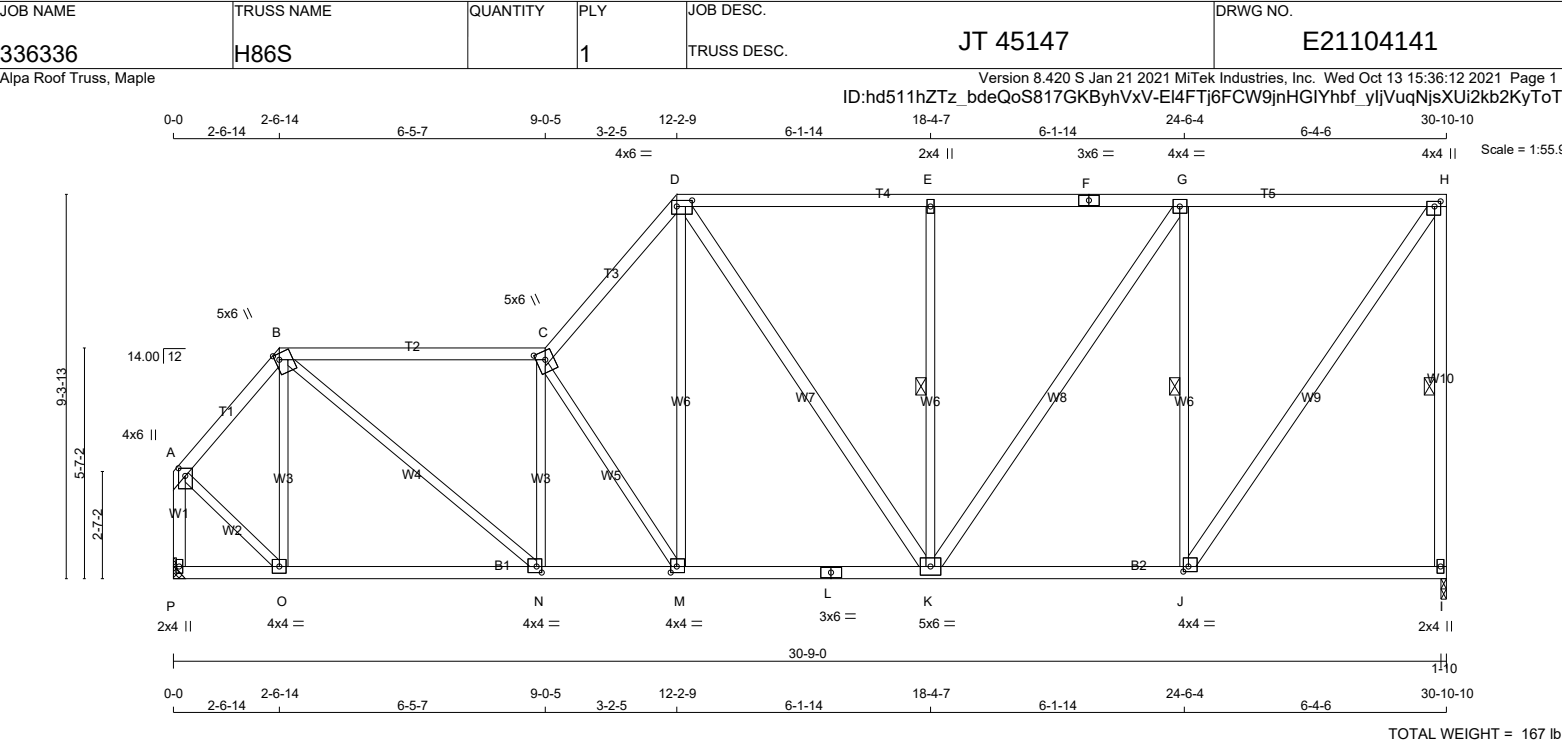
TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES						
PLATE	GRIP(DRY)		SHEAR		SECTION	
	(PSI)		(PLI)		(PLI)	
	MAX	MIN	MAX	MIN	MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.20 (E) (INPUT = 0.90)
JSI METAL= 0.05 (E) (INPUT = 1.00)



TOTAL WEIGHT = 167 lb				
[M]				
LUMBER				
N. L. G. A. RULES				
CHORDS	SIZE	LUMBER	DESCR.	
A - B	2x4	DRY	No.2	SPF
B - C	2x4	DRY	No.2	SPF
C - D	2x4	DRY	No.2	SPF
D - F	2x4	DRY	No.2	SPF
F - H	2x4	DRY	No.2	SPF
I - H	2x4	DRY	No.2	SPF
P - A	2x4	DRY	No.2	SPF
P - L	2x4	DRY	No.2	SPF
L - I	2x4	DRY	No.2	SPF
ALL WEBS	2x3	DRY	No.2	SPF
EXCEPT				
D - K	2x4	DRY	No.2	SPF
K - G	2x4	DRY	No.2	SPF
J - H	2x4	DRY	No.2	SPF
DRY: SEASONED LUMBER.				
PLATES (table is in inches)				
JT	TYPE	PLATES	W	LEN Y X
A	TMVW+p	MT20	4.0	6.0 2.25 2.00
B	TTWW+m	MT20	5.0	6.0 1.75 1.25
C	TTWW+m	MT20	5.0	6.0 2.50 2.50
D	TTWW-l	MT20	4.0	6.0 1.75 4.50
E	TMW+w	MT20	2.0	4.0
F	TS-t	MT20	3.0	6.0
G	TMWW-t	MT20	4.0	4.0
H	TMVW+p	MT20	4.0	4.0 1.50 1.75
I	BMV1+p	MT20	2.0	4.0
J	BMWW-t	MT20	4.0	4.0 1.50 1.50
K	BMWWW-t	MT20	5.0	6.0
L	BS-t	MT20	3.0	6.0
M	BMWW-t	MT20	4.0	4.0 1.75 1.75
N	BMWW-t	MT20	4.0	4.0 1.75 1.50
O	BMWW-t	MT20	4.0	4.0
P	BMV1+p	MT20	2.0	4.0

DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER				
BEARINGS				
	FACTORED	MAXIMUM FACTORED	INPUT	REQRD
	GROSS REACTION	GROSS REACTION	BRG	BRG
JT	VERT	HORZ	DOWN	HORZ
I	1490	0	1490	0
P	1490	0	1490	0
A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT P. MINIMUM BEARING LENGTH AT JOINT P = 1-10.				
UNFACTORED REACTIONS				
	1ST LCASE	MAX./MIN. COMPONENT REACTIONS		
JT	COMBINED	SNOW	LIVE	PERM.LIVE
I	1062	648 / 0	0 / 0	0 / 0
P	1062	648 / 0	0 / 0	0 / 0
BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) I				
BRACING				
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.10 FT.				
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.				
ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.				
1 LATERAL BRACE(S) AT 1/2 LENGTH OF H-I, E-K, G-J.				
END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW				
LOADING				
TOTAL LOAD CASES: (4)				
CHORDS				
	MAX. FACTORED	FACTORED		
MEMB.	FORCE	VERT. LOAD	LC1	MAX
	(LBS)	(PLF)	CSI (LC)	UNBRAC
FR-TO		FROM	TO	LENGTH
A-B	-1067 / 0	-78.0	-78.0	0.10 (1)
B-C	-1794 / 0	-78.0	-78.0	0.70 (1)
C-D	-1868 / 0	-78.0	-78.0	0.20 (1)
D-E	-1266 / 0	-78.0	-78.0	0.45 (1)
E-F	-1266 / 0	-78.0	-78.0	0.49 (1)
F-G	-1266 / 0	-78.0	-78.0	0.49 (1)
G-H	-876 / 0	-78.0	-78.0	0.46 (1)
H-I	-1442 / 0	0.0	0.0	0.59 (1)
P-A	-1489 / 0	0.0	0.0	0.21 (1)
WEBS				
	MAX. FACTORED			
MEMB.	FORCE			
	(LBS)			
CSI (LC)				
O-B	-461 / 0	0.22 (1)		
B-N	0 / 1447	0.33 (1)		
N-C	-844 / 0	0.40 (1)		
C-M	-1122 / 0	0.75 (1)		
M-D	0 / 1036	0.23 (1)		
D-K	0 / 68	0.01 (1)		
K-E	-514 / 0	0.29 (1)		
K-G	0 / 693	0.11 (1)		
J-G	-1112 / 0	0.63 (1)		
J-H	0 / 1520	0.24 (1)		
A-O	0 / 897	0.20 (1)		

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2

Y. WIDYA
100225448
10/13/2021
PROVINCE OF ONTARIO

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH. LL = 21.0 PSF

DL = 6.0 PSF

BOT CH. LL = 0.0 PSF

DL = 7.4 PSF

TOTAL LOAD = 34.4 PSF

SPACING = 24.0 IN. C/C

LOADING IN ALL FLAT SECTIONS BASED ON A SLOPE OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBC 2015

THIS DESIGN COMPLIES WITH:

- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.03")

CALCULATED VERT. DEFL.(LL)= L/ 999 (0.09")

ALLOWABLE DEFL.(TL)= L/360 (1.03")

CALCULATED VERT. DEFL.(TL)= L/ 999 (0.18")

CSI: TC=0.70/1.00 (B-C:1) , BC=0.33/1.00 (M-N:1) , WB=0.75/1.00 (C-M:1) , SSI=0.23/1.00 (G-H:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10 COMP=1.10 SHEAR=1.10 TENS=1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES

PLATE GRIP(DRY) SHEAR SECTION

(PSI) (PLI) (PLI)

MAX MIN MAX MIN MAX MIN

MT20 650 371 1747 788 1987 1873

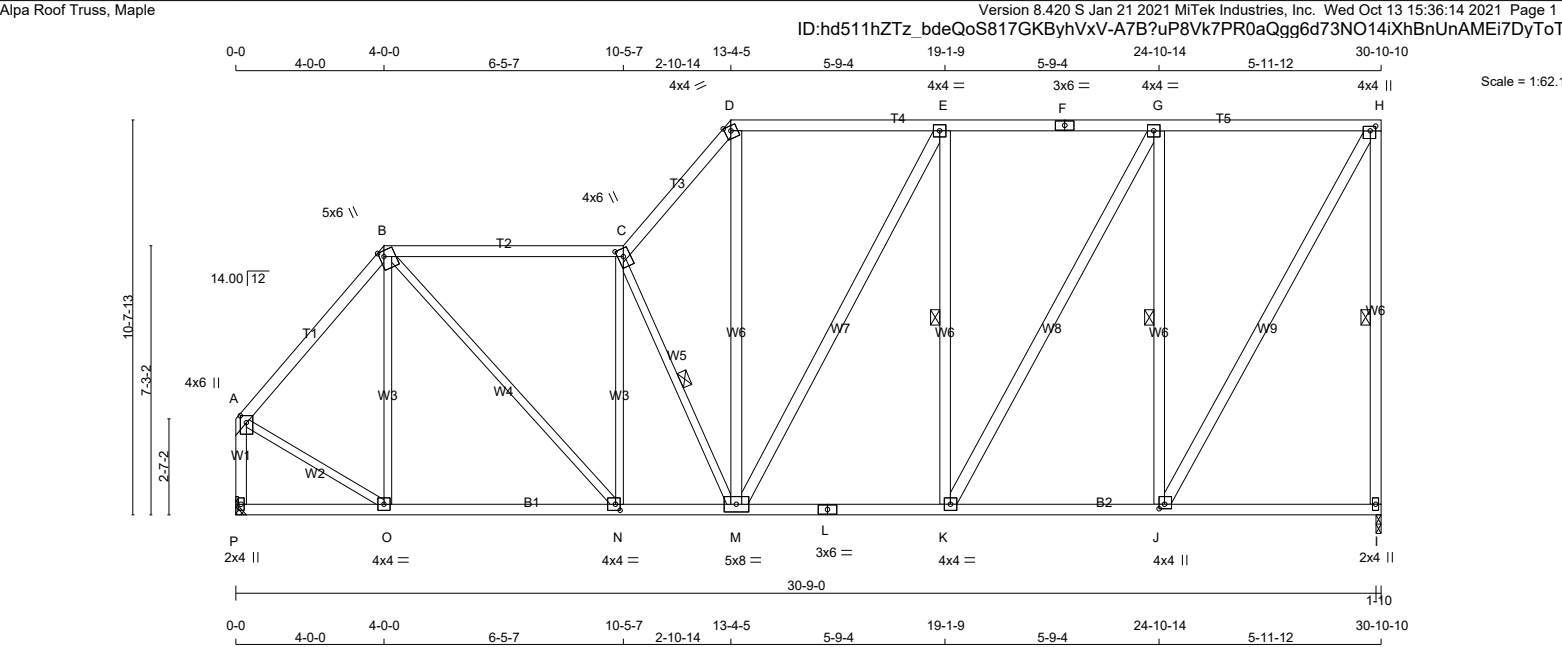
PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (N) (INPUT = 0.90)

JSI METAL= 0.57 (D) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336336	H87S		1	TRUSS DESC. JT 45147	E21104142



LUMBER				
N. L. G. A. RULES				
CHORDS	SIZE	LUMBER	DESCR.	
A - B	2x4	DRY	No.2	SPF
B - C	2x4	DRY	No.2	SPF
C - D	2x4	DRY	No.2	SPF
D - F	2x4	DRY	No.2	SPF
F - H	2x4	DRY	No.2	SPF
I - H	2x4	DRY	No.2	SPF
P - A	2x4	DRY	No.2	SPF
P - L	2x4	DRY	No.2	SPF
L - I	2x4	DRY	No.2	SPF
ALL WEBS	2x4	DRY	No.2	SPF
EXCEPT				
O - B	2x3	DRY	No.2	SPF
B - N	2x3	DRY	No.2	SPF
N - C	2x3	DRY	No.2	SPF
C - M	2x3	DRY	No.2	SPF
A - O	2x3	DRY	No.2	SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y X
A	TMVW+p	MT20	4.0	6.0	2.25 2.00
B	TTWW+m	MT20	5.0	6.0	1.75 1.50
C	TTWW+m	MT20	4.0	6.0	2.50 1.75
D	TTW-m	MT20	4.0	4.0	Edge
E	TMWW-t	MT20	4.0	4.0	
F	TS-t	MT20	3.0	6.0	
G	TMWW-t	MT20	4.0	4.0	
H	TMVW+p	MT20	4.0	4.0	1.50 1.75
I	BMV1+p	MT20	2.0	4.0	
J	BMWW+t	MT20	4.0	4.0	1.50 1.75
K	BMWW-t	MT20	4.0	4.0	
L	BS-t	MT20	3.0	6.0	
M	BMWWW-t	MT20	5.0	8.0	
N	BMWW-t	MT20	4.0	4.0	2.00 1.50
O	BMWW-t	MT20	4.0	4.0	
P	BMV1+p	MT20	2.0	4.0	

Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2

DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER

		FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG		REQRD BRG	
JT	VERT	HORZ		DOWN	HORZ	IN-SX		IN-SX	
I	1490	0		1490	0	1-10		1-10	
P	1490	0		1490	0	MECHANICAL			

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT P. MINIMUM BEARING LENGTH AT JOINT P = 1-10.

UNFACTORED REACTIONS

		1ST LCASE COMBINED		MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW		LIVE	PERM.LIVE	WIND		DEAD	SOIL
I	1062	648 / 0		0 / 0	0 / 0	0 / 0		414 / 0	0 / 0
P	1062	648 / 0		0 / 0	0 / 0	0 / 0		414 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) I

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.47 FT. MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

1 LATERAL BRACE(S) AT 1/2 LENGTH OF H-I, C-M, E-K, G-J.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MAX. FACTORED		FACTORED		MAX. FACTORED		FACTORED	
MEMB.	FORCE (LBS)	VERT. LOAD (PLF)	LC1 MAX CSI (LC)	MEMB.	FORCE (LBS)	MAX CSI (LC)	
FR-TO		FROM TO		FR-TO			
A-B	-1178 / 0	-78.0	-78.0 0.26 (1)	5.59	O-B	-297 / 0	0.28 (1)
B-C	-1479 / 0	-78.0	-78.0 0.67 (1)	4.47	B-N	0 / 1067	0.24 (1)
C-D	-1665 / 0	-78.0	-78.0 0.15 (1)	5.00	N-C	-706 / 0	0.66 (1)
D-E	-1097 / 0	-78.0	-78.0 0.38 (1)	5.54	C-M	-1008 / 0	0.38 (1)
E-F	-1075 / 0	-78.0	-78.0 0.41 (1)	5.52	M-D	0 / 961	0.15 (1)
F-G	-1075 / 0	-78.0	-78.0 0.41 (1)	5.52	M-E	0 / 45	0.01 (1)
G-H	-726 / 0	-78.0	-78.0 0.40 (1)	6.25	K-E	-522 / 0	0.30 (1)
I-H	-1445 / 0	0.0	0.0 0.83 (1)	5.44	K-G	0 / 718	0.12 (1)
P-A	-1467 / 0	0.0	0.0 0.20 (1)	6.76	J-G	-1134 / 0	0.65 (1)
					J-H	0 / 1451	0.23 (1)
					A-O	0 / 868	0.20 (1)
P-O	0 / 0	-18.5	-18.5 0.14 (4)	10.00			
O-N	0 / 758	-18.5	-18.5 0.21 (4)	10.00			
N-M	0 / 1490	-18.5	-18.5 0.28 (1)	10.00			
M-L	0 / 1075	-18.5	-18.5 0.23 (1)	10.00			
L-K	0 / 1075	-18.5	-18.5 0.23 (1)	10.00			
K-J	0 / 726	-18.5	-18.5 0.22 (4)	10.00			
J-I	0 / 0	-18.5	-18.5 0.15 (4)	10.00			

DESIGN CRITERIA

SPECIFIED LOADS:

TOP	CH.	LL	=	21.0	PSF
		DL	=	6.0	PSF
BOT	CH.	LL	=	0.0	PSF
		DL	=	7.4	PSF
TOTAL LOAD		=	34.4	PSF	

SPACING = 24.0 IN. C/C

LOADING IN ALL FLAT SECTIONS BASED ON A SLOPE OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015

THIS DESIGN COMPLIES WITH:

- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.03")
CALCULATED VERT. DEFL.(LL)= L/ 999 (0.07")
ALLOWABLE DEFL.(TL)= L/360 (1.03")
CALCULATED VERT. DEFL.(TL)= L/ 999 (0.15")

CSI: TC=0.83/1.00 (H-I:1) , BC=0.28/1.00 (M-N:1) ,

WB=0.66/1.00 (C-N:1) , SSI=0.22/1.00 (G-H:1)
DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES

PLATE	GRIP(DRY)	SHEAR	SECTION
	(PSI)	(PLI)	(PLI)
MT20	650	371	1747 788 1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.85 (O) (INPUT = 0.90)
JSI METAL= 0.50 (C) (INPUT = 1.00)

Scale = 1:55.

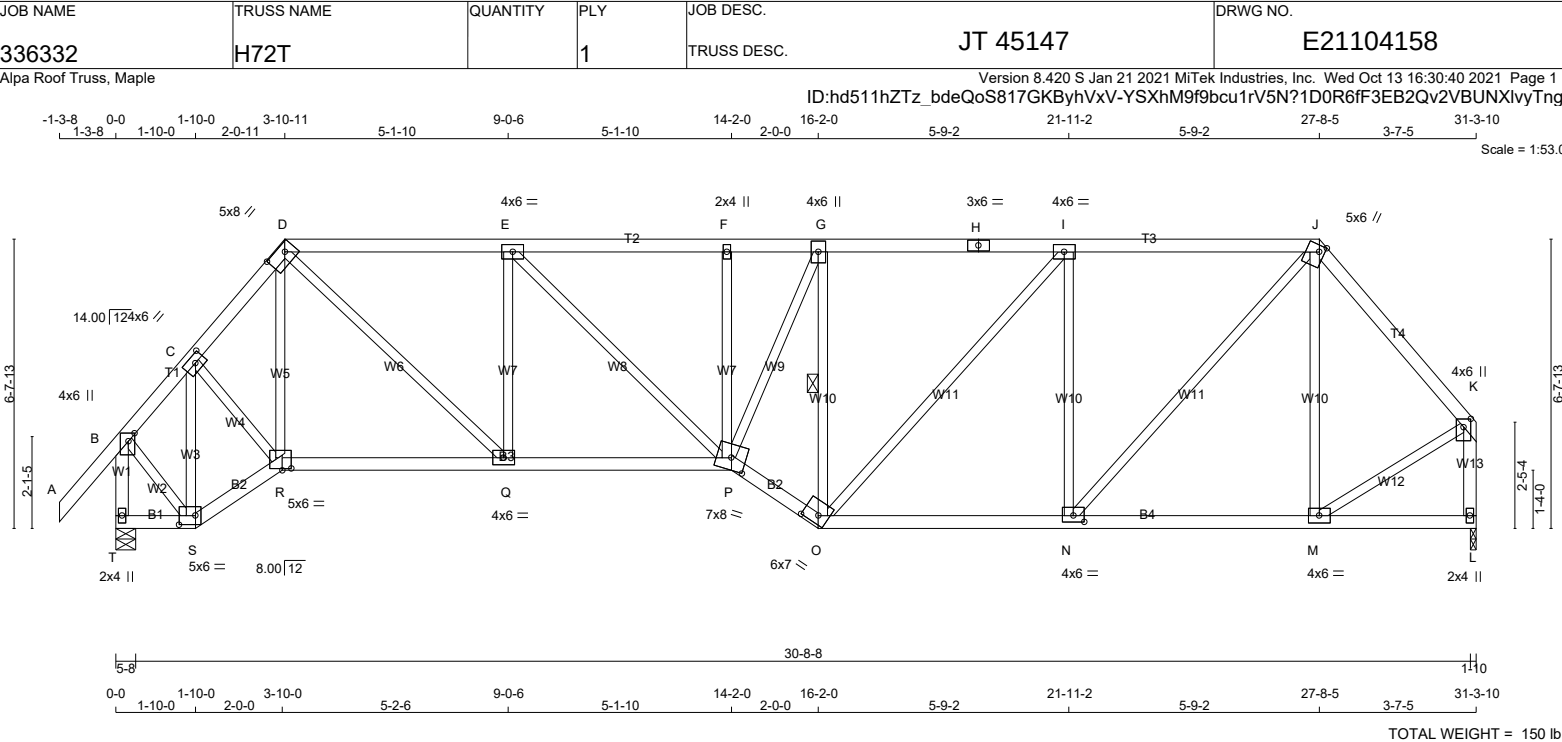


DRY: SEASONED LUMBER.

Edge - INDICATES REFERENCE CORNER OF PLATE
TOUCHES EDGE OF CHORD.

JT	LOC.	LC1	MAX-	MAX+	FACE	DIR.	TYPE	HEEL	CONN.
C	2-9-0	-156	-156	---	FRONT	VERT	TOTAL	---	C1
J	28-10-0	-156	-156	---	FRONT	VERT	TOTAL	---	C1

COMPANION LIVE LOAD FACTOR = 1.00



LUMBER				BEARINGS				DESIGN CRITERIA			
N. L. G. A. RULES				FACTORED				SPECIFIED LOADS:			
CHORDS	SIZE	LUMBER	DESCR.	GROSS REACTION				TOP CH.	LL	21.0	PSF
A - D	2x4	DRY	No.2	VERT	HORZ	DOWN	HORZ	DL	6.0	PSF	
B - H	2x4	DRY	No.2	T	1622	0	1622	BOT CH.	LL	0.0	PSF
H - J	2x4	DRY	No.2	L	1507	0	1507	DL	7.4	PSF	
J - K	2x4	DRY	No.2	UNFACTORED REACTIONS				TOTAL LOAD = 34.4 PSF			
T - B	2x4	DRY	No.2	1ST LCASE	MAX./MIN. COMPONENT REACTIONS			SPACING = 24.0 IN. C/C			
L - K	2x4	DRY	No.2	T COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL	
T - S	2x4	DRY	No.2	T	1154	717 / 0	0 / 0	0 / 0	437 / 0	0 / 0	
S - R	2x4	DRY	No.2	L	1075	656 / 0	0 / 0	0 / 0	419 / 0	0 / 0	
R - P	2x4	DRY	No.2	BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) T, L				LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM			
P - O	2x4	DRY	No.2	BRACING				THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015			
O - L	2x4	DRY	No.2	TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.06 FT.				THIS DESIGN COMPLIES WITH:			
ALL WEBS 2x3 DRY No.2 SPF				MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.				- PART 9 OF CBC 2018 , ABC 2019			
EXCEPT				ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.				- PART 9 OF OBC 2012 (2019 AMENDMENT)			
DRY: SEASONED LUMBER.				1 LATERAL BRACE(S) AT 1 / 2 LENGTH OF G-O.				- CSA 086-14			
				END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW				- TPIC 2014			

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMVW+p	MT20	4.0	6.0	2.25	1.75
C	TMWW-t	MT20	4.0	6.0	2.00	2.75
D	TTWW-h	MT20	5.0	8.0	2.00	5.25
E	TMWW-t	MT20	4.0	6.0		
F	TMW+w	MT20	2.0	4.0		
G	TMWW+t	MT20	4.0	6.0		
H	TS-t	MT20	3.0	6.0		
I	TMWW-t	MT20	4.0	6.0		
J	TTWW+m	MT20	5.0	6.0	1.75	1.50
K	TMVW+p	MT20	4.0	6.0	2.25	2.00
L	BMV1+p	MT20	2.0	4.0		
M	BMWW-t	MT20	4.0	6.0		
N	BMWW-t	MT20	4.0	6.0	1.75	3.00
O	BBWW-h	MT20	6.0	7.0	2.25	4.25
P	BBWWW-m	MT20	7.0	8.0	3.25	4.00
Q	BMWW-t	MT20	4.0	6.0		
R	BBWW-l	MT20	5.0	6.0	0.50	2.50
S	BBWW-l	MT20	5.0	6.0	2.50	4.50
T	BMV1+p	MT20	2.0	4.0		

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2



CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. LC1 (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. LC1 (LC)	
FR-TO		FROM TO		FR-TO			
A-B	0 / 42	-78.0	-78.0 0.11 (1)	S-C	-1003 / 0	0.25 (1)	
B-C	-1042 / 0	-78.0	-78.0 0.12 (1)	C-R	0 / 596	0.13 (1)	
C-D	-1585 / 0	-78.0	-78.0 0.09 (1)	R-D	0 / 54	0.02 (4)	
D-E	-1973 / 0	-78.0	-78.0 0.40 (1)	D-Q	0 / 1328	0.30 (1)	
E-F	-2343 / 0	-78.0	-78.0 0.43 (1)	Q-E	-818 / 0	0.34 (1)	
F-G	-2339 / 0	-78.0	-78.0 0.23 (1)	E-P	0 / 517	0.12 (1)	
G-H	-1876 / 0	-78.0	-78.0 0.49 (1)	P-F	-222 / 0	0.09 (1)	
H-I	-1876 / 0	-78.0	-78.0 0.49 (1)	P-G	0 / 1256	0.28 (1)	
I-J	-1608 / 0	-78.0	-78.0 0.47 (1)	Q-G	-1464 / 0	0.42 (1)	
J-K	-1197 / 0	-78.0	-78.0 0.21 (1)	O-I	0 / 399	0.09 (1)	
T-B	-1605 / 0	0.0	0.0 0.19 (1)	N-I	-807 / 0	0.59 (1)	
L-K	-1484 / 0	0.0	0.0 0.19 (1)	N-J	0 / 1246	0.28 (1)	
T-S	0 / 0	-18.5	-18.5 0.02 (4)	M-J	-336 / 0	0.25 (1)	
S-R	0 / 757	-18.5	-18.5 0.13 (1)	B-S	0 / 903	0.20 (1)	
R-Q	0 / 1021	-18.5	-18.5 0.23 (4)	M-K	0 / 887	0.20 (1)	
Q-P	0 / 1974	-18.5	-18.5 0.39 (1)				
P-O	0 / 2226	-18.5	-18.5 0.37 (1)				
O-N	0 / 1608	-18.5	-18.5 0.34 (1)				
N-M	0 / 769	-18.5	-18.5 0.22 (4)				
M-L	0 / 0	-18.5	-18.5 0.09 (4)				

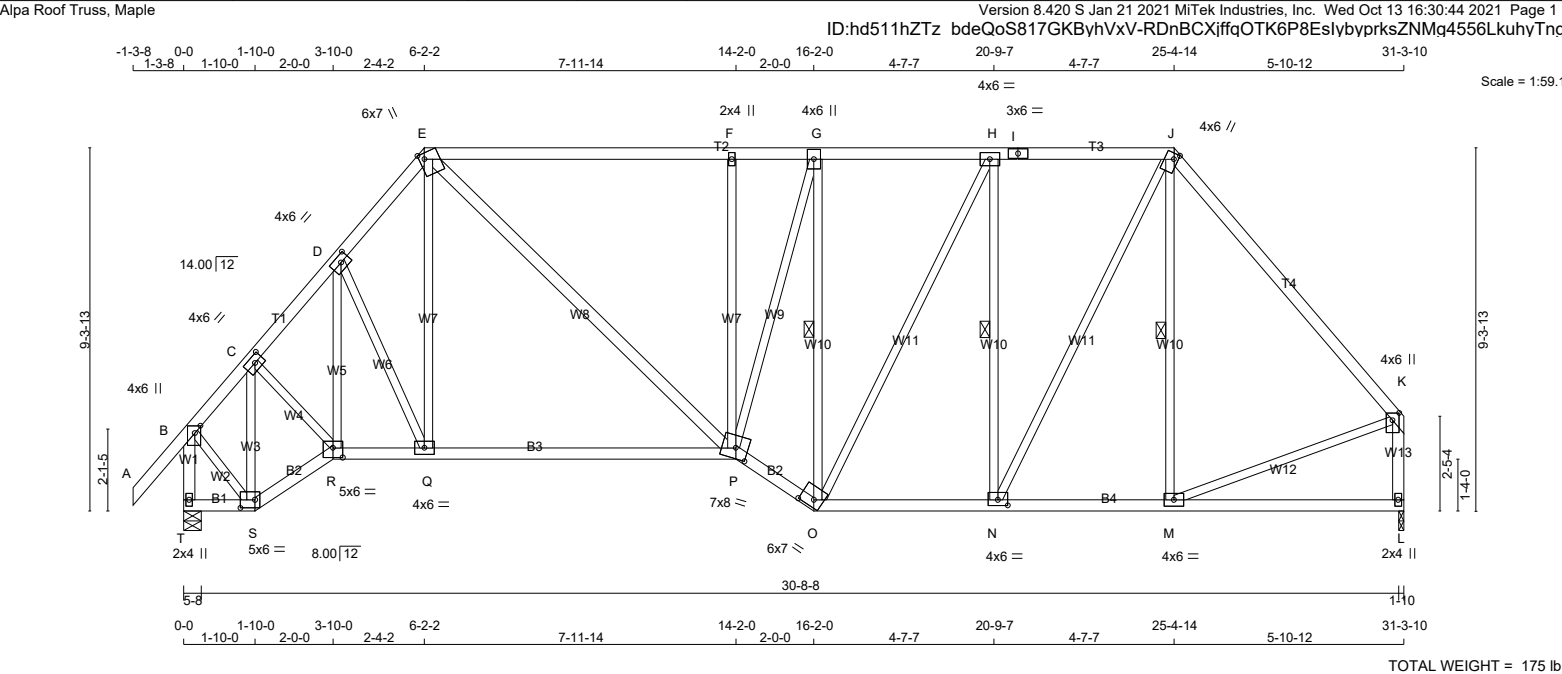
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DRY: SEASONED LUMBER.

JSI GRIP= 0.85 (B) (INPUT = 0.90)
JSI METAL= 0.46 (L) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336332	H74T		1	TRUSS DESC. JT 45147	E21104160



LUMBER			
N. L. G. A. RULES			
CHORDS	SIZE	LUMBER	DESCR.
A - E	2x4	DRY No.2	SPF
E - I	2x4	DRY No.2	SPF
I - J	2x4	DRY No.2	SPF
J - K	2x4	DRY No.2	SPF
T - B	2x4	DRY No.2	SPF
L - K	2x4	DRY No.2	SPF
T - S	2x4	DRY No.2	SPF
S - R	2x4	DRY No.2	SPF
R - P	2x4	DRY No.2	SPF
P - O	2x4	DRY No.2	SPF
O - L	2x4	DRY No.2	SPF
ALL WEBS	2x3	DRY No.2	SPF
EXCEPT			
E - P	2x4	DRY No.2	SPF
DRY: SEASONED LUMBER.			

PLATES (table is in inches)				
JT	TYPE	PLATES	W	LEN Y X
B	TMVW+p	MT20	4.0	6.0 2.25 1.75
C	TMWW-t	MT20	4.0	6.0 2.00 2.75
D	TMWW-t	MT20	4.0	6.0 2.00 2.75
E	TTWW+m	MT20	6.0	7.0 Edge 1.50
F	TMW+w	MT20	2.0	4.0
G	TMWW-t	MT20	4.0	6.0
H	TMWW-t	MT20	4.0	6.0
I	TS-t	MT20	3.0	6.0
J	TTWW+m	MT20	4.0	6.0 1.75 1.25
K	TMVW+p	MT20	4.0	6.0 2.25 2.00
L	BMV1+p	MT20	2.0	4.0
M	BMWW-t	MT20	4.0	6.0
N	BMWW-t	MT20	4.0	6.0 1.75 3.00
O	BBWW-h	MT20	6.0	7.0 2.25 4.25
P	BBWWW-m	MT20	7.0	8.0 3.25 3.75
Q	BMWW-t	MT20	4.0	6.0
R	BBWW-l	MT20	5.0	6.0 3.00 3.00
S	BBWW-l	MT20	5.0	6.0 2.50 4.50
T	BMV1+p	MT20	2.0	4.0
Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.				

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2



DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER									
BEARINGS									
JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG UPLIFT IN-SX		REQRD IN-SX		
	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX	IN-SX	IN-SX
T	1622	0	1622	0	0	5-8	1-12		
L	1507	0	1507	0	0	1-10	1-10		
UNFACTORED REACTIONS									
JT	1ST LCASE COMBINED		MAX./MIN. SNOW LIVE		PERM.LIVE		WIND DEAD SOIL		
	SNOW	LIVE	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL	
T	1154	717 / 0	0 / 0	0 / 0	0 / 0	0 / 0	437 / 0	0 / 0	0 / 0
L	1075	656 / 0	0 / 0	0 / 0	0 / 0	0 / 0	419 / 0	0 / 0	0 / 0
BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) T, L									
BRACING									
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.16 FT.									
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.									
ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.									
1 LATERAL BRACE(S) AT 1 / 2 LENGTH OF G-O, H-N, J-M.									
END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW									

LOADING				
TOTAL LOAD CASES: (4)				
CHORDS				
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)		MEMB. MAX. FACTORED FORCE (LBS)
		FROM	TO	
FR-TO				
A-B	0 / 42	-78.0	-78.0 0.11 (1)	10.00
B-C	-1043 / 0	-78.0	-78.0 0.12 (1)	6.02
C-D	-1578 / 0	-78.0	-78.0 0.08 (1)	5.19
D-E	-1534 / 0	-78.0	-78.0 0.08 (1)	5.26
E-F	-1583 / 0	-78.0	-78.0 0.83 (1)	4.16
F-G	-1575 / 0	-78.0	-78.0 0.65 (1)	4.17
G-H	-1309 / 0	-78.0	-78.0 0.30 (1)	5.29
H-I	-1190 / 0	-78.0	-78.0 0.29 (1)	5.49
I-J	-1190 / 0	-78.0	-78.0 0.29 (1)	5.49
J-K	-1252 / 0	-78.0	-78.0 0.64 (1)	5.01
T-B	-1605 / 0	0.0	0.0 0.19 (1)	6.52
L-K	-1462 / 0	0.0	0.0 0.19 (1)	6.77
T-S	0 / 0	-18.5	-18.5 0.02 (4)	10.00
S-R	0 / 754	-18.5	-18.5 0.13 (1)	10.00
R-Q	0 / 1036	-18.5	-18.5 0.36 (4)	10.00
Q-P	0 / 986	-18.5	-18.5 0.36 (4)	10.00
P-O	0 / 1559	-18.5	-18.5 0.26 (1)	10.00
O-N	0 / 1190	-18.5	-18.5 0.24 (1)	10.00
N-M	0 / 810	-18.5	-18.5 0.22 (4)	10.00
M-L	0 / 0	-18.5	-18.5 0.14 (4)	10.00

DESIGN CRITERIA			
SPECIFIED LOADS:			
TOP CH.	LL	= 21.0	PSF
	DL	= 6.0	PSF
BOT CH.	LL	= 0.0	PSF
	DL	= 7.4	PSF
TOTAL LOAD = 34.4 PSF			
SPACING = 24.0 IN. C/C			
LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM			
THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015			
THIS DESIGN COMPLIES WITH:			
- PART 9 OF BCBC 2018 , ABC 2019			
- PART 9 OF OBC 2012 (2019 AMENDMENT)			
- CSA 086-14			
- TPIC 2014			
DESIGN ASSUMPTIONS			
-OVERHANG NOT TO BE ALTERED OR CUT OFF.			
(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD			
ALLOWABLE DEFL.(LL)= L/360 (1.04")			
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.08")			
ALLOWABLE DEFL.(TL)= L/360 (1.04")			
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.22")			
CSI: TC=0.83/1.00 (E-F:1) , BC=0.36/1.00 (Q-R:4) , WB=0.78/1.00 (F-P:1) , SSI=0.28/1.00 (E-F:1)			
DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10 COMP=1.10 SHEAR=1.10 TENS= 1.10			
COMPANION LIVE LOAD FACTOR = 1.00			
TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .			
NAIL VALUES			
PLATE GRIP(DRY)	SHEAR	SECTION	
(PSI)	(PLI)	(PLI)	
MAX MIN	MAX MIN	MAX MIN	
MT20	650 371	1747 788	1987 1873
PLATE PLACEMENT TOL. = 0.250 inches			
PLATE ROTATION TOL. = 5.0 Deg.			
JSI GRIP= 0.85 (J) (INPUT = 0.90)			
JSI METAL= 0.48 (K) (INPUT = 1.00)			

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LUMBER				
N. L. G. A. RULES				
CHORDS	SIZE		LUMBER	DESCR.
A - E	2x4	DRY	No.2	SPF
E - H	2x4	DRY	No.2	SPF
H - I	2x4	DRY	No.2	SPF
I - J	2x6	DRY	No.2	SPF
R - B	2x4	DRY	No.2	SPF
K - J	2x4	DRY	No.2	SPF
R - Q	2x4	DRY	No.2	SPF
Q - P	2x4	DRY	No.2	SPF
P - N	2x4	DRY	No.2	SPF
N - M	2x4	DRY	No.2	SPF
M - K	2x4	DRY	No.2	SPF
ALL WEBS EXCEPT	2x3	DRY	No.2	SPF
E - N	2x4	DRY	No.2	SPF
M - G	2x4	DRY	No.2	SPF
M - I	2x4	DRY	No.2	SPF
L - I	2x4	DRY	No.2	SPF
DRY: SEASONED LUMBER.				

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG	REQRD BRG
	VERT	HORZ	DOWN	HORZ	UPLIFT IN-SX	IN-SX
R	1622	0	1622	0	0	1-12
K	1507	0	1507	0	0	1-10

1ST LCASE		MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
R	1154	717 / 0	0 / 0	0 / 0	0 / 0	437 / 0	0 / 0
K	1075	656 / 0	0 / 0	0 / 0	0 / 0	419 / 0	0 / 0

BRACING
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.55 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE LATERALLY RESTRAINED

1 LATERAL BRACE(S) AT 1/2 LENGTH OF F-N, G-M, I-M, I-L.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

TOTAL LOAD CASES. (4)

CHORDS					WEBS				
MAX. FACTORED		FACTORED			MAX. FACTORED				
MEMB.	FORCE (LBS)	VERT. LOAD (PLF)	LC1 MAX (LBS)	LC1 MAX (LBS)	MAX. UNBRAC	MEMB.	FORCE (LBS)	MAX CSI (LC)	
FR-TO		FROM	TO		LENGTH	FR-TO			
A-B	0/42	-78.0	-78.0	0.11 (1)	10.00	Q-C	-995 / 0	0.25 (1)	
B-C	-1043 / 0	-78.0	-78.0	0.12 (1)	6.02	P-D	0 / 637	0.14 (1)	
C-D	-1572 / 0	-78.0	-78.0	0.14 (1)	5.13	P-D	-29 / 18	0.01 (1)	
D-E	-1473 / 0	-78.0	-78.0	0.15 (1)	5.27	D-O	-179 / 0	0.12 (1)	
E-F	-1328 / 0	-78.0	-78.0	0.53 (1)	4.95	O-E	0 / 269	0.06 (4)	
F-G	-1324 / 0	-78.0	-78.0	0.63 (1)	4.55	E-N	0 / 631	0.10 (1)	
G-H	-1187 / 0	-78.0	-78.0	0.74 (1)	4.77	N-F	-305 / 0	0.17 (1)	
H-I	-1187 / 0	-78.0	-78.0	0.74 (1)	4.77	N-G	0 / 673	0.15 (1)	
I-J	-1263 / 0	-78.0	-78.0	0.36 (1)	6.25	M-G	-1169 / 0	0.67 (1)	
R-B	-1605 / 0	0.0	0.0	0.19 (1)	6.52	M-I	0 / 596	0.10 (1)	
K-J	-1459 / 0	0.0	0.0	0.18 (1)	6.77	L-I	-47 / 107	0.03 (1)	
						B-Q	0 / 895	0.20 (1)	
R-Q	0 / 0	-18.5	-18.5	0.02 (4)	10.00	L-J	0 / 846	0.19 (1)	
Q-P	0 / 751	-18.5	-18.5	0.13 (1)	10.00				
P-O	0 / 1044	-18.5	-18.5	0.28 (4)	10.00				
O-N	0 / 945	-18.5	-18.5	0.27 (4)	10.00				
N-M	0 / 1404	-18.5	-18.5	0.24 (1)	10.00				
M-L	0 / 816	-18.5	-18.5	0.39 (4)	10.00				
L-K	0 / 0	-18.5	-18.5	0.31 (4)	10.00				

LATERAL BRACE(S) SHOWN SHALL BE
2X4 SPF#2



SPECIFIED LOADS:

TOP	CH.	LL	=	21.0	PSF
		DL	=	6.0	PSF
BOT	CH.	LL	=	0.0	PSF
		DL	=	7.4	PSF
TOTAL LOAD				=	34.4 PSF

LOADING IN FLAT SECTION BASED ON A SLOPE
OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL
OR SMALL BUILDING REQUIREMENTS OF PART
9, NBCC 2015

THIS DESIGN COMPLIES WITH:

- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

DESIGN ASSUMPTIONS
-OVERHANG NOT TO BE ALTERED OR CUT OFF.

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= $L/360$ (1.04")
 CALCULATED VERT. DEFL.(LL) = $L/999$ (0.06")
 ALLOWABLE DEFL.(TL)= $L/360$ (1.04")
 CALCULATED VERT. DEFL.(TL) = $L/999$ (0.15")

CSI: TC=0.74/1.00 (G-I:1) , BC=0.39/1.00 (L-M:4)
WB=0.67/1.00 (G-M:1) , SSI=0.27/1.00 (G-I:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

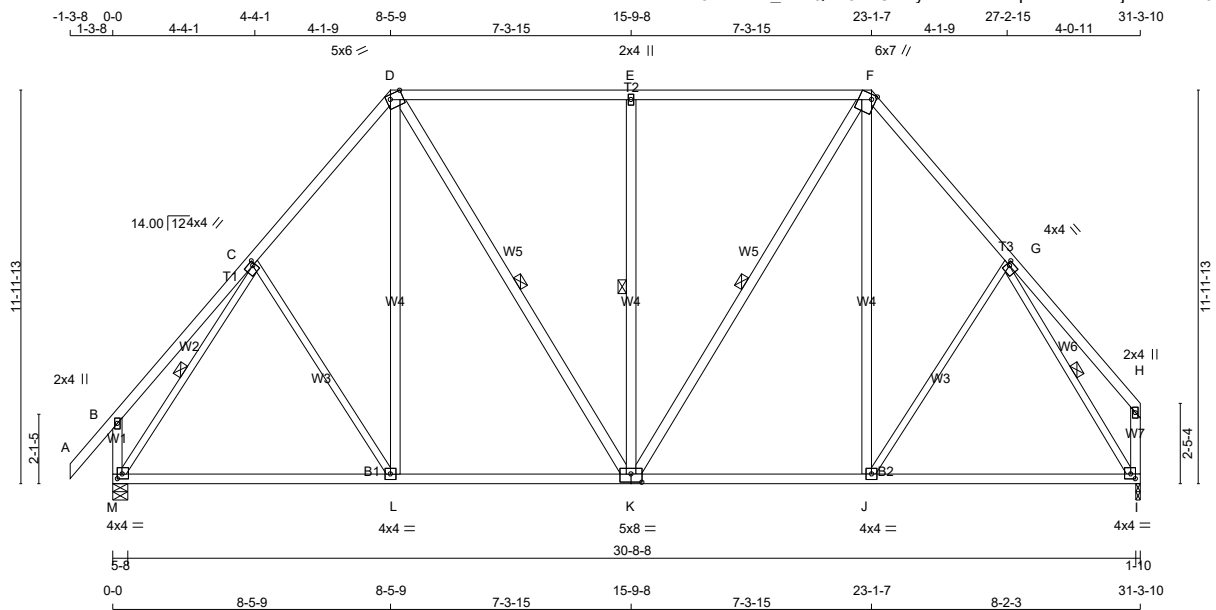
TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

PLATE	GRIP(DRY)		SHEAR		SECTION	
	(PSI)		(PLI)		(PLI)	
	MAX	MIN	MAX	MIN	MAX	MIN
MT20	650	371	1747	788	1987	187

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg

JSI GRIP= 0.85 (B) (INPUT = 0.90)
JSI METAL= 0.49 (J) (INPUT = 1.00)



TOTAL WEIGHT = 3 X 183 = 549 lb

LUMBER

N. L. G. A. RULES				
CHORDS	SIZE		LUMBER	DESCR.
A - D	2x4	DRY	No.2	SPF
D - F	2x4	DRY	No.2	SPF
F - H	2x4	DRY	No.2	SPF
M - B	2x4	DRY	No.2	SPF
I - H	2x4	DRY	No.2	SPF
M - K	2x4	DRY	No.2	SPF
K - I	2x4	DRY	No.2	SPF
ALL WEBS EXCEPT	2x4	DRY	No.2	SPF
C - L	2x3	DRY	No.2	SPF
J - G	2x3	DRY	No.2	SPF
M - C	2x3	DRY	No.2	SPF
G - I	2x3	DRY	No.2	SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	PLATES	W	LEN	Y	X
B	TMV+p	MT20	2.0	4.0	
C	TMWV-t	MT20	4.0	4.0	1.50
D	TTWV-m	MT20	5.0	6.0	Edge 4.50
E	TMV+w	MT20	2.0	4.0	
F	TTWV+m	MT20	6.0	7.0	Edge 1.50
G	TMWV-t	MT20	4.0	4.0	1.50
H	TMV+p	MT20	2.0	4.0	
I	BMVW1-t	MT20	4.0	4.0	1.75 1.75
J	BMWV-t	MT20	4.0	4.0	
K	BSWVWV-I	MT20	5.0	8.0	3.00 4.00
L	BMWV-t	MT20	4.0	4.0	
M	BMVW1-t	MT20	4.0	4.0	1.75 1.75

Edge - INDICATES REFERENCE CORNER OF PLATE
TOUCHES EDGE OF CHORD.

LATERAL BRACE(S) SHOWN SHALL BE
2X4 SPF#2



DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER

BEARINGS

	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION			INPUT BRG	REQRD BRG
JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX
M	1619	0	1619	0	0	5-8	1-12
I	1510	0	1510	0	0	1-10	1-10

UNFACTORED REACTIONS

1ST LCASE		MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
M	1152	716 / 0	0 / 0	0 / 0	0 / 0	436 / 0	0 / 0
I	1076	657 / 0	0 / 0	0 / 0	0 / 0	419 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) M, I

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.29 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE LATERALLY RESTRAINED.

1 LATERAL BRACE(S) AT 1/2 LENGTH OF D-K, E-K, F-K, C-M, G-I.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

LOADING

TOTAL LOAD CASES: (4)

CHORDS			WEBBS					
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1	MAX. CSI (LC)	MAX. UNBRAC	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. CSI (LC)
FR-TO		FROM TO			LENGTH	FR-TO		
A-B	0 / 42	-78.0	-78.0	0.11 (1)	10.00	C-L	-45 / 27	0.06 (1)
B-C	0 / 29	-78.0	-78.0	0.22 (1)	10.00	L-D	0 / 219	0.05 (4)
C-D	-1280 / 0	-78.0	-78.0	0.21 (1)	5.50	D-K	0 / 453	0.07 (1)
D-E	-1054 / 0	-78.0	-78.0	0.57 (1)	5.29	K-E	-701 / 0	0.55 (1)
E-F	-1054 / 0	-78.0	-78.0	0.57 (1)	5.29	K-F	0 / 486	0.08 (4)
F-G	-1252 / 0	-78.0	-78.0	0.20 (1)	5.55	J-F	0 / 169	0.04 (4)
G-H	0 / 29	-78.0	-78.0	0.21 (1)	10.00	J-G	0 / 46	0.02 (4)
M-B	-234 / 0	0.0	0.0	0.03 (1)	7.81	M-C	-1564 / 0	0.64 (1)
I-H	-113 / 0	0.0	0.0	0.01 (1)	7.81	G-I	-1551 / 0	0.61 (1)
M-L	0 / 835	-18.5	-18.5	0.42 (4)	10.00			
L-K	0 / 813	-18.5	-18.5	0.42 (4)	10.00			
K-J	0 / 796	-18.5	-18.5	0.41 (4)	10.00			
J-I	0 / 787	-18.5	-18.5	0.40 (4)	10.00			

DESIGN CRITERIA

SPECIFIED LOADS:

TOP	CH.	LL =	21.0	PSF
		DL =	6.0	PSF
BOT	CH.	LL =	0.0	PSF
		DL =	7.4	PSF
TOTAL LOAD		=	34.4	PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE
OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL
OR SMALL BUILDING REQUIREMENTS OF PART
9, NBCC 2015

THIS DESIGN COMPLIES WITH:

- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.04")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.04")
ALLOWABLE DEFL.(TL)= L/360 (1.04")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.16")

CSI: TC=0.57/1.00 (D-E:1), BC=0.42/1.00 (K-L:4),
WB=0.64/1.00 (C-M:1), SSI=0.28/1.00 (D-E:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

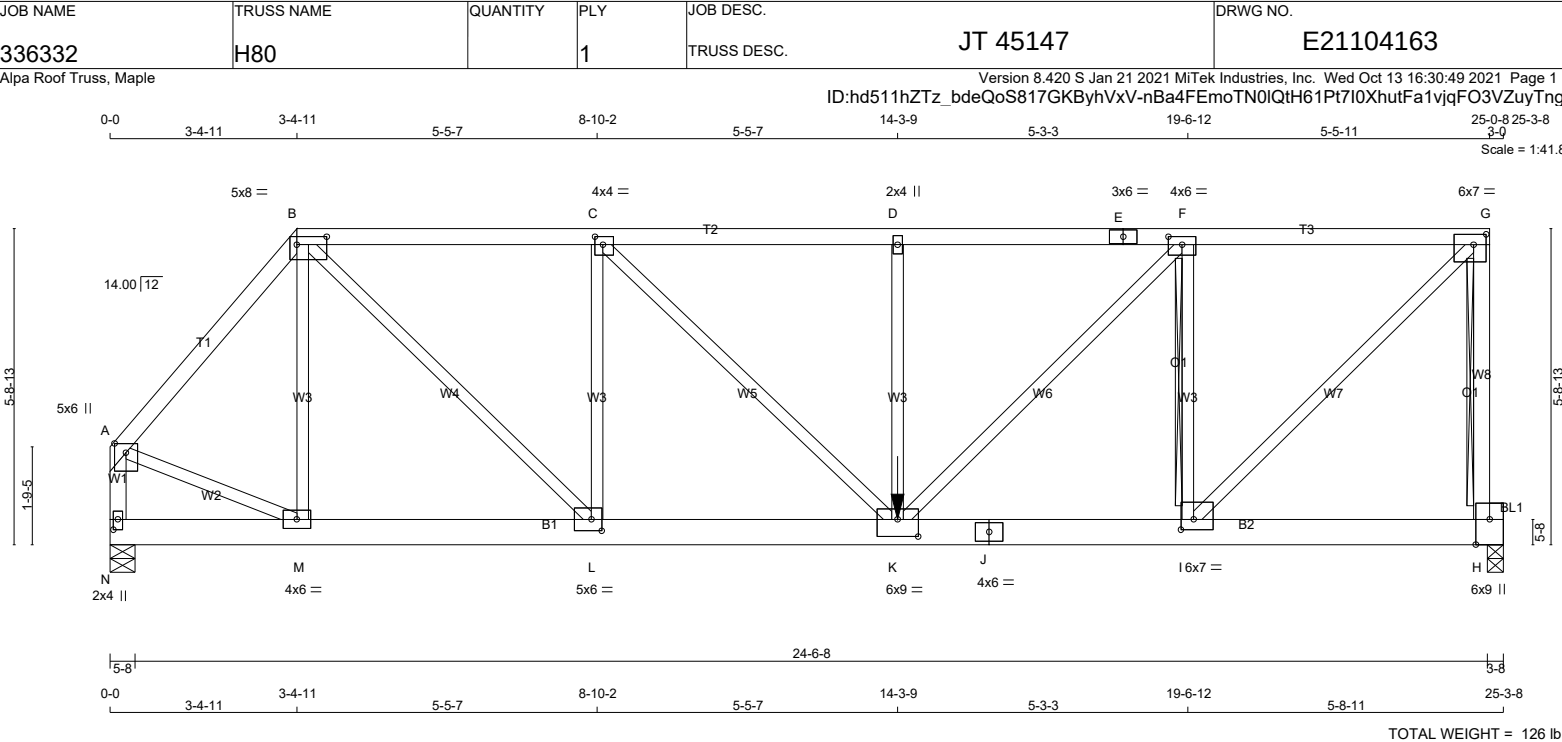
TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES						
PLATE	GRIP(DRY)		SHEAR		SECTION	
	(PSI)		(PLI)		(PLI)	
	MAX	MIN	MAX	MIN	MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.89 (D) (INPUT = 0.90)
JSI METAL= 0.53 (C) (INPUT = 1.00)



LUMBER			
N. L. G. A. RULES			
CHORDS	SIZE	LUMBER	DESCR.
A - B	2x4	DRY No.2	SPF
B - E	2x4	DRY 1650F 1.5E	SPF
E - G	2x4	DRY 1650F 1.5E	SPF
H - G	2x4	DRY No.2	SPF
N - A	2x4	DRY No.2	SPF
N - J	2x6	DRY No.2	SPF
J - H	2x6	DRY No.2	SPF

BEARING BLOCKS			
BL1	2x4	DRY No.2	SPF
ALL WEBS EXCEPT			
2x3	DRY No.2	SPF	

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
A	TMVW+p	MT20	5.0	6.0	2.00	2.50
B	TTWW-l	MT20	5.0	8.0	1.75	6.50
C	TMWW-t	MT20	4.0	4.0	1.75	1.75
D	TMW+w	MT20	2.0	4.0		
E	TS-t	MT20	3.0	6.0		
F	TMWW-t	MT20	4.0	6.0	1.75	3.00
G	TMVW-t	MT20	6.0	7.0	2.25	2.75
H	BMVK1+t	MT20	6.0	9.0	Edge	3.00
I	BMWW-t	MT20	6.0	7.0	2.25	2.75
J	BS-t	MT20	4.0	6.0		
K	BMWWW-t	MT20	6.0	9.0	3.75	4.50
L	BMWW-t	MT20	5.0	6.0	2.50	2.25
M	BMWW-t	MT20	4.0	6.0		
N	BMV1+p	MT20	2.0	4.0	2.25	1.00

Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2



DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER

BEARINGS		FACTORED GROSS REACTION	MAXIMUM FACTORED GROSS REACTION	INPUT BRG	REQRD BRG
JT	VERT	HORZ	DOWN	HORZ	UPLIFT
H	2904	0	2904	0	3-8
N	2019	0	2019	0	5-8

UNFACTORED REACTIONS

JT	1ST LCASE	MAX./MIN.	COMPONENT REACTIONS	WIND	DEAD	SOIL
H	COMBINED	SNOW	LIVE	PERM.LIVE		
H	2070	1266 / 0	0 / 0	0 / 0	804 / 0	0 / 0
N	1439	879 / 0	0 / 0	0 / 0	561 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) H, N
BEARING SIZE FACTOR = 1.15 AT JNT(S) H (BASED ON SUPPORT DEPTH = 1-8)

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.08 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

2x3 DRY SPF No.2 T-BRACE AT G-H, F-I

FASTEN T AND I-BRACES TO NARROW EDGE OF WEB WITH ONE ROW PER PLY OF 3" COMMON WIRE NAILS @ 6" O.C. WITH 3" MINIMUM END DISTANCE. BRACE MUST COVER 90% OF WEB LENGTH.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

LOADING

TOTAL LOAD CASES: (4)

CHORDS		WEBS	
MEMB.	MAX. FACTORED FORCE (LBS)	MEMB.	MAX. FACTORED FORCE (LBS)
FR-TO	FROM TO	FR-TO	FROM TO
A-B	-1856 / 0	M-B	-354 / 0
B-C	-2675 / 0	B-L	0 / 2070
C-D	-3570 / 0	L-C	-1328 / 0
D-E	-3570 / 0	C-K	0 / 1255
E-F	-3570 / 0	K-D	-588 / 0
F-G	-2434 / 0	K-F	0 / 1621
H-G	-2816 / 0	I-F	-2201 / 0
N-A	-2002 / 0	I-G	0 / 3513
		A-M	0 / 1284

FACTORED CONCENTRATED LOADS (LBS)		FACE	DIR.	TYPE	HEEL	CONN.
JT	LOC.	LC1	MAX-	MAX+		
K	14-3-9	-1346	-1346	---	FRONT	VERT

CONNECTION REQUIREMENTS

1) C1: A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED.

DESIGN CRITERIA

*** SPECIAL LOADS ANALYSIS ***
GEOMETRY AND/OR BASIC LOADS CHANGED BY USER.
LOADS WERE DERIVED FROM USER INPUT
NO FURTHER MODIFICATIONS WERE MADE

SPECIFIED LOADS:

TOP CH.	LL	=	21.0	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.4	PSF
TOTAL LOAD	=	34.4	PSF	

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM

GIRDER TYPE: CPrimeHip
LEFT SETBACK = 3-4-11
RIGHT SETBACK = 0-0
END SETBACK = 6-6-0
END WALL WIDTH = 0-0
CORNER FRAMING TYPE: CONVENTIONAL
END JACK TYPE: CONVENTIONAL
APPLIED TO FRONT SIDE
- ADDTL LOADS BASED ON 55 % OF GSL.
LOADS APPLIED TO FIRST 10-11-15 OF SPAN MEASURED FROM THE RIGHT.

*** NON STANDARD GIRDER ***
ADDTL USER-DEFINED LOADS APPLIED TO ALL LOAD CASES.

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015

THIS DESIGN COMPLIES WITH:
- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.83")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.12")
ALLOWABLE DEFL.(TL)= L/360 (0.83")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.23")

CSI: TC=0.87/1.00 (G-H:1) , BC=0.42/1.00 (K-L:1) , WB=0.88/1.00 (F-I:1) , SSI=0.47/1.00 (F-G:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.00
COMP=1.00 SHEAR=1.00 TENS= 1.00

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES
PLATE GRIP(DRY) SHEAR SECTION
(Psi) (PLI) (PLI)
MAX MIN MAX MIN MAX MIN
MT20 650 371 1747 788 1987 1873

LUS – Double Shear Joist Hangers



All LUS hangers have double shear nailing. This patented innovation distributes the load through two points on each joist nail for greater strength. It also allows the use of fewer nails, faster installation and the use of common nails for all connections.

Material: 18 gauge

Finish: G90 galvanized

Design:

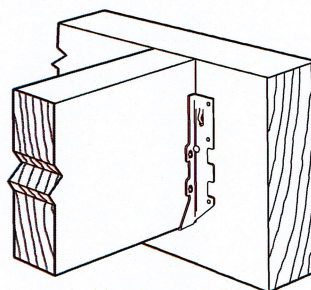
- Factored resistances are in accordance with CSA O86-14.
- Uplift resistances have been increased 15%. No further increase is permitted.
- Wood shear is not considered in the factored resistances given. The specifier must ensure that the joist and header capacities are capable of withstanding these loads.

Installation:

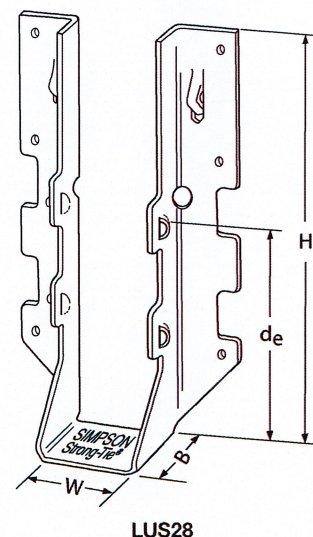
- Use all specified fasteners.
- Nails: 16d = 0.162" dia. x 3½" long common wire, 10d = 0.148" x 3" long common wire.
- Double shear nails must be driven at an angle through the joist or truss into the header to achieve the table loads.
- Not designed for welded or nailer applications.

Options:

- These hangers cannot be modified



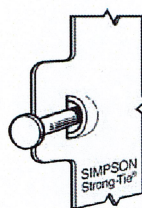
Typical LUS Installation



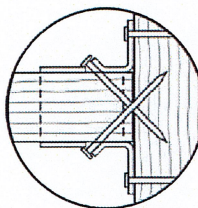
LUS28

Model No.	Ga.	Dimensions (in.)				Fasteners		Factored Resistance (lb.)			
		W	H	B	d _e ¹	Face	Joist	D.Fir-L		S-P-F	
								Uplift (K _p =1.15)	Normal (K _p =1.00)	Uplift (K _p =1.15)	Normal (K _p =1.00)
LUS24	18	1½	3½	1¾	1 15/16	(4) 10d	(2) 10d	710	1630	645	1155
LUS24-2	18	3½	3½	2	1 13/16	(4) 16d	(2) 16d	835	2020	590	1435
LUS26	18	1½	4¾	1¾	3½	(4) 10d	(4) 10d	1420	2170	1290	1630
LUS26-2	18	3½	4¾	2	4	(4) 16d	(4) 16d	1720	2595	1545	1920
LUS26-3	18	4½	4¾	2	3¼	(4) 16d	(4) 16d	1720	2595	1545	2340
LUS28	18	1½	6½	1¾	3¾	(6) 10d	(6) 10d	1420	2520	1290	1790
LUS28-2	18	3½	7	2	4	(6) 16d	(4) 16d	1720	3325	1545	2575
LUS28-3	18	4½	6¼	2	3¼	(6) 16d	(4) 16d	1720	3325	1545	2375
LUS210	18	1½	7 15/16	1¾	3¾	(8) 10d	(4) 10d	1420	2785	1290	2210
LUS210-2	18	3½	9	2	6	(8) 16d	(6) 16d	2580	4500	2320	3195
LUS210-3	18	4½	8¾	2	5¼	(8) 16d	(6) 16d	2580	3345	2320	2375

1. d_e is the distance from the seat of the hanger to the highest joist nail.



Dome Double Shear Nailing prevents tabs breaking off (available on some models).
U.S. Patent 5,603,580



Double Shear Nailing Top View.



LIMIT STATES DESIGN

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HUS/LJS – Double Shear Joist Hangers

SIMPSON
Strong-Tie

All hangers have double shear nailing. This patented innovation distributes the load through two points on each joist nail for greater strength. It also allows the use of fewer nails, faster installation and the use of common nails for all connections. Do not bend or remove tabs.

Material: See table

Finish: G90 galvanized

Design:

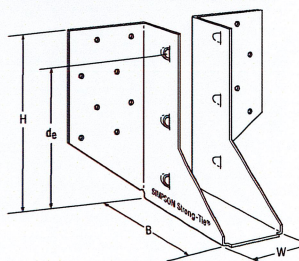
- Factored resistances are in accordance with CSA O86 -14.
- Uplift resistances have been increased 15%. No further increase is permitted.
- Wood shear is not considered in the factored resistances given. The specifier must ensure that the joist and header capacities are capable of withstanding these loads.

Installation:

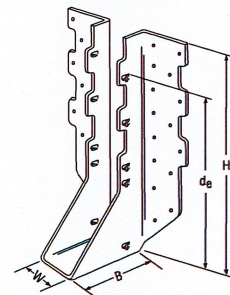
- Use all specified fasteners
- Nails: 16d = 0.162" dia. x 3½" long common wire
- Double shear nails must be driven at an angle through the joist or truss into the header to achieve the table loads
- Not designed for welded or nailer applications

Options:

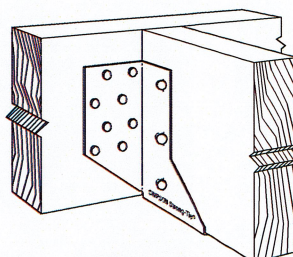
- See current catalogue for options



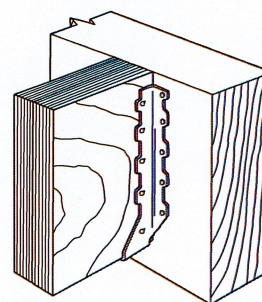
LJS26DS



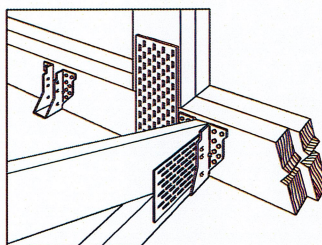
HUS210
(HUS26, HUS28, similar)



Typical LJS26DS
Installation



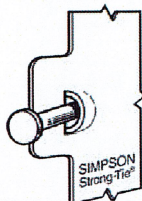
Typical HUS
Installation



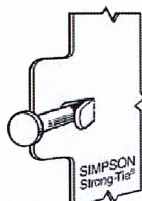
Typical HUS Installation
(Truss Designer to provide fastener
quantity for connecting multiple
members together)

Model No.	Ga.	Dimensions (in.)				Fasteners		Factored Resistance (lb.)			
		W	H	B	d _e ¹	Face	Joist	D.Fir-L		S-P-F	
								Uplift (K ₀ =1.15) lb.	Normal (K ₀ =1.00) lb.	Uplift (K ₀ =1.15) lb.	Normal (K ₀ =1.00) lb.
LJS26DS	18	1½	5	3½	4⅝	(16) 16d	(6) 16d	2055	4265	1460	4115
HUS26	16	1⅝	5⅝	3	3½	(14) 16d	(6) 16d	2705	4940	2065	3875
HUS28	16	1⅝	7⅝	3	6⅝	(22) 16d	(8) 16d	3605	5365	2675	4345
HUS210	16	1⅝	9⅝	3	7⅝	(30) 16d	(10) 16d	4505	5795	4010	4740
HUS1.81/10	16	1⅝	9	3	8	(30) 16d	(10) 16d	4505	6450	4010	5200

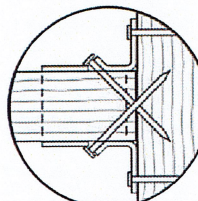
1. d_e is the distance from the seat of the hanger to the highest joist nail.



Dome Double
Shear Nailing
prevents tabs
breaking off
(available on
some models).
U.S. Patent
5,603,580



Double
Shear
Nailing
Side View.
Do not
bend tab
back.



Double
Shear
Nailing
Top View.



LIMIT
STATES
DESIGN

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HHUS – Double Shear Joist Hangers

All HHUS hangers have double shear nailing. This patented innovation distributes the load through two points on each joist nail for greater strength. It also allows the use of fewer nails, faster installation and the use of common nails for all connections. Do not bend or remove tabs.

Material: 14 gauge

Finish: G90 galvanized

Design:

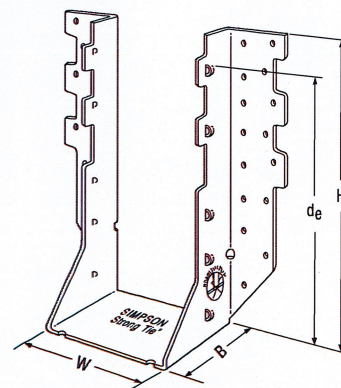
- Factored resistances are in accordance with CSA O86-14.
- Uplift resistances have been increased 15%. No further increase is permitted.
- Wood shear is not considered in the factored resistances given. The specifier must ensure that the joist and header capacities are capable of withstanding these loads.

Installation:

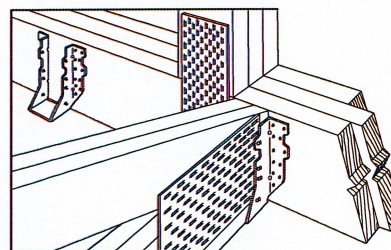
- Use all specified fasteners
- Nails: 16d = 0.162" dia. x 3 1/2" long common wire
- Double shear nails must be driven at an angle through the joist or truss into the header to achieve the table loads
- Not designed for welded or nailer applications

Options:

- See current catalogue for options



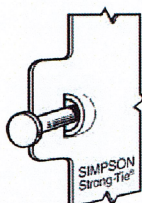
HHUS410



Typical HHUS Installation
(Truss Designer to provide fastener quantity for connecting multiple members together)

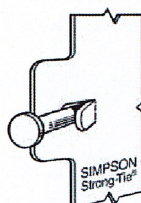
Model No.	Ga.	Dimensions (in.)				Fasteners		Factored Resistance (lb.)			
		W	H	B	d _e ¹	Face	Joist	D.Fir-L		S-P-F	
								Uplift (K ₀ =1.15)	Normal (K ₀ =1.00)	Uplift (K ₀ =1.15)	Normal (K ₀ =1.00)
HHUS26-2	14	3 5/16	5 13/16	3	3 15/16	(14) 16d	(6) 16d	2850	7335	2065	5205
HHUS28-2	14	3 5/16	7 1/2	3	6 5/32	(22) 16d	(8) 16d	3765	8940	2675	6345
HHUS210-2	14	3 5/16	9 3/32	3	8	(30) 16d	(10) 16d	4670	9660	4235	7000
HHUS210-3	14	4 11/16	9	3	7 15/16	(30) 16d	(10) 16d	4670	9670	4235	6865
HHUS210-4	14	6 1/8	8 29/32	3	7 27/32	(30) 16d	(10) 16d	4670	10155	4235	7210
HHUS46	14	3 3/8	5 13/32	3	3 15/16	(14) 16d	(6) 16d	2540	7335	2065	5205
HHUS48	14	3 3/8	7 1/8	3	6 1/8	(22) 16d	(8) 16d	3765	8940	2675	6345
HHUS410	14	3 3/8	9	3	8	(30) 16d	(10) 16d	4670	9855	4235	7000
HHUS5.50/10	14	5 1/2	9	3	8	(30) 16d	(10) 16d	4670	10155	4235	7210
HHUS7.25/10	14	7 1/4	9	3 3/8	7 29/32	(30) 16d	(10) 16d	4670	10155	3370	7210

1. d_e is the distance from the seat of the hanger to the highest joist nail.

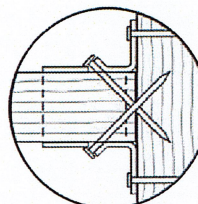


Dome Double Shear Nailing prevents tabs breaking off (available on some models).

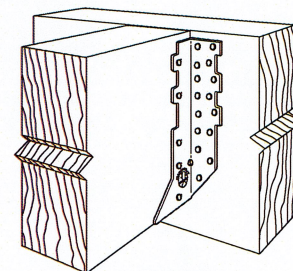
U.S. Patent
5,603,580



Double Shear Nailing Side View. Do not bend tab back.



Double Shear Nailing Top View.



Typical HHUS Installation



LIMIT
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TC – Truss Connectors

SIMPSON
Strong-Tie

The TC truss connector is an ideal connector for scissor trusses and can allow horizontal movement up to 1¼". The TC also attaches plated trusses to top plates or sill plates to resist uplift forces. Typically used on one or both ends of truss as determined by the building designer.

Material: 16 gauge

Finish: G90 galvanized

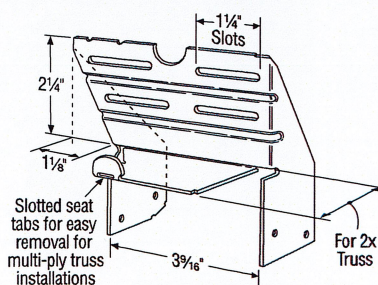
Design: Factored resistances are in accordance with CSA 086-14

Installation:

- Use all specified fasteners.
- Nails: 10d = 0.148" dia. x 3" long common wire, 10d x 1½" = 0.148" dia. x 1½" long.
- Drive 10d nails into the truss at the inside end of the slotted holes (inside end is towards the centre of the truss) and clinch on the back side. Do not seat these nails into the truss—allow room under the nail head for movement of the truss with respect to the wall.

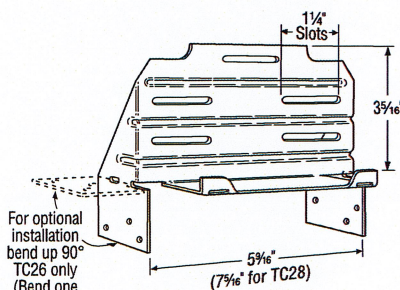
Optional TC Installation:

- Bend one flange up 90°. Drive specified nails into the top and face of the top plates or install Titen® screws into the top and face of masonry wall. See optional load tables and installation details.



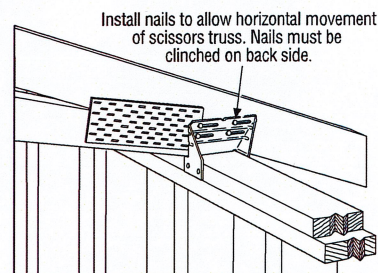
TC24

U.S. Patent 4,932,173

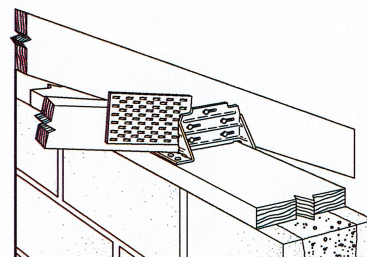


TC26

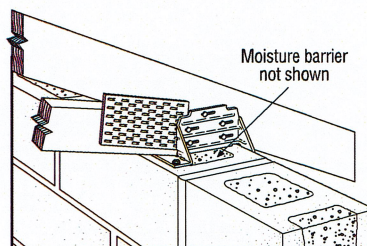
(TC28 Similar)



Typical TC24 Installation



Optional TC26 Installation for Grouted Concrete Block using a Wood Nailer
(8", 10", 12" Wall Installation Similar)



Optional TC26 Installation for Grouted Concrete Block using Titen Screws

Model No.	Fasteners		Factored Resistance	
	Truss	Wall Plates	D.Fir-L	S-P-F
			Uplift (K ₀ =1.15)	Uplift (K ₀ =1.15)
TC24	(4) 10d	(4) 10d	605	430
TC26	(5) 10d	(6) 10d	1015	720
TC28	(5) 10d	(6) 10d	1015	720

Optional TC Installation Table

Model No.	Fasteners		Factored Resistance	
	Truss	Wall Plates	D.Fir-L	S-P-F
			Uplift (K ₀ =1.15)	Uplift (K ₀ =1.15)
TC26	(5) 10d	(6) 10d x 1½"	810	660
	(5) 10d	(6) 10d	930	660

1. Factored resistances have been increased 15% for earthquake or wind loading; no further increase allowed; reduce where other loads govern.
2. Grout strength is 15 MPa minimum.
3. Optional TC26 installation with 10d nails requires minimum 3" top plate thickness.
4. TC26 fastened to grouted concrete block with (6) – ¾" x 2¼" Titen screws has a factored uplift resistance of 275 lb.



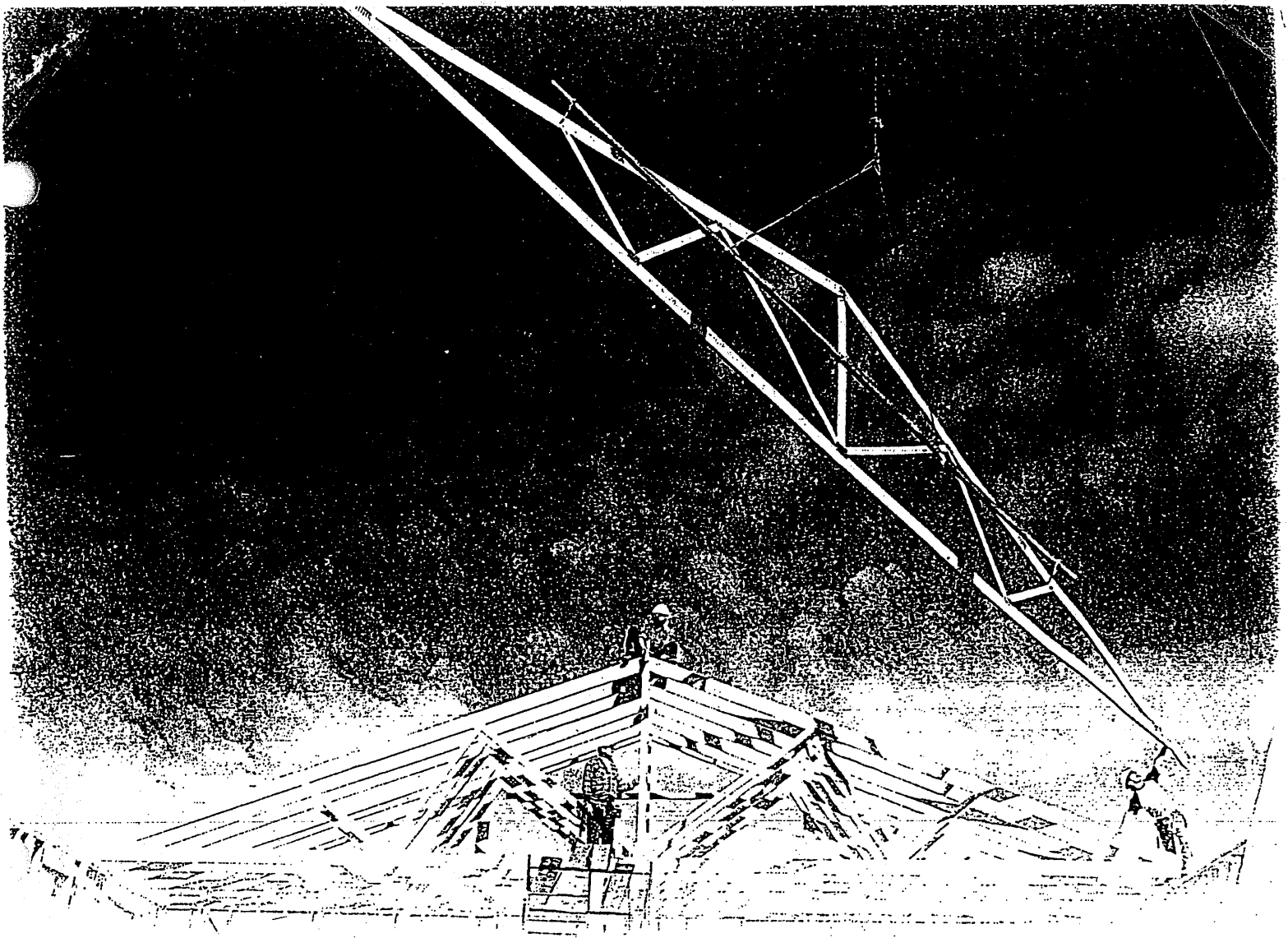
**LIMIT
STATES
DESIGN**

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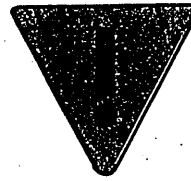
Wood Truss Installation

**A Guide to proper handling, erecting and bracing
metal plate connected wood trusses**

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1 Unloading & Lifting.....	5
2 Job Site Handling.....	5
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6 Bracing.....	8
7 Bracing Requirements for 3 Planes of Roof.....	9
8 Stacking Materials.....	10
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Warning



General

Familiarity with the Construction Design Documents, the Truss Design Drawings, and Truss Placement Plans (if required by the Construction Design Documents) is required to properly erect, brace, and connect the trusses to the building system.

All of the care and quality involved in the design and manufacture of wood trusses can be jeopardized if the trusses are not properly handled, erected, and braced.

The consequences of improper handling, erecting, and bracing may be a collapse of the structure, which at best is a substantial loss of time and materials, and at worst is a loss of life. The majority of truss accidents occur during truss installation and not as a result of improper design or manufacture.

Prior to truss erection, the builder/erector shall meet with the erection crew for a safety and planning meeting, making sure each crew member understands his or her roles and responsibilities during the erection process.

Temporary Erection Bracing

Trusses are not marked in any way to identify the frequency, or location of temporary erection bracing.

All temporary bracing shall comply with the latest edition of *Commentary and Recommendations for Handling, Installing & Bracing Metal Plate Connected Wood Trusses* (HIB), published by the Truss Plate Institute, and/or as specified in the Construction Design Documents prepared by the building designer.

Permanent Truss Bracing

Permanent bracing for the roof or floor trusses is the responsibility of the building designer and should be shown on the Construction Design Documents. Permanent bracing locations for individual compression members of a wood truss are shown on the Truss Design Drawings, and shall be installed by the building or erection contractor. This bracing is needed for the proper performance of individual trusses within the roof or floor system. The design and connection of the bracing to the truss and then to the overall building system is the responsibility of the building designer, and is in addition to the permanent bracing plan, which is also specified by the building designer.

Special Design Requirements

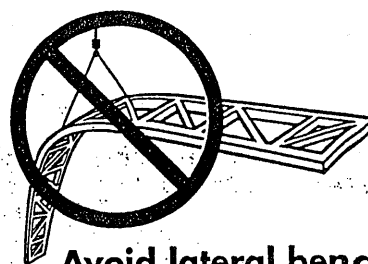
Special design requirements, such as wind bracing, portal bracing, seismic bracing, diaphragms, shear walls, or other load transfer elements and their connections to wood trusses must be considered separately by the building designer, who shall determine size, location, and method of connections for all bracing as needed to resist these forces.

1

Unloading & Lifting

Never handle trusses flat

Beginning with the unloading process, and throughout all phases of construction, care must be taken to avoid lateral bending of trusses, which can cause damage to the lumber and metal connector plates at the joints.

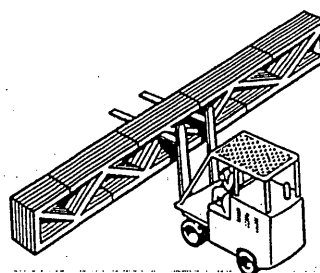
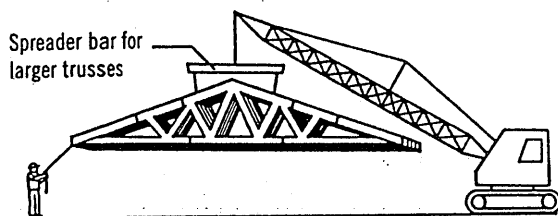


Avoid lateral bending

- Use special care in windy weather.
- If using a crane within 10 feet of an electric line, contact the local power company.
- If using a crane within 5 miles of an airport, contact the airport 30 days prior to erection to learn about any safety regulations that must be followed.

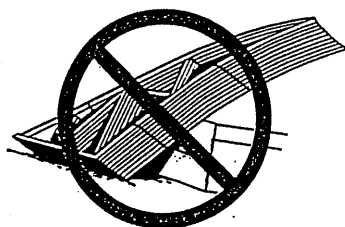
2

Job Site Handling



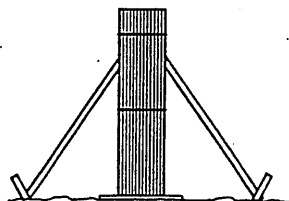
All trusses should be picked up at the top chords in a vertical position only

Proper banding and smooth ground allow for unloading of trusses without damage. This should be done as close to the building site as possible to minimize handling. Do not break banding until installation begins. Hand erection of trusses is allowed, provided excessive lateral bending is prevented.



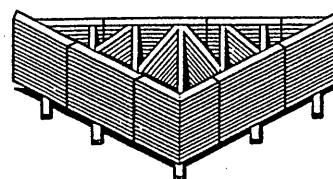
Do not store unbraced bundles upright

If trusses are stored vertically they shall be braced in a manner that will prevent tipping or topping. Generally cutting of the banding is done just prior to installation.



Do not store on uneven ground

If trusses are stored horizontally, blocking should be used on eight to ten foot centers, or as required, to minimize lateral bending and moisture gain.

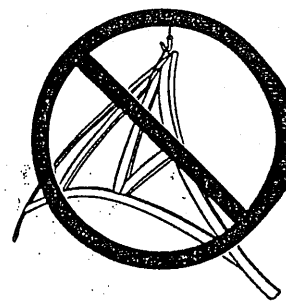


Care should be exercised when removing banding to avoid damaging trusses.

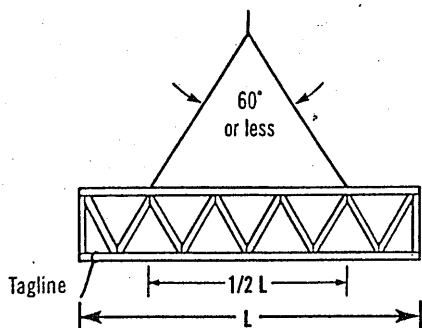
During long term storage, trusses shall be protected from the environment in a manner that provides for adequate ventilation of the trusses. If tarpaulins or other material is used, the ends shall be left open for ventilation. Plastic is not recommended, since it can trap moisture.

3 Hoisting

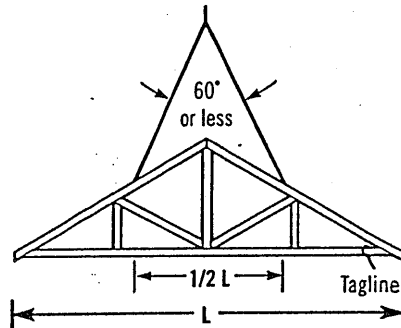
All trusses that are erected one at a time shall be held safely in position by the erection equipment until such time as all necessary bracing has been installed and the ends of the trusses are securely fastened to the building.



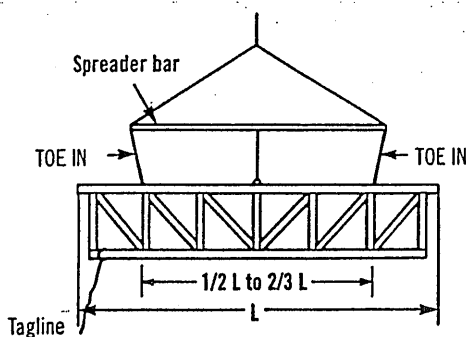
Avoid lateral bending



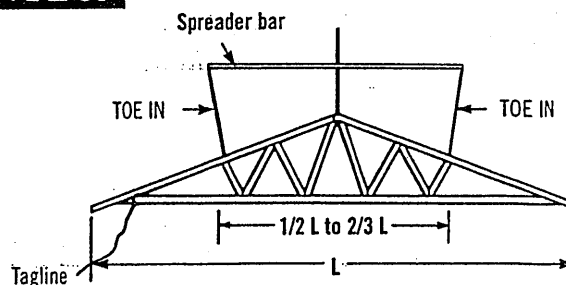
$L \leq 30'$



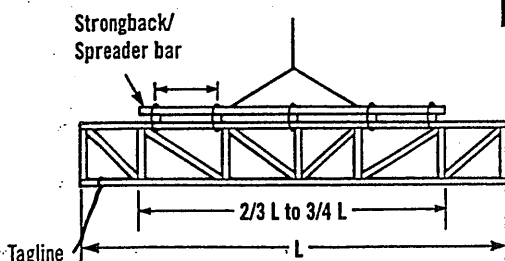
Truss sling is acceptable where these criteria are met.



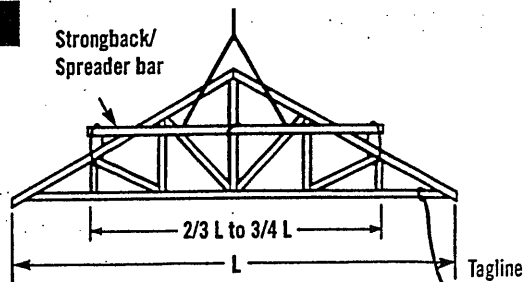
$30' < L \leq 60'$



Use spreader bar in all other cases. It should be noted that the lines from the ends of the spreader bar "TOE IN"; if these lines should "TOE OUT" the truss may fold in half.



$L > 60'$



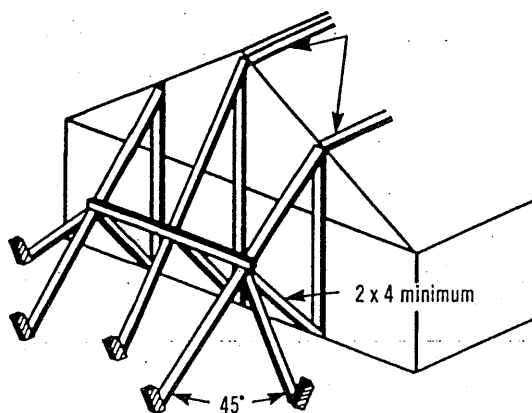
For lifting trusses with spans in excess of 60 feet, it is recommended that a strongback/spreader bar be used as illustrated. The strongback/spreader bar should be attached to the top chord and web members at intervals of approximately 10 feet. Further, the strongback/spreader bar should be at or above the mid-height of the truss to prevent overturning. The strongback/spreader bar can be of any material with sufficient strength to safely carry the weight of the truss and sufficient rigidity to adequately resist bending of the truss.

4 Beginning the Erection Process

It is important for the builder or erection contractor to provide substantial bracing for the first truss erected. The two or more trusses making up the rest of the first set are tied to and rely upon the first truss for stability. Likewise, after this first set of trusses is adequately cross-braced, the remaining trusses installed rely upon this first set for stability. Thus, the performance of the truss bracing system depends to a great extent on how well the first group of trusses is braced.

Ground Brace - Exterior

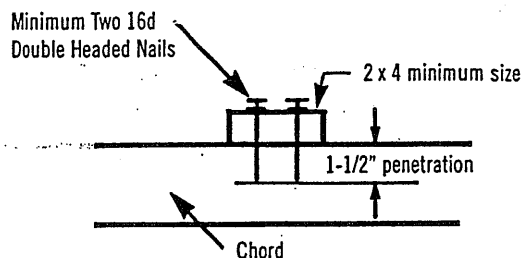
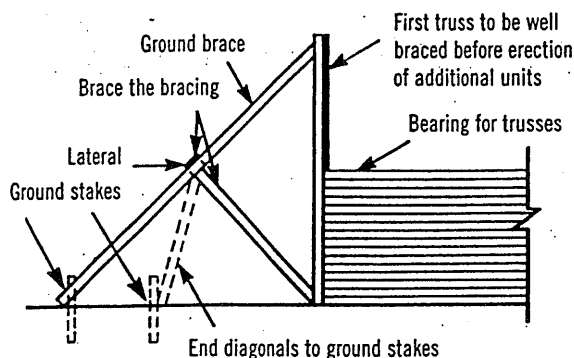
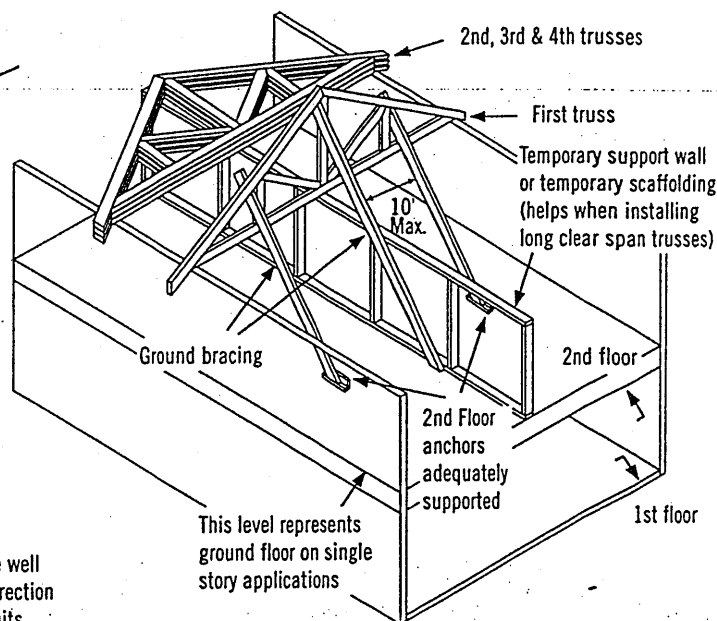
One satisfactory method ties the first unit of trusses off to a series of braces that are attached to a stake driven into the ground and securely anchored. The ground brace itself should be supported as shown below or it is apt to buckle. Additional ground braces in the opposite direction, inside the building, are also recommended.



Note: Locate ground braces for first truss directly in line with all rows of top chord continuous lateral bracing (either temporary or permanent).

Ground Brace - Interior

Another satisfactory method where height of building or ground conditions prohibit bracing from the exterior is to tie the first truss rigidly in place from the interior at the floor level, provided the floor is substantially completed and capable of supporting the ground bracing forces. Securely fasten the first truss to the middle of the building. Brace the bracing similar to exterior ground bracing shown at left. Set trusses from the middle toward the end of the building. Properly cross-brace the first set of trusses before removing floor braces and setting remaining trusses.

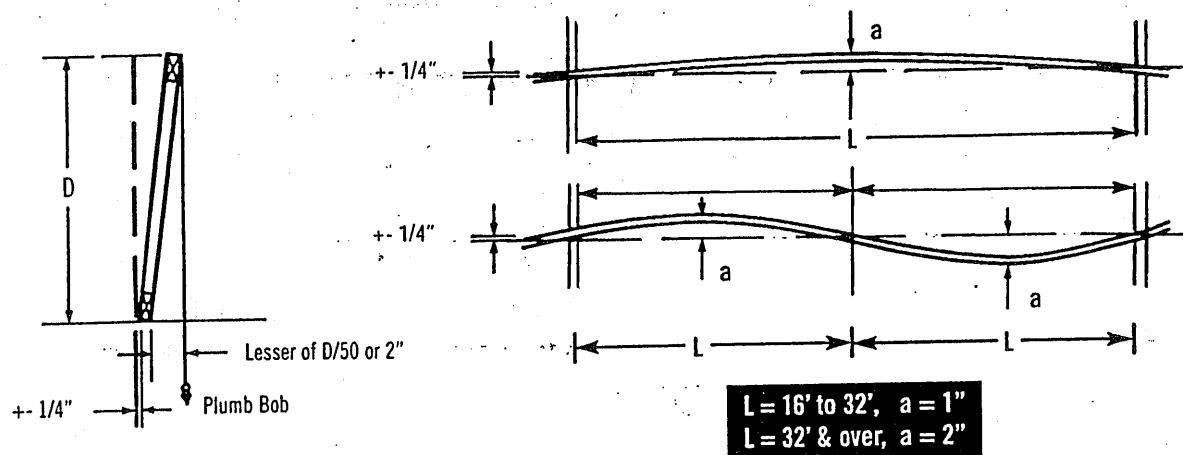


Inadequate size of bracing material or inadequate fastening is a major cause of erection dominoing.

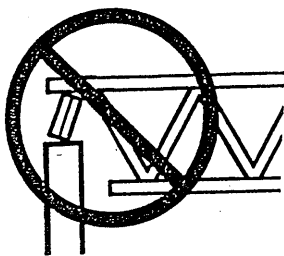
5 Erection Tolerance

Complying with erection tolerances is critical to achieving an acceptable roof or floor line, and to accomplishing effective bracing. Setting trusses within tolerance the first time will prevent the need for the hazardous practice of respacing or adjusting trusses when roof sheathing or roof purlins are installed. Trusses leaning or bowing can cause nails to miss the top chords when sheathing is applied, and create cumulative stresses on the bracing, which is a frequent cause of dominoing.

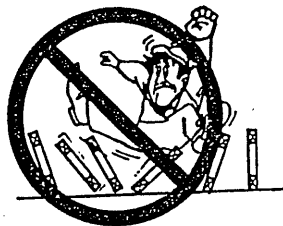
When sheathing, make sure nails are driven into the top chord of the trusses.



6 Bracing



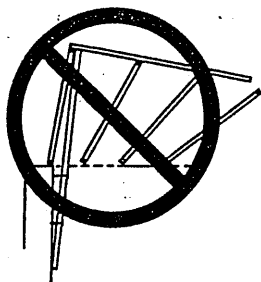
Do not install trusses on temporarily connected supports



Do not walk on unbraced trusses



Do not walk on trusses or gable ends lying flat

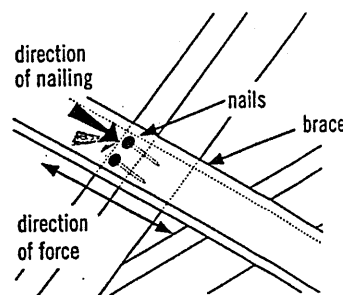


Nails in withdrawal (parallel to force)

All anchors, hangers, tie-downs, seats, bearing ledgers, etc., that are part of the supporting structure shall be accurately and properly placed and permanently attached before truss installation begins. No trusses shall ever be installed on anchors or ties that have temporary connections to the supporting structure.

Nailing scabs to the end of the building to brace the first truss is not recommended.

All nailing of bracing should be done so that nails are driven perpendicular to the direction of force, as shown at right.



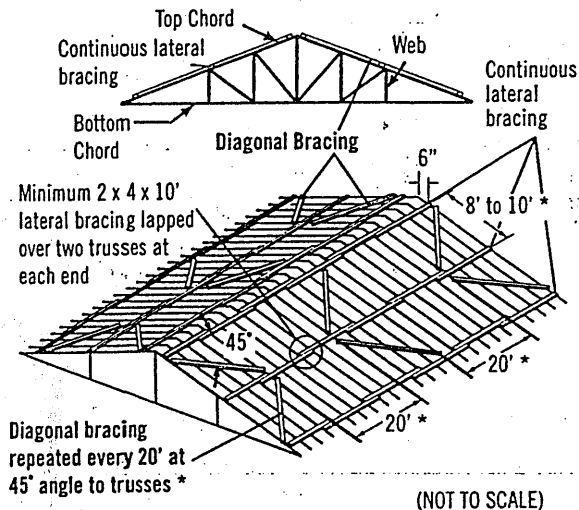
Well nailed (perpendicular to force)

7 Bracing Requirements for 3 Planes of Roof

Temporary erection bracing must be applied to three planes of the roof system to ensure stability: Plane 1) Top Chord (sheathing), Plane 2) Bottom Chord (ceiling plane), and Plane 3) Web Member plane or vertical plane perpendicular to trusses.

1) Top Chord Plane

Most important to the builder or erection contractor is bracing in the plane of the top chord. Truss top chords are susceptible to lateral buckling before they are braced or sheathed.

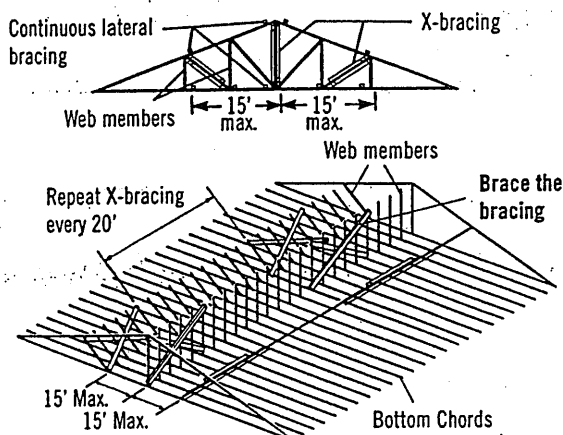


Exact spacing between trusses should be maintained as bracing is installed to avoid the hazardous practice of removing bracing to adjust spacing. This act of "adjusting spacing" can cause trusses to topple if connections are removed at the wrong time.

3) Web Member Plane

"X" bracing, as shown, is critical in preventing trusses from leaning or dominoing. Repeat as shown to create a succession of rigid units.

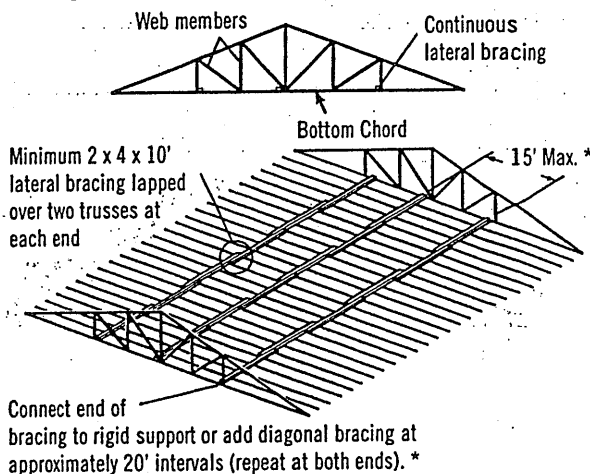
X-bracing should be installed on vertical web members wherever possible, at or near lateral bracing. Plywood or OSB may be substituted for X-bracing.



Note: Top chords and some web members are not shown, in order to make drawings more readable.

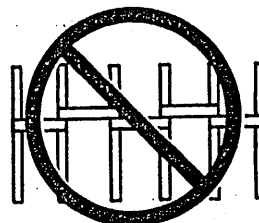
2) Bottom Chord Plane

In order to hold proper spacing on the bottom chord, temporary bracing is recommended on the top of the bottom chord.

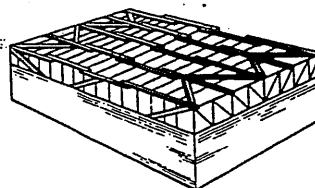


* Long spans, heavy loads or other spacing configurations may require closer spacing between lateral bracing and closer intervals between diagonals. Consult the building designer or HIB and DSB (Recommended Design Specification for Temporary Bracing of Metal-Plate Connected Wood Trusses) for details.

Diagonal or cross-bracing is very important!



Do not use short blocks to brace individual trusses without a specific bracing plan detailing their use

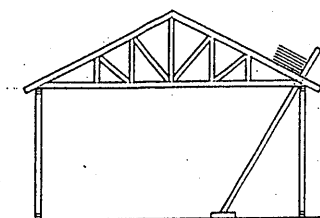
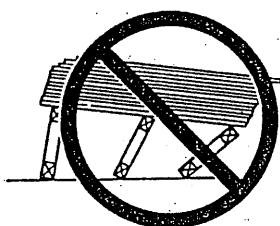


Bracing requirements using the same principles apply to parallel chord trusses

8 Stacking Materials

Do not proceed with building completion until all bracing is securely and properly in place

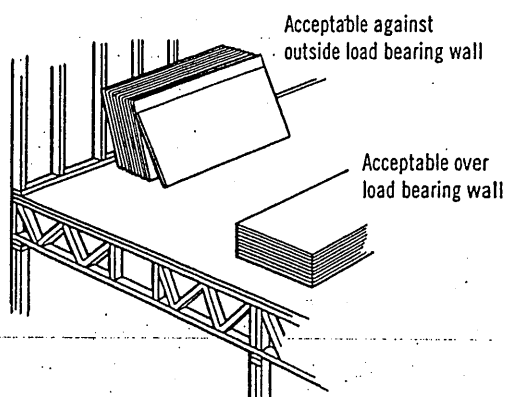
Never stack materials on unbraced or inadequately braced trusses



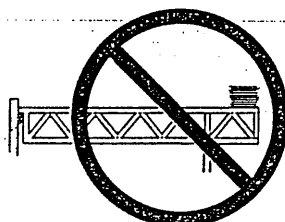
Platform must be rigidly braced

Proper distribution of construction materials is a must during construction.

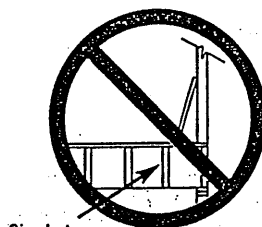
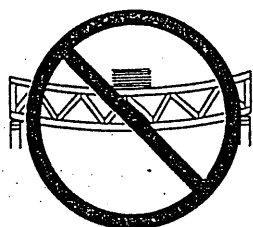
Never stack materials near a peak



Never stack materials on the cantilever of a truss

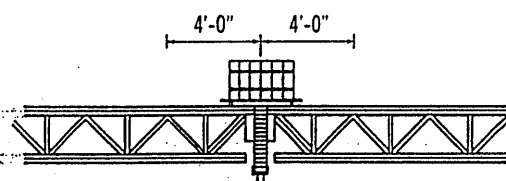


Always stack materials over two or more trusses.



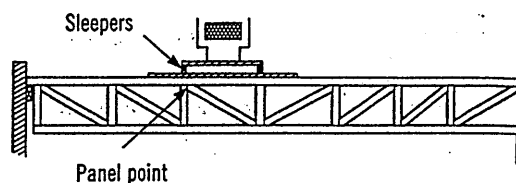
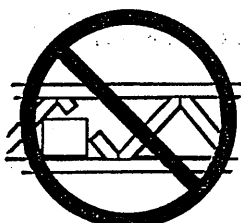
Single truss

Never overload small groups or single trusses. Position load over as many trusses as possible.



Roofing and mechanical contractors are cautioned to stack materials only along outside supporting members or directly over inside supporting members. Trusses are not designed for dynamic loads (i.e., moving vehicles). Extreme care should be taken when loading and stacking construction materials (rolled roofing, mechanical equipment, etc.) on the roof or floor system.

Never cut any structural member of a truss.



Panel point

Sleepers for mechanical equipment should be located at panel points (joints) or over main supporting members, and only on trusses that have been designed for such loads.

Caution Notes

Errors in building lines and/or dimensions, or errors by others shall be corrected by the contractor or responsible construction trade subcontractor or supplier before erection of trusses begins.

Cutting of nonstructural overhangs is considered a part of normal erection and shall be done by the builder or erection contractor.

Any field modification that involves the cutting, drilling, or relocation of any structural truss member or connector plate shall not be done without the approval of the truss manufacturer or a licensed design professional.

The methods and procedures outlined are intended to ensure that the overall construction techniques employed will put floor and roof trusses safely in place in a completed structure. These recommendations for bracing wood trusses originate from the collective experience of leading technical personnel in the wood truss industry, but must, due to the nature of responsibilities involved, be presented only as a guide for use by a qualified building designer, builder, or erection contractor. Thus, the Wood Truss Council of America expressly disclaims any responsibility for damages arising from the use, application, or reliance on the recommendations and information contained herein.

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