

EWP DESIGN INC.

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RESPONSIBILITIES AND SPECIFICATIONS

RESPONSIBILITIES

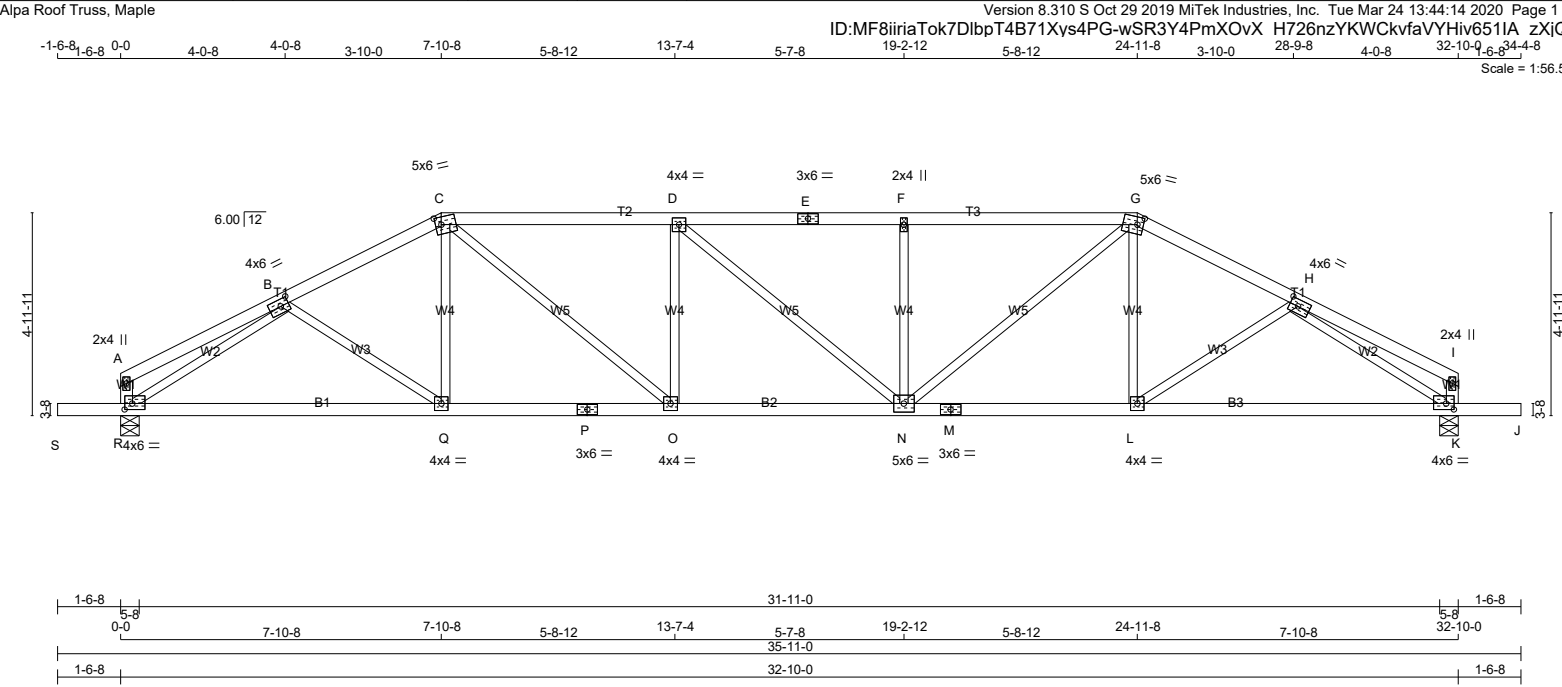
1. EWP DESIGN INC. is responsible for the design of trusses as individual components.
2. It is the responsibility of others to ascertain that the design loads utilized on each drawing meet or exceed the actual dead load imposed by the structure, the live load imposed by the intended use and the snow 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.

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
318402	H33		1	TRUSS DESC. JT 45147	E20035269



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
G - I	2x4	DRY	No.2
R - A	2x4	DRY	No.2
K - I	2x4	DRY	No.2
S - P	2x4	DRY	No.2
P - M	2x4	DRY	No.2
M - J	2x4	DRY	No.2
ALL WEBS EXCEPT	2x3	DRY	No.2
SPF			
DRY: SEASONED LUMBER.			

PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y X
A	TMV+p	MT20	2.0	4.0	
B	TMWW-t	MT20	4.0	6.0	2.00 2.50
C	TTWW-m	MT20	5.0	6.0	2.25 1.75
D	TMWW-t	MT20	4.0	4.0	
E	TS-t	MT20	3.0	6.0	
F	TMW+w	MT20	2.0	4.0	
G	TTWW-m	MT20	5.0	6.0	2.25 1.75
H	TMWW-t	MT20	4.0	6.0	2.00 2.50
I	TMV+p	MT20	2.0	4.0	
K	BMVW1-t	MT20	4.0	6.0	1.75 2.25
L, O, Q					
L	BMWW-t	MT20	4.0	4.0	
M	BS-t	MT20	3.0	6.0	
N	BMWWW-t	MT20	5.0	6.0	
P	BS-t	MT20	3.0	6.0	
R	BMVW1-t	MT20	4.0	6.0	1.75 2.25

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
R	1732	0	1732	0	0
K	1732	0	1732	0	0

UNFACTORED REACTIONS		1ST LCASE	MAX./MIN. COMPONENT REACTIONS
JT	COMBINED	SNOW	LIVE
R	1235	754 / 0	0 / 0
K	1235	754 / 0	0 / 0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.84 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 LC1 (PLF)	MAX. CSI (LC)	MAX. UNBRAC LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. CSI (LC)
FR-TO		FROM	TO		FR-TO		
A-B	0 / 13	-78.0	-78.0	0.16 (1)	10.00	B-Q	0 / 64
B-C	-2304 / 0	-78.0	-78.0	0.19 (1)	4.36	Q-C	0 / 147
C-D	-2751 / 0	-78.0	-78.0	0.41 (1)	3.84	C-O	0 / 905
D-E	-2750 / 0	-78.0	-78.0	0.38 (1)	3.88	O-D	-480 / 0
E-F	-2750 / 0	-78.0	-78.0	0.38 (1)	3.88	D-N	-2 / 0
F-G	-2750 / 0	-78.0	-78.0	0.41 (1)	3.84	N-F	-479 / 0
G-H	-2304 / 0	-78.0	-78.0	0.19 (1)	4.36	N-G	0 / 903
H-I	0 / 13	-78.0	-78.0	0.16 (1)	10.00	L-G	0 / 148
R-A	-125 / 0	0.0	0.0	0.01 (1)	7.81	L-H	0 / 64
K-I	-125 / 0	0.0	0.0	0.01 (1)	7.81	R-B	-2474 / 0
						H-K	-2475 / 0
S-R	0 / 0	-96.5	-96.5	0.16 (1)	10.00		0.92 (1)
R-Q	0 / 2042	-18.5	-18.5	0.47 (1)	10.00		
Q-P	0 / 2051	-18.5	-18.5	0.46 (1)	10.00		
P-O	0 / 2051	-18.5	-18.5	0.46 (1)	10.00		
O-N	0 / 2752	-18.5	-18.5	0.51 (1)	10.00		
N-M	0 / 2051	-18.5	-18.5	0.46 (1)	10.00		
M-L	0 / 2051	-18.5	-18.5	0.46 (1)	10.00		
L-K	0 / 2042	-18.5	-18.5	0.47 (1)	10.00		
K-J	0 / 0	-96.5	-96.5	0.16 (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, 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 (1.09")

CALCULATED VERT. DEFL.(LL) = L/999 (0.15")

ALLOWABLE DEFL.(TL)= L/360 (1.09")

CALCULATED VERT. DEFL.(TL) = L/999 (0.31")

CANTILEVER DEFLECTION:

ALLOWABLE DEFL.(LL)= L/120 (0.19")

CALCULATED VERT. DEFL.(LL) = L/999 (0.01")

ALLOWABLE DEFL.(TL)= L/120 (0.19")

CALCULATED VERT. DEFL.(TL) = L/999 (0.01")

CSI: TC=0.41/1.00 (F-G:1), BC=0.51/1.00 (N-O:1), WB=0.92/1.00 (H-K:1), SSI=0.21/1.00 (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 (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 (H) (INPUT = 0.90)

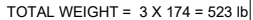
JSI METAL= 0.61 (P) (INPUT = 1.00)

Scale = 1:56.5



JSI GRIP= 0.88 (P) (INPUT = 0.90)
JSI METAL= 0.63 (N) (INPUT = 1.00)

Scale = 1:56.5



PATTERN-LOADING CHECK APPLIED TO THIS TRUSS.

CONTINUED ON PAGE 2

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
318402	H42A		3	TRUSS DESC. JT 45147	E20035271(2)

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
A	TMVW-p	MT20	5.0	6.0	2.00	2.75
B	TMWW-t	MT20	4.0	6.0	2.00	2.75
C	TTWW+m	MT20	5.0	6.0	2.50	1.50
D	TMW+w	MT20	2.0	4.0		
E	TMWW+t	MT20	4.0	6.0	2.25	2.00
F	TMW+w	MT20	2.0	4.0		
G	TTWW+m	MT20	5.0	6.0	2.50	1.50
H	TMWW-t	MT20	4.0	6.0	2.00	2.75
I	TMVW-p	MT20	5.0	6.0	2.00	2.75
K	BMV1+p	MT20	2.0	4.0		
L	BMWW+t	MT20	5.0	6.0	3.25	1.75
M	BS-t	MT20	5.0	6.0		
N	BMWW-t	MT20	5.0	6.0		
O	BMWWWW+t	MT20	8.0	9.0	Edge	4.00
P	BMWWWW1+t	MT20	8.0	9.0	Edge	4.00
Q	BMWW-t	MT20	5.0	6.0		
R	BS-t	MT20	5.0	6.0		
S	BMWW+t	MT20	5.0	6.0	3.25	1.75
T	BMV1+p	MT20	2.0	4.0		

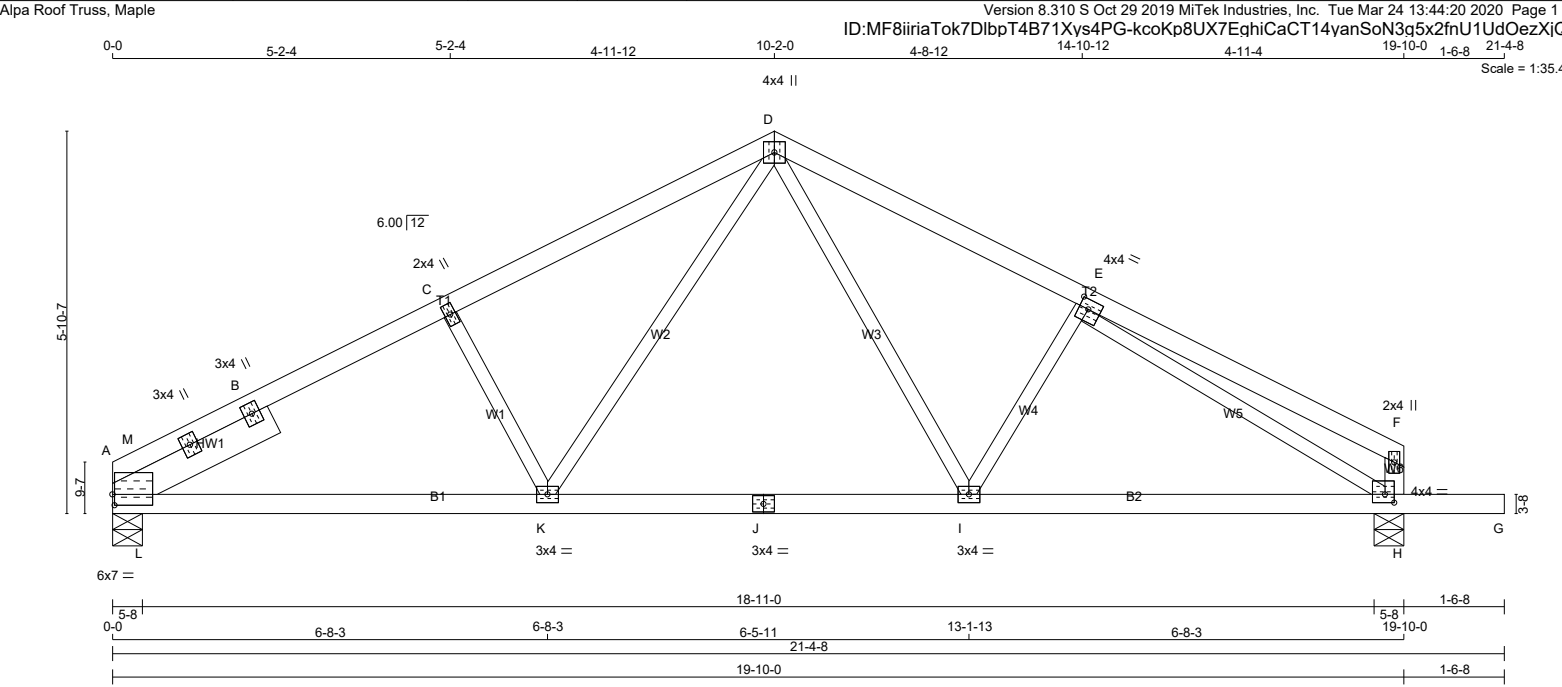
Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.

JSI GRIP= 0.90 (H) (INPUT = 0.90)
JSI METAL= 0.80 (E) (INPUT = 1.00)

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



JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
318402	H45		1	TRUSS DESC. JT 45147	E20035274



LUMBER										DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER										DESIGN CRITERIA									
N. L. G. A. RULES																													
CHORDS SIZE LUMBER																													
A - D 2x4 DRY No.2										DESCR. SPF										SPECIFIED LOADS:									
D - F 2x4 DRY No.2										SPF										TOP CH. LL = 21.0 PSF									
H - F 2x4 DRY No.2										SPF										DL = 6.0 PSF									
A - J 2x4 DRY No.2										SPF										BOT CH. LL = 0.0 PSF									
J - G 2x4 DRY No.2										SPF										DL = 7.4 PSF									
																				TOTAL LOAD = 34.4 PSF									
REINFORCING MEMBERS																				SPACING = 24.0 IN. C/C									
HW1 2x6 DRY No.2										SPF										THIS TRUSS IS DESIGNED FOR RESIDENTIAL									
ALL WEBS 2x3 DRY No.2										SPF										OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015									
EXCEPT																													
DRY: SEASONED LUMBER.																				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									
PLATES (table is in inches)																				ALLOWABLE DEFL.(LL)= L/360 (0.66")									
JT TYPE PLATES W LEN Y X																				CALCULATED VERT. DEFL.(LL) = L/ 999 (0.04")									
A TMBMR1-I MT20 6.0 7.0 2.00 0.25																				ALLOWABLE DEFL.(TL)= L/360 (0.66")									
A RT+t MT20 3.0 4.0																				CALCULATED VERT. DEFL.(TL) = L/ 999 (0.10")									
A RT+t MT20 3.0 4.0																													
C TMW+w MT20 2.0 4.0																													
D TTWW+p MT20 4.0 4.0																													
E TMWW-t MT20 4.0 4.0 1.75 1.75																													
F TMV+p MT20 2.0 4.0																													
H BMWV1-t MT20 4.0 4.0 1.50 1.75																													
I BMWW-t MT20 3.0 4.0																													
J BS-t MT20 3.0 4.0																													
K BMWW-t MT20 3.0 4.0																													
																				CANTILEVER DEFLECTION:									
																				ALLOWABLE DEFL.(LL)= L/120 (0.19")									
																				CALCULATED VERT. DEFL.(LL) = L/ 999 (0.01")									
																				ALLOWABLE DEFL.(TL)= L/120 (0.19")									
																				CALCULATED VERT. DEFL.(TL) = L/ 999 (0.01")									
																				CSI: TC=0.29/1.00 (E-F:1) , BC=0.30/1.00 (H-I:4) , WB=0.77/1.00 (E-H:1) , SSI=0.16/1.00 (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= 0.47 (E) (INPUT = 1.00)									

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

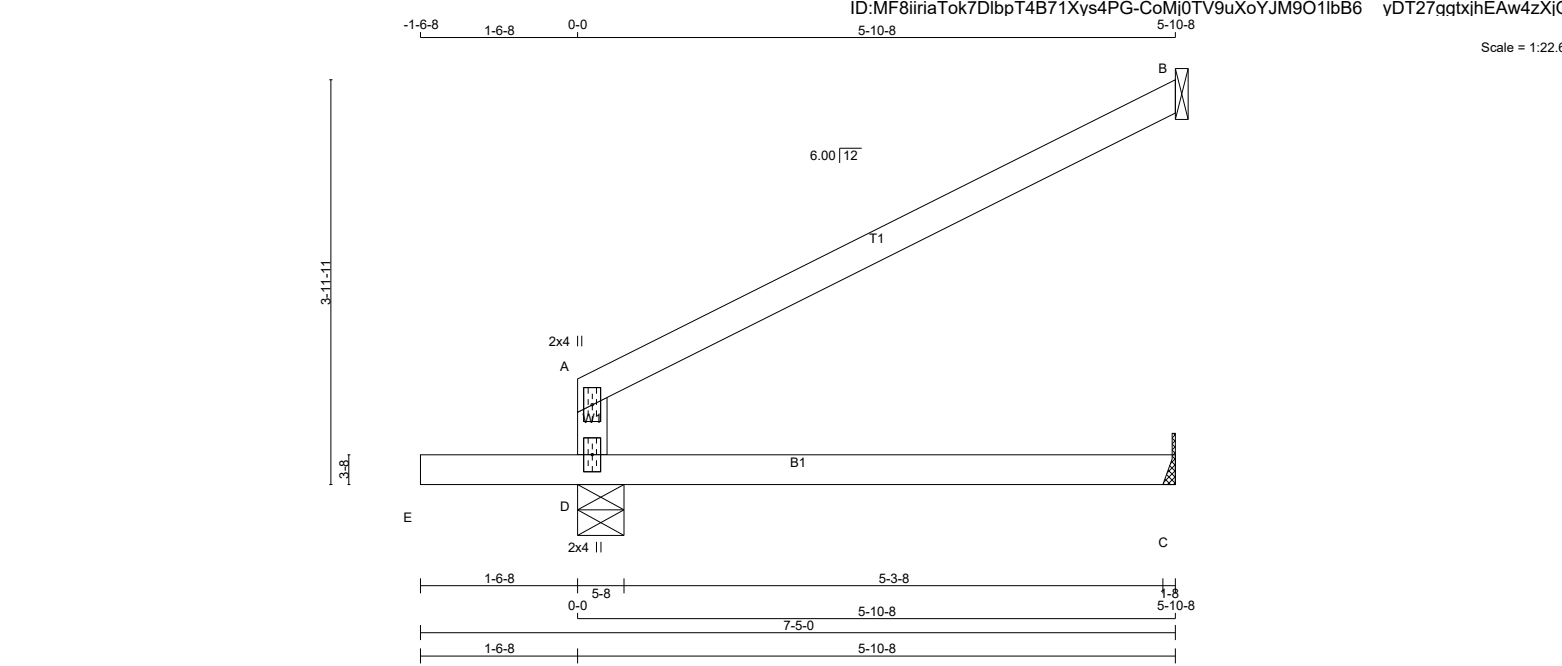


JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
318402	J04		1	TRUSS DESC. JT 45147	E20035275

Alpa Roof Truss, Maple

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ID:MF8iiriaTok7DlbpT4B71Xys4PG-CoMj0TV9uXoYJM901lbB6 yDT27ggtxjhEAW4zXjQ8



TOTAL WEIGHT = 5 X 17 = 84 lb [M]

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

DRY: SEASONED LUMBER.

PLATES (table is in inches)				
JT	TYPE	PLATES	W	LEN Y X
A	TMV+p	MT20	2.0	4.0
D	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
	VERT	HORZ	DOWN	HORZ		
JT	489	0	489	0	5-8	1-8
D	186	0	186	0	1-8	1-8
B	41	0	46	0	MECHANICAL	

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

SEE MITEK STANDARD DETAIL B97791H FOR CONNECTION TO JOINT(S) B

UNFACTORED REACTIONS

JT	COMBINED	MAX./MIN. COMPONENT REACTIONS					
		1ST LCASE	SNOW	LIVE	PERM.LIVE	WIND	DEAD
D	349	211 / 0	0 / 0	0 / 0	0 / 0	138 / 0	0 / 0
B	129	100 / 0	0 / 0	0 / 0	0 / 0	29 / 0	0 / 0
C	33	0 / 0	0 / 0	0 / 0	0 / 0	33 / 0	0 / 0

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

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		WEBS	
	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)
FR-TO		FROM TO		FROM TO
D-A	-272 / 0	0.0 0.0 0.34 (1)	7.81	
A-B	-19 / 0	-78.0 -78.0 0.34 (1)	6.25	
E-D	0 / 0	-96.5 -96.5 0.16 (1)	10.00	
D-C	0 / 0	-18.5 -18.5 0.19 (4)	10.00	

DESIGN CRITERIA

SPECIFIED LOADS:

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

SPACING = 24.0 IN. C/C

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

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

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

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

ALLOWABLE DEFL.(TL)= L/360 (0.20")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.02")

CANTILEVER DEFLECTION:
ALLOWABLE DEFL.(LL)= L/120 (0.19")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.01")
ALLOWABLE DEFL.(TL)= L/120 (0.19")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.01")

CSI: TC=0.34/1.00 (A-D:1) , BC=0.19/1.00 (C-D:4) ,
WB=0.00/1.00 (n/a:0) , SSI=0.19/1.00 (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

AUTOSOLVE RIGHT HEEL ONLY

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

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

PLATE PLACEMENT TOL. = 0.250 inches

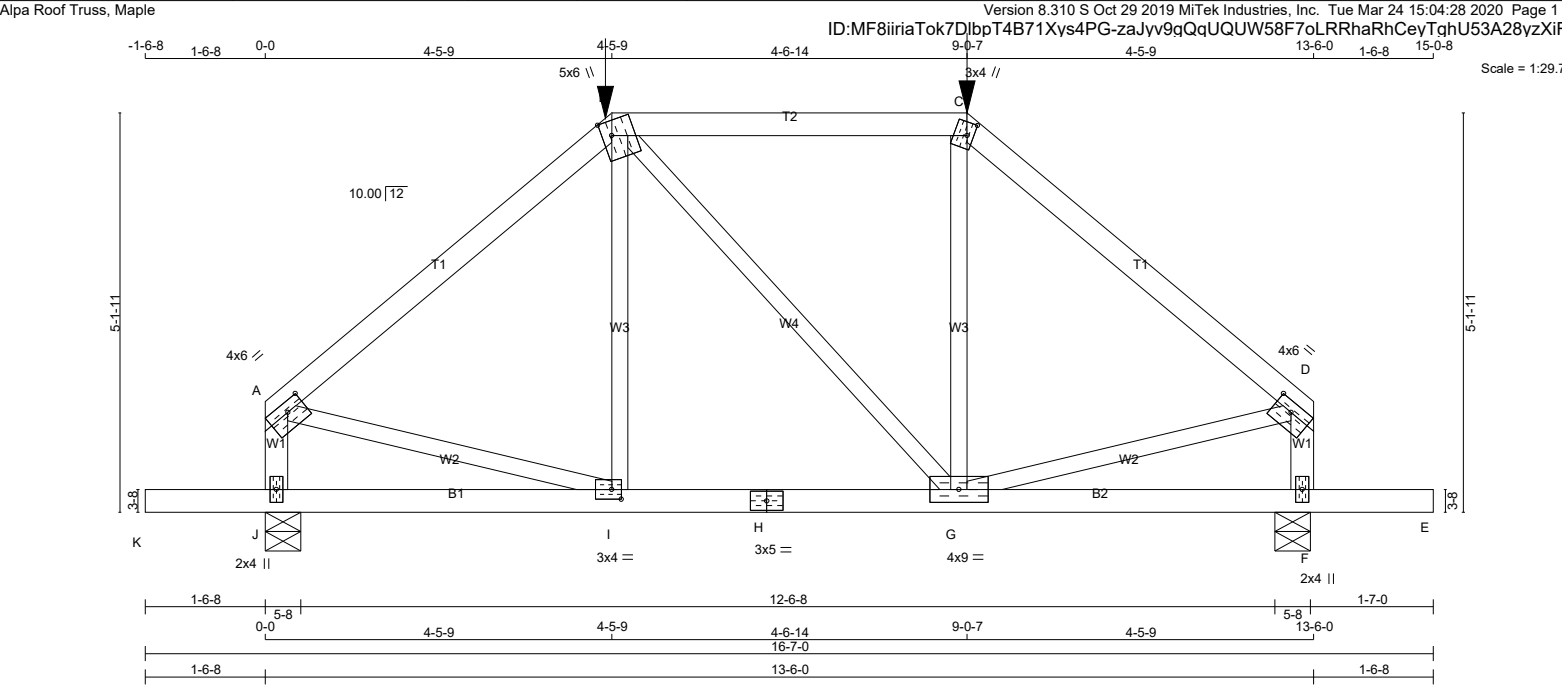
PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.15 (A) (INPUT = 0.90)
JSI METAL= 0.11 (A) (INPUT = 1.00)

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



JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
318404	H1		1	TRUSS DESC. JT 45147	E20035295



LUMBER			
N. L. G. A. RULES			
CHORDS	SIZE	LUMBER	DESCR.
A - B	2x4	DRY	No.2
B - C	2x4	DRY	No.2
C - D	2x4	DRY	No.2
J - A	2x4	DRY	No.2
F - D	2x4	DRY	No.2
K - H	2x4	DRY	No.2
H - E	2x4	DRY	No.2
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-t	MT20	4.0	6.0 1.50 2.75
B	TTWW+m	MT20	5.0	6.0 2.25 1.50
C	TTW+m	MT20	3.0	4.0 2.00 1.00
D	TMVW-t	MT20	4.0	6.0 1.50 2.75
F	BMV1+p	MT20	2.0	4.0
G	BMWWW-t	MT20	4.0	9.0
H	BS-t	MT20	3.0	5.0
I	BMWW-t	MT20	3.0	4.0 1.50 1.50
J	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
J	1244	0	1244	0	0	5-8	1-13
F	1244	0	1244	0	0	5-8	1-13

UNFACTORED REACTIONS		1ST LCASE		MAX./MIN. COMPONENT REACTIONS	
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND
J	888	534 / 0	0 / 0	0 / 0	0 / 0
F	888	534 / 0	0 / 0	0 / 0	0 / 0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.68 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.	FORCE (LBS)	MEMB.	FORCE (LBS)
FR-TO	FROM TO	FR-TO	FROM TO
A-B	-1054 / 0	I-B	0 / 133
B-C	-810 / 0	B-G	0 / 0
C-D	-1054 / 0	G-C	0 / 133
J-A	-1043 / 0	A-I	0 / 830
F-D	-1043 / 0	G-D	0 / 830
K-J	0 / 0		
J-I	0 / 0		
I-H	0 / 809		
H-G	0 / 809		
G-F	0 / 0		
F-E	0 / 0		

FACTORED CONCENTRATED LOADS (LBS)		TYPE	
JT	LOC.	HEEL	CONN.
B	4-5-9	---	C1
C	9-0-7	---	C1

DESIGN CRITERIA

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

SPACING = 24.0 IN. C/C

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

GIRDER TYPE: CPrimeHip

SIDE SETBACK = 4-5-9

END SETBACK = 5-1-11

END WALL WIDTH = 0-0

CORNER FRAMING TYPE: CONVENTIONAL

END JACK TYPE: PARTIAL

APPLIED TO FRONT SIDE

- ADDTL LOADS BASED ON 55 % OF GSL.

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

THIS DESIGN COMPLIES WITH:

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

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

ALLOWABLE DEFL.(LL)= L/360 (0.45")

CALCULATED VERT. DEFL.(LL) = L/ 999 (0.03")

ALLOWABLE DEFL.(TL)= L/360 (0.45")

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

CANTILEVER DEFLECTION:

ALLOWABLE DEFL.(LL)= L/120 (0.19")

CALCULATED VERT. DEFL.(LL) = L/ 999 (0.01")

ALLOWABLE DEFL.(TL)= L/120 (0.19")

CALCULATED VERT. DEFL.(TL) = L/ 999 (0.01")

CSI: TC=0.37/1.00 (B-C:1), BC=0.30/1.00 (G-I:1), WB=0.21/1.00 (D-G:1), SI=0.17/1.00 (B-C:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.00

COMP=1.00 SHEAR=1.00 TENS= 1.00

COMPANION LIVE LOAD FACTOR = 1.00

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

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

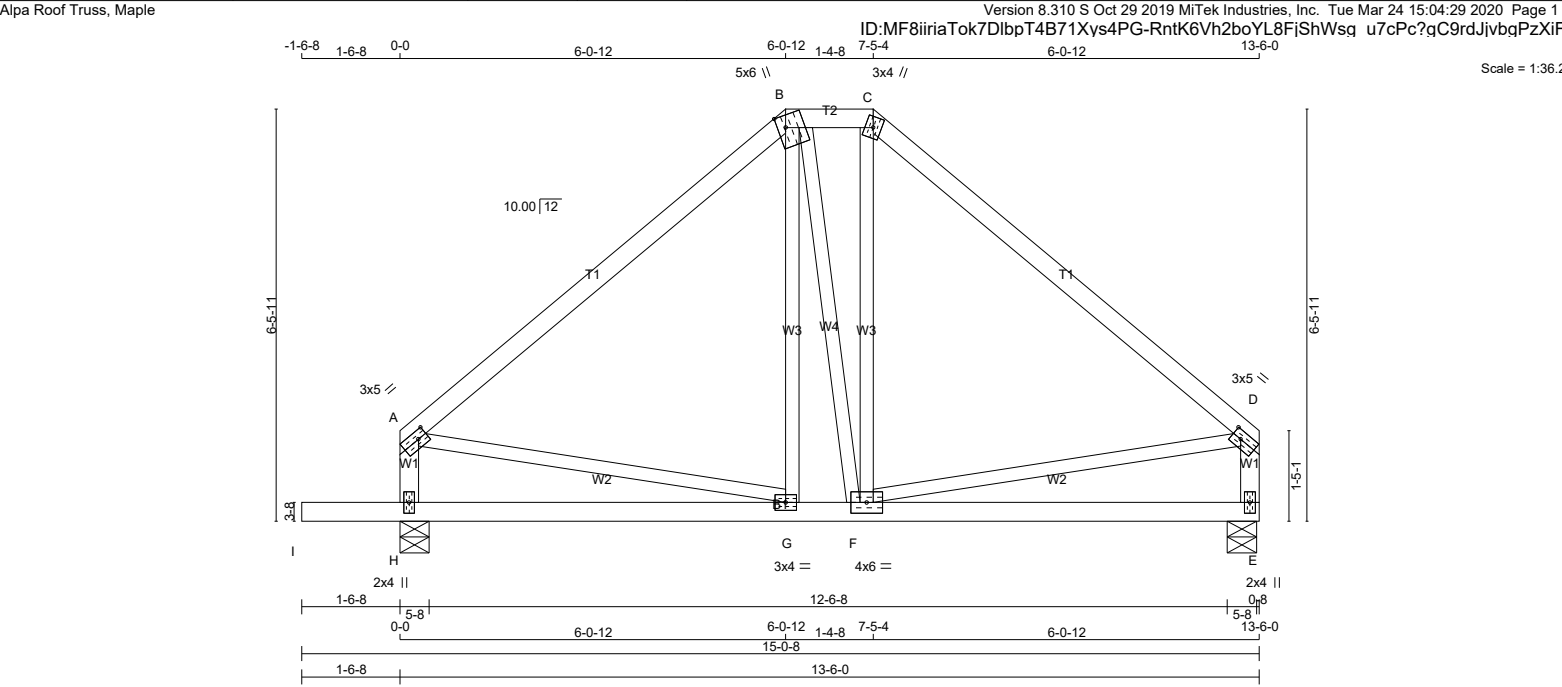
PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

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



JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
318404	H2		1	TRUSS DESC. JT 45147	E20035296



Scale = 1:36.2

TOTAL WEIGHT = 64 lb

LUMBER				DESCR.
N. L. G. A. RULES	CHORDS	SIZE	LUMBER	
A - B	2x4	DRY	No.2	SPF
B - C	2x4	DRY	No.2	SPF
C - D	2x4	DRY	No.2	SPF
H - A	2x4	DRY	No.2	SPF
E - D	2x4	DRY	No.2	SPF
I - E	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 - B	TMVW-t	MT20	3.0	5.0	1.50 1.75
B - C	TTWW+m	MT20	5.0	6.0	2.25 1.50
C - D	TTW+m	MT20	3.0	4.0	
D - E	TMVW-t	MT20	3.0	5.0	1.50 1.75
E - F	BMV1+p	MT20	2.0	4.0	
F - G	BMWWW-t	MT20	4.0	6.0	
G - H	BMWW-t	MT20	3.0	4.0	
H - I	BMV1+p	MT20	2.0	4.0	

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



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

BEARINGS		FACTORED GROSS REACTION	MAXIMUM FACTORED GROSS REACTION	INPUT BRG	REQRD BRG
JT	VERT	HORZ	DOWN	HORZ	UPLIFT
E	651	0	651	0	0
H	800	0	800	0	0

UNFACTORED REACTIONS		1ST LCASE	MAX /MIN. COMPONENT REACTIONS
JT	COMBINED	SNOW	LIVE
E	464	283 / 0	0 / 0
H	570	348 / 0	0 / 0

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

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

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

LOADING
TOTAL LOAD CASES: (4)

CHORDS		MEMB.		WEBS	
MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1	MAX	MAX. UNBRACED LENGTH	MAX. FACTORED FORCE (LBS)
FR-TO	FROM	TO	CSI (LC)	FR-TO	TO
A - B	-474 / 0	-78.0	-78.0	0.37 (1)	6.25
B - C	-365 / 0	-78.0	-78.0	0.02 (1)	6.25
C - D	-475 / 0	-78.0	-78.0	0.37 (1)	6.25
H - A	-605 / 0	0.0	0.0	0.06 (1)	7.81
E - D	-604 / 0	0.0	0.0	0.06 (1)	7.81
I - H	0 / 0	-96.5	-96.5	0.16 (1)	10.00
H - G	0 / 0	-18.5	-18.5	0.16 (4)	10.00
G - F	0 / 364	-18.5	-18.5	0.21 (4)	10.00
F - E	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

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 (0.45")
CALCULATED VERT. DEFL.(LL)= L/ 999 (0.01")
ALLOWABLE DEFL.(TL)= L/360 (0.45")
CALCULATED VERT. DEFL.(TL)= L/ 999 (0.04")

CANTILEVER DEFLECTION:
ALLOWABLE DEFL.(LL)= L/120 (0.19")
CALCULATED VERT. DEFL.(LL)= L/ 999 (0.01")
ALLOWABLE DEFL.(TL)= L/120 (0.19")
CALCULATED VERT. DEFL.(TL)= L/ 999 (0.01")

CSI: TC=0.37/1.00 (C-D:1) , BC=0.21/1.00 (F-G:4) , WB=0.08/1.00 (D-F:1) , SSI=0.14/1.00 (C-D:1)

DOL LUMBER=1.00 NAIL=1.00 LBS 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 .

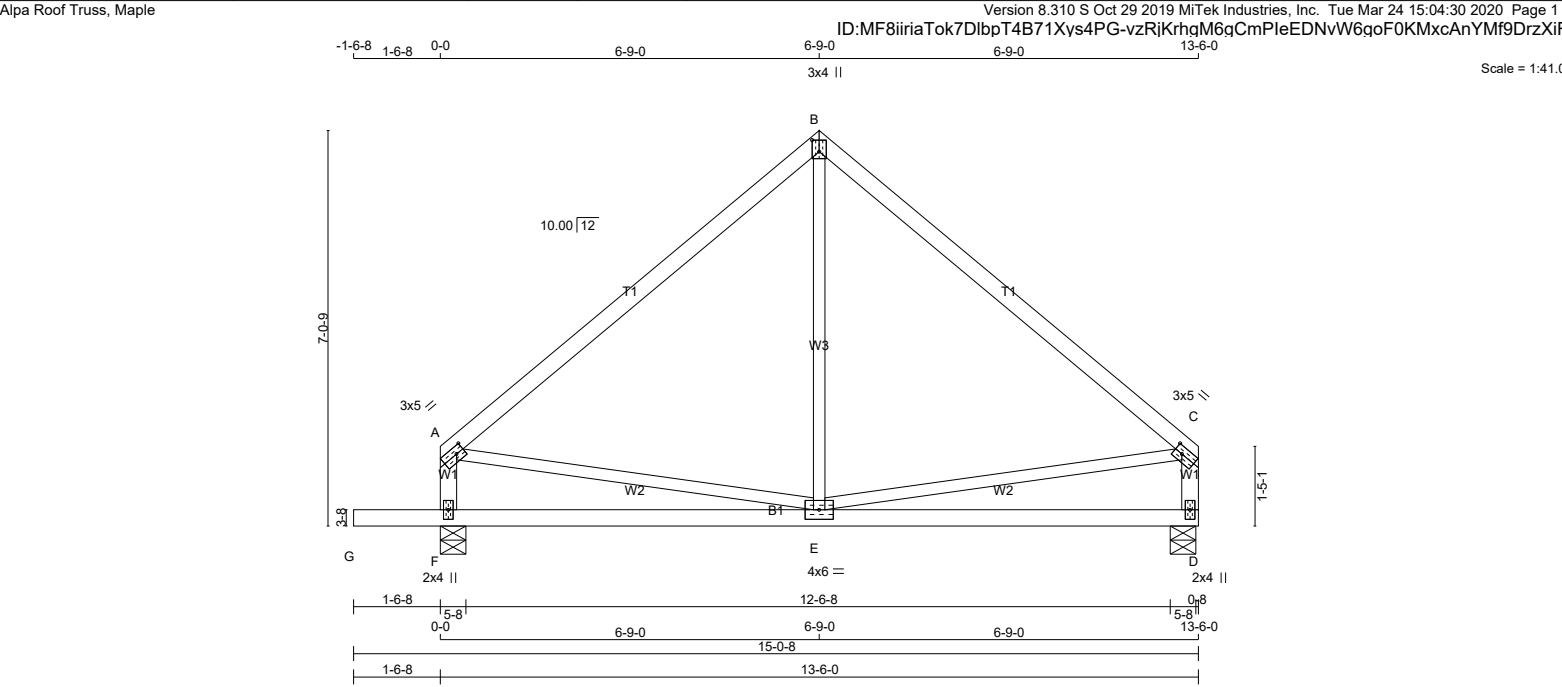
NAIL VALUES
PLATE GRIP(DRY) SHEAR SECTION (PSI) (PLI) (PLI)
MAX MIN MAX MIN MAX MIN
MT20 650 371 1747 788 1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.62 (G) (INPUT = 0.90)
JSI METAL= 0.18 (D) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
318404	H3		1	TRUSS DESC. JT 45147	E20035297



LUMBER				
N. L. G. A. RULES				
CHORDS	SIZE	LUMBER	DESCR.	
A - B	2x4	DRY	2100F 1.8E	SPF
B - C	2x4	DRY	2100F 1.8E	SPF
F - A	2x4	DRY	No.2	SPF
D - C	2x4	DRY	No.2	SPF
G - D	2x4	DRY	No.2	SPF
ALL WEBS	2x3	DRY	No.2	SPF
EXCEPT				
DRY: SEASONED LUMBER.				

PLATES (table is in inches)						
JT	TYPE	PLATES	W	LEN	Y	X
A	TMVW-t	MT20	3.0	5.0	1.50	1.75
B	TTW+p	MT20	3.0	4.0	2.50	1.50
C	TMVW-t	MT20	3.0	5.0	1.50	1.75
D	BMV1+p	MT20	2.0	4.0		
E	BMWWW-t	MT20	4.0	6.0		
F	BMV1+p	MT20	2.0	4.0		

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



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

BEARINGS		FACTORED GROSS REACTION	MAXIMUM FACTORED GROSS REACTION	INPUT BRG	REQRD BRG
JT	VERT	HORZ	DOWN	HORZ	UPLIFT
D	651	0	651	0	0
F	800	0	800	0	0

UNFACTORED REACTIONS		1ST LCASE	MAX./MIN. COMPONENT REACTIONS				
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
D	464	283 / 0	0 / 0	0 / 0	0 / 0	181 / 0	0 / 0
F	570	348 / 0	0 / 0	0 / 0	0 / 0	222 / 0	0 / 0

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

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

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

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 UNBRAC LENGTH	FR-TO	MEMB.	MAX. FACTORED FORCE (LBS)
FR-TO				FROM	TO						
A- B		-446 / 0		-78.0	-78.0	0.30 (1)	6.25	E- B	0 / 128	0.04 (4)	
B- C		-446 / 0		-78.0	-78.0	0.30 (1)	6.25	A- E	0 / 347	0.08 (1)	
F- A		-604 / 0		0.0	0.0	0.06 (1)	7.81	E- C	0 / 347	0.08 (1)	
D- C		-604 / 0		0.0	0.0	0.06 (1)	7.81				
G- F		0 / 0		-96.5	-96.5	0.16 (1)	10.00				
F- E		0 / 0		-18.5	-18.5	0.24 (4)	10.00				
E- D		0 / 0		-18.5	-18.5	0.24 (4)	10.00				

DESIGN CRITERIA

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

SPACING = 24.0 IN. C/C

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

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

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

ALLOWABLE DEFL.(LL)= L/360 (0.45")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")
ALLOWABLE DEFL.(TL)= L/360 (0.45")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.05")

CANTILEVER DEFLECTION:
ALLOWABLE DEFL.(LL)= L/120 (0.19")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.01")
ALLOWABLE DEFL.(TL)= L/120 (0.19")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.01")

CSI: TC=0.30/1.00 (A-B:1) , BC=0.24/1.00 (E-F:4) , WB=0.08/1.00 (C-E:1) , SSI=0.16/1.00 (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

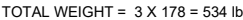
TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

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= 0.51 (A) (INPUT = 0.90)
JSI METAL= 0.18 (A) (INPUT = 1.00)

Scale = 1:56.5

FACTORED CONCENTRATED LOADS (LBS)									
JT	LOC.	LC1	MAX-	MAX+	FACE	DIR.	TYPE	HEEL	CONN
J	27-4-10	-397	-397	---	FRONT	VERT	TOTAL	---	C1

COMPANION LIVE LOAD

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
318404	H41A		3	TRUSS DESC. JT 45147	E20035298(2)

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
A	TMV+p	MT20	2.0	4.0		
B	TMWW-t	MT20	4.0	6.0	1.75	2.00
C	TTWW-m	MT20	5.0	6.0	2.00	2.25
D	TMWW-t	MT20	4.0	4.0	1.50	2.00
E	TMW+w	MT20	2.0	4.0		
F	TMWW+t	MT20	4.0	6.0	2.00	2.00
G	TS-t	MT20	3.0	6.0		
H	TMW+w	MT20	2.0	4.0		
I	TMWW-t	MT20	4.0	4.0	1.50	2.00
J	TTWW-m	MT20	5.0	6.0	2.00	2.25
K	TMWW-t	MT20	4.0	6.0	1.75	2.00
L	TMV+p	MT20	2.0	4.0		
N	BMVW1-t	MT20	5.0	6.0	2.50	2.75
O	BMWW+t	MT20	4.0	6.0		
P	BMWW-t	MT20	4.0	4.0	2.00	1.50
Q	BS-t	MT20	4.0	6.0		
R	BMWWW+t	MT20	8.0	9.0	Edge	4.00
S	BMWWW1+t	MT20	8.0	9.0	Edge	4.00
T	BS-t	MT20	4.0	6.0		
U	BMWW-t	MT20	4.0	4.0	2.00	1.50
V	BMWW+t	MT20	4.0	6.0		
W	BMVW1-t	MT20	5.0	6.0	2.50	2.75

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

PATTERN-LOADING CHECK APPLIED TO THIS TRUSS.

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

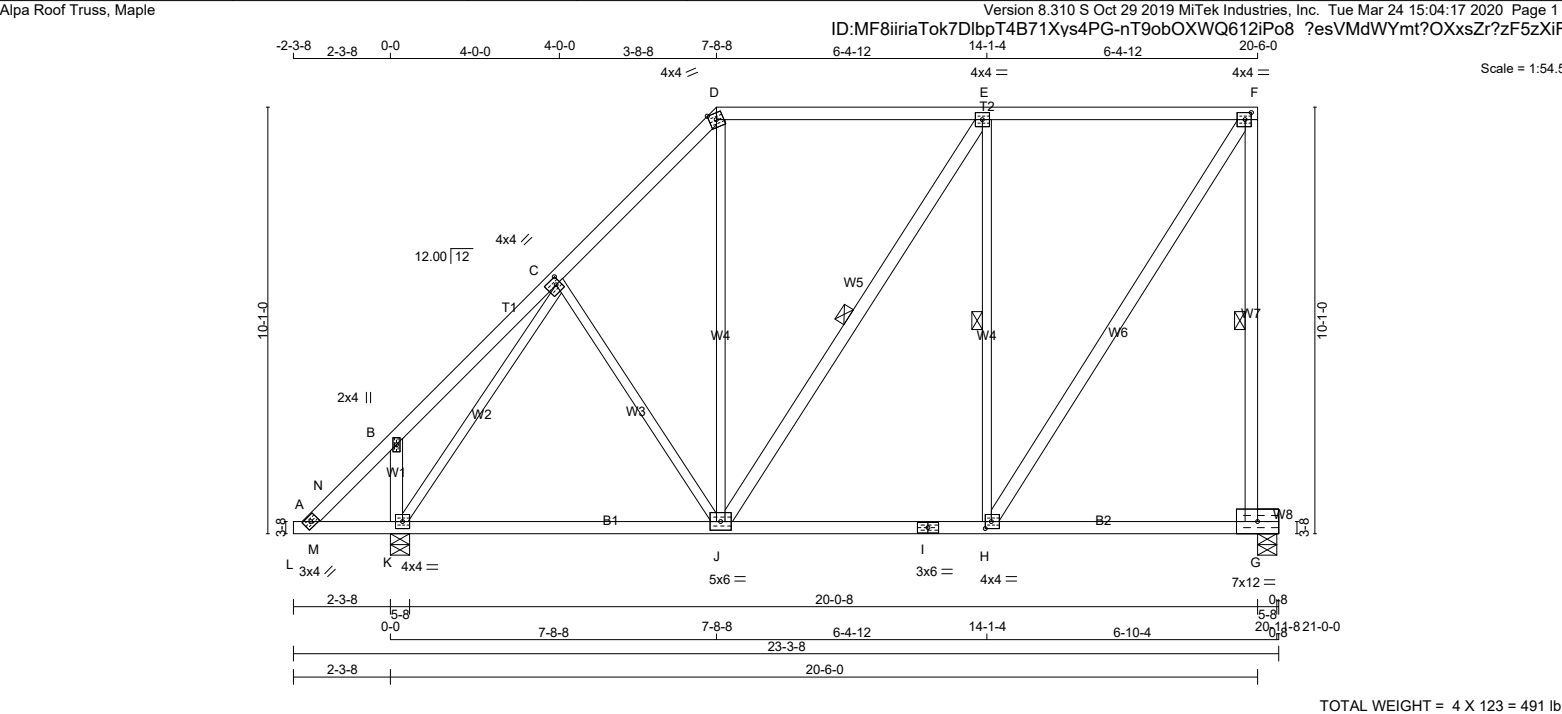
PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.89 (B) (INPUT = 0.90)
JSI METAL= 0.94 (F) (INPUT = 1.00)

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





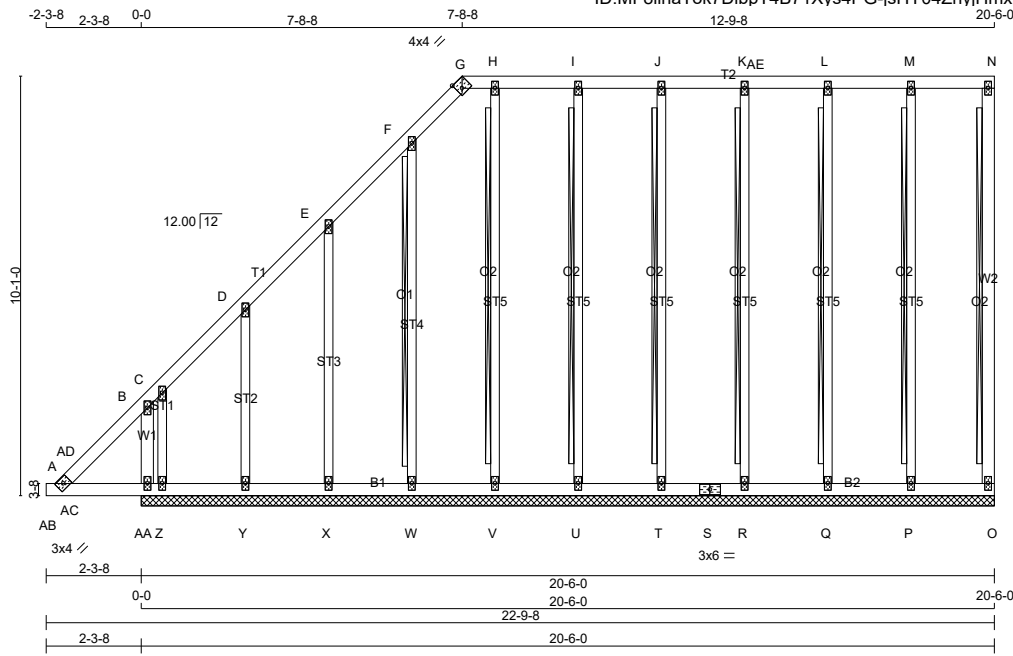
LUMBER N. L. G. A. RULES CHORDS SIZE LUMBER DESCR. A - D 2x4 DRY No.2 SPF D - F 2x4 DRY No.2 SPF G - F 2x4 DRY No.2 SPF K - B 2x4 DRY No.2 SPF L - I 2x4 DRY No.2 SPF I - G 2x4 DRY No.2 SPF ALL WEBS 2x3 DRY No.2 SPF EXCEPT J - E 2x4 DRY No.2 SPF H - F 2x4 DRY No.2 SPF DRY: SEASONED LUMBER.							DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER BEARINGS <table><tr><th></th><th>FACTORED GROSS REACTION</th><th>MAXIMUM FACTORED GROSS REACTION</th><th>INPUT BRG</th><th>REQRD BRG</th></tr><tr><th>JT</th><th>VERT</th><th>HORZ</th><th>DOWN</th><th>IN-SX</th></tr><tr><td>G</td><td>1044</td><td>0</td><td>1044</td><td>0</td></tr><tr><td>K</td><td>1238</td><td>0</td><td>1238</td><td>0</td></tr></table> UNFACTORED REACTIONS <table><tr><th>JT</th><th>1ST LCASE</th><th>MAX./MIN. COMPONENT REACTIONS</th><th></th><th></th><th></th><th></th><th></th></tr><tr><th></th><th>COMBINED</th><th>SNOW</th><th>LIVE</th><th>PERM.LIVE</th><th>WIND</th><th>DEAD</th><th>SOIL</th></tr><tr><td>G</td><td>750</td><td>426 / 0</td><td>0 / 0</td><td>0 / 0</td><td>0 / 0</td><td>324 / 0</td><td>0 / 0</td></tr><tr><td>K</td><td>886</td><td>522 / 0</td><td>0 / 0</td><td>0 / 0</td><td>0 / 0</td><td>363 / 0</td><td>0 / 0</td></tr></table> BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) G, K BRACING FOR SECTION D-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 = 6.25 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, E-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) <table><tr><th colspan="4">CHORDS</th><th colspan="4">WEBS</th></tr><tr><th>MEMB.</th><th>MAX. FACTORED FORCE (LBS)</th><th>FACTORED VERT. LOAD (PLF)</th><th>MAX. UNBRACED LENGTH</th><th>MEMB.</th><th>MAX. FACTORED FORCE (LBS)</th><th>MAX. UNBRACED LENGTH</th><th></th></tr><tr><td>FR-TO</td><td></td><td>FROM TO</td><td></td><td>FR-TO</td><td></td><td></td><td></td></tr><tr><td>A-N</td><td>0 / 41</td><td>-78.0 -78.0 0.04 (4)</td><td>10.00</td><td>J-D</td><td>0 / 177</td><td>0.05 (4)</td><td></td></tr><tr><td>N-B</td><td>-15 / 52</td><td>-78.0 -78.0 0.13 (1)</td><td>6.25</td><td>J-E</td><td>-21 / 0</td><td>0.02 (1)</td><td></td></tr><tr><td>B-C</td><td>-16 / 25</td><td>-78.0 -78.0 0.16 (1)</td><td>6.25</td><td>H-E</td><td>-661 / 0</td><td>0.46 (1)</td><td></td></tr><tr><td>C-D</td><td>-734 / 0</td><td>-78.0 -78.0 0.14 (1)</td><td>6.25</td><td>H-F</td><td>0 / 943</td><td>0.15 (1)</td><td></td></tr><tr><td>D-E</td><td>-504 / 0</td><td>-85.5 -85.5 0.45 (1)</td><td>2.00</td><td>K-C</td><td>-984 / 0</td><td>0.91 (1)</td><td></td></tr><tr><td>E-F</td><td>-516 / 0</td><td>-85.5 -85.5 0.45 (1)</td><td>2.00</td><td>C-J</td><td>-40 / 21</td><td>0.04 (1)</td><td></td></tr><tr><td>G-F</td><td>-996 / 0</td><td>0.0 0.0 0.49 (1)</td><td>6.25</td><td>M-N</td><td>-70 / 0</td><td>0.00 (1)</td><td></td></tr><tr><td>K-B</td><td>-258 / 0</td><td>0.0 0.0 0.03 (1)</td><td>7.81</td><td></td><td></td><td></td><td></td></tr><tr><td>L-A</td><td>0 / 0</td><td>-33.5 -33.5 0.00 (4)</td><td>10.00</td><td></td><td></td><td></td><td></td></tr><tr><td>A-M</td><td>-15 / 12</td><td>-18.5 -18.5 0.02 (4)</td><td>6.25</td><td></td><td></td><td></td><td></td></tr><tr><td>M-K</td><td>-15 / 12</td><td>-18.5 -18.5 0.21 (4)</td><td>6.25</td><td></td><td></td><td></td><td></td></tr><tr><td>K-J</td><td>0 / 525</td><td>-18.5 -18.5 0.26 (4)</td><td>10.00</td><td></td><td></td><td></td><td></td></tr><tr><td>J-I</td><td>0 / 516</td><td>-18.5 -18.5 0.23 (4)</td><td>10.00</td><td></td><td></td><td></td><td></td></tr><tr><td>I-H</td><td>0 / 516</td><td>-18.5 -18.5 0.23 (4)</td><td>10.00</td><td></td><td></td><td></td><td></td></tr><tr><td>H-G</td><td>0 / 0</td><td>-18.5 -18.5 0.17 (4)</td><td>10.00</td><td></td><td></td><td></td><td></td></tr></table>								FACTORED GROSS REACTION	MAXIMUM FACTORED GROSS REACTION	INPUT BRG	REQRD BRG	JT	VERT	HORZ	DOWN	IN-SX	G	1044	0	1044	0	K	1238	0	1238	0	JT	1ST LCASE	MAX./MIN. COMPONENT REACTIONS							COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL	G	750	426 / 0	0 / 0	0 / 0	0 / 0	324 / 0	0 / 0	K	886	522 / 0	0 / 0	0 / 0	0 / 0	363 / 0	0 / 0	CHORDS				WEBS				MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. UNBRACED LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. UNBRACED LENGTH		FR-TO		FROM TO		FR-TO				A-N	0 / 41	-78.0 -78.0 0.04 (4)	10.00	J-D	0 / 177	0.05 (4)		N-B	-15 / 52	-78.0 -78.0 0.13 (1)	6.25	J-E	-21 / 0	0.02 (1)		B-C	-16 / 25	-78.0 -78.0 0.16 (1)	6.25	H-E	-661 / 0	0.46 (1)		C-D	-734 / 0	-78.0 -78.0 0.14 (1)	6.25	H-F	0 / 943	0.15 (1)		D-E	-504 / 0	-85.5 -85.5 0.45 (1)	2.00	K-C	-984 / 0	0.91 (1)		E-F	-516 / 0	-85.5 -85.5 0.45 (1)	2.00	C-J	-40 / 21	0.04 (1)		G-F	-996 / 0	0.0 0.0 0.49 (1)	6.25	M-N	-70 / 0	0.00 (1)		K-B	-258 / 0	0.0 0.0 0.03 (1)	7.81					L-A	0 / 0	-33.5 -33.5 0.00 (4)	10.00					A-M	-15 / 12	-18.5 -18.5 0.02 (4)	6.25					M-K	-15 / 12	-18.5 -18.5 0.21 (4)	6.25					K-J	0 / 525	-18.5 -18.5 0.26 (4)	10.00					J-I	0 / 516	-18.5 -18.5 0.23 (4)	10.00					I-H	0 / 516	-18.5 -18.5 0.23 (4)	10.00					H-G	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. 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DEFL.(TL) = L/ 999 (0.01") CSI: TC=0.49/1.00 (F-G:1), BC=0.26/1.00 (J-K:4), WB=0.91/1.00 (C-K:1), SSI=0.27/1.00 (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 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= 0.81 (C) (INPUT = 0.90) JSI METAL= 0.33 (C) (INPUT = 1.00)						
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JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
318404	G1G		1	TRUSS DESC. JT 45147	E20035300

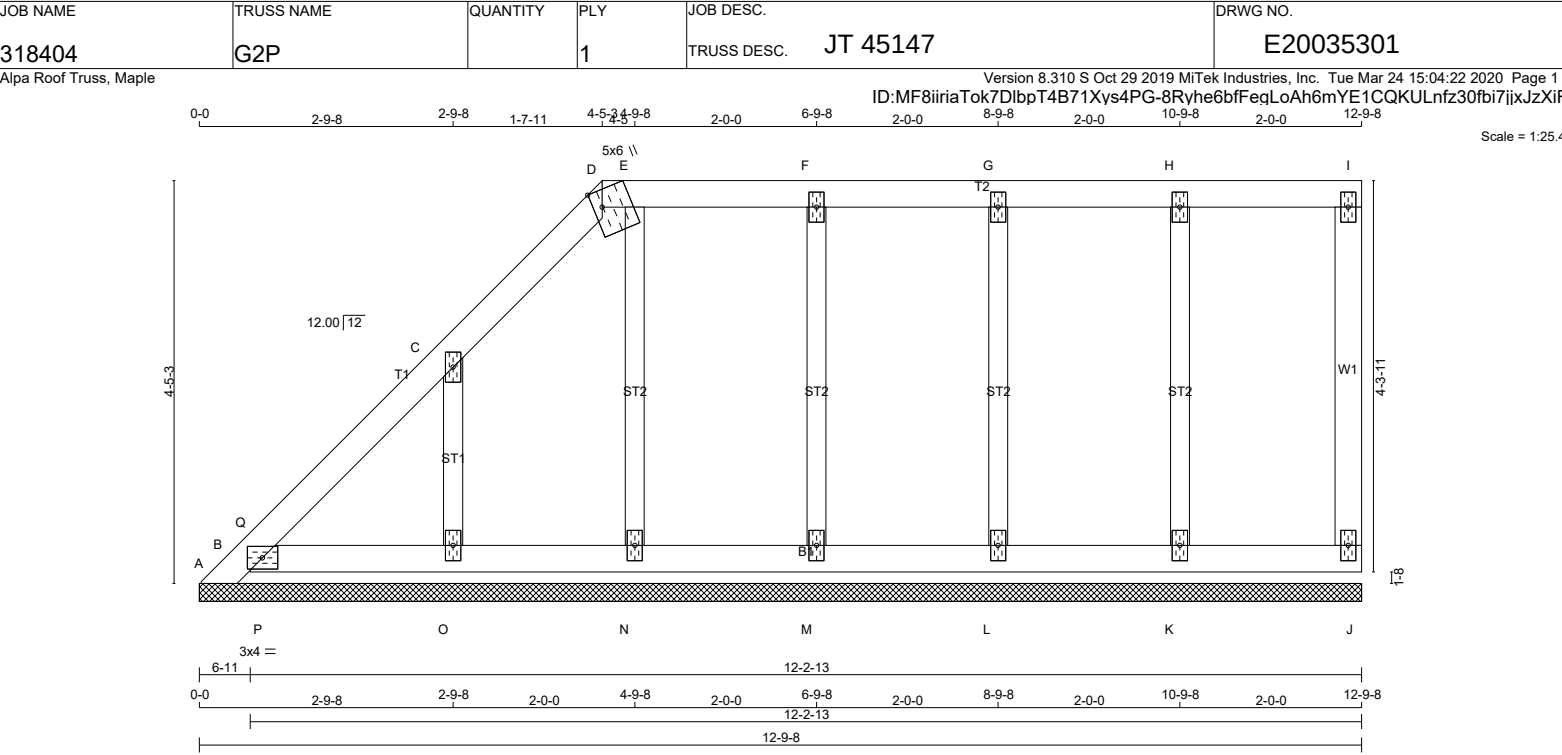
Alpa Roof Truss, Maple

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LUMBER N. L. G. A. RULES CHORDS SIZE LUMBER DESCR. AA- B 2x4 DRY No.2 SPF A - G 2x4 DRY No.2 SPF G - N 2x4 DRY No.2 SPF O - N 2x4 DRY No.2 SPF AB- S 2x4 DRY No.2 SPF S - O 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. <u>PROVIDE ANCHORAGE AT BEARING JOINT Z FOR 382 LBS. FACTORED UPLIFT BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S)</u> BRACING FOR SECTION G-N, 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. 2x4 DRY SPF No.2 T-BRACE AT N-O, M-P, L-Q, K-R, J-T, I-U, H-V, F-W 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)				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 WALL 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 CSI: TC=0.14/1.00 (B-AD:1) , BC=0.17/1.00 (AA-AC:1) , WB=0.15/1.00 (H-V:1) , SSI=0.22/1.00 (Z-AA: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= 0.41 (G) (INPUT = 0.90) JSI METAL= 0.18 (B) (INPUT = 1.00)																																																																																																																																																																																																																	
PLATES (table is in inches) JT TYPE PLATES W LEN Y X A TBM-h MT20 3.0 4.0 B TMV+p MT20 2.0 4.0 C, D, E, F, H, I, J, K, L, M C TMW+w MT20 2.0 4.0 G TT-h MT20 4.0 4.0 Edge 1.50 N TMV+p MT20 2.0 4.0 O BMV1+p MT20 2.0 4.0 P, Q, R, T, U, V, W, X, Y, Z P BMW1+w MT20 2.0 4.0 S BS-t MT20 3.0 6.0 AA BMV1+p MT20 2.0 4.0 Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.				<table><tr><th colspan="3">CHORDS</th><th colspan="3">WEBS</th></tr><tr><th>MEMB.</th><th>MAX. FACTORED FORCE (LBS)</th><th>FACTORED VERT. LOAD (PLF)</th><th>MAX. UNBRACED LENGTH</th><th>MEMB.</th><th>MAX. FACTORED FORCE (LBS)</th></tr><tr><td>FR-TO</td><td></td><td>FROM TO</td><td></td><td>FR-TO</td><td></td></tr><tr><td>AA- B</td><td>-347 / 0</td><td>0.0 0.0 0.04 (1)</td><td>7.81</td><td>P- M</td><td>-187 / 0</td></tr><tr><td>A-AD</td><td>0 / 26</td><td>-78.0 -78.0 0.02 (1)</td><td>10.00</td><td>Q- L</td><td>-170 / 0</td></tr><tr><td>AD- B</td><td>0 / 31</td><td>-78.0 -78.0 0.14 (1)</td><td>10.00</td><td>R- K</td><td>-171 / 0</td></tr><tr><td>B- C</td><td>-155 / 0</td><td>-78.0 -78.0 0.14 (1)</td><td>6.25</td><td>T- J</td><td>-173 / 0</td></tr><tr><td>C- D</td><td>-8 / 0</td><td>-78.0 -78.0 0.04 (1)</td><td>10.00</td><td>U- I</td><td>-158 / 0</td></tr><tr><td>D- E</td><td>-7 / 0</td><td>-78.0 -78.0 0.04 (1)</td><td>10.00</td><td>V- H</td><td>-190 / 0</td></tr><tr><td>E- F</td><td>0 / 0</td><td>-78.0 -78.0 0.04 (1)</td><td>10.00</td><td>W- F</td><td>-156 / 0</td></tr><tr><td>F- G</td><td>-18 / 0</td><td>-78.0 -78.0 0.04 (1)</td><td>6.25</td><td>X- E</td><td>-148 / 0</td></tr><tr><td>G- H</td><td>0 / 2</td><td>-85.5 -85.5 0.07 (1)</td><td>2.00</td><td>Y- D</td><td>-159 / 0</td></tr><tr><td>H- I</td><td>0 / 0</td><td>-85.5 -85.5 0.06 (1)</td><td>10.00</td><td>Z- C</td><td>0 / 121</td></tr><tr><td>I- J</td><td>0 / 0</td><td>-85.5 -85.5 0.04 (1)</td><td>10.00</td><td>AC-AD</td><td>-80 / 0</td></tr><tr><td>J-AE</td><td>0 / 0</td><td>-85.5 -85.5 0.04 (1)</td><td>10.00</td><td></td><td></td></tr><tr><td>AE- K</td><td>0 / 0</td><td>-85.5 -85.5 0.04 (1)</td><td>10.00</td><td></td><td></td></tr><tr><td>K- L</td><td>0 / 0</td><td>-85.5 -85.5 0.04 (1)</td><td>10.00</td><td></td><td></td></tr><tr><td>L- M</td><td>0 / 0</td><td>-85.5 -85.5 0.04 (1)</td><td>10.00</td><td></td><td></td></tr><tr><td>M- N</td><td>0 / 0</td><td>-85.5 -85.5 0.04 (1)</td><td>10.00</td><td></td><td></td></tr><tr><td>O- N</td><td>-70 / 0</td><td>0.0 0.0 0.05 (1)</td><td>7.81</td><td></td><td></td></tr><tr><td>AB- A</td><td>0 / 0</td><td>-33.5 -33.5 0.00 (4)</td><td>10.00</td><td></td><td></td></tr><tr><td>A-AC</td><td>-1 / 3</td><td>-18.5 -18.5 0.01 (1)</td><td>10.00</td><td></td><td></td></tr><tr><td>AC-AA</td><td>-1 / 3</td><td>-18.5 -18.5 0.17 (1)</td><td>10.00</td><td></td><td></td></tr><tr><td>AA- Z</td><td>-1 / 3</td><td>-18.5 -18.5 0.17 (1)</td><td>10.00</td><td></td><td></td></tr><tr><td>Z- Y</td><td>0 / 8</td><td>-18.5 -18.5 0.02 (4)</td><td>10.00</td><td></td><td></td></tr><tr><td>Y- X</td><td>0 / 4</td><td>-18.5 -18.5 0.02 (4)</td><td>10.00</td><td></td><td></td></tr><tr><td>X- W</td><td>0 / 2</td><td>-18.5 -18.5 0.01 (4)</td><td>10.00</td><td></td><td></td></tr><tr><td>W- V</td><td>0 / 0</td><td>-18.5 -18.5 0.01 (4)</td><td>10.00</td><td></td><td></td></tr><tr><td>V- U</td><td>0 / 0</td><td>-18.5 -18.5 0.01 (4)</td><td>10.00</td><td></td><td></td></tr><tr><td>U- T</td><td>0 / 0</td><td>-18.5 -18.5 0.01 (4)</td><td>10.00</td><td></td><td></td></tr><tr><td>T- S</td><td>0 / 0</td><td>-18.5 -18.5 0.01 (4)</td><td>10.00</td><td></td><td></td></tr><tr><td>S- R</td><td>0 / 0</td><td>-18.5 -18.5 0.01 (4)</td><td>10.00</td><td></td><td></td></tr><tr><td>R- Q</td><td>0 / 0</td><td>-18.5 -18.5 0.01 (4)</td><td>10.00</td><td></td><td></td></tr><tr><td>Q- P</td><td>0 / 0</td><td>-18.5 -18.5 0.02 (4)</td><td>10.00</td><td></td><td></td></tr><tr><td>P- O</td><td>0 / 0</td><td>-18.5 -18.5 0.02 (4)</td><td>10.00</td><td></td><td></td></tr></table>				CHORDS			WEBS			MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. UNBRACED LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	FR-TO		FROM TO		FR-TO		AA- B	-347 / 0	0.0 0.0 0.04 (1)	7.81	P- M	-187 / 0	A-AD	0 / 26	-78.0 -78.0 0.02 (1)	10.00	Q- L	-170 / 0	AD- B	0 / 31	-78.0 -78.0 0.14 (1)	10.00	R- K	-171 / 0	B- C	-155 / 0	-78.0 -78.0 0.14 (1)	6.25	T- J	-173 / 0	C- D	-8 / 0	-78.0 -78.0 0.04 (1)	10.00	U- I	-158 / 0	D- E	-7 / 0	-78.0 -78.0 0.04 (1)	10.00	V- H	-190 / 0	E- F	0 / 0	-78.0 -78.0 0.04 (1)	10.00	W- F	-156 / 0	F- G	-18 / 0	-78.0 -78.0 0.04 (1)	6.25	X- E	-148 / 0	G- H	0 / 2	-85.5 -85.5 0.07 (1)	2.00	Y- D	-159 / 0	H- I	0 / 0	-85.5 -85.5 0.06 (1)	10.00	Z- C	0 / 121	I- J	0 / 0	-85.5 -85.5 0.04 (1)	10.00	AC-AD	-80 / 0	J-AE	0 / 0	-85.5 -85.5 0.04 (1)	10.00			AE- K	0 / 0	-85.5 -85.5 0.04 (1)	10.00			K- L	0 / 0	-85.5 -85.5 0.04 (1)	10.00			L- M	0 / 0	-85.5 -85.5 0.04 (1)	10.00			M- N	0 / 0	-85.5 -85.5 0.04 (1)	10.00			O- N	-70 / 0	0.0 0.0 0.05 (1)	7.81			AB- A	0 / 0	-33.5 -33.5 0.00 (4)	10.00			A-AC	-1 / 3	-18.5 -18.5 0.01 (1)	10.00			AC-AA	-1 / 3	-18.5 -18.5 0.17 (1)	10.00			AA- Z	-1 / 3	-18.5 -18.5 0.17 (1)	10.00			Z- Y	0 / 8	-18.5 -18.5 0.02 (4)	10.00			Y- X	0 / 4	-18.5 -18.5 0.02 (4)	10.00			X- W	0 / 2	-18.5 -18.5 0.01 (4)	10.00			W- V	0 / 0	-18.5 -18.5 0.01 (4)	10.00			V- U	0 / 0	-18.5 -18.5 0.01 (4)	10.00			U- T	0 / 0	-18.5 -18.5 0.01 (4)	10.00			T- S	0 / 0	-18.5 -18.5 0.01 (4)	10.00			S- R	0 / 0	-18.5 -18.5 0.01 (4)	10.00			R- Q	0 / 0	-18.5 -18.5 0.01 (4)	10.00			Q- P	0 / 0	-18.5 -18.5 0.02 (4)	10.00			P- O	0 / 0	-18.5 -18.5 0.02 (4)	10.00		
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AE- K	0 / 0	-85.5 -85.5 0.04 (1)	10.00																																																																																																																																																																																																																						
K- L	0 / 0	-85.5 -85.5 0.04 (1)	10.00																																																																																																																																																																																																																						
L- M	0 / 0	-85.5 -85.5 0.04 (1)	10.00																																																																																																																																																																																																																						
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LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2																																																																																																																																																																																																																									



LUMBER				
N. L. G. A. RULES				
CHORDS	SIZE	LUMBER	DESCR.	
A - D	2x4	DRY	No.2	SPF
D - I	2x4	DRY	No.2	SPF
J - I	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.

PLATES (table is in inches)				
JT TYPE	PLATES	W	LEN	Y X
B TMB1-I	MT20	3.0	4.0	
C, F, G, H				
C TMW+w	MT20	2.0	4.0	
D				
D TTW+m	MT20	5.0	6.0	Edge 1.25
E				
I TMV+p	MT20	2.0	4.0	
J BMV1+p	MT20	2.0	4.0	
K, L, M, N, O				
K BMW1+w	MT20	2.0	4.0	

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

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): J, K, L, M, N, O

PROVIDE ANCHORAGE AT BEARING JOINT A 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)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. LC1 (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. LC1 (LC)	
FR-TO		FROM TO		FR-TO			
A-B	0 / 31	-96.5 -96.5	0.03 (1)	K-H	-174 / 0	0.05 (1)	
B-Q	-53 / 0	-78.0 -78.0	0.03 (1)	L-G	-152 / 0	0.04 (1)	
Q-C	-4 / 0	-78.0 -78.0	0.04 (1)	M-F	-159 / 0	0.04 (1)	
C-D	-12 / 0	-78.0 -78.0	0.04 (1)	N-E	-155 / 0	0.04 (1)	
D-E	0 / 5	-78.0 -78.0	0.03 (1)	O-C	-163 / 0	0.03 (1)	
E-F	0 / 0	-78.0 -78.0	0.04 (1)	P-Q	-21 / 24	0.00 (1)	
F-G	0 / 0	-78.0 -78.0	0.04 (1)				
G-H	0 / 0	-78.0 -78.0	0.04 (1)				
H-I	0 / 0	-78.0 -78.0	0.04 (1)				
J-I	-63 / 0	0.0 0.0	0.02 (1)				
B-P	0 / 8	-18.5 -18.5	0.01 (1)				
P-O	0 / 8	-18.5 -18.5	0.02 (4)				
O-N	0 / 0	-18.5 -18.5	0.02 (4)				
N-M	0 / 0	-18.5 -18.5	0.02 (4)				
M-L	0 / 0	-18.5 -18.5	0.02 (4)				
L-K	0 / 0	-18.5 -18.5	0.02 (4)				
K-J	0 / 0	-18.5 -18.5	0.02 (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

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

CSI: TC=0.04/1.00 (C-D), BC=0.02/1.00 (O-P:4), WB=0.05/1.00 (H-K:1), SSI=0.07/1.00 (H-I:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

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

PLATE PLACEMENT TOL. = 0.250 inches

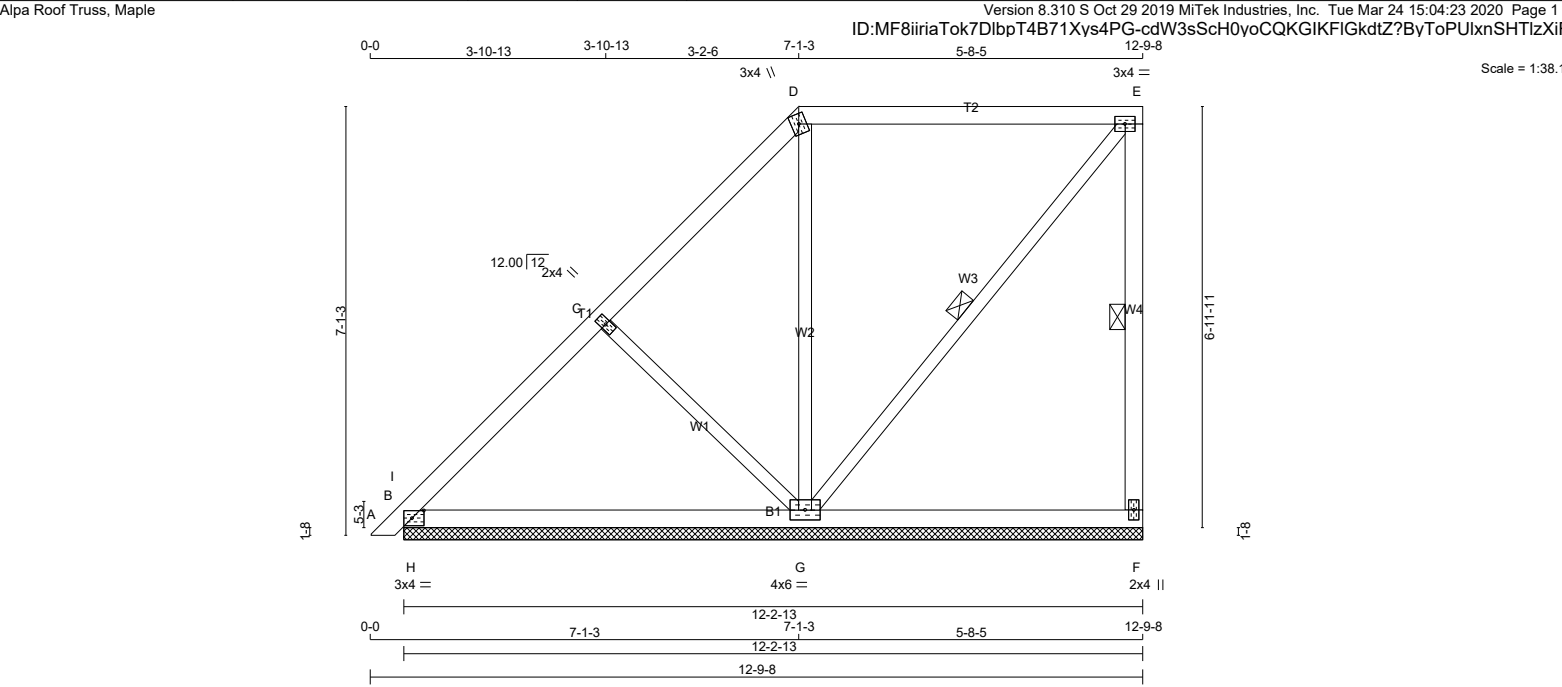
PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.12 (C) (INPUT = 0.90)
JSI METAL= 0.09 (C) (INPUT = 1.00)

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



JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
318404	G3P		1	TRUSS DESC. JT 45147	E20035302



LUMBER				
N. L. G. A. RULES				
CHORDS	SIZE	DRY	LUMBER	DESCR.
A - D	2x4	DRY	No.2	SPF
D - E	2x4	DRY	No.2	SPF
F - E	2x4	DRY	No.2	SPF
B - 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	TMB1-I	MT20	3.0	4.0	1.50 2.50
C	TMW+w	MT20	2.0	4.0	
D	TTW+m	MT20	3.0	4.0	
E	TMVW-t	MT20	3.0	4.0	
F	BMV1+p	MT20	2.0	4.0	
G	BMWWW1-t	MT20	4.0	6.0	

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
F	249	0	249	0	0
B	338	0	338	0	0
G	628	0	628	0	0

UNFACTORED REACTIONS		MAX./MIN. COMPONENT REACTIONS					
JT	1ST LCASE	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
F	177	111 / 0	0 / 0	0 / 0	0 / 0	66 / 0	0 / 0
B	240	153 / 0	0 / 0	0 / 0	0 / 0	87 / 0	0 / 0
G	448	268 / 0	0 / 0	0 / 0	0 / 0	180 / 0	0 / 0

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

1 LATERAL BRACE(S) AT 1/2 LENGTH OF E-F, E-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 (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. LC1 (LC)	
FR-TO		FROM	TO	FR-TO			
A-B	0 / 11	-78.0	-78.0 0.01 (1)	C-G	-228 / 0	0.08 (1)	
B-I	-372 / 0	-78.0	-78.0 0.08 (4)	G-D	-321 / 0	0.27 (1)	
I-C	-196 / 0	-78.0	-78.0 0.15 (1)	G-E	-13 / 3	0.01 (1)	
C-D	-19 / 0	-78.0	-78.0 0.14 (1)	H-I	0 / 211	0.00 (1)	
D-E	-2 / 8	-78.0	-78.0 0.43 (1)				
F-E	-212 / 0	0.0	0.0 0.05 (1)				
B-H	0 / 160	-18.5	-18.5 0.08 (4)				
H-G	0 / 160	-18.5	-18.5 0.19 (4)				
G-F	0 / 0	-18.5	-18.5 0.18 (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, 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

CSI: TC=0.43/1.00 (D-E:1), BC=0.19/1.00 (G-H:4), WB=0.27/1.00 (D-G:1), SSI=0.18/1.00 (B-H:4)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.49 (D) (INPUT = 0.90)
JSI METAL= 0.11 (D) (INPUT = 1.00)

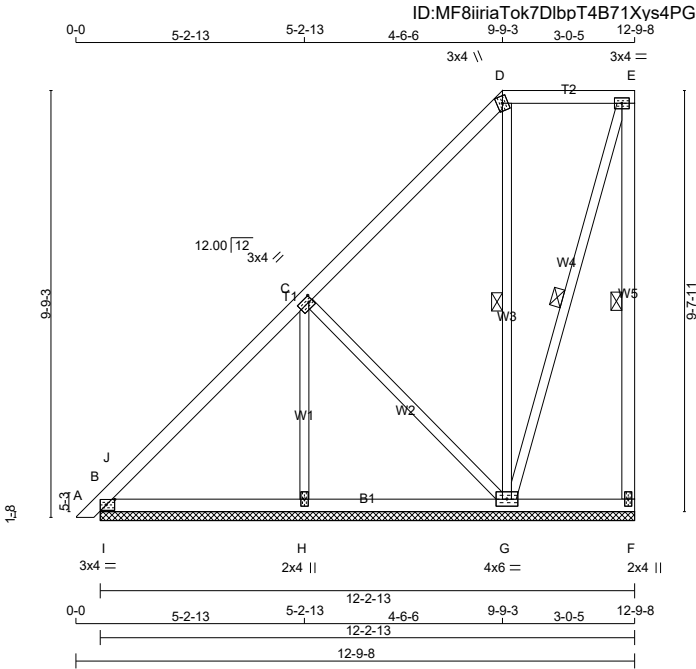
LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2



JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
318404	G4P		1	TRUSS DESC. JT 45147	E20035303

Alpa Roof Truss, Maple

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TOTAL WEIGHT = 67 lb

[M]

LUMBER				
N. L. G. A. RULES				
CHORDS	SIZE	LUMBER	DESCR.	
A - D	2x4	DRY	No.2	SPF
D - E	2x4	DRY	No.2	SPF
F - E	2x4	DRY	No.2	SPF
B - 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	TMB1-I	MT20	3.0	4.0 1.50 2.50
C	TMWW-t	MT20	3.0	4.0 1.50 1.00
D	TTW+m	MT20	3.0	4.0
E	TMVW-t	MT20	3.0	4.0
F	BMV1+p	MT20	2.0	4.0
G	BMWW1-t	MT20	4.0	6.0
H	BMW1+w	MT20	2.0	4.0

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

BEARINGS		FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG		REQRD BRG	
JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX	IN-SX	IN-SX
F	123	0	123	0	0	12-2-13	1-6-3	1-6-3	1-6-3
B	315	0	315	0	0	12-2-13	1-6-3	1-6-3	1-6-3
H	329	0	329	0	0	12-2-13	1-6-3	1-6-3	1-6-3
G	449	0	449	0	0	12-2-13	1-6-3	1-6-3	1-6-3

UNFACTORED REACTIONS

1ST LCASE		MAX./MIN. COMPONENT REACTIONS		DEAD		SOIL	
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
F	87	55 / 0	0 / 0	0 / 0	0 / 0	32 / 0	0 / 0
B	222	148 / 0	0 / 0	0 / 0	0 / 0	74 / 0	0 / 0
H	237	129 / 0	0 / 0	0 / 0	0 / 0	108 / 0	0 / 0
G	319	200 / 0	0 / 0	0 / 0	0 / 0	119 / 0	0 / 0

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

1 LATERAL BRACE(S) AT 1/2 LENGTH OF E-F, D-G, E-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				
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	0 / 11	-78.0	-78.0	0.01 (1)	10.00	H-C	-208 / 0	0.08 (1)
B-J	-63 / 0	-78.0	-78.0	0.05 (1)	6.25	C-G	-155 / 0	0.13 (1)
J-C	-126 / 0	-78.0	-78.0	0.26 (1)	6.25	G-D	-255 / 0	0.16 (1)
C-D	-27 / 0	-78.0	-78.0	0.26 (1)	6.25	G-E	-16 / 0	0.01 (1)
D-E	0 / 5	-78.0	-78.0	0.12 (1)	10.00	I-J	-298 / 1	0.00 (1)
F-E	-102 / 0	0.0	0.0	0.05 (1)	6.25			
B-I	0 / 106	-18.5	-18.5	0.10 (1)	10.00			
I-H	0 / 106	-18.5	-18.5	0.11 (1)	10.00			
H-G	0 / 106	-18.5	-18.5	0.11 (4)	10.00			
G-F	0 / 0	-18.5	-18.5	0.06 (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, 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=0.26/1.00 (C-J:1), BC=0.11/1.00 (H-I:1), WB=0.16/1.00 (D-G:1), SSI=0.25/1.00 (B-I:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

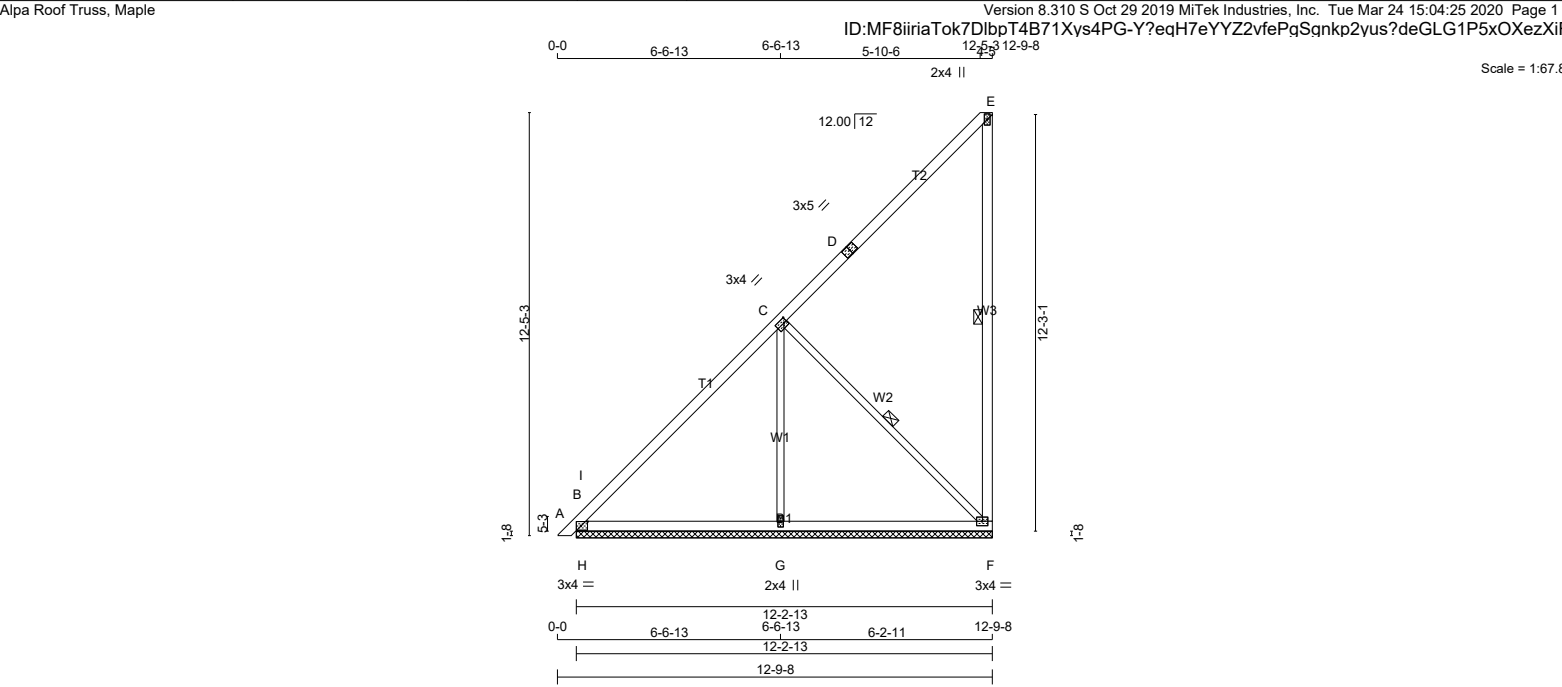
NAIL VALUES			
PLATE	GRIP(DRY)	SHEAR	SECTION
	(PSI)	(PLI)	(PLI)
	MAX	MIN	MAX
MT20	650	371	1747
	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

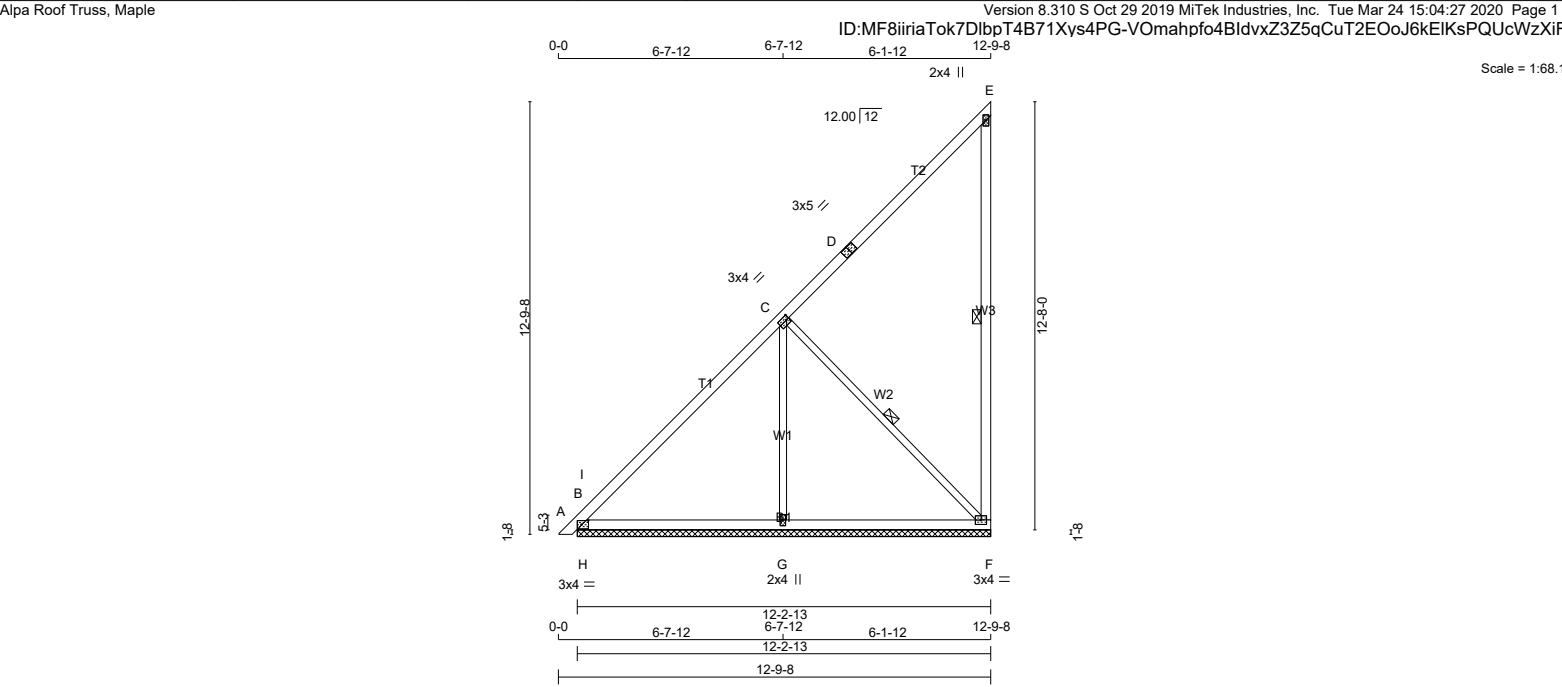
JSI GRIP= 0.29 (B) (INPUT = 0.90)
JSI METAL= 0.07 (D) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
318404	G5P		1	TRUSS DESC. JT 45147	E20035304



LUMBER N. L. G. A. RULES CHORDS SIZE LUMBER DESCR. A - D 2x4 DRY No.2 SPF D - E 2x4 DRY No.2 SPF F - E 2x4 DRY No.2 SPF B - F 2x4 DRY No.2 SPF ALL WEBS 2x3 DRY No.2 SPF DRY: SEASONED LUMBER.							DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER BEARINGS <table><tr><th></th><th colspan="2">FACTORED GROSS REACTION</th><th colspan="2">MAXIMUM FACTORED GROSS REACTION</th><th>INPUT BRG</th><th>REQRD BRG</th></tr><tr><th>JT</th><th>VERT</th><th>HORZ</th><th>DOWN</th><th>HORZ</th><th>UPLIFT</th><th>IN-SX</th></tr><tr><td>F</td><td>373</td><td>0</td><td>373</td><td>0</td><td>0</td><td>12-2-13</td></tr><tr><td>B</td><td>400</td><td>0</td><td>400</td><td>0</td><td>0</td><td>12-2-13</td></tr><tr><td>G</td><td>442</td><td>0</td><td>442</td><td>0</td><td>0</td><td>12-2-13</td></tr></table>								FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG	REQRD BRG	JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	F	373	0	373	0	0	12-2-13	B	400	0	400	0	0	12-2-13	G	442	0	442	0	0	12-2-13	DESIGN CRITERIA SPECIFIED LOADS: TOP CH. LL = 21.0 PSF DL = 6.0 PSF BOT CH. LL = 0.0 PSF DL = 7.4 PSF TOTAL LOAD = 34.4 PSF SPACING = 24.0 IN. C/C THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015 THIS DESIGN COMPLIES WITH: - PART 9 OF BCBC 2018 , ABC 2019 - PART 9 OF OBC 2012 (2019 AMENDMENT) - CSA 086-14 - TPIC 2014 (55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD CSI: TC=0.47/1.00 (C-I:1) , BC=0.21/1.00 (G-H:4) , WB=0.19/1.00 (C-G:1) , SSI=0.38/1.00 (B-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= 0.72 (D) (INPUT = 0.90) JSI METAL= 0.25 (D) (INPUT = 1.00)																																																												
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B	400	0	400	0	0	12-2-13																																																																																																							
G	442	0	442	0	0	12-2-13																																																																																																							
PLATES (table is in inches) <table><tr><th>JT</th><th>TYPE</th><th>PLATES</th><th>W</th><th>LEN</th><th>Y</th><th>X</th></tr><tr><td>B</td><td>TMB1-I</td><td>MT20</td><td>3.0</td><td>4.0</td><td>1.50</td><td>2.50</td></tr><tr><td>C</td><td>TMWW-t</td><td>MT20</td><td>3.0</td><td>4.0</td><td>1.50</td><td>1.00</td></tr><tr><td>D</td><td>TS-t</td><td>MT20</td><td>3.0</td><td>5.0</td><td></td><td></td></tr><tr><td>E</td><td>TMV+p</td><td>MT20</td><td>2.0</td><td>4.0</td><td></td><td></td></tr><tr><td>F</td><td>BMVW1-t</td><td>MT20</td><td>3.0</td><td>4.0</td><td></td><td></td></tr><tr><td>G</td><td>BMW1+w</td><td>MT20</td><td>2.0</td><td>4.0</td><td></td><td></td></tr></table>							JT	TYPE	PLATES	W	LEN	Y	X	B	TMB1-I	MT20	3.0	4.0	1.50	2.50	C	TMWW-t	MT20	3.0	4.0	1.50	1.00	D	TS-t	MT20	3.0	5.0			E	TMV+p	MT20	2.0	4.0			F	BMVW1-t	MT20	3.0	4.0			G	BMW1+w	MT20	2.0	4.0			UNFACTORED REACTIONS <table><tr><th>JT</th><th>1ST LCASE</th><th colspan="6">MAX./MIN. COMPONENT REACTIONS</th></tr><tr><th></th><th>COMBINED</th><th>SNOW</th><th>LIVE</th><th>PERM.LIVE</th><th>WIND</th><th>DEAD</th><th>SOIL</th></tr><tr><td>F</td><td>264</td><td>174 / 0</td><td>0 / 0</td><td>0 / 0</td><td>0 / 0</td><td>90 / 0</td><td>0 / 0</td></tr><tr><td>B</td><td>282</td><td>189 / 0</td><td>0 / 0</td><td>0 / 0</td><td>0 / 0</td><td>93 / 0</td><td>0 / 0</td></tr><tr><td>G</td><td>319</td><td>169 / 0</td><td>0 / 0</td><td>0 / 0</td><td>0 / 0</td><td>150 / 0</td><td>0 / 0</td></tr></table>							JT	1ST LCASE	MAX./MIN. COMPONENT REACTIONS							COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL	F	264	174 / 0	0 / 0	0 / 0	0 / 0	90 / 0	0 / 0	B	282	189 / 0	0 / 0	0 / 0	0 / 0	93 / 0	0 / 0	G	319	169 / 0	0 / 0	0 / 0	0 / 0	150 / 0	0 / 0							
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LOADING TOTAL LOAD CASES: (4) <table><tr><th colspan="4">CHORDS</th><th colspan="4">WEBS</th></tr><tr><th>MEMB.</th><th>MAX. FACTORED FORCE (LBS)</th><th>FACTORED VERT. LOAD (PLF)</th><th>LC1 MAX CSI (LC)</th><th>MAX. UNBRACED LENGTH</th><th>MEMB.</th><th>MAX. FACTORED FORCE (LBS)</th><th>MAX CSI (LC)</th></tr><tr><td>FR-TO</td><td></td><td>FROM TO</td><td></td><td></td><td>FR-TO</td><td></td><td></td></tr><tr><td>A- B</td><td>0 / 11</td><td>-78.0 -78.0</td><td>0.01 (1)</td><td>10.00</td><td>G- C</td><td>-277 / 0</td><td>0.19 (1)</td></tr><tr><td>B- I</td><td>-76 / 15</td><td>-78.0 -78.0</td><td>0.09 (1)</td><td>6.25</td><td>C- F</td><td>-207 / 0</td><td>0.10 (1)</td></tr><tr><td>I- C</td><td>-176 / 0</td><td>-78.0 -78.0</td><td>0.47 (1)</td><td>6.25</td><td>H- I</td><td>-460 / 0</td><td>0.00 (1)</td></tr><tr><td>C- D</td><td>-38 / 0</td><td>-78.0 -78.0</td><td>0.46 (1)</td><td>6.25</td><td></td><td></td><td></td></tr><tr><td>D- E</td><td>-38 / 0</td><td>-78.0 -78.0</td><td>0.46 (1)</td><td>6.25</td><td></td><td></td><td></td></tr><tr><td>F- E</td><td>-188 / 0</td><td>0.0 0.0</td><td>0.17 (1)</td><td>6.25</td><td></td><td></td><td></td></tr><tr><td>B- H</td><td>0 / 148</td><td>-18.5 -18.5</td><td>0.16 (1)</td><td>10.00</td><td></td><td></td><td></td></tr><tr><td>H- G</td><td>0 / 148</td><td>-18.5 -18.5</td><td>0.21 (4)</td><td>10.00</td><td></td><td></td><td></td></tr><tr><td>G- F</td><td>0 / 148</td><td>-18.5 -18.5</td><td>0.21 (4)</td><td>10.00</td><td></td><td></td><td></td></tr></table>							CHORDS				WEBS				MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 MAX CSI (LC)	MAX. UNBRACED LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)	FR-TO		FROM TO			FR-TO			A- B	0 / 11	-78.0 -78.0	0.01 (1)	10.00	G- C	-277 / 0	0.19 (1)	B- I	-76 / 15	-78.0 -78.0	0.09 (1)	6.25	C- F	-207 / 0	0.10 (1)	I- C	-176 / 0	-78.0 -78.0	0.47 (1)	6.25	H- I	-460 / 0	0.00 (1)	C- D	-38 / 0	-78.0 -78.0	0.46 (1)	6.25				D- E	-38 / 0	-78.0 -78.0	0.46 (1)	6.25				F- E	-188 / 0	0.0 0.0	0.17 (1)	6.25				B- H	0 / 148	-18.5 -18.5	0.16 (1)	10.00				H- G	0 / 148	-18.5 -18.5	0.21 (4)	10.00				G- F	0 / 148	-18.5 -18.5	0.21 (4)	10.00										
CHORDS				WEBS																																																																																																									
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 MAX CSI (LC)	MAX. UNBRACED LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)																																																																																																						
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LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2																																																																																																													
																																																																																																													

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
318404	G6P		1	TRUSS DESC. JT 45147	E20035305



LUMBER					
N. L. G. A. RULES	CHORDS	SIZE	DRY	LUMBER	DESCR.
A - D	2x4	DRY	No.2	SPF	
D - E	2x4	DRY	No.2	SPF	
F - E	2x4	DRY	No.2	SPF	
B - 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	TMB1-I	MT20	3.0	4.0	1.50	2.50
C	TMWW-I	MT20	3.0	4.0	1.50	1.00
D	TS-I	MT20	3.0	5.0		
E	TMV+p	MT20	2.0	4.0		
F	BMVW1-I	MT20	3.0	4.0		
G	BMW1+w	MT20	2.0	4.0		

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

BEARINGS		FACTORED GROSS REACTION	MAXIMUM FACTORED GROSS REACTION	INPUT BRG	REQRD BRG
JT	VERT	HORZ	DOWN	HORZ	UPLIFT
F	373	0	373	0	0
B	406	0	406	0	0
G	436	0	436	0	0

UNFACTORED REACTIONS

JT	1ST LCASE	MAX./MIN. SNOW	MIN. LIVE	MAX. PERM. LIVE	WIND	DEAD	SOIL
F	264	174 / 0	0 / 0	0 / 0	0 / 0	90 / 0	0 / 0
B	286	192 / 0	0 / 0	0 / 0	0 / 0	94 / 0	0 / 0
G	315	166 / 0	0 / 0	0 / 0	0 / 0	149 / 0	0 / 0

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

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

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. LC1 CSI (LC)	MAX. UNBRACED LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. CSI (LC)
FR-TO		FROM	TO		FR-TO		
A-B	0 / 11	-78.0	-78.0 0.01 (1)	10.00	G-C	-270 / 0	0.19 (1)
B-I	-77 / 31	-78.0	-78.0 0.10 (1)	6.25	C-F	-211 / 0	0.11 (1)
I-C	-179 / 0	-78.0	-78.0 0.47 (1)	6.25	H-I	-487 / 0	0.00 (1)
C-D	-39 / 0	-78.0	-78.0 0.46 (1)	6.25			
D-E	-39 / 0	-78.0	-78.0 0.46 (1)	6.25			
F-E	-185 / 0	0.0	0.0 0.16 (1)	6.25			
B-H	0 / 149	-18.5	-18.5 0.16 (1)	10.00			
H-G	0 / 149	-18.5	-18.5 0.21 (4)	10.00			
G-F	0 / 149	-18.5	-18.5 0.21 (4)	10.00			

DESIGN CRITERIA

SPECIFIED LOADS:

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

SPACING = 24.0 IN. C/C

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 (C-I:1) , BC=0.21/1.00 (G-H:4) , WB=0.19/1.00 (C-G:1) , SSI=0.40/1.00 (B-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	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

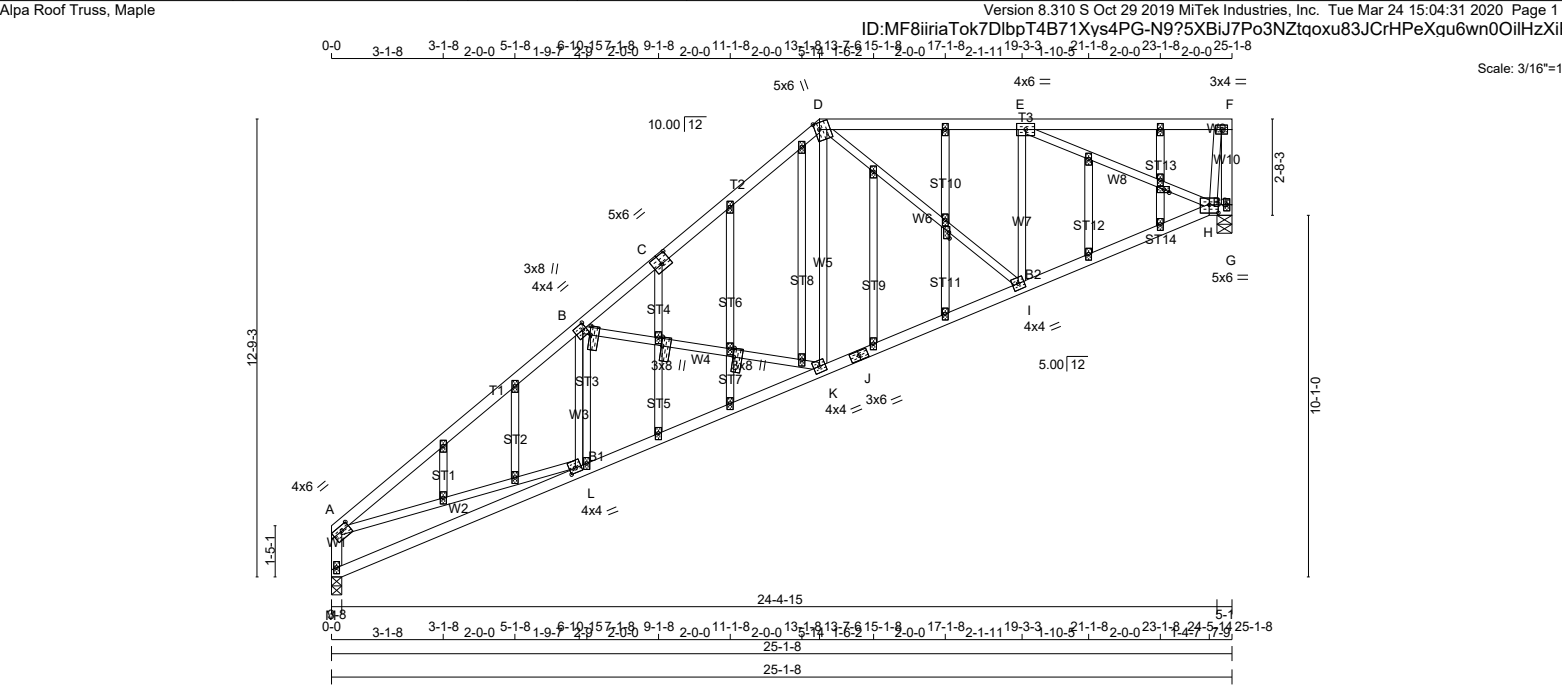
PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.63 (D) (INPUT = 0.90)
JSI METAL= 0.21 (D) (INPUT = 1.00)

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



JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
318404	H5S		1	TRUSS DESC. JT 45147	E20035306



LUMBER					DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER					DESIGN CRITERIA								
N. L. G. A. RULES		CHORDS		SIZE	LUMBER	DESCR.	BEARINGS					SPECIFIED LOADS:						
A - C	2x4	DRY	1650F	1.5E	SPF		FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG		REQRD BRG					
C - D	2x4	DRY	1650F	1.5E	SPF		JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX				
D - F	2x4	DRY	No.2		SPF		G	-348	0	0	0	-348	5-1	3-1				
G - F	2x4	DRY	No.2		SPF		H	1600	0	1600	0	0	5-1	3-1				
M - A	2x4	DRY	No.2		SPF		M	1172	0	1172	0	0	3-8	1-8				
M - J	2x4	DRY	No.2		SPF										TOTAL LOAD = 34.4 PSF			
J - H	2x4	DRY	No.2		SPF		PROVIDE ANCHORAGE AT BEARING JOINT G FOR 348 LBS FACTORED UPLIFT								SPACING = 24.0 IN. C/C			
H - G	2x4	DRY	No.2		SPF		UNFACTORED REACTIONS								LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM			
							1ST LCASE MAX./MIN. COMPONENT REACTIONS											
							JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL				
							G	-249	0 / -148	0 / 0	0 / 0	0 / 0	0 / -101	0 / 0				
							H	1141	693 / 0	0 / 0	0 / 0	0 / 0	449 / 0	0 / 0				
							M	835	510 / 0	0 / 0	0 / 0	0 / 0	325 / 0	0 / 0				
							BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) G, H, M								THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBC 2015			
							BRACING								THIS DESIGN COMPLIES WITH:			
							TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.61 FT.								- PART 9 OF CBC 2018 , ABC 2019			
							MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT. OR RIGID CEILING DIRECTLY APPLIED.								- PART 9 OF OBC 2012 (2019 AMENDMENT)			
							ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.								- CSA 086-14			
							LOADING								- TPIC 2014			
							TOTAL LOAD CASES: (4)								(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			
							CHORDS				WEBS				ALLOWABLE DEFL.(LL)= L/360 (0.82")			
							MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. LC1 (LC)	MAX. UNBRACED LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. UNBRACED LENGTH	CALCULATED VERT. DEFL.(LL) = L/ 999 (0.07")			
							FR-TO	FROM	TO		FR-TO				ALLOWABLE DEFL.(TL)= L/360 (0.82")			
							A-B	-1979 / 0	-78.0	-78.0	0.73 (1)	4.61	L-B	-123 / 60	0.04 (1)	CALCULATED VERT. DEFL.(TL) = L/ 999 (0.14")		
							B-C	-1371 / 0	-78.0	-78.0	0.62 (1)	5.33	B-K	-538 / 0	0.50 (1)	CSI: TC=0.73/1.00 (A-B:1) , BC=0.37/1.00 (K-L:1) ,		
							C-D	-1371 / 0	-78.0	-78.0	0.62 (1)	5.33	K-D	0 / 426	0.10 (1)	WB=0.80/1.00 (E-H:1) , SSI=0.22/1.00 (E-F:1)		
							D-E	-1103 / 0	-78.0	-78.0	0.48 (1)	5.35	D-I	0 / 99	0.02 (1)	DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10		
							E-F	0 / 140	-78.0	-78.0	0.45 (1)	10.00	I-E	0 / 98	0.03 (4)	COMP=1.10 SHEAR=1.10 TENS= 1.10		
							G-F	0 / 354	0.0	0.0	0.06 (1)	10.00	E-H	-1367 / 0	0.80 (1)	COMPANION LIVE LOAD FACTOR = 1.00		
							M-A	-1118 / 0	0.0	0.0	0.12 (1)	7.49	H-F	-547 / 0	0.09 (1)			
													A- L	0 / 1597	0.36 (1)			
							M-L	0 / 6	-18.5	-18.5	0.21 (4)	10.00					TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .	
							L-K	0 / 1677	-18.5	-18.5	0.37 (1)	10.00					NAIL VALUES	
							K-J	0 / 1111	-18.5	-18.5	0.25 (1)	10.00						
							J-I	0 / 1111	-18.5	-18.5	0.25 (1)	10.00						
							I-H	0 / 1192	-18.5	-18.5	0.25 (1)	10.00						
							H-G	0 / 0	-18.5	-18.5	0.00 (4)	10.00						
															</			

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



Scale = 1:85.5



JSI GRIP= 0.89 (G) (INPUT = 0.90)
JSI METAL= 0.51 (L) (INPUT = 1.00)

Scale = 1:99.5



CHORDS					WEBS				
MAX. FACTORED		FACTORED			MAX. FACTORED				
MEMB.	FORCE (LBS)	VERT. LOAD (PLF)	LOA CSI (LC)	MAX. UNBRAC (LC)	MAX. MEMB.	MAX. FORCE (LBS)	FACTORED CSI (LC)		
FR-TO		FROM	TO	LENGTH	FR-TO				
A-B	-2047 / 0	-78.0	-78.0	0.62 (1)	4.19	L-B	-141 / 47	0.04 (1)	
B-C	-1530 / 0	-78.0	-78.0	0.45 (1)	4.88	B-K	-427 / 0	0.37 (1)	
C-D	-1530 / 0	-78.0	-78.0	0.45 (1)	4.88	K-D	0 / 378	0.09 (1)	
D-E	-702 / 0	-78.0	-78.0	0.42 (1)	6.25	D-I	-770 / 0	0.97 (1)	
E-F	-82 / 0	-78.0	-78.0	0.26 (1)	6.25	I-E	0 / 779	0.18 (1)	
G-F	-1206 / 0	0.0	0.0	0.35 (1)	5.83	E-H	-875 / 0	0.48 (1)	
M-A	-1158 / 0	0.0	0.0	0.12 (1)	7.40	H-F	0 / 1010	0.23 (1)	
						A-L	0 / 1643	0.37 (1)	
M-L	0 / 5	-18.5	-18.5	0.19 (4)	10.00				
L-K	0 / 1726	-18.5	-18.5	0.37 (1)	10.00				
K-J	0 / 1273	-18.5	-18.5	0.29 (1)	10.00				
J-I	0 / 1273	-18.5	-18.5	0.29 (1)	10.00				
I-H	0 / 561	-18.5	-18.5	0.19 (4)	10.00				
H-G	0 / 0	-18.5	-18.5	0.00 (4)	10.00				

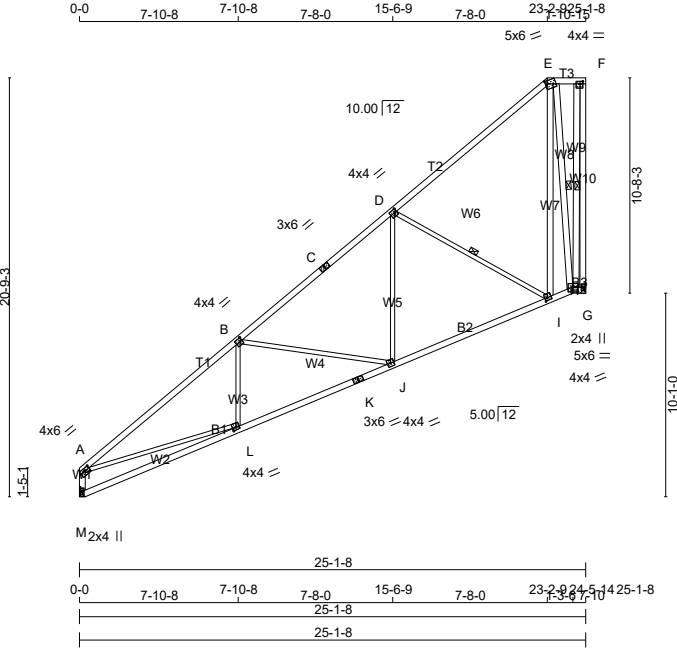
JSI GRIP= 0.86 (A) (INPUT = 0.90)
JSI METAL= 0.57 (L) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
318404	H8S		1	TRUSS DESC. JT 45147	E20035309

Alpa Roof Truss, Maple

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ID:MF8iiriaTok7DlbpT4B71Xys4PG-nkhD9CIBQKAeE0cPT3SrhvqN6dfOtGfMT dMLczXiEx



TOTAL WEIGHT = 145 lb

LUMBER				
N. L. G. A. RULES	CHORDS	SIZE	LUMBER	DESCR.
A - C	2x4	DRY	2100F 1.8E	SPF
C - E	2x4	DRY	2100F 1.8E	SPF
E - F	2x4	DRY	No.2	SPF
G - F	2x4	DRY	No.2	SPF
M - A	2x4	DRY	No.2	SPF
M - K	2x4	DRY	No.2	SPF
K - H	2x4	DRY	No.2	SPF
H - G	2x4	DRY	No.2	SPF
ALL WEBS EXCEPT	2x3	DRY	No.2	SPF
I - E	2x4	DRY	No.2	SPF
E - H	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-t	MT20	4.0	6.0 1.50 2.75
B	TMWW-t	MT20	4.0	4.0 2.00 1.25
C	TS-t	MT20	3.0	6.0
D	TMWW-t	MT20	4.0	4.0 2.00 1.25
E	TTWW-m	MT20	5.0	6.0 1.75 1.00
F	TMVW-t	MT20	4.0	4.0 1.50 1.75
G	BMV1+p	MT20	2.0	4.0
H	BBWW-t	MT20	5.0	6.0 2.75 3.00
I	BMWW-t	MT20	4.0	4.0 1.75 1.50
J	BMWW-t	MT20	4.0	4.0
K	BS-t	MT20	3.0	6.0
L	BMWW-t	MT20	4.0	4.0 1.50 2.00
M	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	1212	0	1212	0	0	MECHANICAL			
M	1212	0	1212	0	0	MECHANICAL			

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT G, M. MINIMUM BEARING LENGTH AT JOINT G = 1-8, JOINT M = 3-8.

UNFACTORED REACTIONS

1ST LCASE		MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
G	864	527 / 0	0 / 0	0 / 0	0 / 0	337 / 0	0 / 0
M	864	527 / 0	0 / 0	0 / 0	0 / 0	337 / 0	0 / 0

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.18 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, D-I, 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			
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	UNBRAC LENGTH	FR-TO		
A-B	-2033 / 0	-78.0	-78.0 0.50 (1)	5.18	L-B	-81 / 87	0.03 (4)
B-C	-1312 / 0	-78.0	-78.0 0.37 (1)	6.24	B-J	-590 / 0	0.75 (1)
C-D	-1312 / 0	-78.0	-78.0 0.37 (1)	6.24	J-D	0 / 488	0.11 (1)
D-E	-284 / 0	-78.0	-78.0 0.37 (1)	6.25	D-I	-940 / 0	0.53 (1)
E-F	-69 / 0	-78.0	-78.0 0.04 (1)	6.25	I-E	0 / 915	0.15 (1)
G-F	-1206 / 0	0.0	0.0 0.69 (1)	5.83	E-H	-1080 / 0	0.64 (1)
M-A	-1151 / 0	0.0	0.0 0.12 (1)	7.42	H-F	0 / 1134	0.18 (1)
					A-L	0 / 1646	0.37 (1)
M-L	0 / 6	-18.5	-18.5 0.26 (4)	10.00			
L-K	0 / 1721	-18.5	-18.5 0.43 (4)	10.00			
K-J	0 / 1721	-18.5	-18.5 0.43 (4)	10.00			
J-I	0 / 1089	-18.5	-18.5 0.31 (4)	10.00			
I-H	0 / 203	-18.5	-18.5 0.18 (4)	10.00			
H-G	0 / 0	-18.5	-18.5 0.00 (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 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 (0.84")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.08")
ALLOWABLE DEFL.(TL)= L/360 (0.84")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.19")

CSI: TC=0.69/1.00 (F-G:1) , BC=0.43/1.00 (J-L:4) , WB=0.75/1.00 (B-J:1) , SSI=0.22/1.00 (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

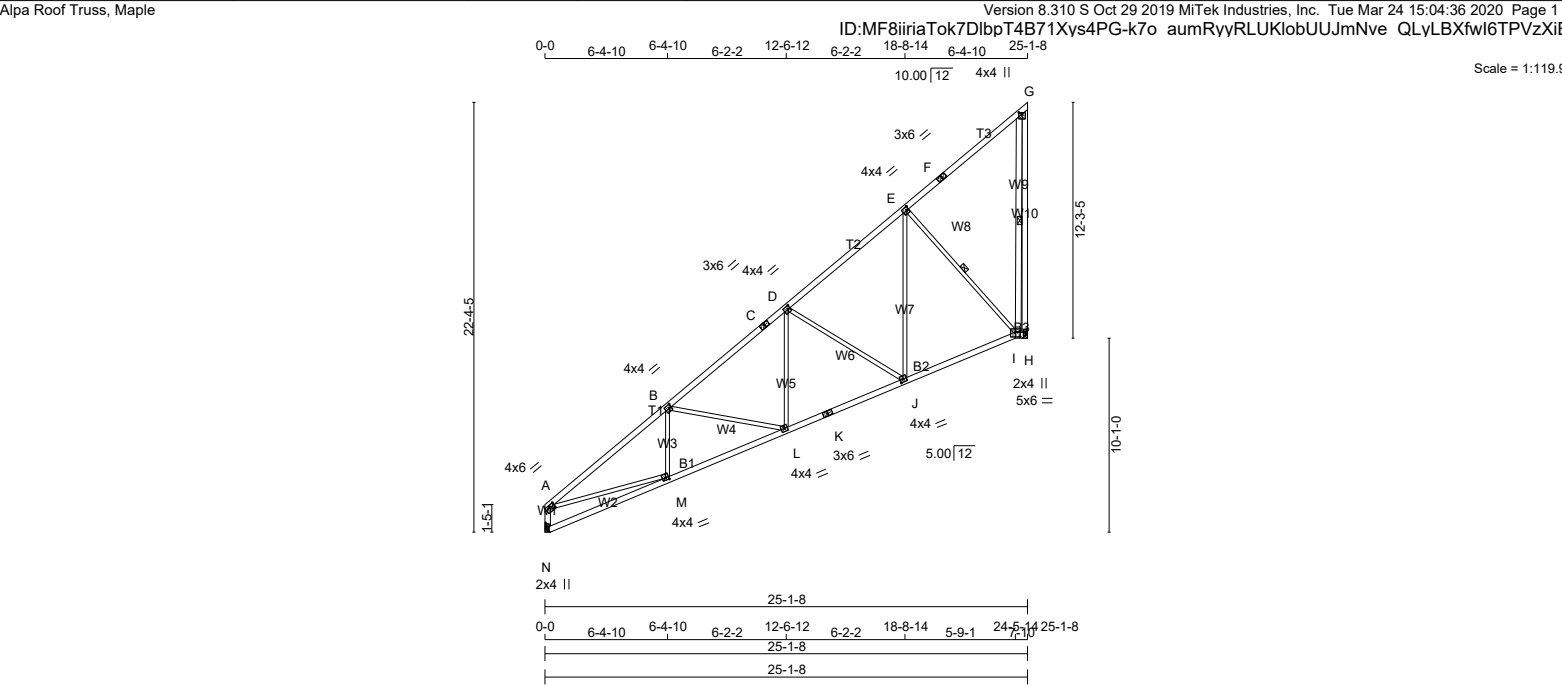
PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.88 (A) (INPUT = 0.90)
JSI METAL= 0.57 (L) (INPUT = 1.00)

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



JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
318404	H9S		1	TRUSS DESC. JT 45147	E20035310



LUMBER N. L. G. A. RULES CHORDS SIZE LUMBER DESCR. N - A 2x4 DRY No.2 SPF A - C 2x4 DRY No.2 SPF C - F 2x4 DRY No.2 SPF F - G 2x4 DRY No.2 SPF H - G 2x4 DRY No.2 SPF N - K 2x4 DRY No.2 SPF K - I 2x4 DRY No.2 SPF I - H 2x4 DRY No.2 SPF ALL WEBS 2x3 DRY No.2 SPF EXCEPT I - G 2x4 DRY No.2 SPF DRY: SEASONED LUMBER.					DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER BEARINGS FACTORED GROSS REACTION MAXIMUM FACTORED GROSS REACTION INPUT REQD BRG JT VERT HORZ DOWN HORZ UPLIFT IN-SX IN-SX N 1212 0 1212 0 0 MECHANICAL H 1212 0 1212 0 0 MECHANICAL A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT N, H. MINIMUM BEARING LENGTH AT JOINT N = 3-8, JOINT H = 1-8. UNFACTORED REACTIONS 1ST LCASE MAX./MIN. COMPONENT REACTIONS JT COMBINED SNOW LIVE PERM.LIVE WIND DEAD SOIL N 864 527 / 0 0 / 0 0 / 0 0 / 0 337 / 0 0 / 0 H 864 527 / 0 0 / 0 0 / 0 0 / 0 337 / 0 0 / 0					DESIGN CRITERIA SPECIFIED LOADS: TOP CH. LL = 21.0 PSF DL = 6.0 PSF BOT CH. LL = 0.0 PSF DL = 7.4 PSF TOTAL LOAD = 34.4 PSF SPACING = 24.0 IN. C/C THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015 THIS DESIGN COMPLIES WITH: - PART 9 OF BCBC 2018 , ABC 2019 - PART 9 OF OBC 2012 (2019 AMENDMENT) - CSA 086-14 - TPIC 2014 (55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD ALLOWABLE DEFL.(LL)= L/360 (0.84") CALCULATED VERT. DEFL.(LL) = L/ 999 (0.08") ALLOWABLE DEFL.(TL)= L/360 (0.84") CALCULATED VERT. DEFL.(TL) = L/ 999 (0.16") CSI: TC=0.99/1.00 (G-H:1) , BC=0.36/1.00 (L-M:1) , WB=0.66/1.00 (D-J:1) , SSI=0.18/1.00 (E-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= 0.86 (M) (INPUT = 0.90) JSI METAL= 0.57 (M) (INPUT = 1.00)				
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PLATES (table is in inches)

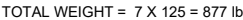
JT	TYPE	PLATES	W	LEN	Y	X
A	TMVW-t	MT20	4.0	6.0	1.50	2.75
B, D, E						
B	TMWW-t	MT20	4.0	4.0	2.00	1.25
C	TS-t	MT20	3.0	6.0		
F	TS-t	MT20	3.0	6.0		
G	TMVW+p	MT20	4.0	4.0	1.00	2.00
H	BMV1+p	MT20	2.0	4.0		
I	BBWW-l	MT20	5.0	6.0	2.75	3.00
J	BMWW-t	MT20	4.0	4.0	2.00	1.75
K	BS-t	MT20	3.0	6.0		
L	BMWW-t	MT20	4.0	4.0		
M	BMWW-t	MT20	4.0	4.0	1.50	2.00
N	BMV1+p	MT20	2.0	4.0		

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



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

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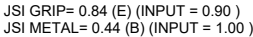


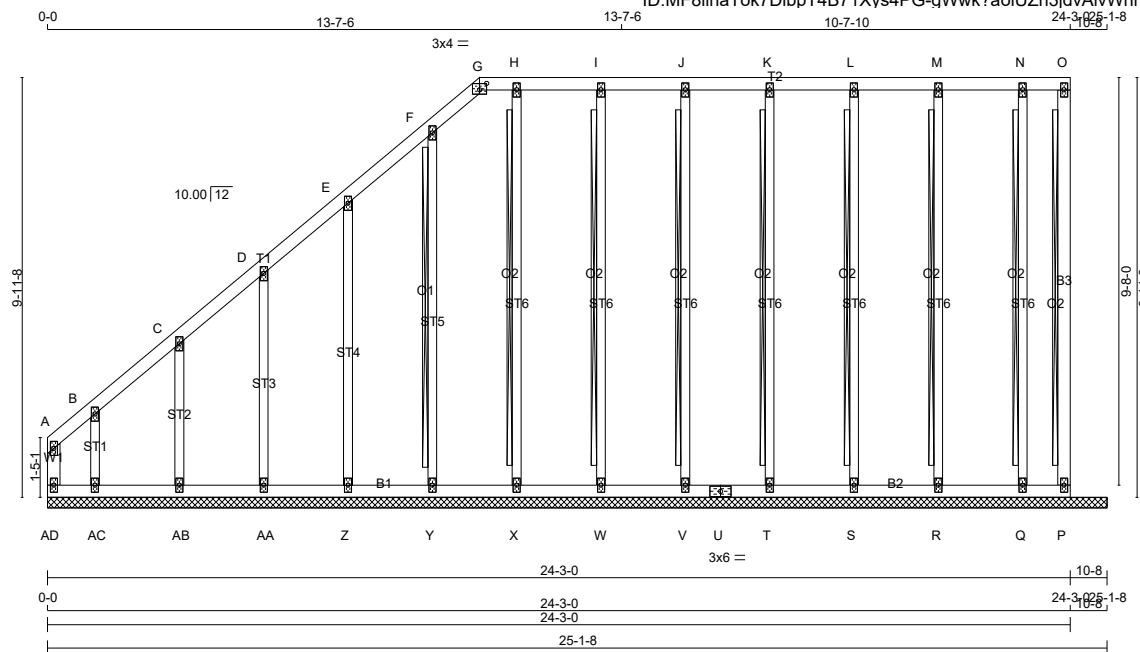
PLATES (table is in inches)						
JT	TYPE	PLATES	W	LEN	Y	X
A	TMV+p	MT20	2.0	4.0		
B	BMVWV-t	MT20	4.0	4.0	1.75	1.50
C	TTW-m	MT20	4.0	4.0		
D	DMVWV-t	MT20	4.0	4.0		
E	TMVW-t	MT20	4.0	4.0	1.75	1.75
G	BMVW1-t	MT20	7.0	12.0	Edge	5.00
H	BMVW-t	MT20	4.0	4.0	1.75	1.75
I	BS-t	MT20	3.0	6.0		
J	BMVWVW-t	MT20	5.0	6.0		
K	BMVW1-t	MT20	4.0	4.0	1.75	1.75

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

TOTAL LOAD CASES: (4)

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





TOTAL WEIGHT = 145 lb

LUMBER				
N. L. G. A.	CHORDS	SIZE	LUMBER	DESCRIPTION
AD- A	2x4	DRY	No.2	SPF
A - G	2x4	DRY	No.2	SPF
G - O	2x4	DRY	No.2	SPF
AD- U	2x4	DRY	No.2	SPF
U - P	2x4	DRY	No.2	SPF
P - O	2x4	DRY	No.2	SPF
ALL WEBS EXCEPT	2x3	DRY	No.2	SPF
ALL GABLE WEBS	2x3	DRY	No.2	SPF
DRY: SEASONED LUMBER.				
GABLE STUDS SPACED AT 2-0-0 OC.				

PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y X
A	TMV+p	MT20	2.0	4.0	
B, C, D, E, F, H, I, J, K, L, M, N					
B	TMV+w	MT20	2.0	4.0	
G	TT-J	MT20	3.0	4.0	1.75 2.00
O	TMV+p	MT20	2.0	4.0	
P	BMV1+p	MT20	2.0	4.0	
Q, R, S, T, V, W, X, Y, Z, AA, AB, AC					
Q	BMV1+w	MT20	2.0	4.0	
U	BS-t	MT20	3.0	6.0	
AD	BMV1+p	MT20	2.0	4.0	

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

THIS TRUSS DESIGNED FOR CONTINUOUS BEARINGS.

THIS TRUSS REQUIRES RIGID SHEATHING ON EXPOSED FACE.

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

BRACING

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

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE LATERALLY RESTRAINED

2x4 DRY SPF No.2 T-BRACE AT O-P, N-Q, M-R, L-S, K-T, J-V, I-W, H-X, F-Y

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 LC1 (CI)	MAX. UNBRAC	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. CSI (LC)		
FR-TO		FROM TO		LENGTH	FR-TO				
AD- A	-46 / 0	0.0 0.0	0.01 (1)	7.81	Q- N	-117 / 0	0.09 (1)		
A- B	-17 / 0	-78.0 -78.0	0.02 (1)	6.25	R- M	-164 / 0	0.13 (1)		
B- C	-12 / 0	-78.0 -78.0	0.04 (1)	6.25	S- L	-155 / 0	0.12 (1)		
C- D	-10 / 0	-78.0 -78.0	0.04 (1)	10.00	T- K	-156 / 0	0.12 (1)		
D- E	-6 / 0	-78.0 -78.0	0.04 (1)	10.00	V- J	-156 / 0	0.12 (1)		
E- F	-3 / 0	-78.0 -78.0	0.04 (1)	10.00	W- I	-155 / 0	0.12 (1)		
F- G	-23 / 0	-78.0 -78.0	0.04 (1)	6.25	X- H	-160 / 0	0.12 (1)		
G- H	0 / 0	-78.0 -78.0	0.04 (1)	10.00	Y- F	-158 / 0	0.09 (1)		
H- I	0 / 0	-78.0 -78.0	0.04 (1)	10.00	Z- E	-154 / 0	0.15 (1)		
I- J	0 / 0	-78.0 -78.0	0.04 (1)	10.00	AA- D	-153 / 0	0.08 (1)		
J- K	0 / 0	-78.0 -78.0	0.04 (1)	10.00	AB- C	-158 / 0	0.04 (1)		
K- L	0 / 0	-78.0 -78.0	0.04 (1)	10.00	AC- B	-117 / 0	0.02 (1)		
L- M	0 / 0	-78.0 -78.0	0.04 (1)	10.00					
M- N	0 / 0	-78.0 -78.0	0.04 (1)	10.00					
N- O	0 / 0	-78.0 -78.0	0.02 (1)	10.00					

AD-AC	0/17	-18.5	-18.5	0.01 (1)	10.00
AC-AB	0/11	-18.5	-18.5	0.02 (4)	10.00
AB-AA	0/7	-18.5	-18.5	0.02 (4)	10.00
AA-Z	0/4	-18.5	-18.5	0.01 (4)	10.00
Z-Y	0/2	-18.5	-18.5	0.01 (4)	10.00
Y-X	0/0	-18.5	-18.5	0.01 (4)	10.00
X-W	0/0	-18.5	-18.5	0.01 (4)	10.00
W-V	0/0	-18.5	-18.5	0.01 (4)	10.00
V-U	0/0	-18.5	-18.5	0.01 (4)	10.00
U-T	0/0	-18.5	-18.5	0.01 (4)	10.00
T-S	0/0	-18.5	-18.5	0.01 (4)	10.00
S-R	0/0	-18.5	-18.5	0.02 (4)	10.00
R-Q	0/0	-18.5	-18.5	0.02 (4)	10.00
Q-P	0/0	-18.5	-18.5	0.01 (4)	10.00
P-O	-30/0	0.0	0.0	0.01 (1)	7.81

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=0.04/1.00 (B-C:1), BC=0.02/1.00
(AB-AC:4), WB=0.15/1.00 (E-Z:1), SSI=0.07/1.00
(M-N: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= 0.64 (G) (INPUT = 0.90)
JSI METAL= 0.08 (C) (INPUT = 1.00)

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



JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
318404	H11P		1	TRUSS DESC. JT 45147	E20035313

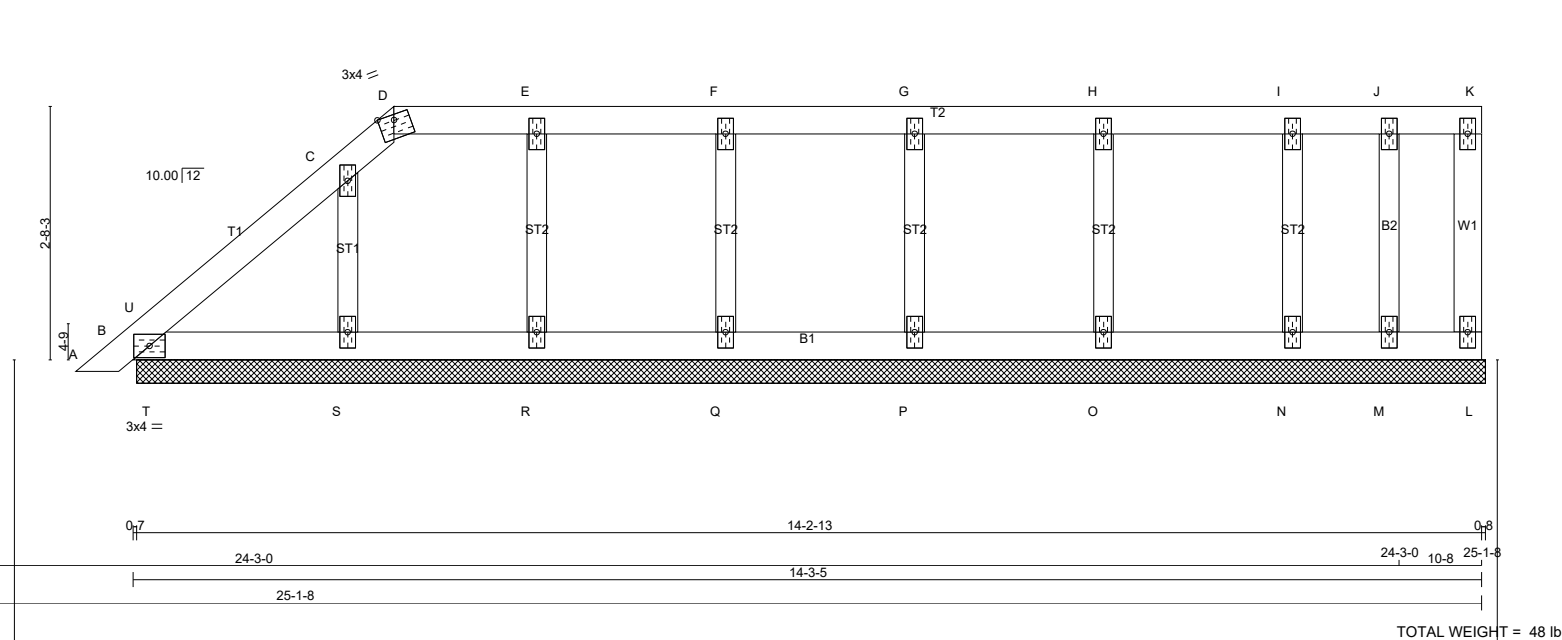
Alpa Roof Truss, Maple

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13-7-610-7-1024-3-010-825-1-8

Scale = 1:24.4



LUMBER N. L. G. A. RULES CHORDS SIZE LUMBER DESCR. A - D 2x4 DRY No.2 SPF D - K 2x4 DRY No.2 SPF L - K 2x4 DRY No.2 SPF M - J 2x3 DRY No.2 SPF B - L 2x4 DRY No.2 SPF ALL WEBS 2x3 DRY No.2 SPF ALL GABLE WEBS 2x3 DRY No.2 SPF DRY: SEASONED LUMBER. GABLE STUDS SPACED AT 2-0-0 OC.				DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER BEARINGS THIS TRUSS DESIGNED FOR CONTINUOUS BEARINGS. THIS TRUSS REQUIRES RIGID SHEATHING ON EXPOSED FACE. BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) BRACING TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT. MAX. UNBRACED BOTTOM CHORD LENGTH = 7.81 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. LC1 (LC) MAX. UNBRACED LENGTH FR-TO A-B 0 / 12 -78.0 -78.0 0.02 (1) 10.00 B-U -12 / 0 -78.0 -78.0 0.01 (4) 6.25 U-C 0 / 1 -78.0 -78.0 0.05 (1) 10.00 C-D -42 / 0 -78.0 -78.0 0.05 (1) 6.25 D-E 0 / 0 -78.0 -78.0 0.04 (1) 10.00 E-F 0 / 0 -78.0 -78.0 0.04 (1) 10.00 F-G 0 / 0 -78.0 -78.0 0.04 (1) 10.00 G-H 0 / 0 -78.0 -78.0 0.04 (1) 10.00 H-I 0 / 0 -78.0 -78.0 0.04 (1) 10.00 I-J 0 / 0 -78.0 -78.0 0.02 (1) 10.00 J-K 0 / 0 -78.0 -78.0 0.01 (1) 10.00 L-K -33 / 0 0.0 0.0 0.00 (1) 7.81 M-J -71 / 0 0.0 0.0 0.01 (1) 7.81 B-T 0 / 9 -18.5 -18.5 0.03 (1) 10.00 T-S 0 / 9 -18.5 -18.5 0.03 (1) 10.00 S-R 0 / 0 -18.5 -18.5 0.02 (4) 10.00 R-Q 0 / 0 -18.5 -18.5 0.02 (4) 10.00 Q-P 0 / 0 -18.5 -18.5 0.02 (4) 10.00 P-O 0 / 0 -18.5 -18.5 0.02 (4) 10.00 O-N 0 / 0 -18.5 -18.5 0.02 (4) 10.00 N-M 0 / 0 -18.5 -18.5 0.01 (4) 10.00 M-L 0 / 0 -18.5 -18.5 0.00 (4) 10.00 WEBS MEMB. MAX. FACTORED FORCE (LBS) MAX. LC1 (LC) FR-TO N-I -126 / 0 0.02 (1) 10.00 O-H -161 / 0 0.03 (1) 10.00 P-G -155 / 0 0.03 (1) 10.00 Q-F -155 / 0 0.03 (1) 10.00 R-E -156 / 0 0.03 (1) 10.00 S-C -173 / 0 0.03 (1) 10.00 T-U -65 / 0 0.00 (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, 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 CSI: TC=0.05/1.00 (C-U:1), BC=0.03/1.00 (S-T:1), WB=0.03/1.00 (H-O:1), SSI=0.06/1.00 (H-I:1) DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10 COMP=1.10 SHEAR=1.10 TENS= 1.10 COMPANION LIVE LOAD FACTOR = 1.00 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= 0.12 (C) (INPUT = 0.90) JSI METAL= 0.09 (C) (INPUT = 1.00)			
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LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2



Alpa Roof Truss, Maple



10-1-0	UNFACTORED REACTIONS	LOADING IN FLAT SECTION BASED ON A SLOPE	10-1-0
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[illegible]

JT	FACTORED GROSS REACTION		MAXIMUM GROSS REACTION		FACTORED BRG	INPUT BRG	REQURD BRG
	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX
F	439	0	439	0	0	14-5-0 (14-3-2)	1-2
B	310	0	310	0	0	14-5-0 (14-3-2)	1-2
G	669	0	669	0	0	14-5-0 (14-3-2)	1-2

UNFACTORED REACTIONS

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

LOADING

CHORDS				WEBS				
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 MAX CSI (LC)	MAX. UNBRAC	MEMB.	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)	
FR-TO		FROM TO		LENGTH	FR-TO			
A-B	0 / 12	-78.0	-78.0	0.02 (1)	10.00	G-C	-254 / 0	0.08 (1)
B-I	0 / 229	-78.0	-78.0	0.19 (1)	10.00	G-D	-279 / 0	0.20 (1)
I-C	-89 / 0	-78.0	-78.0	0.26 (1)	6.25	D-F	-344 / 0	0.24 (1)
C-D	-51 / 0	-78.0	-78.0	0.27 (1)	6.25	H-I	-655 / 0	0.00 (1)
D-E	0 / 0	-78.0	-78.0	0.27 (1)	10.00			
F-E	-135 / 0	0.0	0.0	0.05 (1)	7.81			
B-H	0 / 57	-18.5	-18.5	0.24 (1)	10.00			
H-G	0 / 57	-18.5	-18.5	0.35 (4)	10.00			
G-F	0 / 246	-18.5	-18.5	0.36 (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

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

THIS DESIGN COMPLIES WITH:

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

CSI: TC=0.27/1.00 (C-D:1) , BC=0.36/1.00 (F-G:4) ,
WB=0.24/1.00 (D-F:1) , SSI=0.50/1.00 (B-H:1)

COMPANION LIVE LOAD FACTOR = 1.00

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

NAIL VALUES

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg

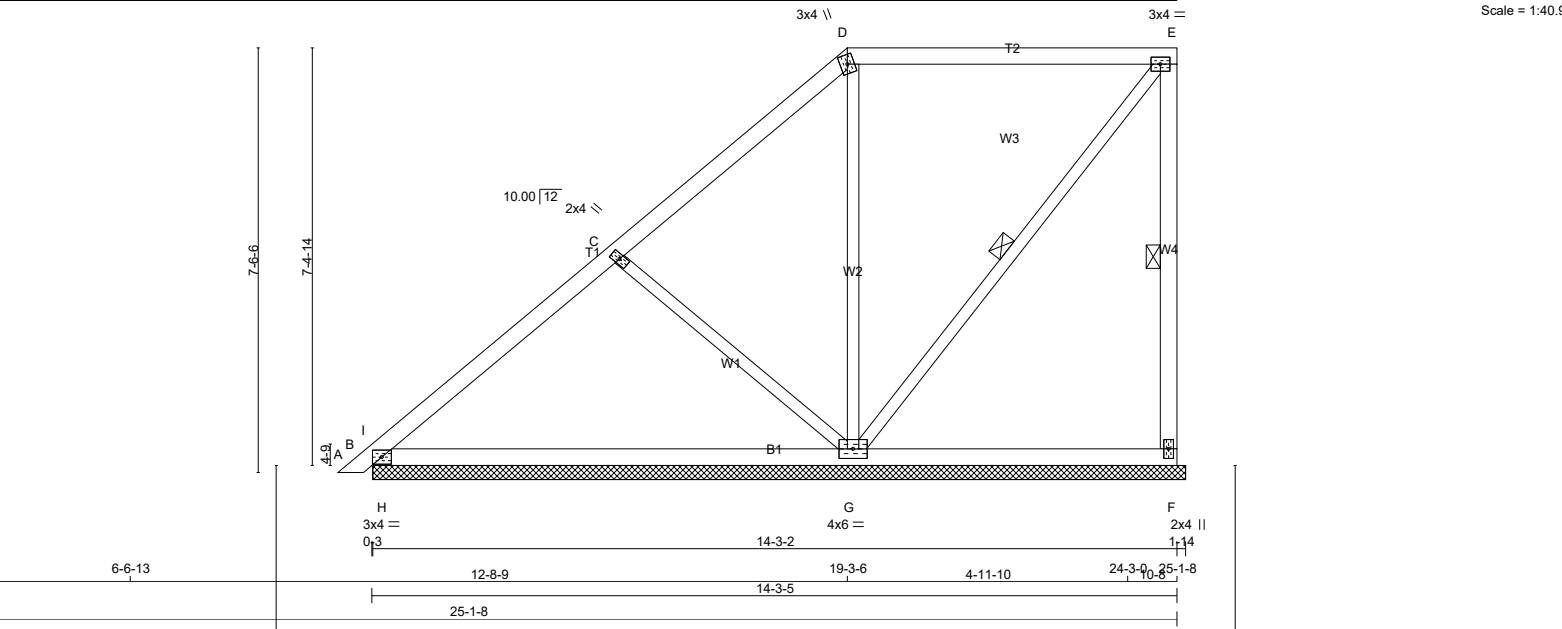
JSI GRIP= 0.42 (F) (INPUT = 0.90)
JSI METAL= 0.09 (F) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
318404	H13P		1	TRUSS DESC. JT 45147	E20035315

Alpa Roof Truss, Maple

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ID:MF8iiriaTok7DlbpT4B71Xys4PG-cu2UQGpy0Axxnyx3ZqKZFwD4SJ2kAH4FFrw4qYGzXiEr



LUMBER N. L. G. A. RULES CHORDS SIZE A - D 2x4 DRY D - E 2x4 DRY F - E 2x4 DRY B - F 2x4 DRY ALL WEBS 2x3 DRY DRY: SEASONED LUMBER.					LUMBER No.2 No.2 No.2 No.2 No.2		DESCR. SPF SPF SPF SPF SPF		DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER BEARINGS <table><tr><th></th><th>FACTORED GROSS REACTION</th><th>MAXIMUM FACTORED GROSS REACTION</th><th>INPUT BRG</th><th>REQRD BRG</th></tr><tr><th>JT</th><th>VERT</th><th>HORZ</th><th>DOWN</th><th>HORZ</th><th>UPLIFT</th><th>IN-SX</th><th>IN-SX</th></tr><tr><td>F</td><td>222</td><td>0</td><td>222</td><td>0</td><td>0</td><td>14-5-0 (14-3-2)</td><td>8-13</td></tr><tr><td>B</td><td>415</td><td>0</td><td>415</td><td>0</td><td>0</td><td>14-5-0 (14-3-2)</td><td>8-13</td></tr><tr><td>G</td><td>780</td><td>0</td><td>780</td><td>0</td><td>0</td><td>14-5-0 (14-3-2)</td><td>8-13</td></tr></table> VALUE IN PARENTHESIS INDICATES EFFECTIVE BEARING LENGTH UNFACTORED REACTIONS <table><tr><th>JT</th><th>1ST LCASE</th><th>MAX./MIN. SNOW</th><th>MIN. COMPONENT LIVE</th><th>PERM. LIVE</th><th>WIND</th><th>DEAD</th><th>SOIL</th></tr><tr><td>F</td><td>158</td><td>98 / 0</td><td>0 / 0</td><td>0 / 0</td><td>0 / 0</td><td>60 / 0</td><td>0 / 0</td></tr><tr><td>B</td><td>295</td><td>186 / 0</td><td>0 / 0</td><td>0 / 0</td><td>0 / 0</td><td>109 / 0</td><td>0 / 0</td></tr><tr><td>G</td><td>557</td><td>336 / 0</td><td>0 / 0</td><td>0 / 0</td><td>0 / 0</td><td>220 / 0</td><td>0 / 0</td></tr></table> BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) F, B, 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. 1 LATERAL BRACE(S) AT 1/2 LENGTH OF E-F, E-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) <table><tr><th colspan="4">CHORDS</th><th colspan="4">WEBS</th></tr><tr><th>MEMB.</th><th>MAX. FACTORED FORCE (LBS)</th><th>FACTORED VERT. LOAD (PLF)</th><th>MAX. LOAD LC1 (LC)</th><th>MEMB.</th><th>MAX. FACTORED FORCE (LBS)</th><th>MAX. UNBRACED LENGTH</th><th>MEMB. FACTORED FORCE (LBS)</th></tr><tr><td>FR-TO</td><td></td><td>FROM</td><td>TO</td><td>FR-TO</td><td></td><td></td><td></td></tr><tr><td>A-B</td><td>0 / 12</td><td>-78.0</td><td>-78.0</td><td>0.02 (1)</td><td>G-D</td><td>-367 / 0</td><td>0.36 (1)</td></tr><tr><td>B-I</td><td>-458 / 0</td><td>-78.0</td><td>-78.0</td><td>0.16 (4)</td><td>C-G</td><td>-326 / 0</td><td>0.17 (1)</td></tr><tr><td>I-C</td><td>-253 / 0</td><td>-78.0</td><td>-78.0</td><td>0.25 (1)</td><td>G-E</td><td>-48 / 0</td><td>0.03 (1)</td></tr><tr><td>C-D</td><td>-6 / 5</td><td>-78.0</td><td>-78.0</td><td>0.24 (1)</td><td>H-I</td><td>0 / 300</td><td>0.00 (1)</td></tr><tr><td>D-E</td><td>0 / 30</td><td>-78.0</td><td>-78.0</td><td>0.46 (1)</td><td></td><td></td><td></td></tr><tr><td>F-E</td><td>-190 / 0</td><td>0.0</td><td>0.0</td><td>0.05 (1)</td><td></td><td></td><td></td></tr><tr><td>B-H</td><td>0 / 223</td><td>-18.5</td><td>-18.5</td><td>0.14 (4)</td><td></td><td></td><td></td></tr><tr><td>H-G</td><td>0 / 223</td><td>-18.5</td><td>-18.5</td><td>0.28 (4)</td><td></td><td></td><td></td></tr><tr><td>G-F</td><td>0 / 0</td><td>-18.5</td><td>-18.5</td><td>0.26 (4)</td><td></td><td></td><td></td></tr></table>								FACTORED GROSS REACTION	MAXIMUM FACTORED GROSS REACTION	INPUT BRG	REQRD BRG	JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX	F	222	0	222	0	0	14-5-0 (14-3-2)	8-13	B	415	0	415	0	0	14-5-0 (14-3-2)	8-13	G	780	0	780	0	0	14-5-0 (14-3-2)	8-13	JT	1ST LCASE	MAX./MIN. SNOW	MIN. COMPONENT LIVE	PERM. LIVE	WIND	DEAD	SOIL	F	158	98 / 0	0 / 0	0 / 0	0 / 0	60 / 0	0 / 0	B	295	186 / 0	0 / 0	0 / 0	0 / 0	109 / 0	0 / 0	G	557	336 / 0	0 / 0	0 / 0	0 / 0	220 / 0	0 / 0	CHORDS				WEBS				MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. LOAD LC1 (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. UNBRACED LENGTH	MEMB. FACTORED FORCE (LBS)	FR-TO		FROM	TO	FR-TO				A-B	0 / 12	-78.0	-78.0	0.02 (1)	G-D	-367 / 0	0.36 (1)	B-I	-458 / 0	-78.0	-78.0	0.16 (4)	C-G	-326 / 0	0.17 (1)	I-C	-253 / 0	-78.0	-78.0	0.25 (1)	G-E	-48 / 0	0.03 (1)	C-D	-6 / 5	-78.0	-78.0	0.24 (1)	H-I	0 / 300	0.00 (1)	D-E	0 / 30	-78.0	-78.0	0.46 (1)				F-E	-190 / 0	0.0	0.0	0.05 (1)				B-H	0 / 223	-18.5	-18.5	0.14 (4)				H-G	0 / 223	-18.5	-18.5	0.28 (4)				G-F	0 / 0	-18.5	-18.5	0.26 (4)			
	FACTORED GROSS REACTION	MAXIMUM FACTORED GROSS REACTION	INPUT BRG	REQRD BRG																																																																																																																																																																																
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MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. LOAD LC1 (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. UNBRACED LENGTH	MEMB. FACTORED FORCE (LBS)																																																																																																																																																																													
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G-F	0 / 0	-18.5	-18.5	0.26 (4)																																																																																																																																																																																

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, 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=0.46/1.00 (D-E:1), BC=0.28/1.00 (G-H:4), WB=0.36/1.00 (D-G:1), SSI=0.27/1.00 (B-H:4)

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

COMPANION LIVE LOAD FACTOR = 1.00

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= 0.45 (D) (INPUT = 0.90)
JSI METAL= 0.11 (D) (INPUT = 1.00)

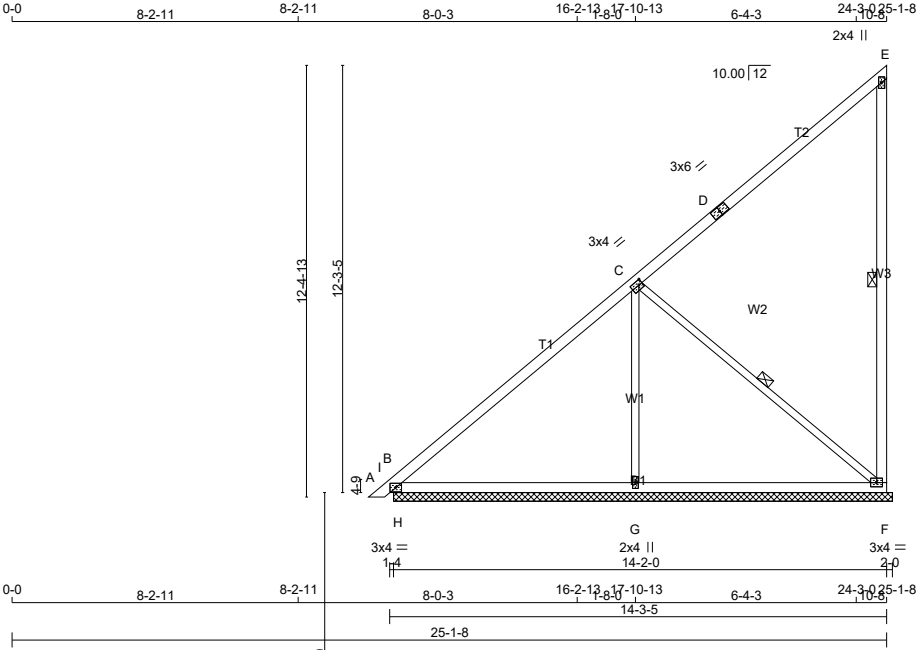
JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
318404	H15P		1	TRUSS DESC. JT 45147	E20035317

Alpa Roof Truss, Maple

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24-3-0 25-1-8



TOTAL WEIGHT = 4 X 63 = 254 lb [M]

LUMBER				
N. L. G. A. RULES				
CHORDS	SIZE	DRY	LUMBER	DESCR.
A - D	2x4	DRY	No.2	SPF
D - E	2x4	DRY	No.2	SPF
F - E	2x4	DRY	No.2	SPF
B - 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	TMB1-I	MT20	3.0	4.0	
C	TMWW-I	MT20	3.0	4.0	1.50 1.25
D	TS-I	MT20	3.0	6.0	
E	TMV+P	MT20	2.0	4.0	
F	BMVW1-I	MT20	3.0	4.0	
G	BMW1+W	MT20	2.0	4.0	

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

BEARINGS		FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG		REQRD BRG	
JT		VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX	
F		396	0	396	0	0	14-4-0 (14-2-0)	1-15	
B		429	0	429	0	0	14-4-0 (14-2-0)	1-15	
G		592	0	592	0	0	14-4-0 (14-2-0)	1-15	

VALUE IN PARENTHESIS INDICATES EFFECTIVE BEARING LENGTH

UNFACTORED REACTIONS

1ST LCASE		MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
F	280	183 / 0	0 / 0	0 / 0	0 / 0	97 / 0	0 / 0
B	303	202 / 0	0 / 0	0 / 0	0 / 0	101 / 0	0 / 0
G	426	236 / 0	0 / 0	0 / 0	0 / 0	190 / 0	0 / 0

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

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

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. LOAD LC1 (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. UNBRACED LENGTH	MAX. FACTORED FORCE (LBS)
FR-TO		FROM	TO	FR-TO			
A-B	0 / 12	-78.0	-78.0 0.02 (1)	10.00	G-C	-399 / 0	0.25 (1)
B-I	-81 / 0	-78.0	-78.0 0.11 (1)	6.25	C-F	-209 / 0	0.12 (1)
I-C	-174 / 0	-78.0	-78.0 0.65 (1)	6.25	H-I	-500 / 0	0.00 (1)
C-D	-41 / 0	-78.0	-78.0 0.63 (1)	6.25			
D-E	-41 / 0	-78.0	-78.0 0.63 (1)	6.25			
F-E	-217 / 0	0.0	0.0 0.18 (1)	6.25			
B-H	0 / 162	-18.5	-18.5 0.21 (1)	10.00			
H-G	0 / 162	-18.5	-18.5 0.29 (4)	10.00			
G-F	0 / 162	-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		

SPACING = 24.0 IN./C

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

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

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

CSI: TC=0.65/1.00 (C-I:1) , BC=0.29/1.00 (G-H:4) , WB=0.25/1.00 (C-G:1) , SSI=0.41/1.00 (B-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= 0.77 (D) (INPUT = 0.90)
JSI METAL= 0.36 (D) (INPUT = 1.00)

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



E20035318

Scale = 1:59.9



TM

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

AUTOSOLVE LEFT HEEL ONLY

CONTINUED ON PAGE 2

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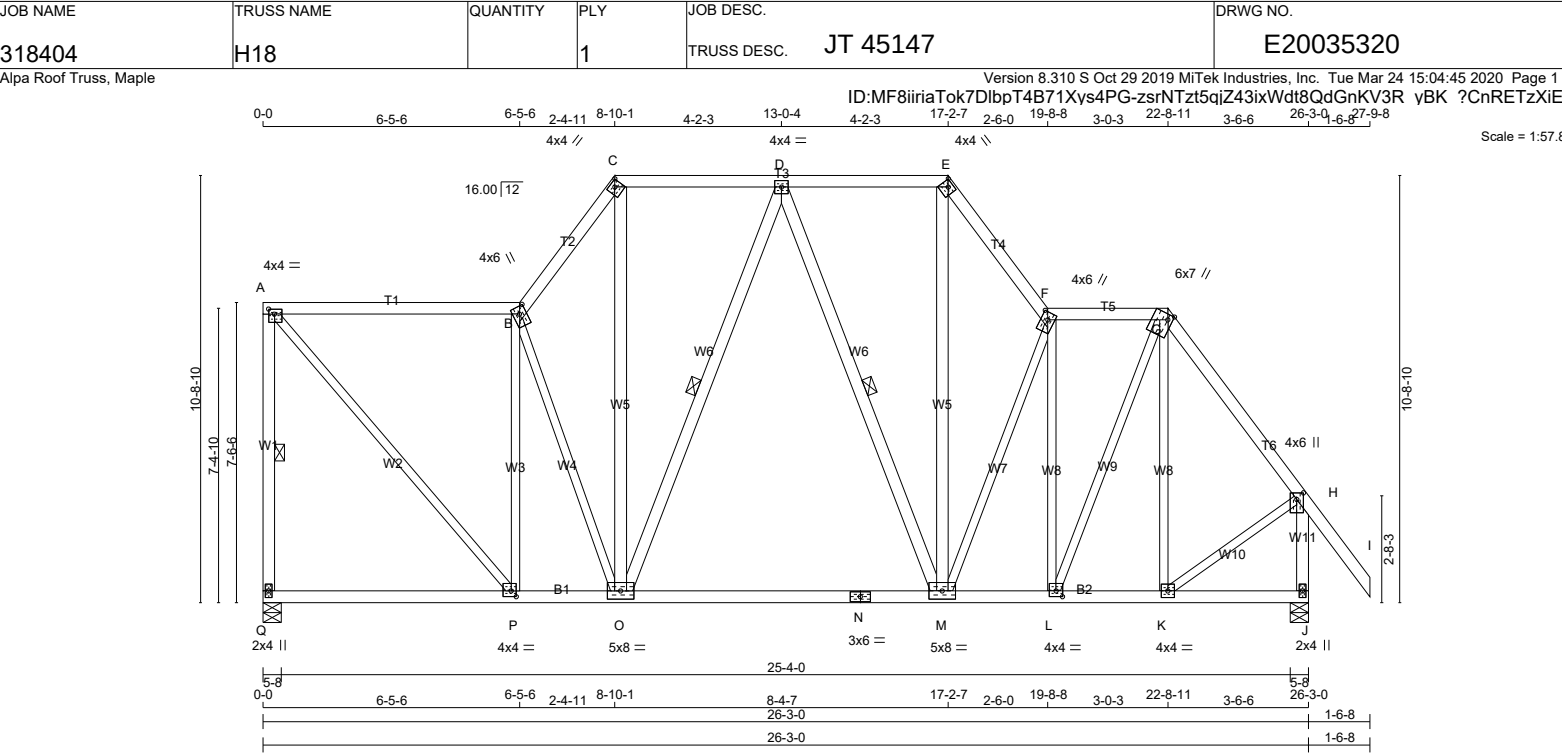
TOTAL WEIGHT = 163 lb

DRY: SEASONED LUMBER.

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

Q- P	0 / 0	-18.5	-18.5	0.10 (4)	10.00
P- O	0 / 1007	-18.5	-18.5	0.29 (4)	10.00
O- N	0 / 835	-18.5	-18.5	0.28 (4)	10.00
N- M	0 / 835	-18.5	-18.5	0.28 (4)	10.00
M- L	0 / 1006	-18.5	-18.5	0.30 (4)	10.00
L- K	0 / 491	-18.5	-18.5	0.12 (1)	10.00
K- J	0 / 0	-18.5	-18.5	0.05 (4)	10.00

JSI GRIP= 0.90 (L) (INPUT = 0.90)
JSI METAL= 0.34 (E) (INPUT = 1.00)



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

DRY: SEASONED LUMBER.

PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y X
A	TMVW-t	MT20	4.0	4.0	1.50 1.75
B	TTWW+m	MT20	4.0	6.0	2.25 2.00
C	TTW-h	MT20	4.0	4.0	Edge
D	TMWW-t	MT20	4.0	4.0	
E	TTW-h	MT20	4.0	4.0	Edge
F	TTWW+m	MT20	4.0	6.0	2.25 2.00
G	TTWW+m	MT20	6.0	7.0	Edge 1.50
H	TMVW+p	MT20	4.0	6.0	2.00 2.00
J	BMV1+p	MT20	2.0	4.0	
K	BMWW-t	MT20	4.0	4.0	
L	BMWW-t	MT20	4.0	4.0	1.75 2.00
M	BMWWW-t	MT20	5.0	8.0	
N	BS-t	MT20	3.0	6.0	
O	BMWWW-t	MT20	5.0	8.0	
P	BMWW-t	MT20	4.0	4.0	1.75 1.50
Q	BMV1+p	MT20	2.0	4.0	

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

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



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

BEARINGS		FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG		REQRD BRG	
JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX	IN-SX	IN-SX
Q	1298	0	1298	0	0	5-8	1-15		
J	1427	0	1427	0	0	5-8	2-2		

UNFACTORED REACTIONS		1ST LCASE		MAX./MIN. COMPONENT REACTIONS	
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND
Q	928	551 / 0	0 / 0	0 / 0	0 / 0
J	1017	621 / 0	0 / 0	0 / 0	0 / 0

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

BRACING
FOR SECTION C-E, MAX. PURLIN SPACING = 2.00 FT.
FOR OTHER SECTIONS, TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.68 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-Q, D-O, D-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		FACTORED		WEB S	
MEMB.	FORCE (LBS)	VERT. LOAD (PLF)	MAX. CSI (LC)	MEMB.	FORCE (LBS)
FR-TO		FROM TO		FR-TO	
Q-A	-1247 / 0	0.0 0.0	0.32 (1)	A-P	0 / 1332
A-B	-878 / 0	-78.0 -78.0	0.43 (1)	P-B	-920 / 0
B-C	-1237 / 0	-78.0 -78.0	0.08 (1)	B-O	-447 / 0
C-D	-752 / 0	-85.5 -85.5	0.19 (1)	O-C	0 / 750
D-E	-762 / 0	-85.5 -85.5	0.19 (1)	O-D	-240 / 0
E-F	-1253 / 0	-78.0 -78.0	0.08 (1)	D-M	-213 / 0
F-G	-896 / 0	-78.0 -78.0	0.10 (1)	M-E	0 / 759
G-H	-964 / 0	-78.0 -78.0	0.14 (1)	M-F	-444 / 0
H-I	0 / 52	-78.0 -78.0	0.15 (1)	L-F	-802 / 0
J-H	-1403 / 0	0.0 0.0	0.20 (1)	L-G	0 / 852
				K-G	-269 / 0
Q-P	0 / 0	-18.5 -18.5	0.16 (4)	K-H	0 / 679
P-O	0 / 891	-18.5 -18.5	0.27 (4)		
O-N	0 / 839	-18.5 -18.5	0.29 (4)		
N-M	0 / 839	-18.5 -18.5	0.29 (4)		
M-L	0 / 908	-18.5 -18.5	0.30 (4)		
L-K	0 / 570	-18.5 -18.5	0.14 (1)		
K-J	0 / 0	-18.5 -18.5	0.07 (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

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

LOADING IN OTHER FLAT SECTIONS BASED ON A SLOPE OF 6.00/12 AND 6.00/12

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 (0.88")
CALCULATED VERT. DEFL.(LL) = L/999 (0.05")
ALLOWABLE DEFL.(TL)= L/360 (0.88")
CALCULATED VERT. DEFL.(TL) = L/999 (0.17")

CSI: TC=0.43/1.00 (A-B:1) , BC=0.30/1.00 (L-M:4) , WB=0.95/1.00 (B-P:1) , SS=0.20/1.00 (A-B:1)

DOL LUMBER=1.00 NAIL=1.00 LBS 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	788	1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.88 (P) (INPUT = 0.90)
JSI METAL= 0.37 (E) (INPUT = 1.00)

Scale = 1:57.8

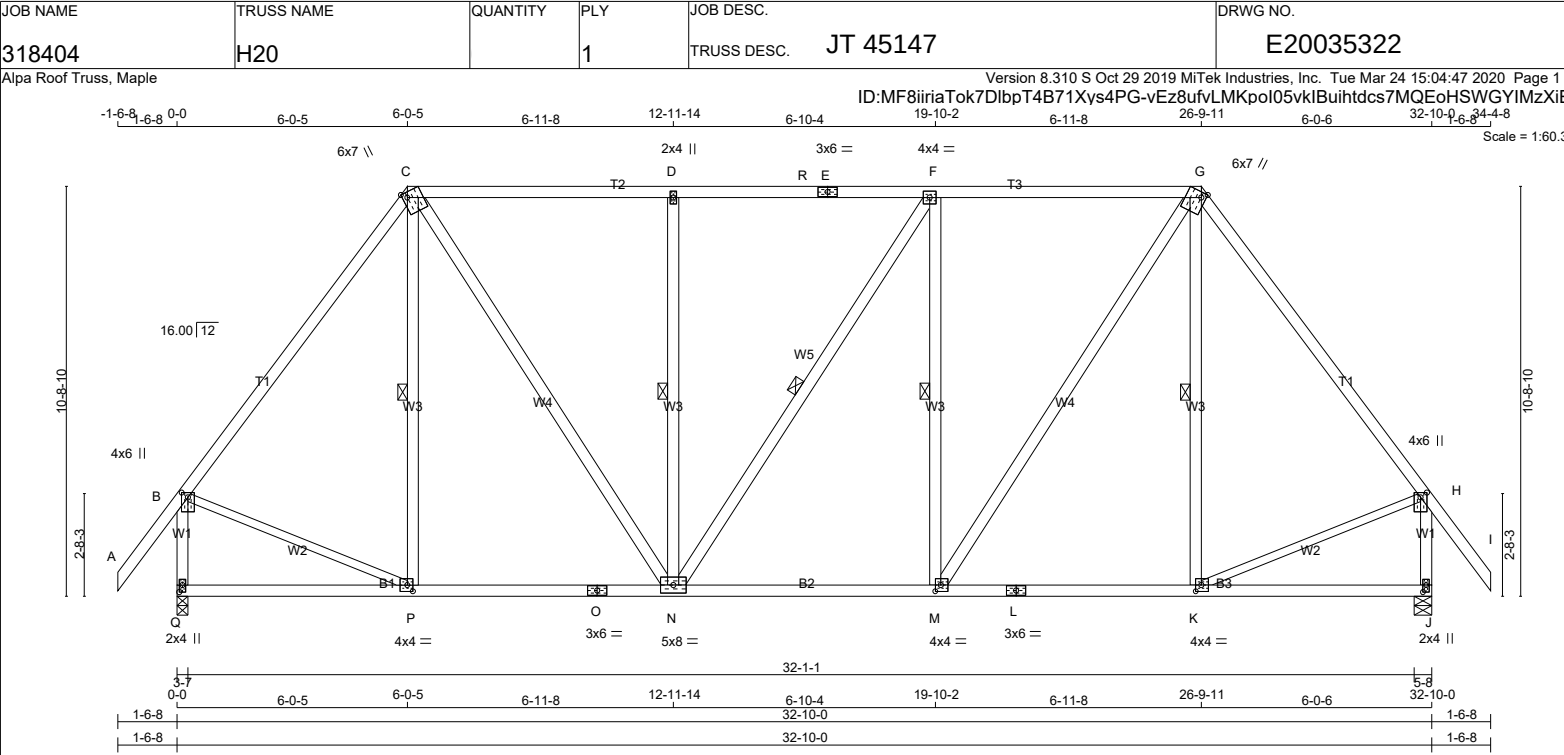


DRY: SEASONED LUMBER.

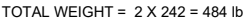
Edge - INDICATES REFERENCE CORNER OF PLATE
TOUCHES EDGE OF CHORD.

R- Q	0 / 487	-18.5	-18.5	0.32 (4)	10.00
Q- P	0 / 802	-18.5	-18.5	0.35 (4)	10.00
P- O	0 / 840	-18.5	-18.5	0.29 (4)	10.00
O- N	0 / 840	-18.5	-18.5	0.29 (4)	10.00
N- M	0 / 822	-18.5	-18.5	0.29 (4)	10.00
M- L	0 / 592	-18.5	-18.5	0.17 (4)	10.00
L- K	0 / 0	-18.5	-18.5	0.11 (4)	10.00

JSI GRIP= 0.79 (M) (INPUT = 0.90)
JSI METAL= 0.39 (I) (INPUT = 1.00)



Scale = 1:65.8



JSI GRIP= 0.89 (L) (INPUT = 0.90)
JSI METAL= 0.96 (P) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
318404	H20A		2	TRUSS DESC. JT 45147	E20035323(2)

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMVW-t	MT20	5.0	8.0	2.00	2.00
C	TTWW-h	MT20	8.0	9.0	2.00	6.25
D	TMWW+t	MT20	4.0	6.0	3.00	1.75
E	TMW+w	MT20	2.0	4.0		
F	TS-t	MT20	3.0	6.0		
G	TMWW+t	MT20	4.0	6.0	3.00	1.75
H	TTWW-h	MT20	8.0	9.0	2.00	6.25
I	TMVW-t	MT20	5.0	8.0	2.00	2.00
K	BMV1+t	MT20	6.0	9.0	Edge	0.50
L	BMWW+t	MT20	5.0	8.0	4.25	1.75
M	BS-t	MT20	4.0	6.0		
N	BMWW+t	MT20	4.0	9.0		
O	BMWWW-t	MT20	7.0	8.0	4.00	4.00
P	BS-t	MT20	4.0	6.0		
Q	BMWW+t	MT20	4.0	9.0		
R	BMWW+t	MT20	5.0	8.0	4.25	1.75
S	BMV1+t	MT20	6.0	9.0	5.50	

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

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



JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
318404	H21P		1	TRUSS DESC. JT 45147	E20035324

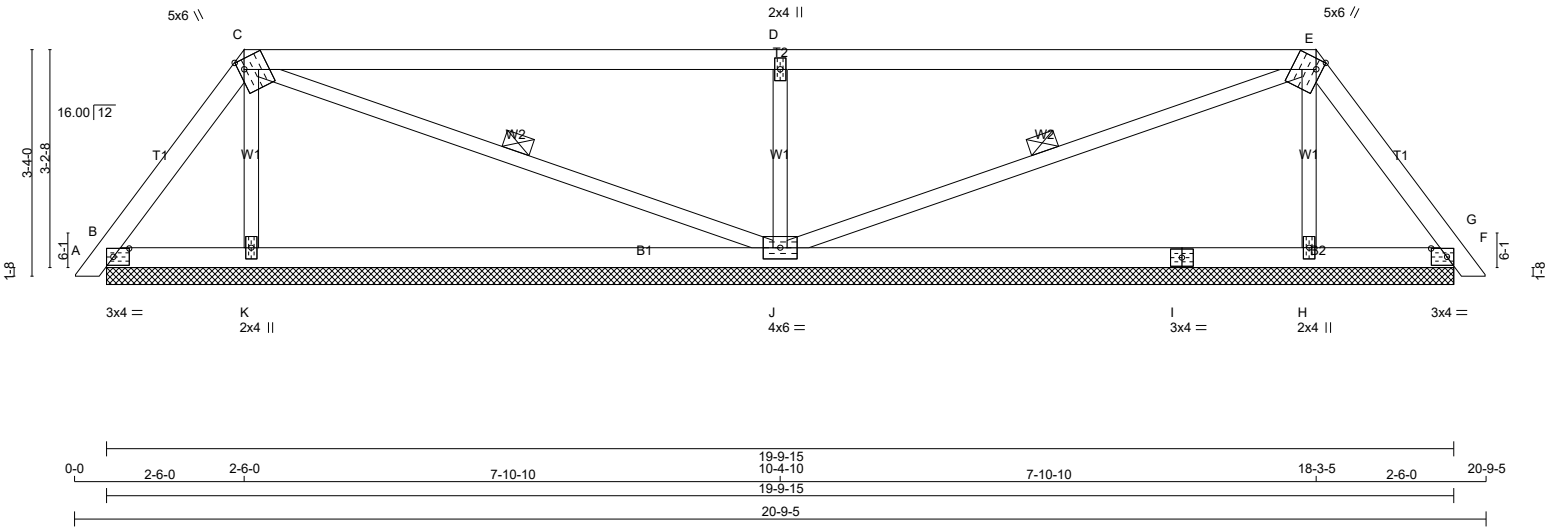
Alpa Roof Truss, Maple

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Scale = 1:33.9



TOTAL WEIGHT = 2 X 70 = 139 lb [M]

LUMBER				DESCR.	
N. L. G. A. RULES					
CHORDS	SIZE	LUMBER		SPF	
A - C	2x4	DRY	No.2	SPF	
C - E	2x4	DRY	No.2	SPF	
E - G	2x4	DRY	No.2	SPF	
B - I	2x4	DRY	No.2	SPF	
I - 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	TMB1-I	MT20	3.0	4.0	1.50	2.75
C	TTWW+m	MT20	5.0	6.0	1.75	1.00
D	TMW+w	MT20	2.0	4.0		
E	TTWW+m	MT20	5.0	6.0	1.75	1.00
F	TMB1-I	MT20	3.0	4.0	1.50	2.75
H	BMW1+w	MT20	2.0	4.0		
I	BS-I	MT20	3.0	4.0		
J	BMWWW1-I	MT20	4.0	6.0		
K	BMW1+w	MT20	2.0	4.0		

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

		FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG		REQRD BRG	
JT		VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX	
B	173	0	173	0	0	0	19-9-15 (4-0-0)0-4		
K	339	0	339	0	0	0	19-9-15 (4-0-0)0-4		
J	944	0	944	0	0	0	19-9-15 (4-0-0)0-4		
H	339	0	339	0	0	0	19-9-15 (4-0-0)0-4		
F	173	0	173	0	0	0	19-9-15 (4-0-0)0-4		

VALUE IN PARENTHESIS INDICATES EFFECTIVE BEARING LENGTH

UNFACTORED REACTIONS

1ST LCASE		MAX./MIN. COMPONENT REACTIONS						
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL	
B	118	101 / 0	0 / 0	0 / 0	0 / 0	18 / 0	0 / 0	
K	247	117 / 0	0 / 0	0 / 0	0 / 0	130 / 0	0 / 0	
J	670	426 / 0	0 / 0	0 / 0	0 / 0	244 / 0	0 / 0	
H	247	117 / 0	0 / 0	0 / 0	0 / 0	130 / 0	0 / 0	
F	118	101 / 0	0 / 0	0 / 0	0 / 0	18 / 0	0 / 0	

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

BRACING

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

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

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

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 UNBRAC LENGTH	MAX LC1 CSI (LC)
FR-TO		FROM TO		FR-TO			
A- B	0 / 10	-78.0 -78.0	0.01 (1)	10.00	K- C	-218 / 0	0.04 (1)
B- C	-98 / 0	-78.0 -78.0	0.05 (1)	6.25	C- J	-34 / 0	0.02 (1)
C- D	-16 / 0	-78.0 -78.0	0.83 (1)	6.25	J- D	-768 / 0	0.14 (1)
D- E	-16 / 0	-78.0 -78.0	0.83 (1)	6.25	J- E	-34 / 0	0.02 (1)
E- F	-98 / 0	-78.0 -78.0	0.05 (1)	6.25	H- E	-218 / 0	0.04 (1)
F- G	0 / 10	-78.0 -78.0	0.01 (1)	10.00			
B- K	0 / 57	-18.5 -18.5	0.17 (4)	10.00			
K- J	0 / 49	-18.5 -18.5	0.25 (4)	10.00			
J- I	0 / 49	-18.5 -18.5	0.25 (4)	10.00			
I- H	0 / 49	-18.5 -18.5	0.25 (4)	10.00			
H- F	0 / 57	-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=0.83/1.00 (D-E:1), BC=0.25/1.00 (H-J:4), WB=0.14/1.00 (D-J:1), SSI=0.30/1.00 (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

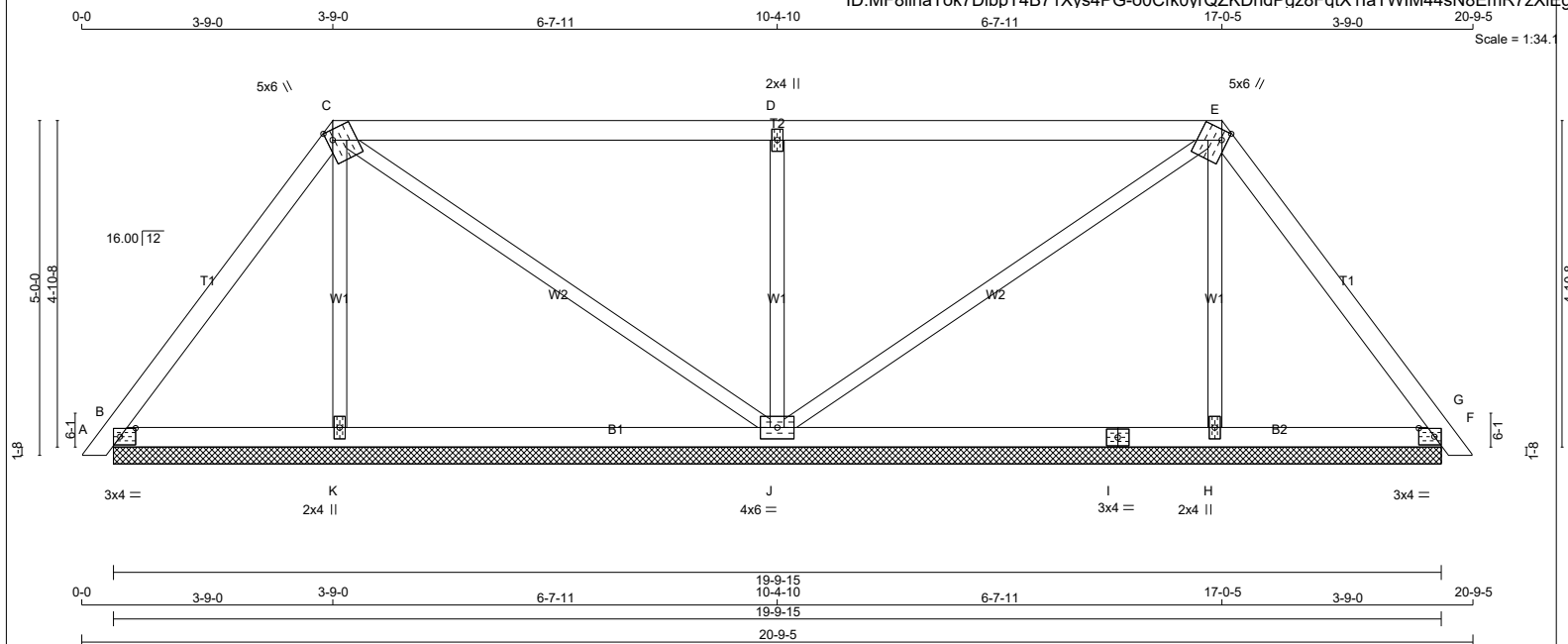
PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.88 (J) (INPUT = 0.90)
JSI METAL= 0.16 (D) (INPUT = 1.00)

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





TOTAL WEIGHT = $2 \times 75 = 150 \text{ lb}$

LUMBER			
N. L. G. A. RULES			
CHORDS	SIZE	LUMBER	DESCR
A - C	2x4	DRY No.2	SPF
C - E	2x4	DRY No.2	SPF
E - G	2x4	DRY No.2	SPF
B - I	2x4	DRY No.2	SPF
I - 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	TMB1-l	MT20	3.0	4.0	1.50	2.75
C	TTWW+ <i>m</i>	MT20	5.0	6.0	1.75	1.00
D	TMW+ <i>w</i>	MT20	2.0	4.0		
E	TTWW+ <i>m</i>	MT20	5.0	6.0	1.75	1.00
F	TMB1-l	MT20	3.0	4.0	1.50	2.75
H	BMW1+ <i>w</i>	MT20	2.0	4.0		
I	BS-t	MT20	3.0	4.0		
J	BMWWWW1-t	MT20	4.0	6.0		
K	BMW1+ <i>w</i>	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	REQ'D BRG
JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX
B	262	0	262	0	0	19-9-15	(4-9-163-11)
K	299	0	299	0	0	19-9-15	(4-9-163-11)
J	847	0	847	0	0	19-9-15	(4-9-163-11)
H	299	0	299	0	0	19-9-15	(4-9-163-11)
F	262	0	262	0	0	19-9-15	(4-9-163-11)

VALUE IN PARENTHESIS INDICATES EFFECTIVE BEARING LENGTH

UNFACTORED REACTIONS

1ST LCASE		MAX/MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
B	183	132 / 0	0 / 0	0 / 0	0 / 0	51 / 0	0 / 0
K	218	105 / 0	0 / 0	0 / 0	0 / 0	112 / 0	0 / 0
J	600	387 / 0	0 / 0	0 / 0	0 / 0	213 / 0	0 / 0
H	218	105 / 0	0 / 0	0 / 0	0 / 0	112 / 0	0 / 0
F	183	132 / 0	0 / 0	0 / 0	0 / 0	51 / 0	0 / 0

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

BRACING

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

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS					WEBS			
MAX. FACTORED		FACTORED			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 / 10	-78.0	-78.0 0.01 (1)	10.00	K- C	-196 / 0	0.07 (1)	
B- C	-111 / 0	-78.0	-78.0 0.14 (1)	6.25	C- J	-64 / 0	0.08 (1)	
C- D	-7 / 0	-78.0	-78.0 0.58 (1)	10.00	J- D	-646 / 0	0.23 (1)	
D- E	-7 / 0	-78.0	-78.0 0.58 (1)	10.00	J- E	-64 / 0	0.08 (1)	
E- F	-111 / 0	-78.0	-78.0 0.14 (1)	6.25	H- E	-196 / 0	0.07 (1)	
F- G	0 / 10	-78.0	-78.0 0.01 (1)	10.00				
B- K	0 / 65	-18.5	-18.5 0.12 (4)	10.00				
K- J	0 / 61	-18.5	-18.5 0.18 (4)	10.00				
J- I	0 / 61	-18.5	-18.5 0.18 (4)	10.00				
I- H	0 / 61	-18.5	-18.5 0.18 (4)	10.00				
H- F	0 / 65	-18.5	-18.5 0.12 (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

CSI: TC=0.58/1.00 (C-D:1) , BC=0.18/1.00 (H-J:4) ,
WB=0.23/1.00 (D-J:1) , SSI=0.25/1.00 (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

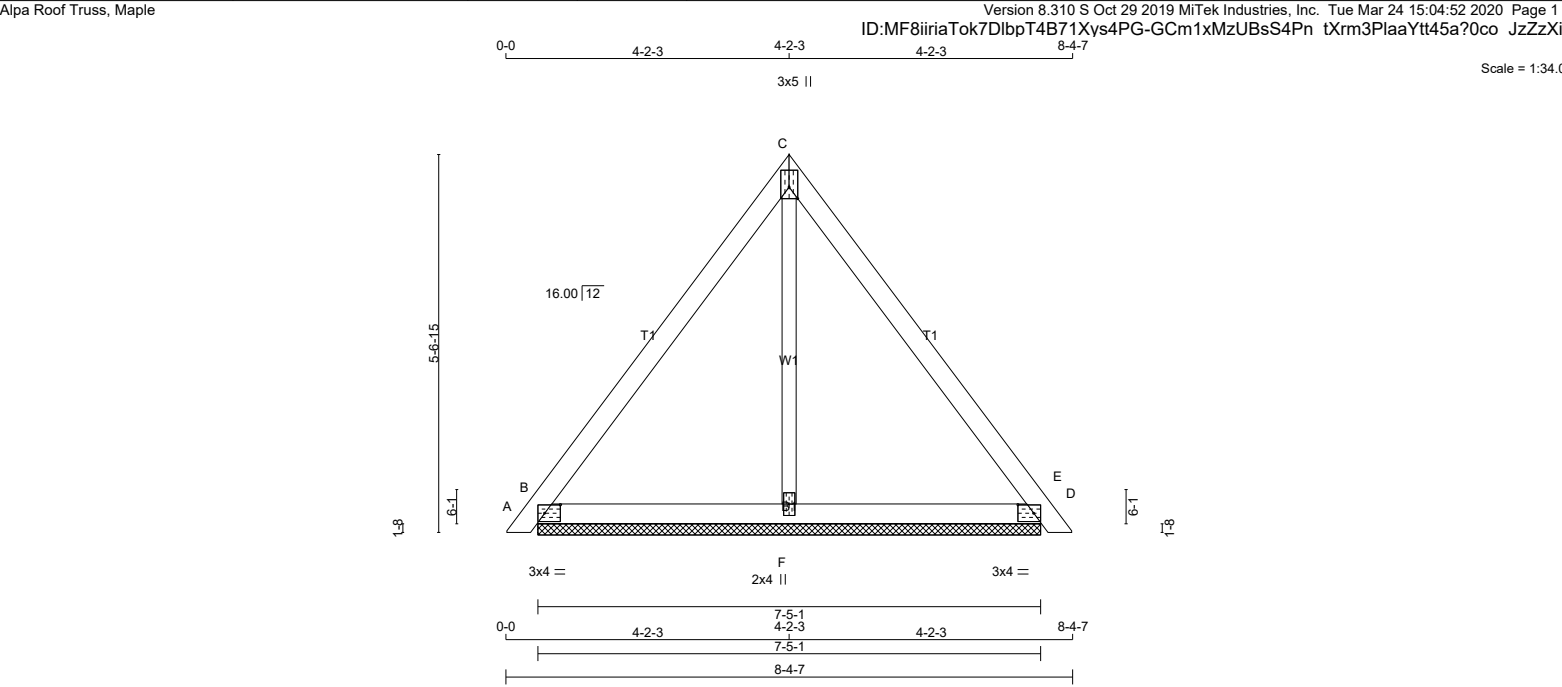
PLATE	GRIP(DRY) (PSI)		SHEAR (PLI)		SECTION (PLI)	
	MAX	MIN	MAX	MIN	MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.64 (J) (INPUT = 0.90)
JSI METAL= 0.14 (D) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
318404	H23P		1	TRUSS DESC. JT 45147	E20035326



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	DRY	LUMBER	DESCR.	FACTORED	MAXIMUM	FACTORED	INPUT	REQRD	TOP	CH.
A - C	2x4	DRY	No.2	SPF	GROSS REACTION	GROSS REACTION	DOWN	BRG	BRG	LL	= 21.0 PSF
C - E	2x4	DRY	No.2	SPF	VERT	HORZ	DOWN	HORZ	UPLIFT	DL	= 6.0 PSF
B - D	2x4	DRY	No.2	SPF	JT					BOT	CH.
					B	277	0	277	0	LL	= 0.0 PSF
					D	277	0	277	0	DL	= 7.4 PSF
					F	216	0	216	0	TOTAL LOAD	= 34.4 PSF
ALL WEBS	2x3	DRY	No.2	SPF						SPACING = 24.0 IN. C/C	
DRY: SEASONED LUMBER.										THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015	

PLATES (table is in inches)						
JT	TYPE	PLATES	W	LEN	Y	X
B	TMB1-l	MT20	3.0	4.0	1.50	2.75
C	TTW+p	MT20	3.0	5.0	2.00	Edge
D	TMB1-l	MT20	3.0	4.0	1.50	2.75
F	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							
JT	1ST LCASE	SNOW	LIVE	PERM. LIVE	WIND	DEAD	SOIL
B	195	135 / 0	0 / 0	0 / 0	0 / 0	59 / 0	0 / 0
D	195	135 / 0	0 / 0	0 / 0	0 / 0	59 / 0	0 / 0
F	159	70 / 0	0 / 0	0 / 0	0 / 0	89 / 0	0 / 0

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

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

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

LOADING
TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX LC1	MAX. UNBRACED LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX LC1
FR-TO		FROM	TO		FR-TO		
A-B	0 / 10	-78.0	-78.0	0.01 (1)	10.00	F-C	-130 / 0
B-C	-98 / 0	-78.0	-78.0	0.18 (1)	6.25		
C-D	-98 / 0	-78.0	-78.0	0.18 (1)	6.25		
D-E	0 / 10	-78.0	-78.0	0.01 (1)	10.00		
B-F	0 / 58	-18.5	-18.5	0.08 (4)	10.00		
F-D	0 / 58	-18.5	-18.5	0.08 (4)	10.00		

CSI: TC=0.18/1.00 (B-C:1) , BC=0.08/1.00 (B-F:4) , WB=0.05/1.00 (C-F:1) , SSI=0.07/1.00 (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 .

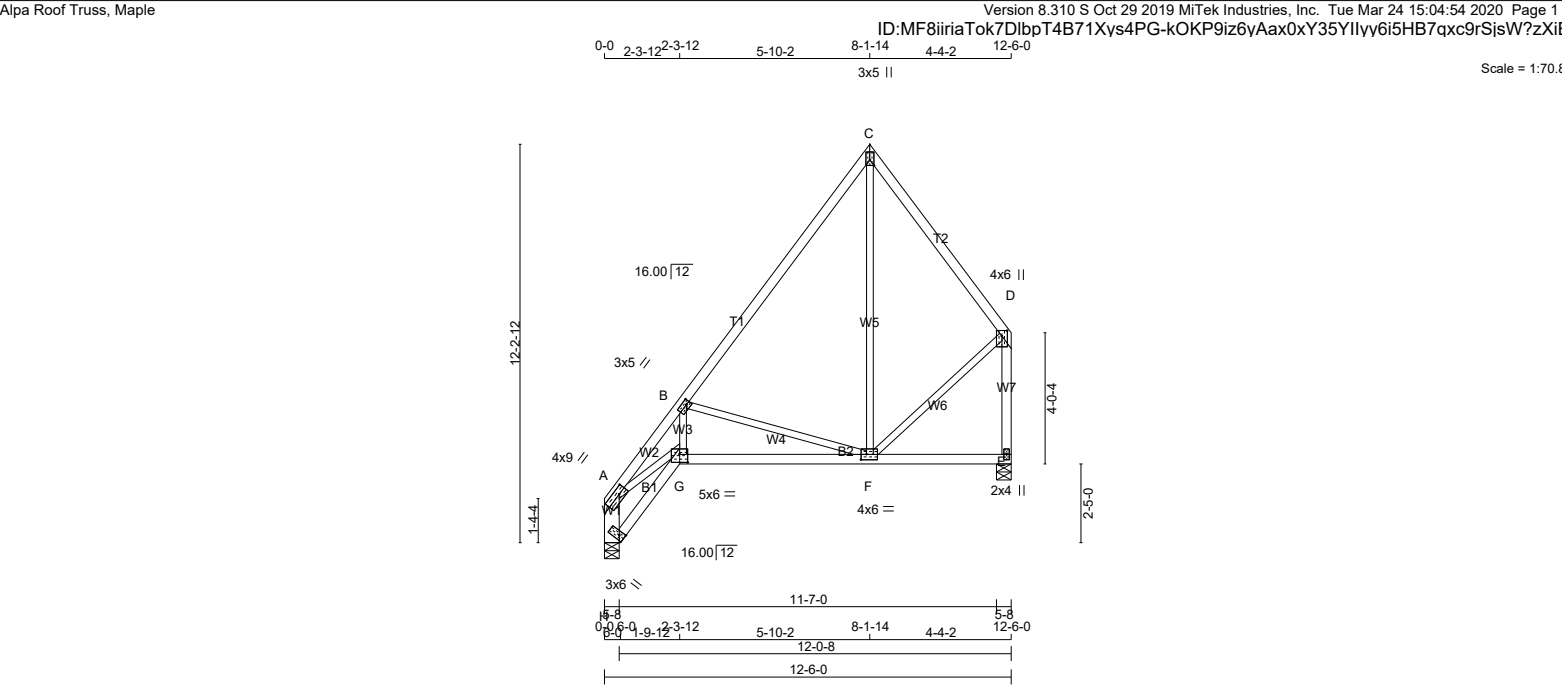
NAIL VALUES
PLATE GRIP(DRY) SHEAR SECTION (PSI) (PLI) (PLI)
MAX MIN MAX MIN MAX MIN
MT20 650 371 1747 788 1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.31 (D) (INPUT = 0.90)
JSI METAL= 0.12 (D) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
318404	H24T		1	TRUSS DESC. JT 45147	E20035327



TOTAL WEIGHT = 2 X 67 = 133 lb

LUMBER			
N. L. G. A. RULES			
CHORDS	SIZE	LUMBER	DESCR.
A - C	2x4	DRY	No.2
C - D	2x4	DRY	No.2
H - A	2x6	DRY	No.2
E - D	2x4	DRY	No.2
H - G	2x4	DRY	No.2
G - E	2x4	DRY	No.2

ALL WEBS	2x3	DRY	No.2	SPF
EXCEPT				

DRY: SEASONED LUMBER.

PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y X
A	TMVW-t	MT20	4.0	9.0	2.00 3.00
B	TMWW-t	MT20	3.0	5.0	1.50 1.50
C	TTW+p	MT20	3.0	5.0	2.00 Edge
D	TMVW+p	MT20	4.0	6.0	2.00 2.00
E	BMV1+p	MT20	2.0	4.0	
F	BMWWW-t	MT20	4.0	6.0	2.00 2.00
G	BBWW-l	MT20	5.0	6.0	3.00 3.00
H	BVM1+l	MT20	3.0	6.0	Edge

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

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

BEARINGS		FACTORED	MAXIMUM	FACTORED	INPUT	REQRD
		GROSS REACTION	GROSS REACTION	DOWN	BRG	BRG
JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX
H	603	0	603	0	0	5-8
E	603	0	603	0	0	5-8

UNFACTORED REACTIONS							
1ST LCASE		MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
H	430	262 / 0	0 / 0	0 / 0	0 / 0	167 / 0	0 / 0
E	430	262 / 0	0 / 0	0 / 0	0 / 0	168 / 0	0 / 0

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

BRACING
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.33 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		MAX. FACTORED		
MEMB.	FORCE	VERT.	LOAD	LC1	MAX.	MEMB.	FORCE	MAX	
	(LBS)	(PLF)	CSI (LC)	UNBRAC			(LBS)	CSI (LC)	
FR-TO		FROM	TO	LENGTH	FR-TO				
A-B	-1334 / 0	-78.0	-78.0	0.25 (1)	5.33	G-B	0 / 620	0.14 (1)	
B-C	-344 / 0	-78.0	-78.0	0.33 (1)	6.25	B-F	-648 / 0	0.41 (1)	
C-D	-313 / 0	-78.0	-78.0	0.19 (1)	6.25	F-C	0 / 146	0.05 (4)	
H-A	-582 / 0	0.0	0.0	0.04 (1)	7.81	F-D	0 / 245	0.06 (1)	
E-D	-577 / 0	0.0	0.0	0.16 (1)	7.81	A-G	0 / 1006	0.23 (1)	
H-G	0 / 0	-18.5	-18.5	0.03 (4)	10.00				
G-F	0 / 807	-18.5	-18.5	0.22 (4)	10.00				
F-E	0 / 0	-18.5	-18.5	0.15 (4)	10.00				

DESIGN CRITERIA

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

SPACING = 24.0 IN. C/C

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

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

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

ALLOWABLE DEFL.(LL)= L/360 (0.42")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.02")
ALLOWABLE DEFL.(TL)= L/360 (0.42")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.07")

CSI: TC=0.33/1.00 (B-C:1) , BC=0.22/1.00 (F-G:4) ,
WB=0.41/1.00 (B-F: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

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
MT20	650	371	1747	788	1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.80 (F) (INPUT = 0.90)
JSI METAL= 0.42 (G) (INPUT = 1.00)

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

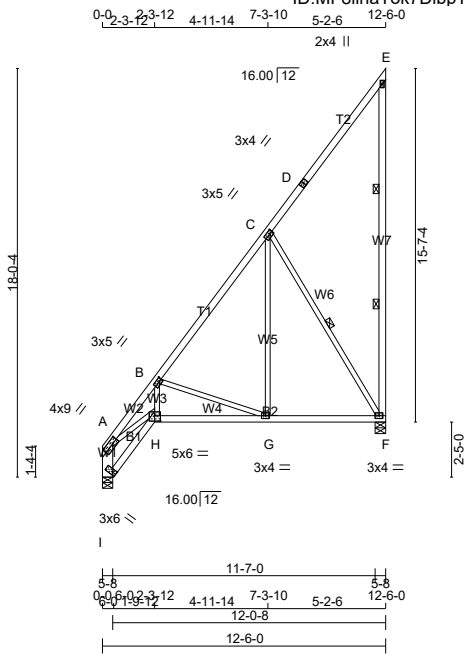


JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
318404	H25T		1	TRUSS DESC. JT 45147	E20035328

Alpa Roof Truss, Maple

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Scale = 1:101.7

TOTAL WEIGHT = 5 X 81 = 404 lb

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

PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y X
A	TMVW-t	MT20	4.0	9.0	2.00 3.00
B	TMWW-t	MT20	3.0	5.0	1.50 1.50
C	TMWW-t	MT20	3.0	5.0	1.50 1.50
D	TS-t	MT20	3.0	4.0	
E	TMV+p	MT20	2.0	4.0	
F	BMVW1-t	MT20	3.0	4.0	
G	BMWW-t	MT20	3.0	4.0	
H	BBWW-t	MT20	5.0	6.0	3.00 3.00
I	BVM1-t	MT20	3.0	6.0	Edge
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	REQRD BRG
JT	VERT	HORZ	DOWN	HORZ	UPLIFT
F	603	0	603	0	0
I	603	0	603	0	0

UNFACTORED REACTIONS		1ST LCASE	MAX /MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL	
F	430	262 / 0	0 / 0	0 / 0	0 / 0	168 / 0	0 / 0	
I	430	262 / 0	0 / 0	0 / 0	0 / 0	168 / 0	0 / 0	

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

BRACING
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.68 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT. OR RIGID CEILING DIRECTLY APPLIED.

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

2 LATERAL BRACE(S) AT 1/3 LENGTH OF E-F.
1 LATERAL BRACE(S) AT 1/2 LENGTH OF C-F.

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

LOADING
TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX LC1 CSI (LC)	MAX. UNBRAC LENGTH FR-TO	MEMB.	FACTORED FORCE (LBS)	MAX CSI (LC)
FR-TO		FROM TO			FR-TO		
A-B	-1237 / 0	-78.0 -78.0	0.10 (1)	5.68	H-B	0 / 556	0.13 (1)
B-C	-400 / 0	-78.0 -78.0	0.25 (1)	6.25	B-G	-499 / 0	0.23 (1)
C-D	-35 / 0	-78.0 -78.0	0.26 (1)	6.25	G-C	0 / 279	0.07 (4)
D-E	-35 / 0	-78.0 -78.0	0.26 (1)	6.25	C-F	-480 / 0	0.33 (1)
F-E	-159 / 0	0.0 0.0	0.09 (1)	6.25	A-H	0 / 903	0.20 (1)
I-A	-582 / 0	0.0 0.0	0.04 (1)	7.81			
I-H	0 / 0	-18.5 -18.5	0.03 (4)	10.00			
H-G	0 / 724	-18.5 -18.5	0.20 (4)	10.00			
G-F	0 / 255	-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/C

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

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

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

ALLOWABLE DEFL.(LL)= L/360 (0.42")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.02")
ALLOWABLE DEFL.(TL)= L/360 (0.42")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.05")

CSI: TC=0.26/1.00 (C-E:1) , BC=0.20/1.00 (G-H:4) , WB=0.33/1.00 (C-F:1) , SSI=0.12/1.00 (C-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

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
MT20	650	371	1747	788 1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.67 (G) (INPUT = 0.90)
JSI METAL= 0.38 (H) (INPUT = 1.00)

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

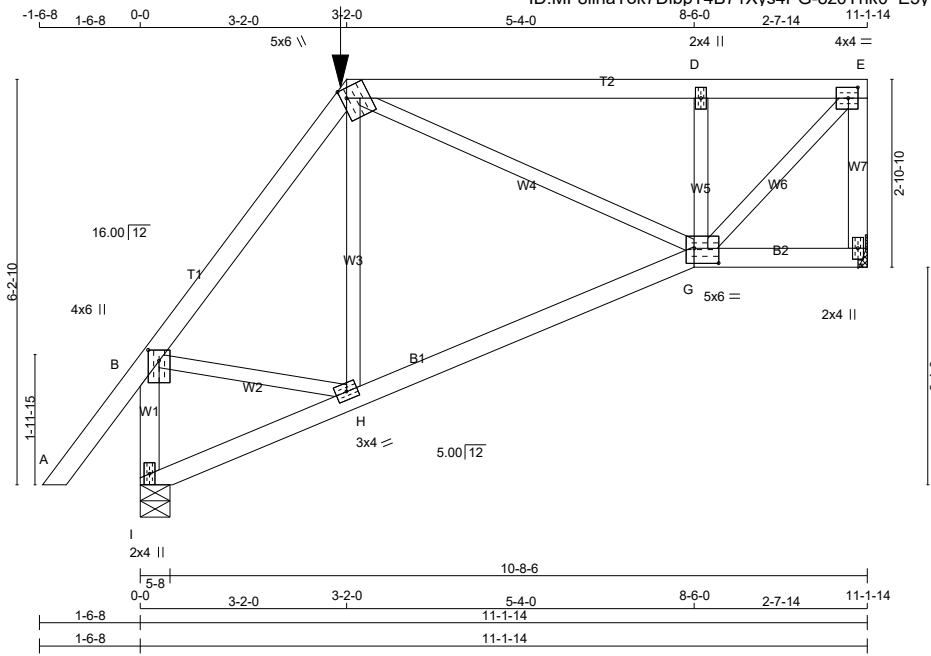


JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
318404	H26		1	TRUSS DESC. JT 45147	E20035329

Alpa Roof Truss, Maple

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TOTAL WEIGHT = 51 lb [M]

LUMBER				
N. L. G. A. RULES	CHORDS	SIZE	LUMBER	DESCR.
A - C	2x4	DRY	No.2	SPF
C - E	2x4	DRY	No.2	SPF
F - E	2x4	DRY	No.2	SPF
I - B	2x4	DRY	No.2	SPF
I - G	2x4	DRY	No.2	SPF
G - F	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	2.00 2.00
C	TTWW+m	MT20	5.0	6.0	1.75 1.00
D	TMW+w	MT20	2.0	4.0	
E	TMVW-t	MT20	4.0	4.0	2.00 1.75
F	BMV1+p	MT20	2.0	4.0	
G	BBWWW-p	MT20	5.0	6.0	2.75 4.50
H	BMWW-t	MT20	3.0	4.0	
I	BMV1+p	MT20	2.0	4.0	

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

BEARINGS		FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG		REQRD BRG	
JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX	MECHANICAL	
F	704	0	704	0	0				
I	790	0	790	0	0	5-8	1-8		

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

UNFACTORED REACTIONS

1ST LCASE		MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
F	502	307 / 0	0 / 0	0 / 0	0 / 0	195 / 0	0 / 0
I	561	354 / 0	0 / 0	0 / 0	0 / 0	208 / 0	0 / 0

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

BRACING

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

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. CSI (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. CSI (LC)	
FR-TO		FROM TO		FR-TO			
A-B	0 / 43	-78.0 -78.0	0.12 (1)	10.00	H-C	-68 / 66	0.03 (1)
B-C	-609 / 0	-78.0 -78.0	0.16 (1)	6.25	C-G	0 / 310	0.08 (1)
C-D	-641 / 0	-100.7 -100.7	0.41 (1)	6.25	G-D	-547 / 0	0.10 (1)
D-E	-664 / 0	-100.7 -100.7	0.40 (1)	6.25	G-E	0 / 926	0.23 (1)
F-E	-673 / 0	0.0 0.0	0.10 (1)	7.81	B-H	0 / 366	0.09 (1)
I-B	-769 / 0	0.0 0.0	0.10 (1)	7.81			
I-H	0 / 8	-23.9 -23.9	0.16 (4)	10.00			
H-G	0 / 387	-23.9 -23.9	0.20 (4)	10.00			
G-F	0 / 0	-23.9 -23.9	0.05 (4)	10.00			

FACTORED CONCENTRATED LOADS (LBS)

JT	LOC.	LC1	MAX-	MAX+	FACE	DIR.	TYPE	HEEL	CONN.
C	3-2-0	-69	-69	---	FRONT	VERT	TOTAL	---	C1

DESIGN CRITERIA

SPECIFIED LOADS:

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

SPACING = 24.0 IN./C

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

GIRDER TYPE: CPrimeHip
LEFT SETBACK = 3-2-0
RIGHT SETBACK = 0-0
END SETBACK = 3-2-0
END WALL WIDTH = 0-0
CORNER FRAMING TYPE: CONVENTIONAL
END JACK TYPE: CONVENTIONAL
APPLIED TO FRONT SIDE
- ADDTL LOADS BASED ON 55 % OF GSL.

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 (0.37")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.01")
ALLOWABLE DEFL.(TL)= L/360 (0.37")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.04")

CSI: TC=0.41/1.00 (C-D:1) , BC=0.20/1.00 (G-H:4) , WB=0.23/1.00 (E-G:1) , SSI=0.28/1.00 (C-D:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.78 (E) (INPUT = 0.90)
JSI METAL= 0.32 (G) (INPUT = 1.00)

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

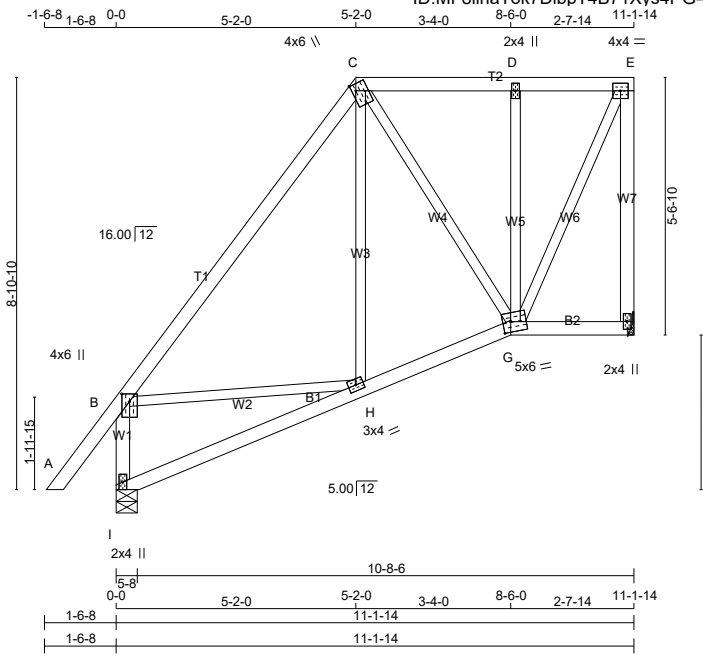


JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
318404	H27		1	TRUSS DESC. JT 45147	E20035330

Alpa Roof Truss, Maple

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ID:MF8iiriaTok7DlbpT4B71Xys4PG-c9aw 40c?P4NVYsqKOME6oHODuZMmp0lI3h4fnzXiEa



TOTAL WEIGHT = 63 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
F - E	2x4	DRY	No.2	SPF
I - B	2x4	DRY	No.2	SPF
I - G	2x4	DRY	No.2	SPF
G - F	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 2.00 2.00
C	TTWW+m	MT20	4.0	6.0 1.75 1.00
D	TMW+w	MT20	2.0	4.0
E	TMVW-t	MT20	4.0	4.0
F	BMV1+p	MT20	2.0	4.0
G	BBWWW-m	MT20	5.0	6.0 2.75 2.00
H	BMWW-t	MT20	3.0	4.0
I	BMV1+p	MT20	2.0	4.0

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

BEARINGS		FACTORED GROSS REACTION	MAXIMUM FACTORED GROSS REACTION	INPUT BRG	REQRD BRG
JT	VERT	HORZ	DOWN	HORZ	UPLIFT
F	538	0	538	0	0
I	646	0	646	0	0

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

UNFACTORED REACTIONS		1ST LCASE	MAX./MIN. COMPONENT REACTIONS
JT	COMBINED	SNOW	LIVE
F	384	234 / 0	0 / 0
I	458	292 / 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		CHORDS	WEBS
MEMB.	FORCE (LBS)	VERT. LOAD (PLF)	MAX. FACTORED FORCE (LBS)
FR-TO		FROM TO	LENGTH FR-TO
A-B	0 / 43	-78.0 -78.0 0.11 (1)	10.00
B-C	-392 / 0	-78.0 -78.0 0.38 (1)	6.25
C-D	-220 / 0	-78.0 -78.0 0.11 (1)	6.25
D-E	-226 / 0	-78.0 -78.0 0.11 (1)	6.25
F-E	-514 / 0	0.0 0.0 0.28 (1)	7.81
I-B	-606 / 0	0.0 0.0 0.07 (1)	7.81
I-H	0 / 4	-18.5 -18.5 0.11 (4)	10.00
H-G	0 / 248	-18.5 -18.5 0.13 (4)	10.00
G-F	0 / 0	-18.5 -18.5 0.04 (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 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 (0.37")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.01")
ALLOWABLE DEFL.(TL)= L/360 (0.37")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.03")

CSI: TC=0.38/1.00 (B-C:1), BC=0.13/1.00 (G-H:4), WB=0.13/1.00 (D-G:1), SSI=0.12/1.00 (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 (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= 0.59 (E) (INPUT = 0.90)
JSI METAL= 0.22 (I) (INPUT = 1.00)

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

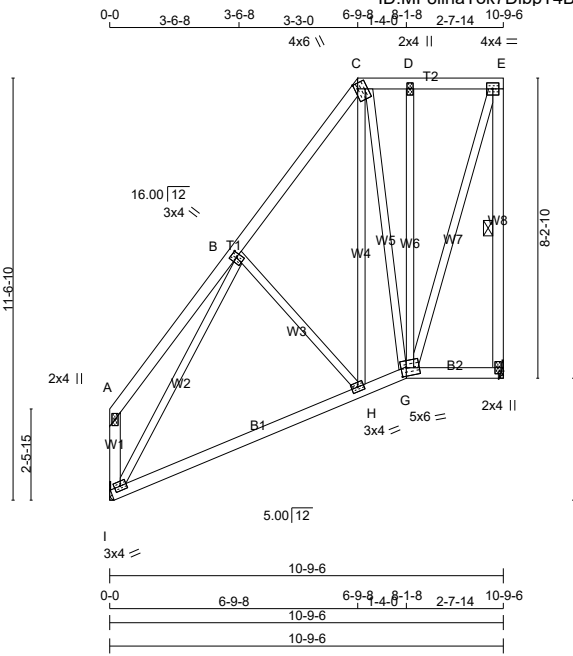


JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
318404	H28		1	TRUSS DESC. JT 45147	E20035331

Alpa Roof Truss, Maple

ID:MF8iiriaTok7DlbpT4B71Xys4PG-4M8lCQ1EmiCE7iR0t6tTf0qcYluCVAiu iRdBDzXlEz

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LUMBER					DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER										DESIGN CRITERIA				[M][F]	
N. L. G. A. RULES		SIZE		LUMBER	DESCR.	BEARINGS										SPECIFIED LOADS:				
CHORDS						FACTORED		MAXIMUM	FACTORED	INPUT	REQRD	TOP	CH.	LL	=	21.0	PSF			
A - C	2x4	DRY	No.2	SPF		GROSS	REACTION	GROSS	REACTION	BRG	BRG			DL	=	6.0	PSF			
C - E	2x4	DRY	No.2	SPF		JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX	BOT	CH.	LL	=	0.0	PSF	
F - E	2x4	DRY	No.2	SPF		F	520	0	520	0	0	MECHANICAL				DL	=	7.4	PSF	
I - A	2x4	DRY	No.2	SPF		I	520	0	520	0	0	MECHANICAL				TOTAL	LOAD	=	34.4	PSF
I - G	2x4	DRY	No.2	SPF		A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT F, I. MINIMUM BEARING LENGTH AT JOINT F = 1-8, JOINT I = 1-8.														
G - F	2x4	DRY	No.2	SPF																
ALL WEBS EXCEPT	2x3	DRY	No.2	SPF																
SPACING = 24.0 IN./C																				

PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y X
A	TMV+p	MT20	2.0	4.0	
B	TMWW+t	MT20	3.0	4.0	1.75 1.25
C	TTWW+m	MT20	4.0	6.0	1.75 1.00
D	TMW+w	MT20	2.0	4.0	
E	TMVW-t	MT20	4.0	4.0	
F	BMV1+p	MT20	2.0	4.0	
G	BBWWW-m	MT20	5.0	6.0	2.75 1.75
H	BMWW-t	MT20	3.0	4.0	
I	BMVW1-t	MT20	3.0	4.0	

UNFACTORED REACTIONS							
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
F	371	226 / 0	0 / 0	0 / 0	0 / 0	144 / 0	0 / 0
I	371	226 / 0	0 / 0	0 / 0	0 / 0	144 / 0	0 / 0

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

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

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

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

LOADING				TOTAL LOAD CASES: (4)			
CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. CSI (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. CSI (LC)	
FR-TO		FROM TO		FR-TO			
A-B	0 / 25	-78.0 -78.0	0.15 (1)	H-C	0 / 261	0.07 (4)	
B-C	-297 / 0	-78.0 -78.0	0.11 (1)	C-G	-185 / 0	0.25 (1)	
C-D	-134 / 0	-78.0 -78.0	0.03 (1)	G-D	-186 / 0	0.25 (1)	
D-E	-137 / 0	-78.0 -78.0	0.06 (1)	G-E	0 / 431	0.10 (1)	
F-E	-496 / 0	0.0 0.0	0.15 (1)	I-B	-522 / 0	0.55 (1)	
I-A	-101 / 0	0.0 0.0	0.01 (1)	B-H	-109 / 0	0.05 (1)	
I-H	0 / 261	-18.5 -18.5	0.22 (4)				
H-G	0 / 155	-18.5 -18.5	0.21 (4)				
G-F	0 / 0	-18.5 -18.5	0.04 (4)				

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



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 (0.36")
CALCULATED VERT. DEFL.(LL)= L/ 999 (0.01")
ALLOWABLE DEFL.(TL)= L/360 (0.36")
CALCULATED VERT. DEFL.(TL)= L/ 999 (0.07")

CSI: TC=0.15/1.00 (E-F:1) , BC=0.22/1.00 (H-I:4) , WB=0.55/1.00 (B-I:1) , SSI=0.10/1.00 (G-H:4)

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

COMPANION LIVE LOAD FACTOR = 1.00

AUTOSOLVE RIGHT HEEL ONLY

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

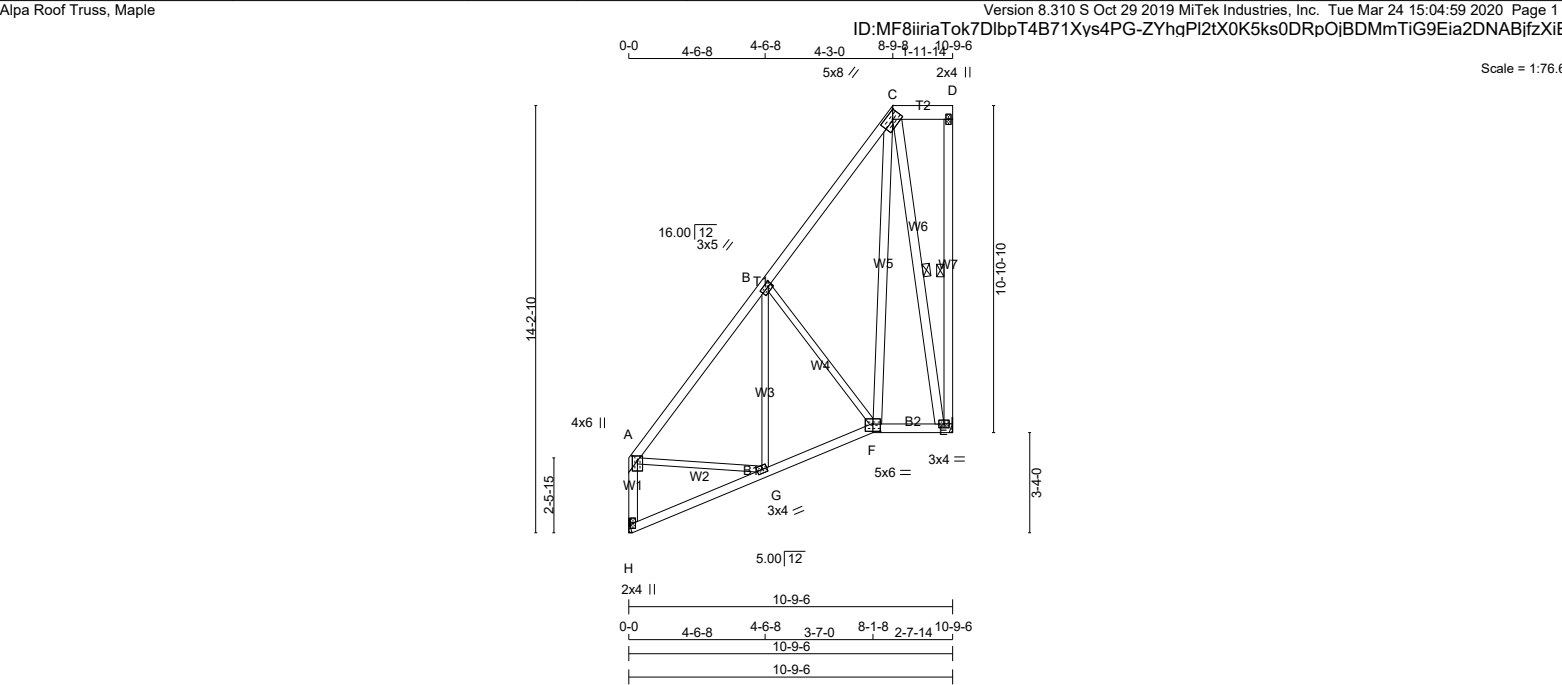
NAIL VALUES
PLATE GRIP(DRY) SHEAR SECTION
(PSI) (PLI) (PLI)
MAX MIN MAX MIN MAX MIN
MT20 650 371 1747 788 1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.88 (B) (INPUT = 0.90)
JSI METAL= 0.31 (B) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
318404	H29		1	TRUSS DESC. JT 45147	E20035332



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	FACTORED			TOP CH. LL = 21.0 PSF		
A - C	2x4	DRY	MAXIMUM FACTORED			DL = 6.0 PSF		
C - D	2x6	DRY	INPUT			BOT CH. LL = 0.0 PSF		
E - D	2x4	DRY	REQRD			DL = 7.4 PSF		
H - A	2x4	DRY	BRG			TOTAL LOAD = 34.4 PSF		
H - F	2x4	DRY	IN-SX					
F - E	2x4	DRY	MECHANICAL					
ALL WEBS	2x3	DRY	A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT E, H. MINIMUM BEARING LENGTH AT JOINT E = 1-8, JOINT H = 1-8.			SPACING = 24.0 IN. C/C		
EXCEPT						LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM		
F - C	2x4	DRY				THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBC 2015		
C - E	2x4	DRY				THIS DESIGN COMPLIES WITH:		
DRY: SEASONED LUMBER.			UNFACTORED REACTIONS			- PART 9 OF BCBC 2018, ABC 2019		
			1ST LCASE			- PART 9 OF OBC 2012 (2019 AMENDMENT)		
			MAX./MIN. COMPONENT REACTIONS			- CSA 086-14		
			JT COMBINED			- TPIC 2014		
			E 371			(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		
			H 371			ALLOWABLE DEFL.(LL)= L/360 (0.36")		
						CALCULATED VERT. DEFL.(LL) = L/ 999 (0.01")		
						ALLOWABLE DEFL.(TL)= L/360 (0.36")		
						CALCULATED VERT. DEFL.(TL) = L/ 999 (0.02")		
						CSI: TC=0.20/1.00 (A-B:1), BC=0.11/1.00 (F-G:4), WB=0.26/1.00 (C-E:1), SSI=0.10/1.00 (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= 0.43 (E) (INPUT = 0.90)		
						JSI METAL= 0.17 (H) (INPUT = 1.00)		

PLATES (table is in inches)						
JT	TYPE	PLATES	W	LEN	Y	X
A	TMVW+p	MT20	4.0	6.0	2.00	2.00
B	TMWW-t	MT20	3.0	5.0	1.50	1.50
C	TTWW-h	MT20	5.0	8.0	2.50	3.25
D	TMV+p	MT20	2.0	4.0		
E	BMVW1-t	MT20	3.0	4.0		
F	BBWW-t	MT20	5.0	6.0	3.00	3.00
G	BMWW-t	MT20	3.0	4.0		
H	BMV1+p	MT20	2.0	4.0		

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

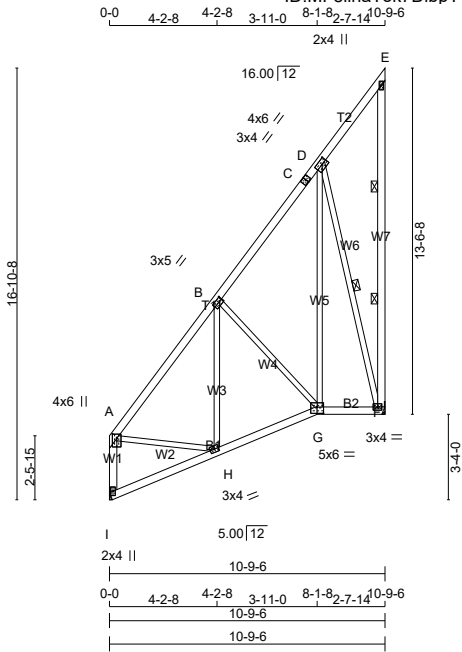


JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
318404	H30		1	TRUSS DESC. JT 45147	E20035333

Alpa Roof Truss, Maple

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TOTAL WEIGHT = 2 X 79 = 159 lb

[M][F]

LUMBER				
N. L. G. A. RULES				
CHORDS	SIZE	LUMBER		DESCR.
I - A	2x4	DRY	No.2	SPF
A - C	2x4	DRY	No.2	SPF
C - E	2x4	DRY	No.2	SPF
F - E	2x4	DRY	No.2	SPF
I - 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
A	TMVW+p	MT20	4.0	6.0	2.00 2.00
B	TMWW-t	MT20	3.0	5.0	1.50 1.50
C	TS-t	MT20	3.0	4.0	
D	TMWW-t	MT20	4.0	6.0	2.00 2.50
E	TMV+p	MT20	2.0	4.0	
F	BMVW1-t	MT20	3.0	4.0	
G	BBWW-t	MT20	5.0	6.0	3.00 3.00
H	BMWW-t	MT20	3.0	4.0	
I	BMV1+p	MT20	2.0	4.0	

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

BEARINGS

	FACTORED GROSS REACTION	MAXIMUM FACTORED GROSS REACTION	INPUT BRG	REQRD BRG
JT	VERT	HORZ	DOWN	HORZ
I	520	0	520	0
F	520	0	520	0

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

UNFACTORED REACTIONS

1ST LCASE	MAX./MIN. COMPONENT REACTIONS						
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
I	371	226 / 0	0 / 0	0 / 0	0 / 0	144 / 0	0 / 0
F	371	226 / 0	0 / 0	0 / 0	0 / 0	144 / 0	0 / 0

BRACING

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

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

2 LATERAL BRACE(S) AT 1/3 LENGTH OF E-F.
1 LATERAL BRACE(S) AT 1/2 LENGTH OF D-F.

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	VERT. LOAD (PLF)	FACTORED LC1 MAX CSI (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX UNBRAC LENGTH	FACTORED MAX CSI (LC)
FR-TO		FROM TO		FR-TO			
I-A	-489 / 0	0.0	0.0 0.07 (1)	G-D	0 / 310	6.25	0.07 (1)
A-B	-393 / 0	-78.0	-78.0 0.16 (1)	D-F	-440 / 0	6.25	0.33 (1)
B-C	-205 / 0	-78.0	-78.0 0.15 (1)	A-H	0 / 253	6.25	0.06 (1)
C-D	-205 / 0	-78.0	-78.0 0.15 (1)	H-B	-36 / 54	6.25	0.02 (1)
D-E	-23 / 0	-78.0	-78.0 0.08 (1)	B-G	-206 / 0	6.25	0.13 (1)
F-E	-70 / 0	0.0	0.0 0.03 (1)				
I-H	0 / 4	-18.5	-18.5 0.09 (4)				
H-G	0 / 269	-18.5	-18.5 0.11 (4)				
G-F	0 / 111	-18.5	-18.5 0.05 (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

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

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

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

ALLOWABLE DEFL.(LL)= L/360 (0.36")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.01")
ALLOWABLE DEFL.(TL)= L/360 (0.36")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.02")

CSI: TC=0.16/1.00 (A-B:1) , BC=0.11/1.00 (G-H:4) ,
WB=0.33/1.00 (D-F:1) , SSI=0.09/1.00 (A-B:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

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

PLATE PLACEMENT TOL. = 0.250 inches

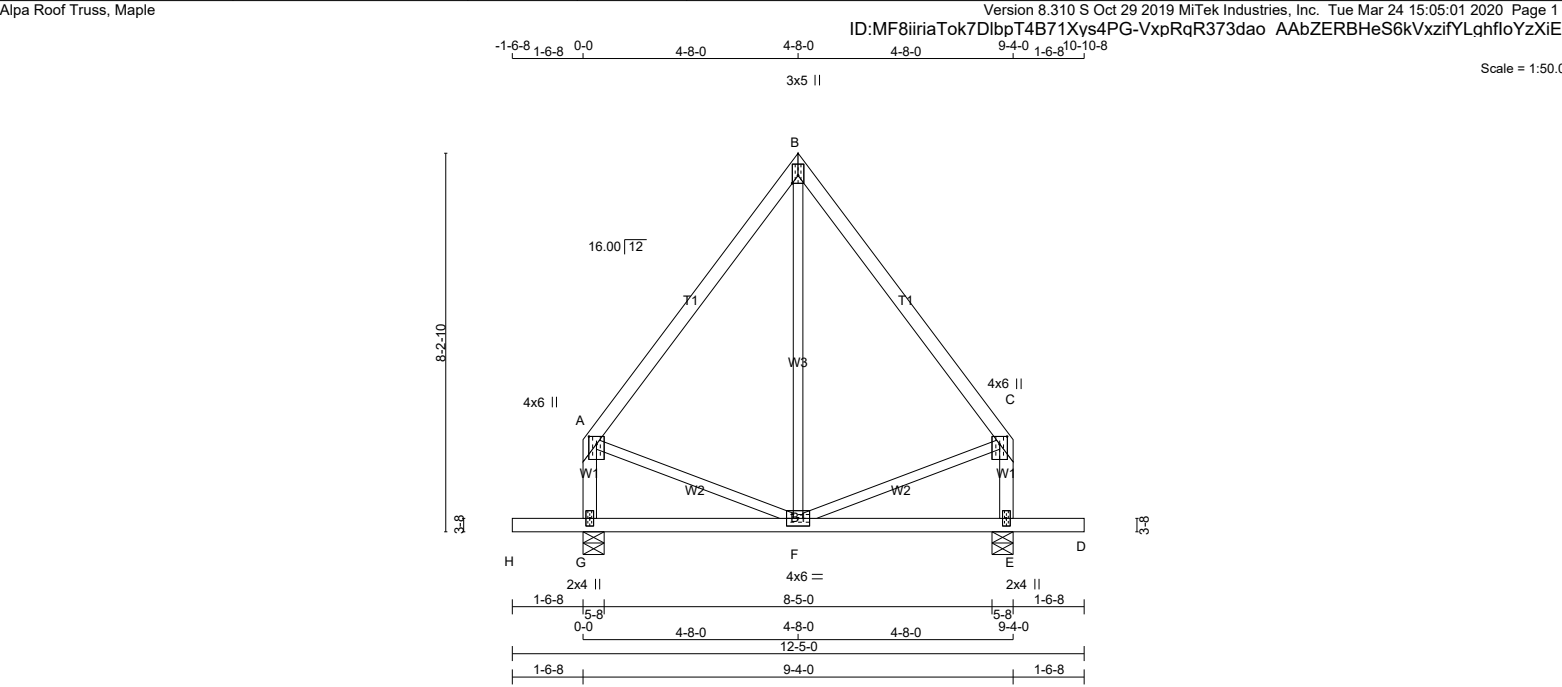
PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.65 (F) (INPUT = 0.90)
JSI METAL= 0.18 (I) (INPUT = 1.00)

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



JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
318404	H31		1	TRUSS DESC. JT 45147	E20035334



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

DRY: SEASONED LUMBER.

PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y X
A	TMVW+p	MT20	4.0	6.0	2.00 2.00
B	TTW+p	MT20	3.0	5.0	2.00 Edge
C	TMVW+p	MT20	4.0	6.0	2.00 2.00
E	BMV1+p	MT20	2.0	4.0	
F	BMVWW-t	MT20	4.0	6.0	
G	BMV1+p	MT20	2.0	4.0	

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

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



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

BEARINGS		FACTORED	MAXIMUM FACTORED	INPUT	REQRD
		GROSS REACTION	GROSS REACTION	BRG	BRG
JT	VERT	HORZ	DOWN	HORZ	UPLIFT
G	599	0	599	0	0
E	599	0	599	0	0

UNFACTORED REACTIONS

1ST LCASE		MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
G	427	261 / 0	0 / 0	0 / 0	0 / 0	166 / 0	0 / 0
E	427	261 / 0	0 / 0	0 / 0	0 / 0	166 / 0	0 / 0

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS		MEMB.				WEBS			
MAX. FACTORED		FORCE		FACTORED		MAX. FACTORED		FORCE	
		(LBS)		VERT. LOAD LC1		MAX. UNBRAC		(LBS)	
				(PLF)		LENGTH FR-TO			
				CSI (LC)					
FR-TO		FROM TO							
A-B		-234 / 0		-78.0 -78.0 0.22 (1)		6.25 F-B		0 / 79 0.03 (4)	
B-C		-234 / 0		-78.0 -78.0 0.22 (1)		6.25 A-F		0 / 148 0.03 (1)	
G-A		-417 / 0		0.0 0.0 0.05 (1)		7.81 F-C		0 / 148 0.03 (1)	
E-C		-417 / 0		0.0 0.0 0.05 (1)		7.81			
H-G		0 / 0		-96.5 -96.5 0.16 (1)		10.00			
G-F		0 / 0		-18.5 -18.5 0.11 (4)		10.00			
F-E		0 / 0		-18.5 -18.5 0.11 (4)		10.00			
E-D		0 / 0		-96.5 -96.5 0.16 (1)		10.00			

DESIGN CRITERIA

SPECIFIED LOADS:

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

SPACING = 24.0 IN. C/C

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

THIS DESIGN COMPLIES WITH:
- PART 9 OF 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 (0.31")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")
ALLOWABLE DEFL.(TL)= L/360 (0.31")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.01")

CANTILEVER DEFLECTION:
ALLOWABLE DEFL.(LL)= L/120 (0.19")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.01")
ALLOWABLE DEFL.(TL)= L/120 (0.19")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.01")

CSI: TC=0.22/1.00 (B-C:1) , BC=0.16/1.00 (D-E:1) , WB=0.03/1.00 (C-F:1) , SSI=0.12/1.00 (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 .

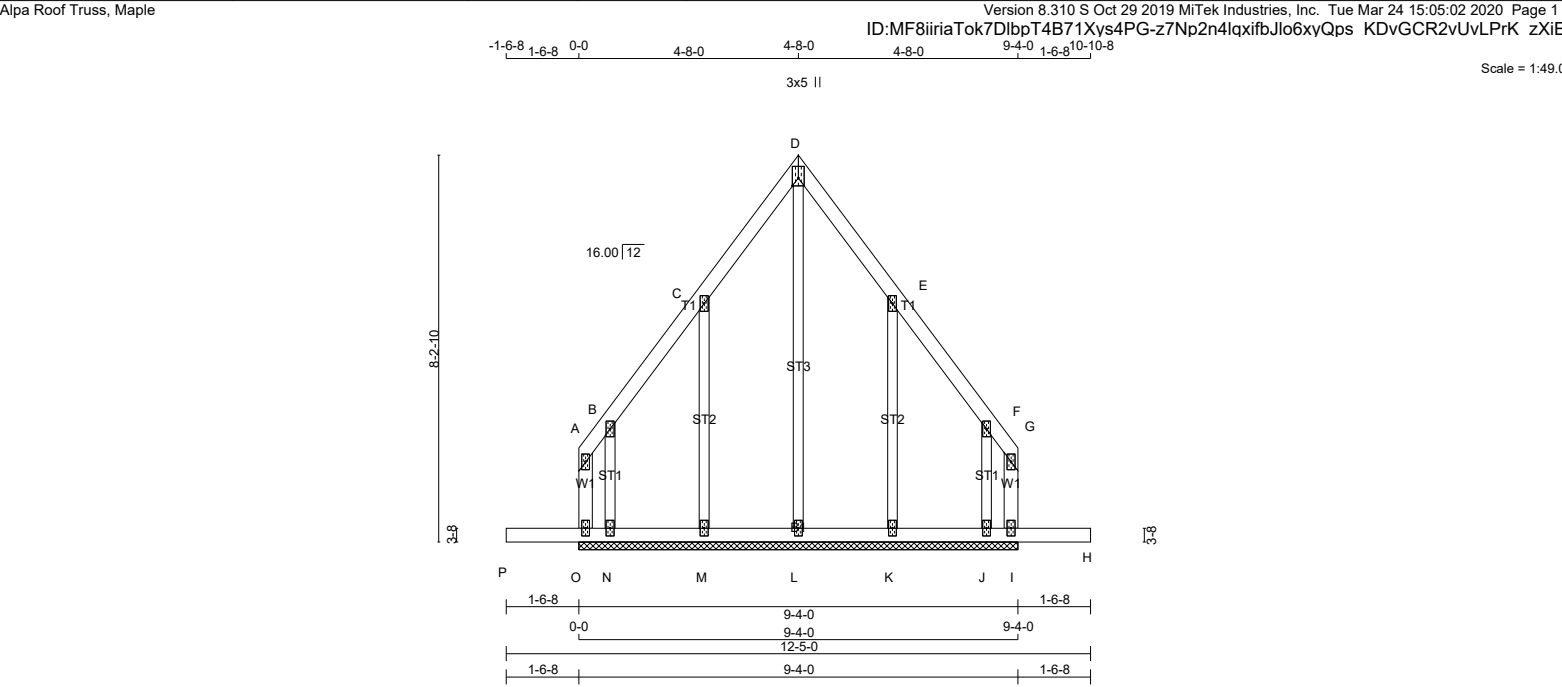
NAIL VALUES			
PLATE GRIP(DRY) SHEAR	SECTION	(PSI)	(PLI)
		MAX MIN	MAX MIN
MT20	650	371	1747 788 1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.23 (A) (INPUT = 0.90)
JSI METAL= 0.12 (C) (INPUT = 1.00)

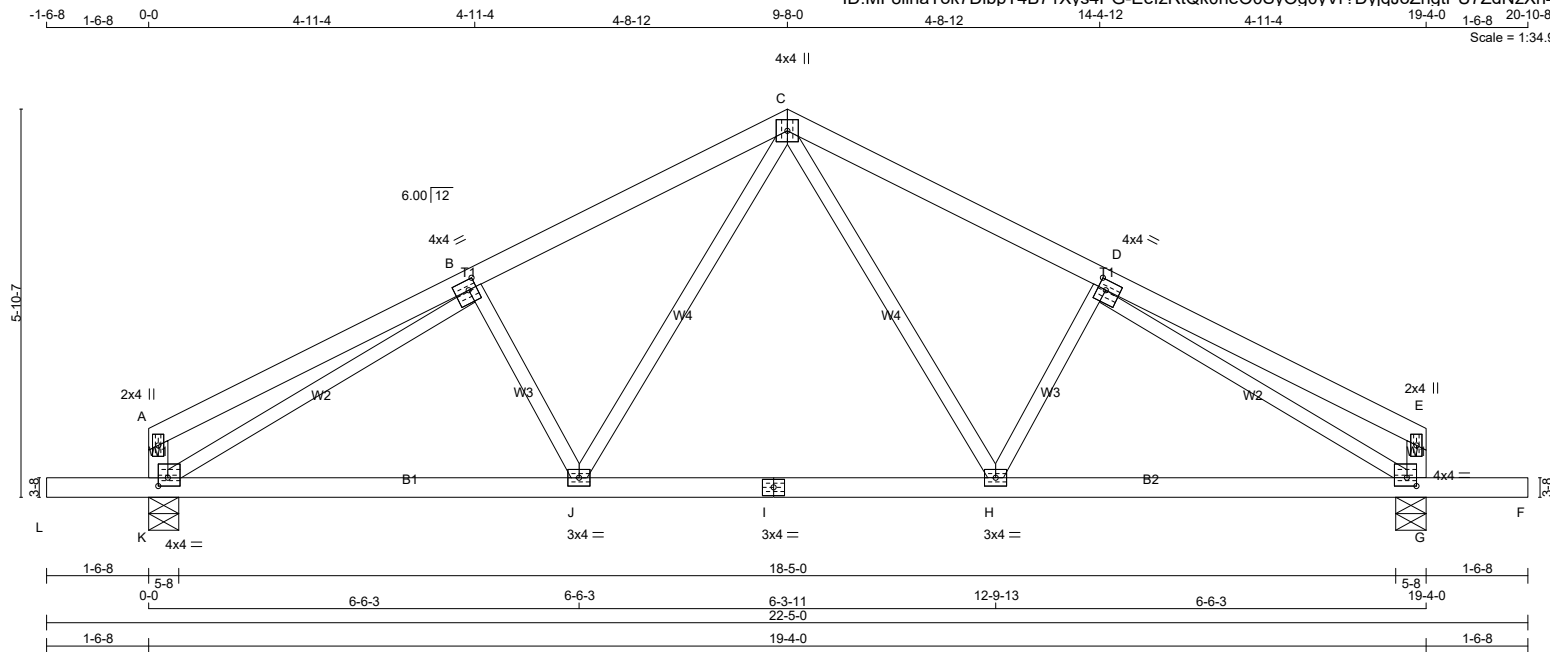
JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
318404	H31G		1	TRUSS DESC. JT 45147	E20035335



LUMBER N. L. G. A. RULES CHORDS SIZE LUMBER DESCR. O - A 2x4 DRY No.2 SPF A - D 2x4 DRY No.2 SPF D - G 2x4 DRY No.2 SPF I - G 2x4 DRY No.2 SPF P - H 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" 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. PROVIDE ANCHORAGE AT BEARING JOINT N FOR 150 LBS. FACTORED UPLIFT PROVIDE ANCHORAGE AT BEARING JOINT J 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 = 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. 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 THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015 THIS DESIGN COMPLIES WITH: - PART 9 OF BCBC 2018 , ABC 2019 - PART 9 OF OBC 2012 (2019 AMENDMENT) - CSA 086-14 - TPIC 2014 DESIGN ASSUMPTIONS -OVERHANG NOT TO BE ALTERED OR CUT OFF. (55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD CSI: TC=0.04/1.00 (B-C:1) , BC=0.16/1.00 (H-I:1) , WB=0.22/1.00 (D-L:1) , SSI=0.14/1.00 (I-J:1) DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10 COMP=1.10 SHEAR=1.10 TENS= 1.10 COMPANION LIVE LOAD FACTOR = 1.00 TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT . NAIL VALUES PLATE GRIP(DRY) SHEAR SECTION (PSI) (PLI) (PLI) MAX MIN MAX MIN MAX MIN MT20 650 371 1747 788 1987 1873 PLATE PLACEMENT TOL. = 0.250 inches PLATE ROTATION TOL. = 5.0 Deg. JSI GRIP= 0.17 (D) (INPUT = 0.90) JSI METAL= 0.08 (E) (INPUT = 1.00)																																																																																																																																																												
PLATES (table is in inches) JT TYPE PLATES W LEN Y X A TMV+p MT20 2.0 4.0 B, C, E, F B TMW+w MT20 2.0 4.0 D TTW+p MT20 3.0 5.0 2.00 Edge G TMV+p MT20 2.0 4.0 I BMV1+p MT20 2.0 4.0 J, K, L, M, N J BMW1+w MT20 2.0 4.0 O BMV1+p MT20 2.0 4.0 Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.					<table><tr><th colspan="2">CHORDS</th><th colspan="2">FACTORED</th><th colspan="2">WEBS</th><th colspan="2">FACTORED</th></tr><tr><th>MEMB.</th><th>FORCE (LBS)</th><th>VERT. LOAD (PLF)</th><th>LC1 MAX CSI (LC)</th><th>MEMB.</th><th>FORCE (LBS)</th><th>LC1 MAX CSI (LC)</th><th></th></tr><tr><td>FR-TO</td><td></td><td>FROM TO</td><td></td><td>FR-TO</td><td></td><td></td><td></td></tr><tr><td>O- A</td><td>-20 / 0</td><td>0.0</td><td>0.0 0.02 (1)</td><td>7.81</td><td>L- D</td><td>-178 / 0</td><td>0.22 (1)</td></tr><tr><td>A- B</td><td>0 / 5</td><td>-78.0</td><td>-78.0 0.02 (1)</td><td>10.00</td><td>M- C</td><td>-165 / 0</td><td>0.07 (1)</td></tr><tr><td>B- C</td><td>0 / 10</td><td>-78.0</td><td>-78.0 0.04 (1)</td><td>10.00</td><td>N- B</td><td>-90 / 0</td><td>0.02 (1)</td></tr><tr><td>C- D</td><td>0 / 9</td><td>-78.0</td><td>-78.0 0.04 (1)</td><td>10.00</td><td>K- E</td><td>-165 / 0</td><td>0.07 (1)</td></tr><tr><td>D- E</td><td>0 / 9</td><td>-78.0</td><td>-78.0 0.04 (1)</td><td>10.00</td><td>J- F</td><td>-90 / 0</td><td>0.02 (1)</td></tr><tr><td>E- F</td><td>0 / 10</td><td>-78.0</td><td>-78.0 0.04 (1)</td><td>10.00</td><td></td><td></td><td></td></tr><tr><td>F- G</td><td>0 / 5</td><td>-78.0</td><td>-78.0 0.02 (1)</td><td>10.00</td><td></td><td></td><td></td></tr><tr><td>I- G</td><td>-20 / 0</td><td>0.0</td><td>0.0 0.02 (1)</td><td>7.81</td><td></td><td></td><td></td></tr><tr><td>P- O</td><td>0 / 0</td><td>-96.5</td><td>-96.5 0.16 (1)</td><td>10.00</td><td></td><td></td><td></td></tr><tr><td>O- N</td><td>-3 / 2</td><td>-18.5</td><td>-18.5 0.14 (1)</td><td>10.00</td><td></td><td></td><td></td></tr><tr><td>N- M</td><td>-4 / 0</td><td>-18.5</td><td>-18.5 0.02 (4)</td><td>10.00</td><td></td><td></td><td></td></tr><tr><td>M- L</td><td>-6 / 0</td><td>-18.5</td><td>-18.5 0.02 (4)</td><td>10.00</td><td></td><td></td><td></td></tr><tr><td>L- K</td><td>-6 / 0</td><td>-18.5</td><td>-18.5 0.02 (4)</td><td>10.00</td><td></td><td></td><td></td></tr><tr><td>K- J</td><td>-4 / 0</td><td>-18.5</td><td>-18.5 0.02 (4)</td><td>10.00</td><td></td><td></td><td></td></tr><tr><td>J- I</td><td>-3 / 2</td><td>-18.5</td><td>-18.5 0.14 (1)</td><td>10.00</td><td></td><td></td><td></td></tr><tr><td>I- H</td><td>0 / 0</td><td>-96.5</td><td>-96.5 0.16 (1)</td><td>10.00</td><td></td><td></td><td></td></tr></table>					CHORDS		FACTORED		WEBS		FACTORED		MEMB.	FORCE (LBS)	VERT. LOAD (PLF)	LC1 MAX CSI (LC)	MEMB.	FORCE (LBS)	LC1 MAX CSI (LC)		FR-TO		FROM TO		FR-TO				O- A	-20 / 0	0.0	0.0 0.02 (1)	7.81	L- D	-178 / 0	0.22 (1)	A- B	0 / 5	-78.0	-78.0 0.02 (1)	10.00	M- C	-165 / 0	0.07 (1)	B- C	0 / 10	-78.0	-78.0 0.04 (1)	10.00	N- B	-90 / 0	0.02 (1)	C- D	0 / 9	-78.0	-78.0 0.04 (1)	10.00	K- E	-165 / 0	0.07 (1)	D- E	0 / 9	-78.0	-78.0 0.04 (1)	10.00	J- F	-90 / 0	0.02 (1)	E- F	0 / 10	-78.0	-78.0 0.04 (1)	10.00				F- G	0 / 5	-78.0	-78.0 0.02 (1)	10.00				I- G	-20 / 0	0.0	0.0 0.02 (1)	7.81				P- O	0 / 0	-96.5	-96.5 0.16 (1)	10.00				O- N	-3 / 2	-18.5	-18.5 0.14 (1)	10.00				N- M	-4 / 0	-18.5	-18.5 0.02 (4)	10.00				M- L	-6 / 0	-18.5	-18.5 0.02 (4)	10.00				L- K	-6 / 0	-18.5	-18.5 0.02 (4)	10.00				K- J	-4 / 0	-18.5	-18.5 0.02 (4)	10.00				J- I	-3 / 2	-18.5	-18.5 0.14 (1)	10.00				I- H	0 / 0	-96.5	-96.5 0.16 (1)	10.00				LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2				
CHORDS		FACTORED		WEBS		FACTORED																																																																																																																																																																
MEMB.	FORCE (LBS)	VERT. LOAD (PLF)	LC1 MAX CSI (LC)	MEMB.	FORCE (LBS)	LC1 MAX CSI (LC)																																																																																																																																																																
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I- H	0 / 0	-96.5	-96.5 0.16 (1)	10.00																																																																																																																																																																		







TOTAL WEIGHT = 4 X 76 = 304 lb

LUMBER			
N. L. G. A. RULES			
CHORDS	SIZE	LUMBER	DESCR.
A - C	2x4	No.2	SPF
C - E	2x4	No.2	SPF
K - A	2x4	No.2	SPF
G - E	2x4	No.2	SPF
L - I	2x4	No.2	SPF
I - F	2x4	No.2	SPF

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

PLATES (table is in inches)

JT	PLATES	W	LEN	Y	X
A	TMV+p	MT20	2.0	4.0	
B	TMWW-t	MT20	4.0	4.0	1.75
C	TTWW+p	MT20	4.0	4.0	
D	TMWW-t	MT20	4.0	4.0	1.75
E	TMV+p	MT20	2.0	4.0	
G	BMVW1-t	MT20	4.0	4.0	1.50
H	BMWW-t	MT20	3.0	4.0	
I	BS-t	MT20	3.0	4.0	
J	BMWW-t	MT20	3.0	4.0	
K	BMVW1-t	MT20	4.0	4.0	1.50

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

	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION			INPUT BRG	REQRD BRG
	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX
JT	1081	0	1081	0	0	5-8	1-8
K	1081	0	1081	0	0	5-8	1-8
G	1081	0	1081	0	0	5-8	1-8

UNFACTORED REACTIONS

1ST LCASE		MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
K	771	471 / 0	0 / 0	0 / 0	0 / 0	300 / 0	0 / 0
G	771	471 / 0	0 / 0	0 / 0	0 / 0	300 / 0	0 / 0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.67 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

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

LOADING

TOTAL LOAD CASES: (4)

C H O R D S				W E B S			
MAX. FACTORED		FACTORED		MAX. FACTORED			
MEMB.	FORCE (LBS)	VERT. LOAD (PLF)	LC1 MAX CSI (LC)	MAX. UNBRAC	MEMB.	FORCE (LBS)	MAX CSI (LC)
FR-TO		FROM TO		LENGTH	FR-TO		
A-B	0 / 19	-78.0	-78.0 0.29 (1)	10.00	C-H	0 / 414	0.09 (1)
B-C	-1148 / 0	-78.0	-78.0 0.24 (1)	5.67	H-D	-262 / 0	0.06 (1)
C-D	-1148 / 0	-78.0	-78.0 0.24 (1)	5.67	J-C	0 / 414	0.09 (1)
D-E	0 / 19	-78.0	-78.0 0.29 (1)	10.00	B-J	-262 / 0	0.06 (1)
K-A	-145 / 0	0.0	0.0 0.01 (1)	7.81	K-B	-1352 / 0	0.74 (1)
G-E	-145 / 0	0.0	0.0 0.01 (1)	7.81	D-G	-1352 / 0	0.74 (1)
L-K	0 / 0	-96.5	-96.5 0.16 (1)	10.00			
K-J	0 / 1133	-18.5	-18.5 0.28 (4)	10.00			
J-I	0 / 806	-18.5	-18.5 0.25 (4)	10.00			
I-H	0 / 806	-18.5	-18.5 0.25 (4)	10.00			
H-G	0 / 1133	-18.5	-18.5 0.28 (4)	10.00			
G-F	0 / 0	-96.5	-96.5 0.16 (1)	10.00			

DESIGN CRITERIA

SPECIFIED LOADS:

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

SPACING = 24.0 IN. C/C

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

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

(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)= $L/360$ (0.64")
 CALCULATED VERT. DEFL.(LL) = $L/999$ (0.04")
 ALLOWABLE DEFL.(TL)= $L/360$ (0.64")
 CALCULATED VERT. DEFL.(TL) = $L/999$ (0.09")

CANTILEVER DEFLECTION:
ALLOWABLE DEFL.(LL)= $L/120$ (0.19")
CALCULATED VERT. DEFL.(LL) = $L/999$ (0.01")
ALLOWABLE DEFL.(TL)= $L/120$ (0.19")
CALCULATED VERT. DEFL.(TL) = $L/999$ (0.01")

CSI: TC=0.29/1.00 (A-B:1), BC=0.28/1.00 (J-K:4),
WB=0.74/1.00 (B-K:1), SSI=0.16/1.00 (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

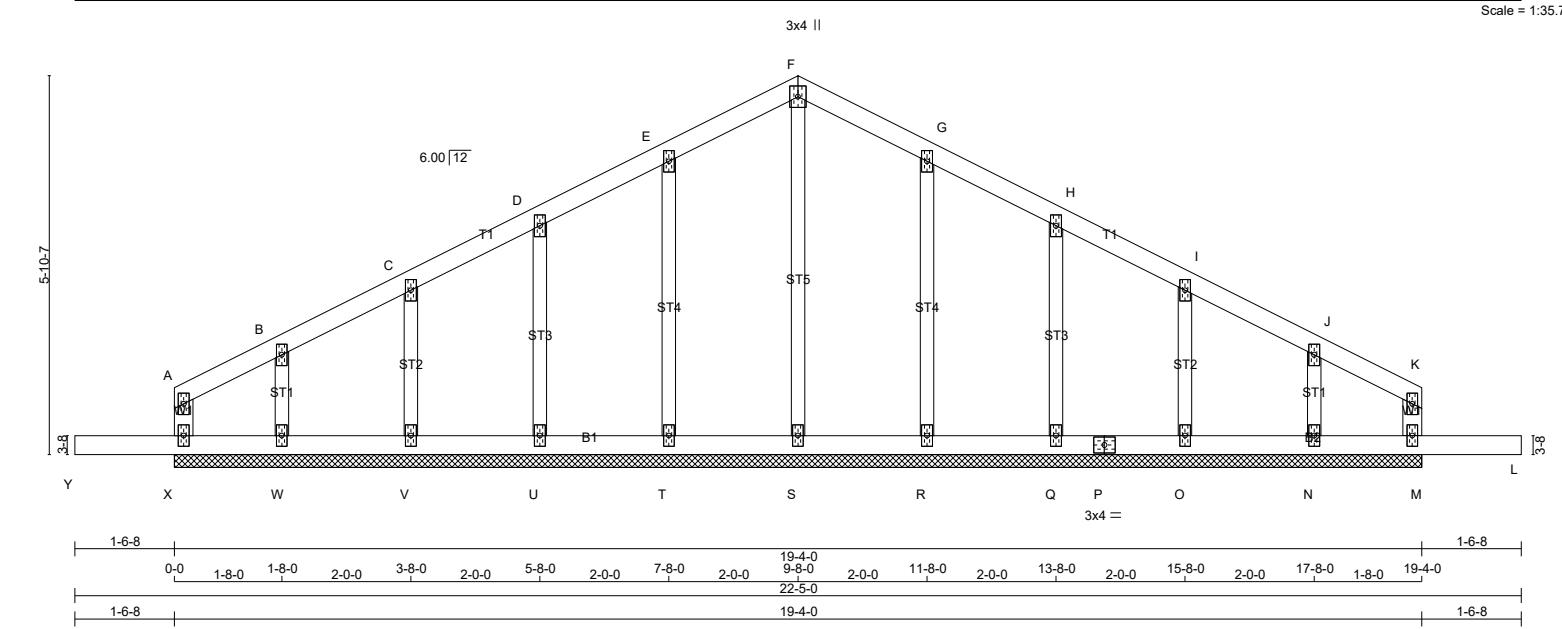
PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.87 (K) (INPUT = 0.90)
JSI METAL= 0.46 (D) (INPUT = 1.00)

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





TOTAL WEIGHT = 74 lb

[M]

LUMBER				
N. L. G. A. RULES				
CHORDS	SIZE	LUMBER		DESCR.
A - F	2x4	DRY	No.2	SPF
F - K	2x4	DRY	No.2	SPF
X - A	2x4	DRY	No.2	SPF
M - K	2x4	DRY	No.2	SPF
Y - P	2x4	DRY	No.2	SPF
P - L	2x4	DRY	No.2	SPF
ALL WEBS	2x3	DRY	No.2	SPF
ALL GABLE WEBS	2x3	DRY	No.2	SPF
DRY: SEASONED LUMBER.				
GABLE STUDS SPACED AT 2'-0" OC.				

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

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

BEARINGS

THIS TRUSS DESIGNED FOR CONTINUOUS BEARINGS.

THIS TRUSS REQUIRES RIGID SHEATHING ON EXPOSED FACE.

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

BRACING

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

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

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

LOADING				
TOTAL LOAD CASES: (4)				
CHORDS				
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. FACTORED CSI (LC)	MAX. MEMB. UNBRAC LENGTH
FR-TO		FROM TO		FR-TO
A-B	0 / 32	-78.0 -78.0	0.04 (1)	10.00
B-C	0 / 42	-78.0 -78.0	0.04 (1)	10.00
C-D	0 / 44	-78.0 -78.0	0.04 (1)	10.00
D-E	0 / 49	-78.0 -78.0	0.05 (1)	10.00
E-F	0 / 50	-78.0 -78.0	0.05 (1)	10.00
F-G	0 / 50	-78.0 -78.0	0.05 (1)	10.00
G-H	0 / 49	-78.0 -78.0	0.05 (1)	10.00
H-I	0 / 44	-78.0 -78.0	0.04 (1)	10.00
I-J	0 / 42	-78.0 -78.0	0.04 (1)	10.00
J-K	0 / 32	-78.0 -78.0	0.04 (1)	10.00
X-A	-51 / 0	0.0 0.0	0.06 (1)	7.81
M-K	-51 / 0	0.0 0.0	0.06 (1)	7.81
Y-X	0 / 0	-96.5 -96.5	0.16 (1)	10.00
X-W	-30 / 0	-18.5 -18.5	0.09 (1)	6.25
W-V	-36 / 0	-18.5 -18.5	0.02 (4)	6.25
V-U	-40 / 0	-18.5 -18.5	0.02 (4)	6.25
U-T	-43 / 0	-18.5 -18.5	0.01 (4)	6.25
T-S	-45 / 0	-18.5 -18.5	0.01 (4)	6.25
S-R	-45 / 0	-18.5 -18.5	0.01 (4)	6.25
R-Q	-43 / 0	-18.5 -18.5	0.01 (4)	6.25
Q-P	-40 / 0	-18.5 -18.5	0.02 (4)	6.25
P-O	-40 / 0	-18.5 -18.5	0.02 (4)	6.25
O-N	-36 / 0	-18.5 -18.5	0.02 (4)	6.25
N-M	-30 / 0	-18.5 -18.5	0.09 (1)	6.25
M-L	0 / 0	-96.5 -96.5	0.16 (1)	10.00

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH. LL = 21.0 PSF

DL = 6.0 PSF

BOT CH. LL = 0.0 PSF

DL = 7.4 PSF

TOTAL LOAD = 34.4 PSF

SPACING = 24.0 IN. C/C

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

DESIGN ASSUMPTIONS

-OVERHANG NOT TO BE ALTERED OR CUT OFF.

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

CSI: TC=0.06/1.00 (K-M:1) , BC=0.16/1.00 (L-M:1) , WB=0.11/1.00 (F-S:1) , SSI=0.12/1.00 (X-Y: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= 0.67 (F) (INPUT = 0.90)

JSI METAL= 0.07 (G) (INPUT = 1.00)

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



December 18, 2019

Re: Expiration Date for Technical Bulletins Extended to 4/1/2020

Please be advised that the expiration date of the Technical Bulletins listed below has been extended until April 1, 2020.

T-SPECCP17	T-SPECH17	T-SPECDSHGUS17R
T-SPECHGUS17-R	T-SPECHHUS17-R	T-SPECHUS17
T-SPECLF17	T-SPECLT17	T-SPECLU17
T-SPECCLUL17	T-SPECLUS17	T-SPECSUR17
T-SPECTBE17	T-SPECTC17	T-SPECTHGB17
T-SPECTHGBHV17	T-SPECTHGQ17	T-SPECTHGW17
T-SPECLSULSSU17	T-SPECHTHGQ17	T-SPECSTHGQ17

Should you have any questions or concerns regarding the above, please contact me at your convenience.

Sincerely,



Brent Bunting, P.Eng.
Simpson Strong-Tie Canada, Ltd.



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:

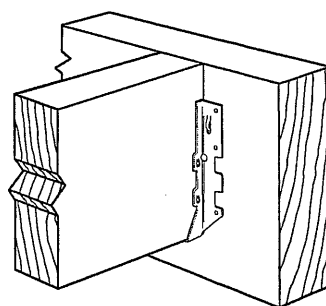
- Factored resistances are in accordance with CSA O86-14.
- Uplift resistances have been increased 15%. No further increase is permitted.
- Wood shear is not considered in the factored resistances given. The specifier must ensure that the joist and header capacities are capable of withstanding these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

Installation:

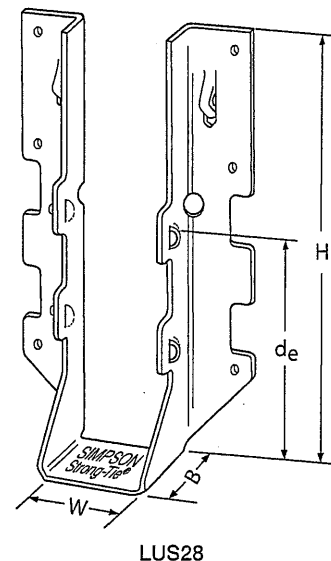
- Use all specified fasteners.
- Nails: 16d = 0.162" dia. x 3½" long common wire, 10d = 0.148" x 3" long common wire.
- Double shear nails must be driven at an angle through the joist or truss into the header to achieve the table loads.
- Not designed for welded or nailer applications.

Options:

- These hangers cannot be modified

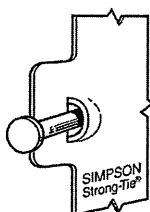


Typical LUS Installation



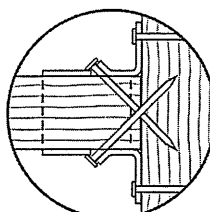
Model No.	Ga.	Dimensions (in.)				Fasteners		Factored Resistance (lb.)			
		W	H	B	d _e ¹	Face	Joist	D.Fir-L		S-P-F	
								Uplift	Normal	Uplift	Normal
								(K _p =1.15)	(K _p =1.00)	(K _p =1.15)	(K _p =1.00)
LUS24	18	1⅞	3⅞	1¾	1 15/16	(4) 10d	(2) 10d	710	1630	645	1155
LUS24-2	18	3⅞	3⅞	2	1 13/16	(4) 16d	(2) 16d	835	2020	590	1435
LUS26	18	1⅞	4¾	1¾	3⅞	(4) 10d	(4) 10d	1420	2170	1290	1630
LUS26-2	18	3⅞	4⅞	2	4	(4) 16d	(4) 16d	1720	2595	1545	1920
LUS26-3	18	4⅞	4⅞	2	3¼	(4) 16d	(4) 16d	1720	2595	1545	2340
LUS28	18	1⅞	6⅞	1¾	3¾	(6) 10d	(6) 10d	1420	2520	1290	1790
LUS28-2	18	3⅞	7	2	4	(6) 16d	(4) 16d	1720	3325	1545	2575
LUS28-3	18	4⅞	6¼	2	3¼	(6) 16d	(4) 16d	1720	3325	1545	2375
LUS210	18	1⅞	7 13/16	1¾	3⅞	(8) 10d	(4) 10d	1420	2785	1290	2210
LUS210-2	18	3⅞	9	2	6	(8) 16d	(6) 16d	2580	4500	2320	3195
LUS210-3	18	4⅞	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.

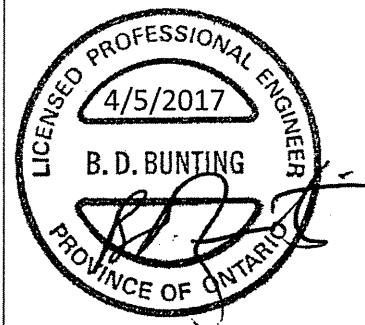


Dome Double Shear Nailing prevents tabs breaking off (available on some models).

U.S. Patent 5,603,580



Double Shear Nailing Top View.



LIMIT STATES DESIGN

This technical bulletin is effective until June 30, 2019, and reflects information available as of March 1, 2017. This information is updated periodically and should not be relied upon after June 30, 2019. Contact Simpson Strong-Tie for current information and limited warranty or see strongtie.com.

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T-SPECLUS17 3/17 exp. 6/19

(800) 999-5099
strongtie.com

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:

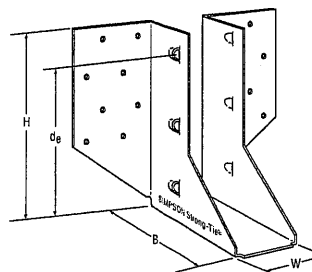
- Factored resistances are in accordance with CSA O86-14.
- Uplift resistances have been increased 15%. No further increase is permitted.
- Wood shear is not considered in the factored resistances given. The specifier must ensure that the joist and header capacities are capable of withstanding these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

Installation:

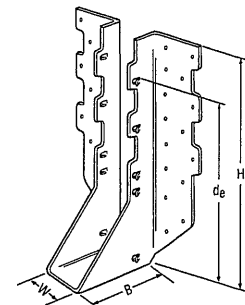
- Use all specified fasteners
- Nails: 16d = 0.162" dia. x 3½" long common wire
- Double shear nails must be driven at an angle through the joist or truss into the header to achieve the table loads
- Not designed for welded or nailer applications

Options:

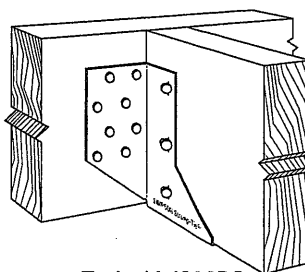
- See current catalogue for options



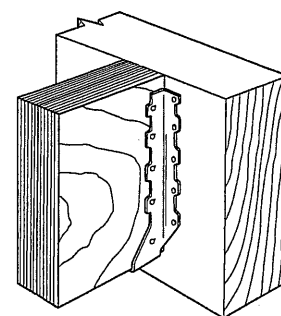
LJS26DS



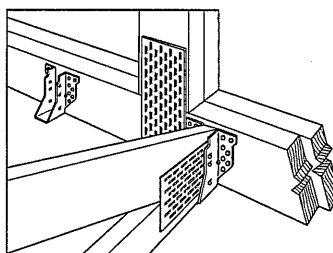
HUS210
(HUS26, HUS28, similar)



Typical LJS26DS
Installation



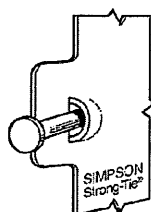
Typical HUS
Installation



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

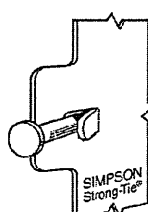
Model No.	Ga.	Dimensions (in.)				Fasteners		Factored Resistance (lb.)			
		W	H	B	d _e ¹	Face	Joist	D.Fir-L		S-P-F	
								Uplift (K ₀ =1.15)	Normal (K ₀ =1.00)	Uplift (K ₀ =1.15)	Normal (K ₀ =1.00)
LJS26DS	18	1⅞	5	3½	4⅝	(16) 16d	(6) 16d	2055	4265	1460	4115
HUS26	16	1⅞	5⅝	3	3⅞	(14) 16d	(6) 16d	2705	4940	2065	3875
HUS28	16	1⅞	7⅝	3	6⅝	(22) 16d	(8) 16d	3605	5365	2675	4345
HUS210	16	1⅞	9⅝	3	7⅞	(30) 16d	(10) 16d	4505	5795	4010	4740
HUS1.81/10	16	1⅞	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.

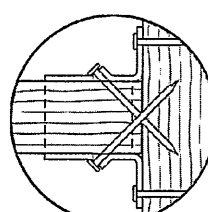


Dome Double
Shear Nailing
prevents tabs
breaking off
(available on
some models).

U.S. Patent
5,603,580



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



Double
Shear
Nailing
Top View.



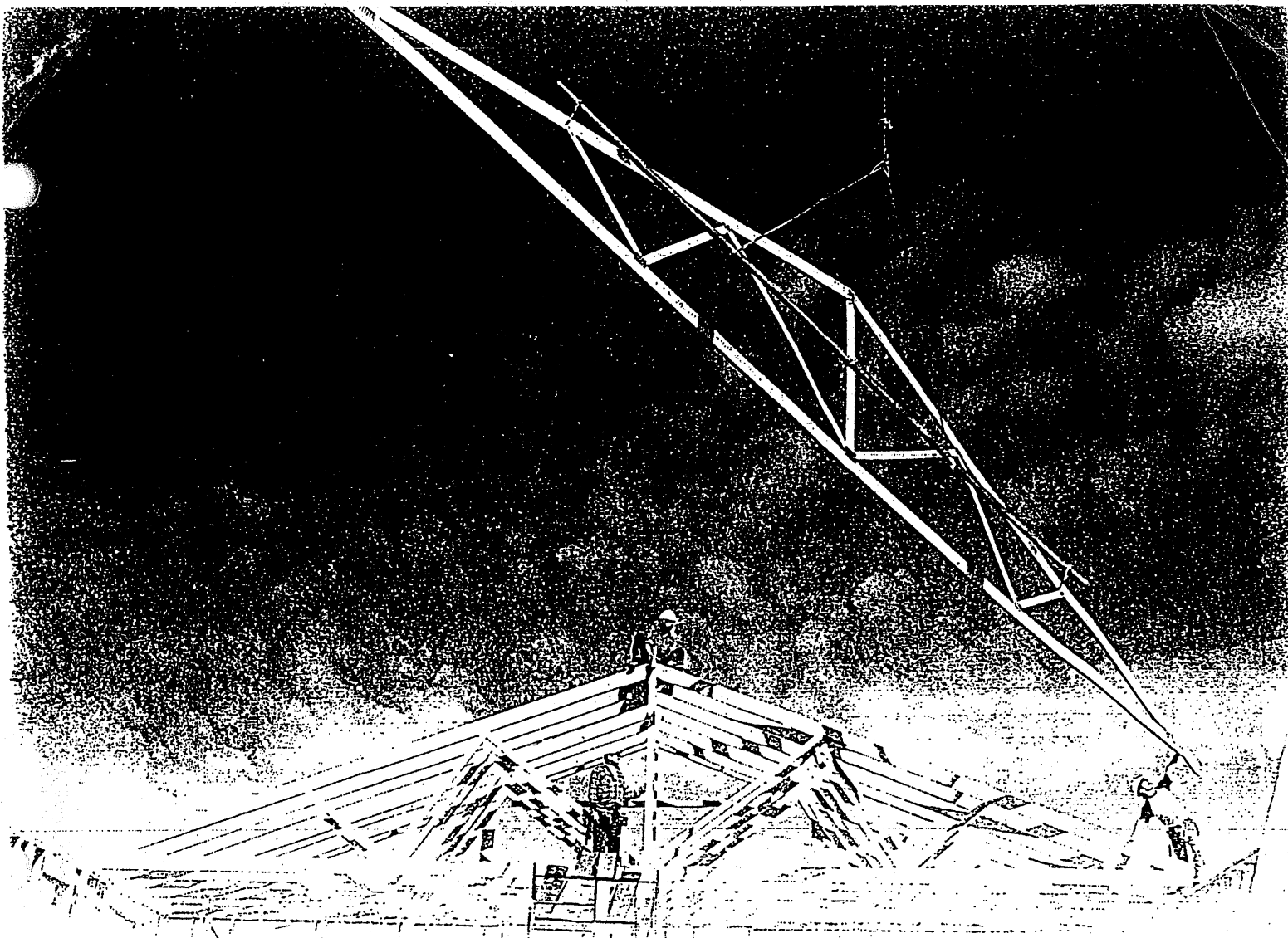
LIMIT
STATES
DESIGN

This technical bulletin is effective until June 30, 2019, and reflects information available as of March 1, 2017. This information is updated periodically and should not be relied upon after June 30, 2019. Contact Simpson Strong-Tie for current information and limited warranty or see strongtie.com

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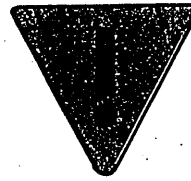
Wood Truss Installation

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

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7 Bracing Requirements for 3 Planes of Roof.....	9
8 Stacking Materials.....	10
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Warning



General

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

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

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

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

Temporary Erection Bracing

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

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

Permanent Truss Bracing

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

Special Design Requirements

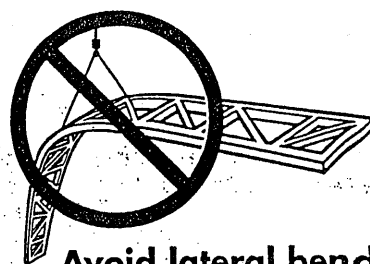
Special design requirements, such as wind bracing, portal bracing, seismic bracing, diaphragms, shear walls, or other load transfer elements and their connections to wood trusses must be considered separately by the building designer, who shall determine size, location, and method of connections for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

1

Unloading & Lifting

Never handle trusses flat

Beginning with the unloading process, and throughout all phases of construction, care must be taken to avoid lateral bending of trusses, which can cause damage to the lumber and metal connector plates at the joints.

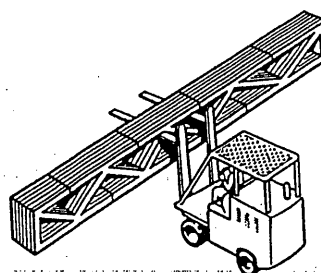
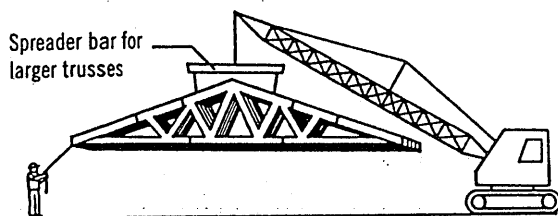


Avoid lateral bending

- Use special care in windy weather.
- If using a crane within 10 feet of an electric line, contact the local power company.
- If using a crane within 5 miles of an airport, contact the airport 30 days prior to erection to learn about any safety regulations that must be followed.

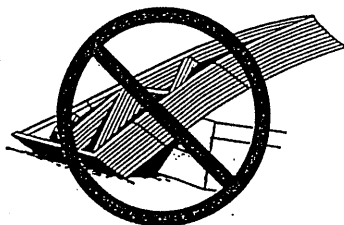
2

Job Site Handling



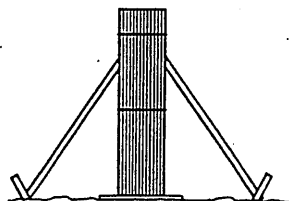
All trusses should be picked up at the top chords in a vertical position only

Proper banding and smooth ground allow for unloading of trusses without damage. This should be done as close to the building site as possible to minimize handling. Do not break banding until installation begins. Hand erection of trusses is allowed, provided excessive lateral bending is prevented.



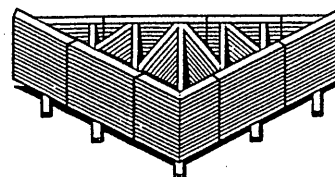
Do not store unbraced bundles upright

If trusses are stored vertically they shall be braced in a manner that will prevent tipping or topping. Generally cutting of the banding is done just prior to installation.



Do not store on uneven ground

If trusses are stored horizontally, blocking should be used on eight to ten foot centers, or as required, to minimize lateral bending and moisture gain.

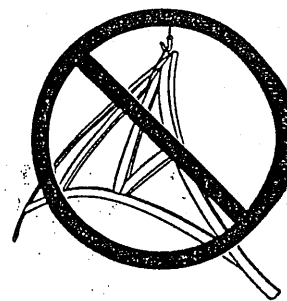


Care should be exercised when removing banding to avoid damaging trusses.

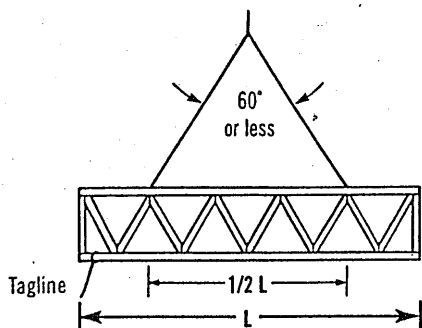
During long term storage, trusses shall be protected from the environment in a manner that provides for adequate ventilation of the trusses. If tarpaulins or other material is used, the ends shall be left open for ventilation. Plastic is not recommended, since it can trap moisture.

3 Hoisting

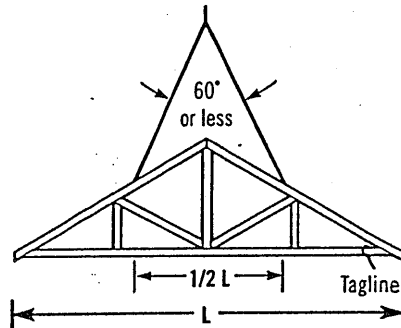
All trusses that are erected one at a time shall be held safely in position by the erection equipment until such time as all necessary bracing has been installed and the ends of the trusses are securely fastened to the building.



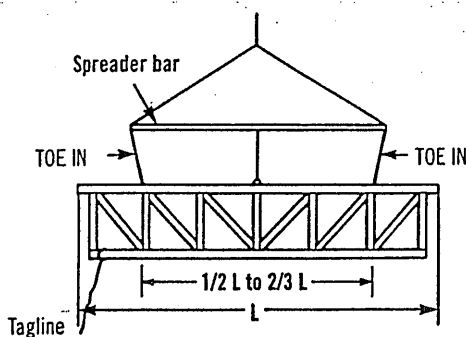
Avoid lateral bending



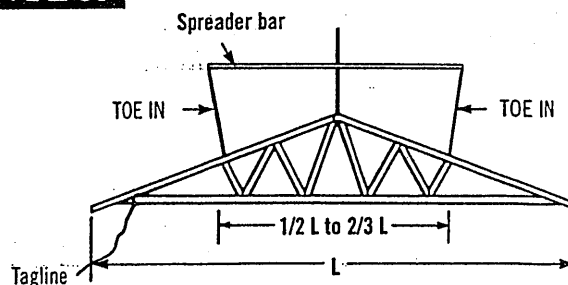
$L \leq 30'$



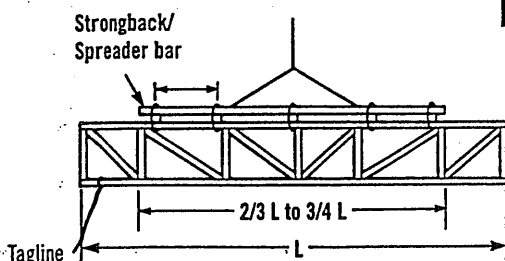
Truss sling is acceptable where these criteria are met.



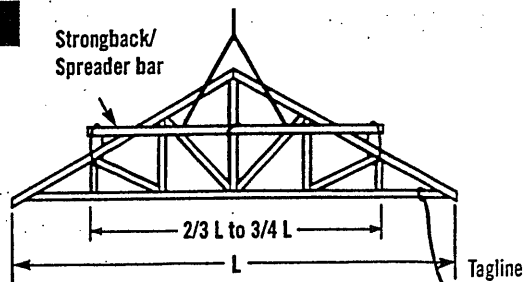
$30' < L \leq 60'$



Use spreader bar in all other cases. It should be noted that the lines from the ends of the spreader bar "TOE IN"; if these lines should "TOE OUT" the truss may fold in half.



$L > 60'$



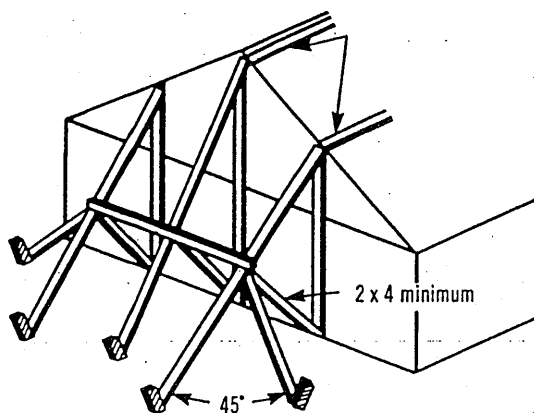
For lifting trusses with spans in excess of 60 feet, it is recommended that a strongback/spreader bar be used as illustrated. The strongback/spreader bar should be attached to the top chord and web members at intervals of approximately 10 feet. Further, the strongback/spreader bar should be at or above the mid-height of the truss to prevent overturning. The strongback/spreader bar can be of any material with sufficient strength to safely carry the weight of the truss and sufficient rigidity to adequately resist bending of the truss.

4 Beginning the Erection Process

It is important for the builder or erection contractor to provide substantial bracing for the first truss erected. The two or more trusses making up the rest of the first set are tied to and rely upon the first truss for stability. Likewise, after this first set of trusses is adequately cross-braced, the remaining trusses installed rely upon this first set for stability. Thus, the performance of the truss bracing system depends to a great extent on how well the first group of trusses is braced.

Ground Brace - Exterior

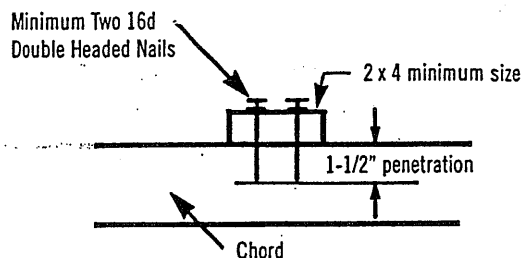
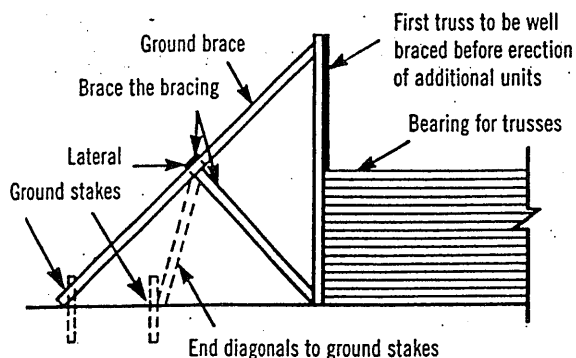
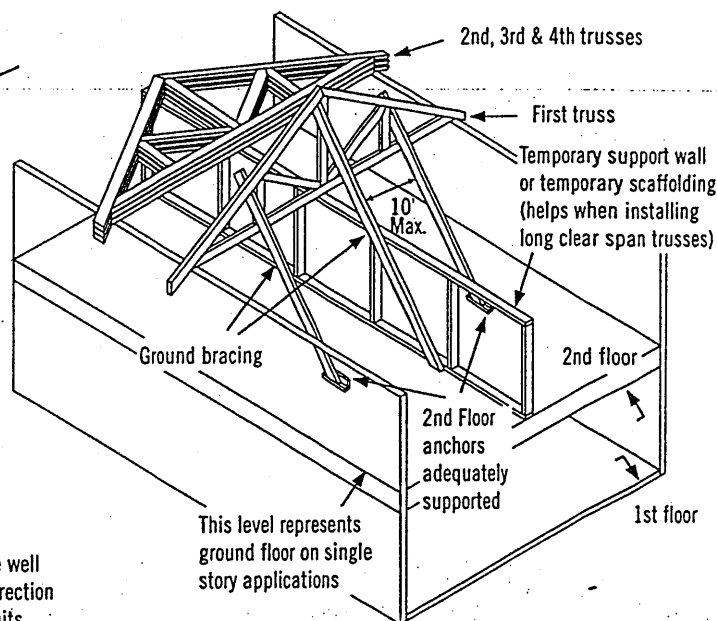
One satisfactory method ties the first unit of trusses off to a series of braces that are attached to a stake driven into the ground and securely anchored. The ground brace itself should be supported as shown below or it is apt to buckle. Additional ground braces in the opposite direction, inside the building, are also recommended.



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

Ground Brace - Interior

Another satisfactory method where height of building or ground conditions prohibit bracing from the exterior is to tie the first truss rigidly in place from the interior at the floor level, provided the floor is substantially completed and capable of supporting the ground bracing forces. Securely fasten the first truss to the middle of the building. Brace the bracing similar to exterior ground bracing shown at left. Set trusses from the middle toward the end of the building. Properly cross-brace the first set of trusses before removing floor braces and setting remaining trusses.

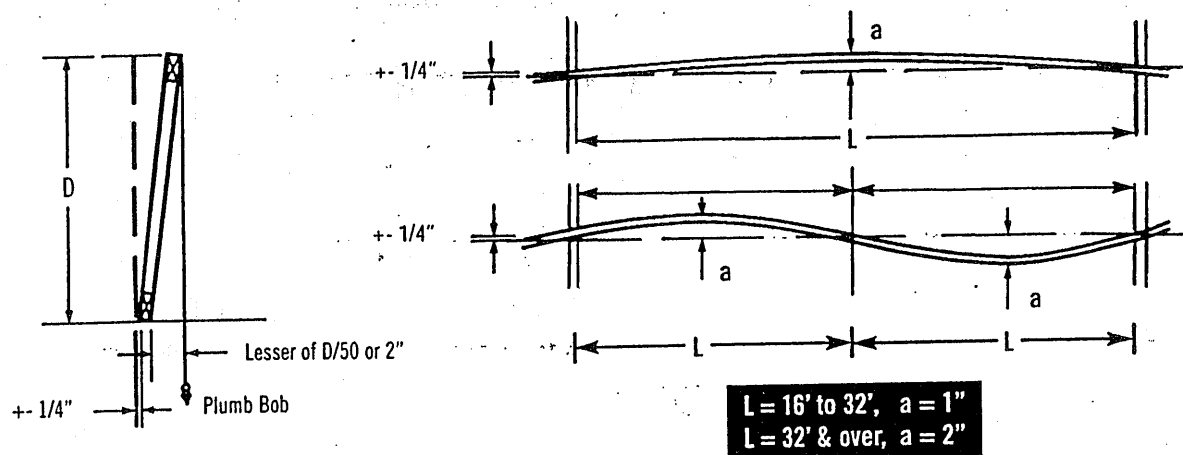


Inadequate size of bracing material or inadequate fastening is a major cause of erection dominoing.

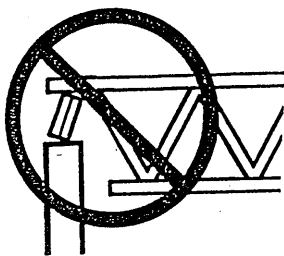
5 Erection Tolerance

Complying with erection tolerances is critical to achieving an acceptable roof or floor line, and to accomplishing effective bracing. Setting trusses within tolerance the first time will prevent the need for the hazardous practice of respacing or adjusting trusses when roof sheathing or roof purlins are installed. Trusses leaning or bowing can cause nails to miss the top chords when sheathing is applied, and create cumulative stresses on the bracing, which is a frequent cause of dominoing.

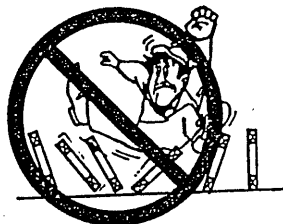
When sheathing, make sure nails are driven into the top chord of the trusses.



6 Bracing



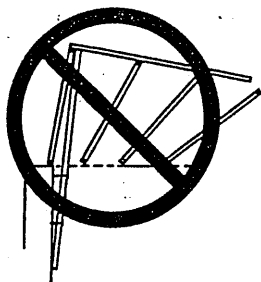
Do not install trusses on temporarily connected supports



Do not walk on unbraced trusses



Do not walk on trusses or gable ends lying flat

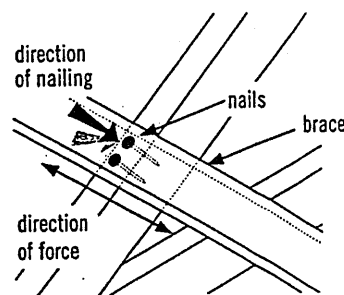


Nails in withdrawal (parallel to force)

All anchors, hangers, tie-downs, seats, bearing ledgers, etc., that are part of the supporting structure shall be accurately and properly placed and permanently attached before truss installation begins. No trusses shall ever be installed on anchors or ties that have temporary connections to the supporting structure.

Nailing scabs to the end of the building to brace the first truss is not recommended.

All nailing of bracing should be done so that nails are driven perpendicular to the direction of force, as shown at right.



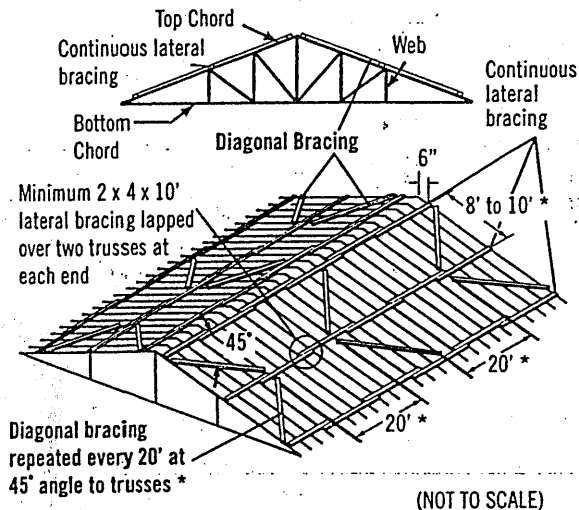
Well nailed (perpendicular to force)

7 Bracing Requirements for 3 Planes of Roof

Temporary erection bracing must be applied to three planes of the roof system to ensure stability: Plane 1) Top Chord (sheathing), Plane 2) Bottom Chord (ceiling plane), and Plane 3) Web Member plane or vertical plane perpendicular to trusses.

1) Top Chord Plane

Most important to the builder or erection contractor is bracing in the plane of the top chord. Truss top chords are susceptible to lateral buckling before they are braced or sheathed.

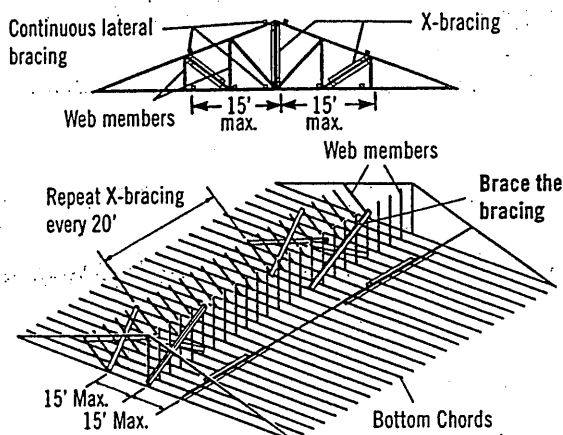


Exact spacing between trusses should be maintained as bracing is installed to avoid the hazardous practice of removing bracing to adjust spacing. This act of "adjusting spacing" can cause trusses to topple if connections are removed at the wrong time.

3) Web Member Plane

"X" bracing, as shown, is critical in preventing trusses from leaning or dominoing. Repeat as shown to create a succession of rigid units.

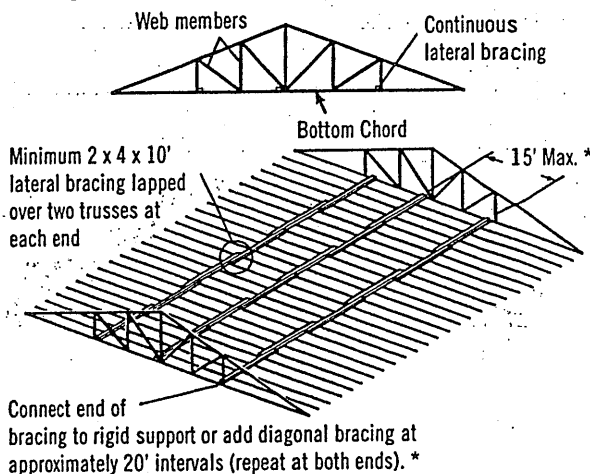
X-bracing should be installed on vertical web members wherever possible, at or near lateral bracing. Plywood or OSB may be substituted for X-bracing.



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

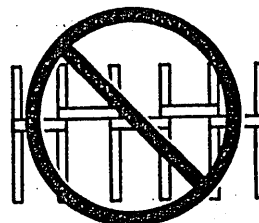
2) Bottom Chord Plane

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

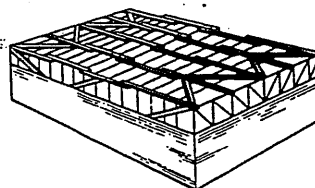


* Long spans, heavy loads or other spacing configurations may require closer spacing between lateral bracing and closer intervals between diagonals. Consult the building designer or HIB and DSB (Recommended Design Specification for Temporary Bracing of Metal-Plate Connected Wood Trusses) for details.

Diagonal or cross-bracing is very important!



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

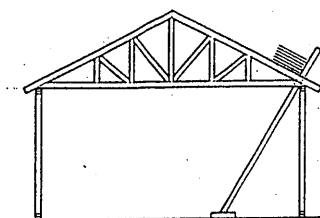
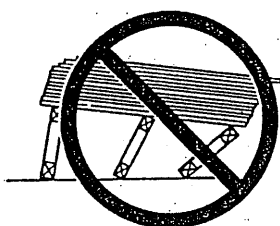


Bracing requirements using the same principles apply to parallel chord trusses

8 Stacking Materials

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

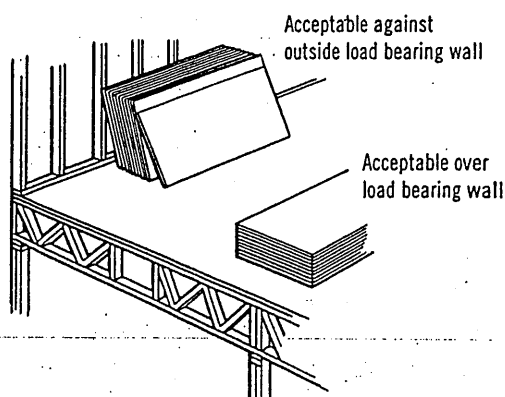
Never stack materials on unbraced or inadequately braced trusses



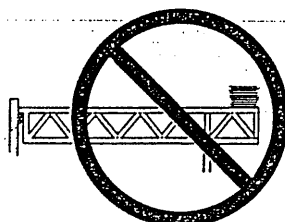
Platform must be rigidly braced

Proper distribution of construction materials is a must during construction.

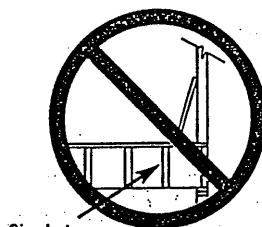
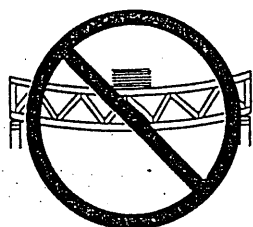
Never stack materials near a peak



Never stack materials on the cantilever of a truss

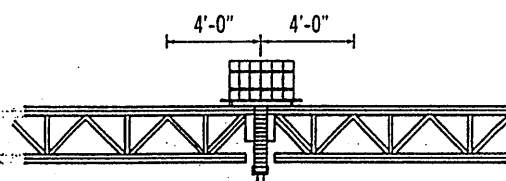


Always stack materials over two or more trusses.



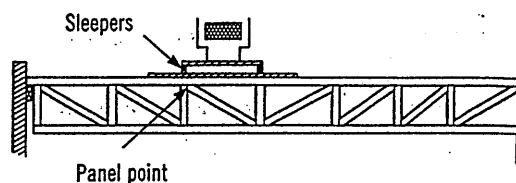
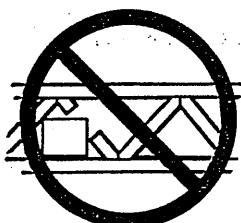
Single truss

Never overload small groups or single trusses. Position load over as many trusses as possible.



Roofing and mechanical contractors are cautioned to stack materials only along outside supporting members or directly over inside supporting members. Trusses are not designed for dynamic loads (i.e., moving vehicles). Extreme care should be taken when loading and stacking construction materials (rolled roofing, mechanical equipment, etc.) on the roof or floor system.

Never cut any structural member of a truss.



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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