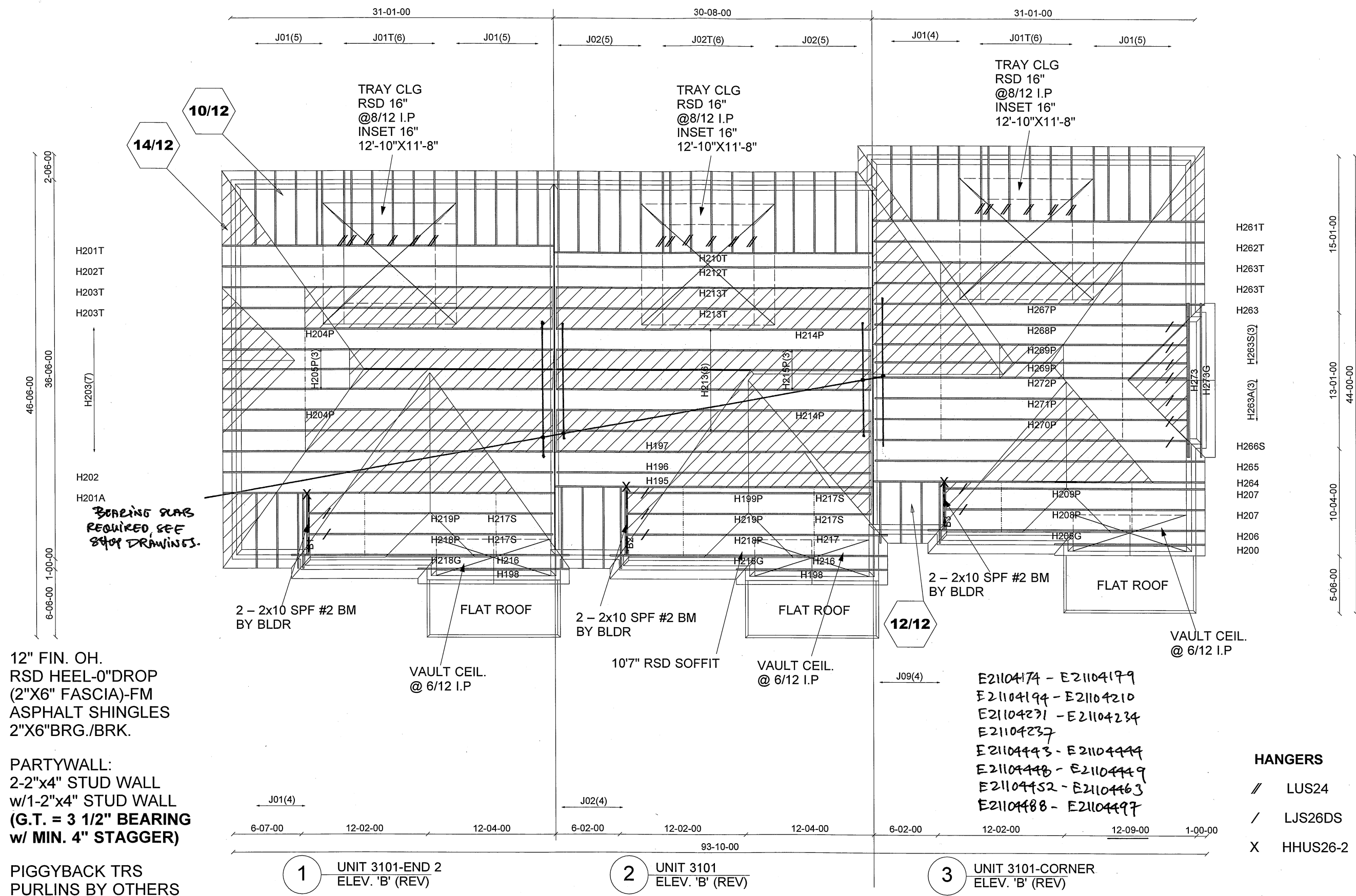




PL: 111206(TYP.), 114170E

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: 336331

Plan Log: 113188

Builder / Location:

GOLD PARK HOMES / VAUGHAN

Project: PINE VALLEY

Date: 9/28/2021

Designer: JBURROWS/C

Model / Elevation:

BLOCK 11 / UNIT 1-3

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.

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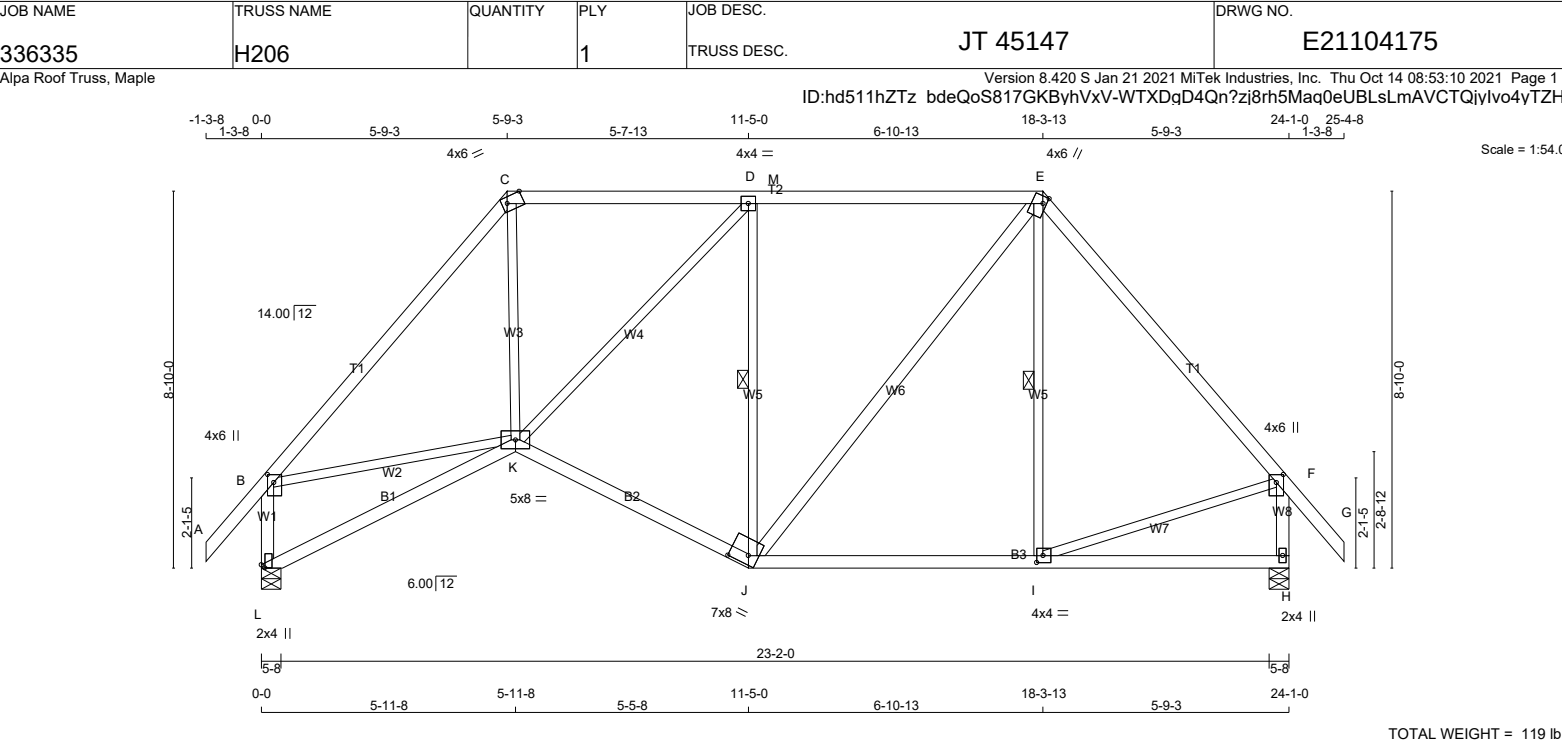
TOTAL WEIGHT = 60 lb

DRY: SEASONED LUMBER.

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

C H O R D S				W E B S			
MAX. FACTORED		FACTORED		MAX. FACTORED			
MEMB.	FORCE	VERT. LOAD	LC1 MAX	MAX. UNBRAC	MEMB.	FORCE	MAX
	(LBS)	(PLF)	CSI (LC)			(LBS)	CSI (LC)
FR-TO		FROM TO		LENGTH	FR-TO		
A-B	0 / 42	-78.0	-78.0 0.09 (1)	10.00	G-C	0 / 208	0.06 (4)
B-C	-443 / 0	-78.0	-78.0 0.30 (1)	6.25	B-G	0 / 292	0.07 (1)
C-D	-443 / 0	-78.0	-78.0 0.30 (1)	6.25	G-D	0 / 292	0.07 (1)
D-E	0 / 42	-78.0	-78.0 0.09 (1)	10.00			
H-B	-629 / 0	0.0	0.0 0.08 (1)	7.81			
F-D	-629 / 0	0.0	0.0 0.08 (1)	7.81			
H-G	0 / 0	-18.5	-18.5 0.19 (4)	10.00			
G-F	0 / 0	-18.5	-18.5 0.19 (4)	10.00			

JSI GRIP= 0.48 (G) (INPUT = 0.90)
JSI METAL= 0.26 (H) (INPUT = 1.00)



LUMBER

N. L. G. A. RULES

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

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	TTW-m	MT20	4.0	6.0	Edge	4.50
D	TMWW-t	MT20	4.0	4.0		
E	TTWW+m	MT20	4.0	6.0	2.00	1.00
F	TMVW+p	MT20	4.0	6.0	2.25	2.00
H	BMV1+p	MT20	2.0	4.0		
I	BMWW-t	MT20	4.0	4.0	2.00	1.75
J	BBWW-h	MT20	7.0	8.0	2.50	5.25
K	BBWWW-p	MT20	5.0	8.0		
L	BMV1+p	MT20	2.0	4.0	1.00	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
L	1318	0	1318	0
H	1318	0	1318	0

UNFACTORED REACTIONS

	1ST LCASE	MAX./MIN.	COMPONENT REACTIONS
JT	COMBINED	SNOW	LIVE
L	942	564 / 0	0 / 0
H	942	564 / 0	0 / 0

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

BRACING
FOR SECTION C-E, MAX. PURLIN SPACING = 2.00 FT.
FOR OTHER SECTIONS, 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 D-J, E-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					WEBS				
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1	MAX. 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	C-K	0 / 682	0.15 (1)	
B-C	-1426 / 0	-78.0	-78.0	0.64 (1)	4.79	K-D	0 / 52	0.01 (1)	
C-D	-947 / 0	-85.5	-85.5	0.62 (1)	2.00	J-D	-698 / 0	0.35 (1)	
D-M	-920 / 0	-85.5	-85.5	0.64 (1)	2.00	J-E	0 / 440	0.07 (1)	
M-E	-920 / 0	-85.5	-85.5	0.64 (1)	2.00	I-E	-45 / 80	0.03 (4)	
E-F	-991 / 0	-78.0	-78.0	0.56 (1)	5.55	B-K	0 / 938	0.21 (1)	
F-G	0 / 42	-78.0	-78.0	0.11 (1)	10.00	I-F	0 / 671	0.15 (1)	
L-B	-1263 / 0	0.0	0.0	0.16 (1)	7.16				
H-F	-1279 / 0	0.0	0.0	0.15 (1)	7.13				
L-K	0 / 0	-18.5	-18.5	0.19 (4)	10.00				
K-J	0 / 1020	-18.5	-18.5	0.27 (4)	10.00				
J-I	0 / 642	-18.5	-18.5	0.29 (4)	10.00				
I-H	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 PIGGYBACK TRUSS WITH SLOPES OF 6.00/12 AND -6.00/12 AND RESPECTIVE HEEL HEIGHTS OF 0-0 AND 0-0 AND AN ADDITIONAL DEAD LOAD OF 3.0 P.S.F.

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 (0.80")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.03")
ALLOWABLE DEFL.(TL)= L/360 (0.80")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.11")

CSI: TC=0.64/1.00 (B-C:1) , BC=0.29/1.00 (I-J:4) , WB=0.35/1.00 (D-J: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 .

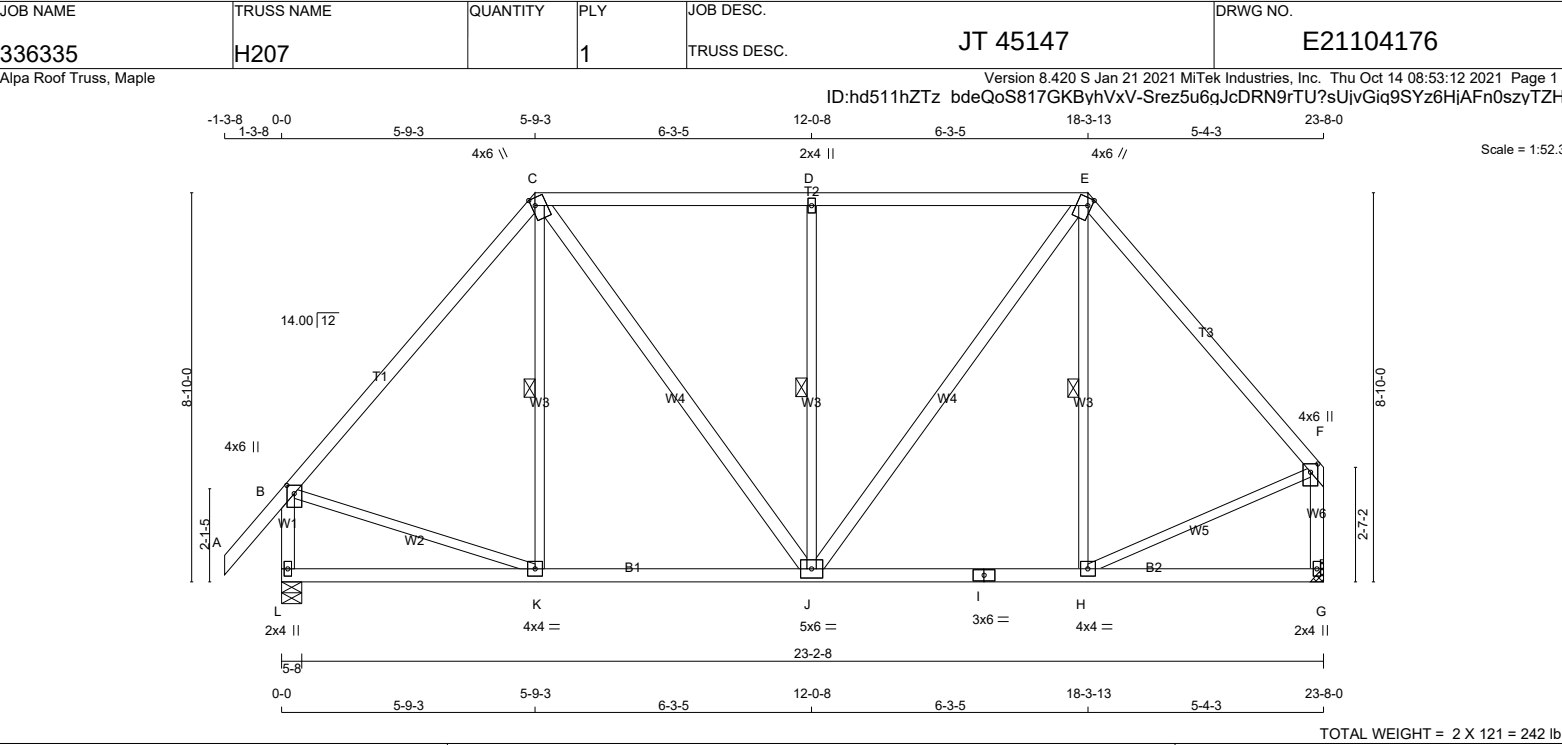
NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.80 (B) (INPUT = 0.90)
JSI METAL= 0.53 (B) (INPUT = 1.00)



LUMBER

N. L. G. A. RULES

CHORDS	SIZE	LUMBER	DESCR.
A - C	2x4	DRY	No.2
C - E	2x4	DRY	No.2
E - F	2x4	DRY	No.2
L - B	2x4	DRY	No.2
G - F	2x4	DRY	No.2
L - I	2x4	DRY	No.2
I - G	2x4	DRY	No.2
ALL WEBS EXCEPT	2x3	DRY	No.2
C - J	2x4	DRY	No.2
J - E	2x4	DRY	No.2

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	TMW+w	MT20	2.0	4.0		
E	TTWW+m	MT20	4.0	6.0	2.00	1.00
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	BS-t	MT20	3.0	6.0		
J	BMWWW-t	MT20	5.0	6.0		
K	BMWW-t	MT20	4.0	4.0		
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

JT	FACTORED GROSS REACTION	MAXIMUM FACTORED GROSS REACTION	INPUT	REQRD
L	1297 0	1297 0	5-8	1-8
G	1189 0	1189 0	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	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
L	927	556 / 0	0 / 0	0 / 0	0 / 0	0 / 0	371 / 0	0 / 0
G	852	497 / 0	0 / 0	0 / 0	0 / 0	0 / 0	355 / 0	0 / 0

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

BRACING

FOR SECTION C-E, MAX. PURLIN SPACING = 2.00 FT.

FOR OTHER SECTIONS, TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.60 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 C-K, D-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 CSI (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX LC1 CSI (LC)	
FR-TO		FROM TO		FR-TO			
A-B	0 / 42	-78.0 -78.0	0.11 (1)	10.00	K-C	-60 / 60	0.03 (1)
B-C	-965 / 0	-78.0 -78.0	0.55 (1)	5.60	C-J	0 / 449	0.07 (1)
C-D	-892 / 0	-85.5 -85.5	0.61 (1)	2.00	J-D	-657 / 0	0.33 (1)
D-E	-892 / 0	-85.5 -85.5	0.61 (1)	2.00	J-E	0 / 502	0.08 (1)
E-F	-918 / 0	-78.0 -78.0	0.46 (1)	5.84	H-E	-122 / 30	0.06 (1)
L-B	-1254 / 0	0.0 0.0	0.15 (1)	7.18	B-K	0 / 653	0.15 (1)
G-F	-1151 / 0	0.0 0.0	0.16 (1)	7.42	H-F	0 / 643	0.14 (1)
L-K	0 / 0	-18.5 -18.5	0.16 (4)	10.00			
K-J	0 / 625	-18.5 -18.5	0.23 (4)	10.00			
J-I	0 / 594	-18.5 -18.5	0.21 (4)	10.00			
I-H	0 / 594	-18.5 -18.5	0.21 (4)	10.00			
H-G	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

LOADING IN FLAT SECTION BASED ON PIGGYBACK TRUSS WITH SLOPES OF 6.00/12 AND -6.00/12 AND RESPECTIVE HEEL HEIGHTS OF 0-0 AND 0-0 AND AN ADDITIONAL DEAD LOAD OF 3.0 P.S.F.

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBC2015

THIS DESIGN COMPLIES WITH:

- PART 9 OF CBC2018 , 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 (0.79")

CALCULATED VERT. DEFL.(LL) = L/ 999 (0.02")

ALLOWABLE DEFL.(TL)= L/360 (0.79")

CALCULATED VERT. DEFL.(TL) = L/ 999 (0.05")

CSI: TC=0.61/1.00 (D-E:1) , BC=0.23/1.00 (J-K:4) , WB=0.33/1.00 (D-J:1) , SSI=0.26/1.00 (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.

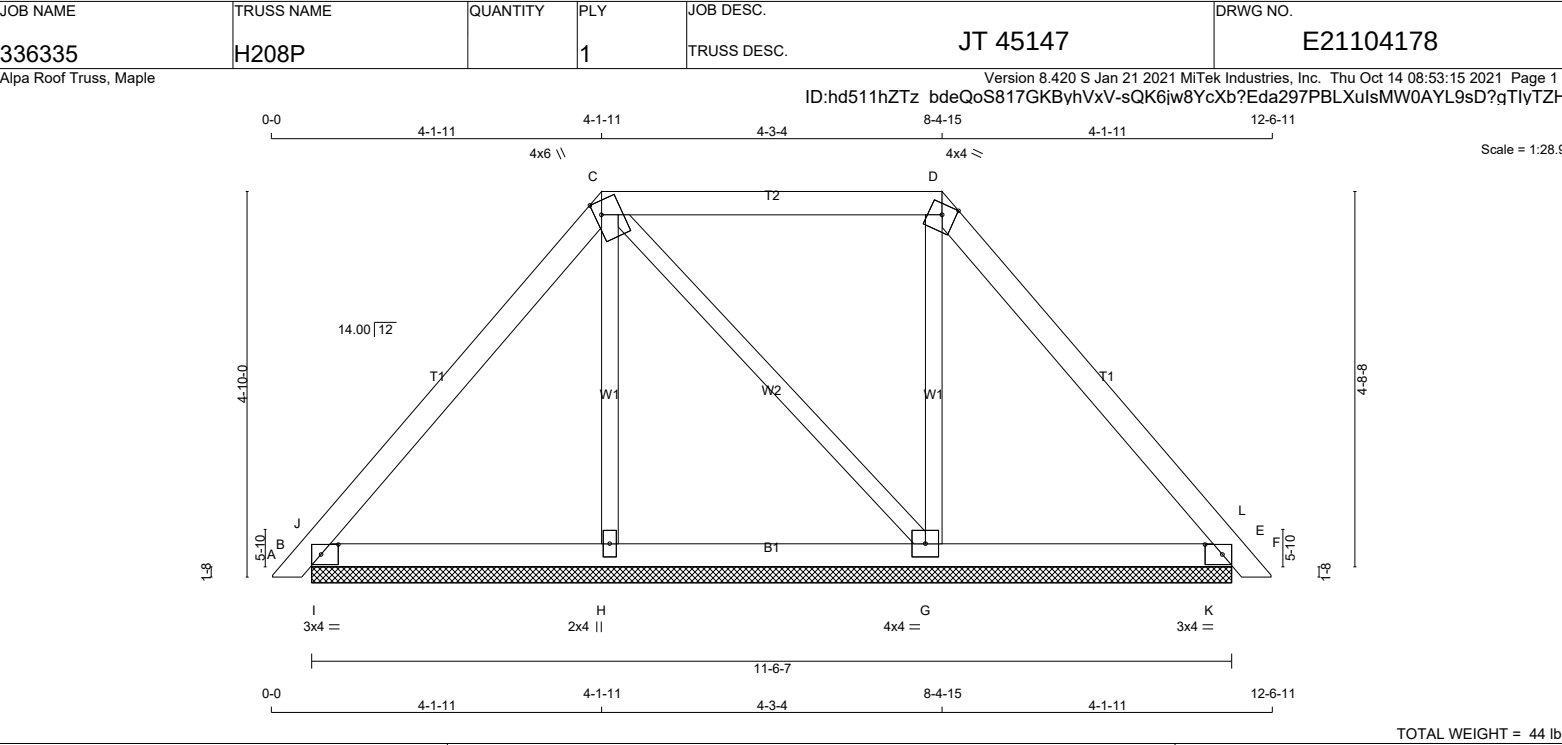
JSI GRIP= 0.80 (K) (INPUT = 0.90)

JSI METAL= 0.41 (B) (INPUT = 1.00)

scale = 1:19.8



JSI GRIP= 0.12 (B) (INPUT = 0.90)
JSI METAL= 0.04 (D) (INPUT = 1.00)



Alpa Roof Truss, Maple

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TOTAL WEIGHT = 40 lb

PLATES (table is in inches)						
JT	TYPE	PLATES	W	LEN	Y	X
B	TMB1-I	MT20	3.0	4.0	1.50	2.50
C	TTW-p	MT20	4.0	4.0		
D	TMB1-I	MT20	3.0	4.0	1.50	2.50
F	BMW1+w	MT20	2.0	4.0		

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION			INPUT BRG	REQD BRG
	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX
B	485	0	485	0	0	11-6-7	1-8
D	485	0	485	0	0	11-6-7	1-8
F	203	0	203	0	0	11-6-7	1-8

1ST LCASE		MAX/MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
B	342	230 / 0	0 / 0	0 / 0	0 / 0	112 / 0	0 / 0
D	342	230 / 0	0 / 0	0 / 0	0 / 0	112 / 0	0 / 0
F	151	56 / 0	0 / 0	0 / 0	0 / 0	95 / 0	0 / 0

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

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)

C H O R D S					W E B S				
MAX. FACTORED		FACTORED			MAX. FACTORED				
MEMB.	FORCE (LBS)	VERT. LOAD (PLF)	LC1	MAX	MAX. UNBRAC	MEMB.	FORCE (LBS)	MAX	CS1 (LC)
FR-TO		FROM	TO		LENGTH	FR-TO			
A-B	0 / 10	-78.0	-78.0	0.01 (1)	10.00	F-C	0 / 32		0.01 (4)
B-H	0 / 494	-78.0	-78.0	0.31 (1)	10.00	G-H	-1130 / 0		0.00 (1)
H-C	-292 / 0	-78.0	-78.0	0.32 (1)	6.25	I-J	-1130 / 0		0.00 (1)
C-J	-292 / 0	-78.0	-78.0	0.32 (1)	6.25				
J-D	0 / 494	-78.0	-78.0	0.31 (1)	10.00				
D-E	0 / 10	-78.0	-78.0	0.01 (1)	10.00				
B-G	0 / 175	-18.5	-18.5	0.29 (1)	10.00				
G-F	0 / 175	-18.5	-18.5	0.29 (1)	10.00				
F-I	0 / 175	-18.5	-18.5	0.29 (1)	10.00				
I-D	0 / 175	-18.5	-18.5	0.29 (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

(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=0.32/1.00 (C-J:1), BC=0.29/1.00 (F-I:1),
WB=0.01/1.00 (C-F:4), SSI=0.87/1.00 (D-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

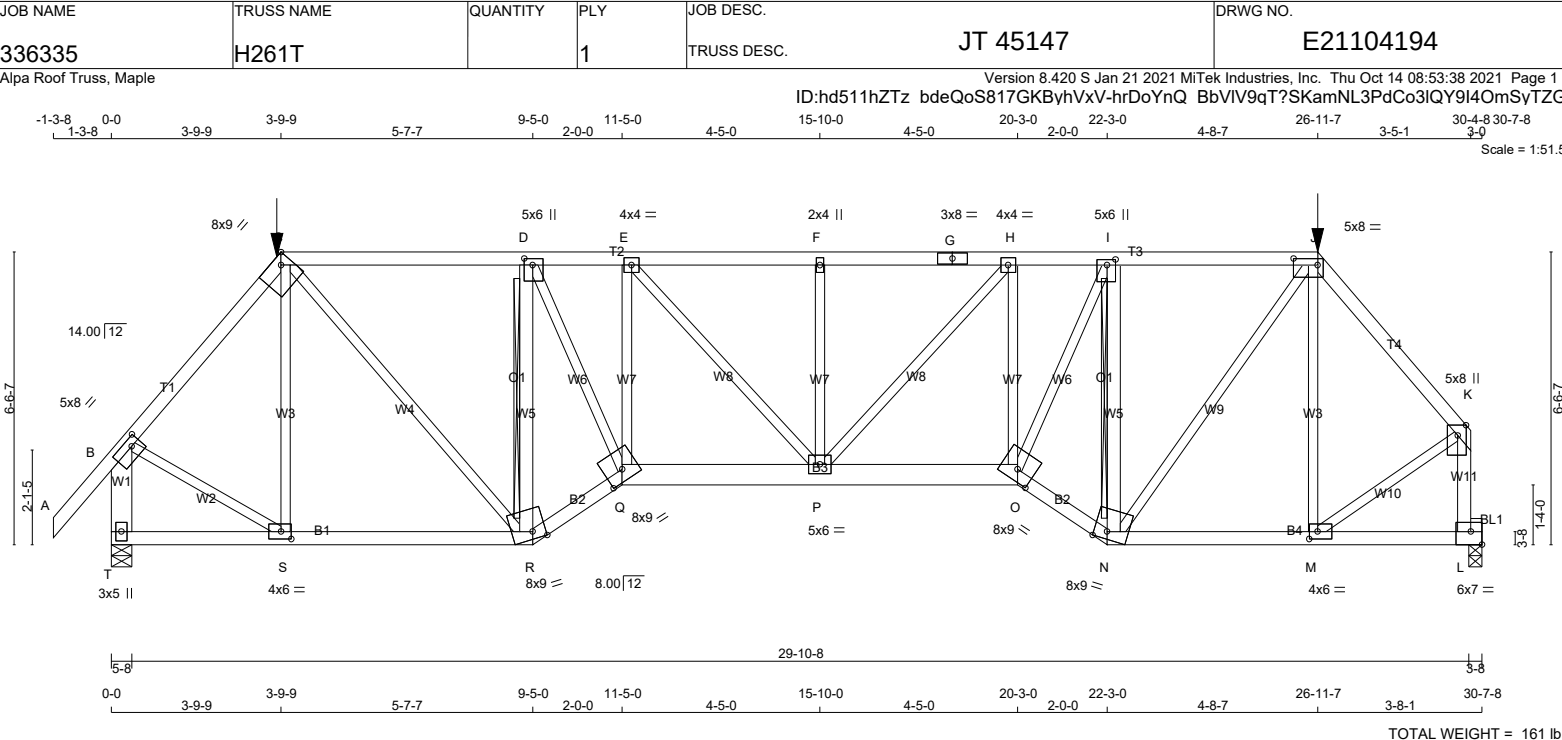
TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

PLATE	GRIP(DRY) (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= 0.59 (D) (INPUT = 0.90)
JSI METAL= 0.13 (B) (INPUT = 1.00)



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.																				TOP CH. LL = 21.0 PSF									
A - C 2x4 DRY No.2 SPF										FACTORED GROSS REACTION										DL = 6.0 PSF									
C - G 2x4 DRY No.2 SPF										GROSS REACTION										BOT CH. LL = 0.0 PSF									
G - J 2x4 DRY No.2 SPF										DOWN HORZ UPLIFT										DL = 7.4 PSF									
J - K 2x4 DRY No.2 SPF										T 2899 0 2899 0 0 5-8 3-15										TOTAL LOAD = 34.4 PSF									
T - B 2x6 DRY No.2 SPF										L 2832 0 2832 0 0 3-8 3-8																			
L - K 2x4 DRY No.2 SPF																													
T - R 2x4 DRY No.2 SPF																													
R - Q 2x4 DRY No.2 SPF																													
Q - O 2x6 DRY No.2 SPF																													
O - N 2x4 DRY No.2 SPF																													
N - L 2x4 DRY No.2 SPF																													
BEARING BLOCKS										UNFACTORED REACTIONS										SPACING = 24.0 IN. C/C									
BL1 2x4 DRY No.2 SPF										1ST LCASE MAX./MIN. COMPONENT REACTIONS																			
										JT COMBINED SNOW LIVE PERM.LIVE WIND DEAD SOIL										LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM									
ALL WEBS 2x3 DRY No.2 SPF										T 2066 1264 / 0 0 / 0 0 / 0 0 / 0 802 / 0 0 / 0										GIRDER TYPE: CPrimeHip									
EXCEPT										L 2020 1228 / 0 0 / 0 0 / 0 0 / 0 792 / 0 0 / 0										LEFT SETBACK = 3-9-9									
R - D 2x4 DRY No.2 SPF										BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) T, L										RIGHT SETBACK = 3-8-1									
N - I 2x4 DRY No.2 SPF										BEARING SIZE FACTOR = 1.15 AT JNT(S) L (BASED ON SUPPORT DEPTH = 1-8)										END SETBACK = 5-10-8									
DRY: SEASONED LUMBER.										BRACING										END WALL WIDTH = 0-0									
										TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 2.08 FT.										CORNER FRAMING TYPE: CONVENTIONAL									
										MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.										END JACK TYPE: CONVENTIONAL									
										ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.										APPLIED TO FRONT SIDE									
										2x4 DRY SPF No.2 T-BRACE AT D-R, I-N										- ADDT'L LOADS BASED ON 55 % OF GSL.									
										FASTEN T AND I-BRACES TO NARROW EDGE OF WEB WITH ONE ROW PER PLY OF 3"										LOADS APPLIED TO FIRST 9-5-0 OF SPAN									
										COMMON WIRE NAILS @ 6" O.C. WITH 3" MINIMUM END DISTANCE. BRACE MUST COVER 90% OF WEB LENGTH.										MEASURED FROM THE LEFT.									
										END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW										GIRDER TYPE: CStdGirder									
PLATES (table is in inches)										LOADING										START DISTANCE = 9-5-0									
JT TYPE PLATES W LEN Y X										TOTAL LOAD CASES: (4)										START SPAN CARRIED = 5-10-8									
B TMWW-t MT20 5.0 8.0 2.00 2.50										CHORDS										END DISTANCE = 22-3-0									
C TTWW-h MT20 8.0 9.0 Edge 2.75										MEMB. MAX. FACTORED FORCE (LBS) FACTORED VERT. LOAD (PLF) MAX LCI										END SPAN CARRIED = 5-10-8									
D TMWW-t MT20 5.0 6.0 1.75 2.25										FROM TO LENGTH										END WALL WIDTH = 0-0									
E TMWW-t MT20 4.0 4.0										FR-TO										CORNER FRAMING TYPE: CONVENTIONAL									
F TMW+w MT20 2.0 4.0										A-B 0 / 42 -78.0 -78.0 0.12 (1) 10.00										END JACK TYPE: CONVENTIONAL									
G TS-t MT20 3.0 8.0										B-C -2473 / 0 -78.0 -78.0 0.37 (1) 4.05										APPLIED TO FRONT SIDE									
H TMWW-t MT20 4.0 4.0										C-D -3092 / 0 -153.5 -153.5 0.92 (1) 2.82										- ADDT'L LOADS BASED ON 55 % OF GSL.									
I TMWW-t MT20 5.0 6.0 1.50 2.25										D-E -4234 / 0 -78.0 -78.0 0.89 (1) 2.08										LOADS APPLIED TO FIRST 8-4-8 OF SPAN									
J TTWW-I MT20 5.0 8.0 1.75 6.50										E-F -4583 / 0 -78.0 -78.0 0.63 (1) 2.76										MEASURED FROM THE RIGHT.									
K TMW+p MT20 5.0 8.0 2.75 Edge										F-G -4583 / 0 -78.0 -78.0 0.63 (1) 2.76										THIS TRUSS IS DESIGNED FOR RESIDENTIAL									
L BMVK1-t MT20 6.0 7.0 3.50 Edge										G-H -4583 / 0 -78.0 -78.0 0.63 (1) 2.76										OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015									
M BMWW-t MT20 4.0 6.0 2.00 2.25										H-I -3989 / 0 -78.0 -78.0 0.64 (1) 2.78										THIS DESIGN COMPLIES WITH:									
N BMWW-m MT20 8.0 9.0 Edge 3.50										I-J -2787 / 0 -153.5 -153.5 0.60 (1) 3.48										- PART 9 OF CBC2018 , ABC 2019									
O BMWW-h MT20 8.0 9.0 3.00 4.50										J-K -2190 / 0 -78.0 -78.0 0.28 (1) 4.34										- PART 9 OF OBC 2012 (2019 AMENDMENT)									
P BMWW-t MT20 5.0 6.0										T-B -2856 / 0 0.0 0.0 0.25 (1) 6.16										- CSA 086-14									
Q BMWW-h MT20 8.0 9.0 3.00 4.75										L-K -2801 / 0 0.0 0.0 0.41 (1) 5.08										- TPIC 2014									
R BMWW-m MT20 8.0 9.0 Edge 3.50										T-S 0 / 0 -36.4 -36.4 0.28 (4) 10.00										(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F.									
S BMWW-t MT20 4.0 6.0 2.00 2.75										S-R 0 / 1593 -36.4 -36.4 0.45 (4) 10.00										RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED									
T BMV1+p MT20 3.0 5.0										R-Q 0 / 3652 -112.0 -112.0 0.73 (1) 10.00										ROOF LIVE LOAD									
										Q-P 0 / 4242 -112.0 -112.0 0.70 (1) 10.00										ALLOWABLE DEFL.(LL)= L/360 (1.01")									
										P-O 0 / 4006 -112.0 -112.0 0.67 (1) 10.00										CALCULATED VERT. DEFL.(LL) = L/ 999 (0.23")									
										O-N 0 / 3283 -112.0 -112.0 0.66 (1) 10.00										ALLOWABLE DEFL.(TL)= L/360 (1.01")									
										N-M 0 / 1404 -36.4 -36.4 0.37 (1) 10.00										CALCULATED VERT. DEFL.(TL) = L/ 817 (0.44")									
										M-L -187 / 0 -36.4 -36.4 0.20 (4) 6.25										CSI: TC=0.92/1.00 (C-D:1), BC=0.73/1.00 (Q-R:1),									
										FACTORED CONCENTRATED LOADS (LBS)										WB=0.86/1.00 (D-R:1), SSI=0.42/1.00 (C-D:1)									
										JT LOC. LC1 MAX- MAX+ FACE DIR. TYPE HEEL CONN.										DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.00									
										C 3-9-9 -216 -216 --- FRONT VERT TOTAL --- C1										COMP=1.00 SHEAR=1.00 TENS= 1.00									
										J 26-11-7 -209 -209 --- FRONT VERT TOTAL --- C1										COMPANION LIVE LOAD FACTOR = 1.00									
																				CONTINUED ON PAGE									

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

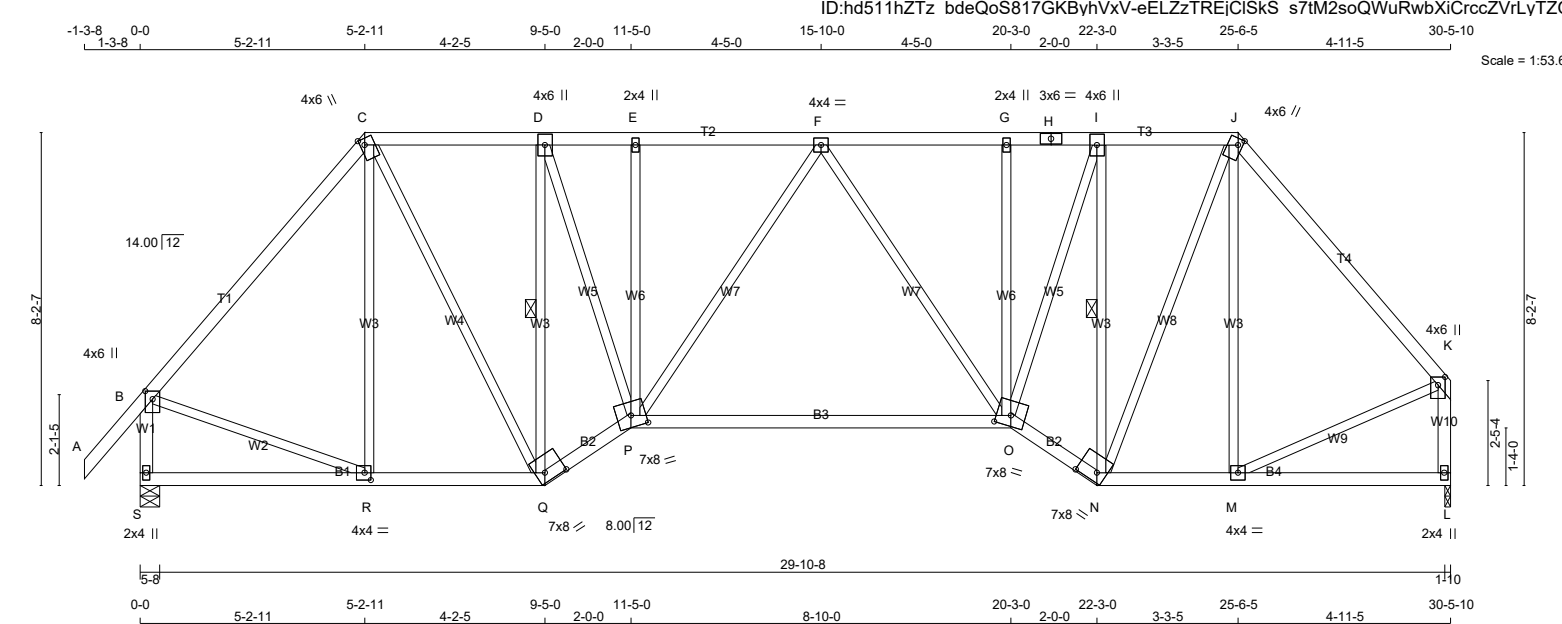


JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336335	H262T		1	TRUSS DESC. JT 45147	E21104195

Alpa Roof Truss, Maple

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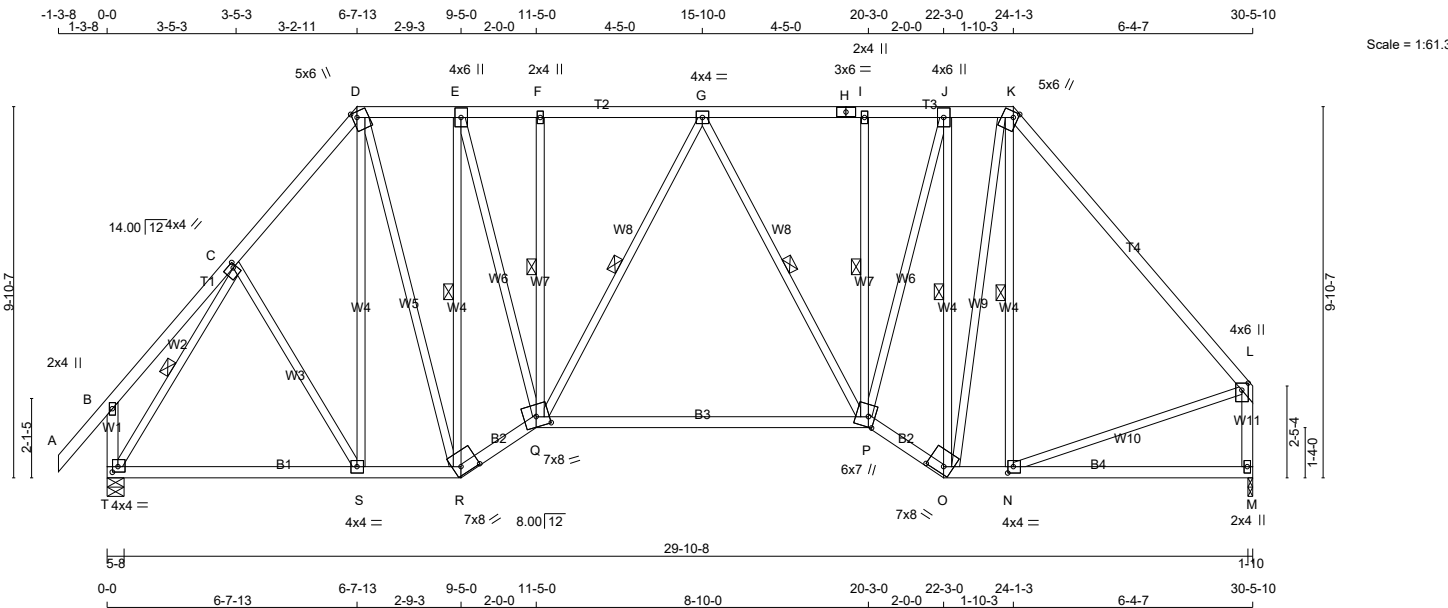


JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336335	H263T		1	TRUSS DESC. JT 45147	E21104196

Alpa Roof Truss, Maple

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TOTAL WEIGHT = 2 X 188 = 376 lb [M]

LUMBER			
N. L. G. A. RULES			
CHORDS	SIZE	LUMBER	DESCR.
A - D	2x4	DRY No.2	SPF
D - H	2x4	DRY No.2	SPF
H - K	2x4	DRY No.2	SPF
K - L	2x4	DRY 2100F 1.8E	SPF
T - B	2x4	DRY No.2	SPF
M - L	2x4	DRY No.2	SPF
T - R	2x4	DRY No.2	SPF
R - Q	2x4	DRY No.2	SPF
Q - P	2x4	DRY No.2	SPF
P - O	2x4	DRY No.2	SPF
O - M	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	TMV+p	MT20	2.0	4.0	
C	TMWW-t	MT20	4.0	4.0	1.50 1.00
D	TTWW+m	MT20	5.0	6.0	1.75 1.50
E	TMWW+t	MT20	4.0	6.0	
F	TMW+w	MT20	2.0	4.0	
G	TMWW-t	MT20	4.0	4.0	
H	TS-t	MT20	3.0	6.0	
I	TMW+w	MT20	2.0	4.0	
J	TMWW+t	MT20	4.0	6.0	
K	TTWW+m	MT20	5.0	6.0	1.75 1.50
L	TMVW+p	MT20	4.0	6.0	2.25 2.00
M	BMV1+p	MT20	2.0	4.0	
N	BMWW-t	MT20	4.0	4.0	2.00 1.75
O	BBWW-h	MT20	7.0	8.0	2.25 5.25
P	BBWWW+m	MT20	6.0	7.0	3.25 2.00
Q	BBWWW-m	MT20	7.0	8.0	3.25 4.00
R	BBWW-h	MT20	7.0	8.0	2.50 5.50
S	BMWW-t	MT20	4.0	4.0	
T	BMVW1-t	MT20	4.0	4.0	1.75 1.75

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 UPLIFT		REQRD BRG IN-SX	
	VERT	HORZ	DOWN	HORZ	IN-SX	IN-SX	IN-SX	IN-SX
JT	1470	0	1470	0	1-10	1-9		
M	1470	0	1470	0	5-8	1-11		

UNFACTORED REACTIONS							
	1ST LCASE	MAX./MIN. COMPONENT REACTIONS					
	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
JT	1048	640 / 0	0 / 0	0 / 0	0 / 0	408 / 0	0 / 0
M	1124	698 / 0	0 / 0	0 / 0	0 / 0	425 / 0	0 / 0

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

BRACING
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.42 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-R, F-Q, G-Q, G-P, I-P, J-O, K-N, C-T.

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

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)		MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED MAX. UNBRACED LENGTH (FT)	
		FROM	TO			FR-TO	CS (LC)
FR-TO							
A-B	0 / 42	-78.0	-78.0 0.11 (1)	10.00	C-S	0 / 61	0.02 (4)
B-C	0 / 22	-78.0	-78.0 0.13 (1)	10.00	S-D	0 / 93	0.03 (4)
C-D	-1271 / 0	-78.0	-78.0 0.16 (1)	5.55	D-R	0 / 694	0.16 (1)
D-E	-1003 / 0	-78.0	-78.0 0.09 (1)	6.14	R-E	-1308 / 0	0.86 (1)
E-F	-1280 / 0	-78.0	-78.0 0.09 (1)	5.61	E-Q	0 / 1174	0.26 (1)
F-G	-1283 / 0	-78.0	-78.0 0.23 (1)	5.42	Q-F	-246 / 0	0.11 (1)
G-H	-1222 / 0	-78.0	-78.0 0.23 (1)	5.52	Q-G	-150 / 0	0.09 (1)
H-I	-1222 / 0	-78.0	-78.0 0.23 (1)	5.52	G-P	-279 / 0	0.17 (1)
I-J	-1219 / 0	-78.0	-78.0 0.10 (1)	5.70	P-I	-276 / 0	0.13 (1)
J-K	-920 / 0	-78.0	-78.0 0.07 (1)	6.25	P-J	0 / 1265	0.28 (1)
K-L	-1214 / 0	-78.0	-78.0 0.45 (1)	6.25	O-J	-1300 / 0	0.85 (1)
T-B	-208 / 0	0.0	0.0 0.02 (1)	7.81	O-K	0 / 700	0.16 (1)
M-L	-1423 / 0	0.0	0.0 0.19 (1)	6.84	N-K	-118 / 47	0.08 (1)
					T-C	-1531 / 0	0.44 (1)
					N-L	0 / 827	0.19 (1)
T-S	0 / 777	-18.5	-18.5 0.26 (4)	10.00			
S-R	0 / 810	-18.5	-18.5 0.26 (4)	10.00			
R-Q	0 / 1189	-18.5	-18.5 0.20 (1)	10.00			
Q-P	0 / 1354	-18.5	-18.5 0.55 (4)	10.00			
P-O	0 / 1088	-18.5	-18.5 0.19 (1)	10.00			
O-N	0 / 786	-18.5	-18.5 0.26 (4)	10.00			
N-M	0 / 0	-18.5	-18.5 0.18 (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 (1.02")
CALCULATED VERT. DEFL.(LL)= L/ 999 (0.08")
ALLOWABLE DEFL.(TL)= L/360 (1.02")
CALCULATED VERT. DEFL.(TL)= L/ 853 (0.43")

CSI: TC=0.45/1.00 (K-L:1) , BC=0.55/1.00 (P-Q:4) , WB=0.86/1.00 (E-R:1) , SSI=0.15/1.00 (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	MAX MIN
MT20	650 371	1747 788	1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

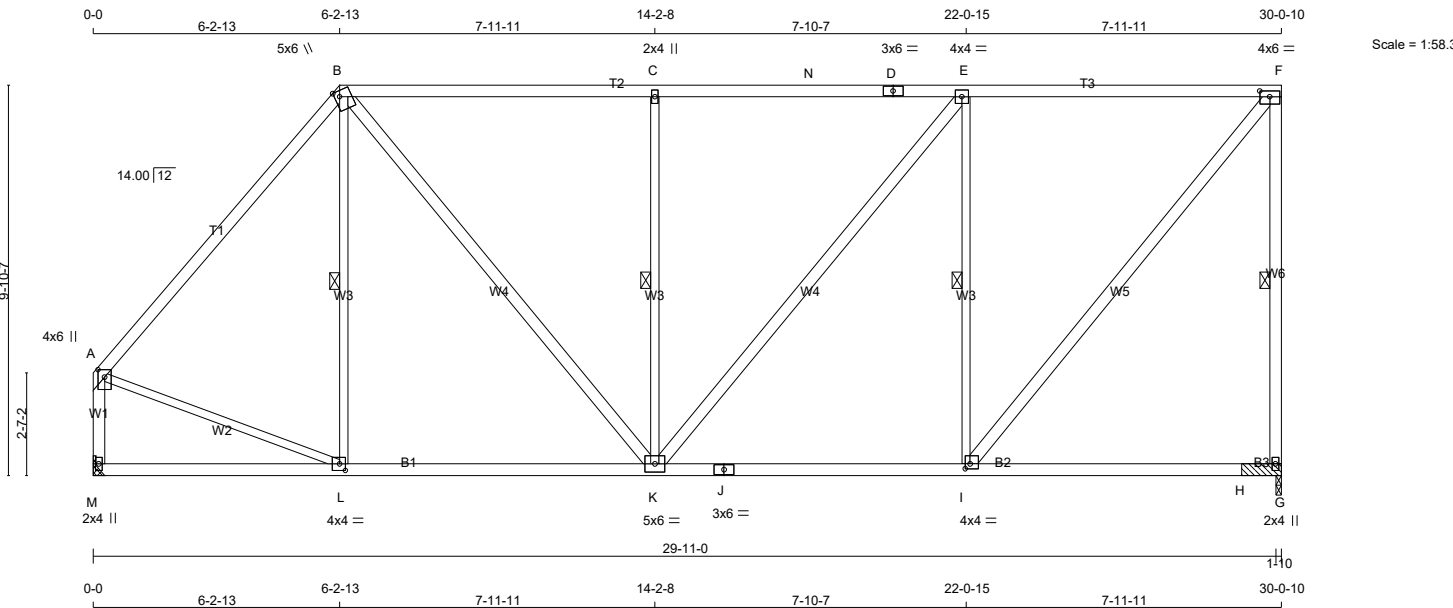
JSI GRIP= 0.87 (Q) (INPUT = 0.90)
JSI METAL= 0.51 (C) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336335	H263A		1	TRUSS DESC. JT 45147	E21104197

Alpa Roof Truss, Maple

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ID:hd511hZTz bdeQoS817GKByhVxV-oGO??? IU8iZYPi7vHPrg2nZidSW9gwOSVFF L8yTZHY



TOTAL WEIGHT = 3 X 156 = 468 lb

[M]

LUMBER				
N. L. G. A. RULES				
CHORDS	SIZE	LUMBER	DESCR.	
A - B	2x4	DRY	2100F 1.8E	SPF
B - D	2x4	DRY	1650F 1.5E	SPF
D - F	2x4	DRY	1650F 1.5E	SPF
G - F	2x4	DRY	No.2	SPF
M - A	2x4	DRY	No.2	SPF
M - J	2x4	DRY	No.2	SPF
J - G	2x4	DRY	No.2	SPF
ALL WEBS EXCEPT	2x3	DRY	No.2	SPF
B - K	2x4	DRY	No.2	SPF
K - E	2x4	DRY	No.2	SPF
I - 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	1.75 3.00
G	BMV1+p	MT20	2.0	4.0	
I	BMWW-t	MT20	4.0	4.0	1.50 1.50
J	BS-t	MT20	3.0	6.0	
K	BMWWW-t	MT20	5.0	6.0	
L	BMWW-t	MT20	4.0	4.0	2.00 1.75
M	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		REQRD BRG	
JT	VERT	HORZ		DOWN	HORZ	UPLIFT	IN-SX	IN-SX	
G	1557	0		1557	0	0	1-10	1-10 & BLOCK	
M	1520	0		1520	0	0	MECHANICAL		

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

UNFACTORED REACTIONS

		1ST LCASE		MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL		
G	1120	631 / 0	0 / 0	0 / 0	0 / 0	489 / 0	0 / 0		
M	1090	631 / 0	0 / 0	0 / 0	0 / 0	459 / 0	0 / 0		

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

2x4 DRY SPF No.2 BEARING BLOCK 12" LONG AT JT. G ATTACHED TO FRONT SIDE WITH 2 ROWS OF (0.122"x3") SPIRAL NAILS SPACED 3" C.C. 8 NAILS TOTAL.

BRACING

FOR SECTION B-F, MAX. PURLIN SPACING = 2.00 FT.
FOR OTHER SECTIONS, 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 F-G, B-L, C-K, E-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				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	-1248 / 0	-78.0 -78.0	0.43 (1)	6.25	L-B	-136 / 41	0.09 (1)
B-C	-1277 / 0	-85.5 -85.5	0.71 (1)	2.00	B-K	0 / 732	0.12 (1)
C-N	-1277 / 0	-85.5 -85.5	0.71 (1)	2.00	K-C	-737 / 0	0.48 (1)
N-D	-1277 / 0	-85.5 -85.5	0.71 (1)	2.00	K-E	0 / 406	0.07 (1)
D-E	-1277 / 0	-85.5 -85.5	0.71 (1)	2.00	I-E	-1058 / 0	0.70 (1)
E-F	-1020 / 0	-85.5 -85.5	0.69 (1)	2.00	I-F	0 / 1594	0.26 (1)
G-F	-1499 / 0	0.0 0.0	0.70 (1)	5.36	A-L	0 / 858	0.19 (1)
M-A	-1477 / 0	0.0 0.0	0.21 (1)	6.74			
M-L	0 / 0	-18.5 -18.5	0.22 (4)	10.00			
L-K	0 / 808	-18.5 -18.5	0.31 (4)	10.00			
K-J	0 / 1020	-18.5 -18.5	0.40 (4)	10.00			
J-I	0 / 1020	-18.5 -18.5	0.40 (4)	10.00			
I-H	0 / 0	-18.5 -18.5	0.28 (4)	10.00			
H-G	0 / 0	-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

LOADING IN FLAT SECTION BASED ON PIGGYBACK TRUSS WITH SLOPES OF 6.00/12 AND -6.00/12 AND RESPECTIVE HEEL HEIGHTS OF 0-0 AND 0-0 AND AN ADDITIONAL DEAD LOAD OF 3.0 P.S.F.

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 (1.00")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.05")
ALLOWABLE DEFL.(TL)= L/360 (1.00")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.13")

CSI: TC=0.71/1.00 (C-E:1) , BC=0.40/1.00 (I-K:4) , WB=0.70/1.00 (E-I:1) , SSI=0.32/1.00 (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)	(PSI)	(PLI)	MAX MIN	MAX MIN
MT20	650	371	1747	788	1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

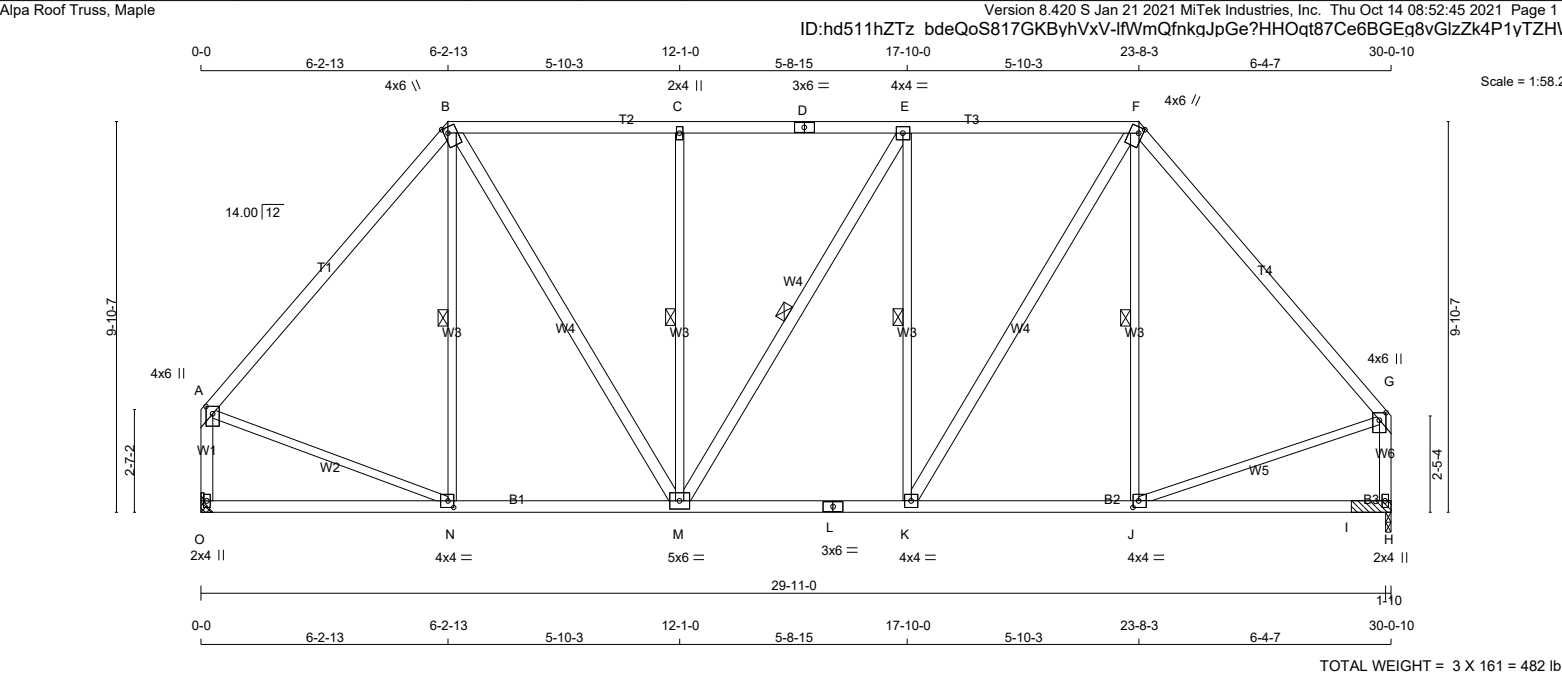
PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.85 (I) (INPUT = 0.90)
JSI METAL= 0.48 (A) (INPUT = 1.00)

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



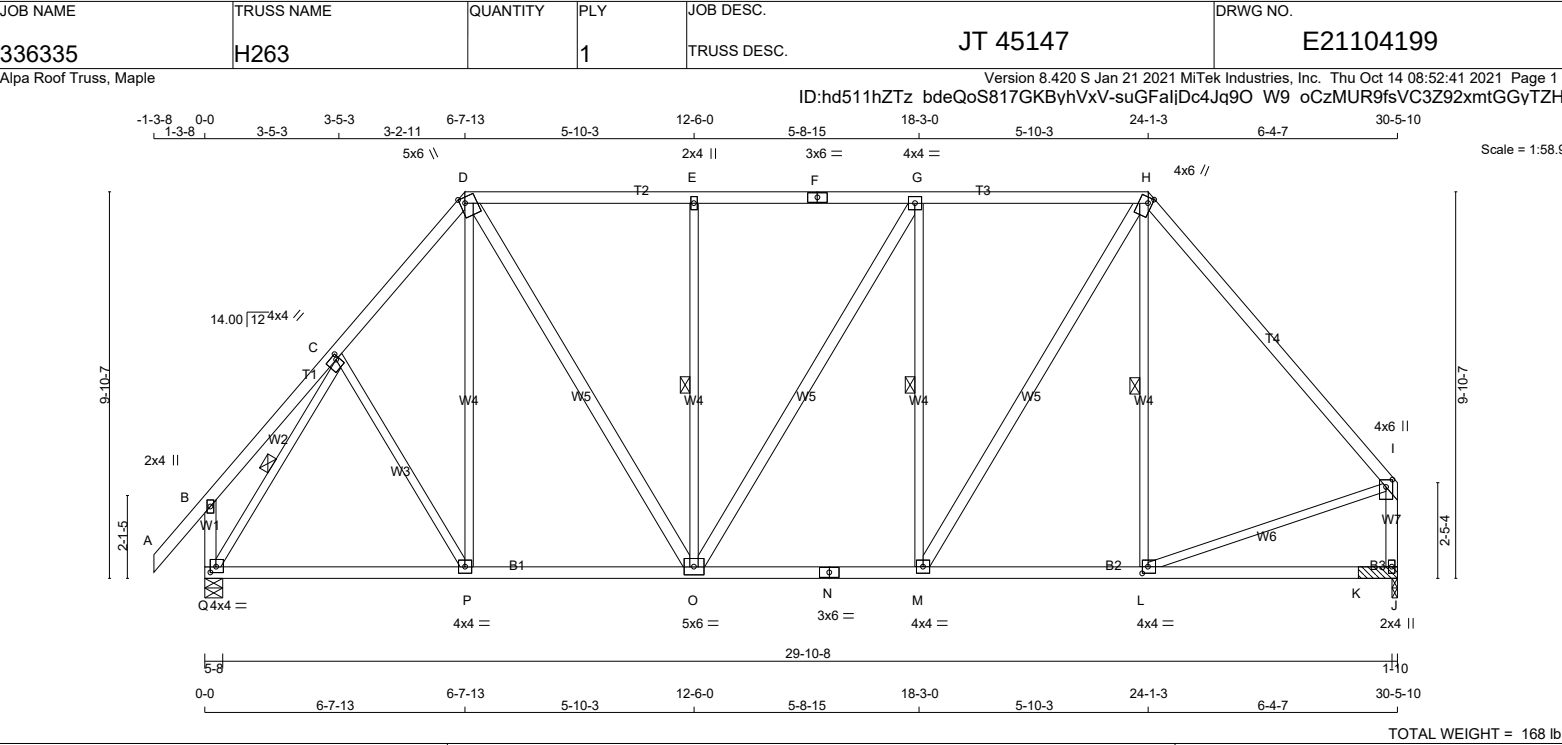
JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336335	H263S		1	TRUSS DESC. JT 45147	E21104198



LUMBER N. L. G. A. RULES CHORDS SIZE A - B 2x4 DRY 2100F 1.8E B - D 2x4 DRY No.2 D - F 2x4 DRY No.2 F - G 2x4 DRY 2100F 1.8E O - A 2x4 DRY No.2 H - G 2x4 DRY No.2 O - L 2x4 DRY No.2 L - H 2x4 DRY No.2 ALL WEBS EXCEPT B - M 2x4 DRY No.2 M - E 2x4 DRY No.2 K - F 2x4 DRY No.2 DRY: SEASONED LUMBER.						DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER BEARINGS FACTORED GROSS REACTION JT VERT HORZ O 1515 0 H 1515 0 MAXIMUM FACTORED GROSS REACTION DOWN HORZ UPLIFT O 1515 0 0 H 1515 0 0 INPUT BRG IN-SX MECHANICAL 1-10 REQRD BRG IN-SX 1-10 & BLOCK A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT O. MINIMUM BEARING LENGTH AT JOINT O = 1-10.						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 PIGGYBACK TRUSS WITH SLOPES OF 6.00/12 AND -6.00/12 AND RESPECTIVE HEEL HEIGHTS OF 0-0 AND 0-0 AND AN ADDITIONAL DEAD LOAD OF 3.0 P.S.F. 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 (1.00") CALCULATED VERT. DEFL.(LL) = L/ 999 (0.04") ALLOWABLE DEFL.(TL)= L/360 (1.00") CALCULATED VERT. DEFL.(TL) = L/ 999 (0.09") CSI: TC=0.45/1.00 (F-G:1) , BC=0.26/1.00 (J-K:4) , WB=0.35/1.00 (C-M:1) , SSI=0.23/1.00 (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= 0.84 (F) (INPUT = 0.90) JSI METAL= 0.48 (G) (INPUT = 1.00)					
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 TTTWW+m MT20 4.0 6.0 1.75 1.25 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 TTTWW+m MT20 4.0 6.0 1.75 1.25 G TMVW+p MT20 4.0 6.0 2.25 2.00 H BMV1+p MT20 2.0 4.0 J BMWW-t MT20 4.0 4.0 2.00 1.75 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						UNFACTORED REACTIONS 1ST LCASE MAX./MIN. COMPONENT REACTIONS JT COMBINED SNOW LIVE PERM.LIVE WIND DEAD SOIL O 1086 631 / 0 0 / 0 0 / 0 455 / 0 0 / 0 H 1086 631 / 0 0 / 0 0 / 0 455 / 0 0 / 0 BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) H 2x4 DRY SPF No.2 BEARING BLOCK 12" LONG AT JT. H ATTACHED TO FRONT SIDE WITH 2 ROWS OF (0.122"x3") SPIRAL NAILS SPACED 3" C.C. 8 NAILS TOTAL. BRACING FOR SECTION B-F, MAX. PURLIN SPACING = 2.00 FT. FOR OTHER SECTIONS, TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.21 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 B-N, C-M, E-M, E-K, F-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 MEMB. MAX. FORCE FACTORED (LBS) FR-TO FROM TO A-B -1239 / 0 -78.0 -78.0 0.43 (1) 6.25 B-C -1196 / 0 -85.5 -85.5 0.44 (1) 2.00 C-D -1196 / 0 -85.5 -85.5 0.44 (1) 2.00 D-E -1196 / 0 -85.5 -85.5 0.44 (1) 2.00 E-F -1201 / 0 -85.5 -85.5 0.44 (1) 2.00 F-G -1258 / 0 -78.0 -78.0 0.45 (1) 6.21 O-A -1468 / 0 0.0 0.0 0.20 (1) 6.76 H-G -1466 / 0 0.0 0.0 0.19 (1) 6.76 WEBS MEMB. MAX. FORCE FACTORED (LBS) FR-TO FROM TO N-B -152 / 21 0.10 (1) B-M 0 / 753 0.12 (1) M-C -534 / 0 0.35 (1) M-E -10 / 0 0.01 (1) K-E -528 / 0 0.35 (1) K-F 0 / 739 0.12 (1) J-F -131 / 32 0.09 (1) A-N 0 / 852 0.19 (1) J-G 0 / 857 0.19 (1) O-N 0 / 0 -18.5 -18.5 0.17 (4) 10.00 N-M 0 / 802 -18.5 -18.5 0.26 (4) 10.00 M-L 0 / 1201 -18.5 -18.5 0.25 (1) 10.00 L-K 0 / 1201 -18.5 -18.5 0.25 (1) 10.00 K-J 0 / 815 -18.5 -18.5 0.26 (4) 10.00 J-I 0 / 0 -18.5 -18.5 0.18 (4) 10.00 I-H 0 / 0 -18.5 -18.5 0.18 (4) 10.00											
LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2																	







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CONTINUED ON PAGE 2

Alpa Roof Truss, Maple Version 8.420 S Jan 21 2021 MiTek Industries, Inc. Thu Oct 14 08:54:14 2021 Page 1



DRY: SEASONED LUMBER.

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

UNFACTORED REACTIONS

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.97 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-H, C-L, D-K, F-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				
MAX. FACTORED		FACTORED			MAX. FACTORED				
MEMB.	FORCE	VERT. LOAD	LC1	MAX. (LC)	MAX. UNBRAC	MEMB.	FORCE	MAX. (LC)	
	(LBS)	(PLF)	CSI (LC)				(LBS)		
FR-TO		FROM TO		LENGTH	FR-TO				
A-B	0 / 42	-78.0	-78.0	0.11 (1)	10.00	L-C	-114 / 58	0.05 (1)	
B-C	-1268 / 0	-78.0	-78.0	0.53 (1)	5.13	C-K	0 / 859	0.14 (1)	
C-D	-1437 / 0	-78.0	-78.0	0.97 (1)	3.98	K-D	-706 / 0	0.32 (1)	
D-E	-1437 / 0	-78.0	-78.0	0.97 (1)	3.97	K-F	0 / 366	0.06 (1)	
E-F	-1437 / 0	-78.0	-78.0	0.97 (1)	3.97	I-F	-971 / 0	0.44 (1)	
F-G	-1177 / 0	-78.0	-78.0	0.91 (1)	4.35	I-G	0 / 1642	0.26 (1)	
H-G	-1408 / 0	0.0	0.0	0.46 (1)	5.49	B-L	0 / 862	0.19 (1)	
M-B	-1544 / 0	0.0	0.0	0.18 (1)	6.62				
M-L	0 / 0	-18.5	-18.5	0.22 (4)	10.00				
L-K	0 / 821	-18.5	-18.5	0.31 (4)	10.00				
K-J	0 / 1177	-18.5	-18.5	0.43 (4)	10.00				
J-I	0 / 1177	-18.5	-18.5	0.43 (4)	10.00				
I-H	0 / 0	-18.5	-18.5	0.31 (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, 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 (1.02")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.06")
ALLOWABLE DEFL.(TL)= L/360 (1.02")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.16")

CSI: TC=0.97/1.00 (C-D:1), BC=0.43/1.00 (I-K:4),
WB=0.44/1.00 (F-I:1), SSI=0.30/1.00 (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.

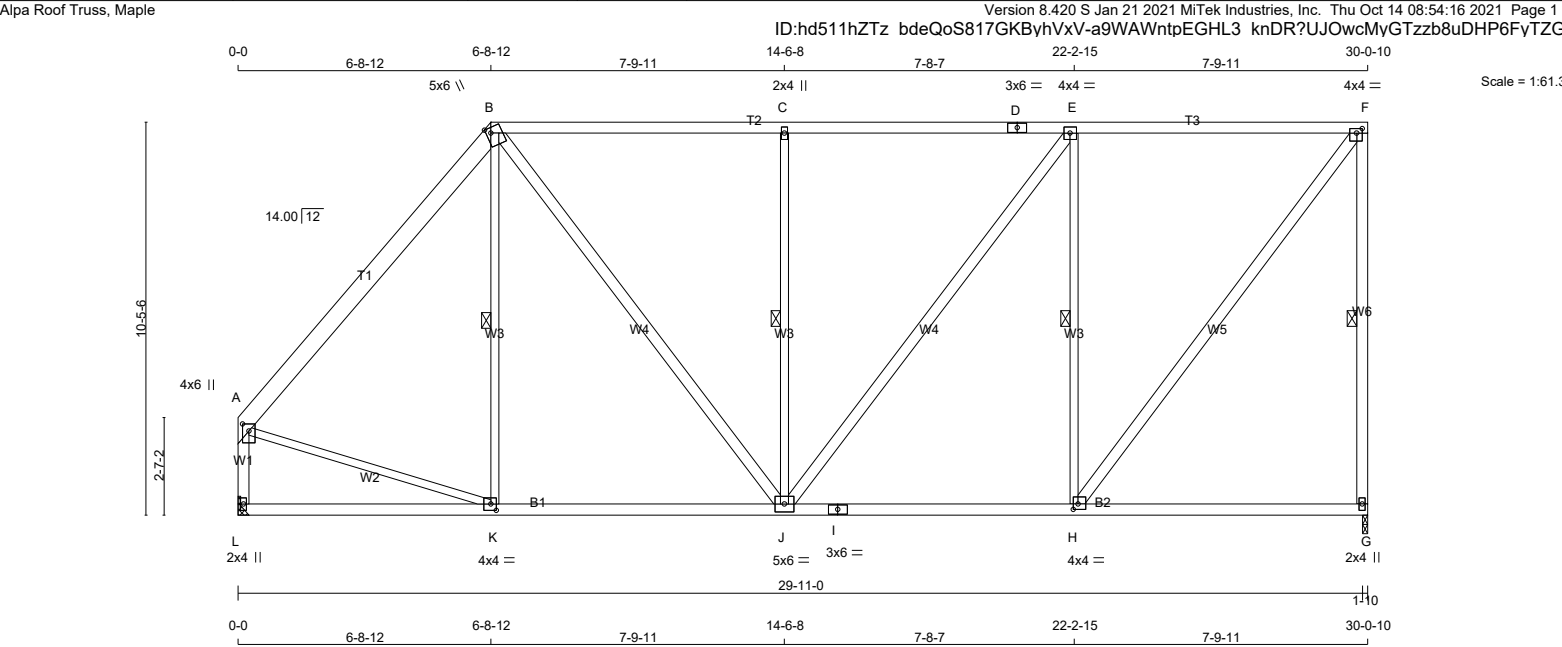
NAIL VALUES						
PLATE	GRIP(DRY)		SHEAR		SECTION	
	(PSI)		(PLI)		(PLI)	
	MAX	MIN	MAX	MIN	MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.87 (B) (INPUT = 0.90)
JSI METAL= 0.50 (B) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336335	H266S		1	TRUSS DESC. JT 45147	E21104202



LUMBER				
N. L. G. A. RULES				
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
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	4.0	1.50 1.75
G	BMV1+p	MT20	2.0	4.0	
H	BMWW-t	MT20	4.0	4.0	1.75 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		MAXIMUM FACTORED		INPUT		REQRD		
	GROSS REACTION		GROSS REACTION		BRG		BRG		
JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX		
G	1450	0	1450	0	0	1-10	1-9		
L	1450	0	1450	0	0	MECHANICAL			
A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT L. MINIMUM BEARING LENGTH AT JOINT L = 1-9.									

UNFACTORED REACTIONS							
	1ST LCASE	MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
G	1033	631 / 0	0 / 0	0 / 0	0 / 0	403 / 0	0 / 0
L	1033	631 / 0	0 / 0	0 / 0	0 / 0	403 / 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 = 4.79 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 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									
	MAX. FACTORED	FACTORED				WEBS			
	MEMB. FORCE (LBS)	VERT. LOAD	LC1	MAX	MAX.	MEMB. FORCE (LBS)	MAX		
		(PLF)	CSI (LC)	UNBRAC			FORCE (LBS)	MAX	
FR-TO		FROM	TO	LENGTH	FR-TO			CSI (LC)	
A-B	-1184 / 0	-78.0	-78.0	0.33 (1)	6.25	K-B	-82 / 77	0.06 (1)	
B-C	-1123 / 0	-78.0	-78.0	0.76 (1)	4.80	B-J	0 / 587	0.09 (1)	
C-D	-1124 / 0	-78.0	-78.0	0.76 (1)	4.79	J-C	-649 / 0	0.49 (1)	
D-E	-1124 / 0	-78.0	-78.0	0.76 (1)	4.79	J-E	0 / 400	0.06 (1)	
E-F	-882 / 0	-78.0	-78.0	0.73 (1)	5.29	H-E	-984 / 0	0.75 (1)	
G-F	-1392 / 0	0.0	0.0	0.76 (1)	5.52	H-F	0 / 1447	0.23 (1)	
L-A	-1401 / 0	0.0	0.0	0.18 (1)	6.88	A-K	0 / 800	0.18 (1)	
L-K	0 / 0	-18.5	-18.5	0.24 (4)	10.00				
K-J	0 / 764	-18.5	-18.5	0.31 (4)	10.00				
J-I	0 / 882	-18.5	-18.5	0.36 (4)	10.00				
I-H	0 / 882	-18.5	-18.5	0.36 (4)	10.00				
H-G	0 / 0	-18.5	-18.5	0.27 (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 (1.00")

CALCULATED VERT. DEFL.(LL)= L/ 999 (0.05")

ALLOWABLE DEFL.(TL)= L/360 (1.00")

CALCULATED VERT. DEFL.(TL)= L/ 999 (0.12")

CSI: TC=0.76/1.00 (C-E:1), BC=0.36/1.00 (H-J:4), WB=0.75/1.00 (E-H: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

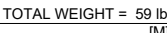
PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (H) (INPUT = 0.90)

JSI METAL= 0.46 (A) (INPUT = 1.00)

A horizontal timeline representing the 1990s, from 0-0 to 17-5-6. The timeline is marked with vertical lines and labels for specific dates: 0-0, 2-10-5, 2-10-5, 5-10-6, 8-8-11, 5-10-6, 14-7-1, 2-10-5, and 17-5-6. The scale is indicated as 1:28.



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

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.

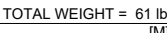
TOTAL LOAD CASES: (4)

CHORDS				WEBS				
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 MAX CSI (LC)	MAX. UNBRAC LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX FACTORED CSI (LC)	
FR-TO		FROM TO			FR-TO			
A- B	0 / 10	-78.0	-78.0	0.01 (1)	10.00	K- C	-160 / 0	0.03 (1)
B- M	0 / 12	-78.0	-78.0	0.03 (1)	10.00	C- J	-39 / 0	0.03 (1)
M- C	-98 / 0	-78.0	-78.0	0.05 (1)	6.25	J- D	-571 / 0	0.11 (1)
C- D	-17 / 0	-78.0	-78.0	0.46 (1)	6.25	J- E	-39 / 0	0.03 (1)
D- E	-17 / 0	-78.0	-78.0	0.46 (1)	6.25	H- E	-160 / 0	0.03 (1)
E- O	-98 / 0	-78.0	-78.0	0.05 (1)	6.25	L- M	-209 / 0	0.00 (1)
O- F	0 / 12	-78.0	-78.0	0.03 (1)	10.00	N- O	-209 / 0	0.00 (1)
F- G	0 / 10	-78.0	-78.0	0.01 (1)	10.00			
B- L	0 / 58	-18.5	-18.5	0.06 (1)	10.00			
L- K	0 / 58	-18.5	-18.5	0.09 (4)	10.00			
K- J	0 / 52	-18.5	-18.5	0.14 (4)	10.00			
J- I	0 / 52	-18.5	-18.5	0.14 (4)	10.00			
I- H	0 / 52	-18.5	-18.5	0.14 (4)	10.00			
H- N	0 / 58	-18.5	-18.5	0.09 (4)	10.00			
N- F	0 / 58	-18.5	-18.5	0.06 (1)	10.00			

JSI GRIP= 0.74 (J) (INPUT = 0.90)
JSI METAL= 0.12 (D) (INPUT = 1.00)

Alpa Roof Truss, Maple

Version 8.420 S Jan 21 2021 MiTek Industries, Inc. Thu Oct 14 08:54:19 2021 Page 1
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PLATES (table is in inches)						
JT	TYPE	PLATES	W	LEN	Y	X
B	TMB1-I	MT20	3.0	4.0	1.50	2.50
C	TTW+m	MT20	3.0	4.0	2.00	1.00
D	MTWW-t	MT20	3.0	4.0		
E	TTW+m	MT20	3.0	4.0	2.00	1.00
F	TMB1-I	MT20	3.0	4.0	1.50	2.50
H	BMWW1-t	MT20	3.0	4.0		
I	BS-t	MT20	3.0	4.0		
J	BMWW1-t	MT20	3.0	4.0		

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION			INPUT BRG	REQD BRG
	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX
B	267	0	267	0	0	16-5-2	(5-5-2) 1-8
J	556	0	556	0	0	16-5-2	(5-5-2) 1-8
H	556	0	556	0	0	16-5-2	(5-5-2) 1-8
F	267	0	267	0	0	16-5-2	(5-5-2) 1-8

UNFACTORED REACTIONS

1ST LCASE		MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
B	186	141 / 0	0 / 0	0 / 0	0 / 0	45 / 0	0 / 0
H	401	221 / 0	0 / 0	0 / 0	0 / 0	180 / 0	0 / 0
J	401	221 / 0	0 / 0	0 / 0	0 / 0	180 / 0	0 / 0
F	186	141 / 0	0 / 0	0 / 0	0 / 0	45 / 0	0 / 0

BRACING

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)	MAX FACTORED LOCSI (LC)	MAX. UNBRAC LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX FACTORED CSI (LC)	
FR-TO		FROM	TO		FR-TO			
A-B	0 / 11	-78.0	-78.0	0.01 (1)	10.00	J-C	-174 / 0	0.06 (1)
B-L	0 / 215	-78.0	-78.0	0.13 (1)	10.00	J-D	-296 / 0	0.21 (1)
L-C	-118 / 0	-78.0	-78.0	0.13 (1)	6.25	D-H	-296 / 0	0.21 (1)
C-D	-62 / 0	-78.0	-78.0	0.26 (1)	6.25	H-E	-174 / 0	0.06 (1)
D-E	-62 / 0	-78.0	-78.0	0.26 (1)	6.25	K-L	-531 / 0	0.00 (1)
E-N	-118 / 0	-78.0	-78.0	0.13 (1)	6.25	M-N	-531 / 0	0.00 (1)
N-F	0 / 215	-78.0	-78.0	0.13 (1)	10.00			
F-G	0 / 11	-78.0	-78.0	0.01 (1)	10.00			
B-K	0 / 66	-18.5	-18.5	0.13 (1)	10.00			
K-J	0 / 66	-18.5	-18.5	0.24 (4)	10.00			
J-I	0 / 266	-18.5	-18.5	0.25 (4)	10.00			
I-H	0 / 266	-18.5	-18.5	0.25 (4)	10.00			
H-M	0 / 66	-18.5	-18.5	0.24 (4)	10.00			
M-F	0 / 66	-18.5	-18.5	0.13 (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

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

CSI: TC=0.26/1.00 (C-D:1), BC=0.25/1.00 (H-J:4),
WB=0.21/1.00 (D-J:1), SSI=0.40/1.00 (B-K: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

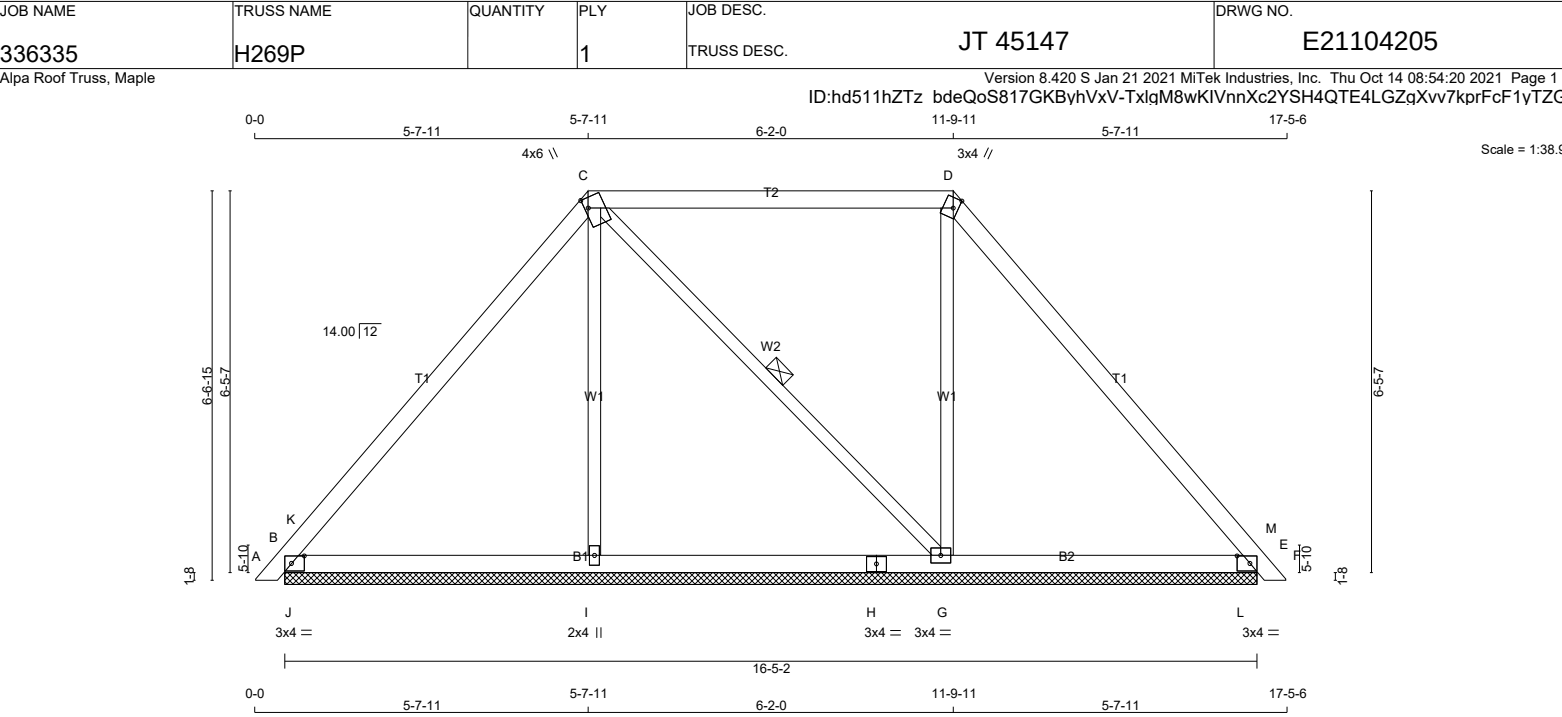
TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

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= 0.75 (J) (INPUT = 0.90)
JSI METAL= 0.09 (I) (INPUT = 1.00)



LUMBER

N. L. G. A. RULES

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

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMB1-I	MT20	3.0	4.0	1.50	2.50
C	TTWW+m	MT20	4.0	6.0	2.00	0.75
D	TTW+m	MT20	3.0	4.0	2.00	1.00
E	TMB1-I	MT20	3.0	4.0	1.50	2.50
G	BMWw1-t	MT20	3.0	4.0		
H	BS-t	MT20	3.0	4.0		
I	BMW1+w	MT20	2.0	4.0		

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
B	502	502	16-5-2 (6-5-2) 1-8	
I	295	295	16-5-2 (6-5-2) 1-8	
G	377	377	16-5-2 (6-5-2) 1-8	
E	472	472	16-5-2 (6-5-2) 1-8	

VALUE IN PARENTHESIS INDICATES EFFECTIVE BEARING LENGTH

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
B	353	243 / 0	0 / 0	0 / 0	0 / 0	0 / 0	110 / 0	0 / 0
I	215	104 / 0	0 / 0	0 / 0	0 / 0	0 / 0	111 / 0	0 / 0
G	271	150 / 0	0 / 0	0 / 0	0 / 0	0 / 0	121 / 0	0 / 0
E	333	226 / 0	0 / 0	0 / 0	0 / 0	0 / 0	107 / 0	0 / 0

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

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

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	0 / 10	-78.0 -78.0	0.01 (1)	I-C	-149 / 0	0.10 (1)	
B-K	-39 / 200	-78.0 -78.0	0.20 (1)	C-G	-37 / 0	0.02 (1)	
K-C	-327 / 0	-78.0 -78.0	0.26 (1)	G-D	-204 / 0	0.14 (1)	
C-D	-172 / 0	-78.0 -78.0	0.51 (1)	J-K	-805 / 0	0.00 (1)	
D-M	-288 / 0	-78.0 -78.0	0.26 (1)	L-M	-814 / 0	0.00 (1)	
M-E	-32 / 246	-78.0 -78.0	0.20 (1)				
E-F	0 / 10	-78.0 -78.0	0.01 (1)				
B-J	0 / 200	-18.5 -18.5	0.22 (1)				
J-I	0 / 200	-18.5 -18.5	0.22 (1)				
I-H	0 / 197	-18.5 -18.5	0.16 (4)				
H-G	0 / 197	-18.5 -18.5	0.16 (4)				
G-L	0 / 175	-18.5 -18.5	0.22 (1)				
L-E	0 / 175	-18.5 -18.5	0.22 (1)				

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

CSI: TC=0.51/1.00 (C-D:1) , BC=0.22/1.00 (I-J:1) ,
WB=0.14/1.00 (D-G:1) , SSI=0.64/1.00 (E-L: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)
MT20	650	371	1747
		788	1987
		1873	

PLATE PLACEMENT TOL. = 0.250 inches

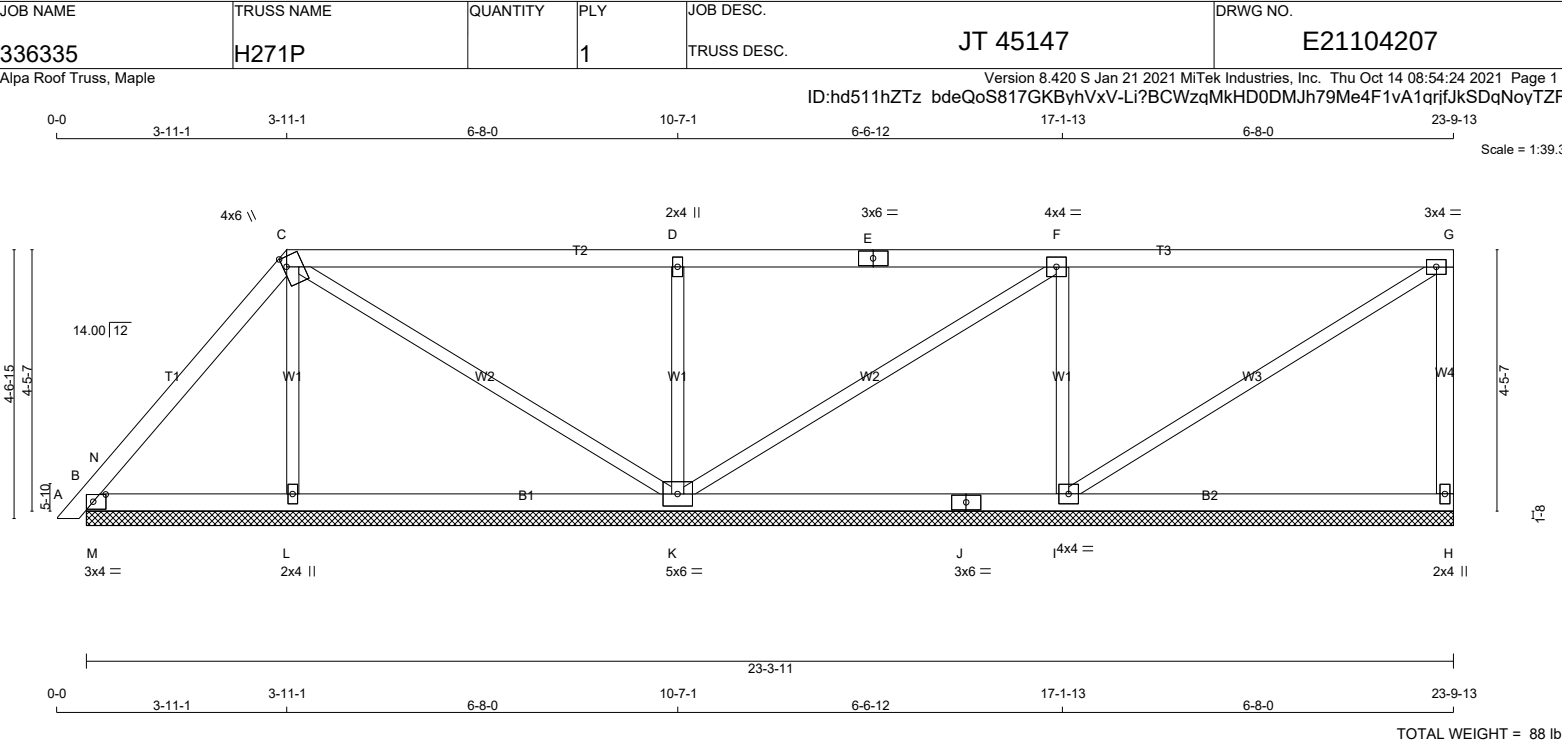
PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.89 (C) (INPUT = 0.90)
JSI METAL= 0.14 (H) (INPUT = 1.00)

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



JSI GRIP= 0.84 (G) (INPUT = 0.90)
JSI METAL= 0.25 (E) (INPUT = 1.00)



LUMBER

N. L. G. A. RULES

CHORDS SIZE

LUMBER

DESCR.

A - C

2x4

DRY

No.2

SPF

C - E

2x4

DRY

No.2

SPF

E - G

2x4

DRY

No.2

SPF

H - G

2x4

DRY

No.2

SPF

B - J

2x4

DRY

No.2

SPF

J - H

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	TMB1-I	MT20	3.0	4.0	1.50	2.50
C	TTWW+m	MT20	4.0	6.0	2.00	0.75
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	3.0	4.0		
H	BMV1+p	MT20	2.0	4.0		
I	BMWW1-t	MT20	4.0	4.0		
J	BS-t	MT20	3.0	6.0		
K	BMWWW1-t	MT20	5.0	6.0		
L	BMW1+w	MT20	2.0	4.0		

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
H	271	0	271	0
B	259	0	259	0
L	316	0	316	0
K	774	0	774	0
I	660	0	660	0

VALUE IN PARENTHESIS INDICATES EFFECTIVE BEARING LENGTH

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
H	193	119 / 0	0 / 0	0 / 0	0 / 0	73 / 0	0 / 0
B	181	130 / 0	0 / 0	0 / 0	0 / 0	51 / 0	0 / 0
L	230	113 / 0	0 / 0	0 / 0	0 / 0	117 / 0	0 / 0
K	549	352 / 0	0 / 0	0 / 0	0 / 0	197 / 0	0 / 0
I	472	281 / 0	0 / 0	0 / 0	0 / 0	191 / 0	0 / 0

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

MEMB.	CHORDS MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 MAX	MAX. UNBRAC LENGTH	MEMB.	WEBS MAX. FACTORED FORCE (LBS)	MAX. CSI (LC)
FR-TO		FROM TO			FR-TO		
A-B	0 / 10	-78.0 -78.0	0.01 (1)	10.00	L-C	-183 / 0	0.05 (1)
B-N	0 / 123	-78.0 -78.0	0.09 (1)	10.00	C-K	-109 / 0	0.13 (1)
N-C	-116 / 0	-78.0 -78.0	0.11 (1)	6.25	K-D	-567 / 0	0.17 (1)
C-D	0 / 31	-78.0 -78.0	0.47 (1)	10.00	K-F	-61 / 0	0.08 (1)
D-E	0 / 30	-78.0 -78.0	0.47 (1)	10.00	I-F	-534 / 0	0.16 (1)
E-F	0 / 30	-78.0 -78.0	0.47 (1)	10.00	I-G	0 / 25	0.01 (1)
F-G	-21 / 0	-78.0 -78.0	0.47 (1)	6.25	M-N	-408 / 0	0.00 (1)
H-G	-222 / 0	0.0 0.0	0.07 (1)	7.81			
B-M	0 / 67	-18.5 -18.5	0.11 (1)	10.00			
M-L	0 / 67	-18.5 -18.5	0.14 (4)	10.00			
L-K	0 / 62	-18.5 -18.5	0.15 (4)	10.00			
K-J	0 / 21	-18.5 -18.5	0.20 (4)	10.00			
J-I	0 / 21	-18.5 -18.5	0.20 (4)	10.00			
I-H	0 / 0	-18.5 -18.5	0.20 (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

CSI: TC=0.47/1.00 (D-F:1) , BC=0.20/1.00 (I-K:4) , WB=0.17/1.00 (D-K:1) , SSI=0.31/1.00 (B-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
MT20	650	371	1747
		788	1987
		1873	

PLATE PLACEMENT TOL. = 0.250 inches

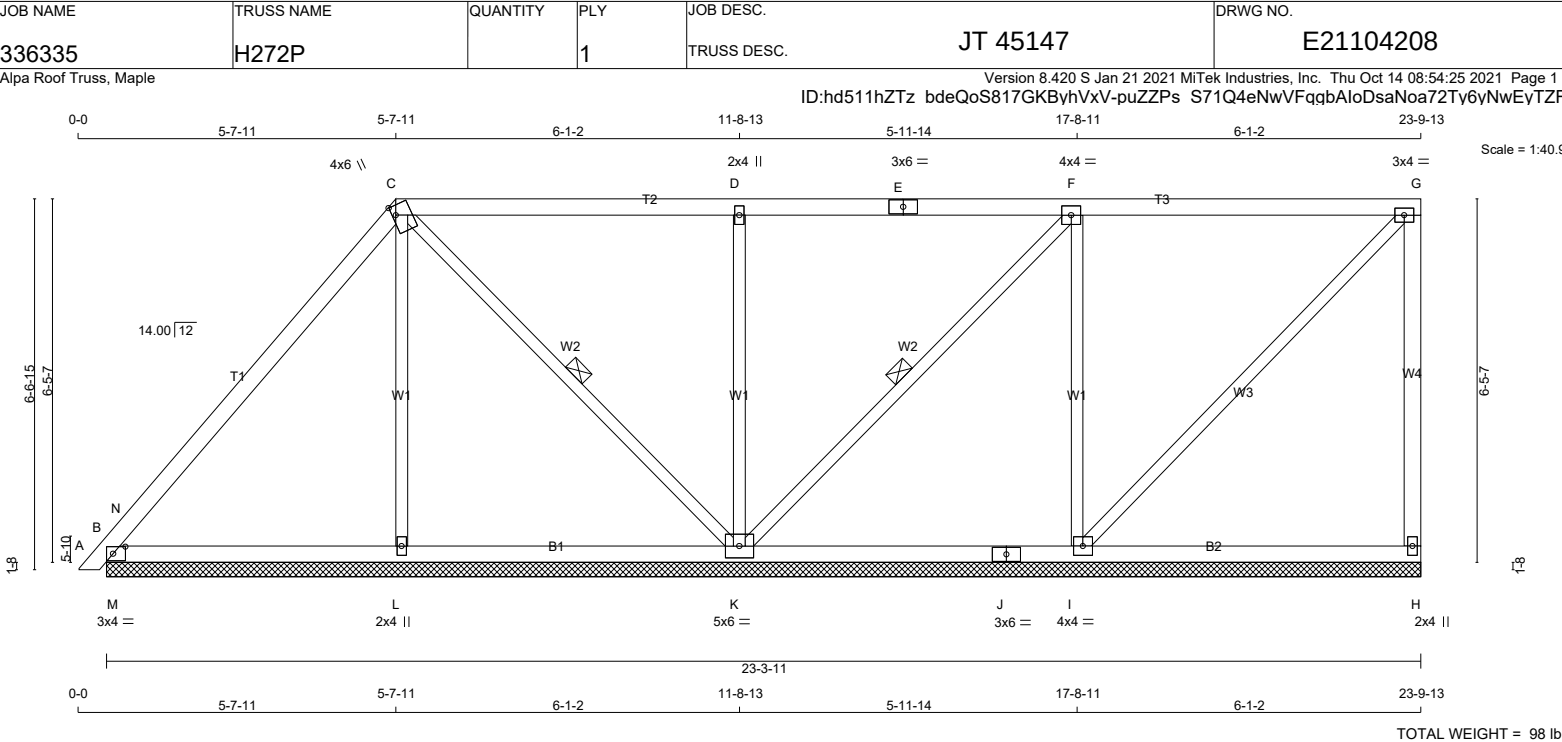
PLATE ROTATION TOL. = 5.0 Deg.

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

JSI METAL= 0.22 (E) (INPUT = 1.00)

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





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

PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y X
B	TMB1-l	MT20	3.0	4.0	1.50 2.50
C	TTWW+m	MT20	4.0	6.0	2.00 0.75
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	3.0	4.0	
H	BMV1+p	MT20	2.0	4.0	
I	BMWW1-t	MT20	4.0	4.0	
J	BS-t	MT20	3.0	6.0	
K	BMWWW1-t	MT20	5.0	6.0	
L	BMW1+w	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	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX	IN-SX	IN-SX
H	266	0	266	0	0	23-3-11 (7-4-3)8			
B	378	0	378	0	0	23-3-11 (7-4-3)8			
L	277	0	277	0	0	23-3-11 (7-4-3)8			
K	804	0	804	0	0	23-3-11 (7-4-3)8			
I	553	0	553	0	0	23-3-11 (7-4-3)8			

VALUE IN PARENTHESIS INDICATES EFFECTIVE BEARING LENGTH

UNFACTORED REACTIONS		1ST LCASE		MAX./MIN. COMPONENT REACTIONS	
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND
H	189	118 / 0	0 / 0	0 / 0	71 / 0
B	267	179 / 0	0 / 0	0 / 0	88 / 0
L	203	93 / 0	0 / 0	0 / 0	110 / 0
K	568	375 / 0	0 / 0	0 / 0	192 / 0
I	397	229 / 0	0 / 0	0 / 0	168 / 0

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

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

CHORDS		FACTORED		WEBS	
MEMB.	MAX. FORCE (LBS)	VERT. LOAD (PLF)	MAX. CSI (LC)	MEMB.	MAX. FORCE (LBS)
FR-TO		FROM TO		FR-TO	
A-B	0 / 10	-78.0 -78.0 0.01 (1)	10.00	L-C	-117 / 0
B-N	0 / 396	-78.0 -78.0 0.23 (1)	10.00	C-K	-180 / 0
N-C	-170 / 0	-78.0 -78.0 0.26 (1)	6.25	K-D	-518 / 0
C-D	0 / 31	-78.0 -78.0 0.39 (1)	10.00	K-F	-88 / 0
D-E	0 / 30	-78.0 -78.0 0.39 (1)	10.00	I-F	-455 / 0
E-F	0 / 30	-78.0 -78.0 0.39 (1)	10.00	I-G	0 / 44
F-G	-31 / 0	-78.0 -78.0 0.39 (1)	6.25	M-N	-853 / 0
H-G	-222 / 0	0.0 0.0 0.19 (1)	7.81		
B-M	0 / 98	-18.5 -18.5 0.22 (1)	10.00		
M-L	0 / 98	-18.5 -18.5 0.22 (1)	10.00		
L-K	0 / 96	-18.5 -18.5 0.16 (4)	10.00		
K-J	0 / 31	-18.5 -18.5 0.17 (4)	10.00		
J-I	0 / 31	-18.5 -18.5 0.17 (4)	10.00		
I-H	0 / 0	-18.5 -18.5 0.17 (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

CSI: TC=0.39/1.00 (D-F:1) , BC=0.22/1.00 (B-M:1) ,
 WB=0.35/1.00 (D-K:1) , SSI=0.67/1.00 (B-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

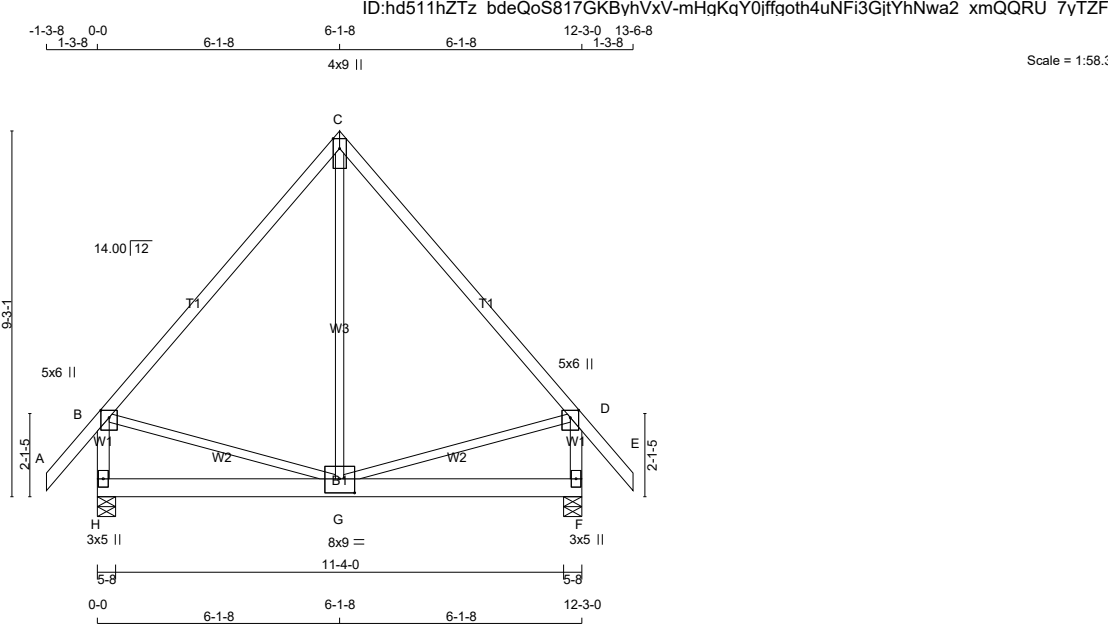
PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.89 (C) (INPUT = 0.90)
 JSI METAL= 0.18 (E) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336335	H273		2	TRUSS DESC. JT 45147	E21104209

Alpa Roof Truss, Maple

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TOTAL WEIGHT = 2 X 69 = 137 lb

LUMBER				
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	2x6	DRY	1650F 1.5E	SPF
ALL WEBS	2x3	DRY	No.2	SPF
EXCEPT				

DRY: SEASONED LUMBER.

DESIGN CONSISTS OF 2 TRUSSES BUILT SEPARATELY THEN FASTENED TOGETHER AS FOLLOWS:

CHORDS #ROWS	SURFACE SPACING (IN)	LOAD(PLF)
TOP CHORDS : (0.122"x3") SPIRAL NAILS		
A - C	12	TOP
C - E	12	TOP
H - B	12	TOP
F - D	12	TOP
BOTTOM CHORDS : (0.122"x3") SPIRAL NAILS		
H - F	8	SIDE(338.3)
WEBS : (0.122"x3") SPIRAL NAILS		
2x3	6	

NAILS TO BE DRIVEN FROM ONE SIDE ONLY.

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+p	MT20	5.0	6.0	2.25 2.50
C	TTW+p	MT20	4.0	9.0	3.00 Edge
D	TMVW+p	MT20	5.0	6.0	2.25 2.50
F	BMV1+p	MT20	3.0	5.0	
G	BMWWW-t	MT20	8.0	9.0	4.25 4.50

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	4844	0	4844	0	5-8	4-6
H	4844	0	4844	0	5-8	4-6
F	4844	0	4844	0	5-8	4-6

UNFACTORED REACTIONS

1ST LCASE	MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD
H	3451	2119 / 0	0 / 0	0 / 0	0 / 0	1332 / 0
F	3451	2119 / 0	0 / 0	0 / 0	0 / 0	1332 / 0

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

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)

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	0.06 (1)	10.00	G-C	0 / 4173	0.52 (1)	
B-C	-3062 / 0	-78.0	-78.0	0.50 (1)	4.91	B-G	0 / 2065	0.26 (1)	
C-D	-3062 / 0	-78.0	-78.0	0.50 (1)	4.91	G-D	0 / 2065	0.26 (1)	
D-E	0 / 42	-78.0	-78.0	0.06 (1)	10.00				
H-B	-3212 / 0	0.0	0.0	0.20 (1)	6.48				
F-D	-3212 / 0	0.0	0.0	0.20 (1)	6.48				
H-G	0 / 0	-695.0	-695.0	0.77 (1)	10.00				
G-F	0 / 0	-695.0	-695.0	0.77 (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

GIRDER TYPE: CStdGirder
START DISTANCE = 0-0
START SPAN CARRIED = 30-0-10
END DISTANCE = 12-3-0
END SPAN CARRIED = 30-0-10
END WALL WIDTH = 0-0
APPLIED TO FRONT SIDE OF BOTTOM CHORD.
- 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 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 (0.41")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.08")
ALLOWABLE DEFL.(TL)= L/360 (0.41")
CALCULATED VERT. DEFL.(TL) = L/ 882 (0.17")

CSI: TC=0.50/1.00 (B-C:1) , BC=0.77/1.00 (G-H:1) , WB=0.52/1.00 (C-G:1) , SSI=0.87/1.00 (G-H: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
MT20	650	371	1747	788	1987

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.81 (B) (INPUT = 0.90)
JSI METAL= 0.44 (D) (INPUT = 1.00)

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



Alpa Roof Truss, Maple

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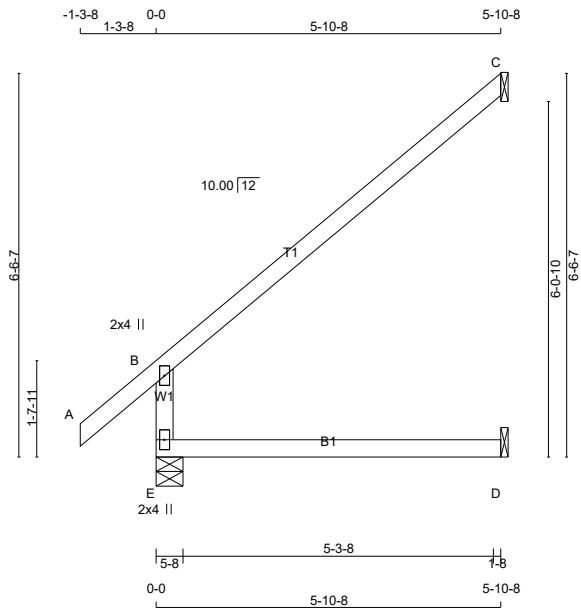
TOTAL WEIGHT = 68 lb

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336335	J01		1	TRUSS DESC. JT 45147	E21104231

Alpa Roof Truss, Maple

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Scale = 1:39.3

TOTAL WEIGHT = 28 X 19 = 532 lb [M]

LUMBER				
N. L. G. A. RULES				
CHORDS	SIZE	LUMBER	DESCR.	
E - B	2x4	DRY	No.2	SPF
A - C	2x4	DRY	No.2	SPF
E - D	2x4	DRY	No.2	SPF
DRY: SEASONED LUMBER.				

PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y X
B	TMV+p	MT20	2.0	4.0	
E	BMV1+p	MT20	2.0	4.0	

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

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG IN-SX	REQRD BRG IN-SX
	VERT	HORZ	DOWN	HORZ		
E	457	0	457	0	5-8	1-8
C	172	0	172	0	1-8	1-8
D	46	0	52	0	1-8	1-8

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

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS					
		SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
E	323	212 / 0	0 / 0	0 / 0	0 / 0	111 / 0	0 / 0
C	119	93 / 0	0 / 0	0 / 0	0 / 0	26 / 0	0 / 0
D	37	0 / 0	0 / 0	0 / 0	0 / 0	37 / 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)

MEMB.	CHORDS MAX. FACTORED FORCE (LBS)		FACTORED VERT. LOAD (PLF)		LC1 MAX (LC)	WEBS MAX. FACTORED FORCE (LBS)	
	FR-TO	FROM	TO	TO		FR-TO	MAX (LC)
E-B	-394 / 0	0.0	0.0	0.11 (4)	7.81		
A-B	0 / 35	-78.0	-78.0	0.11 (1)	10.00		
B-C	-37 / 0	-78.0	-78.0	0.46 (1)	6.25		
E-D	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

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 (0.00")
CALCULATED VERT. DEFL.(LL)= L/ 999 (0.00")
ALLOWABLE DEFL.(TL)= L/360 (0.00")
CALCULATED VERT. DEFL.(TL)= L/ 999 (0.03")

CSI: TC=0.46/1.00 (B-C:1) , BC=0.14/1.00 (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

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		

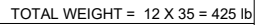
PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.27 (B) (INPUT = 0.90)
JSI METAL= 0.21 (B) (INPUT = 1.00)

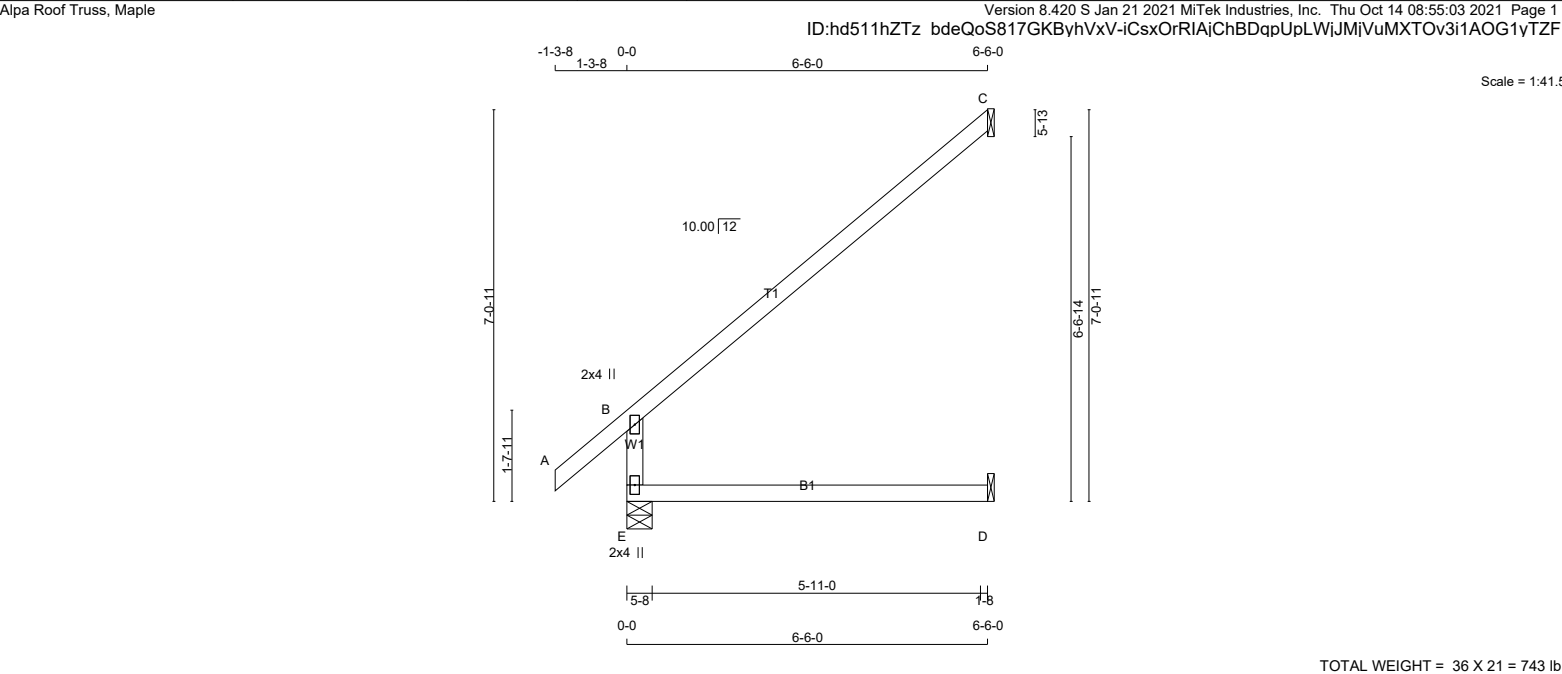
LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2



Scale = 1:38.6

JSI GRIP= 0.33 (B) (INPUT = 0.90)
JSI METAL= 0.08 (I) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336335	J02		1	TRUSS DESC. JT 45147	E21104233



LUMBER

N. L. G. A. RULES

CHORDS SIZE

E - B 2x4 DRY No.2

A - C 2x4 DRY No.2

E - D 2x4 DRY No.2

DESCR.

SPF

SPF

SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)

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

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
E	494	0	494	0
C	190	0	190	0
D	51	0	57	0

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

UNFACTORED REACTIONS

JT	1ST LCASE	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
E	350	229 / 0	0 / 0	0 / 0	0 / 0	121 / 0	0 / 0
C	132	102 / 0	0 / 0	0 / 0	0 / 0	29 / 0	0 / 0
D	41	0 / 0	0 / 0	0 / 0	0 / 0	41 / 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)	LC1 MAX (LC)	MAX. UNBRAC LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX (LC)
FR-TO		FROM	TO		FR-TO		
E- B	-425 / 0	0.0	0.0	0.13 (4)	7.81		
A- B	0 / 35	-78.0	-78.0	0.11 (1)	10.00		
B- C	-41 / 0	-78.0	-78.0	0.44 (1)	6.25		
E- D	0 / 0	-18.5	-18.5	0.16 (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 (0.22")

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

ALLOWABLE DEFL.(TL)= L/360 (0.22")

CALCULATED VERT. DEFL.(TL) = L/ 999 (0.05")

CSI: TC=0.44/1.00 (B-C:1) , BC=0.16/1.00 (D-E:4) , WB=0.00/1.00 (n/a:0) , 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

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
MT20	650	371	1747
		788	1987
			1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.29 (B) (INPUT = 0.90)

JSI METAL= 0.23 (B) (INPUT = 1.00)

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

LICENSED PROFESSIONAL ENGINEER

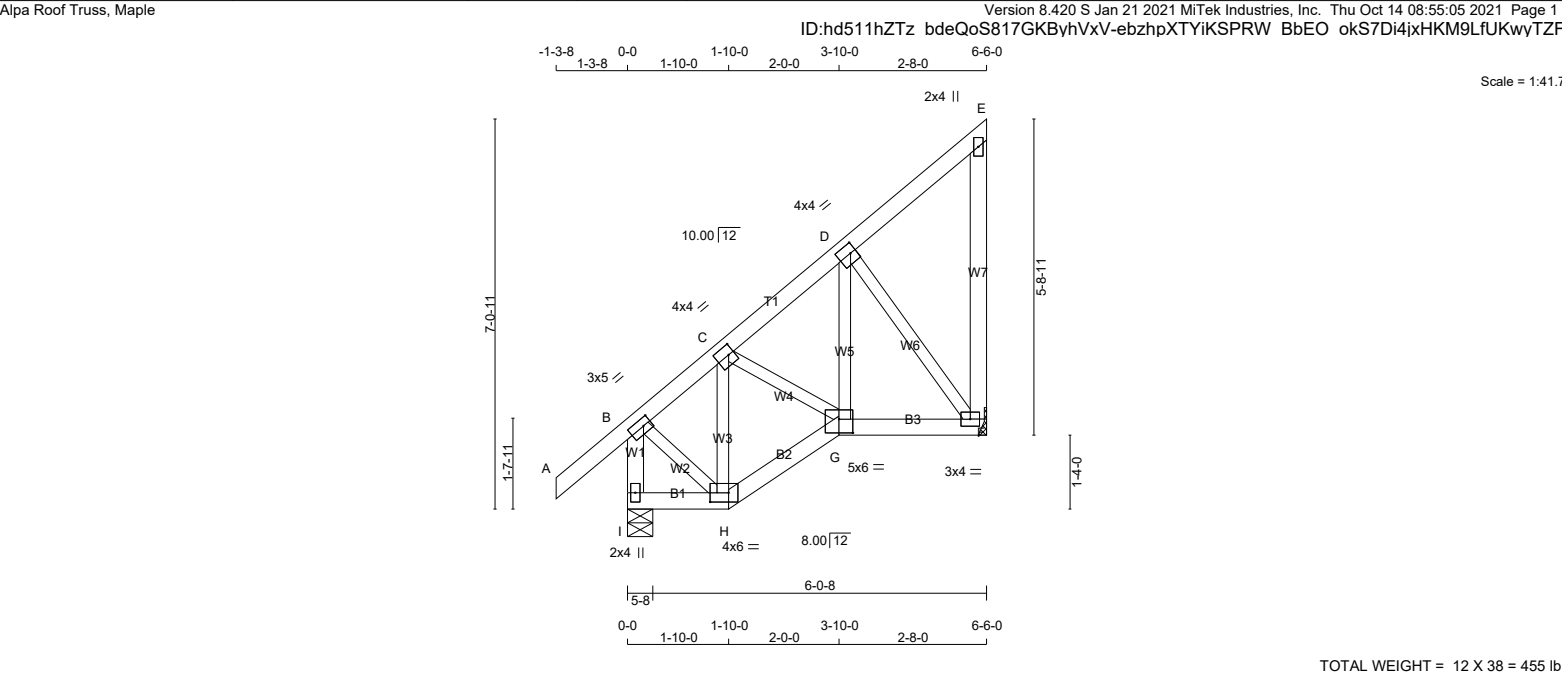
Y. WIDYA

100225448

10/14/2021

PROVINCE OF ONTARIO

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336335	J02T		1	TRUSS DESC. JT 45147	E21104234



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	5.0	1.50 1.75
C	TMWW-t	MT20	4.0	4.0	2.00 1.25
D	TMWW-t	MT20	4.0	4.0	2.00 1.25
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	
JT	VERT	HORZ		DOWN	HORZ	UPLIFT			
I	433	0		433	0	0	5-8	1-8	
F	302	0		302	0	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					
JT			SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
I		306	201 / 0	0 / 0	0 / 0	0 / 0	105 / 0	0 / 0
F		216	130 / 0	0 / 0	0 / 0	0 / 0	85 / 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			
		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			
I-B	-416 / 0	0.0	0.0	0.04 (1)	7.81	B-H	0 / 159	0.04 (1)	
A-B	0 / 35	-78.0	-78.0	0.11 (1)	10.00	H-C	-139 / 0	0.03 (1)	
B-C	-195 / 0	-78.0	-78.0	0.08 (1)	6.25	C-G	0 / 43	0.01 (1)	
C-D	-194 / 0	-78.0	-78.0	0.06 (1)	6.25	G-D	0 / 104	0.03 (4)	
D-E	-13 / 0	-78.0	-78.0	0.06 (1)	6.25	D-F	-253 / 0	0.07 (1)	
F-E	-79 / 0	0.0	0.0	0.05 (1)	7.81				
I-H	0 / 0	-18.5	-18.5	0.02 (4)	10.00				
H-G	0 / 150	-18.5	-18.5	0.04 (4)	10.00				
G-F	0 / 157	-18.5	-18.5	0.05 (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, NBC2015

THIS DESIGN COMPLIES WITH:
- PART 9 OF CBC2018 , 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 (0.22")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")
ALLOWABLE DEFL.(TL)= L/360 (0.22")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.00")

CSI: TC=0.11/1.00 (A-B:1) , BC=0.05/1.00 (F-G:4) , WB=0.07/1.00 (D-F:1) , SSI=0.07/1.00 (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)	
		MAX	MIN	MAX	MIN
MT20		650	371	1747	1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.35 (B) (INPUT = 0.90)
JSI METAL= 0.09 (B) (INPUT = 1.00)

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

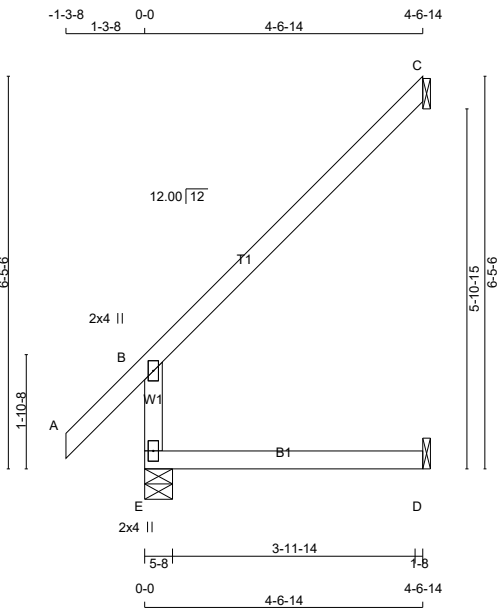


JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336335	J09		1	TRUSS DESC. JT 45147	E21104237

Alpa Roof Truss, Maple

ID:hd511hZTz bdeQoS817GKByhVxV-XMDCevW3mZyqw8lZq3SwyacmYJQ8t6Ox4ydiThyTZFG

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TOTAL WEIGHT = 4 X 17 = 67 lb [M]

LUMBER				
N. L. G. A. RULES				
CHORDS	SIZE	LUMBER	DESCR.	
E - B	2x4	DRY	No.2	SPF
A - C	2x4	DRY	No.2	SPF
E - D	2x4	DRY	No.2	SPF
DRY: SEASONED LUMBER.				

PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y X
B	TMV+p	MT20	2.0	4.0	
E	BMV1+p	MT20	2.0	4.0	

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

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG IN-SX	REQRD BRG IN-SX
	VERT	HORZ	DOWN	HORZ		
E	379	0	379	0	5-8	1-8
C	134	0	134	0	1-8	1-8
D	37	0	41	0	1-8	1-8

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

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS				
		SNOW	LIVE	PERM.LIVE	WIND	DEAD
E	268	178 / 0	0 / 0	0 / 0	0 / 0	89 / 0
C	93	72 / 0	0 / 0	0 / 0	0 / 0	21 / 0
D	30	0 / 0	0 / 0	0 / 0	0 / 0	30 / 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)

MEMB.	CHORDS MAX. FACTORED FORCE (LBS)		FACTORED VERT. LOAD (PLF)		MAX LC1 (LC)	MAX UNBRAC LENGTH	WEBS MAX. FACTORED FORCE (LBS)	
	FR-TO		FROM	TO			FR-TO	
E-B	-331 / 0		0.0	0.0	0.06 (4)	7.81		
A-B	0 / 38		-78.0	-78.0	0.11 (1)	10.00		
B-C	-31 / 0		-78.0	-78.0	0.28 (1)	6.25		
E-D	0 / 0		-18.5	-18.5	0.09 (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

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=0.12/1.00 (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 MIN
MT20 650 371 1747 788 1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.25 (B) (INPUT = 0.90)
JSI METAL= 0.17 (B) (INPUT = 1.00)

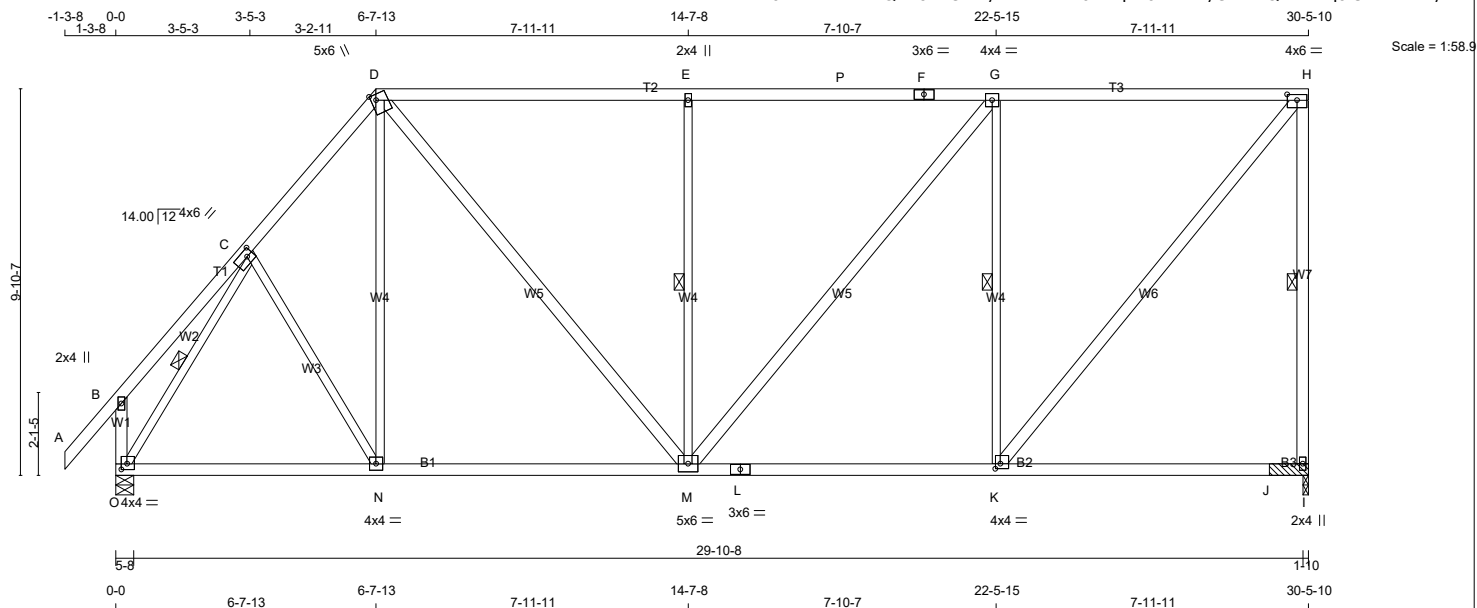
LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2



Structural diagram of a roof truss system. The diagram shows a series of vertical posts (W1-W6) and horizontal beams (T1-T3) supporting a roof structure. The roof is composed of several truss sections (W1-W6) and a central section (W7). The diagram includes dimensions for various components, such as 14.00' for the height of the roof, 2'-1.5' for the height of the posts, and 5'-8' for the width of the base. The diagram is labeled with 'Scale = 1:50.9' and '1:10'.



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



TOTAL WEIGHT = 7 X 164 = 1147 lb

LUMBER

N. L. G. A. RULES

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

DRY: SEASONED LUMBER.

PLATES (table is in inches)

J	T	PLATES	W	LEN	Y	X
B	TMV+p	MT20	2.0	4.0		
C	TMWV-t	MT20	4.0	6.0	2.00	2.00
D	TTWV+m	MT20	5.0	6.0	1.75	1.50
E	TMV+w	MT20	2.0	4.0		
F	TS-t	MT20	3.0	6.0		
G	TMWV-t	MT20	4.0	4.0		
H	TMV-w	MT20	4.0	6.0	1.75	3.00
I	BMV1+p	MT20	2.0	4.0		
K	BMWV-t	MT20	4.0	4.0	1.50	1.50
L	BS-t	MT20	3.0	6.0		
M	BMWVWV-t	MT20	5.0	6.0		
N	BMWV-t	MT20	4.0	4.0		
O	BMVW1-t	MT20	4.0	4.0	1.75	1.75

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
I	1578	0	1578	0	0	1-10	1-10 & BLOCK
O	1649	0	1649	0	0	5-8	1-13

UNFACTORED REACTIONS

1ST LCASE		MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
I	1135	640 / 0	0 / 0	0 / 0	0 / 0	495 / 0	0 / 0
O	1179	698 / 0	0 / 0	0 / 0	0 / 0	481 / 0	0 / 0

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

2x4 DRY SPF No.2 BEARING BLOCK 12" LONG AT JT. I ATTACHED TO FRONT SIDE WITH 2 ROWS OF (0.122"x3") SPIRAL NAILS SPACED 3" C.C. 8 NAILS TOTAL.

BRACING

FOR SECTION D-H, MAX. PURLIN SPACING = 2.00 FT.
FOR OTHER SECTIONS, TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.43 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-M, G-K, C-O.

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 LOCL (LC)	MAX. UNBRAC LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX FACTORED CSI (LC)	
FR-TO		FROM TO			FR-TO			
A-B	0 / 42	-78.0	-78.0	0.11 (1)	10.00	C-N	0 / 76	0.03 (4)
B-C	0 / 21	-78.0	-78.0	0.13 (1)	10.00	N-D	0 / 107	0.04 (4)
C-D	-1350 / 0	-78.0	-78.0	0.16 (1)	5.43	D-M	0 / 704	0.11 (1)
D-E	-1312 / 0	-85.5	-85.5	0.91 (1)	2.00	M-E	-736 / 0	0.48 (1)
E-F	-1312 / 0	-85.5	-85.5	0.91 (1)	2.00	M-G	0 / 433	0.07 (1)
P-F	-1312 / 0	-85.5	-85.5	0.91 (1)	2.00	K-G	-1079 / 0	0.71 (1)
F-G	-1312 / 0	-85.5	-85.5	0.91 (1)	2.00	K-H	0 / 1621	0.26 (1)
G-H	-1037 / 0	-85.5	-85.5	0.86 (1)	2.00	O-C	-1616 / 0	0.46 (1)
I-H	-1520 / 0	0.0	0.0	0.71 (1)	5.33			
O-B	-209 / 0	0.0	0.0	0.02 (1)	7.81			
O-N	0 / 820	-18.5	-18.5	0.32 (4)	10.00			
N-M	0 / 861	-18.5	-18.5	0.33 (4)	10.00			
M-L	0 / 1037	-18.5	-18.5	0.40 (4)	10.00			
L-K	0 / 1037	-18.5	-18.5	0.40 (4)	10.00			
K-J	0 / 0	-18.5	-18.5	0.29 (4)	10.00			
J-I	0 / 0	-18.5	-18.5	0.29 (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

TOTAL LOAD = 34.4 PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON
PIGGYBACK TRUSS WITH SLOPES OF 6.00/12
AND -6.00/12 AND RESPECTIVE HEEL HEIGHTS
OF 0-0 AND 0-0 AND AN ADDITIONAL DEAD
LOAD OF 3.0 P.S.F.

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 (1.02")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.05")
ALLOWABLE DEFL.(TL)= L/360 (1.02")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.13")

CSI: TC=0.91/1.00 (E-G:1), BC=0.40/1.00 (K-M:4),
WB=0.71/1.00 (G-K:1), SSI=0.32/1.00 (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

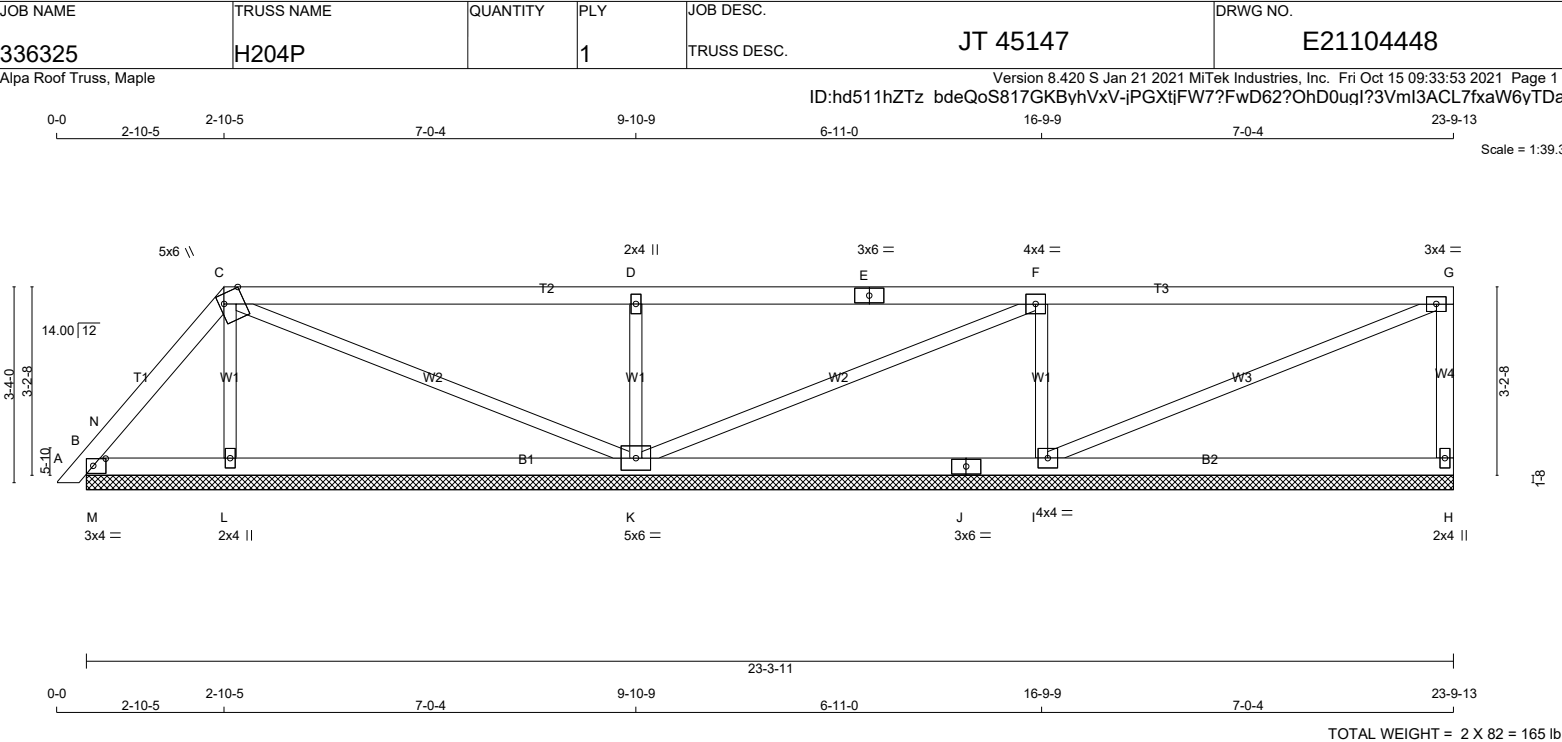
TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT.

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= 0.88 (O) (INPUT = 0.90)
JSI METAL= 0.36 (K) (INPUT = 1.00)



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 GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG	REQRD BRG	TOP CH.	LL	PSF			
A - C	2x4	DRY	No.2	JT <td>VERT</td> <td>HORZ</td> <td>DOWN</td> <td>HORZ</td> <td>UPLIFT</td> <td>IN-SX</td> <td>IN-SX</td> <td>DL<td>= 21.0</td></td>	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX	DL <td>= 21.0</td>	= 21.0		
C - E	2x4	DRY	No.2	H <td>277</td> <td>0</td> <td>277</td> <td>0</td> <td>0</td> <td>23-3-11</td> <td>(8-3-11)</td> <td>PSF</td> <td></td>	277	0	277	0	0	23-3-11	(8-3-11)	PSF			
E - G	2x4	DRY	No.2	B <td>179</td> <td>0</td> <td>179</td> <td>0</td> <td>0</td> <td>23-3-11</td> <td>(8-3-11)</td> <td>PSF</td> <td></td>	179	0	179	0	0	23-3-11	(8-3-11)	PSF			
H - G	2x4	DRY	No.2	L <td>339</td> <td>0</td> <td>339</td> <td>0</td> <td>0</td> <td>23-3-11</td> <td>(8-3-11)</td> <td>PSF</td> <td></td>	339	0	339	0	0	23-3-11	(8-3-11)	PSF			
B - J	2x4	DRY	No.2	K <td>760</td> <td>0</td> <td>760</td> <td>0</td> <td>0</td> <td>23-3-11</td> <td>(8-3-11)</td> <td>PSF</td> <td></td>	760	0	760	0	0	23-3-11	(8-3-11)	PSF			
J - H	2x4	DRY	No.2	I <td>725</td> <td>0</td> <td>725</td> <td>0</td> <td>0</td> <td>23-3-11</td> <td>(8-3-11)</td> <td>PSF</td> <td></td>	725	0	725	0	0	23-3-11	(8-3-11)	PSF			
ALL WEBS	2x3	DRY	No.2												
DRY: SEASONED LUMBER.															
				SPACING = 24.0								IN. C/C			

PLATES (table is in inches)						
JT	TYPE	PLATES	W	LEN	Y	X
B	TMB1-l	MT20	3.0	4.0	1.50	2.50
C	TTWW+m	MT20	5.0	6.0	Edge	4.00
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	3.0	4.0		
H	BMV1+p	MT20	2.0	4.0		
I	BMWW1-t	MT20	4.0	4.0		
J	BS-t	MT20	3.0	6.0		
K	BMWWW1-t	MT20	5.0	6.0		
L	BMW1+w	MT20	2.0	4.0		

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

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



UNFACTORED REACTIONS									
1ST LCASE		MAX./MIN. COMPONENT REACTIONS							
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL		
H	197	121 / 0	0 / 0	0 / 0	0 / 0	76 / 0	0 / 0		
B	123	99 / 0	0 / 0	0 / 0	0 / 0	24 / 0	0 / 0		
D	247	121 / 0	0 / 0	0 / 0	0 / 0	125 / 0	0 / 0		
K	539	341 / 0	0 / 0	0 / 0	0 / 0	198 / 0	0 / 0		
I	517	312 / 0	0 / 0	0 / 0	0 / 0	206 / 0	0 / 0		
BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) H, B, L, K, 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		MAX. FACTORED				WEBS			
MEMB.	FORCE (LBS)	VERT.	LOAD (PLF)	LC1	MAX	MAX.	MEMB.	FORCE (LBS)	MAX
FR-TO		FROM	TO	CSI (LC)	UNBRAC	LENGTH	FR-TO		CSI (LC)
A - B	0 / 10	-78.0	-78.0	0.01 (1)	10.00	L - C	-210 / 0	0.04 (1)	
B - N	0 / 42	-78.0	-78.0	0.04 (1)	10.00	C - K	-63 / 0	0.07 (1)	
N - C	-86 / 0	-78.0	-78.0	0.05 (1)	6.25	K - D	-597 / 0	0.11 (1)	
C - D	0 / 17	-78.0	-78.0	0.52 (1)	10.00	K - F	-33 / 0	0.04 (1)	
D - E	0 / 17	-78.0	-78.0	0.52 (1)	10.00	I - F	-585 / 0	0.11 (1)	
E - F	0 / 17	-78.0	-78.0	0.52 (1)	10.00	I - G	0 / 15	0.00 (1)	
F - G	-14 / 0	-78.0	-78.0	0.52 (1)	6.25	M - N	-238 / 0	0.00 (1)	
H - G	-225 / 0	0.0	0.0	0.04 (1)	7.81				
B - M	0 / 49	-18.5	-18.5	0.06 (1)	10.00				
M - L	0 / 49	-18.5	-18.5	0.14 (4)	10.00				
L - K	0 / 41	-18.5	-18.5	0.17 (4)	10.00				
K - J	0 / 14	-18.5	-18.5	0.22 (4)	10.00				
J - I	0 / 14	-18.5	-18.5	0.22 (4)	10.00				
I - H	0 / 0	-18.5	-18.5	0.22 (4)	10.00				

CSI: TC=0.52/1.00 (C-D:1), BC=0.22/1.00 (I-K:4), WB=0.11/1.00 (D-K:1), SSI=0.26/1.00 (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 SECTION
(PSI) (PLI) (PLI)
MAX MIN MAX MIN MAX MIN
MT20 650 371 1747 788 1987 1873

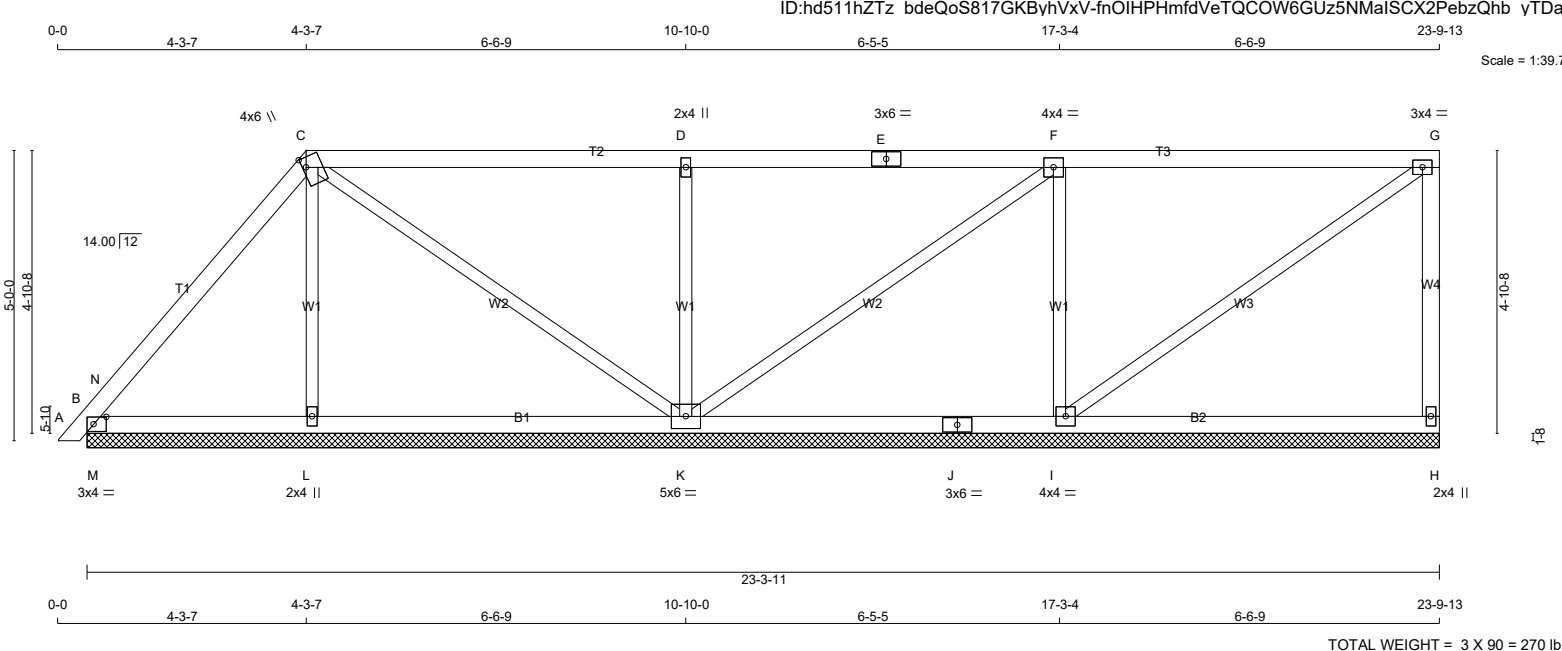
PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.83 (K) (INPUT = 0.90)
JSI METAL= 0.21 (E) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336325	H205P		1	TRUSS DESC. JT 45147	E21104449

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TOTAL WEIGHT = 3 X 90 = 270 lb [M]

N. L. G. A. RULES				BUILDING DESIGNER							DESIGN CRITERIA			
CHORDS	SIZE	LUMBER	DESCR.	BEARINGS			FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG	REQRD BRG	SPECIFIED LOADS:	
A - C	2x4	DRY	No.2	SPF	FACTORED								TOP CH.	LL = 21.0 PSF
C - E	2x4	DRY	No.2	SPF	GROSS REACTION								DL = 6.0 PSF	
E - G	2x4	DRY	No.2	SPF	JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX	BOT CH.	LL = 0.0 PSF
H - G	2x4	DRY	No.2	SPF	H	269	0	269	0	0	23-3-11 (8-3-11)		DL = 7.4 PSF	
B - J	2x4	DRY	No.2	SPF	B	284	0	284	0	0	23-3-11 (8-3-11)		TOTAL LOAD = 34.4 PSF	
J - H	2x4	DRY	No.2	SPF	L	308	0	308	0	0	23-3-11 (8-3-11)			
					K	781	0	781	0	0	23-3-11 (8-3-11)			
					I	637	0	637	0	0	23-3-11 (8-3-11)			
ALL WEBS 2x3 DRY: SEASONED LUMBER.				No.2	SPF								SPACING = 24.0 IN. C/C	

PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y X
B	TMB1-l	MT20	3.0	4.0	1.50 2.50
C	TTWW+m	MT20	4.0	6.0	2.00 0.75
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	3.0	4.0	
H	BMV1+p	MT20	2.0	4.0	
I	BMWW1-t	MT20	4.0	4.0	
J	BS-t	MT20	3.0	6.0	
K	BMWWW1-t	MT20	5.0	6.0	
L	BMW1+w	MT20	2.0	4.0	

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



UNFACTORED REACTIONS							
JT	1ST LCASE	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
H	192	119 / 0	0 / 0	0 / 0	0 / 0	73 / 0	0 / 0
B	199	140 / 0	0 / 0	0 / 0	0 / 0	59 / 0	0 / 0
L	224	109 / 0	0 / 0	0 / 0	0 / 0	115 / 0	0 / 0
K	554	357 / 0	0 / 0	0 / 0	0 / 0	196 / 0	0 / 0
I	455	270 / 0	0 / 0	0 / 0	0 / 0	186 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) H, B, L, K, 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 (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. FACTORED CSI (LC)	
FR-TO		FROM	TO	FR-TO			
A-B	0 / 10	-78.0	-78.0 0.01 (1)	10.00	L-C	-170 / 0	0.06 (1)
B-N	0 / 166	-78.0	-78.0 0.11 (1)	10.00	C-K	-125 / 0	0.16 (1)
N-C	-127 / 0	-78.0	-78.0 0.13 (1)	6.25	K-D	-557 / 0	0.19 (1)
C-D	0 / 33	-78.0	-78.0 0.45 (1)	10.00	K-F	-70 / 0	0.09 (1)
D-E	0 / 33	-78.0	-78.0 0.45 (1)	10.00	I-F	-516 / 0	0.18 (1)
E-F	0 / 33	-78.0	-78.0 0.45 (1)	10.00	I-G	0 / 29	0.01 (1)
F-G	-24 / 0	-78.0	-78.0 0.45 (1)	6.25	M-N	-485 / 0	0.00 (1)
H-G	-221 / 0	0.0	0.0 0.09 (1)	7.81			
B-M	0 / 73	-18.5	-18.5 0.13 (1)	10.00			
M-L	0 / 73	-18.5	-18.5 0.14 (4)	10.00			
L-K	0 / 70	-18.5	-18.5 0.15 (4)	10.00			
K-J	0 / 24	-18.5	-18.5 0.19 (4)	10.00			
J-I	0 / 24	-18.5	-18.5 0.19 (4)	10.00			
I-H	0 / 0	-18.5	-18.5 0.19 (4)	10.00			

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

CSI: TC=0.45/1.00 (D-F:1) , BC=0.19/1.00 (I-K:4) , WB=0.19/1.00 (D-K:1) , SSI=0.38/1.00 (B-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
MT20	650	371	1747	788	1987

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

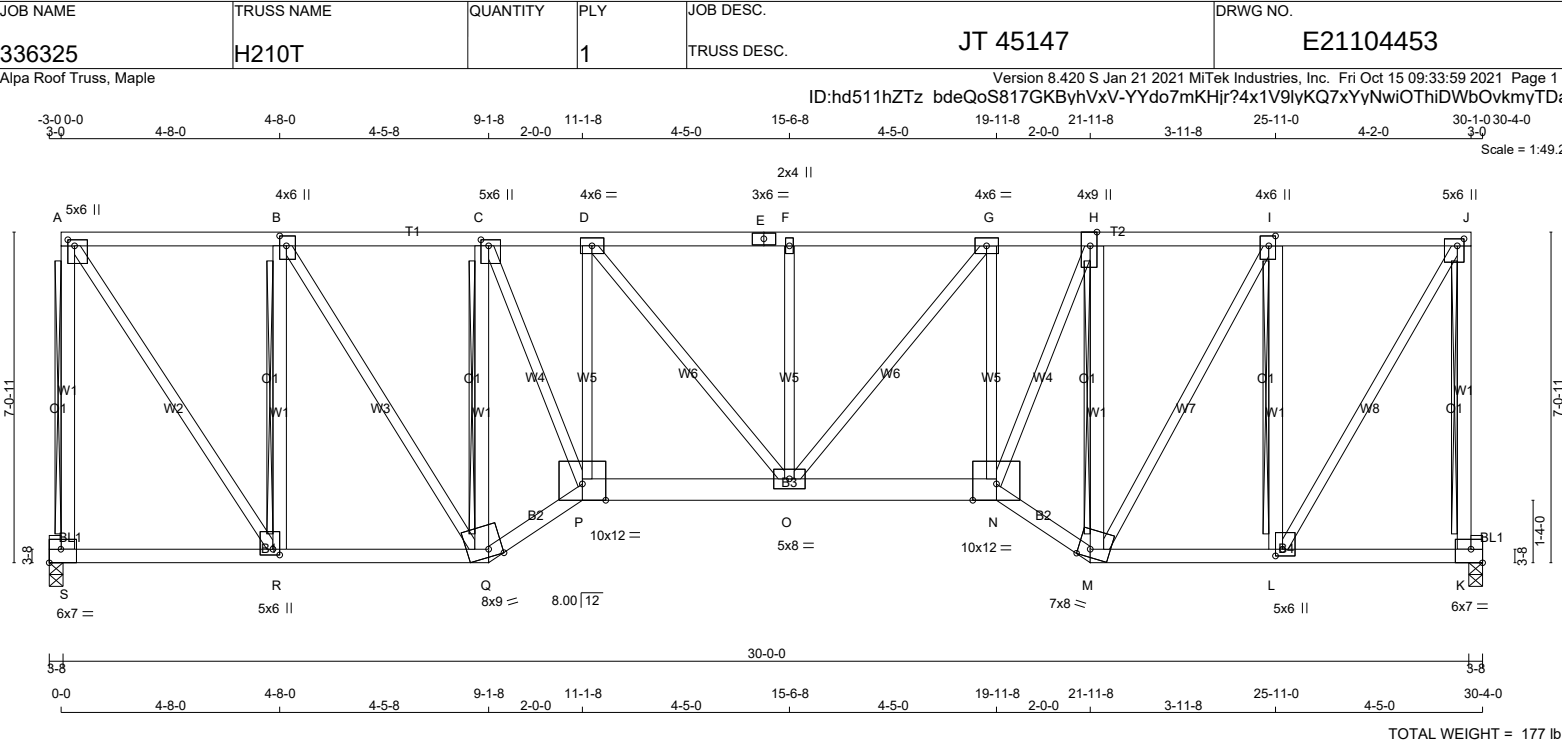
JSI GRIP= 0.89 (C) (INPUT = 0.90)
JSI METAL= 0.20 (E) (INPUT = 1.00)

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M]

JSI GRIP= 0.86 (I) (INPUT = 0.90)
JSI METAL= 0.36 (K) (INPUT = 1.00)



LUMBER
N. L. G. A. RULES

CHORDS	SIZE	LUMBER	DESCR.
S - A	2x4	DRY No.2	SPF
A - E	2x4	DRY No.2	SPF
E - J	2x4	DRY No.2	SPF
K - J	2x4	DRY No.2	SPF
S - Q	2x4	DRY No.2	SPF
Q - P	2x4	DRY No.2	SPF
P - N	2x6	DRY No.2	SPF
N - M	2x4	DRY No.2	SPF
M - K	2x4	DRY No.2	SPF

BEARING BLOCKS

BL1	2 - 2x4	DRY	No.2	SPF
-----	---------	-----	------	-----

ALL WEBS EXCEPT

R - B	2x4	DRY	No.2	SPF
Q - C	2x4	DRY	No.2	SPF
M - H	2x4	DRY	No.2	SPF
L - I	2x4	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	1.50 1.75
B	TMWW+t	MT20	4.0	6.0	2.50 1.75
C	TMWW+t	MT20	5.0	6.0	1.50 2.00
D	TMWW-t	MT20	4.0	6.0	
E	TS-t	MT20	3.0	6.0	
F	TMW+w	MT20	2.0	4.0	
G	TMWW-t	MT20	4.0	6.0	
H	TMWW+t	MT20	4.0	9.0	Edge 1.75
I	TMWW+t	MT20	4.0	6.0	2.50 1.75
J	TMVW+p	MT20	5.0	6.0	1.75 1.75
K	BMVK1-t	MT20	6.0	7.0	3.50 Edge
L	BMWW+t	MT20	5.0	6.0	1.75 1.75
M	BBWW-m	MT20	7.0	8.0	2.00 3.00
N	BBWW-t	MT20	10.0	12.0	Edge
O	BMWW-t	MT20	5.0	8.0	
P	BBWW-t	MT20	10.0	12.0	Edge
Q	BBWW-m	MT20	8.0	9.0	Edge 3.50
R	BMWW+t	MT20	5.0	6.0	1.50 1.75
S	BMVK1-t	MT20	6.0	7.0	3.50 Edge

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	REQRD
JT	VERT	HORZ	DOWN	HORZ
S	3065	0	3065	0
K	3065	0	3065	0

UNFACTORED REACTIONS

JT	1ST LCASE	MAX./MIN.	COMPONENT REACTIONS
S	2185	1335 / 0	0 / 0
K	2185	1335 / 0	0 / 0

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

BRACING
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 2.95 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.

2x4 DRY SPF No.2 T-BRACE AT A-S, J-K, B-R, C-Q, H-M, I-L

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)	MAX. FACTORED CSI (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. FACTORED CSI (LC)	
FR-TO		FROM TO		FR-TO			
S-A	-2995 / 0	0.0 0.0 0.85 (1)	7.81	A-R	0 / 3267	0.81 (1)	
A-B	-1790 / 0	-165.7 -165.7 0.67 (1)	4.01	R-B	-2482 / 0	0.70 (1)	
B-C	-2846 / 0	-165.7 -165.7 0.77 (1)	3.10	B-Q	0 / 1915	0.47 (1)	
C-D	-3920 / 0	-78.0 -78.0 0.43 (1)	3.17	Q-C	-3304 / 0	0.94 (1)	
D-E	-4287 / 0	-78.0 -78.0 0.57 (1)	2.95	C-P	0 / 3091	0.77 (1)	
E-F	-4287 / 0	-78.0 -78.0 0.57 (1)	2.95	P-D	-621 / 0	0.30 (1)	
F-G	-4287 / 0	-78.0 -78.0 0.57 (1)	2.95	D-O	0 / 566	0.14 (1)	
G-H	-3753 / 0	-78.0 -78.0 0.35 (1)	3.33	O-F	-391 / 0	0.19 (1)	
H-I	-2646 / 0	-165.7 -165.7 0.60 (1)	3.51	O-G	0 / 825	0.20 (1)	
I-J	-1615 / 0	-165.7 -165.7 0.52 (1)	4.48	N-G	-843 / 0	0.40 (1)	
K-J	-3001 / 0	0.0 0.0 0.85 (1)	7.81	N-H	0 / 3181	0.79 (1)	
S-R	-65 / 0	-39.3 -39.3 0.24 (4)	6.25	M-I	0 / 2037	0.50 (1)	
R-Q	0 / 1790	-39.3 -39.3 0.44 (1)	10.00	L-I	-2546 / 0	0.72 (1)	
Q-P	0 / 3367	-127.0 -127.0 0.69 (1)	10.00	L-J	0 / 3204	0.79 (1)	
P-O	0 / 3933	-127.0 -127.0 0.68 (1)	10.00				
O-N	0 / 3770	-127.0 -127.0 0.65 (1)	10.00				
N-M	0 / 3123	-127.0 -127.0 0.65 (1)	10.00				
M-L	0 / 1615	-39.3 -39.3 0.38 (1)	10.00				
L-K	-65 / 0	-39.3 -39.3 0.19 (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/C

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

GIRDER TYPE: CPrimeHip
SIDE 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 8-4-8 OF SPAN MEASURED FROM THE RIGHT.

GIRDER TYPE: CPrimeHip
SIDE 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 8-4-8 OF SPAN MEASURED FROM THE LEFT.

GIRDER TYPE: CStdGirder
START DISTANCE = 9-1-8
START SPAN CARRIED = 6-6-0
END DISTANCE = 21-11-8
END SPAN CARRIED = 6-6-0
END WALL WIDTH = 0-0
APPLIED TO FRONT SIDE OF BOTTOM CHORD.
- ADDTL LOADS BASED ON 55 % OF GSL.

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

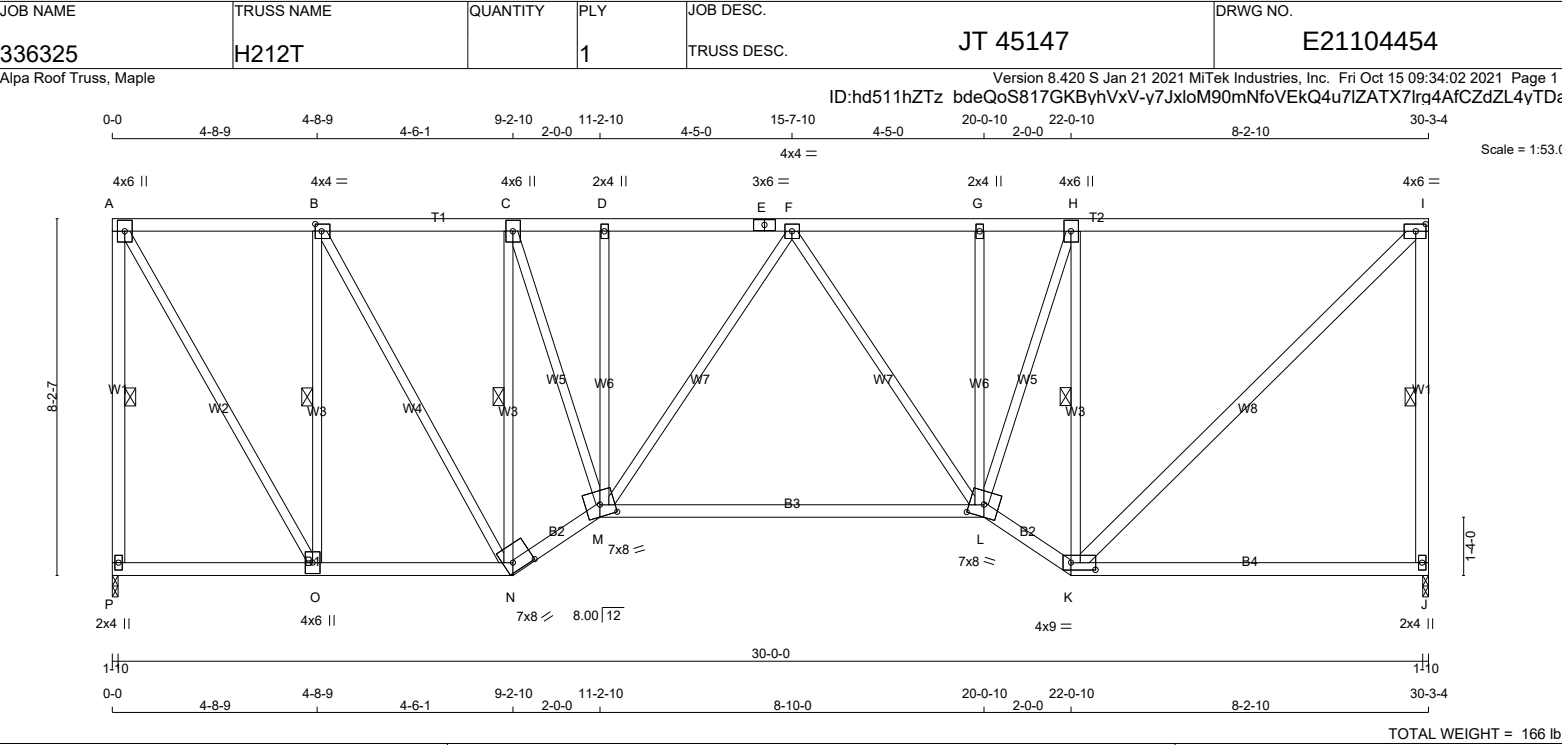
(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.99")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.25")
ALLOWABLE DEFL.(TL)= L/360 (0.99")
CALCULATED VERT. DEFL.(TL) = L/ 736 (0.49")

CSI: TC=0.85/1.00 (J-K:1) , BC=0.69/1.00 (P-Q:1) , WB=0.94/1.00 (H-M:1) , SSI=0.40/1.00 (A-B: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



LUMBER				N. L. G. A. RULES			
CHORDS	SIZE	DRY	No.2	SPF	SPF	SPF	SPF
P - A	2x4	DRY	No.2	SPF	SPF	SPF	SPF
A - E	2x4	DRY	No.2	SPF	SPF	SPF	SPF
E - I	2x4	DRY	No.2	SPF	SPF	SPF	SPF
J - I	2x4	DRY	No.2	SPF	SPF	SPF	SPF
P - N	2x4	DRY	No.2	SPF	SPF	SPF	SPF
N - M	2x4	DRY	No.2	SPF	SPF	SPF	SPF
M - L	2x4	DRY	No.2	SPF	SPF	SPF	SPF
L - K	2x4	DRY	No.2	SPF	SPF	SPF	SPF
K - J	2x4	DRY	No.2	SPF	SPF	SPF	SPF
ALL WEBS EXCEPT K - I	2x3	DRY	No.2	SPF	SPF	SPF	SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y
A	TMVW+p	MT20	4.0	6.0	
B	TMWW-t	MT20	4.0	4.0	2.00
C	TMWW+t	MT20	4.0	6.0	
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	TMW+w	MT20	2.0	4.0	
H	TMWW+t	MT20	4.0	6.0	
I	TMVW-t	MT20	4.0	6.0	2.00
J	BMV1+p	MT20	2.0	4.0	
K	BBWW-l	MT20	4.0	9.0	2.00
L	BBWWW-m	MT20	7.0	8.0	3.25
M	BBWWW-m	MT20	7.0	8.0	3.25
N	BBWW-h	MT20	7.0	8.0	2.50
O	BMWW+t	MT20	4.0	6.0	
P	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

FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT		REQRD	
JT	VERT	HORZ	DOWN	HORZ	UPLIFT	BRG	IN-SX
P	1460	0	1460	0	1-10	1-9	
J	1460	0	1460	0	1-10	1-9	

UNFACTORED REACTIONS		1ST LCASE		MAX./MIN. COMPONENT REACTIONS	
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND
P	1041	635 / 0	0 / 0	0 / 0	0 / 0
J	1041	635 / 0	0 / 0	0 / 0	0 / 0

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

BRACING
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.03 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.

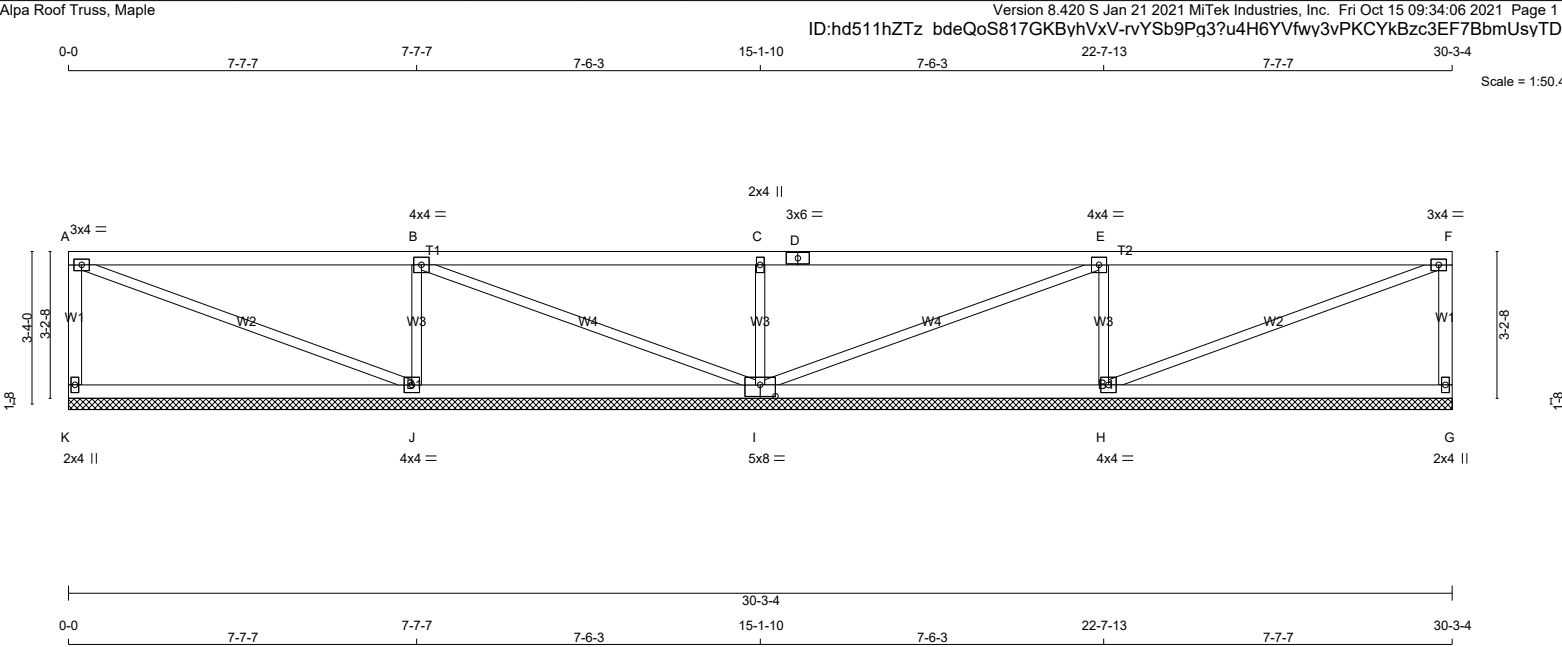
1 LATERAL BRACE(S) AT 1 / 2 LENGTH OF A-P, I-J, B-O, C-N, H-K.

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)

CHORDS		FACTORED		WEBS		FACTORED	
MEMB.	FORCE (LBS)	VERT. LOAD (PLF)	MAX. CSI (LC)	MEMB.	FORCE (LBS)	MAX. CSI (LC)	
FR-TO		FROM TO		FR-TO			
P-A	-1426 / 0	0.0	0.0 0.43 (1)	A-O	0 / 1491	0.34 (1)	
A-B	-763 / 0	-78.0	-78.0 0.27 (1)	O-B	-1179 / 0	0.50 (1)	
B-C	-1195 / 0	-78.0	-78.0 0.28 (1)	B-N	0 / 872	0.20 (1)	
C-D	-1576 / 0	-78.0	-78.0 0.12 (1)	N-C	-1488 / 0	0.63 (1)	
D-E	-1580 / 0	-78.0	-78.0 0.28 (1)	C-M	0 / 1312	0.30 (1)	
E-F	-1580 / 0	-78.0	-78.0 0.28 (1)	M-D	-216 / 0	0.17 (1)	
F-G	-1504 / 0	-78.0	-78.0 0.28 (1)	M-F	-180 / 0	0.23 (1)	
G-H	-1505 / 0	-78.0	-78.0 0.73 (1)	F-L	-315 / 0	0.40 (1)	
H-I	-1176 / 0	-78.0	-78.0 0.85 (1)	L-G	0 / 31	0.01 (1)	
I-J	-1384 / 0	0.0	0.0 0.42 (1)	L-H	0 / 1154	0.26 (1)	
P-O	0 / 0	-18.5	-18.5 0.11 (4)	K-H	-1804 / 0	0.77 (1)	
O-N	0 / 763	-18.5	-18.5 0.18 (4)	K-I	0 / 1631	0.26 (1)	
N-M	0 / 1413	-18.5	-18.5 0.24 (1)				
M-L	0 / 1680	-18.5	-18.5 0.58 (4)				
L-K	0 / 1385	-18.5	-18.5 0.24 (1)				
K-J	0 / 0	-18.5	-18.5 0.37 (4)				

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336325	H214P		1	TRUSS DESC. JT 45147	E21104456



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										[M]
K - A	2x4	DRY	No.2	SPF		FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT		REQRD		SPECIFIED LOADS:												
A - D	2x4	DRY	No.2	SPF		JT	VERT	HORZ	DOWN	HORZ	UPLIFT	BRG IN-SX	BRG IN-SX	TOP	CH.	LL	=	21.0	PSF							
D - F	2x4	DRY	No.2	SPF																			DL	=	6.0	PSF
G - F	2x4	DRY	No.2	SPF		K	288	0	288	0	0	30-3-4 (15-1-10)	109	BOT	CH.	LL	=	0.0	PSF							
K - I	2x4	DRY	No.2	SPF		G	288	0	288	0	0	30-3-4 (15-1-10)	109			DL	=	7.4	PSF							
I - G	2x4	DRY	No.2	SPF		J	829	0	829	0	0	30-3-4 (15-1-10)	109	TOTAL LOAD = 34.4 PSF												
						I	685	0	685	0	0	30-3-4 (15-1-10)	109	SPACING = 24.0 IN. C/C												
ALL WEBS	2x3	DRY	No.2	SPF		H	829	0	829	0	0	30-3-4 (15-1-10)	109													
DRY: SEASONED LUMBER.																										

PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y X
A	TMVW-t	MT20	3.0	4.0	
B	TMWW-t	MT20	4.0	4.0	
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	3.0	4.0	
G	BMV1+p	MT20	2.0	4.0	
H	BMWW1-t	MT20	4.0	4.0	
I	BSWWW1-t	MT20	5.0	8.0	3.00 4.00
J	BMWW1-t	MT20	4.0	4.0	
K	BMV1+p	MT20	2.0	4.0	

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

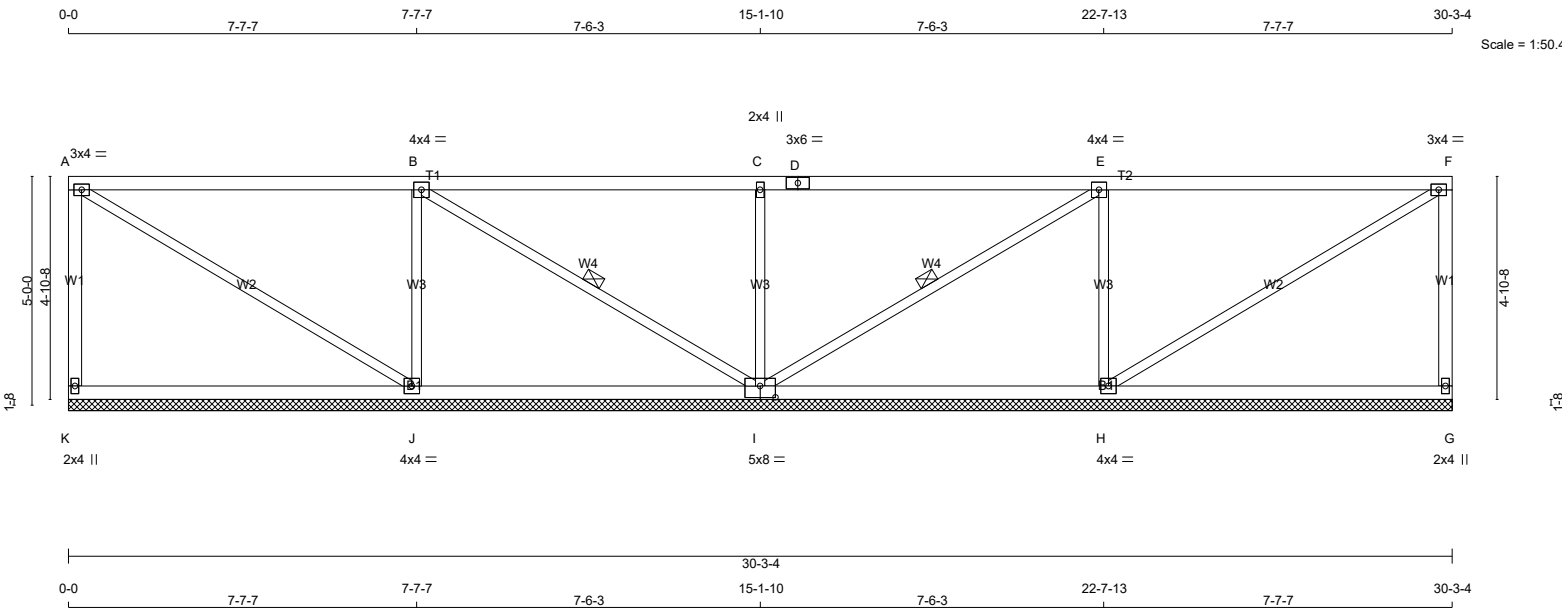


JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336325	H215P		1	TRUSS DESC.	E21104457

Alpa Roof Truss, Maple

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TOTAL WEIGHT = 3 X 117 = 350 lb

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

PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y X
A	TMVW-t	MT20	3.0	4.0	
B	TMWW-t	MT20	4.0	4.0	
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	3.0	4.0	
G	BMV1+p	MT20	2.0	4.0	
H	BMWW1-t	MT20	4.0	4.0	
I	BSWWW1-I	MT20	5.0	8.0	3.00 4.00
J	BMWW1-t	MT20	4.0	4.0	
K	BMV1+p	MT20	2.0	4.0	

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

	FACTORED		MAXIMUM FACTORED		INPUT	REQRD
	GROSS REACTION		GROSS REACTION			
	VERT	HORZ	DOWN	HORZ	BRG	BRG
JT	289	0	289	0	30-3-4 (15-1-10)	30-3-4 (15-1-10)
K	289	0	289	0	30-3-4 (15-1-10)	30-3-4 (15-1-10)
G	289	0	289	0	30-3-4 (15-1-10)	30-3-4 (15-1-10)
J	789	0	789	0	30-3-4 (15-1-10)	30-3-4 (15-1-10)
I	766	0	766	0	30-3-4 (15-1-10)	30-3-4 (15-1-10)
H	789	0	789	0	30-3-4 (15-1-10)	30-3-4 (15-1-10)

VALUE IN PARENTHESIS INDICATES EFFECTIVE BEARING LENGTH

UNFACTORED REACTIONS

	1ST LCASE		MAX./MIN. COMPONENT REACTIONS		WIND	DEAD	SOIL
	COMBINED	SNOW	LIVE	PERM.LIVE			
JT	205	127 / 0	0 / 0	0 / 0	0 / 0	79 / 0	0 / 0
K	205	127 / 0	0 / 0	0 / 0	0 / 0	79 / 0	0 / 0
G	565	330 / 0	0 / 0	0 / 0	0 / 0	234 / 0	0 / 0
J	541	356 / 0	0 / 0	0 / 0	0 / 0	185 / 0	0 / 0
I	565	330 / 0	0 / 0	0 / 0	0 / 0	234 / 0	0 / 0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 10.00 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 B-I, E-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)

MEMB.	CHORDS		FACTORED		WEBS		FACTORED	
	MAX. FORCE (LBS)	VERT. LOAD (PLF)	MAX. VERT. LOAD (PLF)	MAX. CSI (LC)	MAX. UNBRACED LENGTH	MEMB. FORCE (LBS)	MAX. FORCE (LBS)	MAX. CSI (LC)
FR-TO		FROM	TO		FR-TO			
K-A	-235 / 0	0.0	0.0	0.09 (1)	7.81	A-J	0 / 3	0.00 (1)
A-B	-2 / 0	-78.0	-78.0	0.65 (1)	10.00	J-B	-615 / 0	0.21 (1)
B-C	0 / 97	-78.0	-78.0	0.67 (1)	10.00	B-I	-116 / 0	0.06 (1)
C-D	0 / 97	-78.0	-78.0	0.67 (1)	10.00	I-C	-541 / 0	0.19 (1)
D-E	0 / 97	-78.0	-78.0	0.67 (1)	10.00	E-I	-116 / 0	0.06 (1)
E-F	-2 / 0	-78.0	-78.0	0.65 (1)	10.00	H-E	-615 / 0	0.21 (1)
G-F	-235 / 0	0.0	0.0	0.09 (1)	7.81	H-F	0 / 3	0.00 (1)
K-J	0 / 0	-18.5	-18.5	0.31 (4)	10.00			
J-I	0 / 2	-18.5	-18.5	0.31 (4)	10.00			
I-H	0 / 2	-18.5	-18.5	0.31 (4)	10.00			
H-G	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, 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

CSI=TC=0.67/1.00 (C-E:1) , BC=0.31/1.00 (G-H:4) , WB=0.21/1.00 (E-H:1) , SSI=0.28/1.00 (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= 0.76 (F) (INPUT = 0.90)
JSI METAL= 0.34 (D) (INPUT = 1.00)

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

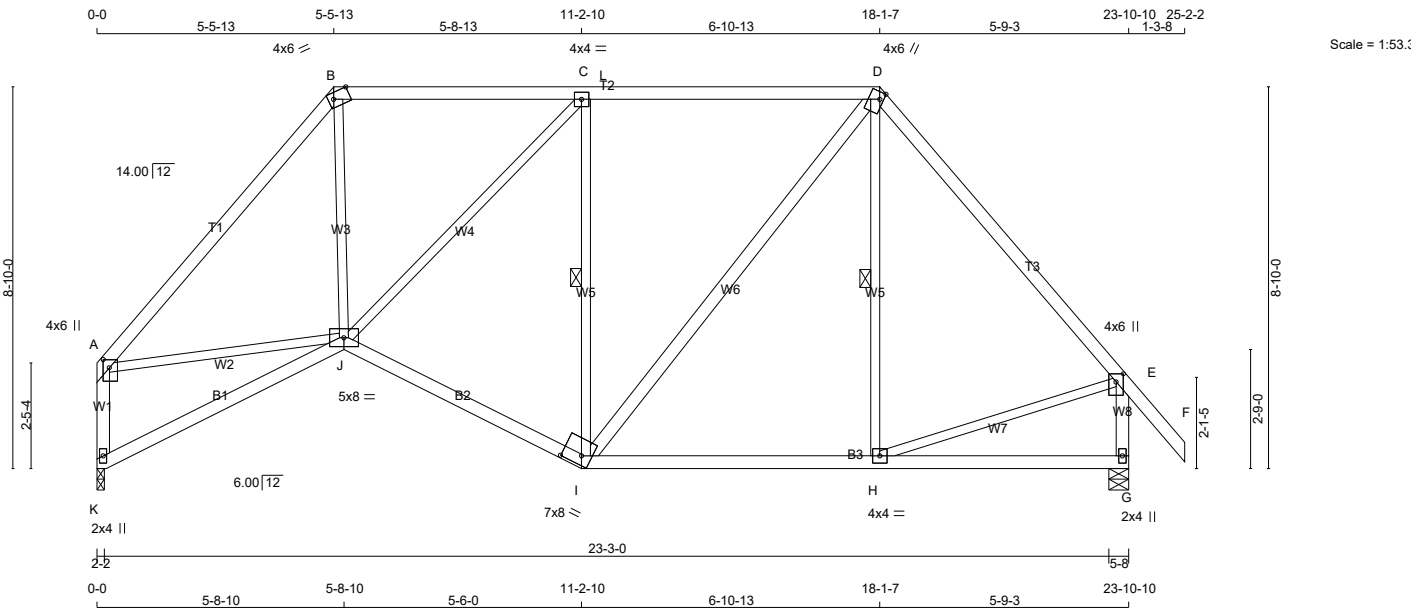


JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336325	H216		1	TRUSS DESC. JT 45147	E21104458

Alpa Roof Truss, Maple

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LUMBER				DESCR.	
N. L. G. A. RULES					
CHORDS	SIZE	LUMBER		SPF	
A - B	2x4	DRY	No.2	SPF	
B - D	2x4	DRY	No.2	SPF	
D - F	2x4	DRY	No.2	SPF	
K - A	2x4	DRY	No.2	SPF	
G - E	2x4	DRY	No.2	SPF	
K - J	2x4	DRY	No.2	SPF	
J - I	2x4	DRY	No.2	SPF	
I - G	2x4	DRY	No.2	SPF	
ALL WEBS	2x3	DRY	No.2	SPF	
EXCEPT					
I - D	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 1.75
B	TTW-m	MT20	4.0	6.0	Edge 4.50
C	TMWW-t	MT20	4.0	4.0	
D	TTWW+m	MT20	4.0	6.0	2.00 1.00
E	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	BBWW-h	MT20	7.0	8.0	2.50 5.25
J	BBWWW-p	MT20	5.0	8.0	
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	BRG	IN-SX
K	1200	0		1200	0	0	2-2	1-8	
G	1308	0		1308	0	0	5-8	1-8	

UNFACTORED REACTIONS		1ST LCASE		MAX./MIN. COMPONENT REACTIONS			
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
K	860	501 / 0	0 / 0	0 / 0	0 / 0	358 / 0	0 / 0
G	935	560 / 0	0 / 0	0 / 0	0 / 0	374 / 0	0 / 0

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

BRACING
FOR SECTION B-D, MAX. PURLIN SPACING = 2.00 FT.
FOR OTHER SECTIONS, TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.96 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 C-I, D-H.

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

CHORDS		WEBS	
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. FACTORED FORCE (LBS)
FR-TO		FROM TO	FR-TO
A - B	-1369 / 0	-78.0 -78.0 0.56 (1)	4.96 B - J
B - C	-914 / 0	-85.5 -85.5 0.63 (1)	2.00 J - C
C - L	-906 / 0	-85.5 -85.5 0.65 (1)	2.00 I - C
L - D	-906 / 0	-85.5 -85.5 0.65 (1)	2.00 I - D
D - E	-981 / 0	-78.0 -78.0 0.56 (1)	5.57 H - D
E - F	0 / 42	-78.0 -78.0 0.11 (1)	10.00 A - J
K - A	-1147 / 0	0.0 0.0 0.15 (1)	7.42 H - E
G - E	-1269 / 0	0.0 0.0 0.15 (1)	7.14
K - J	0 / 0	-18.5 -18.5 0.18 (4)	10.00
J - I	0 / 1004	-18.5 -18.5 0.27 (4)	10.00
I - H	0 / 636	-18.5 -18.5 0.29 (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 PIGGYBACK TRUSS WITH SLOPES OF 6.00/12 AND -6.00/12 AND RESPECTIVE HEEL HEIGHTS OF 0-0 AND 0-0 AND AN ADDITIONAL DEAD LOAD OF 3.0 P.S.F.

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 (0.80")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.03")
ALLOWABLE DEFL.(TL)= L/360 (0.80")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.10")

CSI: TC=0.65/1.00 (C-D:1) , BC=0.29/1.00 (H-I:4) , WB=0.34/1.00 (C-I:1) , SSI=0.28/1.00 (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= 0.81 (H) (INPUT = 0.90)
JSI METAL= 0.49 (A) (INPUT = 1.00)

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

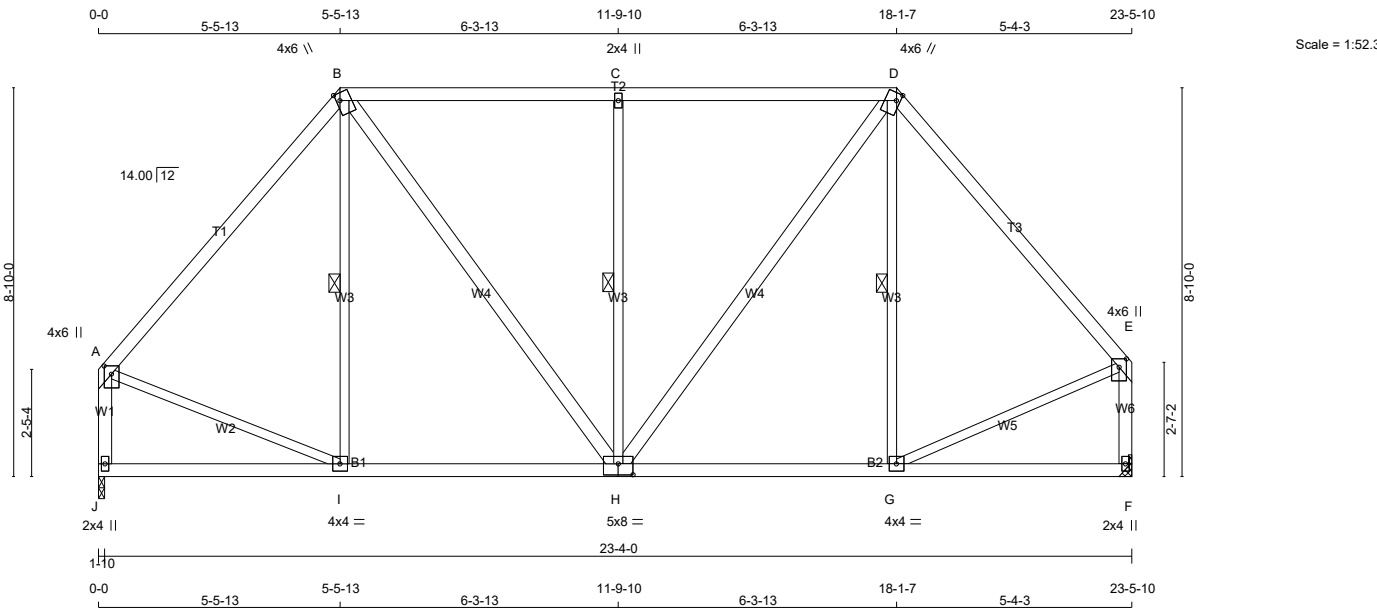


JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336325	H217		1	TRUSS DESC. JT 45147	E21104459

Alpa Roof Truss, Maple

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TOTAL WEIGHT = 3 X 118 = 355 lb [M]

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 - E	2x4	DRY	No.2	SPF
J - A	2x4	DRY	No.2	SPF
F - E	2x4	DRY	No.2	SPF
J - H	2x4	DRY	No.2	SPF
H - F	2x4	DRY	No.2	SPF
ALL WEBS	2x3	DRY	No.2	SPF
EXCEPT				
B - H	2x4	DRY	No.2	SPF
H - D	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	4.0	6.0	2.00 1.00
C	TMW+w	MT20	2.0	4.0	
D	TTWW+m	MT20	4.0	6.0	2.00 1.00
E	TMVW+p	MT20	4.0	6.0	2.25 2.00
F	BMV1+p	MT20	2.0	4.0	
G	BMWW-t	MT20	4.0	4.0	
H	BSWWW-l	MT20	5.0	8.0	3.00 4.00
I	BMWW-t	MT20	4.0	4.0	
J	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	REQD BRG			
JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX
J	1179	0	1179	0	0	1-10	1-8
F	1180	0	1180	0	0	MECHANICAL	

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

UNFACTORED REACTIONS							
JT	1ST LCASE COMBINED	MAX./MIN. SNOW	MIN. LIVE	PERM.LIVE	WIND	DEAD	SOIL
J	845	493 / 0	0 / 0	0 / 0	0 / 0	352 / 0	0 / 0
F	845	493 / 0	0 / 0	0 / 0	0 / 0	353 / 0	0 / 0

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

BRACING
FOR SECTION B-D, MAX. PURLIN SPACING = 2.00 FT.
FOR OTHER SECTIONS, TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.79 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 B-I, C-H, D-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)	MAX LC1 CSI (LC)	MAX. UNBRACED LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
FR-TO		FROM TO			FR-TO		
A-B	-927 / 0	-78.0 -78.0	0.49 (1)	5.79	I-B	-87 / 55	0.04 (1)
B-C	-874 / 0	-85.5 -85.5	0.62 (1)	2.00	B-H	0 / 459	0.07 (1)
C-D	-874 / 0	-85.5 -85.5	0.62 (1)	2.00	H-C	-661 / 0	0.33 (1)
D-E	-911 / 0	-78.0 -78.0	0.46 (1)	5.86	H-D	0 / 477	0.08 (1)
J-A	-1141 / 0	0.0 0.0	0.15 (1)	7.44	G-D	-107 / 46	0.05 (1)
F-E	-1143 / 0	0.0 0.0	0.16 (1)	7.43	A-I	0 / 641	0.14 (1)
					G-E	0 / 638	0.14 (1)
J-I	0 / 0	-18.5 -18.5	0.19 (4)	10.00			
I-H	0 / 600	-18.5 -18.5	0.25 (4)	10.00			
H-G	0 / 590	-18.5 -18.5	0.25 (4)	10.00			
G-F	0 / 0	-18.5 -18.5	0.18 (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

LOADING IN FLAT SECTION BASED ON PIGGYBACK TRUSS WITH SLOPES OF 6.00/12 AND -6.00/12 AND RESPECTIVE HEEL HEIGHTS OF 0-0 AND 0-0 AND AN ADDITIONAL DEAD LOAD OF 3.0 P.S.F.

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 (0.78")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.02")
ALLOWABLE DEFL.(TL)= L/360 (0.78")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.07")

CSI: TC=0.62/1.00 (B-C:1) , BC=0.25/1.00 (H-I:4) , WB=0.33/1.00 (C-H:1) , SSI=0.26/1.00 (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
MT20	650	371	1747	788	1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.73 (B) (INPUT = 0.90)
JSI METAL= 0.36 (A) (INPUT = 1.00)

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

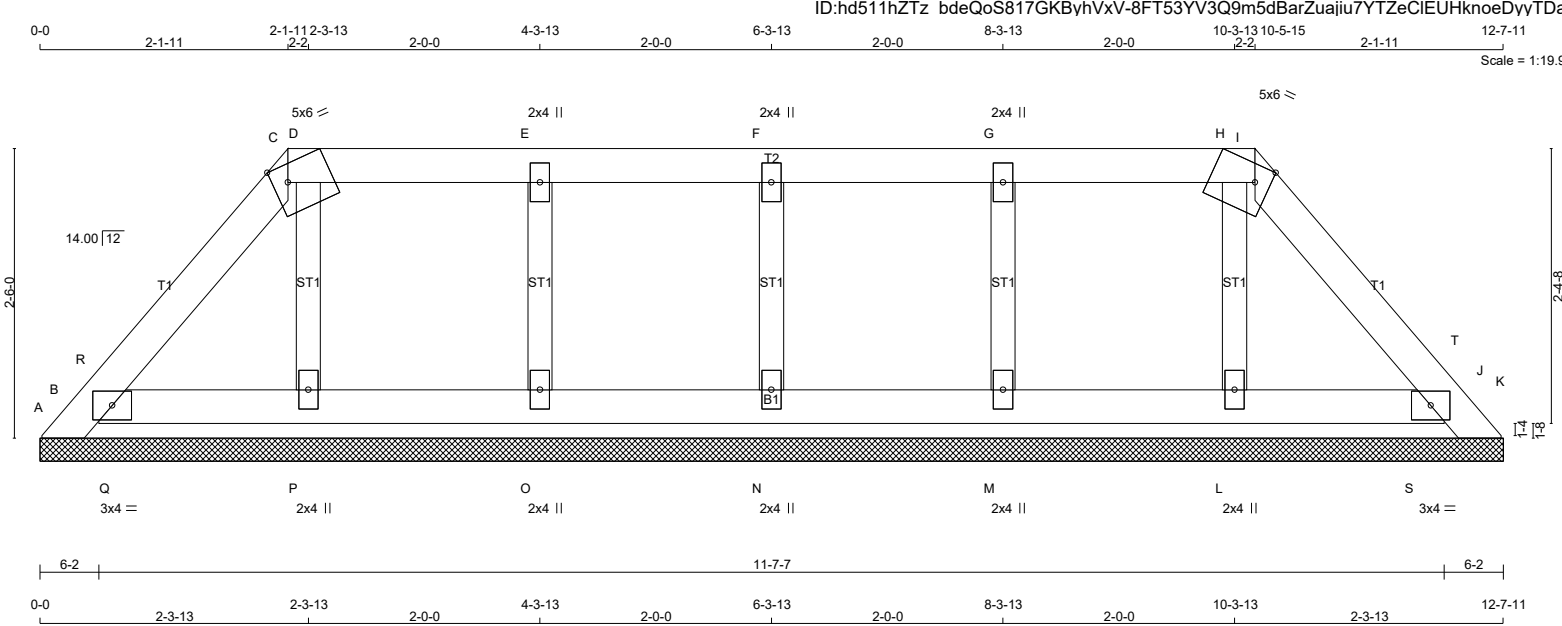


JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336325	H218G		1	TRUSS DESC. JT 45147	E21104460

Alpa Roof Truss, Maple

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LUMBER N. L. G. A. RULES CHORDS SIZE LUMBER DESCR. A - C 2x4 DRY No.2 SPF C - I 2x4 DRY No.2 SPF I - K 2x4 DRY No.2 SPF B - 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. BEVELED PLATE OR SHIM REQUIRED TO PROVIDE FULL BEARING SURFACE WITH TRUSS CHORD AT JT(S): N , O , P , M , L PROVIDE ANCHORAGE AT BEARING JOINT A FOR 150 LBS FACTORED UPLIFT PROVIDE ANCHORAGE AT BEARING JOINT K FOR 150 LBS FACTORED UPLIFT 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. LOADING TOTAL LOAD CASES: (4)				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 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 CSI: TC=0.04/1.00 (E-F:1) , BC=0.02/1.00 (P-Q:4) , WB=0.03/1.00 (E-O:1) , SSI=0.07/1.00 (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= 0.11 (B) (INPUT = 0.90) JSI METAL= 0.04 (B) (INPUT = 1.00)			
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PLATES (table is in inches)					
JT TYPE	PLATES	W	LEN	Y	X
B TMB1-I	MT20	3.0	4.0		
C, D, H, I					
C					
C TTW-m	MT20	5.0	6.0	Edge	1.50
E, F, G					
E TMW+w	MT20	2.0	4.0		
I TTW-m	MT20	5.0	6.0	Edge	1.50
J TMB1-I	MT20	3.0	4.0		
L, M, N, O, P					
L BMW1+w	MT20	2.0	4.0		
Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.					

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

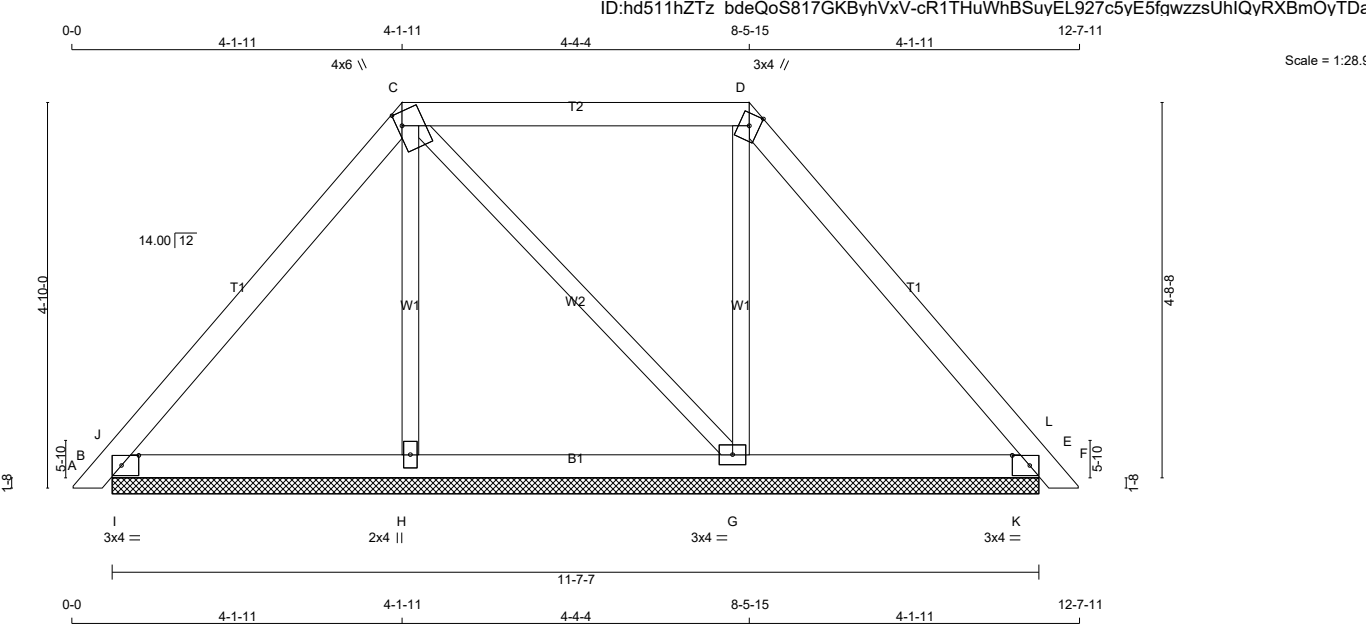


JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336325	H218P		1	TRUSS DESC. JT 45147	E21104461

Alpa Roof Truss, Maple

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ID:hd511hZTz bdeQoS817GKByhVxV-cR1THuWhBSuyEL927c5yE5fgwzssUhlQyRXBmOyTDad



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

PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y X
B	TMB1-I	MT20	3.0	4.0	1.50 2.50
C	TTWW+m	MT20	4.0	6.0	2.00 0.75
D	TTW+m	MT20	3.0	4.0	Edge
E	TMB1-I	MT20	3.0	4.0	1.50 2.50
G	BMW1-t	MT20	3.0	4.0	
H	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 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
B	344	0	344	0	0	11-7-7	1-8	1-8	1-8
E	320	0	320	0	0	11-7-7	1-8	1-8	1-8
H	224	0	224	0	0	11-7-7	1-8	1-8	1-8
G	294	0	294	0	0	11-7-7	1-8	1-8	1-8

UNFACTORED REACTIONS		1ST LCASE		MAX./MIN. COMPONENT REACTIONS	
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND
B	242	167 / 0	0 / 0	0 / 0	0 / 0
E	225	153 / 0	0 / 0	0 / 0	0 / 0
H	163	81 / 0	0 / 0	0 / 0	0 / 0
G	211	120 / 0	0 / 0	0 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) B, E, H, 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		MEMB.	
MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)
FR-TO	FROM TO	FR-TO	FROM TO
A-B	0 / 10	-78.0	-78.0 0.01 (1)
B-J	-37 / 26	-78.0	-78.0 0.08 (1)
J-C	-202 / 0	-78.0	-78.0 0.13 (1)
C-D	-99 / 0	-78.0	-78.0 0.25 (1)
D-L	-170 / 0	-78.0	-78.0 0.13 (1)
L-E	-30 / 64	-78.0	-78.0 0.08 (1)
E-F	0 / 10	-78.0	-78.0 0.01 (1)
B-I	0 / 123	-18.5	-18.5 0.12 (1)
I-H	0 / 123	-18.5	-18.5 0.12 (1)
H-G	0 / 120	-18.5	-18.5 0.08 (4)
G-K	0 / 103	-18.5	-18.5 0.11 (1)
K-E	0 / 103	-18.5	-18.5 0.11 (1)

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

CSI: TC=0.25/1.00 (C-D:1) , BC=0.12/1.00 (H-I:1) , WB=0.05/1.00 (D-G:1) , SSI=0.32/1.00 (E-K: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)	(PLI)
MAX	MIN	MAX	MIN
MT20	650	371	1747

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.42 (D) (INPUT = 0.90)

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

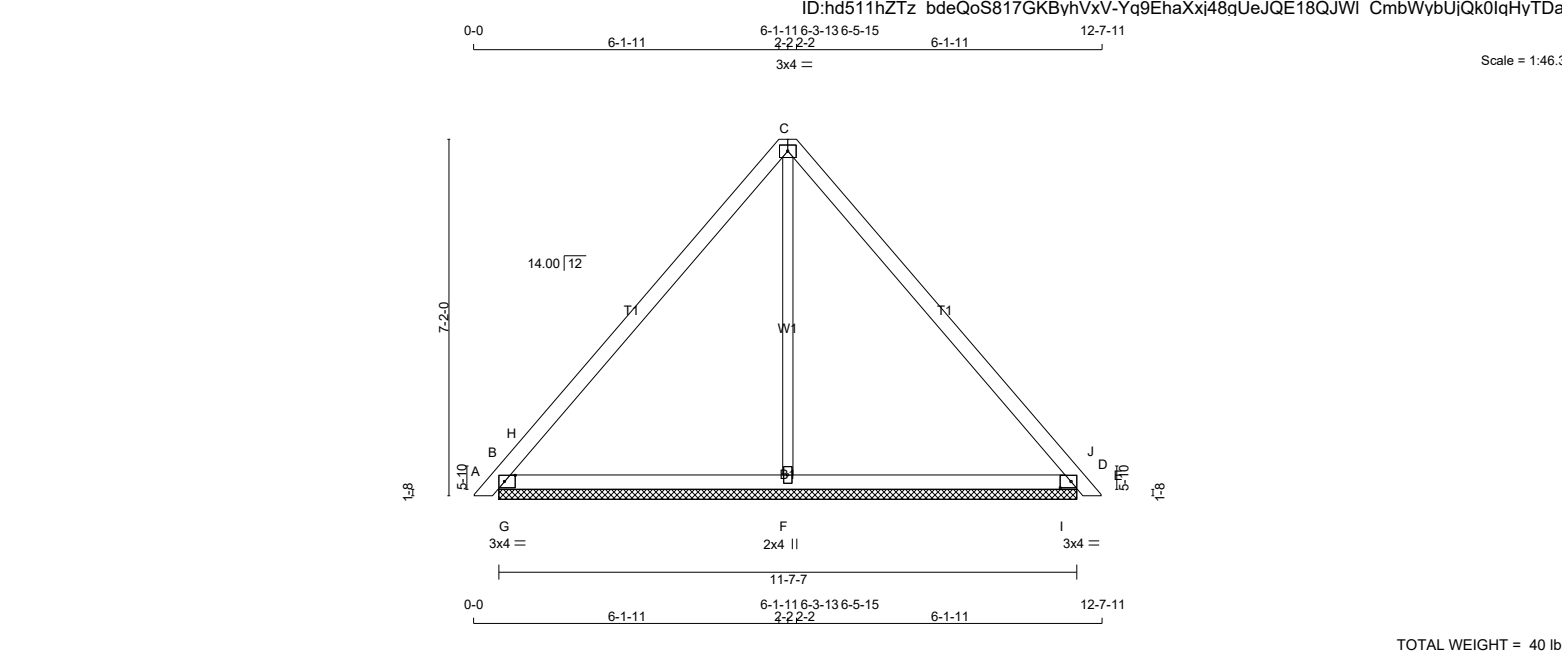
LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2



JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336325	H219P		1	TRUSS DESC. JT 45147	E21104462

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		SIZE		LUMBER	DESCR.	BEARINGS				FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG		REQRD BRG		
CHORDS							VERT	HORZ		DOWN	HORZ	UPLIFT	IN-SX	IN-SX				
C - C	2x4	DRY	No.2	SPF		JT				489	0	0	11-7-7	1-8				
C - E	2x4	DRY	No.2	SPF		B	489	0		489	0	0	11-7-7	1-8				
B - D	2x4	DRY	No.2	SPF		D	489	0		489	0	0	11-7-7	1-8				
ALL WEBS 2x3 DRY: SEASONED LUMBER.					SPF	F	203	0		203	0	0	11-7-7	1-8				
										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					

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMB1-I	MT20	3.0	4.0	1.50	2.50
C	TTW-p	MT20	3.0	4.0		
D	TMB1-I	MT20	3.0	4.0	1.50	2.50
F	BMW1+w	MT20	2.0	4.0		

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 / 10	-78.0	-78.0 0.01 (1)	10.00	F-C	0 / 34	0.01 (4)
B-H	0 / 503	-78.0	-78.0 0.32 (1)	10.00	G-H	-1146 / 0	0.00 (1)
H-C	-295 / 0	-78.0	-78.0 0.33 (1)	6.25	I-J	-1146 / 0	0.00 (1)
C-J	-295 / 0	-78.0	-78.0 0.33 (1)	6.25			
J-D	0 / 503	-78.0	-78.0 0.32 (1)	10.00			
D-E	0 / 10	-78.0	-78.0 0.01 (1)	10.00			
B-G	0 / 177	-18.5	-18.5 0.30 (1)	10.00			
G-F	0 / 177	-18.5	-18.5 0.30 (1)	10.00			
F-I	0 / 177	-18.5	-18.5 0.30 (1)	10.00			
I-D	0 / 177	-18.5	-18.5 0.30 (1)	10.00			

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



CSI: TC=0.33/1.00 (C-H:1), BC=0.30/1.00 (B-G:1), WB=0.01/1.00 (C-F:4), SSI=0.89/1.00 (B-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 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= 0.59 (D) (INPUT = 0.90)
JSI METAL= 0.13 (B) (INPUT = 1.00)

TOTAL WEIGHT = 194 lb

JSI GRIP= 0.90 (A) (INPUT = 0.90)
JSI METAL= 0.86 (M) (INPUT = 1.00)

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DRY: SEASONED LUMBER.

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

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

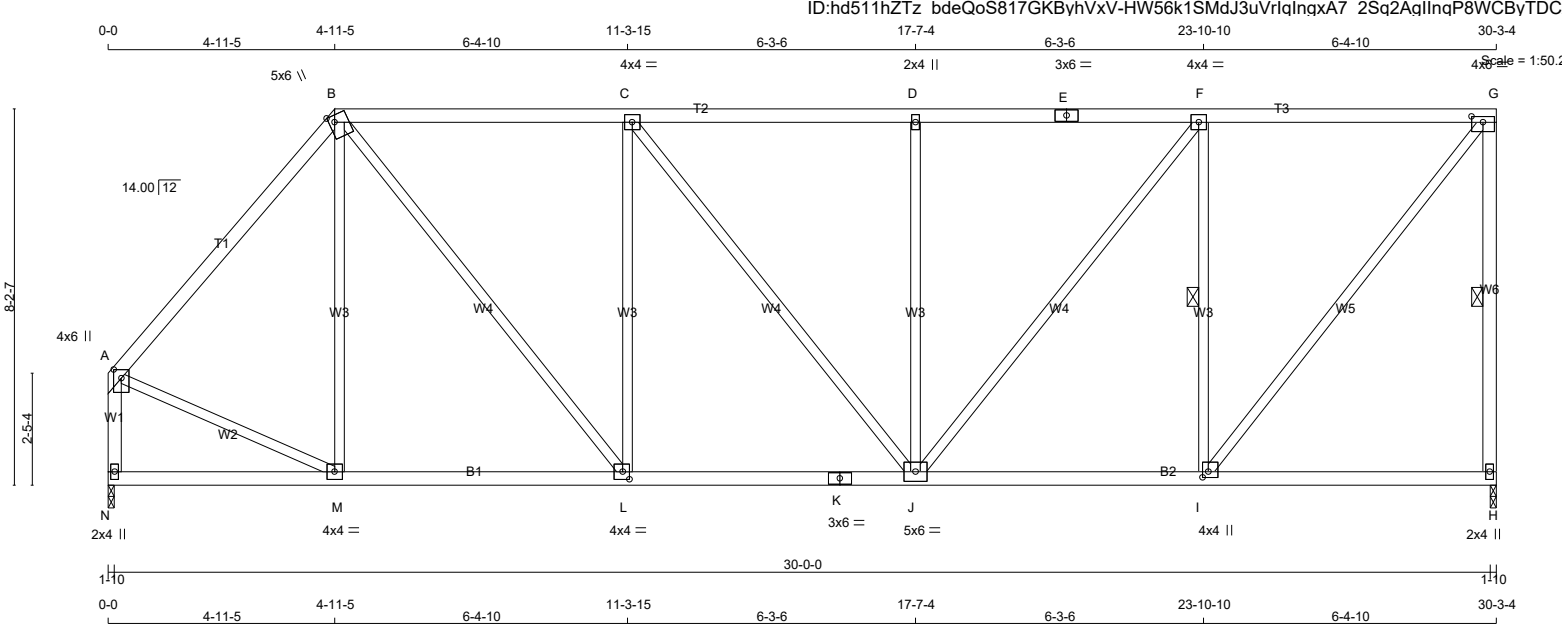
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JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336331	H196		1	TRUSS DESC. JT 45147	E21104489

Alpa Roof Truss, Maple

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LUMBER			
N. L. G. A. RULES			
CHORDS	SIZE	LUMBER	DESCR.
A - B	2x4	DRY	No.2 SPF
B - E	2x4	DRY	No.2 SPF
E - G	2x4	DRY	No.2 SPF
H - G	2x4	DRY	No.2 SPF
N - A	2x4	DRY	No.2 SPF
N - K	2x4	DRY	No.2 SPF
K - H	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	TTWW+m	MT20	5.0	6.0	1.75 1.50
C	TMWW-t	MT20	4.0	4.0	
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	6.0	1.50 3.00
H	BMV1+p	MT20	2.0	4.0	
I	BMWW+t	MT20	4.0	4.0	1.50 1.50
J	BMWWW-t	MT20	5.0	6.0	
K	BS-t	MT20	3.0	6.0	
L	BMWW-t	MT20	4.0	4.0	2.00 1.75
M	BMWW-t	MT20	4.0	4.0	
N	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		MAXIMUM FACTORED		INPUT		REQRD		
	GROSS REACTION		GROSS REACTION		BRG		BRG		
JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX		
H	1460	0	1460	0	1-10	1-9			
N	1460	0	1460	0	0	1-10	1-9		
UNFACTORED REACTIONS									
	1ST LCASE		MAX./MIN.		COMPONENT REACTIONS				
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL		
H	1041	635 / 0	0 / 0	0 / 0	0 / 0	406 / 0	0 / 0		
N	1041	635 / 0	0 / 0	0 / 0	0 / 0	406 / 0	0 / 0		

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

BRACING
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.82 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-H, F-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									
	MAX. FACTORED		FACTORED		WEBS		MAX. FACTORED		
MEMB.	FORCE (LBS)	VERT. LOAD (PLF)	LC1 MAX CSI (LC)	MAX. UNBRAC LENGTH	MEMB.	FORCE (LBS)	MAX CSI (LC)		
FR-TO		FROM TO			FR-TO				
A- B	-1200 / 0	-78.0	-78.0 0.41 (1)	5.36	M- B	-202 / 4	0.26 (1)		
B- C	-1357 / 0	-78.0	-78.0 0.54 (1)	4.87	B- L	0 / 924	0.21 (1)		
C- D	-1392 / 0	-78.0	-78.0 0.54 (1)	4.82	L- C	-600 / 0	0.79 (1)		
D- E	-1392 / 0	-78.0	-78.0 0.54 (1)	4.82	C- J	0 / 55	0.01 (1)		
E- F	-1392 / 0	-78.0	-78.0 0.54 (1)	4.82	J- D	-451 / 0	0.59 (1)		
F- G	-981 / 0	-78.0	-78.0 0.51 (1)	5.55	J- F	0 / 661	0.15 (1)		
H- G	-1413 / 0	0.0	0.0 0.43 (1)	5.49	I- F	-1082 / 0	0.46 (1)		
N- A	-1425 / 0	0.0	0.0 0.19 (1)	6.84	I- G	0 / 1562	0.35 (1)		
					A- M	0 / 841	0.19 (1)		
N- M	0 / 0	-18.5	-18.5 0.14 (4)	10.00					
M- L	0 / 775	-18.5	-18.5 0.22 (4)	10.00					
L- K	0 / 1357	-18.5	-18.5 0.30 (1)	10.00					
K- J	0 / 1357	-18.5	-18.5 0.30 (1)	10.00					
J- I	0 / 981	-18.5	-18.5 0.28 (4)	10.00					
I- H	0 / 0	-18.5	-18.5 0.18 (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 (1.01")
CALCULATED VERT. DEFL.(LL)= L/ 999 (0.07")
ALLOWABLE DEFL.(TL)= L/360 (1.01")
CALCULATED VERT. DEFL.(TL)= L/ 999 (0.14")

CSI: TC=0.54/1.00 (C-D:1) , BC=0.30/1.00 (J-L:1) , WB=0.79/1.00 (C-L:1) , SSI=0.23/1.00 (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

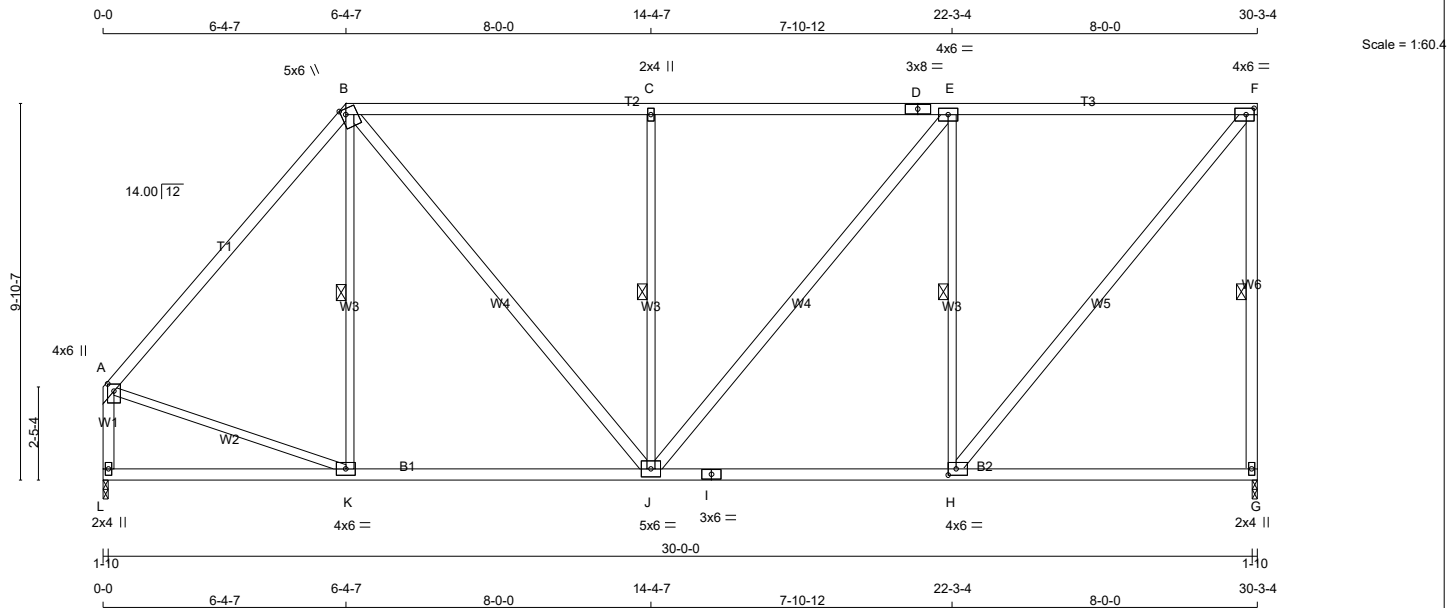
TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES			
PLATE GRIP(DRY)	SHEAR (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 (M) (INPUT = 0.90)
JSI METAL= 0.45 (A) (INPUT = 1.00)



TOTAL WEIGHT = 155 lb

LUMBER

N. L. G. A. RULES				
CHORDS	SIZE		LUMBER	DESCR
A - B	2x4	DRY	2100F 1.8E	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)

J	T	PLATES	W	LEN	Y	X
A	TMWw+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	8.0		
E	TMWw-t	MT20	4.0	6.0		
F	TMW-t	MT20	4.0	6.0	2.00	2.50
G	BMV1+p	MT20	2.0	4.0		
H	BMWw-t	MT20	4.0	6.0	2.00	2.50
I	BS-t	MT20	3.0	6.0		
J	BMVWWw-t	MT20	5.0	6.0		
K	BMWw-t	MT20	4.0	6.0		
L	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	UPLIFT	IN-SX	IN-SX
G	1460	0	1460	0	0	1-10	1-9
L	1460	0	1460	0	0	1-10	1-9

UNFACTORED REACTIONS

1ST LCASE		MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
G	1041	635 / 0	0 / 0	0 / 0	0 / 0	406 / 0	0 / 0
L	1041	635 / 0	0 / 0	0 / 0	0 / 0	406 / 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 = 4.54 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)

C H O R D S					W E B S				
MAX. FACTORED		FACTORED			MAX. FACTORED				
MEMB.	FORCE	VERT. LOAD	LC1	MAX	MAX.	MEMB.	FORCE	MAX	
	(LBS)	(PLF)	CSI (LC)	UNBRAC			(LBS)	CSI (LC)	
FR-TO		FROM TO		LENGTH	FR-TO				
A-B	-1205 / 0	-78.0	-78.0	0.44 (1)	6.25	K-B	-100 / 68	0.07 (1)	
B-C	-1210 / 0	-78.0	-78.0	0.82 (1)	4.55	B-J	0 / 667	0.11 (1)	
C-D	-1210 / 0	-78.0	-78.0	0.82 (1)	4.54	J-C	-674 / 0	0.44 (1)	
D-E	-1210 / 0	-78.0	-78.0	0.82 (1)	4.54	J-E	0 / 391	0.06 (1)	
E-F	-961 / 0	-78.0	-78.0	0.78 (1)	5.00	H-E	-983 / 0	0.65 (1)	
G-F	-1401 / 0	0.0	0.0	0.66 (1)	5.51	H-F	0 / 1499	0.24 (1)	
L-A	-1415 / 0	0.0	0.0	0.19 (1)	6.85	A-K	0 / 821	0.18 (1)	
L-K	0 / 0	-18.5	-18.5	0.23 (4)	10.00				
K-J	0 / 781	-18.5	-18.5	0.31 (4)	10.00				
J-I	0 / 961	-18.5	-18.5	0.38 (4)	10.00				
I-H	0 / 961	-18.5	-18.5	0.38 (4)	10.00				
H-G	0 / 0	-18.5	-18.5	0.29 (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, 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 (1.01")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.05")
ALLOWABLE DEFL.(TL)= L/360 (1.01")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.13")

CSI: TC=0.82/1.00 (C-E:1), BC=0.38/1.00 (H-J:4),
WB=0.65/1.00 (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) (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= 0.85 (F) (INPUT = 0.90)
JSI METAL= 0.47 (A) (INPUT = 1.00)

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TOTAL WEIGHT = 2 X 60 = 120 lb

DRY: SEASONED LUMBER.

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

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

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.	MAX. FACTORED FORCE (LBS)	MAX FACTORED CSI (LC)	
FR-TO		FROM TO			FR-TO			
A-B	0 / 42	-78.0	-78.0	0.09 (1)	10.00	G-C	0 / 211 0.06 (4)	
B-C	-447 / 0	-78.0	-78.0	0.31 (1)	6.25	B-G	0 / 295 0.07 (1)	
C-D	-447 / 0	-78.0	-78.0	0.31 (1)	6.25	G-D	0 / 295 0.07 (1)	
D-E	0 / 42	-78.0	-78.0	0.09 (1)	10.00			
H-B	-633 / 0	0.0	0.0	0.08 (1)	7.81			
F-D	-633 / 0	0.0	0.0	0.08 (1)	7.81			
H-G	0 / 0	-18.5	-18.5	0.20 (4)	10.00			
G-F	0 / 0	-18.5	-18.5	0.20 (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 (0.40")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.01")
ALLOWABLE DEFL.(TL)= L/360 (0.40")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.07")

CSI: TC=0.31/1.00 (C-D:1), BC=0.20/1.00 (F-G:4),
WB=0.07/1.00 (B-G: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	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

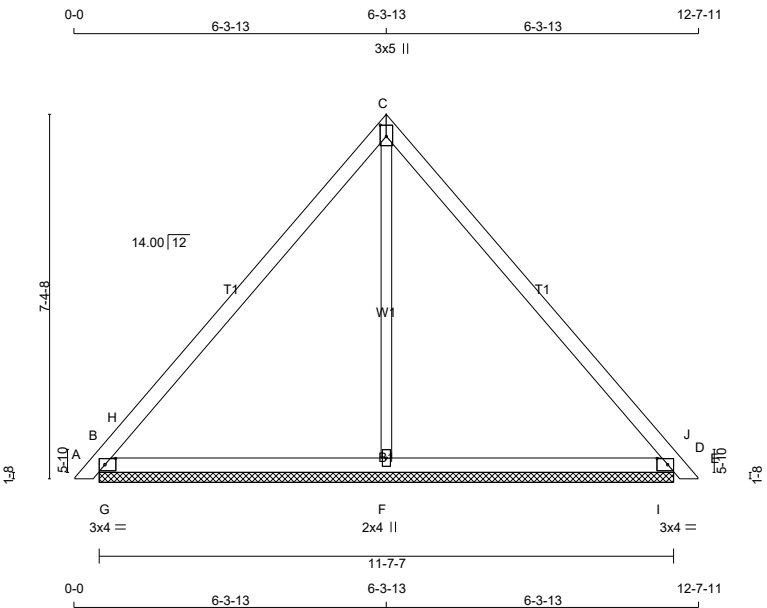
JSI GRIP= 0.49 (G) (INPUT = 0.90)
JSI METAL= 0.26 (H) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336331	H199P		1	TRUSS DESC. JT 45147	E21104492

Alpa Roof Truss, Maple

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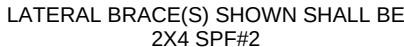


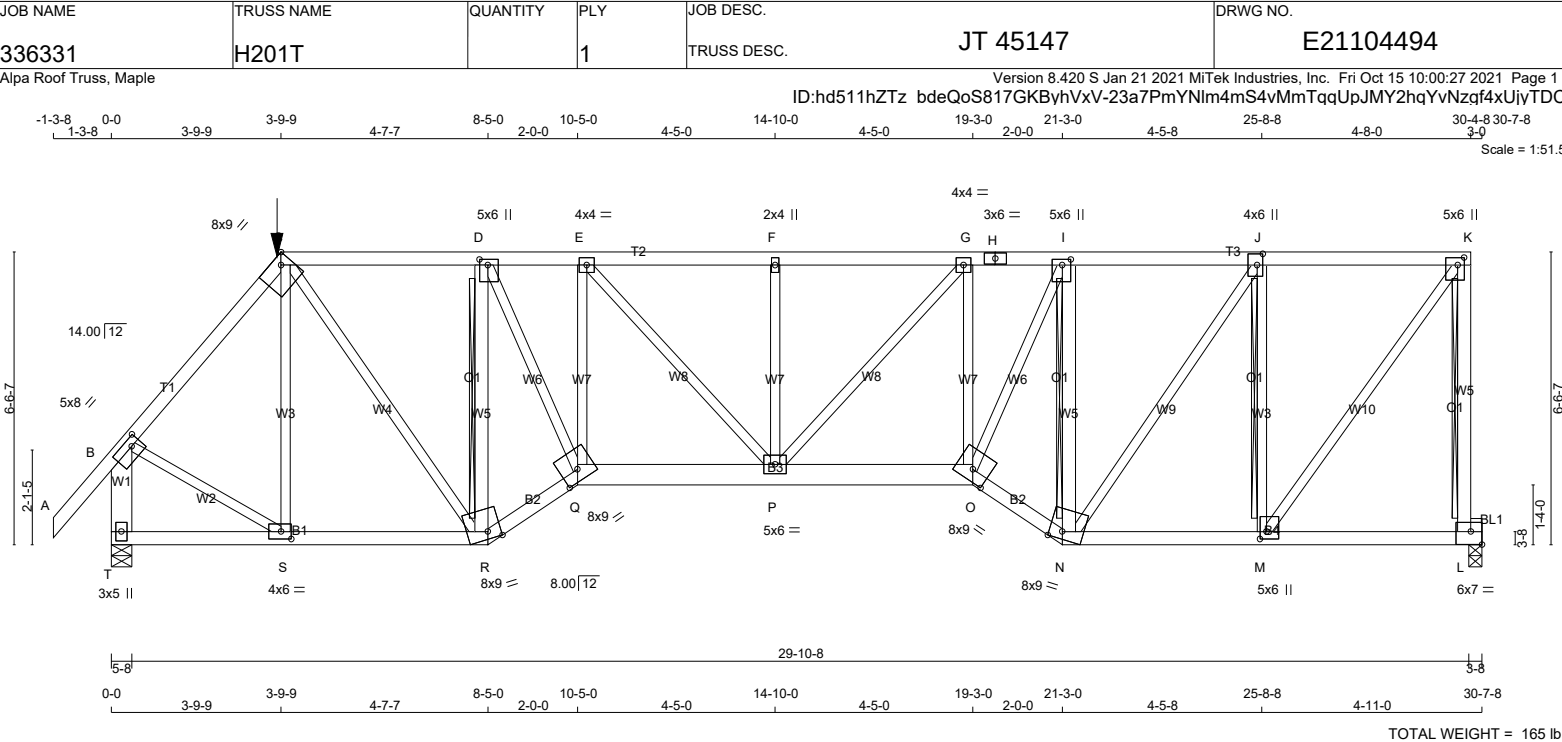
Edge - INDICATES REFERENCE CORNER OF PLATE
TOUCHES EDGE OF CHORD.

LOADING
TOTAL LOAD CASES: (4)

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

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





LUMBER				N. L. G. A. RULES			
CHORDS	SIZE	LUMBER	DESCR.	CHORDS	SIZE	LUMBER	DESCR.
A - C	2x4	DRY	No.2	SPF			
C - H	2x4	DRY	No.2	SPF			
H - K	2x4	DRY	No.2	SPF			
L - K	2x4	DRY	No.2	SPF			
T - B	2x6	DRY	No.2	SPF			
T - R	2x4	DRY	No.2	SPF			
R - Q	2x4	DRY	No.2	SPF			
Q - O	2x6	DRY	No.2	SPF			
O - N	2x4	DRY	No.2	SPF			
N - L	2x4	DRY	No.2	SPF			
BEARING BLOCKS							
BL1	2x4	DRY	No.2	SPF			
ALL WEBS							
EXCEPT				SPF			
R - D	2x4	DRY	No.2	SPF			
N - I	2x4	DRY	No.2	SPF			
DRY: SEASONED LUMBER.							

PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y
B	TMVW-t	MT20	5.0	8.0	2.00 2.50
C	TTWW-h	MT20	8.0	9.0	Edge 2.75
D	TMWW-t	MT20	5.0	6.0	1.50 2.25
E	TMWW-t	MT20	4.0	4.0	
F	TMW+w	MT20	2.0	4.0	
G	TMWW-t	MT20	4.0	4.0	
H	TS-t	MT20	3.0	6.0	
I	TMWW-t	MT20	5.0	6.0	1.50 2.25
J	TMWW-t	MT20	4.0	6.0	3.00 1.50
K	TMVW+p	MT20	5.0	6.0	2.00 1.75
L	BMVK1-t	MT20	6.0	7.0	3.50 Edge
M	BMWW+t	MT20	5.0	6.0	2.00 1.75
N	BBWW-m	MT20	8.0	9.0	Edge 3.50
O	BBWW-h	MT20	8.0	9.0	3.00 4.50
P	BMWWW-t	MT20	5.0	6.0	
Q	BBWW-h	MT20	8.0	9.0	3.00 4.50
R	BBWW-m	MT20	8.0	9.0	Edge 3.50
S	BMWW-t	MT20	4.0	6.0	2.00 2.75
T	BMV1+p	MT20	3.0	5.0	

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



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

FACTORED		MAXIMUM FACTORED		INPUT		REQRD	
GROSS REACTION		GROSS REACTION		BRG		BRG	
JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX
L	2891	0	2891	0	0	3-8	
T	2889	0	2889	0	0	5-8	3-14

UNFACTORED REACTIONS		MAX./MIN. COMPONENT REACTIONS	
JT	COMBINED	SNOW	LIVE
L	2061	1260 / 0	0 / 0
T	2059	1259 / 0	0 / 0

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

BRACING
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 2.79 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.

2x4 DRY SPF No.2 T-BRACE AT K-L, D-R, I-N, J-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		MAX. FACTORED		FACTORED		MAX		WEB S		MAX. FACTORED	
MEMB.	FORCE (LBS)	VERT. LOAD (PLF)	LC1	MAX	CS1 (LC)	UNBRAC	LENGTH	MEMB.	FORCE (LBS)	MAX	CS1 (LC)
FR-TO		FROM	TO					FR-TO			
A-B	0 / 42	-78.0	-78.0	0.12 (1)	10.00	S-C	-521 / 0	0.37 (1)			
B-C	-2457 / 0	-78.0	-78.0	0.37 (1)	4.06	C-R	0 / 2143	0.53 (1)			
C-D	-2864 / 0	-153.5	-153.5	0.60 (1)	3.45	R-D	-3451 / 0	0.84 (1)			
D-E	-4054 / 0	-78.0	-78.0	0.63 (1)	2.79	D-Q	0 / 3144	0.78 (1)			
E-F	-4560 / 0	-78.0	-78.0	0.62 (1)	2.81	Q-E	-659 / 0	0.26 (1)			
F-G	-4560 / 0	-78.0	-78.0	0.62 (1)	2.81	E-P	0 / 738	0.18 (1)			
G-H	-4137 / 0	-78.0	-78.0	0.43 (1)	3.08	P-F	-399 / 0	0.15 (1)			
H-I	-4137 / 0	-78.0	-78.0	0.43 (1)	3.08	F-G	0 / 614	0.15 (1)			
I-J	-2931 / 0	-153.5	-153.5	0.73 (1)	3.16	O-G	-642 / 0	0.25 (1)			
J-K	-1834 / 0	-153.5	-153.5	0.62 (1)	4.08	O-I	0 / 3177	0.79 (1)			
L-K	-2827 / 0	0.0	0.0	0.69 (1)	6.17	N-I	-3314 / 0	0.81 (1)			
T-B	-2839 / 0	0.0	0.0	0.24 (1)	7.81	N-J	0 / 1885	0.47 (1)			
T-S	0 / 0	-36.4	-36.4	0.21 (4)	10.00	M-K	0 / 3174	0.79 (1)			
S-R	0 / 1582	-36.4	-36.4	0.41 (1)	10.00	M-J	-2350 / 0	0.74 (1)			
R-Q	0 / 3378	-112.0	-112.0	0.68 (1)	10.00	B-S	0 / 1742	0.43 (1)			
Q-P	0 / 4069	-112.0	-112.0	0.68 (1)	10.00						
P-O	0 / 4152	-112.0	-112.0	0.69 (1)	10.00						
O-N	0 / 3463	-112.0	-112.0	0.70 (1)	10.00						
N-M	0 / 1834	-36.4	-36.4	0.44 (1)	10.00						
M-L	-66 / 0	-36.4	-36.4	0.22 (4)	6.25						

FACTORED CONCENTRATED LOADS (LBS)		FACE		DIR.		TYPE		HEEL		CONN.	
JT	LOC.	LC1	MAX-	MAX+	FRONT	VERT	TOTAL	---	---	C1	---
C	3-9-9	-216	-216	---							

CONNECTION REQUIREMENTS

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

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
LEFT SETBACK = 3-9-9
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
- ADDT'L LOADS BASED ON 55 % OF GSL.
LOADS APPLIED TO FIRST 8-5-0 OF SPAN MEASURED FROM THE LEFT.

GIRDER TYPE: CSIdGirder
START DISTANCE = 8-5-0
START SPAN CARRIED = 5-10-8
END DISTANCE = 21-3-0
END SPAN CARRIED = 5-10-8
END WALL WIDTH = 0-0
APPLIED TO FRONT SIDE OF BOTTOM CHORD.
- ADDT'L LOADS BASED ON 55 % OF GSL.

GIRDER TYPE: CPrimeHip
LEFT SETBACK = 3-9-9
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
- ADDT'L LOADS BASED ON 55 % OF GSL.
LOADS APPLIED TO FIRST 9-4-8 OF SPAN MEASURED FROM THE RIGHT.

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBC2015

THIS DESIGN COMPLIES WITH:
- PART 9 OF CBC2018 , 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 (1.01")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.24")
ALLOWABLE DEFL.(TL)= L/360 (1.01")
CALCULATED VERT. DEFL.(TL)= L/ 762 (0.48")

CSI: TC=0.73/1.00 (I-J:1) , BC=0.70/1.00 (N-O:1) , WB=0.84/1.00 (D-R:1) , SSI=0.37/1.00 (J-K:1)

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

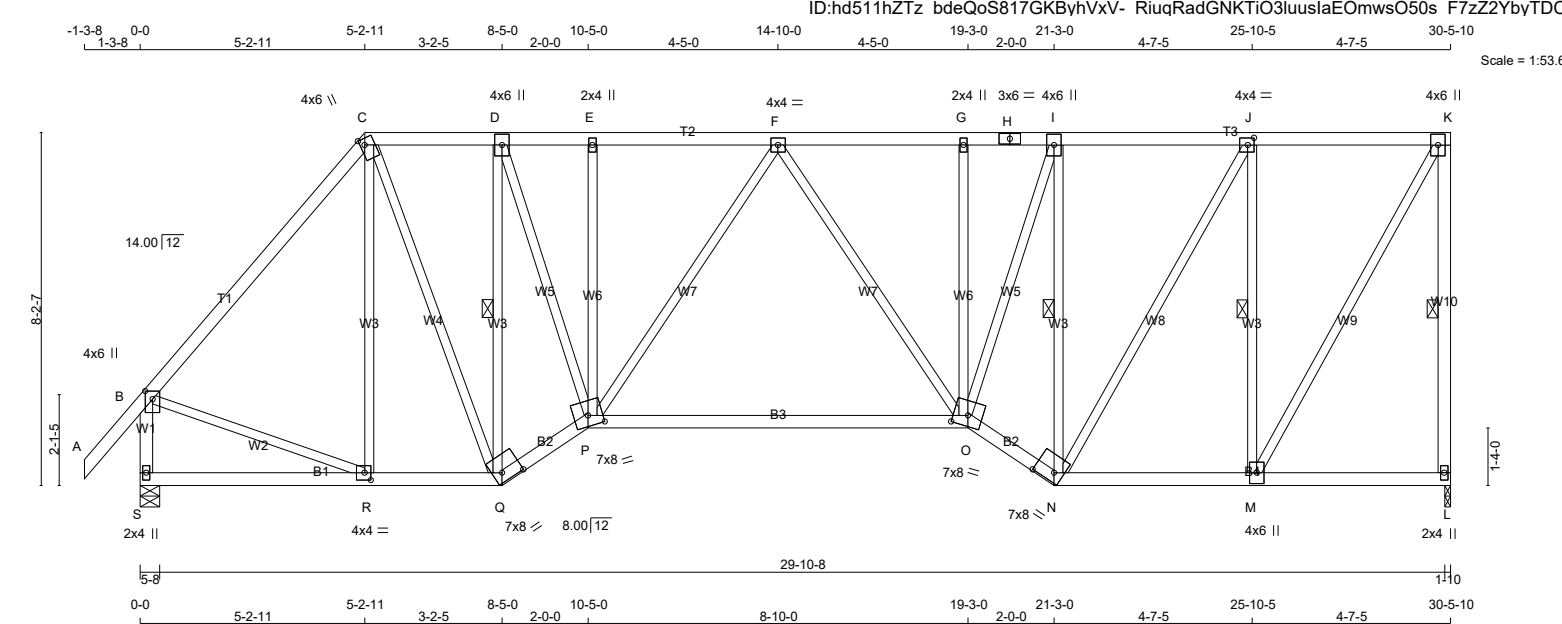
COMPANION LIVE LOAD FACTOR = 1.00

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336331	H202T		1	TRUSS DESC. JT 45147	E21104495

Alpa Roof Truss, Maple

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ID:hd511hZtZ bdeQoS817GKByhVxV- RiuqRadGNKTIO3luuslaEomwsO50s F7zZ2YbyTDC0



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

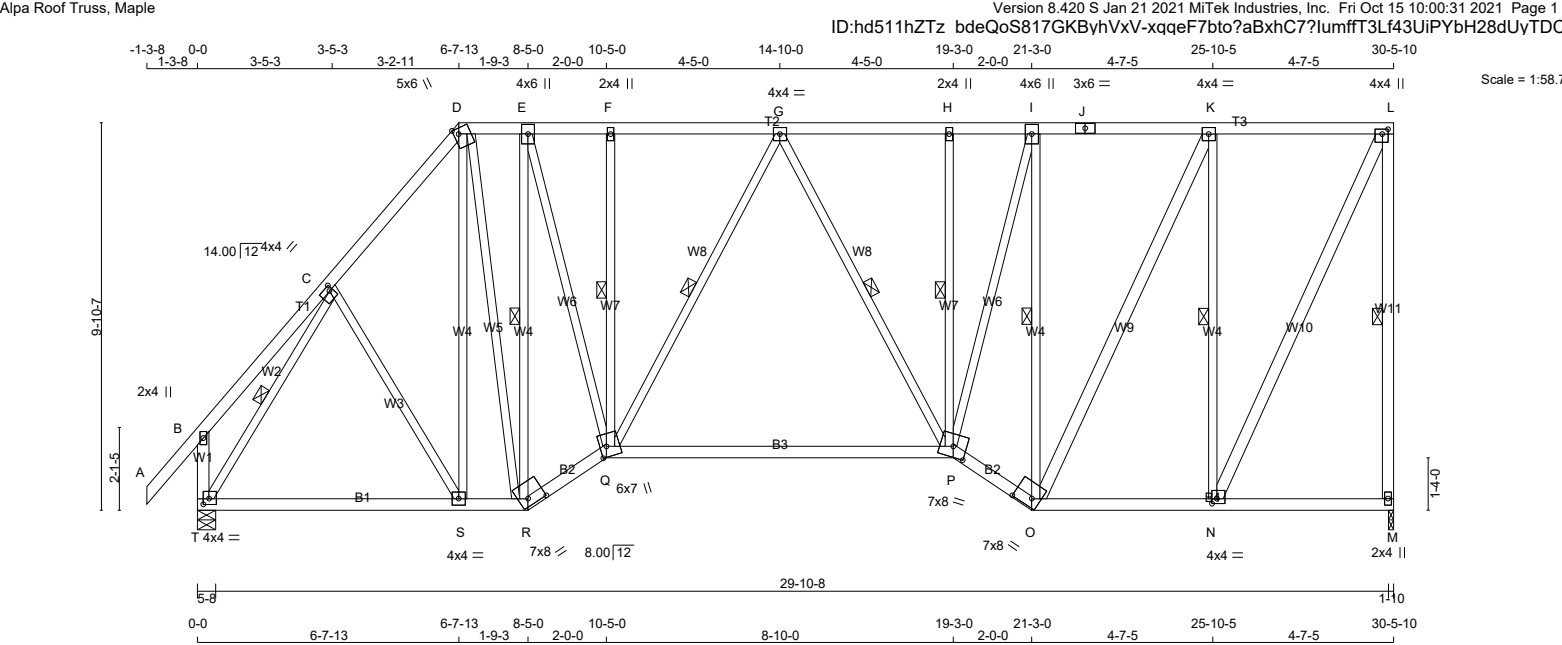
PLATES (table is in inches)				
JT TYPE	PLATES	W	LEN	Y X
B TMVW+p	MT20	4.0	6.0	2.25 2.00
C TTWW+m	MT20	4.0	6.0	1.75 1.25
D TMWW+t	MT20	4.0	6.0	
E TMW+w	MT20	2.0	4.0	
F TMWW-t	MT20	4.0	4.0	
G TMW+w	MT20	2.0	4.0	
H TS-t	MT20	3.0	6.0	
I TMWW+t	MT20	4.0	6.0	
J TMWW-t	MT20	4.0	4.0	2.00 1.75
K TMVW+p	MT20	4.0	6.0	
L BMV1+p	MT20	2.0	4.0	
M BMWW+t	MT20	4.0	6.0	
N BBWW-h	MT20	7.0	8.0	2.50 5.50
O BBWWW-m	MT20	7.0	8.0	3.00 4.00
P BBWWW-m	MT20	7.0	8.0	3.00 4.00
Q BBWW-h	MT20	7.0	8.0	2.50 5.50
R BMWW-t	MT20	4.0	4.0	2.00 1.75
S 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 DOWN		INPUT BRG UPLIFT		REQRD BRG IN-SX	
JT	VERT	HORZ		DOWN	HORZ	UPLIFT	IN-SX	IN-SX	
L	1470	0		1470	0	0	1-10	1-9	
S	1579	0		1579	0	0	5-8	1-11	
UNFACTORED REACTIONS									
		1ST LCASE		MAX./MIN. LIVE		PERM. LIVE		WIND DEAD	
JT	COMBINED	SNOW		LIVE		PERM. LIVE		WIND	DEAD
L	1048	640 / 0		0 / 0		0 / 0		0 / 0	408 / 0
S	1124	698 / 0		0 / 0		0 / 0		0 / 0	425 / 0
BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) L, S									
BRACING									
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.96 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 K-L, D-Q, I-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									
		MAX. FACTORED		FACTORED		WEBS		MAX. FACTORED	
MEMB.		FORCE (LBS)		VERT. LOAD (PLF)	LC1 MAX CSI (LC)	MAX. UNBRAC LENGTH	MEMB.	FORCE (LBS)	MAX CSI (LC)
FR-TO				FROM TO			FR-TO		
A-B	0 / 42			-78.0 -78.0	0.11 (1)	10.00	R-C	-167 / 9	0.22 (1)
B-C	-1260 / 0			-78.0 -78.0	0.48 (1)	5.19	C-Q	0 / 865	0.19 (1)
C-D	-1141 / 0			-78.0 -78.0	0.12 (1)	5.82	Q-D	-1514 / 0	0.64 (1)
D-E	-1542 / 0			-78.0 -78.0	0.10 (1)	5.22	D-P	0 / 1378	0.31 (1)
E-F	-1545 / 0			-78.0 -78.0	0.25 (1)	5.03	P-E	-235 / 0	0.19 (1)
F-G	-1597 / 0			-78.0 -78.0	0.25 (1)	4.96	P-F	-277 / 0	0.36 (1)
G-H	-1593 / 0			-78.0 -78.0	0.13 (1)	5.12	F-O	-185 / 0	0.24 (1)
H-I	-1593 / 0			-78.0 -78.0	0.13 (1)	5.12	O-G	-220 / 0	0.18 (1)
I-J	-1207 / 0			-78.0 -78.0	0.28 (1)	5.48	O-I	0 / 1329	0.30 (1)
J-K	-755 / 0			-78.0 -78.0	0.26 (1)	6.25	N-I	-1512 / 0	0.64 (1)
L-K	-1436 / 0			0.0 0.0	0.44 (1)	5.45	N-J	0 / 897	0.20 (1)
S-B	-1539 / 0			0.0 0.0	0.18 (1)	6.63	M-J	-1194 / 0	0.51 (1)
S-R	0 / 0			-18.5 -18.5	0.12 (4)	10.00	M-K	0 / 1500	0.34 (1)
R-Q	0 / 815			-18.5 -18.5	0.20 (1)	10.00	B-R	0 / 860	0.19 (1)
Q-P	0 / 1347			-18.5 -18.5	0.23 (1)	10.00			
P-O	0 / 1700			-18.5 -18.5	0.58 (4)	10.00			
O-N	0 / 1427			-18.5 -18.5	0.24 (1)	10.00			
N-M	0 / 755			-18.5 -18.5	0.18 (4)	10.00			
M-L	0 / 0			-18.5 -18.5	0.11 (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 (1.02")			
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.11")			
ALLOWABLE DEFL.(TL)= L/360 (1.02")			
CALCULATED VERT. DEFL.(TL) = L/ 775 (0.47")			
CSI: TC=0.48/1.00 (B-C:1) , BC=0.58/1.00 (O-P:4) , WB=0.64/1.00 (D-Q:1) , SSI=0.17/1.00 (J-K: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 (J) (INPUT = 0.90)			
JSI METAL= 0.50 (B) (INPUT = 1.00)			

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336331	H203T		1	TRUSS DESC. JT 45147	E21104496



LUMBER N. L. G. A. RULES CHORDS SIZE LUMBER DESCR. DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER BEARINGS UNFACTORED REACTIONS TOTAL WEIGHT = 2 X 202 = 405 lb [M]

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

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	4.0	4.0 1.50 1.00
D	TTWW+m	MT20	5.0	6.0 1.75 1.50
E	TMWW+t	MT20	4.0	6.0
F	TMW+w	MT20	2.0	4.0
G	TMWW-t	MT20	4.0	4.0
H	TMW+w	MT20	2.0	4.0
I	TMWW+t	MT20	4.0	6.0
J	TS-t	MT20	3.0	6.0
K	TMWW-t	MT20	4.0	4.0
L	TMVW+p	MT20	4.0	4.0 1.50 1.75
M	BMV1+p	MT20	2.0	4.0
N	BMWW-t	MT20	4.0	4.0 1.50 1.50
O	BBWW-h	MT20	7.0	8.0 2.50 5.50
P	BBWWW-m	MT20	7.0	8.0 3.25 4.00
Q	BBWWW+m	MT20	6.0	7.0 3.25 2.00
R	BBWW-h	MT20	7.0	8.0 2.25 5.25
S	BMWW-t	MT20	4.0	4.0
T	BMVW1-t	MT20	4.0	4.0 1.75 1.75

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 IN-SX	
JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX
M	1470	0	1470	0	1-10	1-9	1-9
T	1579	0	1579	0	5-8	1-11	1-11

UNFACTORED REACTIONS		MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
M	1048	640 / 0	0 / 0	0 / 0	0 / 0	408 / 0	0 / 0
T	1124	698 / 0	0 / 0	0 / 0	0 / 0	425 / 0	0 / 0

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

BRACING
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.43 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 L-M, E-R, F-Q, G-Q, G-P, H-P, I-O, K-N, C-T.

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.	
MEMB.	FORCE (LBS)	VERT. LOAD (PLF)	MAX. FACTORED (CSI (LC))
FR-TO		FROM	TO
A-B	0 / 42	-78.0	-78.0 0.11 (1)
B-C	0 / 22	-78.0	-78.0 0.13 (1)
C-D	-1273 / 0	-78.0	-78.0 0.16 (1)
D-E	-934 / 0	-78.0	-78.0 0.07 (1)
E-F	-1230 / 0	-78.0	-78.0 0.10 (1)
F-G	-1234 / 0	-78.0	-78.0 0.24 (1)
G-H	-1273 / 0	-78.0	-78.0 0.24 (1)
H-I	-1270 / 0	-78.0	-78.0 0.12 (1)
I-J	-998 / 0	-78.0	-78.0 0.27 (1)
J-K	-998 / 0	-78.0	-78.0 0.27 (1)
K-L	-624 / 0	-78.0	-78.0 0.26 (1)
M-L	-1437 / 0	0.0	0.0 0.67 (1)
T-B	-208 / 0	0.0	0.0 0.02 (1)
T-S	0 / 778	-18.5	-18.5 0.27 (4)
S-R	0 / 811	-18.5	-18.5 0.28 (4)
R-Q	0 / 1104	-18.5	-18.5 0.19 (1)
Q-P	0 / 1356	-18.5	-18.5 0.55 (4)
P-O	0 / 1181	-18.5	-18.5 0.20 (1)
O-N	0 / 624	-18.5	-18.5 0.17 (4)
N-M	0 / 0	-18.5	-18.5 0.11 (4)
C-S	0 / 61	0.02	0.02 (4)
S-D	0 / 106	0.04	0.04 (4)
D-R	0 / 669	0.15	0.15 (1)
R-E	-1282 / 0	0.84	0.84 (1)
E-Q	0 / 1257	0.28	0.28 (1)
Q-F	-277 / 0	0.13	0.13 (1)
G-P	-174 / 0	0.11	0.11 (1)
P-H	-217 / 0	0.10	0.10 (1)
H-K	0 / 1162	0.26	0.26 (1)
O-I	-1377 / 0	0.91	0.91 (1)
O-K	0 / 861	0.14	0.14 (1)
N-K	-1193 / 0	0.78	0.78 (1)
N-L	0 / 1439	0.23	0.23 (1)
T-C	-1533 / 0	0.44	0.44 (1)

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 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 (1.02")
CALCULATED VERT. DEFL.(LL)= L/ 999 (0.10")
ALLOWABLE DEFL.(TL)= L/360 (1.02")
CALCULATED VERT. DEFL.(TL)= L/ 810 (0.45")

CSI: TC=0.67/1.00 (L-M:1), BC=0.55/1.00 (P-Q:4), WB=0.91/1.00 (I-O:1), SSI=0.17/1.00 (K-L: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 .

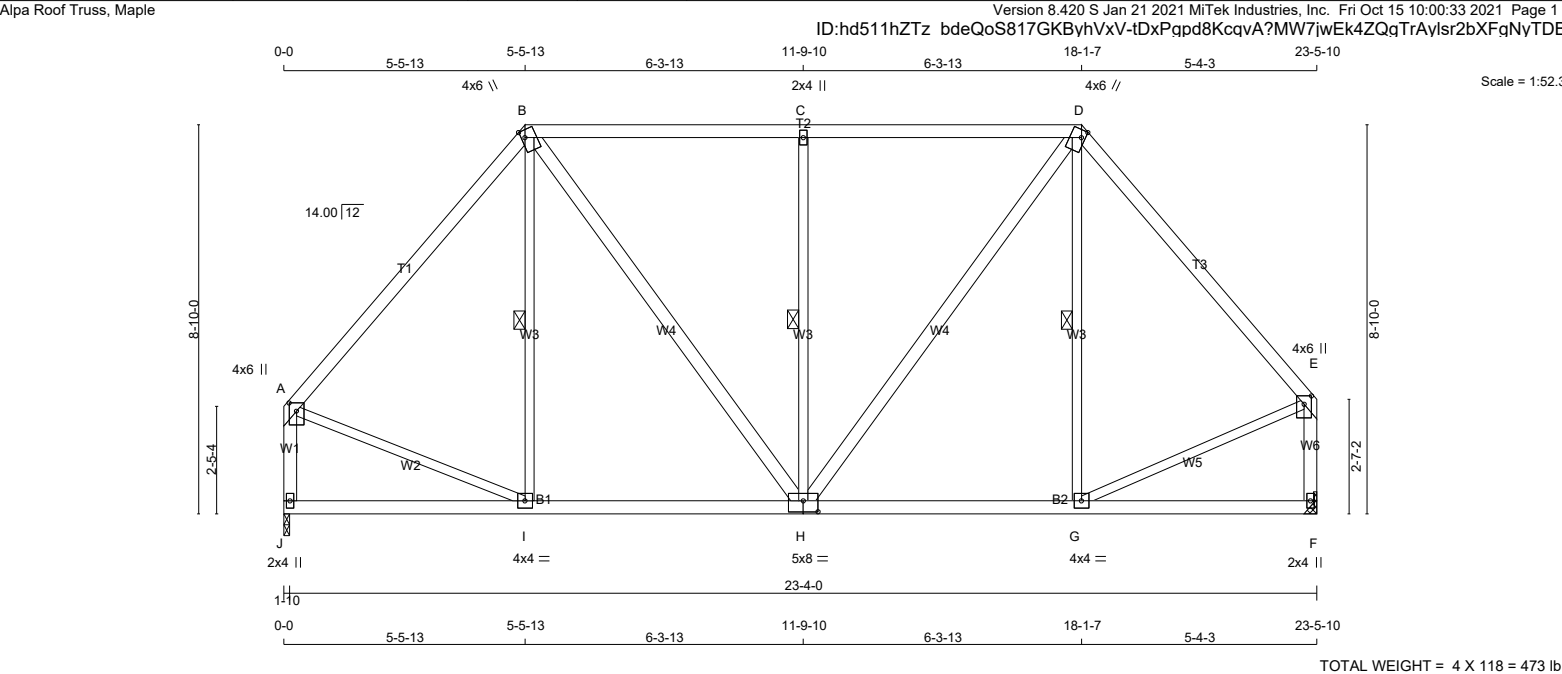
NAIL VALUES		PLATE GRIP(DRY) SHEAR		SECTION	
(PSI)	(PLI)	(PSI)	(PLI)	(PSI)	(PLI)
MAX	MIN	MAX	MIN	MAX	MIN
MT20	650	371	1747	788	1987

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.88 (K) (INPUT = 0.90)
JSI METAL= 0.51 (C) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336331	H217S		1	TRUSS DESC. JT 45147	E21104497



LUMBER				DESCR.	
N. L. G. A. RULES					
CHORDS	SIZE	LUMBER		SPF	
A - B	2x4	DRY	No.2	SPF	
B - D	2x4	DRY	No.2	SPF	
D - E	2x4	DRY	No.2	SPF	
J - A	2x4	DRY	No.2	SPF	
F - E	2x4	DRY	No.2	SPF	
J - H	2x4	DRY	No.2	SPF	
H - F	2x4	DRY	No.2	SPF	
ALL WEBS	2x3	DRY	No.2	SPF	
EXCEPT					
B - H	2x4	DRY	No.2	SPF	
H - D	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	4.0	6.0	2.00	1.00
C	TMW+w	MT20	2.0	4.0		
D	TTWW+m	MT20	4.0	6.0	2.00	1.00
E	TMVW+p	MT20	4.0	6.0	2.25	2.00
F	BMV1+p	MT20	2.0	4.0		
G	BMWW-t	MT20	4.0	4.0		
H	BSWWW-l	MT20	5.0	8.0	3.00	4.00
I	BMWW-t	MT20	4.0	4.0		
J	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

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG	REQRD IN-SX	
	VERT	HORZ	DOWN	HORZ		IN-SX	IN-SX
J	1179	0	1179	0	0	1-10	1-8
F	1180	0	1180	0	0	MECHANICAL	

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

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED		MAX./MIN. COMPONENT REACTIONS		WIND	DEAD	SOIL
	SNOW	LIVE	PERM.LIVE	UNBRAC			
J	845	493 / 0	0 / 0	0 / 0	0 / 0	352 / 0	0 / 0
F	845	493 / 0	0 / 0	0 / 0	0 / 0	353 / 0	0 / 0

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

BRACING

FOR SECTION B-D, MAX. PURLIN SPACING = 2.00 FT.
FOR OTHER SECTIONS, TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.79 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 B-I, C-H, D-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)	MAX LC1 CSI (LC)	MAX. UNBRAC LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX LC1 (LC)
FR-TO		FROM TO			FR-TO		
A-B	-927 / 0	-78.0 -78.0	0.49 (1)	5.79	I-B	-87 / 55	0.04 (1)
B-C	-874 / 0	-85.5 -85.5	0.62 (1)	2.00	B-H	0 / 459	0.07 (1)
C-D	-874 / 0	-85.5 -85.5	0.62 (1)	2.00	H-C	-661 / 0	0.33 (1)
D-E	-911 / 0	-78.0 -78.0	0.46 (1)	5.86	H-D	0 / 477	0.08 (1)
J-A	-1141 / 0	0.0 0.0	0.15 (1)	7.44	G-D	-107 / 46	0.05 (1)
F-E	-1143 / 0	0.0 0.0	0.16 (1)	7.43	A-I	0 / 641	0.14 (1)
					G-E	0 / 638	0.14 (1)
J-I	0 / 0	-18.5 -18.5	0.19 (4)	10.00			
I-H	0 / 600	-18.5 -18.5	0.25 (4)	10.00			
H-G	0 / 590	-18.5 -18.5	0.25 (4)	10.00			
G-F	0 / 0	-18.5 -18.5	0.18 (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

LOADING IN FLAT SECTION BASED ON PIGGYBACK TRUSS WITH SLOPES OF 6.00/12 AND -6.00/12 AND RESPECTIVE HEEL HEIGHTS OF 0-0 AND 0-0 AND AN ADDITIONAL DEAD LOAD OF 3.0 P.S.F.

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBC2015

THIS DESIGN COMPLIES WITH:

- PART 9 OF CBC2018 , 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 (0.78")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.02")
ALLOWABLE DEFL.(TL)= L/360 (0.78")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.07")

CSI: TC=0.62/1.00 (B-C:1) , BC=0.25/1.00 (H-I:4) , WB=0.33/1.00 (C-H:1) , SSI=0.26/1.00 (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)	(PSI)	(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= 0.73 (B) (INPUT = 0.90)
JSI METAL= 0.36 (A) (INPUT = 1.00)

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:

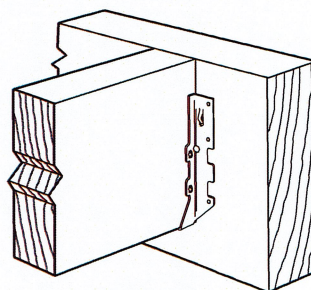
- Factored resistances are in accordance with CSA O86-14.
- Uplift resistances have been increased 15%. No further increase is permitted.
- Wood shear is not considered in the factored resistances given. The specifier must ensure that the joist and header capacities are capable of withstanding these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

Installation:

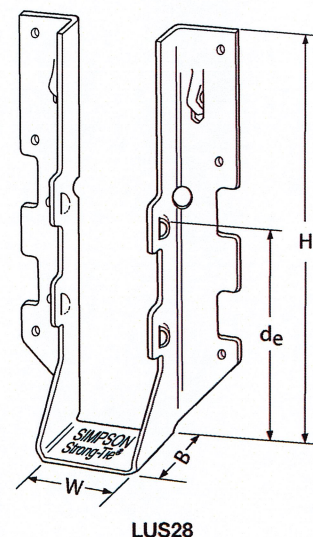
- Use all specified fasteners.
- Nails: 16d = 0.162" dia. x 3½" long common wire, 10d = 0.148" x 3" long common wire.
- Double shear nails must be driven at an angle through the joist or truss into the header to achieve the table loads.
- Not designed for welded or nailer applications.

Options:

- These hangers cannot be modified



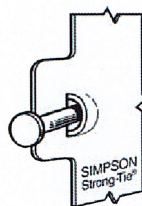
Typical LUS Installation



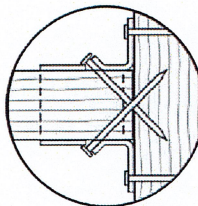
LUS28

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

This technical bulletin is effective until June 30, 2022, and reflects information available as of April 1, 2020. This information is updated periodically and should not be relied upon after June 30, 2022. Contact Simpson Strong-Tie for current information and limited warranty or see strongtie.com.

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T-SPECLUS20 3/20 exp. 6/22

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HUS/LJS – Double Shear Joist Hangers



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:

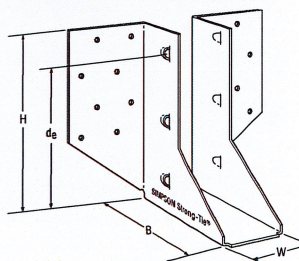
- Factored resistances are in accordance with CSA O86 -14.
- Uplift resistances have been increased 15%. No further increase is permitted.
- Wood shear is not considered in the factored resistances given. The specifier must ensure that the joist and header capacities are capable of withstanding these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

Installation:

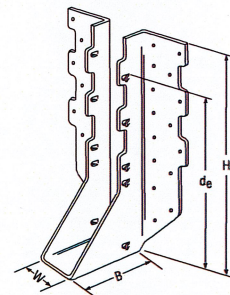
- Use all specified fasteners
- Nails: 16d = 0.162" dia. x 3½" long common wire
- Double shear nails must be driven at an angle through the joist or truss into the header to achieve the table loads
- Not designed for welded or nailer applications

Options:

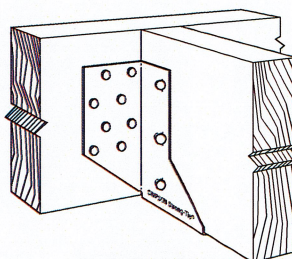
- See current catalogue for options



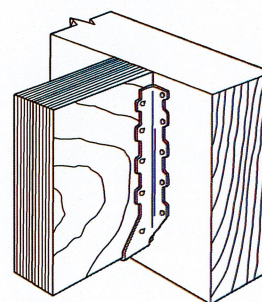
LJS26DS



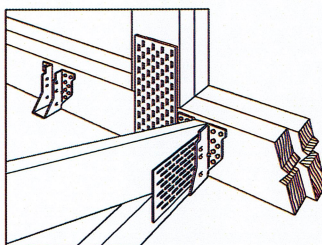
HUS210
(HUS26, HUS28, similar)



Typical LJS26DS
Installation



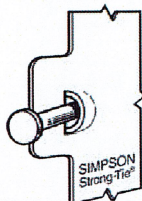
Typical HUS
Installation



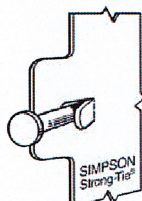
Typical HUS Installation
(Truss Designer to provide fastener
quantity for connecting multiple
members together)

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	4⅞	(16) 16d	(6) 16d	2055	4265	1460	4115
HUS26	16	1⅝	5⅞	3	3½	(14) 16d	(6) 16d	2705	4940	2065	3875
HUS28	16	1⅝	7⅜	3	6⅜	(22) 16d	(8) 16d	3605	5365	2675	4345
HUS210	16	1⅝	9⅜	3	7⅜	(30) 16d	(10) 16d	4505	5795	4010	4740
HUS1.81/10	16	1⅜	9	3	8	(30) 16d	(10) 16d	4505	6450	4010	5200

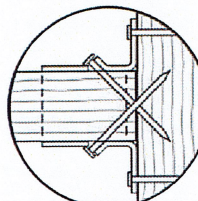
1. d_e is the distance from the seat of the hanger to the highest joist nail.



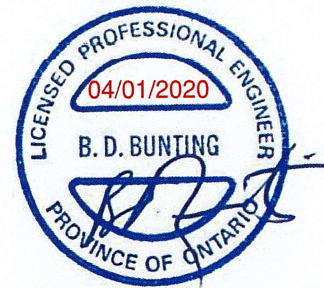
Dome Double Shear Nailing prevents tabs breaking off (available on some models).
U.S. Patent 5,603,580



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:

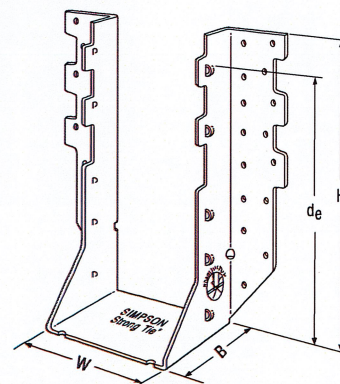
- Factored resistances are in accordance with CSA O86-14.
- Uplift resistances have been increased 15%. No further increase is permitted.
- Wood shear is not considered in the factored resistances given. The specifier must ensure that the joist and header capacities are capable of withstanding these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

Installation:

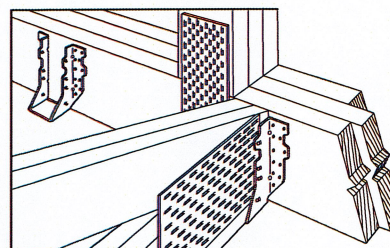
- Use all specified fasteners
- Nails: 16d = 0.162" dia. x 3½" long common wire
- Double shear nails must be driven at an angle through the joist or truss into the header to achieve the table loads
- Not designed for welded or nailer applications

Options:

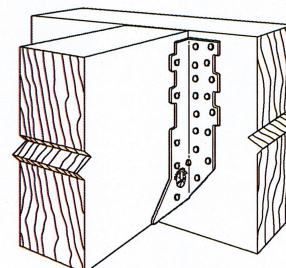
- See current catalogue for options



HHUS410



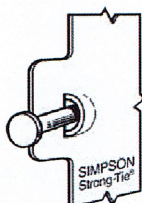
Typical HHUS Installation
(Truss Designer to provide fastener quantity for connecting multiple members together)



Typical HHUS Installation

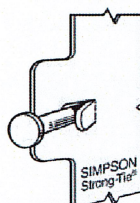
Model No.	Ga.	Dimensions (in.)				Fasteners		Factored Resistance (lb.)			
		W	H	B	d _e ¹	Face	Joist	D.Fir-L		S-P-F	
								Uplift (K ₀ =1.15)	Normal (K ₀ =1.00)	Uplift (K ₀ =1.15)	Normal (K ₀ =1.00)
HHUS26-2	14	3 5/16	5 13/16	3	3 15/16	(14) 16d	(6) 16d	2850	7335	2065	5205
HHUS28-2	14	3 5/16	7 1/2	3	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.

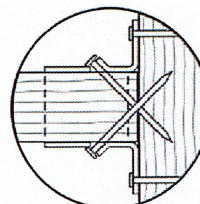


Dome Double Shear Nailing prevents tabs breaking off (available on some models).

U.S. Patent
5,603,580



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



Double Shear Nailing Top View.



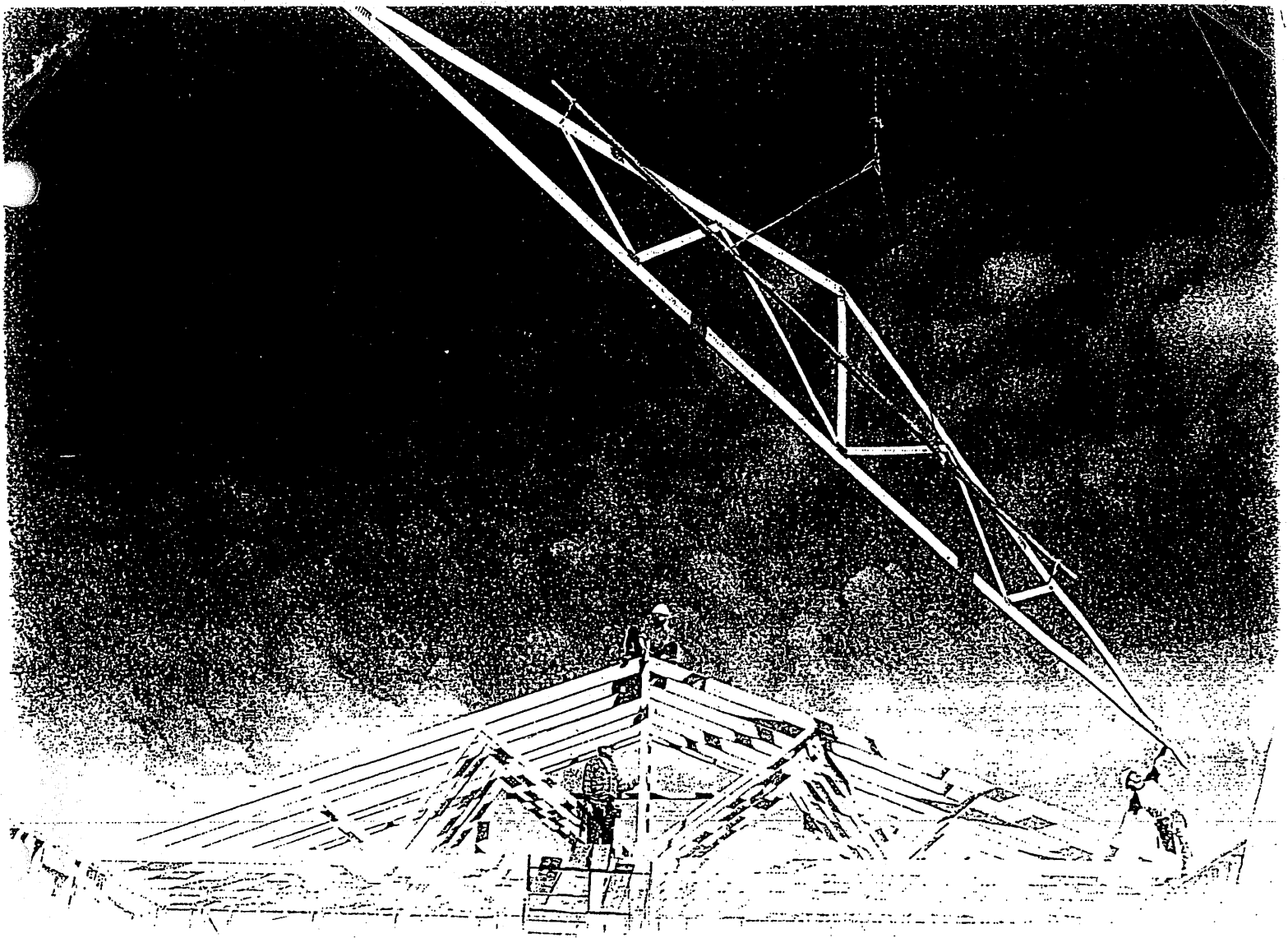
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STATES
DESIGN

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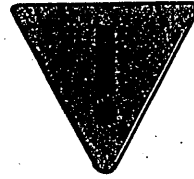
Wood Truss Installation

**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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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

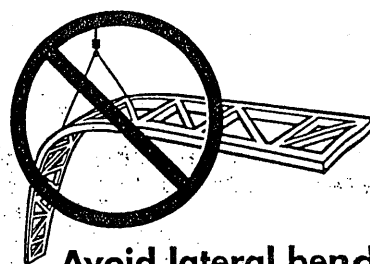
Special design requirements, such as wind bracing, portal bracing, seismic bracing, diaphragms, shear walls, or other load transfer elements and their connections to wood trusses must be considered separately by the building designer, who shall determine size, location, and method of connections for 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.

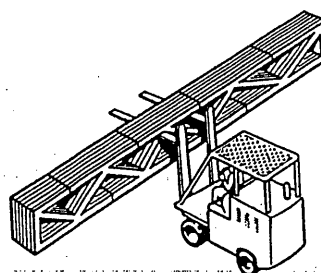
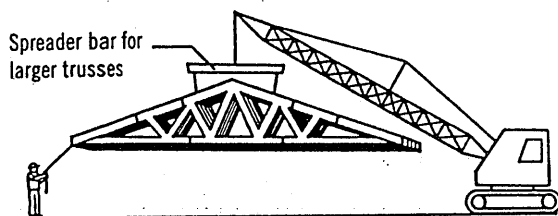


Avoid lateral bending

- 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.

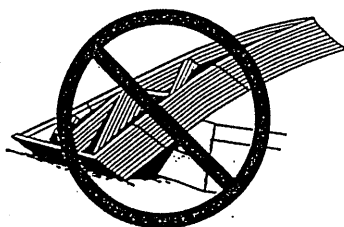
2

Job Site Handling



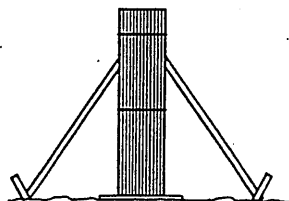
All trusses should be picked up at the top chords in a vertical position only

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.



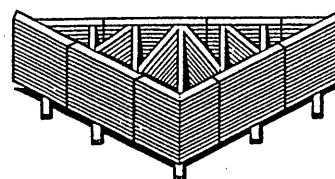
Do not store unbraced bundles upright

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.

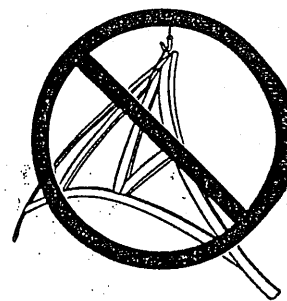


Care should be exercised when removing banding to avoid damaging trusses.

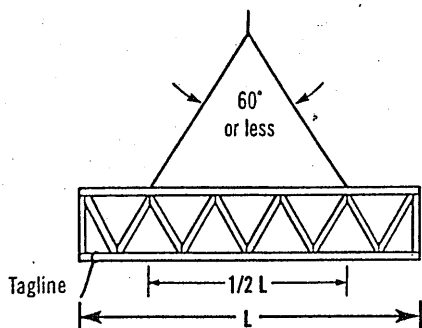
During long term storage, trusses shall be protected from the environment in a manner that provides for adequate ventilation of the trusses. If tarpaulins or other material is used, the ends shall be left open for ventilation. Plastic is not recommended, since it can trap moisture.

3 Hoisting

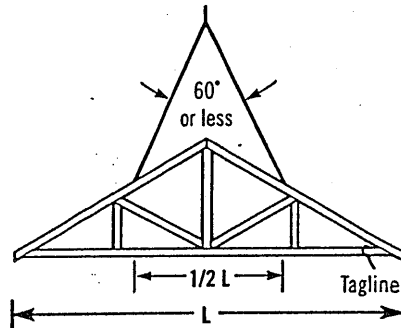
All trusses that are erected one at a time shall be held safely in position by the erection equipment until such time as all necessary bracing has been installed and the ends of the trusses are securely fastened to the building.



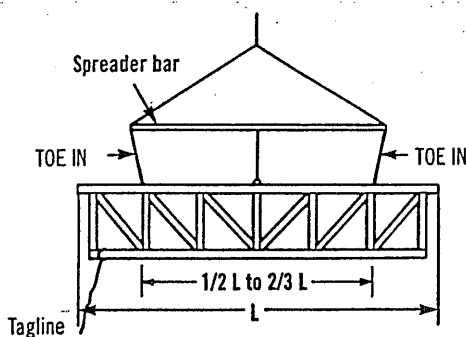
Avoid lateral bending



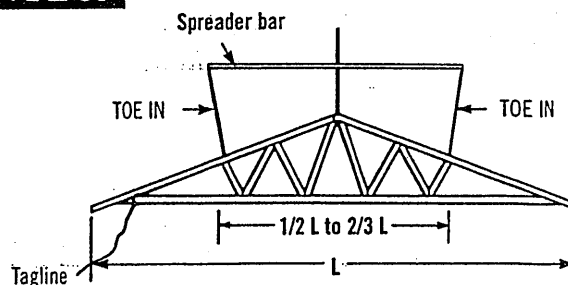
$L \leq 30'$



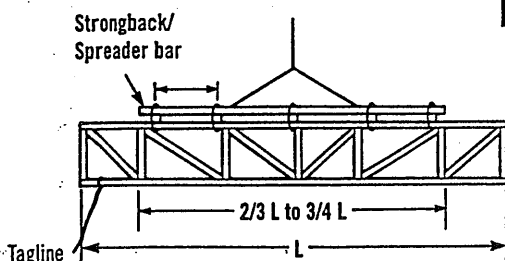
Truss sling is acceptable where these criteria are met.



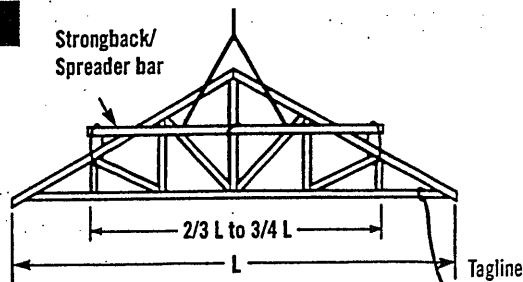
$30' < L \leq 60'$



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.



$L > 60'$



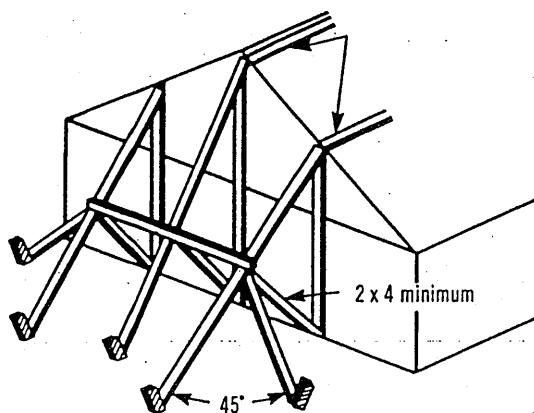
For lifting trusses with spans in excess of 60 feet, it is recommended that a strongback/spreader bar be used as illustrated. The strongback/spreader bar should be attached to the top chord and web members at intervals of approximately 10 feet. Further, the strongback/spreader bar should be at or above 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

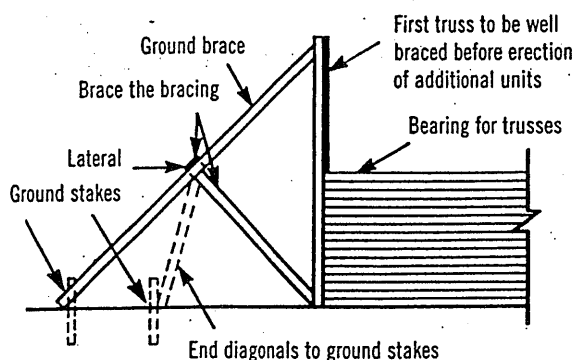
It is important for the builder or erection contractor to provide substantial bracing for the first truss erected. The two or more trusses making up the rest of the first set are tied to and rely upon the first truss for stability. Likewise, after this first set of trusses is adequately cross-braced, 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.

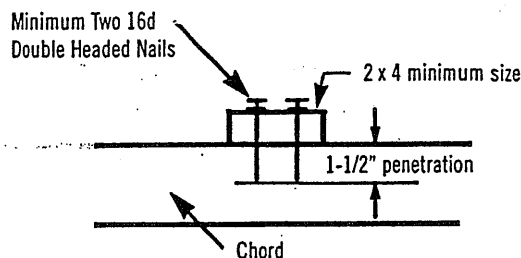
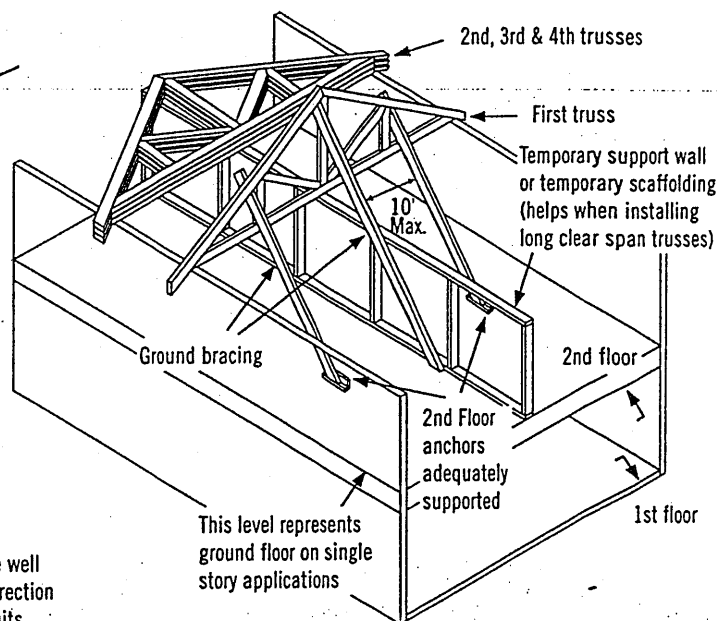


Note: Locate ground braces for first truss directly in line with all rows of top chord continuous lateral bracing (either temporary or permanent).



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.

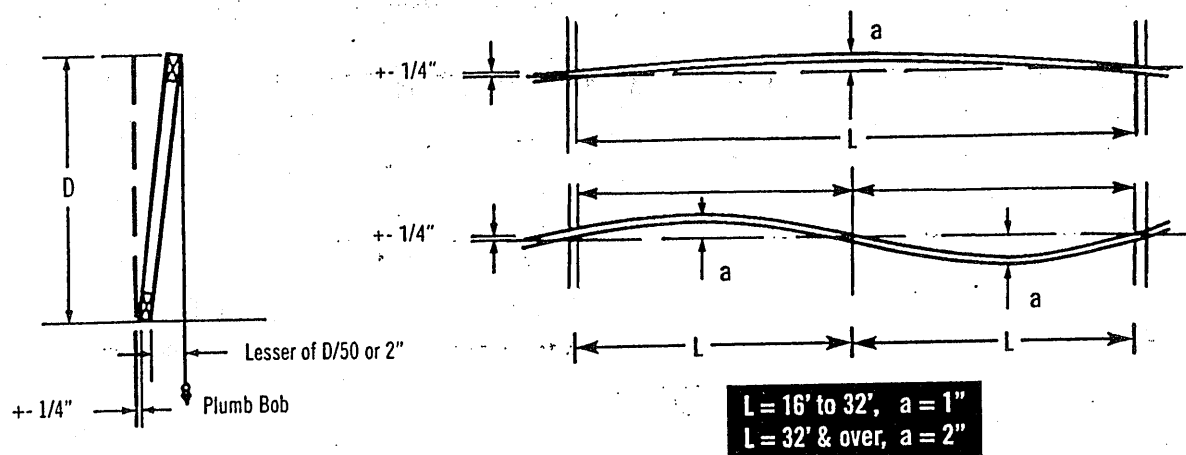


Inadequate size of bracing material or inadequate fastening is a major cause of erection dominoing.

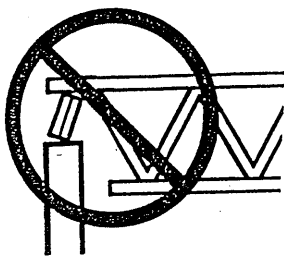
5 Erection Tolerance

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.

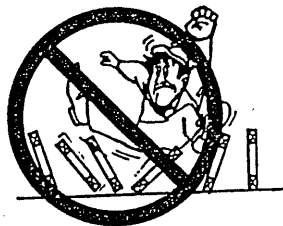
When sheathing, make sure nails are driven into the top chord of the trusses.



6 Bracing



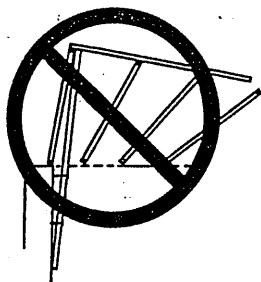
Do not install trusses on temporarily connected supports



Do not walk on unbraced trusses



Do not walk on trusses or gable ends lying flat

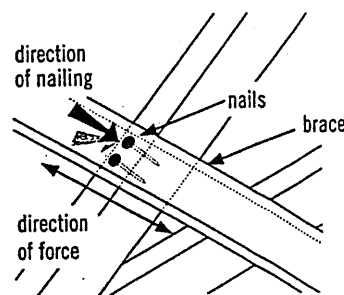


Nails in withdrawal (parallel to force)

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.



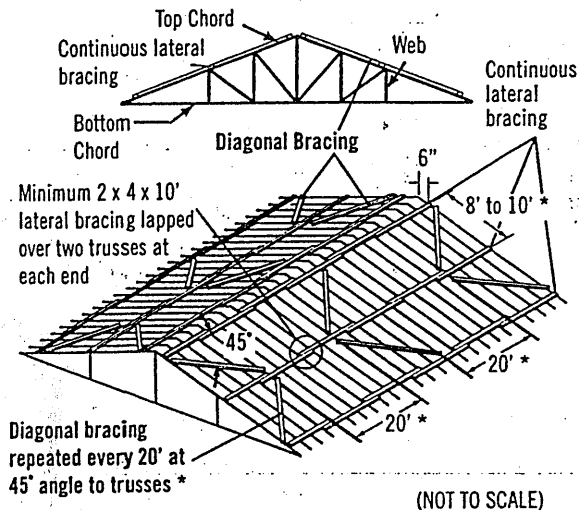
Well nailed (perpendicular to force)

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.

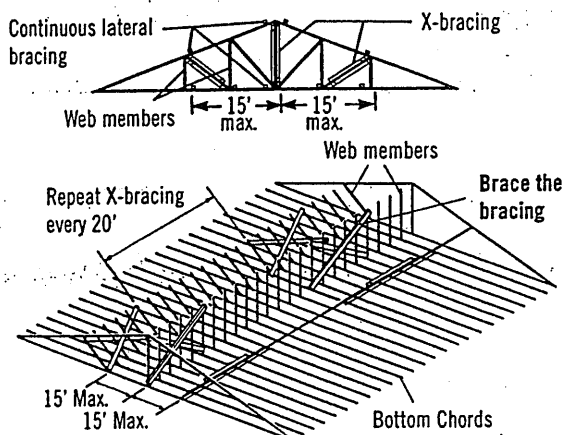


Exact spacing between trusses should be maintained as bracing is installed to avoid the hazardous practice of removing bracing to adjust spacing. This act of "adjusting spacing" can cause trusses to topple if connections are removed at the wrong time.

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.

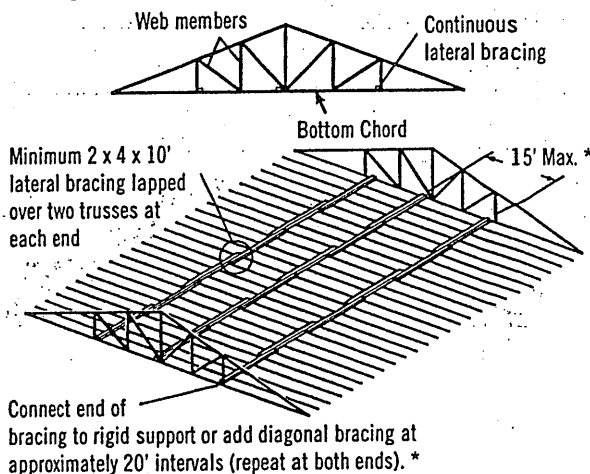
X-bracing should be installed on vertical web members wherever possible, at or near lateral bracing. Plywood or OSB may be substituted for X-bracing.



Note: Top chords and some web members are not shown, in order to make drawings more readable.

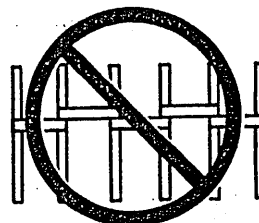
2) Bottom Chord Plane

In order to hold proper spacing on the bottom chord, temporary bracing is recommended on the top of the bottom chord.

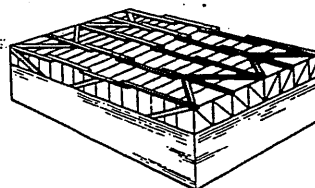


* Long spans, heavy loads or other spacing configurations may require closer spacing between lateral bracing and closer intervals between diagonals. Consult the building designer or HIB and DSB (Recommended Design Specification for Temporary Bracing of Metal-Plate Connected Wood Trusses) for details.

Diagonal or cross-bracing is very important!



Do not use short blocks to brace individual trusses without a specific bracing plan detailing their use

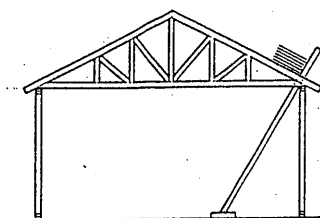
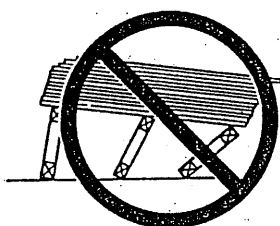


Bracing requirements using the same principles apply to parallel chord trusses

8 Stacking Materials

Do not proceed with building completion until all bracing is securely and properly in place

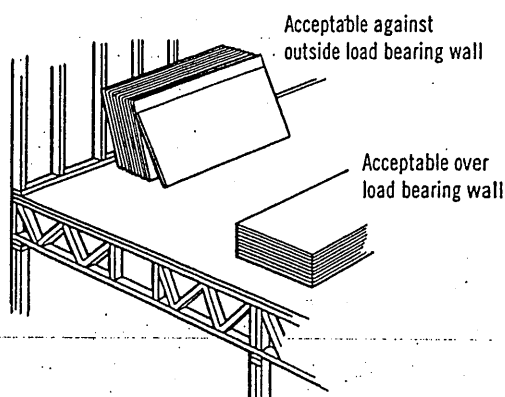
Never stack materials on unbraced or inadequately braced trusses



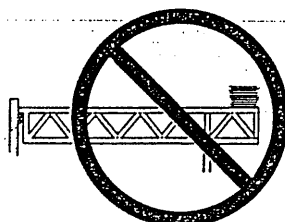
Platform must be rigidly braced

Proper distribution of construction materials is a must during construction.

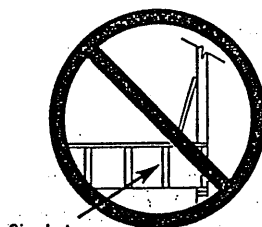
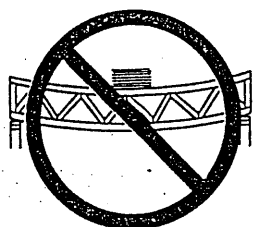
Never stack materials near a peak



Never stack materials on the cantilever of a truss

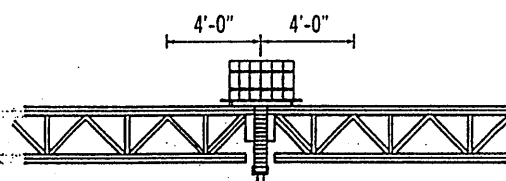


Always stack materials over two or more trusses.



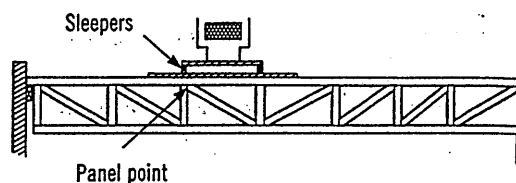
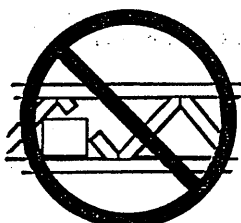
Single truss

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.



Sleepers

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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