

EWP DESIGN INC.

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RESPONSIBILITIES AND SPECIFICATIONS

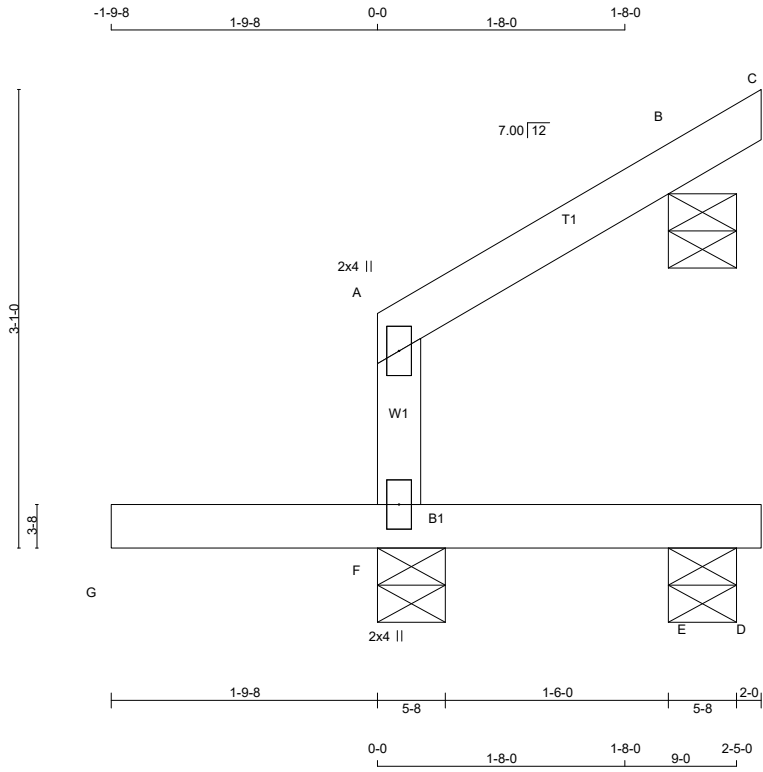
RESPONSIBILITIES

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.



TOTAL WEIGHT = 3 X 10 = 30 lb

LUMBER
N. L. G. A. RULES

CHORDS	SIZE	LUMBER	DESCR.
A - C	2x4	DRY No.2	SPF
F - A	2x4	DRY No.2	SPF
G - D	2x4	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		
F	BMV1+p	MT20	2.0	4.0		

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

BEARINGS

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG	REQRD BRG
	VERT	HORZ	DOWN	HORZ		
F	349	0	349	0	5-8	1-8
E	-20	0	10	-33	5-8	1-8
B	99	0	99	-1	5-8	5-8

BEVELED PLATE OR SHIM REQUIRED TO PROVIDE FULL BEARING SURFACE WITH TRUSS CHORD AT JT(S): B

PROVIDE ANCHORAGE AT BEARING JOINT E FOR 150 LBS. FACTORED UPLIFT
 PROVIDE ANCHORAGE AT BEARING JOINT B FOR 150 LBS. FACTORED UPLIFT

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS					
		SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
F	249	152 / 0	0 / 0	0 / 0	0 / 0	97 / 0	0 / 0
E	-12	0 / -23	0 / 0	0 / 0	0 / 0	7 / 0	0 / 0
B	68	54 / -8	0 / 0	0 / 0	0 / 0	14 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) F, E, 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: (5)

MEMB.	CHORDS				WEBS			
	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 MAX (CSI (LC))	MAX UNBRAC LENGTH	MEMB. FORCE (LBS)	MAX FACTORED FORCE (LBS)	MAX UNBRAC LENGTH	MEMB. FORCE (LBS)
FR-TO		FROM	TO		FR-TO			
A-B	-12 / 0	-78.0	-78.0	0.07 (1)	6.25			
B-C	-9 / 0	-78.0	-78.0	0.01 (1)	10.00			
F-A	-108 / 0	0.0	0.0	0.07 (1)	7.81			
G-F	0 / 0	-96.5	-96.5	0.22 (5)	10.00			
F-E	0 / 0	-18.5	-18.5	0.17 (5)	10.00			
E-D	0 / 0	-18.5	-18.5	0.00 (4)	10.00			

CANTILEVER ANALYSIS HAS BEEN CONSIDERED IN THIS DESIGN

PATTERN-LOADING CHECK APPLIED TO THIS TRUSS.

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	DL	PSF
	21.0	6.0	
BOT CH.	LL	DL	PSF
	0.0	7.4	
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 BCBC 2018, ABC 2019
 - PART 9 OF OBC 2012 (2019 AMENDMENT)
 - CSA 086-14
 - TPIC 2014

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

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

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

CANTILEVER DEFLECTION:
 ALLOWABLE DEFL.(LL)= L/120 (0.19")
 CALCULATED VERT. DEFL.(LL) = L/ 769 (0.03")
 ALLOWABLE DEFL.(TL)= L/120 (0.19")
 CALCULATED VERT. DEFL.(TL) = L/ 410 (0.05")

CSI: TC=0.07/1.00 (A-F:1) , BC=0.22/1.00 (F-G:5) , WB=0.00/1.00 (n/a:0) , SSI=0.14/1.00 (F-G:5)

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 HEELS OFF

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

NAIL VALUES

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

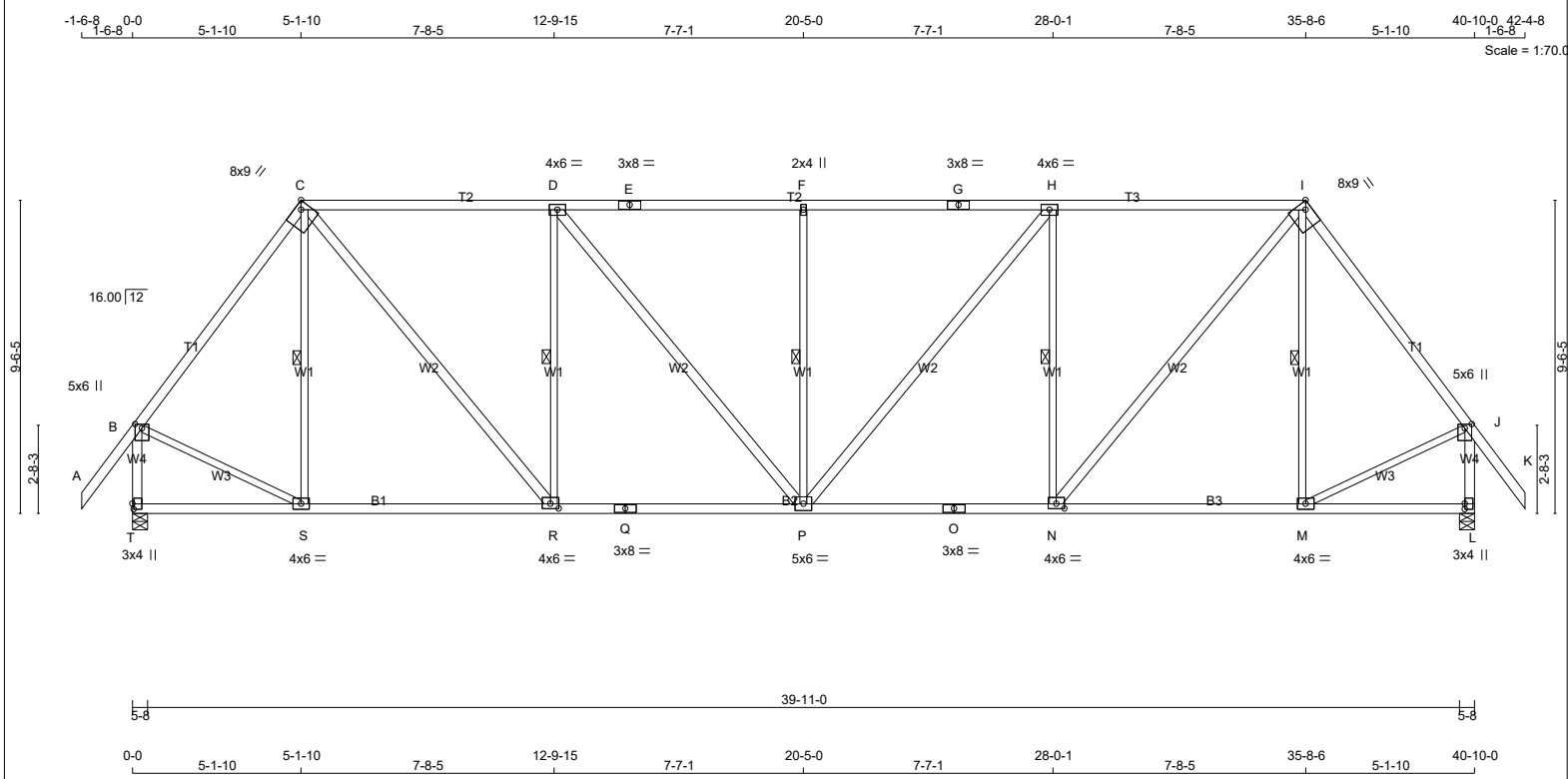
PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.06 (A) (INPUT = 0.90)
 JSI METAL= 0.05 (A) (INPUT = 1.00)

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





TOTAL WEIGHT = 211 lb

LUMBER

N. L. G. A. RULES

CHORDS	SIZE	LUMBER	DESCR.
A - C	2x4	DRY No.2	SPF
C - E	2x4	DRY 1650F 1.5E	SPF
E - G	2x4	DRY 1650F 1.5E	SPF
G - I	2x4	DRY 1650F 1.5E	SPF
I - K	2x4	DRY No.2	SPF
T - B	2x4	DRY No.2	SPF
L - J	2x4	DRY No.2	SPF
T - Q	2x4	DRY No.2	SPF
Q - O	2x4	DRY No.2	SPF
O - L	2x4	DRY No.2	SPF
ALL WEBS EXCEPT	2x3	DRY No.2	SPF
C - R	2x4	DRY No.2	SPF
D - P	2x4	DRY No.2	SPF
P - H	2x4	DRY No.2	SPF
N - I	2x4	DRY No.2	SPF

DRY: SEASONED LUMBER.

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMVW+p	MT20	5.0	6.0	1.50	2.50
C	TTWW-h	MT20	8.0	9.0	Edge	2.75
D	TMWW-t	MT20	4.0	6.0		
E	TS-t	MT20	3.0	8.0		
F	TMW+w	MT20	2.0	4.0		
G	TS-t	MT20	3.0	8.0		
H	TMWW-t	MT20	4.0	6.0		
I	TTWW-h	MT20	8.0	9.0	Edge	2.75
J	TMVW+p	MT20	5.0	6.0	1.50	2.50
L	BMV1+p	MT20	3.0	4.0	2.00	
M	BMWW-t	MT20	4.0	6.0		
N	BMWW-t	MT20	4.0	6.0	1.75	3.00
O	BS-t	MT20	3.0	8.0		
P	BMWWW-t	MT20	5.0	6.0		
Q	BS-t	MT20	3.0	8.0		
R	BMWW-t	MT20	4.0	6.0	1.75	3.00
S	BMWW-t	MT20	4.0	6.0		
T	BMV1+p	MT20	3.0	4.0	2.00	0.50

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

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
T	2328	0	2328	0
L	2328	0	2328	0

UNFACTORED REACTIONS

JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
T	1677	927 / 0	0 / 0	0 / 0	0 / 0	750 / 0	0 / 0
L	1677	927 / 0	0 / 0	0 / 0	0 / 0	750 / 0	0 / 0

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

BRACING
FOR SECTION C-I, MAX. PURLIN SPACING = 2.00 FT.
FOR OTHER SECTIONS, TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.45 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-S, D-R, F-P, H-N, I-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)

MEMB.	C H O R D S				W E B S			
	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 MAX CSI (LC)	MAX. UNBRAC LENGTH	MEMB. FORCE (LBS)	MAX. FACTORED FORCE (LBS)	MAX. CSI (LC)	
FR-TO		FROM	TO		FR-TO			
A-B	0 / 52	-78.0	-78.0	0.15 (1)	10.00	S-C	-352 / 0	0.21 (1)
B-C	-1847 / 0	-78.0	-78.0	0.60 (1)	4.45	C-R	0 / 1743	0.28 (1)
C-D	-2218 / 0	-93.0	-93.0	0.88 (1)	2.00	R-D	-1193 / 0	0.72 (1)
D-E	-2542 / 0	-93.0	-93.0	0.93 (1)	2.00	D-P	0 / 510	0.08 (1)
E-F	-2542 / 0	-93.0	-93.0	0.93 (1)	2.00	P-F	-651 / 0	0.39 (1)
F-G	-2542 / 0	-93.0	-93.0	0.93 (1)	2.00	P-H	0 / 510	0.08 (1)
G-H	-2542 / 0	-93.0	-93.0	0.93 (1)	2.00	N-H	-1193 / 0	0.72 (1)
H-I	-2218 / 0	-93.0	-93.0	0.88 (1)	2.00	N-I	0 / 1743	0.28 (1)
I-J	-1847 / 0	-78.0	-78.0	0.60 (1)	4.45	M-I	-352 / 0	0.21 (1)
J-K	0 / 52	-78.0	-78.0	0.15 (1)	10.00	B-S	0 / 1205	0.27 (1)
T-B	-2294 / 0	0.0	0.0	0.33 (1)	5.63	M-J	0 / 1205	0.27 (1)
L-J	-2294 / 0	0.0	0.0	0.33 (1)	5.63			
T-S	0 / 0	-18.5	-18.5	0.18 (4)	10.00			
S-R	0 / 1099	-18.5	-18.5	0.34 (4)	10.00			
R-Q	0 / 2219	-18.5	-18.5	0.48 (1)	10.00			
Q-P	0 / 2219	-18.5	-18.5	0.48 (1)	10.00			
P-O	0 / 2219	-18.5	-18.5	0.48 (1)	10.00			
O-N	0 / 2219	-18.5	-18.5	0.48 (1)	10.00			
N-M	0 / 1099	-18.5	-18.5	0.34 (4)	10.00			
M-L	0 / 0	-18.5	-18.5	0.18 (4)	10.00			

DESIGN CRITERIA

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

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON PIGGYBACK TRUSS WITH SLOPES OF 6.00/12 AND -6.00/12 AND RESPECTIVE HEEL HEIGHTS OF 0-0 AND 0-0 AND AN ADDITIONAL DEAD LOAD OF 6.0 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 BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

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

ALLOWABLE DEFL.(LL)= L/360 (1.36")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.11")
ALLOWABLE DEFL.(TL)= L/360 (1.36")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.25")

CSI: TC=0.93/1.00 (F-H:1), BC=0.48/1.00 (N-P:1), WB=0.72/1.00 (D-R:1), SSI=0.34/1.00 (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) (PSI) (PLI)
MAX MIN MAX MIN MAX MIN
MT20 650 371 1747 788 1987 1873

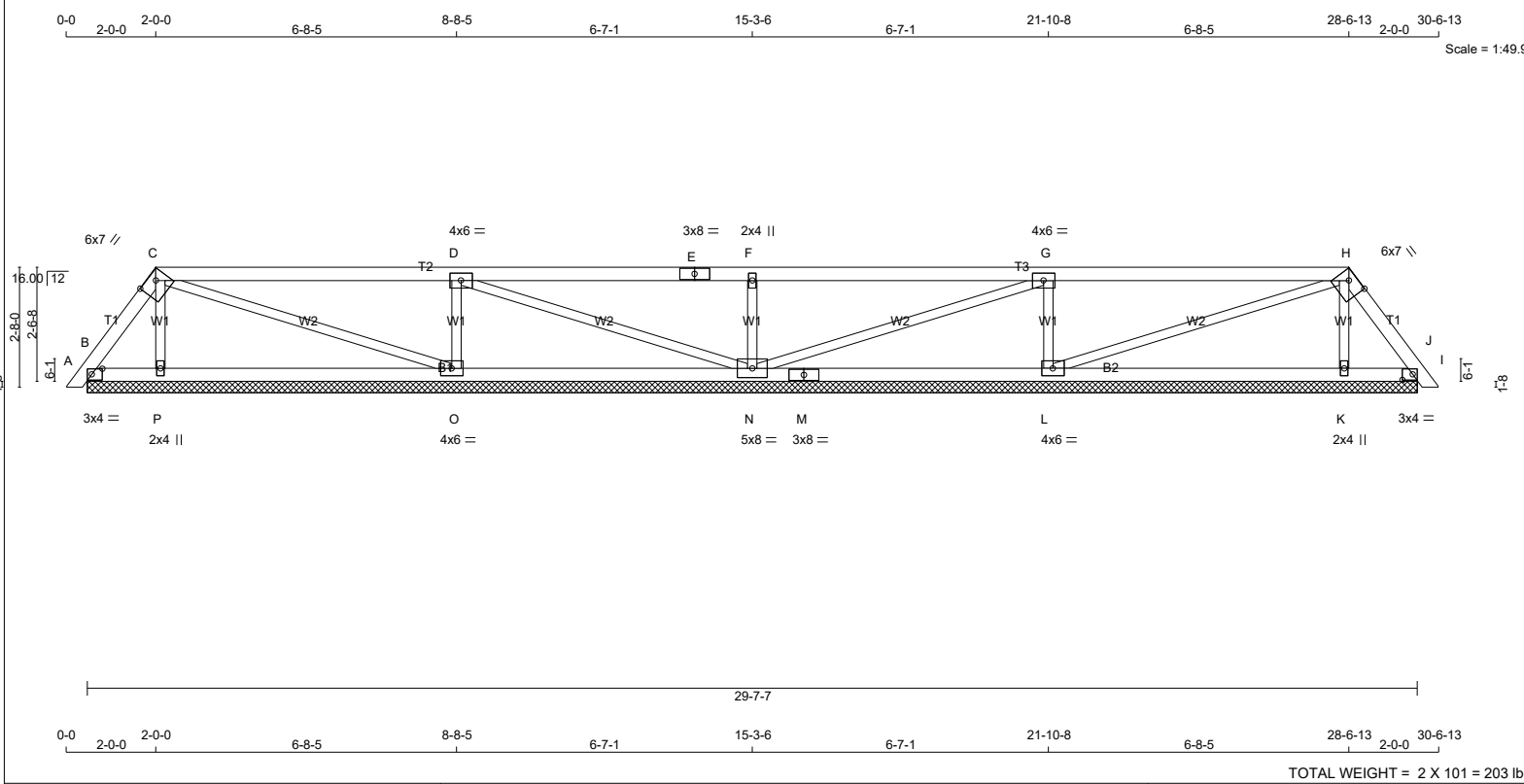
PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.89 (R) (INPUT = 0.90)
JSI METAL= 0.74 (O) (INPUT = 1.00)

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





TOTAL WEIGHT = 2 X 101 = 203 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 - H	2x4	DRY No.2	SPF
H - J	2x4	DRY No.2	SPF
B - M	2x4	DRY No.2	SPF
M - I	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-h	MT20	6.0	7.0	2.00	4.25
D	TMWW-t	MT20	4.0	6.0		
E	TS-t	MT20	3.0	8.0		
F	TMW+w	MT20	2.0	4.0		
G	TMWW-t	MT20	4.0	6.0		
H	TTWW-h	MT20	6.0	7.0	2.00	4.25
I	TMB1-I	MT20	3.0	4.0	1.50	2.75
K	BMW1+w	MT20	2.0	4.0		
L	BMWW1-t	MT20	4.0	6.0		
M	BS-t	MT20	3.0	8.0		
N	BMWWW1-t	MT20	5.0	8.0		
O	BMWW1-t	MT20	4.0	6.0		
P	BMW1+w	MT20	2.0	4.0		

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

BEARINGS

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG	REQRD BRG
	VERT	HORZ	DOWN	HORZ		
B	140	0	140	0	29-7-7 (13-7-15)	
P	293	0	293	0	29-7-7 (13-7-15)	
O	712	0	712	0	29-7-7 (13-7-15)	
N	623	0	623	0	29-7-7 (13-7-15)	
L	712	0	712	0	29-7-7 (13-7-15)	
K	293	0	293	0	29-7-7 (13-7-15)	
I	140	0	140	0	29-7-7 (13-7-15)	

VALUE IN PARENTHESIS INDICATES EFFECTIVE BEARING LENGTH

UNFACTORED REACTIONS

JT	1ST LCASE	MAX./MIN. COMPONENT REACTIONS						
		COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
B	95	85/0	0/0	0/0	0/0	0/0	10/0	0/0
P	214	101/0	0/0	0/0	0/0	0/0	114/0	0/0
O	506	316/0	0/0	0/0	0/0	0/0	191/0	0/0
N	444	271/0	0/0	0/0	0/0	0/0	173/0	0/0
L	506	316/0	0/0	0/0	0/0	0/0	191/0	0/0
K	214	101/0	0/0	0/0	0/0	0/0	114/0	0/0
I	95	85/0	0/0	0/0	0/0	0/0	10/0	0/0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) B, P, O, N, L, K, I

BRACING
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.
ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

LOADING
TOTAL LOAD CASES: (4)

MEMB.	CHORDS			WEBS			
	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. FACTORED LC1 (LC)	MAX. UNBRACED LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. FACTORED LC1 (LC)
FR-TO		FROM TO			FR-TO		
A-B	0/10	-78.0 -78.0	0.01 (1)	10.00	P-C	-187/0	0.03 (1)
B-C	-86/0	-78.0 -78.0	0.03 (1)	6.25	C-O	-24/0	0.02 (1)
C-D	-17/0	-78.0 -78.0	0.50 (1)	6.25	O-D	-579/0	0.09 (1)
D-E	0/25	-78.0 -78.0	0.51 (1)	10.00	D-N	-45/0	0.04 (1)
E-F	0/25	-78.0 -78.0	0.51 (1)	10.00	N-F	-474/0	0.08 (1)
F-G	0/25	-78.0 -78.0	0.51 (1)	10.00	N-G	-45/0	0.04 (1)
G-H	-17/0	-78.0 -78.0	0.50 (1)	6.25	L-G	-579/0	0.09 (1)
H-I	-86/0	-78.0 -78.0	0.03 (1)	6.25	L-H	-24/0	0.02 (1)
I-J	0/10	-78.0 -78.0	0.01 (1)	10.00	K-H	-187/0	0.03 (1)
B-P	0/49	-18.5 -18.5	0.13 (4)	10.00			
P-O	0/40	-18.5 -18.5	0.17 (4)	10.00			
O-N	0/18	-18.5 -18.5	0.17 (4)	10.00			
N-M	0/18	-18.5 -18.5	0.17 (4)	10.00			
M-L	0/18	-18.5 -18.5	0.17 (4)	10.00			
L-K	0/40	-18.5 -18.5	0.17 (4)	10.00			
K-I	0/49	-18.5 -18.5	0.13 (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=0.51/1.00 (F-G:1), BC=0.17/1.00 (K-L:4), WB=0.09/1.00 (G-L: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) SHEAR SECTION (PSI) (PLI) (PLI)
MAX MIN MAX MIN MAX MIN
MT20 650 371 1747 788 1987 1873

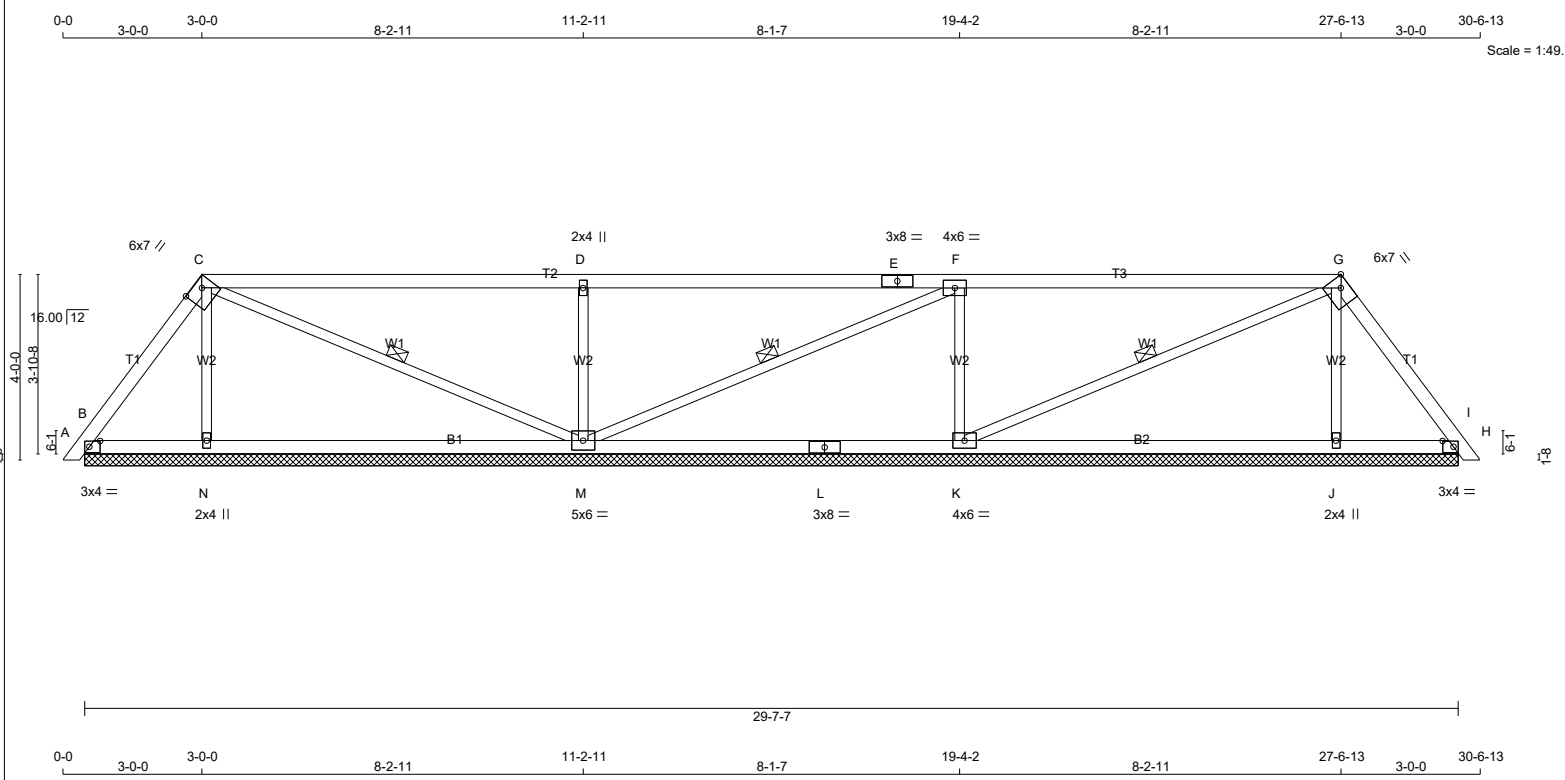
PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.86 (C) (INPUT = 0.90)
JSI METAL= 0.10 (F) (INPUT = 1.00)

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





TOTAL WEIGHT = 2 X 105 = 210 lb

LUMBER
N. L. G. A. RULES

CHORDS	SIZE	LUMBER	DESCR.
A - C	2x4	No.2	SPF
C - E	2x4	No.2	SPF
E - G	2x4	No.2	SPF
G - I	2x4	No.2	SPF
B - L	2x4	No.2	SPF
L - H	2x4	No.2	SPF
ALL WEBS	2x3	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-h	MT20	6.0	7.0	2.00	4.25
D	TMW+w	MT20	2.0	4.0		
E	TS-t	MT20	3.0	8.0		
F	TMWW-t	MT20	4.0	6.0		
G	TTWW-h	MT20	6.0	7.0	Edge	2.75
H	TMB1-I	MT20	3.0	4.0	1.50	2.75
J	BMW1+w	MT20	2.0	4.0		
K	BMWW1-t	MT20	4.0	6.0		
L	BS-t	MT20	3.0	8.0		
M	BMWWW1-t	MT20	5.0	6.0		
N	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

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG	REQRD BRG
	VERT	HORZ	DOWN	HORZ		
B	199	0	199	0	29-7-7 (13-7-15)	
N	376	0	376	0	29-7-7 (13-7-15)	
M	906	0	906	0	29-7-7 (13-7-15)	
K	842	0	842	0	29-7-7 (13-7-15)	
J	365	0	365	0	29-7-7 (13-7-15)	
H	225	0	225	0	29-7-7 (13-7-15)	

VALUE IN PARENTHESIS INDICATES EFFECTIVE BEARING LENGTH

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS				
		SNOW	LIVE	PERM.LIVE	WIND	DEAD
B	137	110 / 0	0 / 0	0 / 0	0 / 0	27 / 0
N	274	134 / 0	0 / 0	0 / 0	0 / 0	139 / 0
M	643	405 / 0	0 / 0	0 / 0	0 / 0	239 / 0
K	600	371 / 0	0 / 0	0 / 0	0 / 0	229 / 0
J	266	129 / 0	0 / 0	0 / 0	0 / 0	138 / 0
H	155	124 / 0	0 / 0	0 / 0	0 / 0	31 / 0

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

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

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.
1 LATERAL BRACE(S) AT 1/2 LENGTH OF C-M, F-M, G-K.

LOADING
TOTAL LOAD CASES: (4)

MEMB.	CHORDS		FACTORED		MAX. UNBRAC	WEBS		FACTORED	
	MAX. FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1	MAX. CSI (LC)		MEMB. FORCE (LBS)	MAX. FORCE (LBS)	MAX. CSI (LC)	
FR-TO		FROM	TO		LENGTH	FR-TO			
A-B	0 / 10	-78.0	-78.0	0.01 (1)	10.00	N-C	-250 / 0	0.06 (1)	
B-C	-97 / 0	-78.0	-78.0	0.09 (1)	6.25	C-M	-70 / 0	0.04 (1)	
C-D	0 / 16	-78.0	-78.0	0.71 (1)	10.00	M-D	-701 / 0	0.16 (1)	
D-E	0 / 15	-78.0	-78.0	0.71 (1)	10.00	M-F	-59 / 0	0.03 (1)	
E-F	0 / 15	-78.0	-78.0	0.71 (1)	10.00	K-F	-676 / 0	0.16 (1)	
F-G	-39 / 0	-78.0	-78.0	0.71 (1)	6.25	K-G	-31 / 0	0.02 (1)	
G-H	-129 / 0	-78.0	-78.0	0.09 (1)	6.25	J-G	-239 / 0	0.06 (1)	
H-I	0 / 10	-78.0	-78.0	0.01 (1)	10.00				
B-N	0 / 56	-18.5	-18.5	0.19 (4)	10.00				
N-M	0 / 49	-18.5	-18.5	0.25 (4)	10.00				
M-L	0 / 39	-18.5	-18.5	0.25 (4)	10.00				
L-K	0 / 39	-18.5	-18.5	0.25 (4)	10.00				
K-J	0 / 68	-18.5	-18.5	0.25 (4)	10.00				
J-H	0 / 75	-18.5	-18.5	0.19 (4)	10.00				

DESIGN CRITERIA

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

SPACING = 24.0 IN. C/C

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

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, 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=0.71/1.00 (F-G:1), BC=0.25/1.00 (J-K:4), WB=0.16/1.00 (D-M:1), SSI=0.30/1.00 (F-G:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

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

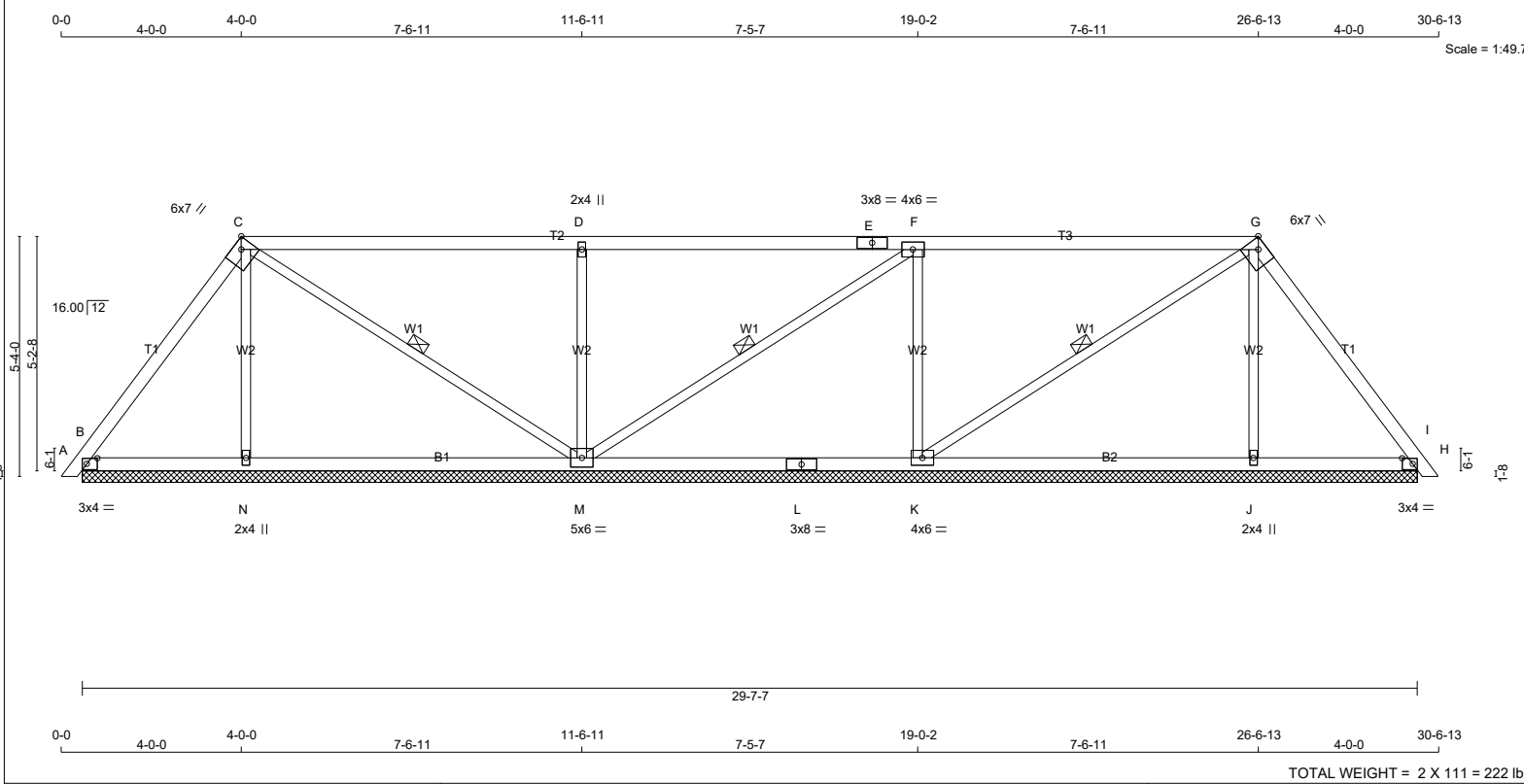
PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.89 (G) (INPUT = 0.90)
JSI METAL= 0.45 (E) (INPUT = 1.00)

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





TOTAL WEIGHT = 2 X 111 = 222 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
G - I	2x4	DRY No.2	SPF
B - L	2x4	DRY No.2	SPF
L - H	2x4	DRY No.2	SPF
ALL WEBS	2x3	DRY No.2	SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMB1-l	MT20	3.0	4.0	1.50	2.75
C	TTWW-h	MT20	6.0	7.0	Edge	2.75
D	TMW+w	MT20	2.0	4.0		
E	TS-t	MT20	3.0	8.0		
F	TMWW-t	MT20	4.0	6.0		
G	TTWW-h	MT20	6.0	7.0	Edge	2.75
H	TMB1-l	MT20	3.0	4.0	1.50	2.75
J	BMW1+w	MT20	2.0	4.0		
K	BMWW1-t	MT20	4.0	6.0		
L	BS-t	MT20	3.0	8.0		
M	BMWWW1-t	MT20	5.0	6.0		
N	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

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG	REQRD BRG
	VERT	HORZ	DOWN	HORZ		
B	261	0	261	0	29-7.7 (13-7-15)	
N	353	0	353	0	29-7.7 (13-7-15)	
M	899	0	899	0	29-7.7 (13-7-15)	
K	750	0	750	0	29-7.7 (13-7-15)	
J	346	0	346	0	29-7.7 (13-7-15)	
H	304	0	304	0	29-7.7 (13-7-15)	

VALUE IN PARENTHESIS INDICATES EFFECTIVE BEARING LENGTH

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS				
		SNOW	LIVE	PERM.LIVE	WIND	DEAD
B	182	132 / 0	0 / 0	0 / 0	0 / 0	50 / 0
N	257	127 / 0	0 / 0	0 / 0	0 / 0	130 / 0
M	637	408 / 0	0 / 0	0 / 0	0 / 0	229 / 0
K	534	328 / 0	0 / 0	0 / 0	0 / 0	206 / 0
J	252	123 / 0	0 / 0	0 / 0	0 / 0	129 / 0
H	212	155 / 0	0 / 0	0 / 0	0 / 0	57 / 0

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

BRACING
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.
ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.
1 LATERAL BRACE(S) AT 1/2 LENGTH OF C-M, F-M, G-K.

LOADING
TOTAL LOAD CASES: (4)

MEMB.	CHORDS		FACTORED		MAX. UNBRAC LENGTH	MEMB.	WEBS	
	MAX. FORCE (LBS)	FACTORED VERT. LOAD (PLF)	VERT. LOAD (LC1)	MAX. CSI (LC)			MAX. FORCE (LBS)	FACTORED MAX. CSI (LC)
A-B	0 / 10	-78.0	-78.0	0.01 (1)	10.00	N-C	-236 / 0	0.09 (1)
B-C	-100 / 0	-78.0	-78.0	0.17 (1)	6.25	C-M	-106 / 0	0.06 (1)
C-D	0 / 36	-78.0	-78.0	0.60 (1)	10.00	M-D	-643 / 0	0.26 (1)
D-E	0 / 36	-78.0	-78.0	0.60 (1)	10.00	M-F	-103 / 0	0.06 (1)
E-F	0 / 36	-78.0	-78.0	0.60 (1)	10.00	K-F	-586 / 0	0.24 (1)
F-G	-50 / 0	-78.0	-78.0	0.60 (1)	6.25	K-G	-41 / 0	0.02 (1)
G-H	-153 / 0	-78.0	-78.0	0.17 (1)	6.25	J-G	-228 / 0	0.09 (1)
H-I	0 / 10	-78.0	-78.0	0.01 (1)	10.00			
B-N	0 / 58	-18.5	-18.5	0.16 (4)	10.00			
N-M	0 / 53	-18.5	-18.5	0.21 (4)	10.00			
M-L	0 / 50	-18.5	-18.5	0.21 (4)	10.00			
L-K	0 / 50	-18.5	-18.5	0.21 (4)	10.00			
K-J	0 / 85	-18.5	-18.5	0.21 (4)	10.00			
J-H	0 / 90	-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

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=0.60/1.00 (D-F:1), BC=0.21/1.00 (J-K:4), WB=0.26/1.00 (D-M:1), SSI=0.28/1.00 (F-G:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

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

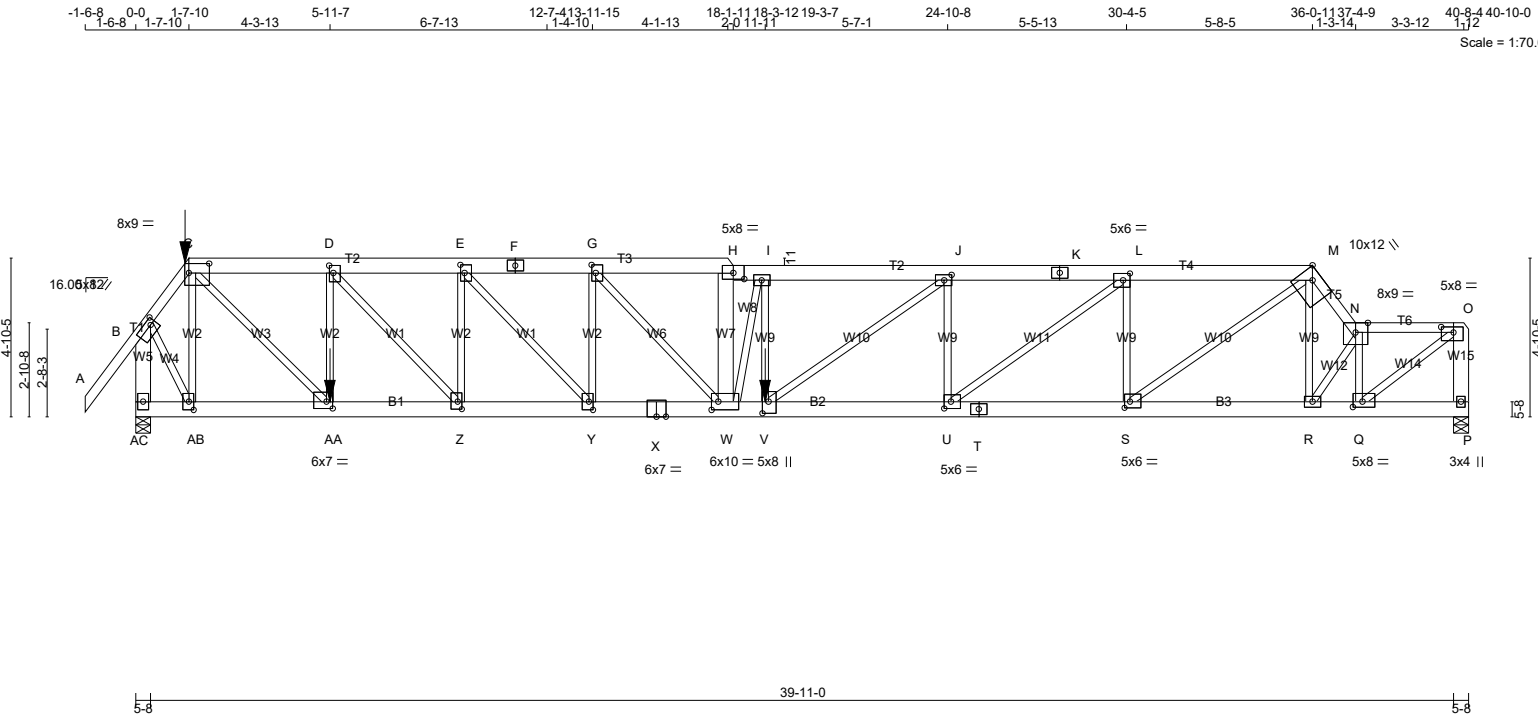
PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.79 (C) (INPUT = 0.90)
JSI METAL= 0.51 (E) (INPUT = 1.00)

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





LUMBER

N. L. G. A. RULES

CHORDS	SIZE	LUMBER	DESCR.
A - C	2x4	DRY No.2	SPF
C - F	2x6	DRY No.2	SPF
F - H	2x6	DRY No.2	SPF
H - K	2x6	DRY No.2	SPF
K - M	2x6	DRY No.2	SPF
M - N	2x4	DRY No.2	SPF
N - O	2x4	DRY No.2	SPF
AC - B	2x6	DRY No.2	SPF
P - O	2x6	DRY No.2	SPF
AC - X	2x6	DRY 1650F 1.5E	SPF
X - T	2x6	DRY 1650F 1.5E	SPF
T - P	2x6	DRY 1650F 1.5E	SPF
ALL WEBS EXCEPT W - H	2x3	DRY No.2	SPF
W - H	2x6	DRY No.2	SPF

DRY: SEASONED LUMBER.

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

CHORDS #ROWS	SURFACE SPACING (IN)	LOAD(PLF)
TOP CHORDS : (0.122"x3") SPIRAL NAILS		
A-C	12	SIDE(61.0)
M-N	12	TOP
N-O	12	TOP
C-F	12	SIDE(37.8)
F-H	12	TOP
H-K	12	TOP
K-M	12	TOP
AC-B	12	TOP
P-O	12	TOP
BOTTOM CHORDS : (0.122"x3") SPIRAL NAILS		
AC-X	12	SIDE(174.2)
X-T	12	SIDE(183.1)
T-P	12	TOP
WEBS : (0.122"x3") SPIRAL NAILS		
2x3	6	
I-V	2	SIDE(781.4)
AA-D	6	SIDE(214.4)
2x6	6	

NAILS TO BE DRIVEN FROM ONE SIDE ONLY.

GIRDER NAILING ASSUMES NAILED HANGERS ARE FASTENED WITH MIN. 3-0 INCH NAILS.

TOP - COMPONENTS ARE LOADED FROM THE TOP AND MUST BE PLACED ON TOP EDGE OF ALL PLIES FOR THE LOAD TO BE TRANSFERRED TO EACH PLY.

SIDE - PLF SHOWN IS THE EQUIVALENT UDL APPLIED TO ONE SIDE THAT THE CORRESPONDING NAILING PATTERN SHALL BE CAPABLE OF TRANSFERING. REMAINING PLF MUST BE APPLIED ON THE OPPOSITE SIDE OR ON THE TOP.

PLATES (table is in inches)

JT TYPE	PLATES	W	LEN	Y	X
B	TMVW-t	MT20	5.0	8.0	2.00 2.00
C	TTWW-I	MT20	8.0	9.0	3.50 7.50
D	TMWW+t	MT20	4.0	6.0	2.75 1.50
E	TMWW+t	MT20	4.0	6.0	3.00 1.50
F	TS-t	MT20	4.0	6.0	
G	TMWW+t	MT20	4.0	6.0	3.00 1.50
H	TTW-h	MT20	5.0	8.0	2.25 4.00
I	TMWW-t	MT20	4.0	6.0	

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	DOWN	UP	IN-SX
AC	5809 0	5809 0	0 0	5-8 3-15
P	3972 0	3972 0	0 0	5-8 2-2

UNFACTORED REACTIONS

	1ST LCASE COMBINED	MAX SNOW	MIN LIVE	PERM LIVE	WIND	DEAD	SOIL
JT	4140	2538 / 0	0 / 0	0 / 0	0 / 0	1601 / 0	0 / 0
AC	2832	1728 / 0	0 / 0	0 / 0	0 / 0	1104 / 0	0 / 0

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

BRACING
 TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 2.81 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.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)		MAX. UNBRACED LENGTH	WEBS MEMB. FORCE (LBS)	MAX. FACTORED CSI (LC)
		FR-TO	FROM TO			
A-B	0 / 52	-78.0	-78.0	0.08 (1)	10.00	AB-C -2375 / 0 0.38 (1)
B-C	-3699 / 0	-78.0	-78.0	0.13 (1)	4.80	W-H 0 / 683 0.04 (1)
C-D	-6929 / 0	-153.5	-153.5	0.21 (1)	4.41	R-M 0 / 2047 0.25 (1)
D-E	-9584 / 0	-78.0	-78.0	0.21 (1)	3.86	R-N -1873 / 0 0.18 (1)
E-F	-11853 / 0	-78.0	-78.0	0.32 (1)	3.42	Q-N -4177 / 0 0.37 (1)
F-G	-11853 / 0	-78.0	-78.0	0.32 (1)	3.42	Q-O 0 / 6258 0.77 (1)
G-H	-14197 / 0	-78.0	-78.0	0.44 (1)	3.05	B-AB 0 / 3534 0.44 (1)
H-I	-14207 / 0	-78.0	-78.0	0.48 (1)	2.97	V-I 0 / 1164 0.14 (1)
I-J	-14902 / 0	-78.0	-78.0	0.62 (1)	2.81	AA-D -3428 / 0 0.54 (1)
J-K	-12275 / 0	-78.0	-78.0	0.35 (1)	3.36	Y-G -2470 / 0 0.39 (1)
K-L	-12275 / 0	-78.0	-78.0	0.35 (1)	3.36	C-AA 0 / 6849 0.85 (1)
L-M	-8710 / 0	-78.0	-78.0	0.25 (1)	3.99	Z-E -2780 / 0 0.44 (1)
M-N	-6980 / 0	-78.0	-78.0	0.16 (1)	3.62	D-Z 0 / 3937 0.49 (1)
N-O	-5018 / 0	-78.0	-78.0	0.18 (1)	4.18	E-Y 0 / 3365 0.42 (1)
AC-B	-5958 / 0	0.0	0.0	0.30 (1)	6.05	G-W 0 / 3436 0.43 (1)
P-O	-3804 / 0	0.0	0.0	0.20 (1)	7.25	V-J 0 / 3280 0.41 (1)
AC-AB	0 / 0	-36.4	-36.4	0.08 (1)	10.00	U-J -2487 / 0 0.36 (1)
AB-AA	0 / 2127	-36.4	-36.4	0.17 (1)	10.00	U-L 0 / 4482 0.55 (1)
AA-Z	0 / 6929	-18.5	-18.5	0.33 (1)	10.00	S-L -3162 / 0 0.46 (1)
Z-Y	0 / 9584	-18.5	-18.5	0.42 (1)	10.00	S-M 0 / 5463 0.68 (1)
Y-X	0 / 11853	-18.5	-18.5	0.51 (1)	10.00	W-I -2693 / 0 0.41 (1)
X-W	0 / 11853	-18.5	-18.5	0.51 (1)	10.00	
W-V	0 / 14902	-18.5	-18.5	0.75 (1)	10.00	
V-U	0 / 12275	-18.5	-18.5	0.65 (1)	10.00	
U-T	0 / 8710	-18.5	-18.5	0.38 (1)	10.00	
T-S	0 / 8710	-18.5	-18.5	0.38 (1)	10.00	
S-R	0 / 4303	-18.5	-18.5	0.19 (1)	10.00	
R-Q	0 / 5195	-18.5	-18.5	0.33 (1)	10.00	
Q-P	0 / 0	-18.5	-18.5	0.12 (1)	10.00	

FACTORED CONCENTRATED LOADS (LBS)

JT	LOC.	LC1	MAX-	MAX+	FACE	DIR.	TYPE	HEEL	CONN.
C	1-7-10	-93	-93	---	FRONT	VERT	TOTAL	---	C1
V	19-3-7	-3697	-3697	---	FRONT	VERT	TOTAL	---	C1
AA	5-11-7	-1490	-1490	---	FRONT	VERT	TOTAL	---	C1

CONNECTION REQUIREMENTS

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

DESIGN CRITERIA

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

SPECIFIED LOADS:

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

SPACING = 24.0 IN. C/C

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

GIRDER TYPE: CPrimeHip
 LEFT SETBACK = 1-7-10
 RIGHT SETBACK = 0-0
 END SETBACK = 5-10-8
 END WALL WIDTH = 0-0
 CORNER FRAMING TYPE: CONVENTIONAL
 END JACK TYPE: CONVENTIONAL
 APPLIED TO FRONT SIDE
 - ADDTL LOADS BASED ON 55 % OF GSL.
 LOADS APPLIED TO FIRST 5-11-7 OF SPAN MEASURED FROM THE LEFT.

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

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

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

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

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

ALLOWABLE DEFL.(LL) = L/360 (1.36")
CALCULATED VERT. DEFL.(LL) = L/999 (0.38")
ALLOWABLE DEFL.(TL) = L/360 (1.36")
CALCULATED VERT. DEFL.(TL) = L/660 (0.74")

CSI: TC=0.62/1.00 (I-J); BC=0.75/1.00 (V-W); WB=0.85/1.00 (C-AA); SSI=0.18/1.00 (V-W)

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

COMPANION LIVE LOAD FACTOR = 1.00

AUTOSOLVE HEELS OFF

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

NAIL VALUES

PLATE	GRIP(DRY) SHEAR (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= 0.90 (AA) (INPUT = 0.90)
 JSI METAL= 0.93 (T) (INPUT = 1.00)



JOB NAME 349181	TRUSS NAME H27	QUANTITY	PLY 2	JOB DESC. JT 45147	DRWG NO. E22104359(2)
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Alpa Roof Truss, Maple

Version 8.530 S Feb 23 2022 MiTek Industries, Inc. Fri Oct 21 14:48:44 2022 Page 2

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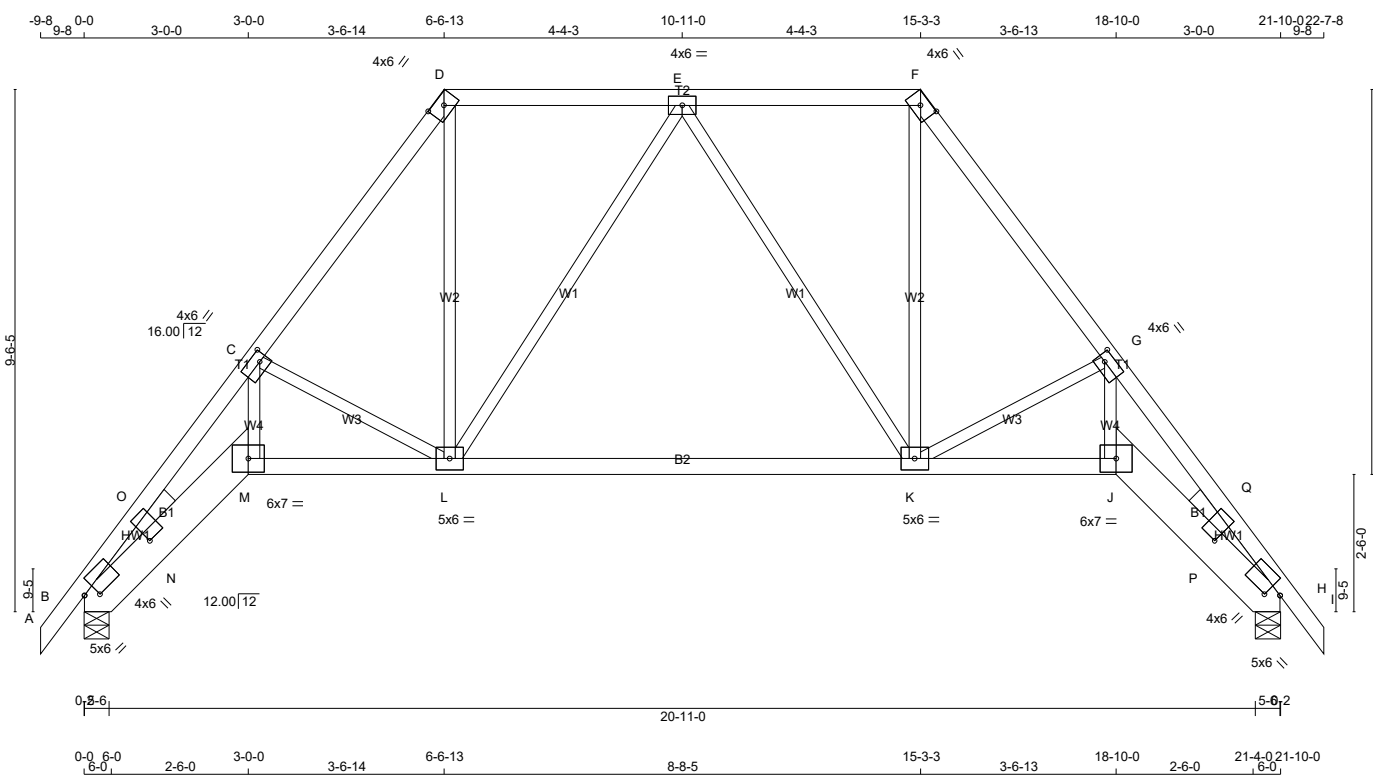
PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
J	TMWW-t	MT20	4.0	6.0	2.00	2.75
K	TS-t	MT20	4.0	6.0		
L	TMWW-t	MT20	5.0	6.0	2.50	2.50
M	TTWW-h	MT20	10.0	12.0	Edge	4.50
N	TTWW-l	MT20	8.0	9.0	Edge	
O	TVMW-l	MT20	5.0	8.0	2.00	4.50
P	BMV1+p	MT20	3.0	4.0		
Q	BMWW-t	MT20	5.0	8.0	2.00	3.50
R	BMWW-t	MT20	4.0	6.0		
S	BMWW-t	MT20	5.0	6.0	2.25	2.00
T	BS-t	MT20	4.0	6.0		
U	BMWW-t	MT20	5.0	6.0	2.50	2.50
V	BMWW+t	MT20	5.0	8.0	4.25	2.25
W	BMWWW-t	MT20	6.0	10.0	3.00	2.50
X	BS-t	MT20	6.0	7.0		
Y	BMWW+t	MT20	4.0	6.0	3.00	1.50
Z	BMWW+t	MT20	4.0	6.0	2.75	1.50
AA	BMWW-t	MT20	6.0	7.0	2.50	2.25
AB	BMWW+t	MT20	4.0	6.0	3.00	1.75
AC	BMV1+p	MT20	4.0	6.0		

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

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





Scale = 1:42.0

TOTAL WEIGHT = 2 X 115 = 229 lb

LUMBER

N. L. G. A. RULES

CHORDS	SIZE	LUMBER	DESCR.
A - D	2x4	DRY No.2	SPF
D - F	2x4	DRY No.2	SPF
F - I	2x4	DRY No.2	SPF
B - M	2x8	DRY No.2	SPF
M - J	2x4	DRY No.2	SPF
J - H	2x8	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	5.0	6.0	2.25	2.75
B	WP+I	MT20	4.0	6.0	1.75	18.50
C	TMWW-t	MT20	4.0	6.0	2.00	1.75
D	TTW-h	MT20	4.0	6.0	2.00	3.25
E	TMWW-t	MT20	4.0	6.0		
F	TTW-h	MT20	4.0	6.0	2.00	3.00
G	TMWW-t	MT20	4.0	6.0	2.00	1.75
H	TMB1-I	MT20	5.0	6.0	2.25	2.75
H	WP+I	MT20	4.0	6.0	1.75	18.50
J	BBW-I	MT20	6.0	7.0		
K	BMWWW-t	MT20	5.0	6.0		
L	BMWWW-t	MT20	5.0	6.0		
M	BBW-I	MT20	6.0	7.0		

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

BEARINGS

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG	REQRD BRG	HEEL
	VERT	HORZ	DOWN	HORZ			
B	1189	0	1189	0	5-8 (5-6)	1-8	2x4 L
H	1189	0	1189	0	5-8 (5-6)	1-8	2x4 R

VALUE IN PARENTHESIS INDICATES EFFECTIVE BEARING LENGTH

BEVELLED PLATE OR SHIM REQUIRED TO PROVIDE FULL BEARING SURFACE WITH TRUSS CHORD AT JT(S): B, H

ALLOW FOR 0.3" OF HORIZONTAL MOVEMENT DUE TO TOTAL LOAD

UNFACTORED REACTIONS

JT	COMBINED	MAX./MIN. COMPONENT REACTIONS					DEAD	SOIL
		1ST LCASE	SNOW	LIVE	PERM.LIVE	WIND		
B	852	496 / 0	0 / 0	0 / 0	0 / 0	355 / 0	0 / 0	
H	852	496 / 0	0 / 0	0 / 0	0 / 0	355 / 0	0 / 0	

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

BRACING
FOR SECTION D-F, MAX. PURLIN SPACING = 2.00 FT.
FOR OTHER SECTIONS, TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.63 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)	LC1 MAX	CS1 (LC)	MEMB. UNBRAC LENGTH	MAX. FACTORED FORCE (LBS)	MAX CS1 (LC)	
FR-TO		FROM TO			FR-TO			
A-B	0 / 20	-78.0	-78.0	0.05 (1)	10.00	M-C	0 / 1436	0.32 (1)
B-O	-3516 / 0	-78.0	-78.0	0.19 (1)	3.63	C-L	-920 / 0	0.26 (1)
C-D	-2814 / 0	-78.0	-78.0	0.15 (1)	4.05	L-D	0 / 768	0.17 (1)
D-E	-1329 / 0	-78.0	-78.0	0.19 (1)	5.43	K-F	0 / 768	0.17 (1)
E-F	-804 / 0	-93.0	-93.0	0.22 (1)	2.00	K-G	-920 / 0	0.26 (1)
F-G	-804 / 0	-93.0	-93.0	0.22 (1)	2.00	J-G	0 / 1436	0.32 (1)
G-Q	-1329 / 0	-78.0	-78.0	0.19 (1)	5.43	L-E	-284 / 0	0.38 (1)
H-I	-2814 / 0	-78.0	-78.0	0.15 (1)	4.05	E-K	-284 / 0	0.38 (1)
Q-H	-3516 / 0	-78.0	-78.0	0.19 (1)	3.63	N-O	0 / 709	0.00 (1)
H-I	0 / 20	-78.0	-78.0	0.05 (1)	10.00	P-Q	0 / 709	0.00 (1)
B-N	0 / 2617	-18.5	-18.5	0.43 (1)	10.00			
N-M	0 / 2142	-18.5	-18.5	0.38 (1)	10.00			
M-L	0 / 1594	-18.5	-18.5	0.38 (4)	10.00			
L-K	0 / 956	-18.5	-18.5	0.32 (4)	10.00			
K-J	0 / 1594	-18.5	-18.5	0.38 (4)	10.00			
J-P	0 / 2142	-18.5	-18.5	0.38 (1)	10.00			
P-H	0 / 2617	-18.5	-18.5	0.43 (1)	10.00			

DESIGN CRITERIA

SPECIFIED LOADS:

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

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON PIGGYBACK TRUSS WITH SLOPES OF 6.00/12 AND -6.00/12 AND RESPECTIVE HEEL HEIGHTS OF 0-0 AND 0-0 AND AN ADDITIONAL DEAD LOAD OF 6.0 P.S.F.

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

THIS DESIGN COMPLIES WITH:
- PART 9 OF 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 (0.73")
CALCULATED VERT. DEFL.(LL) = L/999 (0.08")
ALLOWABLE DEFL.(TL)= L/360 (0.73")
CALCULATED VERT. DEFL.(TL) = L/999 (0.26")

CSI: TC=0.22/1.00 (D-E:1), BC=0.43/1.00 (B-N:1), WB=0.38/1.00 (E-L:1), SSI=0.19/1.00 (D-E:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

NAIL VALUES

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

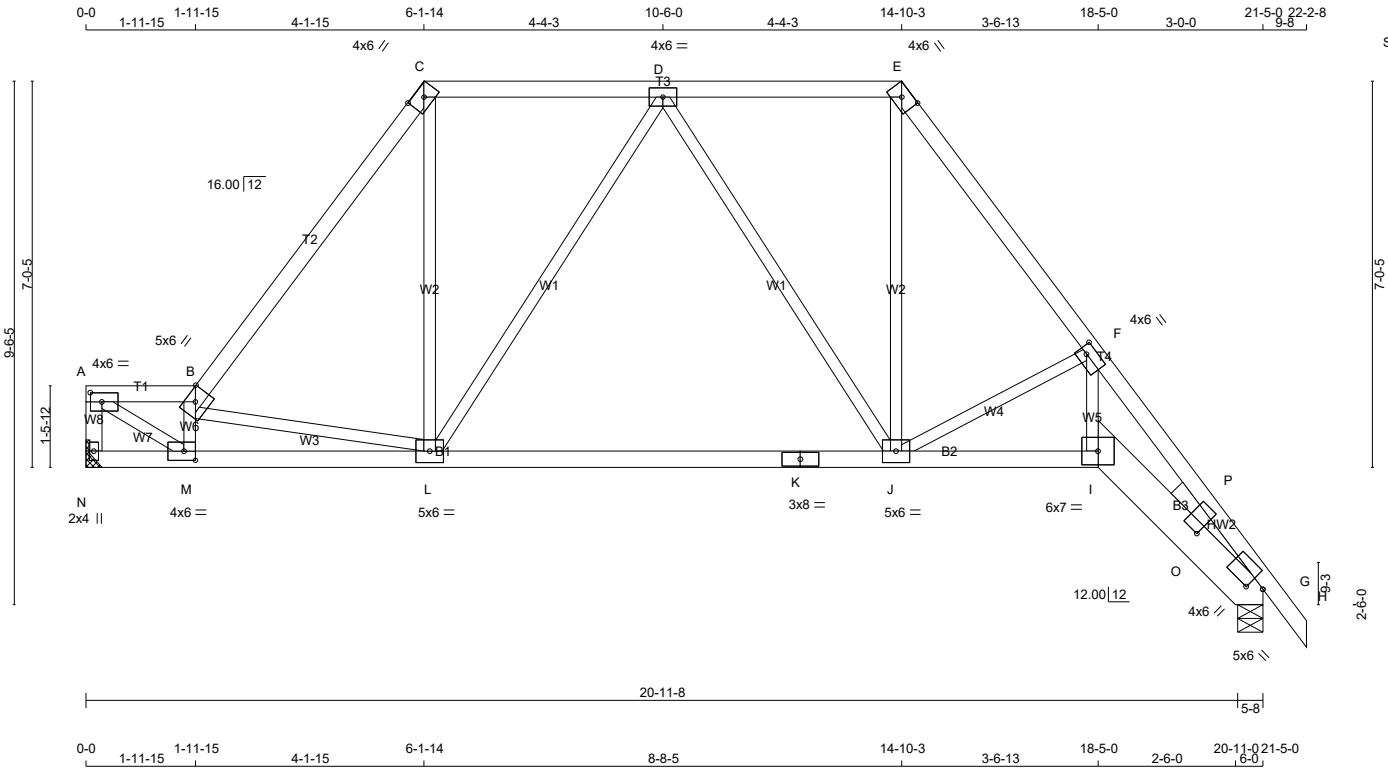
PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.88 (D) (INPUT = 0.90)
JSI METAL= 0.69 (H) (INPUT = 1.00)

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





TOTAL WEIGHT = 3 X 103 = 309 lb

LUMBER

N. L. G. A. RULES

CHORDS	SIZE	LUMBER	DESCR.
N - A	2x4	DRY No.2	SPF
A - B	2x4	DRY No.2	SPF
B - C	2x4	DRY No.2	SPF
C - E	2x4	DRY No.2	SPF
E - H	2x4	DRY No.2	SPF
N - K	2x4	DRY No.2	SPF
K - I	2x4	DRY No.2	SPF
I - G	2x8	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-t	MT20	4.0	6.0	2.00	2.50
B	TTWW-h	MT20	5.0	6.0	Edge	
C	TTW-h	MT20	4.0	6.0	2.00	3.25
D	TMWW-t	MT20	4.0	6.0		
E	TTW-h	MT20	4.0	6.0	2.00	3.25
F	TMWW-t	MT20	4.0	6.0	2.00	1.75
G	TMB1-l	MT20	5.0	6.0	2.25	3.00
G	WP+l	MT20	4.0	6.0	1.50	18.75
I	BBW-l	MT20	6.0	7.0		
J	BMWWW-t	MT20	5.0	6.0		
K	BS-t	MT20	3.0	8.0		
L	BMWWW-t	MT20	5.0	6.0		
M	BMWW-t	MT20	4.0	6.0	2.00	2.50
N	BMV1+p	MT20	2.0	4.0		

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

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

BEARINGS

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG	REQRD BRG	HEEL WEDGE
	VERT	HORZ	DOWN	HORZ			
N	1099	0	1099	0	0	MECHANICAL	
G	1168	0	1168	0	5-8	1-8	2x4 R

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

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS					
		SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
N	790	450 / 0	0 / 0	0 / 0	0 / 0	340 / 0	0 / 0
G	837	488 / 0	0 / 0	0 / 0	0 / 0	349 / 0	0 / 0

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

BRACING
 FOR SECTION C-E, MAX. PURLIN SPACING = 2.00 FT.
 FOR OTHER SECTIONS, TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.63 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)	LC1 MAX (LC)	MAX UNBRAC LENGTH	MEMB. FORCE (LBS)	MAX. FACTORED FORCE (LBS)	MAX UNBRAC LENGTH	MEMB. FORCE (LBS)
FR-TO		FROM	TO		FR-TO			
N-A	-1044 / 0	0.0	0.0	0.11 (1)	7.69	A-M	0 / 1888	0.42 (1)
A-B	-1599 / 0	-78.0	-78.0	0.08 (1)	5.16	M-B	-1028 / 0	0.15 (1)
B-C	-1243 / 0	-78.0	-78.0	0.29 (1)	5.44	B-L	-978 / 0	0.33 (1)
C-D	-762 / 0	-93.0	-93.0	0.29 (1)	2.00	L-C	0 / 669	0.15 (1)
D-E	-783 / 0	-93.0	-93.0	0.29 (1)	2.00	L-D	-305 / 0	0.41 (1)
E-F	-1296 / 0	-78.0	-78.0	0.20 (1)	5.46	D-J	-262 / 0	0.35 (1)
F-P	-2762 / 0	-78.0	-78.0	0.17 (1)	4.05	J-E	0 / 742	0.17 (1)
P-G	-3445 / 0	-78.0	-78.0	0.21 (1)	3.63	J-F	-910 / 0	0.26 (1)
G-H	0 / 20	-78.0	-78.0	0.05 (1)	10.00	I-F	0 / 1416	0.32 (1)
						O-P	0 / 686	0.00 (1)
N-M	0 / 0	-18.5	-18.5	0.10 (1)	10.00			
M-L	0 / 1692	-18.5	-18.5	0.41 (1)	10.00			
L-K	0 / 923	-18.5	-18.5	0.33 (4)	10.00			
K-J	0 / 923	-18.5	-18.5	0.33 (4)	10.00			
J-I	0 / 1565	-18.5	-18.5	0.37 (4)	10.00			
I-O	0 / 2106	-18.5	-18.5	0.37 (1)	10.00			
O-G	0 / 2565	-18.5	-18.5	0.42 (1)	10.00			

DESIGN CRITERIA

SPECIFIED LOADS:

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

SPACING = 24.0 IN. C/C

LOADING IN HIGHEST FLAT SECTION BASED ON PIGGYBACK TRUSS WITH SLOPES OF 6.00/12 AND -6.00/12 AND RESPECTIVE HEEL HEIGHTS OF 0-0 AND 0-0 AND AN ADDITIONAL DEAD LOAD OF 6.0 P.S.F.

LOADING IN OTHER FLAT SECTIONS BASED ON A SLOPE OF 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 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 (0.71")
 CALCULATED VERT. DEFL.(LL) = L/999 (0.07")
 ALLOWABLE DEFL.(TL)= L/360 (0.71")
 CALCULATED VERT. DEFL.(TL) = L/999 (0.20")

CSI: TC=0.29/1.00 (D-E:1), BC=0.42/1.00 (G-O:1), WB=0.42/1.00 (A-M:1), SSI=0.19/1.00 (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)	(PLI)
	MAX	MIN	MAX
MT20	650	371	1747 788 1987 1873

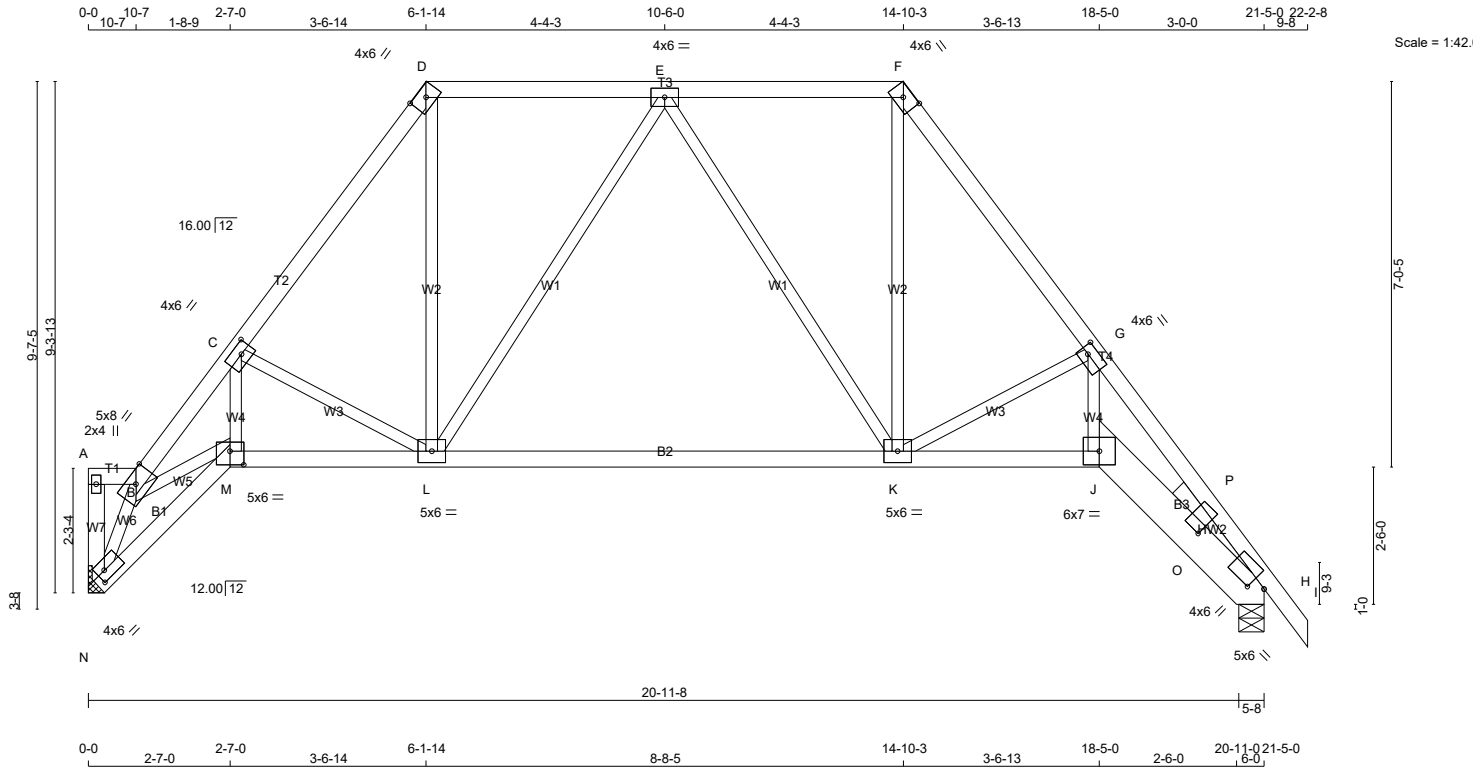
PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.89 (A) (INPUT = 0.90)
 JSI METAL= 0.68 (G) (INPUT = 1.00)

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





LUMBER

N. L. G. A. RULES

CHORDS	SIZE	LUMBER	DESCR.
N - A	2x4	DRY No.2	SPF
A - B	2x4	DRY No.2	SPF
B - D	2x4	DRY No.2	SPF
D - F	2x4	DRY No.2	SPF
F - I	2x4	DRY No.2	SPF
N - M	2x4	DRY No.2	SPF
M - J	2x4	DRY No.2	SPF
J - H	2x8	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	TMV+p	MT20	2.0	4.0		
B	TTWW-h	MT20	5.0	8.0	Edge	
C	TMWW-t	MT20	4.0	6.0	2.00	2.50
D	TTW-h	MT20	4.0	6.0	2.00	3.25
E	TMWW-t	MT20	4.0	6.0		
F	TTW-h	MT20	4.0	6.0	2.00	3.00
G	TMWW-t	MT20	4.0	6.0	2.00	1.75
H	TMB1-l	MT20	5.0	6.0	2.25	3.00
H	WP+l	MT20	4.0	6.0	1.50	18.75
J	BBW-l	MT20	6.0	7.0		
K	BMWWW-t	MT20	5.0	6.0		
L	BMWWW-t	MT20	5.0	6.0		
M	BBWW-l	MT20	5.0	6.0	3.00	3.00
N	BMVW1-t	MT20	4.0	6.0	2.00	1.75

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	HEEL WEDGE
JT	VERT	HORZ	DOWN	HORZ	UPLIFT
N	1099	0	1099	0	0
H	1168	0	1168	0	0

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

ALLOW FOR 0.3" OF HORIZONTAL MOVEMENT DUE TO TOTAL LOAD

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	SNOW	MAX./MIN. LIVE	PERM.LIVE	WIND	DEAD	SOIL
N	790	450 / 0	0 / 0	0 / 0	0 / 0	340 / 0	0 / 0
H	837	488 / 0	0 / 0	0 / 0	0 / 0	349 / 0	0 / 0

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

BRACING
FOR SECTION D-F, MAX. PURLIN SPACING = 2.00 FT.
FOR OTHER SECTIONS, TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.67 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)

MEMB.	CHORDS				WEBS			
	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			
N-A	-34 / 0	0.0	0.0	0.00 (1)	7.81	N-B	-1863 / 0	0.28 (1)
A-B	0 / 0	-78.0	-78.0	0.01 (1)	10.00	B-M	0 / 711	0.16 (1)
B-C	-2258 / 0	-78.0	-78.0	0.12 (1)	4.47	M-C	0 / 890	0.20 (1)
C-D	-1266 / 0	-78.0	-78.0	0.15 (1)	5.58	C-L	-683 / 0	0.19 (1)
D-E	-757 / 0	-93.0	-93.0	0.22 (1)	2.00	L-D	0 / 724	0.16 (1)
E-F	-784 / 0	-93.0	-93.0	0.22 (1)	2.00	K-F	0 / 743	0.17 (1)
F-G	-1297 / 0	-78.0	-78.0	0.18 (1)	5.49	K-G	-909 / 0	0.26 (1)
G-P	-2762 / 0	-78.0	-78.0	0.15 (1)	4.08	J-G	0 / 1415	0.32 (1)
P-H	-3445 / 0	-78.0	-78.0	0.19 (1)	3.67	L-E	-310 / 0	0.41 (1)
H-I	0 / 20	-78.0	-78.0	0.05 (1)	10.00	E-K	-259 / 0	0.34 (1)
						O-P	0 / 686	0.00 (1)
N-M	0 / 977	-18.5	-18.5	0.18 (1)	10.00			
M-L	0 / 1341	-18.5	-18.5	0.36 (4)	10.00			
L-K	0 / 923	-18.5	-18.5	0.32 (4)	10.00			
K-J	0 / 1565	-18.5	-18.5	0.38 (4)	10.00			
J-O	0 / 2106	-18.5	-18.5	0.37 (1)	10.00			
O-H	0 / 2565	-18.5	-18.5	0.42 (1)	10.00			

TOTAL WEIGHT = 108 lb [M]JF

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	DL	PSF
	21.0	6.0	PSF
BOT CH. <td>LL</td> <td>DL</td> <td>PSF</td>	LL	DL	PSF
	0.0	7.4	PSF
TOTAL LOAD = 34.4 PSF			

SPACING = 24.0 IN. C/C

LOADING IN HIGHEST FLAT SECTION BASED ON PIGGYBACK TRUSS WITH SLOPES OF 6.00/12 AND -6.00/12 AND RESPECTIVE HEEL HEIGHTS OF 0-0 AND 0-0 AND AN ADDITIONAL DEAD LOAD OF 6.0 P.S.F.

LOADING IN OTHER FLAT SECTIONS BASED ON A SLOPE OF 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 (0.71")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.07")
ALLOWABLE DEFL.(TL)= L/360 (0.71")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.22")

CSI: TC=0.22/1.00 (E-F:1) , BC=0.42/1.00 (H-O:1) , WB=0.41/1.00 (E-L:1) , SSI=0.19/1.00 (D-E: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
MT20	650	371	1747 788 1987 1873

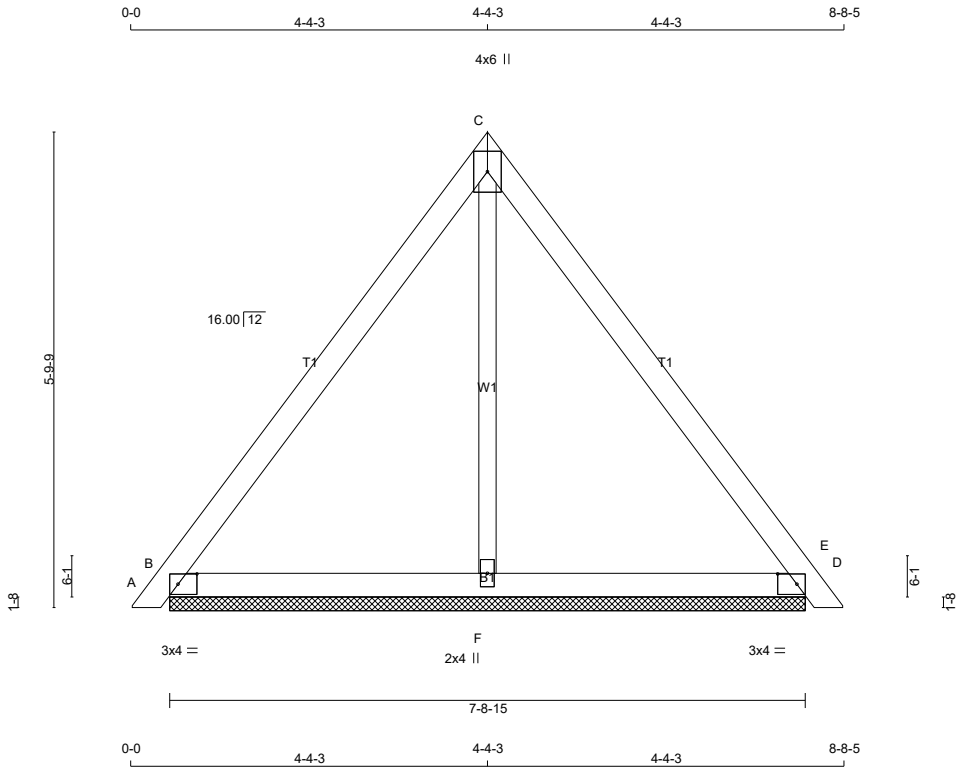
PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.86 (K) (INPUT = 0.90)
JSI METAL= 0.68 (H) (INPUT = 1.00)

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





Scale = 1:28.1

TOTAL WEIGHT = 6 X 29 = 176 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
B - D	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	TTW+p	MT20	4.0	6.0		
D	TMB1-l	MT20	3.0	4.0	1.50	2.75
F	BMW1+w	MT20	2.0	4.0		

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

BEARINGS

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG	REQRD BRG
	VERT	HORZ	DOWN	HORZ		
B	288	0	288	0	7-8-15	1-8
D	288	0	288	0	7-8-15	1-8
F	226	0	226	0	7-8-15	1-8

UNFACTORED REACTIONS

JT	1ST LCASE	MAX./MIN. COMPONENT REACTIONS				DEAD	SOIL
		SNOW	LIVE	PERM.LIVE	WIND		
B	202	141 / 0	0 / 0	0 / 0	0 / 0	62 / 0	0 / 0
D	202	141 / 0	0 / 0	0 / 0	0 / 0	62 / 0	0 / 0
F	166	73 / 0	0 / 0	0 / 0	0 / 0	93 / 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)

MEMB.	CHORDS			UNBRAC LENGTH	MEMB. FR-TO	WEBS		
	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 MAX CSI (LC)			MAX. FACTORED FORCE (LBS)	MAX. FACTORED CSI (LC)	
A-B	0 / 10	-78.0	-78.0	0.01 (1)	10.00	F-C	-136 / 0	0.06 (1)
B-C	-103 / 0	-78.0	-78.0	0.20 (1)	6.25			
C-D	-103 / 0	-78.0	-78.0	0.20 (1)	6.25			
D-E	0 / 10	-78.0	-78.0	0.01 (1)	10.00			
B-F	0 / 61	-18.5	-18.5	0.08 (4)	10.00			
F-D	0 / 61	-18.5	-18.5	0.08 (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, 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=0.20/1.00 (B-C:1), BC=0.08/1.00 (D-F:4), WB=0.06/1.00 (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

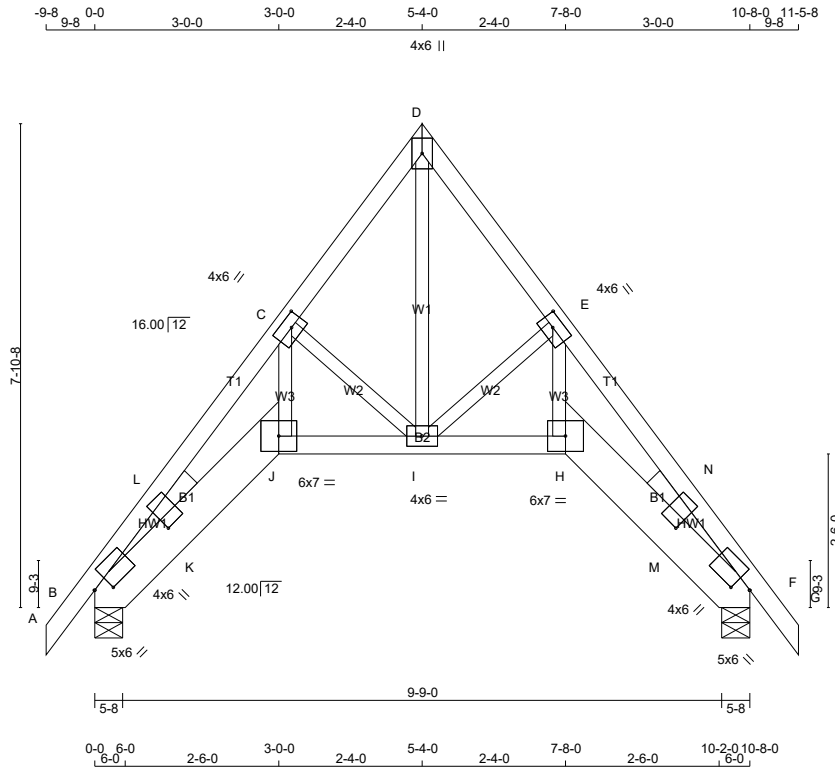
PLATE	GRIP(DRY) (PSI)	SHEAR (PLI)	SECTION (PLI)
MT20	650	371	1747 788 1987 1873

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

JSI GRIP= 0.32 (B) (INPUT = 0.90)
JSI METAL= 0.13 (D) (INPUT = 1.00)

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





Scale = 1:37.5

TOTAL WEIGHT = 66 lb

LUMBER
N. L. G. A. RULES

CHORDS	SIZE	LUMBER	DESCR.
A - D	2x4	DRY No.2	SPF
D - G	2x4	DRY No.2	SPF
B - J	2x8	DRY No.2	SPF
J - H	2x4	DRY No.2	SPF
H - F	2x8	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	5.0	6.0	2.25	3.00
B	WP+I	MT20	4.0	6.0	1.50	18.75
C	TMWW-t	MT20	4.0	6.0	2.00	2.50
D	TTW+p	MT20	4.0	6.0		
E	TMWW-t	MT20	4.0	6.0	2.00	2.50
F	TMB1-I	MT20	5.0	6.0	2.25	3.00
H	WP+I	MT20	4.0	6.0	1.50	18.75
I	BBW-I	MT20	6.0	7.0		
I	BMWW-t	MT20	4.0	6.0		
J	BBW-I	MT20	6.0	7.0		

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	HEEL WEDGE
JT	VERT DOWN	HORZ	UPLIFT	IN-SX
B	585	0	0	5-8
F	585	0	0	5-8

UNFACTORED REACTIONS

JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
B	416	262 / 0	0 / 0	0 / 0	0 / 0	154 / 0	0 / 0
F	416	262 / 0	0 / 0	0 / 0	0 / 0	154 / 0	0 / 0

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

BRACING
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.59 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

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

LOADING
TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 MAX CSI (LC)	MAX. UNBRAC LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. CSI (LC)
FR-TO					FR-TO		
A-B	0 / 20	-78.0	-78.0 0.05 (1)	10.00	J-C	0 / 624	0.14 (1)
B-L	-1322 / 0	-78.0	-78.0 0.05 (1)	5.59	H-E	0 / 624	0.14 (1)
L-C	-1072 / 0	-78.0	-78.0 0.05 (1)	6.05	C-I	-436 / 0	0.08 (1)
C-D	-461 / 0	-78.0	-78.0 0.06 (1)	6.25	I-D	0 / 563	0.13 (1)
D-E	-461 / 0	-78.0	-78.0 0.06 (1)	6.25	I-E	-436 / 0	0.08 (1)
E-N	-1072 / 0	-78.0	-78.0 0.05 (1)	6.05	K-L	0 / 175	0.00 (1)
N-F	-1322 / 0	-78.0	-78.0 0.05 (1)	5.59	M-N	0 / 175	0.00 (1)
F-G	0 / 20	-78.0	-78.0 0.05 (1)	10.00			
B-K	0 / 943	-18.5	-18.5 0.12 (1)	10.00			
K-J	0 / 840	-18.5	-18.5 0.11 (1)	10.00			
J-I	0 / 601	-18.5	-18.5 0.11 (1)	10.00			
I-H	0 / 601	-18.5	-18.5 0.11 (1)	10.00			
H-M	0 / 840	-18.5	-18.5 0.11 (1)	10.00			
M-F	0 / 943	-18.5	-18.5 0.12 (1)	10.00			

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	DL	PSF
		21.0	6.0
BOT CH. <td></td> <td>0.0</td> <td>7.4</td>		0.0	7.4
		0.0	34.4

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 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 (0.36")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.03")
ALLOWABLE DEFL.(TL)= L/360 (0.36")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.06")

CSI: TC=0.06/1.00 (C-D:1), BC=0.12/1.00 (B-K:1), WB=0.14/1.00 (C-J:1), SSI=0.05/1.00 (A-B:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

NAIL VALUES

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

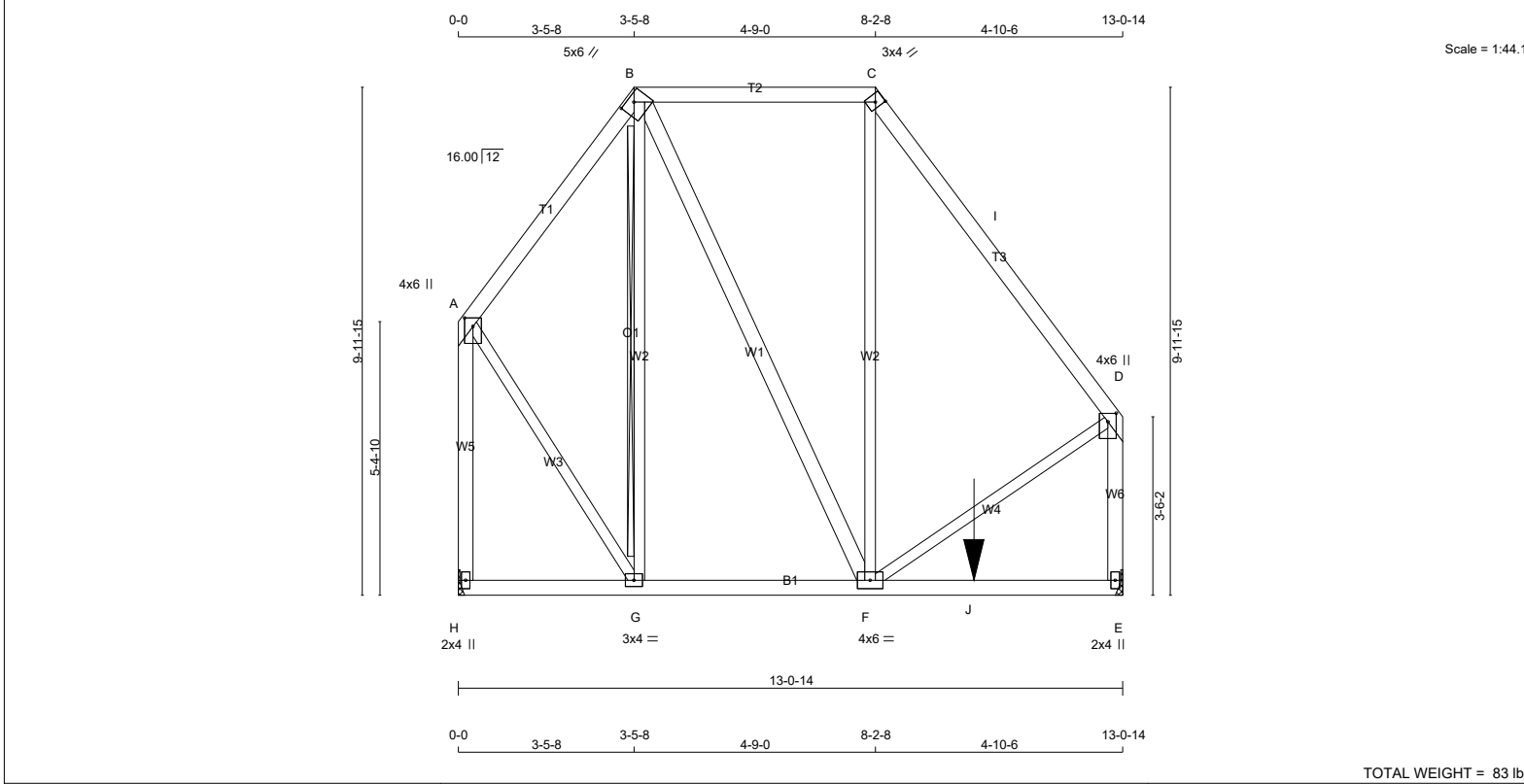
PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.55 (C) (INPUT = 0.90)
JSI METAL= 0.28 (F) (INPUT = 1.00)

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





TOTAL WEIGHT = 83 lb

LUMBER
N. L. G. A. RULES

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

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
A	TMVW+p	MT20	4.0	6.0	2.00	2.00
B	TTWW-h	MT20	5.0	6.0	1.50	3.00
C	TTW+h	MT20	3.0	4.0	2.00	1.25
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		
G	BMWW-t	MT20	3.0	4.0		
H	BMV1+p	MT20	2.0	4.0		

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	FACTORED GROSS REACTION HORZ	INPUT BRG DOWN	REQRD BRG UPLIFT	MECHANICAL IN-SX	MECHANICAL IN-SX
H	980	0	980	0	0	MECHANICAL
E	1112	0	1112	0	0	MECHANICAL

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

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX. SNOW	MIN. LIVE	COMPONENT PERM. LIVE	WIND	DEAD	SOIL
H	699	426 / 0	0 / 0	0 / 0	0 / 0	272 / 0	0 / 0
E	793	484 / 0	0 / 0	0 / 0	0 / 0	309 / 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.
2x4 DRY SPF No.2 T-BRACE AT B-G
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)

MEMB.	CHORDS				WEBS			
	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 MAX	MAX UNBRAC LENGTH	MEMB. FORCE (LBS)	MAX. FACTORED FORCE (LBS)	MAX UNBRAC LENGTH	CS1 (LC)
FR-TO		FROM	TO		FR-TO			
A-B	-458 / 0	-78.0	-78.0	0.18 (1)	6.25	G-B	-146 / 0	0.11 (1)
B-C	-364 / 0	-78.0	-78.0	0.34 (1)	6.25	B-F	0 / 214	0.04 (1)
C-I	-625 / 0	-78.0	-78.0	0.51 (1)	6.25	F-C	0 / 107	0.04 (4)
I-D	-625 / 0	-114.5	-114.5	0.51 (1)	6.25	A-G	0 / 470	0.12 (1)
H-A	-884 / 0	0.0	0.0	0.50 (1)	7.81	F-D	0 / 429	0.11 (1)
E-D	-980 / 0	0.0	0.0	0.22 (1)	7.81			
H-G	0 / 0	-63.7	-63.7	0.11 (1)	10.00			
G-F	0 / 271	-63.7	-63.7	0.41 (1)	10.00			
F-J	0 / 0	-63.7	-63.7	0.40 (1)	10.00			
J-E	0 / 0	-27.2	-27.2	0.40 (1)	10.00			

FACTORED CONCENTRATED LOADS (LBS)

JT	LOC.	LC1	MAX-	MAX+	FACE	DIR.	TYPE	HEEL	CONN.
J	10-1-12	-240	-240	---	FRONT	VERT	TOTAL	---	C1

CONNECTION REQUIREMENTS

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

DESIGN CRITERIA

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

SPECIFIED LOADS:

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

SPACING = 24.0 IN. C/C

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

GIRDER TYPE: CStdGirder
START DISTANCE = 0-0
START SPAN CARRIED = 3-10-8
END DISTANCE = 10-1-12
END SPAN CARRIED = 3-10-8
END WALL WIDTH = 0-0
APPLIED TO FRONT SIDE OF BOTTOM CHORD.
- ADDTL LOADS BASED ON 55 % OF GSL.

GIRDER TYPE: CPrimeHip
SIDE SETBACK = 0-0
END SETBACK = 3-10-8
END WALL WIDTH = 0-0
CORNER FRAMING TYPE: CONVENTIONAL
END JACK TYPE: CONVENTIONAL
APPLIED TO FRONT SIDE
- ADDTL LOADS BASED ON 55 % OF GSL.
LOADS APPLIED TO FIRST 2-11-2 OF SPAN MEASURED FROM THE RIGHT.

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

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, 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 (0.44")
CALCULATED VERT. DEFL.(LL)= L/ 999 (0.05")
ALLOWABLE DEFL.(TL)= L/360 (0.44")
CALCULATED VERT. DEFL.(TL)= L/ 999 (0.11")

CSI: TC=0.51/1.00 (C-D:1) , BC=0.41/1.00 (F-G:1) , WB=0.12/1.00 (A-G:1) , SSI=0.27/1.00 (E-F: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

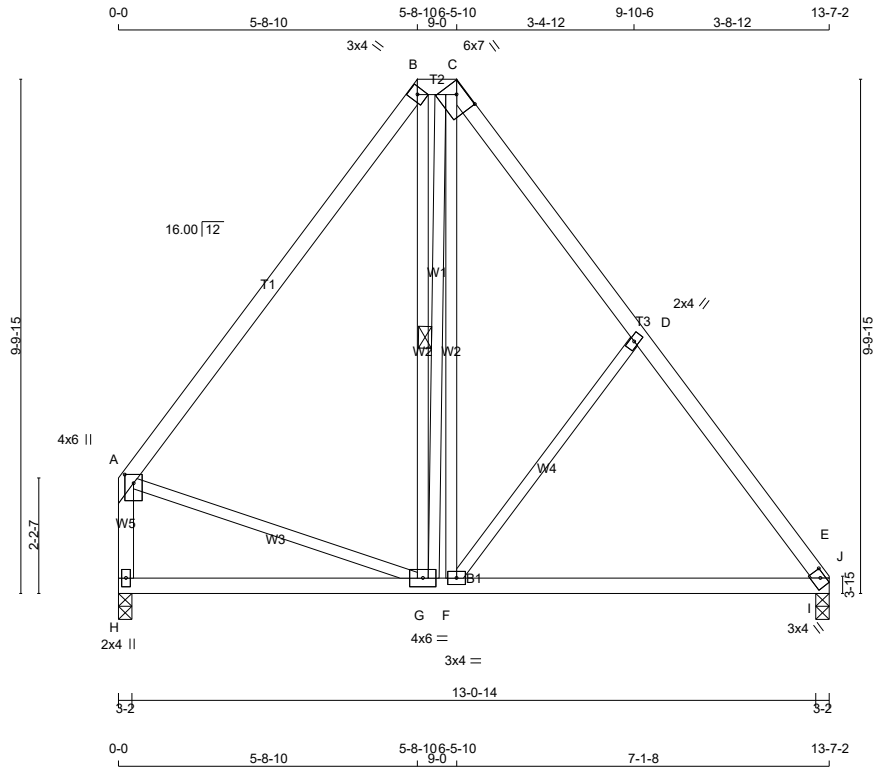
PLATE	GRIP(DRY)	SHEAR (PSI)	SECTION (PLI)
MT20	650	371	1747 788 1987 1873

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

JSI GRIP= 0.79 (G) (INPUT = 0.90)
JSI METAL= 0.26 (D) (INPUT = 1.00)

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





Scale = 1:44.1

TOTAL WEIGHT = 75 lb

LUMBER
N. L. G. A. RULES

CHORDS	SIZE	LUMBER	DESCR.
A - B	2x4	DRY No.2	SPF
B - C	2x4	DRY No.2	SPF
C - E	2x4	DRY No.2	SPF
H - A	2x4	DRY No.2	SPF
H - 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	TMVW+p	MT20	4.0	6.0	2.00	2.00
B	TTW+h	MT20	3.0	4.0		
C	TTWW-h	MT20	6.0	7.0	2.00	4.25
D	TMW+w	MT20	2.0	4.0		
E	TBM1-h	MT20	3.0	4.0	1.00	2.00
F	BMWW-t	MT20	3.0	4.0		
G	BMWWW-t	MT20	4.0	6.0		
H	BMV1+p	MT20	2.0	4.0		

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

BEARINGS

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG	REQRD BRG
	VERT	HORZ	DOWN	HORZ		
E	656	0	656	0	3-2	1-8
H	656	0	656	0	3-2	1-8

UNFACTORED REACTIONS

JT	COMBINED	MAX./MIN. COMPONENT REACTIONS					
		SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
E	467	285 / 0	0 / 0	0 / 0	0 / 0	182 / 0	0 / 0
H	467	285 / 0	0 / 0	0 / 0	0 / 0	182 / 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.
1 LATERAL BRACE(S) AT 1/2 LENGTH OF C-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)

MEMB.	MAX. FACTORED FORCE (LBS)	CHORDS			MAX. UNBRACED LENGTH	MEMB.	WEBS		
		VERT. LOAD (PLF)	LC1	MAX CSI (LC)			MAX. FACTORED FORCE (LBS)	MAX CSI (LC)	
FR-TO		FROM	TO		FR-TO				
A-B	-399 / 0	-78.0	-78.0	0.33 (1)	6.25	G-B	0 / 77	0.03 (4)	
B-C	-239 / 0	-78.0	-78.0	0.01 (1)	6.25	G-C	-55 / 0	0.04 (1)	
C-D	-431 / 0	-78.0	-78.0	0.13 (1)	6.25	F-C	0 / 248	0.06 (1)	
D-J	-584 / 0	-78.0	-78.0	0.14 (1)	6.25	F-D	-223 / 0	0.14 (1)	
J-E	-699 / 0	-78.0	-78.0	0.09 (4)	6.25	A-G	0 / 250	0.06 (1)	
H-A	-617 / 0	0.0	0.0	0.08 (1)	7.81	I-J	0 / 182	0.00 (1)	
H-G	0 / 0	-18.5	-18.5	0.18 (4)	10.00				
G-F	0 / 243	-18.5	-18.5	0.21 (4)	10.00				
F-I	0 / 375	-18.5	-18.5	0.22 (4)	10.00				
I-E	0 / 375	-18.5	-18.5	0.09 (4)	10.00				

DESIGN CRITERIA

SPECIFIED LOADS:

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

SPACING = 24.0 IN. C/C

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

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

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

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

ALLOWABLE DEFL.(LL)= L/360 (0.45")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.02")
ALLOWABLE DEFL.(TL)= L/360 (0.45")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.08")

CSI: TC=0.33/1.00 (A-B-1), BC=0.22/1.00 (F-I-4), WB=0.14/1.00 (D-F-1), SSI=0.18/1.00 (E-J-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

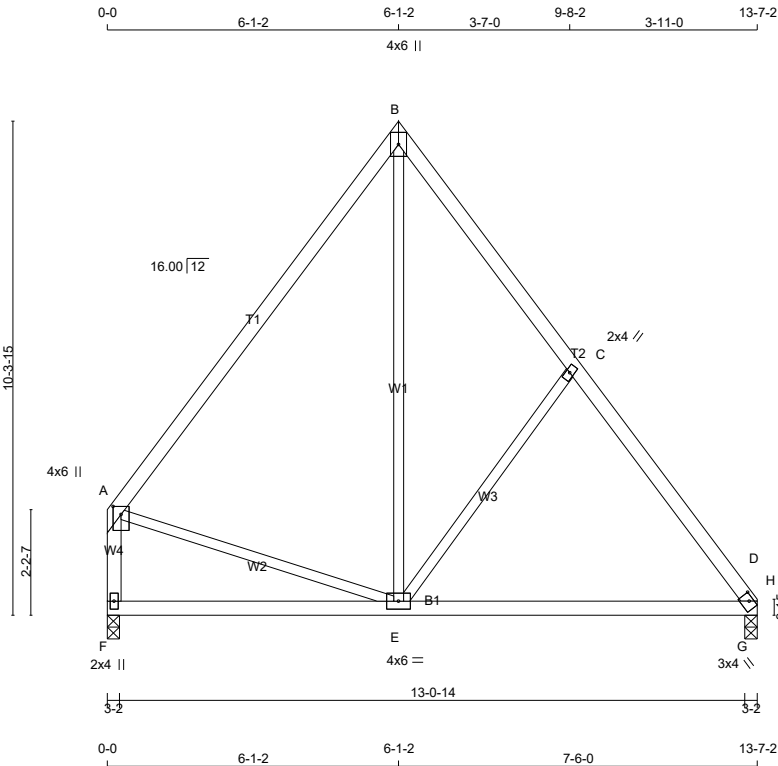
PLATE	GRIP(DRY) (PS)	SHEAR (PL)	SECTION (PL)
MT20	650	371	1747 788 1987 1873

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

JSI GRIP= 0.53 (E) (INPUT = 0.90)
JSI METAL= 0.19 (E) (INPUT = 1.00)

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





TOTAL WEIGHT = 61 lb

LUMBER
N. L. G. A. RULES

CHORDS	SIZE	LUMBER	DESCR.
A - B	2x4	DRY 2100F 1.8E	SPF
B - D	2x4	DRY No.2	SPF
F - A	2x4	DRY No.2	SPF
F - D	2x4	DRY No.2	SPF
ALL WEBS EXCEPT	2x3	DRY No.2	SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
A	TMVW+p	MT20	4.0	6.0	2.00	2.00
B	TTW+p	MT20	4.0	6.0		
C	TMW+w	MT20	2.0	4.0		
D	TBM1-h	MT20	3.0	4.0	1.00	2.00
E	BMWWW-t	MT20	4.0	6.0		
F	BMV1+p	MT20	2.0	4.0		

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

BEARINGS

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG IN-SX	REQRD BRG IN-SX
	VERT	HORZ	DOWN	HORZ		
D	656	0	656	0	3-2	1-8
F	656	0	656	0	3-2	1-8

UNFACTORED REACTIONS

JT	1ST LCASE MAX./MIN. COMPONENT REACTIONS						
	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
D	467	285 / 0	0 / 0	0 / 0	0 / 0	182 / 0	0 / 0
F	467	285 / 0	0 / 0	0 / 0	0 / 0	182 / 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)

MEMB.	CHORDS				WEBS			
	MAX. FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 MAX	LC2 MAX	MEMB. UNBRAC LENGTH	MAX. FORCE (LBS)	FACTORED MAX	LC1 MAX
A-B	-387 / 0	-78.0	-78.0	0.25 (1)	6.25	E-B	0 / 275	0.06 (4)
B-C	-417 / 0	-78.0	-78.0	0.15 (1)	6.25	E-C	-232 / 0	0.16 (1)
C-H	-576 / 0	-78.0	-78.0	0.15 (1)	6.25	A-E	0 / 242	0.05 (1)
H-D	-679 / 0	-78.0	-78.0	0.09 (4)	6.25	G-H	-9 / 177	0.00 (1)
F-A	-617 / 0	0.0	0.0	0.08 (1)	7.81			
F-E	0 / 0	-18.5	-18.5	0.23 (4)	10.00			
E-G	0 / 370	-18.5	-18.5	0.26 (4)	10.00			
G-D	0 / 370	-18.5	-18.5	0.09 (4)	10.00			

DESIGN CRITERIA

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

SPACING = 24.0 IN. C/C

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, 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 (0.45")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.02")
ALLOWABLE DEFL.(TL)= L/360 (0.45")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.09")

CSI: TC=0.25/1.00 (A-B:1), BC=0.26/1.00 (E-G:4), WB=0.16/1.00 (C-E:1), SSI=0.18/1.00 (D-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

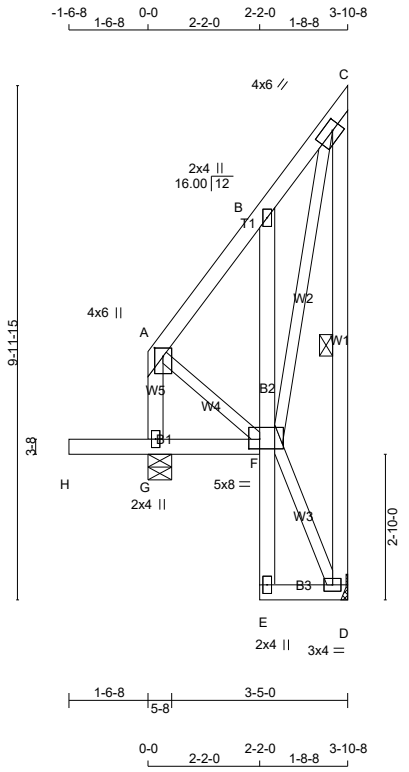
PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.53 (D) (INPUT = 0.90)
JSI METAL= 0.19 (D) (INPUT = 1.00)

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





TOTAL WEIGHT = 4 X 44 = 178 lb

LUMBER

N. L. G. A. RULES

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

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
A	TMVW+p	MT20	4.0	6.0	2.00	2.00
B	TMV+p	MT20	2.0	4.0		
C	TMVW-t	MT20	4.0	6.0	2.00	2.00
D	BMVW1-t	MT20	3.0	4.0		
E	BMV+p	MT20	2.0	4.0		
F	BVMWWV-l	MT20	5.0	8.0	2.25	2.50
G	BMV1+p	MT20	2.0	4.0		

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

BEARINGS

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG	REQRD BRG
	VERT	HORZ	DOWN	HORZ		
G	336	0	336	0	5-8	1-8
D	187	0	187	0	MECHANICAL	

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

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS					
		SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
G	239	146 / 0	0 / 0	0 / 0	0 / 0	93 / 0	0 / 0
D	133	81 / 0	0 / 0	0 / 0	0 / 0	52 / 0	0 / 0

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

BRACING
 TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 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.
 1 LATERAL BRACE(S) AT 1/2 LENGTH OF C-D.

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: (7)

MEMB.	MAX. FACTORED FORCE (LBS)	CHORDS				WEBS			
		VERT. LOAD (PLF)	LC1	MAX	UNBRAC LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX	CSI (LC)
G-A	-166 / 0	0.0	0.0	0.02 (1)	7.81	A-F	0 / 56	0.01 (1)	
A-B	-66 / 0	-78.0	-78.0	0.05 (1)	6.25	F-D	-6 / 0	0.00 (1)	
B-C	-81 / 0	-78.0	-78.0	0.04 (1)	6.25	F-C	0 / 177	0.04 (1)	
D-C	-167 / 0	0.0	0.0	0.08 (1)	6.25				
H-G	0 / 0	-96.5	-96.5	0.18 (7)	10.00				
G-F	0 / 0	-18.5	-18.5	0.03 (4)	10.00				
E-F	0 / 16	0.0	0.0	0.01 (1)	10.00				
F-B	-174 / 0	0.0	0.0	0.02 (1)	7.81				
E-D	0 / 3	-18.5	-18.5	0.01 (4)	10.00				

CANTILEVER ANALYSIS HAS BEEN CONSIDERED IN THIS DESIGN

PATTERN-LOADING CHECK APPLIED TO THIS TRUSS.

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

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

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

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=0.08/1.00 (C-D:1), BC=0.18/1.00 (G-H:7), WB=0.04/1.00 (C-F:1), SSI=0.14/1.00 (G-H:7)

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 (PSI)	SECTION (PLI)
MT20	650	371	1747 788 1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

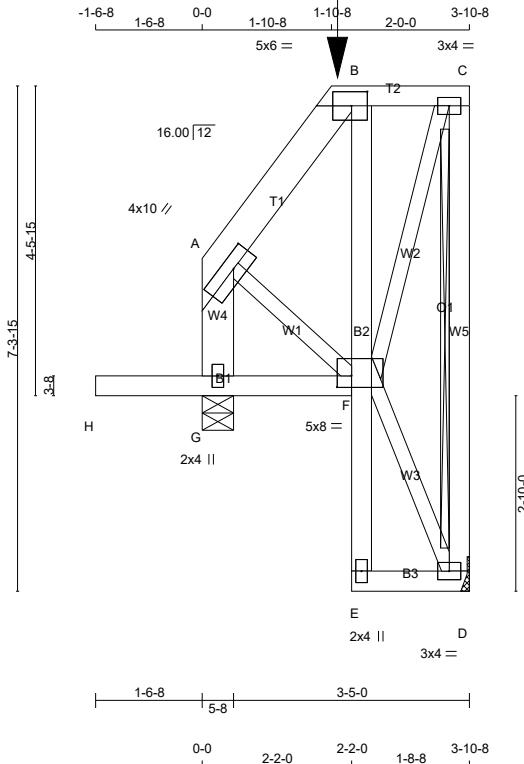
JSI GRIP= 0.23 (F) (INPUT = 0.90)
 JSI METAL= 0.08 (B) (INPUT = 1.00)

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



Alpa Roof Truss, Maple

ID:DqSMSEW8qE9HTV0gkasOLLzzSIP-q RmVMrLh3HBxv5fSxWNPYIPFRcAnYGPWIf8e0yRAP



Scale = 1:33.4

TOTAL WEIGHT = 2 X 41 = 83 lb

LUMBER
N. L. G. A. RULES

CHORDS	SIZE	LUMBER	DESCR.
A - B	2x6	DRY No.2	SPF
B - C	2x4	DRY No.2	SPF
D - C	2x4	DRY No.2	SPF
G - A	2x6	DRY No.2	SPF
H - F	2x4	DRY No.2	SPF
E - B	2x4	DRY No.2	SPF
E - D	2x4	DRY No.2	SPF
ALL WEBS EXCEPT	2x3	DRY No.2	SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
A	TMVW-t	MT20	4.0	10.0	2.00	4.00
B	TMTV*-l	MT20	5.0	6.0	2.50	2.75
C	TMVW-t	MT20	3.0	4.0		
D	BMVW1-t	MT20	3.0	4.0		
E	BMV+p	MT20	2.0	4.0		
F	BVMWWW-l	MT20	5.0	8.0	2.00	2.50
G	BMV1+p	MT20	2.0	4.0		

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

BEARINGS

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG	REQRD BRG
	VERT	HORZ	DOWN	HORZ		
D	241	0	241	0	MECHANICAL	
G	366	0	366	0	5-8	1-8

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

UNFACTORED REACTIONS

JT	COMBINED	MAX./MIN. COMPONENT REACTIONS					
		1ST LCASE	SNOW	LIVE	PERM.LIVE	WIND	DEAD
D	171	106 / 0	0 / 0	0 / 0	0 / 0	65 / 0	0 / 0
G	261	158 / 0	0 / 0	0 / 0	0 / 0	103 / 0	0 / 0

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

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

2x3 DRY SPF No.2 T-BRACE AT C-D

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: (7)

FR-TO	CHORDS				WEBS			
	MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)		MEMB.	MAX. FACTORED FORCE (LBS)	MAX. FACTORED UNBRAC LENGTH (LC)	
			LC1	MAX			FR-TO	MAX
A-B	-86 / 0	-78.0	-78.0	0.04 (1)	6.25	F-D	-4 / 0	0.00 (1)
B-C	-54 / 0	-95.0	-95.0	0.04 (1)	6.25	F-C	0 / 155	0.04 (1)
D-C	-220 / 0	0.0	0.0	0.13 (1)	7.81	A-F	0 / 66	0.02 (1)
G-A	-191 / 0	0.0	0.0	0.01 (1)	7.81			
H-G	0 / 0	-96.5	-96.5	0.21 (7)	10.00			
G-F	0 / 0	-22.5	-22.5	0.04 (4)	10.00			
E-F	0 / 20	0.0	0.0	0.01 (1)	10.00			
F-B	-140 / 0	0.0	0.0	0.01 (1)	7.81			
E-D	0 / 2	-22.5	-22.5	0.02 (4)	10.00			

FACTORED CONCENTRATED LOADS (LBS)

JT	LOC.	LC1	MAX-	MAX+	FACE	DIR.	TYPE	HEEL	CONN.
B	2-3-12	-41	-41	---	FRONT	VERT	TOTAL	---	C1

CONNECTION REQUIREMENTS

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

CANTILEVER ANALYSIS HAS BEEN CONSIDERED IN THIS DESIGN

PATTERN-LOADING CHECK APPLIED TO THIS TRUSS.

DESIGN CRITERIA

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

SPACING = 24.0 IN. C/C

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

GIRDER TYPE: CPrimeHip
LEFT SETBACK = 2-3-12
RIGHT SETBACK = 0-0
END SETBACK = 2-10-8
END WALL WIDTH = 0-0
CORNER FRAMING TYPE: CONVENTIONAL
END JACK TYPE: CONVENTIONAL
APPLIED TO FRONT SIDE
- ADDTL LOADS BASED ON 55 % OF GSL.

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

THIS DESIGN COMPLIES WITH:
- PART 9 OF CBC2018, ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

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

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

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=0.13/1.00 (C-D:1), BC=0.21/1.00 (G-H:7),
WB=0.04/1.00 (C-F:1), SSI=0.16/1.00 (G-H:7)

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

COMPANION LIVE LOAD FACTOR = 1.00

AUTOSOLVE 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
MT20 650 371 1747 788 1987 1873

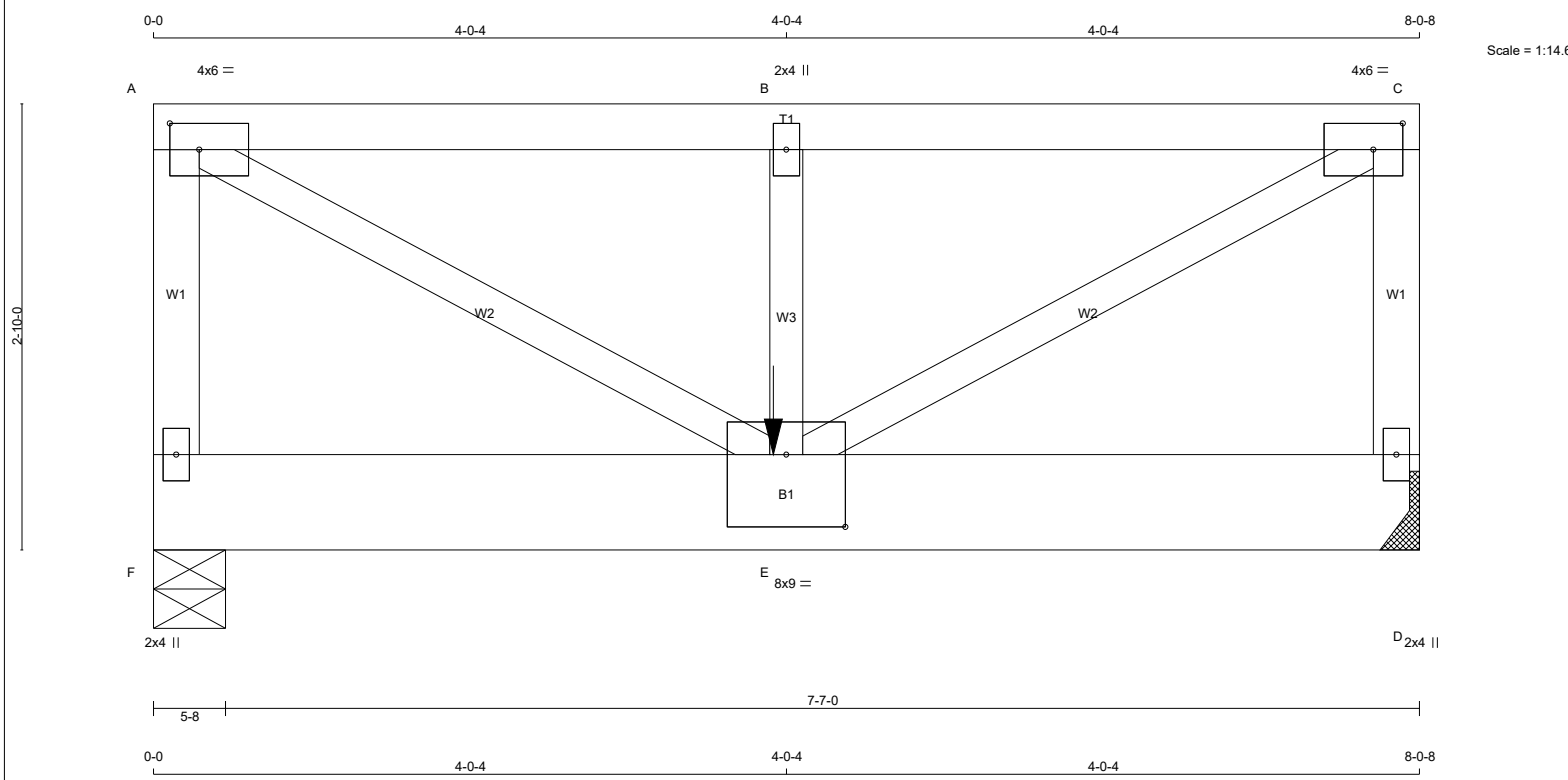
PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.33 (C) (INPUT = 0.90)
JSI METAL= 0.06 (F) (INPUT = 1.00)

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





TOTAL WEIGHT = 2 X 41 = 82 lb

LUMBER

N. L. G. A. RULES

CHORDS	SIZE	LUMBER	DESCR.
F - A	2x4	DRY No.2	SPF
A - C	2x4	DRY No.2	SPF
D - C	2x4	DRY No.2	SPF
F - D	2x8	DRY No.2	SPF
ALL WEBS	2x3	DRY No.2	SPF
DRY: SEASONED LUMBER.			

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

CHORDS #ROWS	SURFACE SPACING (IN)	LOAD(PLF)
TOP CHORDS : (0.122"x3") SPIRAL NAILS		
F - A	12	TOP SIDE(9.7)
A - C	12	TOP
C - D	12	TOP
BOTTOM CHORDS : (0.122"x3") SPIRAL NAILS		
F - D	9	SIDE(234.1)
WEBS : (0.122"x3") SPIRAL NAILS		
B - E	5	SIDE(128.9)
2x3	6	

NAILS TO BE DRIVEN FROM ONE SIDE ONLY.

GIRDER NAILING ASSUMES NAILED HANGERS ARE FASTENED WITH MIN. 3-0 INCH NAILS.

TOP - COMPONENTS ARE LOADED FROM THE TOP AND MUST BE PLACED ON TOP EDGE OF ALL PLIES FOR THE LOAD TO BE TRANSFERRED TO EACH PLY.

SIDE - PLF SHOWN IS THE EQUIVALENT UDL APPLIED TO ONE SIDE THAT THE CORRESPONDING NAILING PATTERN SHALL BE CAPABLE OF TRANSFERING. REMAINING PLF MUST BE APPLIED ON THE OPPOSITE SIDE OR ON THE TOP.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
A	TMVW-t	MT20	4.0	6.0	2.00	2.25
B	TMW+w	MT20	2.0	4.0		
C	TMVW-t	MT20	4.0	6.0	2.00	2.25
D	BMV1+p	MT20	2.0	4.0		
E	BMWWW-t	MT20	8.0	9.0	5.50	4.50
F	BMV1+p	MT20	2.0	4.0		

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

BEARINGS

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG	REQRD BRG
	VERT	HORZ	DOWN	HORZ		
F	3184	0	3184	0	5-8	1-12
D	3698	0	3698	0	MECHANICAL	

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT D. MINIMUM BEARING LENGTH AT JOINT D = 2-8.

UNFACTORED REACTIONS

JT	COMBINED	MAX./MIN. COMPONENT REACTIONS					
		1ST LCASE	SNOW	LIVE	PERM.LIVE	WIND	DEAD
F	2270	1386 / 0	0 / 0	0 / 0	0 / 0	885 / 0	0 / 0
D	2636	1809 / 0	0 / 0	0 / 0	0 / 0	1027 / 0	0 / 0

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

BRACING
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.83 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

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

LOADING
TOTAL LOAD CASES: (4)

MEMB.	CHORDS MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1	MAX	MAX. UNBRAC LENGTH	WEBS	
						MEMB. FORCE (LBS)	MAX. FACTORED CSI (LC)
FR-TO		FROM TO				FR-TO	
F - A	-2274 / 0	0.0	0.0	0.16 (1)	7.42	A - E	0 / 4109 0.51 (1)
A - B	-3534 / 0	-97.5	-97.5	0.17 (1)	4.83	E - B	-390 / 0 0.03 (1)
B - C	-3534 / 0	-78.0	-78.0	0.14 (1)	4.88	E - C	0 / 4109 0.51 (1)
D - C	-2235 / 0	0.0	0.0	0.15 (1)	7.47		
F - E	0 / 0	-491.4	-491.4	0.21 (1)	10.00		
E - D	0 / 0	-766.4	-766.4	0.35 (1)	10.00		

FACTORED CONCENTRATED LOADS (LBS)

JT	LOC.	LC1	MAX-	MAX+	FACE	DIR.	TYPE	HEEL	CONN.
E	3-11-4	-1119	-1119	---	FRONT	VERT	TOTAL	---	C1

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

DESIGN CRITERIA

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

SPECIFIED LOADS:

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

SPACING = 24.0 IN. C/C

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

GIRDER TYPE: CStdGirder
START DISTANCE = 3-11-4
START SPAN CARRIED = 13-7-2
END DISTANCE = 8-0-8
END SPAN CARRIED = 13-7-2
END WALL WIDTH = 0-0
APPLIED TO FRONT SIDE OF BOTTOM CHORD.
- ADDTL LOADS BASED ON 55 % OF GSL.

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

GIRDER TYPE: CStdGirder
START DISTANCE = 0-0
START SPAN CARRIED = 21-5-0
END DISTANCE = 8-0-8
END SPAN CARRIED = 21-5-0
END WALL WIDTH = 0-0
APPLIED TO BACK SIDE OF BOTTOM CHORD.
- ADDTL LOADS BASED ON 55 % OF GSL.

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

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, 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 (0.27")
CALCULATED VERT. DEFL.(LL) = L/999 (0.03")
ALLOWABLE DEFL.(TL)= L/360 (0.27")
CALCULATED VERT. DEFL.(TL) = L/999 (0.06")

CSI: TC=0.17/1.00 (A-B:1), BC=0.35/1.00 (D-E:1), WB=0.51/1.00 (A-E:1), SSI=0.47/1.00 (D-E:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

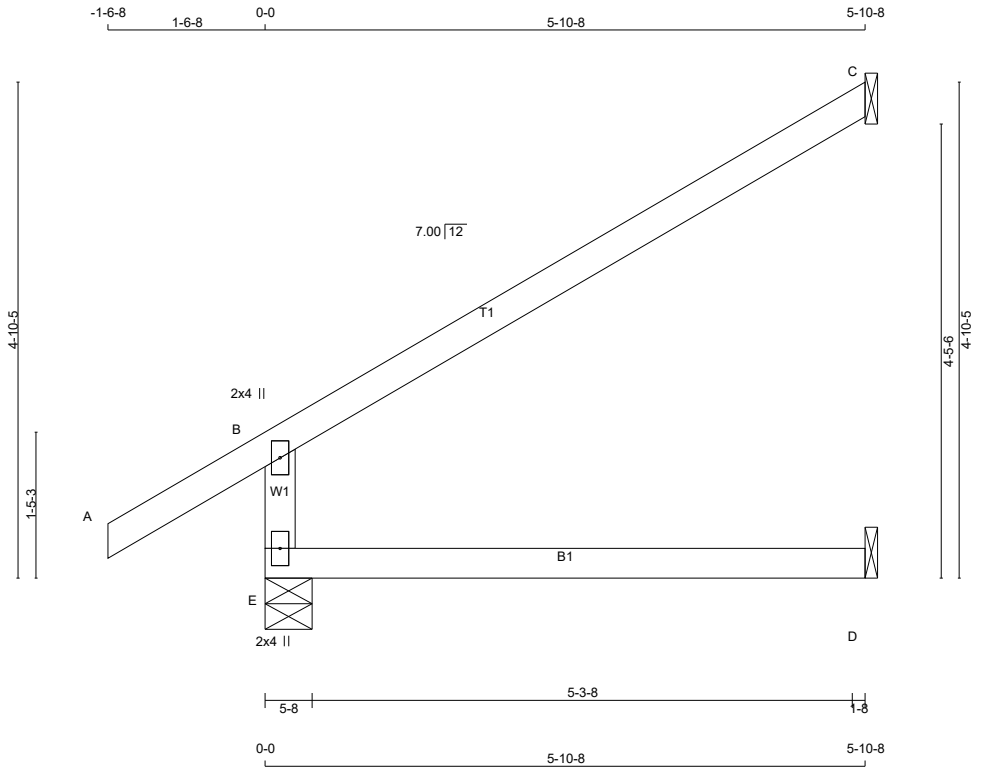
NAIL VALUES

PLATE	GRIP(DRY)	SHEAR (PSI)	SECTION (PLI)
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





TOTAL WEIGHT = 3 X 18 = 53 lb

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

DRY: SEASONED LUMBER.

PLATES (table is in inches)

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

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

BEARINGS

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG IN-SX	REQRD BRG IN-SX
	VERT	HORZ	DOWN	HORZ		
E	475	0	475	0	5-8	1-8
C	172	0	172	0	1-8	1-8
D	46	0	51	0	1-8	1-8

SEE MITEK STANDARD DETAIL MSD2015-H FOR CONNECTION TO JOINT(S) C, D

UNFACTORED REACTIONS

JT	1ST LCASE	MAX./MIN. COMPONENT REACTIONS					
		COMBINED	SNOW	LIVE	PERMLIVE	WIND	DEAD
E	336	222 / 0	0 / 0	0 / 0	0 / 0	114 / 0	0 / 0
C	119	93 / 0	0 / 0	0 / 0	0 / 0	26 / 0	0 / 0
D	37	0 / 0	0 / 0	0 / 0	0 / 0	37 / 0	0 / 0

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

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

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

LOADING
 TOTAL LOAD CASES: (4)

MEMB.	CHORDS MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)		LC1 MAX CSI (LC)	MAX. UNBRAC LENGTH	MEMB. FORCE (LBS)	WEBS MAX. FACTORED FORCE (LBS)	
		FROM	TO				CSI (LC)	CSI (LC)
E-B	-412 / 0	0.0	0.0	0.12 (4)	7.81			
A-B	0 / 32	-78.0	-78.0	0.14 (1)	10.00			
B-C	-29 / 0	-78.0	-78.0	0.46 (1)	6.25			
E-D	0 / 0	-18.5	-18.5	0.13 (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, 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

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

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

ALLOWABLE DEFL.(LL)= L/360 (0.20")
 CALCULATED VERT. DEFL.(LL) = L/999 (0.00")
 ALLOWABLE DEFL.(TL)= L/360 (0.20")
 CALCULATED VERT. DEFL.(TL) = L/999 (0.03")
 CSI: TC=0.46/1.00 (B-C:1), BC=0.13/1.00 (D-E:4), WB=0.00/1.00 (n/a:0), SSI=0.19/1.00 (B-C:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

AUTOSOLVE RIGHT HEEL ONLY
 TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

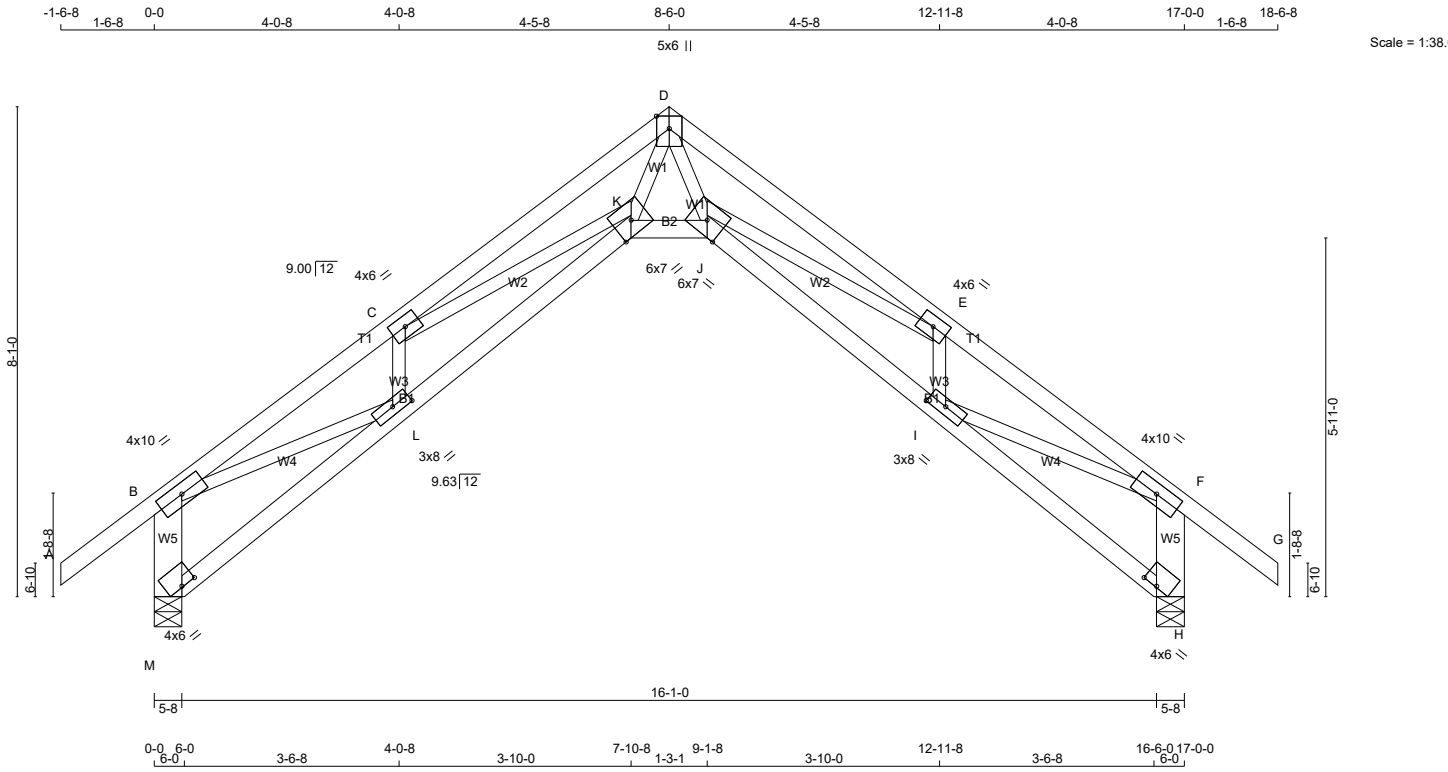
NAIL VALUES
 PLATE GRIP(DRY) SHEAR SECTION (PSI) (PLI) (PLI)
 MAX MIN MAX MIN MAX MIN
 MT20 650 371 1747 788 1987 1873

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

JSI GRIP= 0.24 (B) (INPUT = 0.90)
 JSI METAL= 0.19 (B) (INPUT = 1.00)

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





TOTAL WEIGHT = 10 X 77 = 770 lb [M]F

LUMBER
N. L. G. A. RULES

CHORDS	SIZE	LUMBER	DESCR.
A - D	2x4	DRY No.2	SPF
D - G	2x4	DRY No.2	SPF
M - B	2x6	DRY No.2	SPF
H - F	2x6	DRY No.2	SPF
M - K	2x4	DRY No.2	SPF
K - J	2x4	DRY No.2	SPF
J - H	2x4	DRY No.2	SPF
ALL WEBS EXCEPT	2x3	DRY No.2	SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMVW-t	MT20	4.0	10.0		
C	TMWW-t	MT20	4.0	6.0		
D	TTWW-m	MT20	5.0	6.0	Edge	
E	TMWW-t	MT20	4.0	6.0		
F	TMVW-t	MT20	4.0	10.0		
H	BVM1-l	MT20	4.0	6.0	0.25	3.00
I	BMWW-t	MT20	3.0	8.0	1.50	3.75
J	BBWW-h	MT20	6.0	7.0	Edge	
K	BBWW-h	MT20	6.0	7.0	Edge	
L	BMWW-t	MT20	3.0	8.0	1.50	3.75
M	BVM1-l	MT20	4.0	6.0	0.25	3.00

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

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

BEARINGS

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG	REQRD BRG
	VERT	HORZ	DOWN	HORZ		
M	947	0	947	0	5-8	5-8
H	947	0	947	0	5-8	5-8

ALLOW FOR 0.7" OF HORIZONTAL MOVEMENT DUE TO TOTAL LOAD

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS					SOIL
		SNOW	LIVE	PERM.LIVE	WIND	DEAD	
M	673	425 / 0	0 / 0	0 / 0	0 / 0	247 / 0	0 / 0
H	673	425 / 0	0 / 0	0 / 0	0 / 0	247 / 0	0 / 0

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

BRACING
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.69 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

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

LOADING
TOTAL LOAD CASES: (4)

MEMB.	CHORDS			MAX. UNBRAC LENGTH	WEBS			
	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 MAX CSI (LC)		MAX. MEMB. FORCE (LBS)	FACTORED MAX CSI (LC)		
FR-TO		FROM	TO		FR-TO			
A-B	0 / 38	-78.0	-78.0	0.15 (1)	10.00	D-J	0 / 1834	0.41 (1)
B-C	-2160 / 0	-78.0	-78.0	0.20 (1)	4.49	J-E	0 / 883	0.20 (1)
C-D	-3158 / 0	-78.0	-78.0	0.36 (1)	3.69	I-E	-636 / 0	0.09 (1)
D-E	-3158 / 0	-78.0	-78.0	0.36 (1)	3.69	K-D	0 / 1834	0.41 (1)
E-F	-2160 / 0	-78.0	-78.0	0.20 (1)	4.49	C-K	0 / 883	0.20 (1)
F-G	0 / 38	-78.0	-78.0	0.15 (1)	10.00	L-C	-636 / 0	0.09 (1)
M-B	-908 / 0	0.0	0.0	0.07 (1)	7.81	I-F	0 / 1859	0.42 (1)
H-F	-908 / 0	0.0	0.0	0.07 (1)	7.81	B-L	0 / 1859	0.42 (1)
M-L	0 / 4	-18.5	-18.5	0.07 (4)	10.00			
L-K	0 / 2170	-18.5	-18.5	0.40 (1)	10.00			
K-J	0 / 1915	-18.5	-18.5	0.31 (1)	10.00			
J-I	0 / 2170	-18.5	-18.5	0.40 (1)	10.00			
I-H	0 / 4	-18.5	-18.5	0.07 (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, 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 (0.57")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.20")
ALLOWABLE DEFL.(TL)= L/360 (0.57")
CALCULATED VERT. DEFL.(TL) = L/ 508 (0.40")

CSI: TC=0.36/1.00 (D-E:1) , BC=0.40/1.00 (I-J:1) , WB=0.42/1.00 (F-I:1) , SSI=0.13/1.00 (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

AUTOSOLVE HEELS OFF

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

NAIL VALUES

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

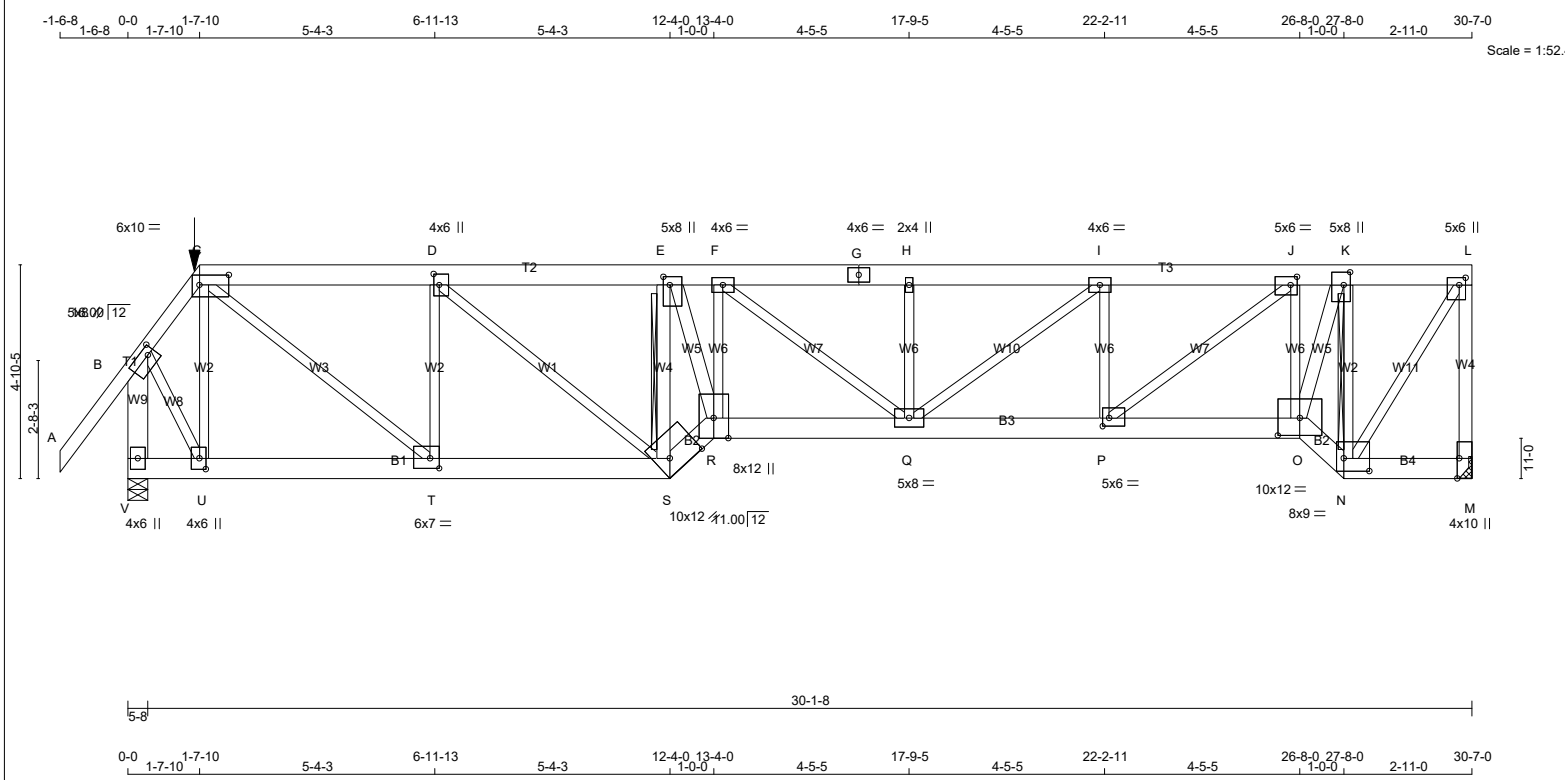
PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (K) (INPUT = 0.90)
JSI METAL= 0.39 (D) (INPUT = 1.00)

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





TOTAL WEIGHT = 184 lb [M]

LUMBER

N. L. G. A. RULES

CHORDS	SIZE	LUMBER	DESCR.
A - C	2x4	DRY No.2	SPF
C - G	2x6	DRY No.2	SPF
G - L	2x6	DRY No.2	SPF
M - L	2x4	DRY No.2	SPF
V - B	2x6	DRY No.2	SPF
V - S	2x6	DRY No.2	SPF
S - R	2x6	DRY No.2	SPF
R - O	2x6	DRY No.2	SPF
O - N	2x6	DRY No.2	SPF
N - M	2x6	DRY No.2	SPF
ALL WEBS EXCEPT	2x3	DRY No.2	SPF
S - E	2x4	DRY No.2	SPF
E - R	2x4	DRY No.2	SPF
O - K	2x4	DRY No.2	SPF

DRY: SEASONED LUMBER.

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-I	MT20	6.0	10.0	2.75 8.00
D	TMWW-t	MT20	4.0	6.0	3.00 1.50
E	TMWW-t	MT20	5.0	8.0	2.25 1.75
F	TMWW-t	MT20	4.0	6.0	
G	TS-t	MT20	4.0	6.0	
H	TMW+w	MT20	2.0	4.0	
I	TMWW-t	MT20	4.0	6.0	
J	TMWW-t	MT20	5.0	6.0	2.25 1.75
K	TMWW-t	MT20	5.0	8.0	3.50 1.75
L	TMVW+p	MT20	5.0	6.0	2.00 1.75
M	BMV1+t	MT20	4.0	10.0	Edge 0.50
N	BBWW-I	MT20	8.0	9.0	3.50 7.00
O	BBWW-I	MT20	10.0	12.0	4.75 6.00
P	BMWW-t	MT20	5.0	6.0	2.25 1.75
Q	BMWWW-t	MT20	5.0	8.0	
R	BBWW+p	MT20	8.0	12.0	Edge
S	BBWW-h	MT20	10.0	12.0	4.00 8.25
T	BMWW-t	MT20	6.0	7.0	2.75 2.50
U	BMWW-t	MT20	4.0	6.0	3.00 1.75
V	BMV1+p	MT20	4.0	6.0	

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

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

BEARINGS

	FACTORED GROSS REACTION	MAXIMUM FACTORED GROSS REACTION	INPUT BRG	REQRD BRG
JT	VERT	HORZ	DOWN	UP
M	2913	0	2913	0
V	3010	0	3010	0

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

UNFACTORED REACTIONS

	1ST LCASE	MAX./MIN.	COMPONENT REACTIONS
JT	COMBINED	SNOW	LIVE PERM.LIVE WIND DEAD SOIL
M	2076	1268 / 0	0 / 0 0 / 0 808 / 0 0 / 0
V	2144	1321 / 0	0 / 0 0 / 0 823 / 0 0 / 0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.14 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 E-S, K-N

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)

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

FR-TO	CHORDS				WEBS			
	MEMB.	MAX. FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. CSI (LC)	MEMB.	MAX. FORCE (LBS)	MAX. CSI (LC)	UNBRAC LENGTH
A-B	0 / 52	-78.0	-78.0	0.17 (1)	10.00	U-C	-1125 / 0	0.36 (1)
B-C	-1852 / 0	-78.0	-78.0	0.21 (1)	4.69	C-T	0 / 3372	0.83 (1)
C-D	-3656 / 0	-153.5	-153.5	0.43 (1)	4.03	T-D	-2000 / 0	0.63 (1)
D-E	-4957 / 0	-153.5	-153.5	0.52 (1)	3.44	D-S	0 / 1678	0.42 (1)
E-F	-6302 / 0	-153.5	-153.5	0.41 (1)	3.19	S-E	-5303 / 0	0.79 (1)
F-G	-6267 / 0	-78.0	-78.0	0.49 (1)	3.14	E-R	0 / 4822	0.85 (1)
G-H	-6267 / 0	-78.0	-78.0	0.49 (1)	3.14	R-F	0 / 108	0.03 (1)
H-I	-6267 / 0	-78.0	-78.0	0.37 (1)	3.27	F-Q	-40 / 0	0.02 (1)
I-J	-5130 / 0	-78.0	-78.0	0.33 (1)	3.61	Q-H	-412 / 0	0.09 (1)
J-K	-2867 / 0	-153.5	-153.5	0.12 (1)	4.85	Q-I	0 / 1445	0.36 (1)
K-L	-1759 / 0	-153.5	-153.5	0.15 (1)	5.81	P-I	-1261 / 0	0.29 (1)
M-L	-2860 / 0	0.0	0.0	0.96 (1)	5.04	P-J	0 / 2826	0.70 (1)
V-B	-3070 / 0	0.0	0.0	0.31 (1)	5.97	O-J	-1974 / 0	0.45 (1)
V-U	0 / 0	-36.4	-36.4	0.12 (1)	10.00	O-K	0 / 3949	0.70 (1)
U-T	0 / 1051	-36.4	-36.4	0.25 (1)	10.00	N-K	-4082 / 0	0.82 (1)
T-S	0 / 3656	-36.4	-36.4	0.57 (1)	10.00	N-L	0 / 3163	0.78 (1)
S-R	0 / 6484	-36.4	-36.4	0.85 (1)	10.00	B-U	0 / 1743	0.43 (1)
R-Q	0 / 6299	-112.0	-112.0	0.99 (1)	10.00			
Q-P	0 / 5130	-112.0	-112.0	0.78 (1)	10.00			
P-O	0 / 2926	-112.0	-112.0	0.54 (1)	10.00			
O-N	0 / 2254	-36.4	-36.4	0.30 (1)	10.00			
N-M	0 / 0	-36.4	-36.4	0.05 (4)	10.00			

FACTORED CONCENTRATED LOADS (LBS)

JT	LOC.	LC1	MAX-	MAX+	FACE	DIR.	TYPE	HEEL	CONN.
C	1-7-10	-93	-93	---	FRONT	VERT	TOTAL	---	C1

CONNECTION REQUIREMENTS

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

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	PSF	
DL	21.0	PSF	
DL	6.0	PSF	
BOT CH. <td>LL</td> <td>0.0</td> <td>PSF</td>	LL	0.0	PSF
DL	7.4	PSF	
TOTAL LOAD	=	34.4	PSF

SPACING = 24.0 IN./C/C

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

GIRDER TYPE: CPrimeHip
 LEFT SETBACK = 1-7-10
 RIGHT SETBACK = 0-0
 END SETBACK = 5-10-8
 END WALL WIDTH = 0-0
 CORNER FRAMING TYPE: CONVENTIONAL
 END JACK TYPE: CONVENTIONAL
 APPLIED TO FRONT SIDE
 - ADDTL LOADS BASED ON 55 % OF GSL.
 LOADS APPLIED TO FIRST 13-4-0 OF SPAN MEASURED FROM THE LEFT.

GIRDER TYPE: CStdGirder
 START DISTANCE = 13-4-0
 START SPAN CARRIED = 5-10-8
 END DISTANCE = 26-8-0
 END SPAN CARRIED = 5-10-8
 END WALL WIDTH = 0-0
 APPLIED TO FRONT SIDE OF BOTTOM CHORD.
 - ADDTL LOADS BASED ON 55 % OF GSL.

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

THIS DESIGN COMPLIES WITH:
 - PART 9 OF 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.(LL)= L/360 (1.02")
 CALCULATED VERT. DEFL.(LL) = L/999 (0.31")
 ALLOWABLE DEFL.(TL)= L/360 (1.02")
 CALCULATED VERT. DEFL.(TL) = L/597 (0.62")

CSI: TC=0.96/1.00 (L-M:1), BC=0.99/1.00 (Q-R:1), WB=0.85/1.00 (E-R:1), SSI=0.33/1.00 (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

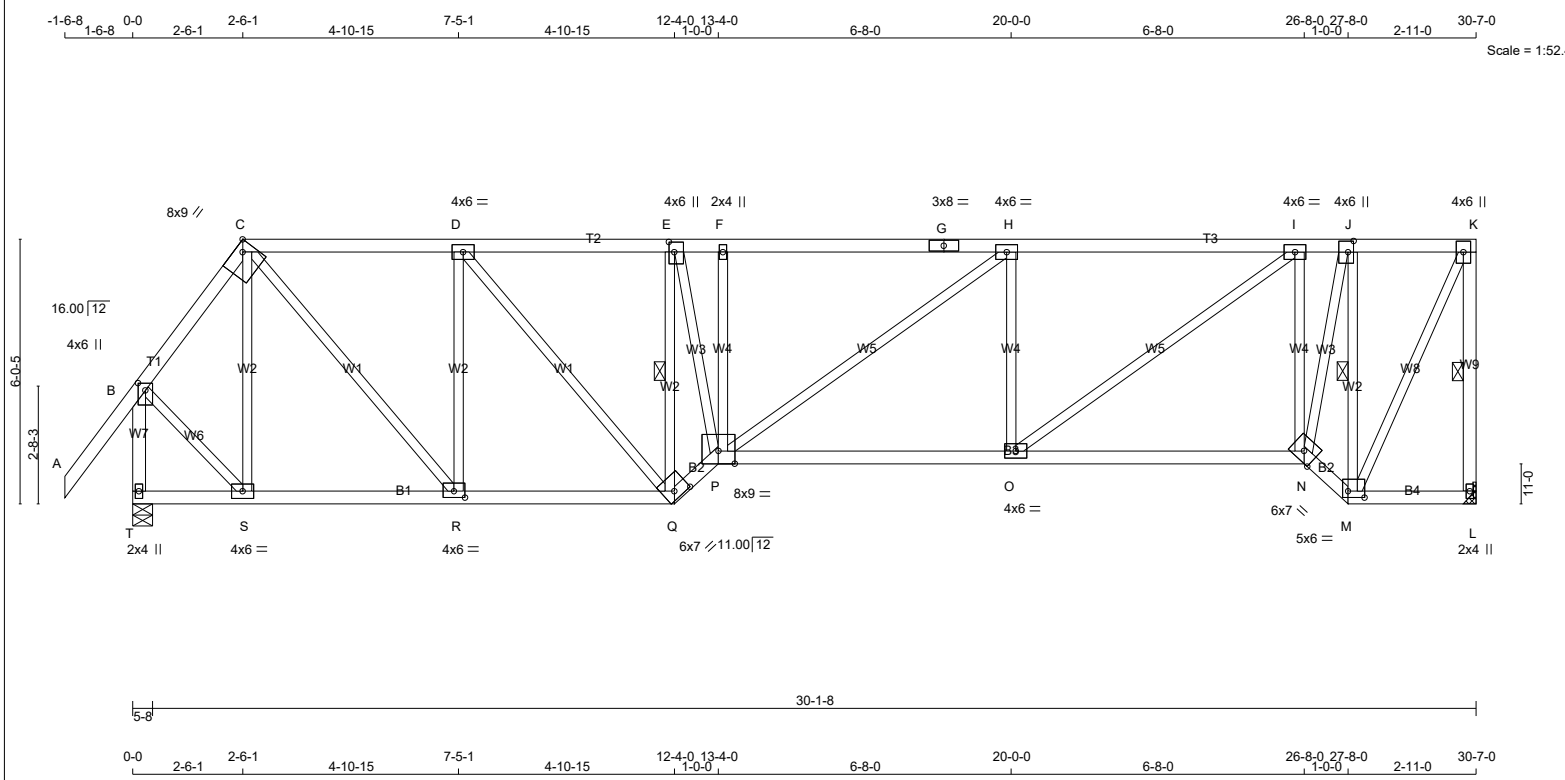
AUTOSOLVE RIGHT HEEL ONLY

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= 0.89 (E) (INPUT = 0.90)
 JSI METAL= 0.75 (R) (INPUT = 1.00)



TOTAL WEIGHT = 153 lb

LUMBER

N. L. G. A. RULES

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

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMVW+p	MT20	4.0	6.0	2.00	2.00
C	TTWW-h	MT20	8.0	9.0	Edge	2.75
D, H, I						
D	TMWW-t	MT20	4.0	6.0		
E	TMWW+t	MT20	4.0	6.0	2.75	1.50
F	TMW+w	MT20	2.0	4.0		
G	TS-t	MT20	3.0	8.0		
J	TMWW+t	MT20	4.0	6.0	3.00	1.50
K	TMVW+p	MT20	4.0	6.0		
L	BMV1+p	MT20	2.0	4.0		
M	BBWW-t	MT20	5.0	6.0	1.75	4.50
N	BBWW-h	MT20	6.0	7.0	Edge	
O	BMWW-t	MT20	4.0	6.0		
P	BBWWW-p	MT20	8.0	9.0	Edge	
Q	BBWW-h	MT20	6.0	7.0	2.00	4.00
R	BMWW-t	MT20	4.0	6.0	1.75	3.00
S	BMWW-t	MT20	4.0	6.0		
T	BMV1+p	MT20	2.0	4.0		

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

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

BEARINGS

	FACTORED GROSS REACTION	MAXIMUM FACTORED GROSS REACTION	INPUT BRG	REQRD BRG
JT	VERT	HORZ	DOWN	UP
L	1475	0	1475	0
T	1604	0	1604	0

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

UNFACTORED REACTIONS

JT	COMBINED	1ST LCASE	SNOW	MAX./MIN. LIVE	PERM. LIVE	WIND	DEAD	SOIL
L	1052	642	0	0/0	0/0	0/0	410/0	0/0
T	1141	712	0	0/0	0/0	0/0	430/0	0/0

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

BRACING
 TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.83 FT.
 MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

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

1 LATERAL BRACE(S) AT 1/2 LENGTH OF K-L, E-Q, J-M.

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

LOADING
 TOTAL LOAD CASES: (4)

CHORDS				WEBS				
MEMB.	FORCE (LBS)	VERT. LOAD (PLF)	MAX. LC1 (LC)	MAX. UNBRAC LENGTH	MEMB.	FORCE (LBS)	MAX. LC1 (LC)	
A-B	0/52	-78.0	-78.0	0.15 (1)	10.00	S-C	-458/0	0.26 (1)
B-C	-1030/0	-78.0	-78.0	0.10 (1)	6.07	C-R	0/1353	0.30 (1)
C-D	-1488/0	-78.0	-78.0	0.33 (1)	5.00	R-D	-932/0	0.53 (1)
D-E	-1920/0	-78.0	-78.0	0.36 (1)	4.49	D-Q	0/663	0.15 (1)
E-F	-2347/0	-78.0	-78.0	0.29 (1)	4.18	Q-E	-2172/0	0.53 (1)
F-G	-2355/0	-78.0	-78.0	0.66 (1)	3.83	E-P	0/2077	0.47 (1)
G-H	-2355/0	-78.0	-78.0	0.66 (1)	3.83	P-F	-342/0	0.13 (1)
H-I	-2203/0	-78.0	-78.0	0.64 (1)	3.96	P-H	0/186	0.04 (1)
I-J	-1085/0	-78.0	-78.0	0.26 (1)	5.72	O-H	-665/0	0.26 (1)
J-K	-691/0	-78.0	-78.0	0.09 (1)	6.25	O-I	0/1355	0.30 (1)
L-K	-1448/0	0.0	0.0	0.25 (1)	5.43	N-I	-1198/0	0.46 (1)
T-B	-1592/0	0.0	0.0	0.23 (1)	6.55	N-J	0/1910	0.43 (1)
						M-J	-1919/0	0.47 (1)
T-S	0/0	-18.5	-18.5	0.06 (4)	10.00	M-K	0/1519	0.34 (1)
S-R	0/604	-18.5	-18.5	0.16 (4)	10.00	B-S	0/815	0.18 (1)
R-Q	0/1488	-18.5	-18.5	0.29 (1)	10.00			
Q-P	0/2551	-18.5	-18.5	0.41 (1)	10.00			
P-O	0/2203	-18.5	-18.5	0.47 (1)	10.00			
O-N	0/1111	-18.5	-18.5	0.33 (4)	10.00			
N-M	0/890	-18.5	-18.5	0.15 (1)	10.00			
M-L	0/0	-18.5	-18.5	0.05 (4)	10.00			

DESIGN CRITERIA

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

SPACING = 24.0 IN. C/C

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

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

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

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

ALLOWABLE DEFL.(LL)= L/360 (1.02")
 CALCULATED VERT. DEFL.(LL) = L/999 (0.16")
 ALLOWABLE DEFL.(TL)= L/360 (1.02")
 CALCULATED VERT. DEFL.(TL) = L/999 (0.34")

CSI: TC=0.66/1.00 (F-H:1), BC=0.47/1.00 (O-P:1), WB=0.53/1.00 (E-Q:1), SSI=0.22/1.00 (F-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 (PS)	SECTION (PLI)	MAX MIN	MAX MIN	MAX MIN
MT20	650	371	1747	788	1987	1873

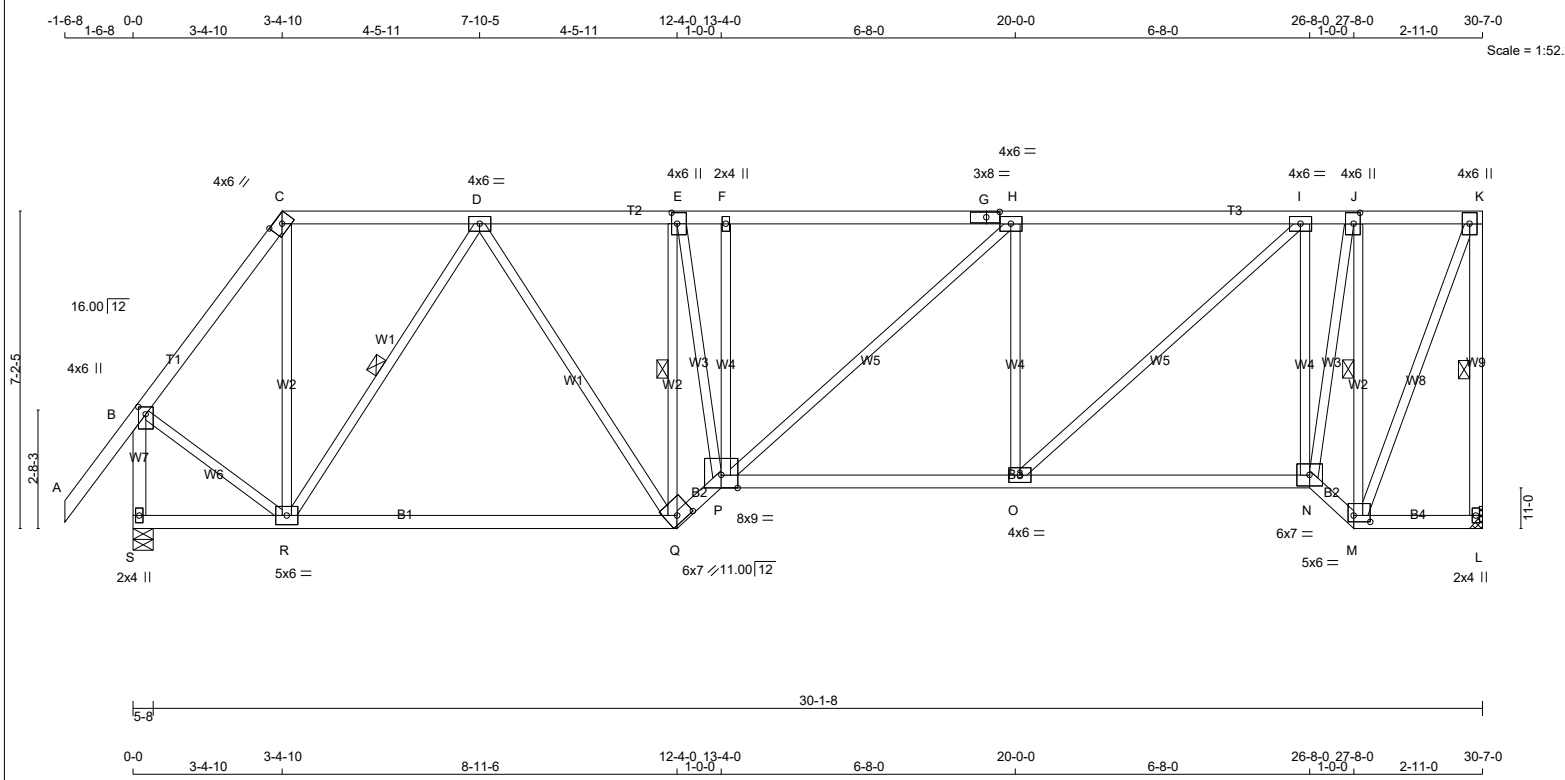
PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.88 (B) (INPUT = 0.90)
 JSI METAL= 0.39 (E) (INPUT = 1.00)

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





TOTAL WEIGHT = 162 lb

LUMBER

N. L. G. A. RULES

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

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMVW+p	MT20	4.0	6.0	2.00	2.00
C	TTW-h	MT20	4.0	6.0	2.00	3.25
D, H, I						
D	TMWW-t	MT20	4.0	6.0		
E	TMWW+t	MT20	4.0	6.0	3.00	1.50
F	TMW+w	MT20	2.0	4.0		
G	TS-t	MT20	3.0	8.0	1.50	3.75
J	TMWW+t	MT20	4.0	6.0	3.00	1.75
K	TMVW+p	MT20	4.0	6.0		
L	BMV1+p	MT20	2.0	4.0		
M	BBWW-t	MT20	5.0	6.0	1.75	4.50
N	BBWW-t	MT20	6.0	7.0		
O	BMWW-t	MT20	4.0	6.0		
P	BBWWW-p	MT20	8.0	9.0	Edge	
Q	BBWW-h	MT20	6.0	7.0	2.00	4.00
R	BMWWW-t	MT20	5.0	6.0		
S	BMV1+p	MT20	2.0	4.0		

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

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

BEARINGS

	FACTORED GROSS REACTION	MAXIMUM FACTORED GROSS REACTION	INPUT BRG	REQRD BRG
JT	VERT	HORZ	DOWN	HORZ
L	1475	0	1475	0
S	1604	0	1604	0

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

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX. SNOW	MIN. LIVE	PERM. LIVE	WIND	DEAD	SOIL
L	1052	642 / 0	0 / 0	0 / 0	0 / 0	410 / 0	0 / 0
S	1141	712 / 0	0 / 0	0 / 0	0 / 0	430 / 0	0 / 0

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

BRACING
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.22 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.
1 LATERAL BRACE(S) AT 1/2 LENGTH OF K-L, D-R, E-Q, J-M.

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

LOADING
TOTAL LOAD CASES: (4)

MEMB.	CHORDS				WEBS			
	MAX. FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX LC1 (LC)	MAX LC2 (LC)	MAX. UNBRAC LENGTH	MEMB. FORCE (LBS)	MAX FACTORED (LBS)	MAX CSI (LC)
A-B	0 / 52	-78.0	-78.0	0.15 (1)	10.00	R-C	0 / 631	0.14 (1)
B-C	-1129 / 0	-78.0	-78.0	0.18 (1)	5.77	R-D	-1078 / 0	0.49 (1)
C-D	-682 / 0	-78.0	-78.0	0.25 (1)	6.25	D-Q	0 / 611	0.14 (1)
D-E	-1592 / 0	-78.0	-78.0	0.29 (1)	4.93	Q-E	-1914 / 0	0.62 (1)
E-F	-1887 / 0	-78.0	-78.0	0.26 (1)	4.61	E-P	0 / 1784	0.40 (1)
F-G	-1892 / 0	-78.0	-78.0	0.61 (1)	4.22	P-F	-323 / 0	0.20 (1)
G-H	-1892 / 0	-78.0	-78.0	0.61 (1)	4.22	P-H	0 / 156	0.04 (1)
H-I	-1776 / 0	-78.0	-78.0	0.59 (1)	4.35	O-H	-666 / 0	0.42 (1)
I-J	-871 / 0	-78.0	-78.0	0.24 (1)	6.24	O-I	0 / 1197	0.27 (1)
J-K	-576 / 0	-78.0	-78.0	0.08 (1)	6.25	N-I	-1178 / 0	0.74 (1)
L-K	-1448 / 0	0.0	0.0	0.34 (1)	5.43	N-J	0 / 1771	0.40 (1)
S-B	-1610 / 0	0.0	0.0	0.23 (1)	6.52	M-J	-1824 / 0	0.60 (1)
						M-K	0 / 1475	0.33 (1)
						B-R	0 / 805	0.18 (1)
S-R	0 / 0	-18.5	-18.5	0.32 (4)	10.00			
R-Q	0 / 1259	-18.5	-18.5	0.43 (4)	10.00			
Q-P	0 / 2192	-18.5	-18.5	0.36 (1)	10.00			
P-O	0 / 1776	-18.5	-18.5	0.41 (1)	10.00			
O-N	0 / 892	-18.5	-18.5	0.31 (4)	10.00			
N-M	0 / 744	-18.5	-18.5	0.12 (1)	10.00			
M-L	0 / 0	-18.5	-18.5	0.05 (4)	10.00			

DESIGN CRITERIA

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

SPACING = 24.0 IN. C/C

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

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

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

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

ALLOWABLE DEFL.(LL)= L/360 (1.02")
CALCULATED VERT. DEFL.(LL) = L/999 (0.13")
ALLOWABLE DEFL.(TL)= L/360 (1.02")
CALCULATED VERT. DEFL.(TL) = L/999 (0.31")

CSI: TC=0.61/1.00 (F-H-1) , BC=0.43/1.00 (Q-R-4) , WB=0.74/1.00 (I-N-1) , SSI=0.22/1.00 (F-H-1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

NAIL VALUES

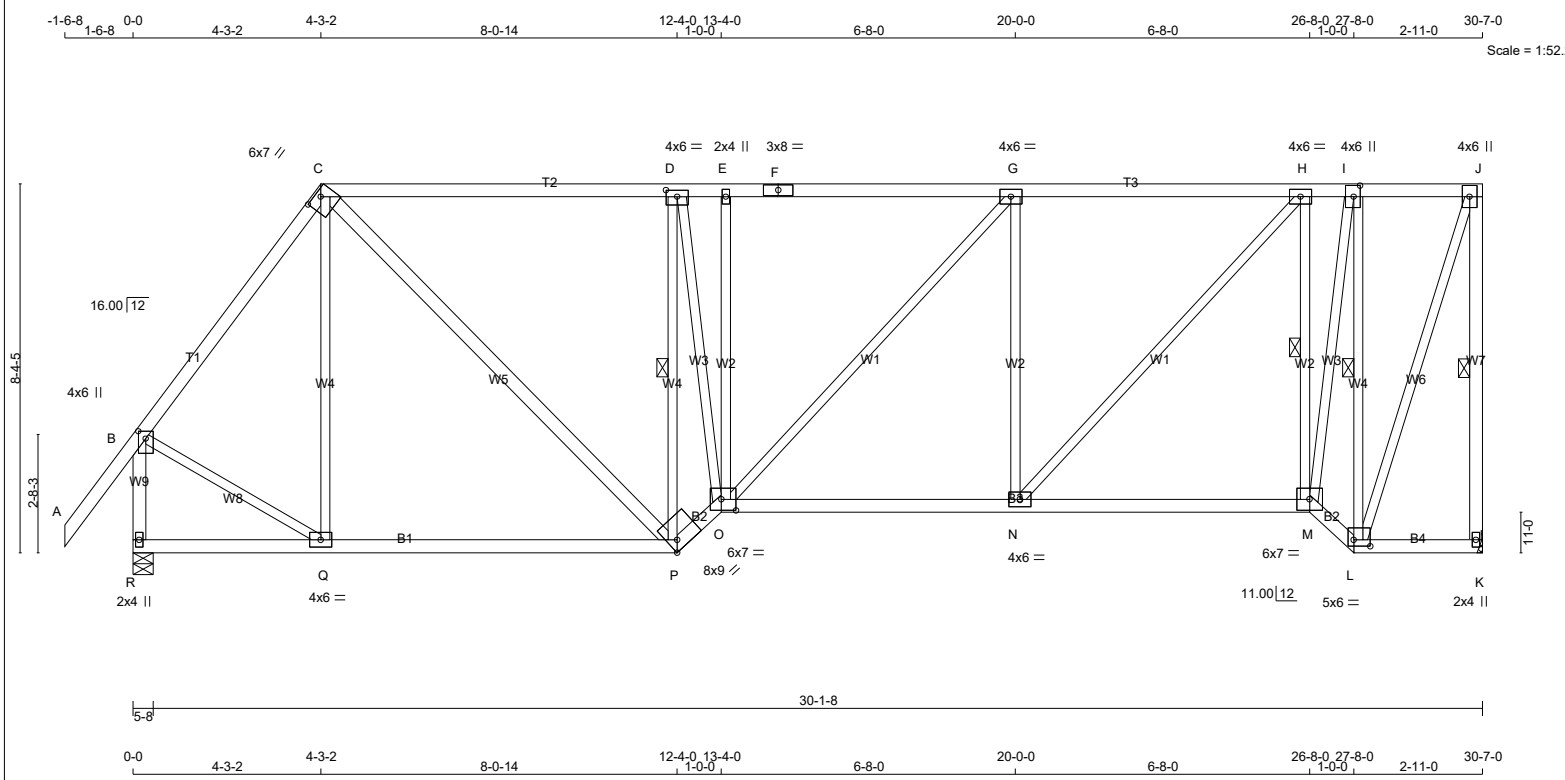
PLATE	GRIP(DRY)	SHEAR (PSI)	SECTION (PLI)	MAX MIN	MAX MIN	MAX MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.
JSI GRIP= 0.90 (J) (INPUT = 0.90)
JSI METAL= 0.42 (B) (INPUT = 1.00)

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





TOTAL WEIGHT = 174 lb

LUMBER
N. L. G. A. RULES

CHORDS	SIZE	LUMBER	DESCR.
K - J	2x4	DRY No.2	SPF
C - F	2x4	DRY No.2	SPF
F - J	2x4	DRY No.2	SPF
A - C	2x4	DRY No.2	SPF
R - B	2x4	DRY No.2	SPF
L - K	2x4	DRY No.2	SPF
M - L	2x4	DRY No.2	SPF
O - M	2x4	DRY No.2	SPF
P - O	2x4	DRY No.2	SPF
R - P	2x4	DRY No.2	SPF
ALL WEBS EXCEPT C - P	2x3 / 2x4	DRY No.2	SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT TYPE	PLATES	W	LEN	Y	X	
B	TMVW+p	MT20	4.0	6.0	2.00	2.00
C	TTWW-h	MT20	6.0	7.0	1.50	3.75
D	TMWW-t	MT20	4.0	6.0	1.75	3.00
E	TMW+w	MT20	2.0	4.0		
F	TS-t	MT20	3.0	8.0		
G	TMWW-t	MT20	4.0	6.0		
H	TMWW-t	MT20	4.0	6.0		
I	TMWW+t	MT20	4.0	6.0	3.00	1.75
J	TMVW+p	MT20	4.0	6.0		
K	BMV1+p	MT20	2.0	4.0		
L	BBWW-l	MT20	5.0	6.0	1.75	4.50
M	BBWW-l	MT20	6.0	7.0		
N	BMWW-t	MT20	4.0	6.0		
O	BBWWW-p	MT20	6.0	7.0	3.00	4.00
P	BBWW-h	MT20	8.0	9.0	2.50	Edge
Q	BMWW-t	MT20	4.0	6.0		
R	BMV1+p	MT20	2.0	4.0		

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

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

BEARINGS

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG	REQRD BRG
	VERT	HORZ	DOWN	HORZ		
K	1475	0	1475	0	0	MECHANICAL
R	1604	0	1604	0	0	1-12

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

UNFACTORED REACTIONS

JT	COMBINED	MAX./MIN. COMPONENT REACTIONS					
		1ST LCASE	SNOW	LIVE	PERM.LIVE	WIND	DEAD
K	1052	642 / 0	0 / 0	0 / 0	0 / 0	410 / 0	0 / 0
R	1141	712 / 0	0 / 0	0 / 0	0 / 0	430 / 0	0 / 0

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

BRACING
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.83 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 J-K, I-L, H-M, D-P.

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

LOADING
TOTAL LOAD CASES: (4)

MEMB.	CHORDS				WEBS			
	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1	MAX CSI (LC)	MEMB. UNBRACED LENGTH	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)	
FR-TO		FROM	TO		FR-TO			
K-J	-1448 / 0	0.0	0.0	0.46 (1)	5.43	L-J	0 / 1452	0.33 (1)
C-D	-1420 / 0	-78.0	-78.0	0.93 (1)	4.03	L-I	-1801 / 0	0.80 (1)
D-E	-1581 / 0	-78.0	-78.0	0.75 (1)	3.83	M-I	0 / 1663	0.37 (1)
E-F	-1580 / 0	-78.0	-78.0	0.58 (1)	4.55	M-H	-1118 / 0	0.39 (1)
F-G	-1580 / 0	-78.0	-78.0	0.58 (1)	4.55	N-H	0 / 1103	0.25 (1)
G-H	-1488 / 0	-78.0	-78.0	0.57 (1)	4.66	N-G	-670 / 0	0.67 (1)
H-I	-726 / 0	-78.0	-78.0	0.20 (1)	6.25	O-G	0 / 135	0.03 (1)
I-J	-495 / 0	-78.0	-78.0	0.14 (1)	6.25	O-E	0 / 49	0.01 (1)
A-B	0 / 52	-78.0	-78.0	0.15 (1)	10.00	D-O	0 / 1209	0.27 (1)
B-C	-1159 / 0	-78.0	-78.0	0.30 (1)	5.58	P-D	-1932 / 0	0.86 (1)
R-B	-1589 / 0	0.0	0.0	0.23 (1)	6.55	C-P	0 / 1030	0.17 (1)
L-K	0 / 0	-18.5	-18.5	0.05 (4)	10.00	Q-C	-213 / 24	0.30 (1)
M-L	0 / 698	-18.5	-18.5	0.12 (1)	10.00	B-Q	0 / 781	0.18 (1)
O-N	0 / 1488	-18.5	-18.5	0.38 (4)	10.00			
N-M	0 / 742	-18.5	-18.5	0.30 (4)	10.00			
P-O	0 / 1893	-18.5	-18.5	0.31 (1)	10.00			
R-Q	0 / 0	-18.5	-18.5	0.26 (4)	10.00			
Q-P	0 / 689	-18.5	-18.5	0.32 (4)	10.00			

DESIGN CRITERIA

SPECIFIED LOADS:

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

TOTAL LOAD = 34.4 PSF

SPACING = 24.0 IN. C/C

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

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

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

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

ALLOWABLE DEFL.(LL)= L/360 (1.02")
CALCULATED VERT. DEFL.(LL) = L/999 (0.12")
ALLOWABLE DEFL.(TL)= L/360 (1.02")
CALCULATED VERT. DEFL.(TL) = L/999 (0.26")

CSI: TC=0.93/1.00 (C-D:1), BC=0.38/1.00 (N-O:4), WB=0.86/1.00 (D-P:1), SSI=0.29/1.00 (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

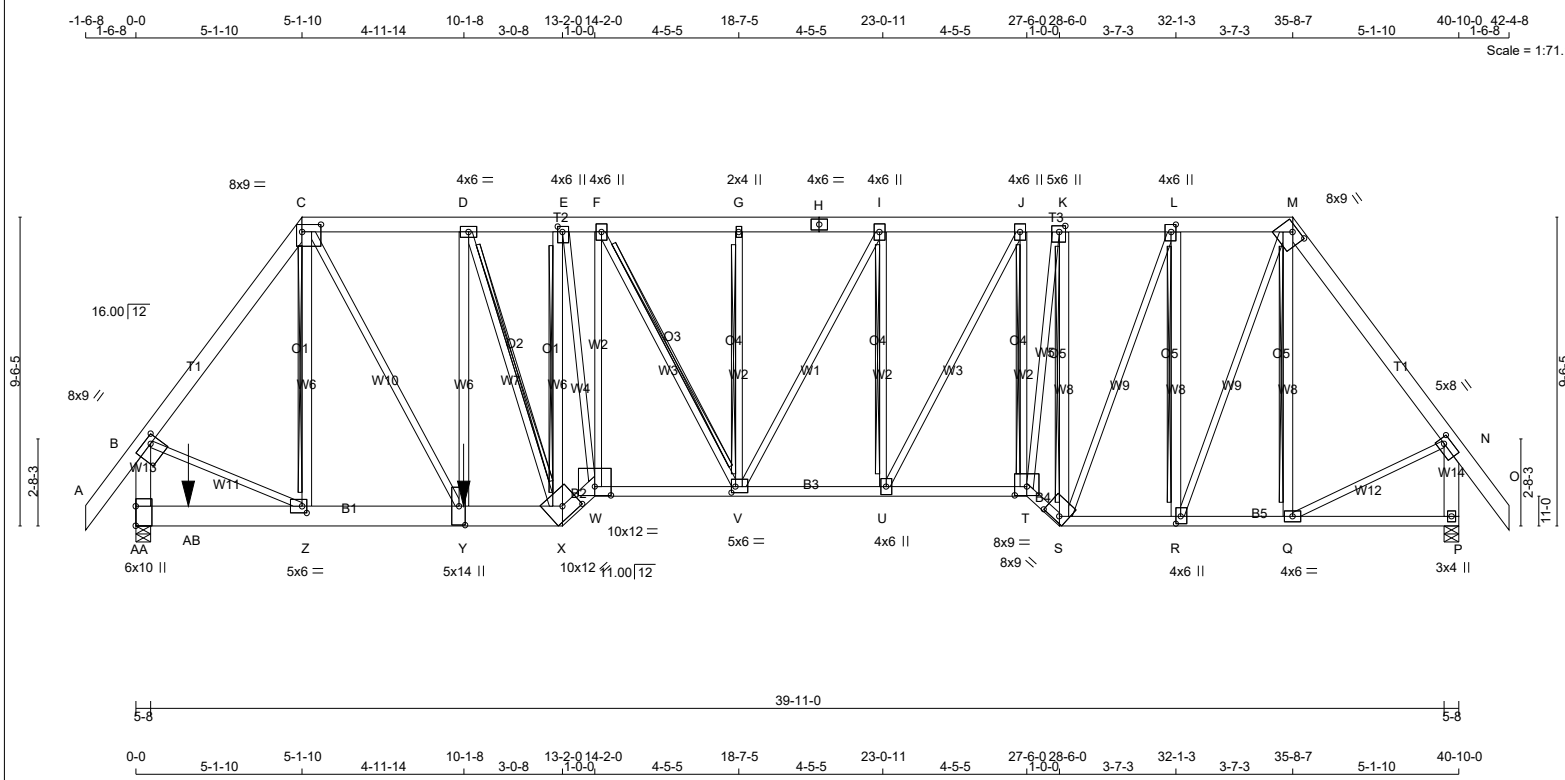
PLATE	GRIP(DRY)	SHEAR (PSI)	SECTION (PLI)	MAX MIN	MAX MIN	MAX MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.
JSI GRIP= 0.90 (L) (INPUT = 0.90)
JSI METAL= 0.53 (L) (INPUT = 1.00)

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





TOTAL WEIGHT = 2 X 327 = 655 lb

LUMBER

N. L. G. A. RULES

CHORDS	SIZE	LUMBER	DESCR.
A - C	2x6	DRY No.2	SPF
C - H	2x6	DRY No.2	SPF
H - M	2x6	DRY No.2	SPF
M - O	2x6	DRY No.2	SPF
AA - B	2x6	DRY No.2	SPF
P - N	2x6	DRY No.2	SPF
AA - X	2x8	DRY No.2	SPF
X - W	2x6	DRY No.2	SPF
W - T	2x4	DRY No.2	SPF
T - S	2x4	DRY No.2	SPF
S - P	2x4	DRY No.2	SPF
ALL WEBS EXCEPT Z - C	2x3	DRY No.2	SPF
Z - C	2x4	DRY No.2	SPF
Y - D	2x4	DRY No.2	SPF
X - E	2x4	DRY No.2	SPF
S - K	2x4	DRY No.2	SPF
R - L	2x4	DRY No.2	SPF
Q - M	2x4	DRY No.2	SPF

DRY: SEASONED LUMBER.

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

CHORDS #ROWS	SURFACE SPACING (IN)	LOAD(PLF)
TOP CHORDS : (0.122"x3") SPIRAL NAILS		
A - C	2 12	SIDE(44.3)
C - H	2 12	SIDE(74.3)
H - M	2 12	TOP
M - O	2 12	TOP
AA - B	2 12	TOP
P - N	2 12	TOP
BOTTOM CHORDS : (0.122"x3") SPIRAL NAILS		
AA - X	2 12	SIDE(165.5)
X - W	2 12	TOP
W - T	1 12	TOP
T - S	1 12	TOP
S - P	1 12	TOP
WEBS : (0.122"x3") SPIRAL NAILS		
2x3	1 6	SIDE(181.4)
D - Y	1 3	SIDE(181.4)
2x4	1 6	SIDE(181.4)

NAILS TO BE DRIVEN FROM ONE SIDE ONLY.

GIRDER NAILING ASSUMES NAILED HANGERS ARE FASTENED WITH MIN. 3-0 INCH NAILS.

TOP - COMPONENTS ARE LOADED FROM THE TOP AND MUST BE PLACED ON TOP EDGE OF ALL PLYS FOR THE LOAD TO BE TRANSFERRED TO EACH PLY.

SIDE - PLF SHOWN IS THE EQUIVALENT UDL APPLIED TO ONE SIDE THAT THE CORRESPONDING NAILING PATTERN SHALL BE CAPABLE OF TRANSFERRING. REMAINING PLF MUST BE APPLIED ON THE OPPOSITE SIDE OR ON THE TOP.

PLATES (table is in inches)

JT TYPE	PLATES	W	LEN	Y	X
B	TMVW+t	MT20	8.0	9.0	2.25 3.00
C	TTWW-l	MT20	8.0	9.0	2.75 7.00
D	TMVW+t	MT20	4.0	6.0	
E	TMVW+t	MT20	4.0	6.0	2.00 1.75
F, I, J					
F	TMVW+t	MT20	4.0	6.0	

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	UPLIFT
AA	10593	0	10593	0
P	4264	0	4264	0

ALLOW FOR 0.3" OF HORIZONTAL MOVEMENT DUE TO TOTAL LOAD

UNFACTORED REACTIONS

JT	1ST LCASE	MAX.	MIN.	COMPONENT REACTIONS
JT	COMBINED	SNOW	LIVE	PERM LIVE
AA	7550	4624 / 0	0 / 0	0 / 0
P	3038	1870 / 0	0 / 0	0 / 0

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

BRACING
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.72 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 C-Z, D-X, F-V, G-V, I-U, J-T, M-Q
2x6 DRY SPF No.2 T-BRACE AT E-X, K-S, L-R

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)

FR-TO	CHORDS		WEBS	
	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. FACTORED FORCE (LBS)	MAX. FACTORED UNBRACED LENGTH (FT)
A-B	0 / 54	-78.0 -78.0 0.05 (1)	10.00	Z-C -700 / 0 0.24 (1)
B-C	-8855 / 0	-226.6 -226.6 0.49 (1)	3.72	C-Y 0 / 7546 0.93 (1)
C-D	-8950 / 0	-226.6 -226.6 0.37 (1)	3.79	Y-D 0 / 332 0.04 (4)
D-E	-8616 / 0	-78.0 -78.0 0.23 (1)	4.00	D-X -1042 / 0 0.47 (1)
E-F	-9239 / 0	-78.0 -78.0 0.36 (1)	3.73	X-E -5866 / 0 0.73 (1)
F-G	-8277 / 0	-78.0 -78.0 0.34 (1)	3.94	E-W 0 / 5094 0.63 (1)
G-H	-8277 / 0	-78.0 -78.0 0.20 (1)	4.10	W-F 0 / 2425 0.30 (1)
H-I	-8277 / 0	-78.0 -78.0 0.20 (1)	4.10	F-V -1997 / 0 0.91 (1)
I-J	-7094 / 0	-78.0 -78.0 0.42 (1)	4.10	V-G -511 / 0 0.17 (1)
J-K	-5573 / 0	-78.0 -78.0 0.37 (1)	4.58	V-I 0 / 2491 0.31 (1)
K-L	-4842 / 0	-78.0 -78.0 0.25 (1)	5.02	U-I -2789 / 0 0.95 (1)
L-M	-3552 / 0	-78.0 -78.0 0.06 (1)	5.91	U-J 0 / 3217 0.40 (1)
M-N	-3722 / 0	-78.0 -78.0 0.13 (1)	5.73	T-J -1688 / 0 0.58 (1)
N-O	0 / 54	-78.0 -78.0 0.05 (1)	10.00	T-K 0 / 6153 0.76 (1)
AA-B	-9826 / 0	0.0 0.0 0.43 (1)	4.81	S-K -7537 / 0 1.00 (1)
P-N	-4229 / 0	0.0 0.0 0.20 (1)	6.95	S-L 0 / 3516 0.44 (1)
				R-L -3366 / 0 0.45 (1)
AA-AB	0 / 0	-53.8 -53.8 0.29 (1)	10.00	R-M 0 / 3654 0.45 (1)
AB-Z	0 / 0	-53.8 -53.8 0.29 (1)	10.00	Q-M -796 / 0 0.30 (1)
Z-Y	0 / 5264	-53.8 -53.8 0.56 (1)	10.00	B-Z 0 / 5641 0.70 (1)
Y-X	0 / 8950	-18.5 -18.5 0.75 (1)	10.00	Q-N 0 / 2395 0.30 (1)
X-W	0 / 11313	-18.5 -18.5 0.74 (1)	10.00	
W-V	0 / 9210	-18.5 -18.5 0.84 (1)	10.00	
V-U	0 / 7094	-18.5 -18.5 0.65 (1)	10.00	
U-T	0 / 5594	-18.5 -18.5 0.52 (1)	10.00	
T-S	0 / 6406	-18.5 -18.5 0.57 (1)	10.00	
S-R	0 / 3552	-18.5 -18.5 0.33 (1)	10.00	
R-Q	0 / 2205	-18.5 -18.5 0.25 (1)	10.00	
Q-P	0 / 0	-18.5 -18.5 0.07 (4)	10.00	

FACTORED CONCENTRATED LOADS (LBS)

JT	LOC.	LC1	MAX-	MAX+	FACE	DIR.	TYPE	HEEL	CONN.
Y	10-1-7	-7589	-7589	---	FRONT	VERT	TOTAL	---	C1
AB	1-7-7	-1198	-1198	---	FRONT	VERT	TOTAL	---	C1

CONNECTION REQUIREMENTS

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

DESIGN CRITERIA

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

SPECIFIED LOADS:

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

SPACING = 24.0 IN. C/C

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

GIRDER TYPE: CPrimeHip
SIDE SETBACK = 0-0
END SETBACK = 9-7-8
END WALL WIDTH = 0-0
CORNER FRAMING TYPE: CONVENTIONAL
END JACK TYPE: CONVENTIONAL
APPLIED TO FRONT SIDE
- ADDTL LOADS BASED ON 55 % OF GSL
LOADS APPLIED TO FIRST 10-1-8 OF SPAN MEASURED FROM THE LEFT.

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

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

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

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

ALLOWABLE DEFL.(LL)= L/360 (1.36")
CALCULATED VERT. DEFL.(LL) = L/999 (0.28")
ALLOWABLE DEFL.(TL)= L/360 (1.36")
CALCULATED VERT. DEFL.(TL) = L/902 (0.54")

CSI: TC=0.49/1.00 (B-C:1), BC=0.84/1.00 (V-W:1),
WB=1.00/1.00 (K-S:1), SSI=0.39/1.00 (J-K:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

AUTOSOLVE HEELS OFF

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

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (R) (INPUT = 0.90)
JSI METAL= 0.95 (Y) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
319561	H19TA		2	JT 45147	E22104397(2)

Alpa Roof Truss, Maple

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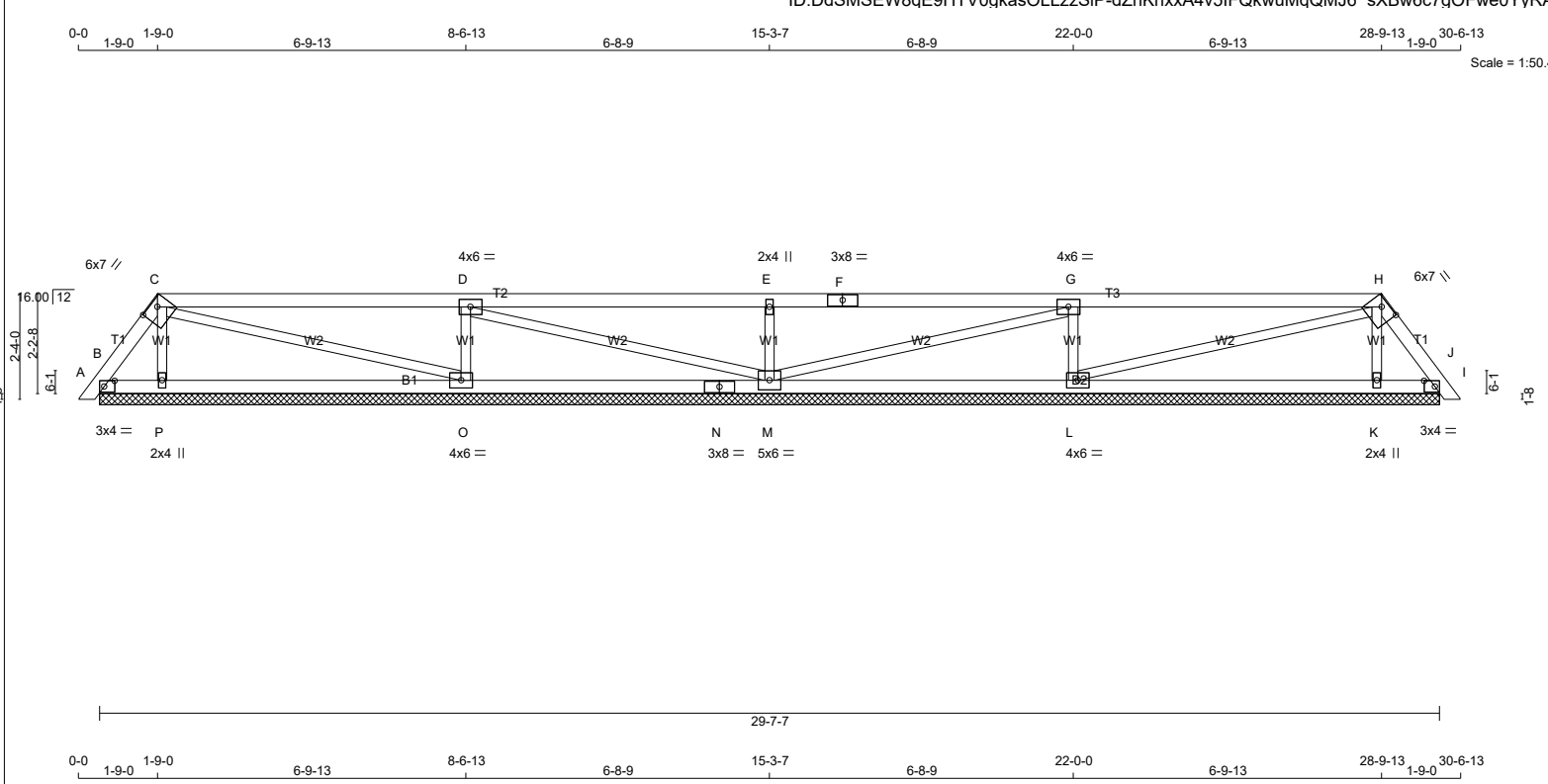
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PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
G	TMW+w	MT20	2.0	4.0		
H	TS-t	MT20	4.0	6.0		
K	TMWW+t	MT20	5.0	6.0	2.25	2.25
L	TMWW+t	MT20	4.0	6.0	2.75	1.75
M	TTWW-h	MT20	8.0	9.0	2.00	4.50
N	TMVW-t	MT20	5.0	8.0	2.50	2.25
P	BMV1+p	MT20	3.0	4.0		
Q	BMWW-t	MT20	4.0	6.0		
R	BMWW+t	MT20	4.0	6.0	2.75	1.75
S	BBWW-h	MT20	8.0	9.0	2.00	6.00
T	BBWW-l	MT20	8.0	9.0	3.25	4.50
U	BMWW+t	MT20	4.0	6.0		
V	BMWWW-t	MT20	5.0	6.0	2.25	1.50
W	BBWW-l	MT20	10.0	12.0	3.25	6.00
X	BBWW-h	MT20	10.0	12.0	4.25	6.00
Y	BMWW+t	MT20	5.0	14.0	7.00	2.25
Z	BMWW-t	MT20	5.0	6.0	2.50	1.75
AA	BMV1+t	MT20	6.0	10.0	7.25	

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





TOTAL WEIGHT = 100 lb

LUMBER

N. L. G. A. RULES

CHORDS	SIZE	LUMBER	DESCR.
A - C	2x4	DRY No.2	SPF
C - F	2x4	DRY No.2	SPF
F - H	2x4	DRY No.2	SPF
H - J	2x4	DRY No.2	SPF
B - N	2x4	DRY No.2	SPF
N - I	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-h	MT20	6.0	7.0	1.75	4.00
D	TMWW-t	MT20	4.0	6.0		
E	TMW+w	MT20	2.0	4.0		
F	TS-t	MT20	3.0	8.0		
G	TMWW-t	MT20	4.0	6.0		
H	TTWW-h	MT20	6.0	7.0	1.75	4.00
I	TMB1-I	MT20	3.0	4.0	1.50	2.75
K	BMW1+w	MT20	2.0	4.0		
L	BMWW1-t	MT20	4.0	6.0		
M	BMWWW1-t	MT20	5.0	6.0		
N	BS-t	MT20	3.0	8.0		
O	BMWW1-t	MT20	4.0	6.0		
P	BMW1+w	MT20	2.0	4.0		

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

BEARINGS

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG	REQRD BRG
	VERT	HORZ	DOWN	HORZ		
B	115	0	115	0	29-7-7 (15-11)00	
P	301	0	301	0	29-7-7 (15-11)00	
O	728	0	728	0	29-7-7 (15-11)00	
M	624	0	624	0	29-7-7 (15-11)00	
L	728	0	728	0	29-7-7 (15-11)00	
K	301	0	301	0	29-7-7 (15-11)00	
I	115	0	115	0	29-7-7 (15-11)00	

VALUE IN PARENTHESIS INDICATES EFFECTIVE BEARING LENGTH

UNFACTORED REACTIONS

JT	1ST LCASE	MAX./MIN. COMPONENT REACTIONS					
		COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD
B	76	77 / 0	0 / 0	0 / 0	0 / 0	0 / -1	0 / 0
P	221	101 / 0	0 / 0	0 / 0	0 / 0	120 / 0	0 / 0
O	518	323 / 0	0 / 0	0 / 0	0 / 0	194 / 0	0 / 0
M	445	270 / 0	0 / 0	0 / 0	0 / 0	175 / 0	0 / 0
L	518	323 / 0	0 / 0	0 / 0	0 / 0	194 / 0	0 / 0
K	221	101 / 0	0 / 0	0 / 0	0 / 0	120 / 0	0 / 0
I	76	77 / 0	0 / 0	0 / 0	0 / 0	0 / -1	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) B, P, O, M, L, K, I

BRACING
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.
ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE LATERALLY RESTRAINED.

LOADING
TOTAL LOAD CASES: (4)

MEMB.	FR-TO	CHORDS		WEBS	
		MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. FACTORED FORCE (LBS)	MAX. FACTORED FORCE (LBS)
A-B	0 / 10		-78.0	-78.0	0.01 (1)
B-C	-80 / 0		-78.0	-78.0	0.02 (1)
C-D	-15 / 0		-78.0	-78.0	0.52 (1)
D-E	0 / 17		-78.0	-78.0	0.53 (1)
E-F	0 / 17		-78.0	-78.0	0.53 (1)
F-G	0 / 17		-78.0	-78.0	0.53 (1)
G-H	-15 / 0		-78.0	-78.0	0.52 (1)
H-I	-80 / 0		-78.0	-78.0	0.02 (1)
I-J	0 / 10		-78.0	-78.0	0.01 (1)
B-P	0 / 45		-18.5	-18.5	0.14 (4)
P-O	0 / 35		-18.5	-18.5	0.17 (4)
O-N	0 / 15		-18.5	-18.5	0.17 (4)
N-M	0 / 15		-18.5	-18.5	0.17 (4)
M-L	0 / 15		-18.5	-18.5	0.17 (4)
L-K	0 / 35		-18.5	-18.5	0.17 (4)
K-I	0 / 45		-18.5	-18.5	0.14 (4)

DESIGN CRITERIA

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

SPACING = 24.0 IN. C/C

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

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

THIS DESIGN COMPLIES WITH:
- PART 9 OF 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=0.53/1.00 (E-G:1), BC=0.17/1.00 (O-P:4), WB=0.09/1.00 (G-L:1), SSI=0.25/1.00 (G-H:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

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

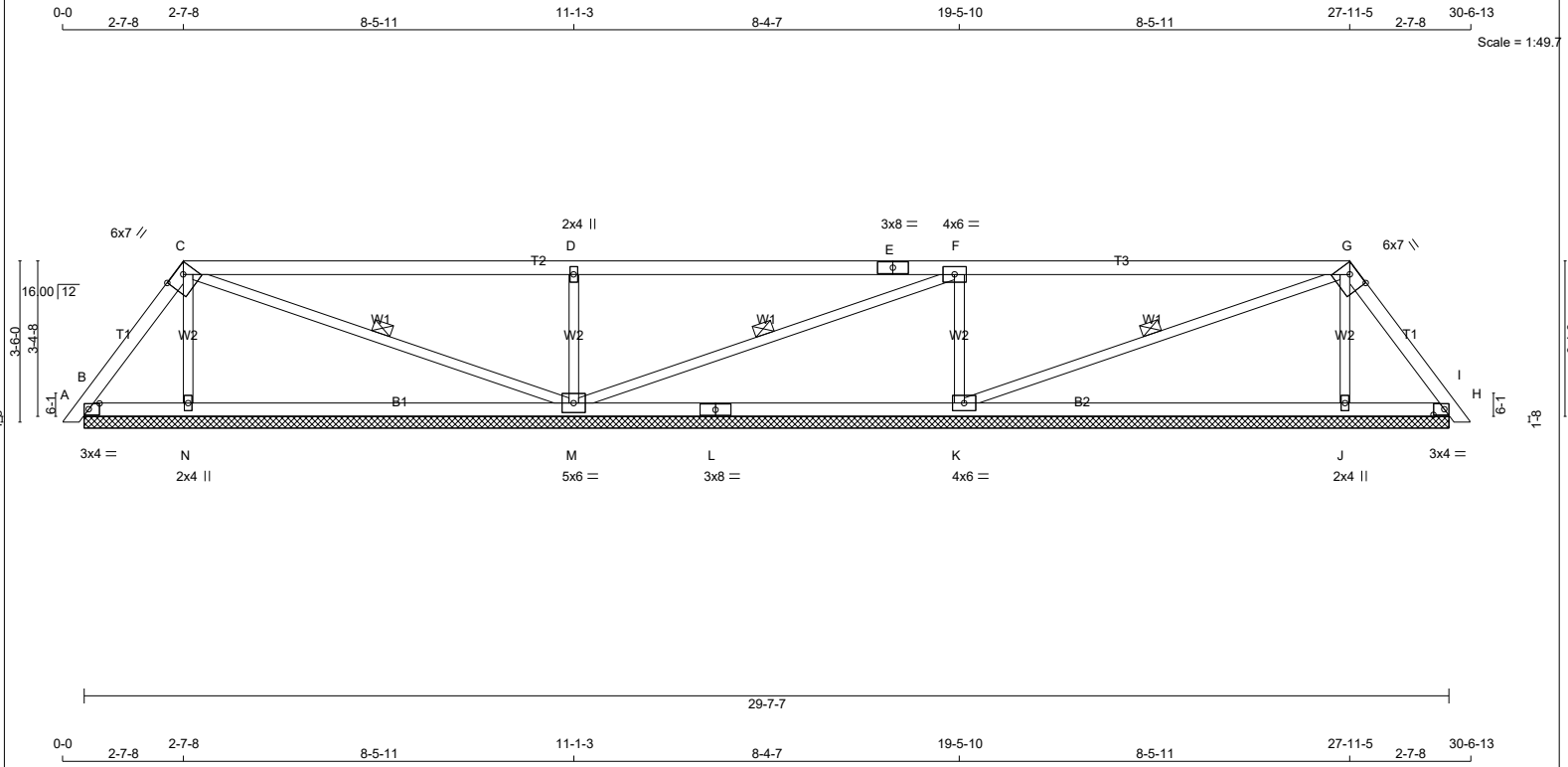
PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.63 (C) (INPUT = 0.90)
JSI METAL= 0.12 (F) (INPUT = 1.00)

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





TOTAL WEIGHT = 103 lb

LUMBER
N. L. G. A. RULES

CHORDS	SIZE	LUMBER	DESCR.
A - C	2x4	DRY No.2	SPF
C - E	2x4	DRY 1650F 1.5E	SPF
E - G	2x4	DRY 1650F 1.5E	SPF
G - I	2x4	DRY No.2	SPF
B - L	2x4	DRY No.2	SPF
L - H	2x4	DRY No.2	SPF
ALL WEBS	2x3	DRY No.2	SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMB1-I	MT20	3.0	4.0	1.50	2.75
C	TTWW-h	MT20	6.0	7.0	2.00	4.25
D	TMW+w	MT20	2.0	4.0		
E	TS-t	MT20	3.0	8.0		
F	TMWW-t	MT20	4.0	6.0		
G	TTWW-h	MT20	6.0	7.0	2.00	4.25
H	TMB1-I	MT20	3.0	4.0	1.50	2.75
J	BMW1+w	MT20	2.0	4.0		
K	BMWW1-t	MT20	4.0	6.0		
L	BS-t	MT20	3.0	8.0		
M	BMWWW1-t	MT20	5.0	6.0		
N	BMW1+w	MT20	2.0	4.0		

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

BEARINGS

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG	REQRD BRG
	VERT	HORZ	DOWN	HORZ		
B	170	0	170	0	29-7.7 (15-11)00	0/0
N	387	0	387	0	29-7.7 (15-11)00	0/0
M	915	0	915	0	29-7.7 (15-11)00	0/0
K	874	0	874	0	29-7.7 (15-11)00	0/0
J	376	0	376	0	29-7.7 (15-11)00	0/0
H	191	0	191	0	29-7.7 (15-11)00	0/0

VALUE IN PARENTHESIS INDICATES EFFECTIVE BEARING LENGTH

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS				
		SNOW	LIVE	PERM.LIVE	WIND	DEAD
B	116	101 / 0	0 / 0	0 / 0	0 / 0	15 / 0
N	282	136 / 0	0 / 0	0 / 0	0 / 0	146 / 0
M	650	407 / 0	0 / 0	0 / 0	0 / 0	243 / 0
K	622	385 / 0	0 / 0	0 / 0	0 / 0	237 / 0
J	275	131 / 0	0 / 0	0 / 0	0 / 0	144 / 0
H	130	112 / 0	0 / 0	0 / 0	0 / 0	18 / 0

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

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

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.
1 LATERAL BRACE(S) AT 1/2 LENGTH OF C-M, F-M, G-K.

LOADING
TOTAL LOAD CASES: (4)

MEMB.	CHORDS		FACTORED		MAX. UNBRAC	WEBS		FACTORED	
	MAX. FORCE (LBS)	VERT. LOAD (PLF)	LC1	MAX. CSI (LC)		MEMB. FORCE (LBS)	MAX. FORCE (LBS)	MAX. CSI (LC)	
FR-TO		FROM TO			LENGTH	FR-TO			
A-B	0 / 10	-78.0	-78.0	0.01 (1)	10.00	N-C	-254 / 0	0.05 (1)	
B-C	-93 / 0	-78.0	-78.0	0.06 (1)	6.25	C-M	-57 / 0	0.03 (1)	
C-D	0 / 9	-78.0	-78.0	0.63 (1)	10.00	M-D	-722 / 0	0.14 (1)	
D-E	0 / 8	-78.0	-78.0	0.63 (1)	10.00	M-F	-45 / 0	0.02 (1)	
E-F	0 / 8	-78.0	-78.0	0.63 (1)	10.00	K-F	-706 / 0	0.14 (1)	
F-G	-34 / 0	-78.0	-78.0	0.63 (1)	6.25	K-G	-28 / 0	0.02 (1)	
G-H	-119 / 0	-78.0	-78.0	0.06 (1)	6.25	J-G	-243 / 0	0.05 (1)	
H-I	0 / 10	-78.0	-78.0	0.01 (1)	10.00				
B-N	0 / 54	-18.5	-18.5	0.20 (4)	10.00				
N-M	0 / 45	-18.5	-18.5	0.27 (4)	10.00				
M-L	0 / 34	-18.5	-18.5	0.27 (4)	10.00				
L-K	0 / 34	-18.5	-18.5	0.27 (4)	10.00				
K-J	0 / 60	-18.5	-18.5	0.27 (4)	10.00				
J-H	0 / 69	-18.5	-18.5	0.20 (4)	10.00				

DESIGN CRITERIA

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

SPACING = 24.0 IN. C/C

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

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

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

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

CSI: TC=0.63/1.00 (F-G:1), BC=0.27/1.00 (J-K:4), WB=0.14/1.00 (D-M:1), SSI=0.31/1.00 (F-G:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

NAIL VALUES

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

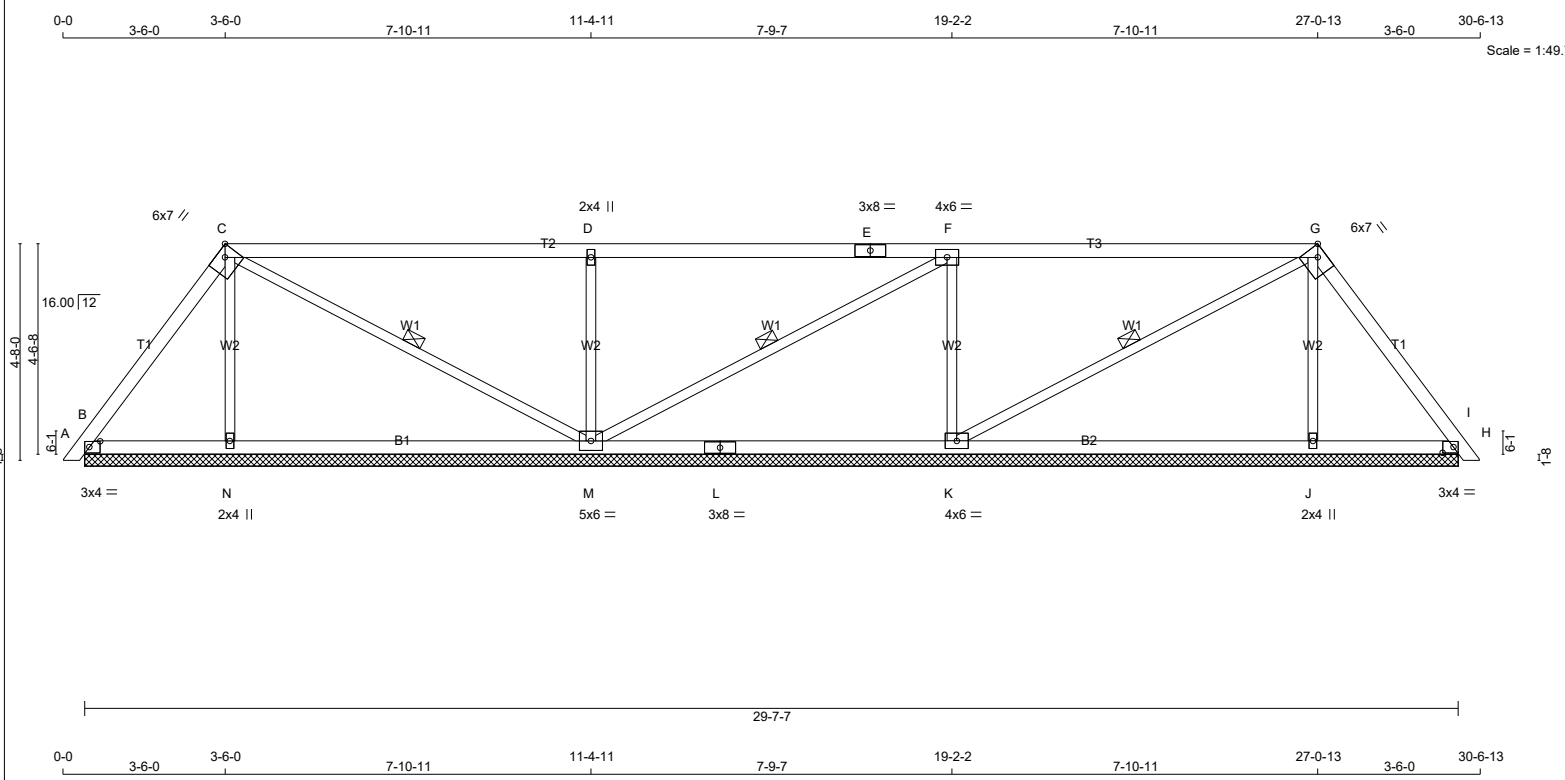
PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.89 (M) (INPUT = 0.90)
JSI METAL= 0.44 (E) (INPUT = 1.00)

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





LUMBER
N. L. G. A. RULES

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

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMB1-I	MT20	3.0	4.0	1.50	2.75
C	TTWW-h	MT20	6.0	7.0	Edge	2.75
D	TMW+w	MT20	2.0	4.0		
E	TS-t	MT20	3.0	8.0		
F	TMWW-t	MT20	4.0	6.0		
G	TTWW-h	MT20	6.0	7.0	Edge	2.75
H	TMB1-I	MT20	3.0	4.0	1.50	2.75
J	BMW1+w	MT20	2.0	4.0		
K	BMWW1-t	MT20	4.0	6.0		
L	BS-t	MT20	3.0	8.0		
M	BMWWW1-t	MT20	5.0	6.0		
N	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

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG	REQRD BRG
	VERT	HORZ	DOWN	HORZ		
B	232	0	232	0	29-7.7 (15-11)00	0/0
N	364	0	364	0	29-7.7 (15-11)00	0/0
M	899	0	899	0	29-7.7 (15-11)00	0/0
K	797	0	797	0	29-7.7 (15-11)00	0/0
J	354	0	354	0	29-7.7 (15-11)00	0/0
H	266	0	266	0	29-7.7 (15-11)00	0/0

VALUE IN PARENTHESIS INDICATES EFFECTIVE BEARING LENGTH

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS					
		SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
B	161	122 / 0	0 / 0	0 / 0	0 / 0	40 / 0	0 / 0
N	265	131 / 0	0 / 0	0 / 0	0 / 0	134 / 0	0 / 0
M	639	405 / 0	0 / 0	0 / 0	0 / 0	234 / 0	0 / 0
K	568	350 / 0	0 / 0	0 / 0	0 / 0	218 / 0	0 / 0
J	258	126 / 0	0 / 0	0 / 0	0 / 0	132 / 0	0 / 0
H	185	140 / 0	0 / 0	0 / 0	0 / 0	45 / 0	0 / 0

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

BRACING
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.
ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE LATERALLY RESTRAINED.

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

LOADING
TOTAL LOAD CASES: (4)

MEMB.	CHORDS		FACTORED		MAX. UNBRAC LENGTH	WEBS		FACTORED	
	MAX. FORCE (LBS)	VERT. LOAD (PLF)	LC1	MAX. CSI (LC)		MEMB. FORCE (LBS)	MAX. FORCE (LBS)	MAX. CSI (LC)	
FR-TO		FROM	TO			FR-TO			
A-B	0 / 10	-78.0	-78.0	0.01 (1)	10.00	N-C	-243 / 0	0.07 (1)	
B-C	-99 / 0	-78.0	-78.0	0.12 (1)	6.25	C-M	-88 / 0	0.05 (1)	
C-D	0 / 26	-78.0	-78.0	0.66 (1)	10.00	M-D	-672 / 0	0.20 (1)	
D-E	0 / 26	-78.0	-78.0	0.66 (1)	10.00	M-F	-81 / 0	0.04 (1)	
E-F	0 / 26	-78.0	-78.0	0.66 (1)	10.00	K-F	-633 / 0	0.19 (1)	
F-G	-45 / 0	-78.0	-78.0	0.66 (1)	6.25	K-G	-36 / 0	0.02 (1)	
G-H	-142 / 0	-78.0	-78.0	0.12 (1)	6.25	J-G	-233 / 0	0.07 (1)	
H-I	0 / 10	-78.0	-78.0	0.01 (1)	10.00				
B-N	0 / 58	-18.5	-18.5	0.17 (4)	10.00				
N-M	0 / 52	-18.5	-18.5	0.23 (4)	10.00				
M-L	0 / 45	-18.5	-18.5	0.23 (4)	10.00				
L-K	0 / 45	-18.5	-18.5	0.23 (4)	10.00				
K-J	0 / 77	-18.5	-18.5	0.23 (4)	10.00				
J-H	0 / 83	-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=0.66/1.00 (D-F:1), BC=0.23/1.00 (J-K:4), WB=0.20/1.00 (D-M:1), SSI=0.29/1.00 (F-G:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

NAIL VALUES

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

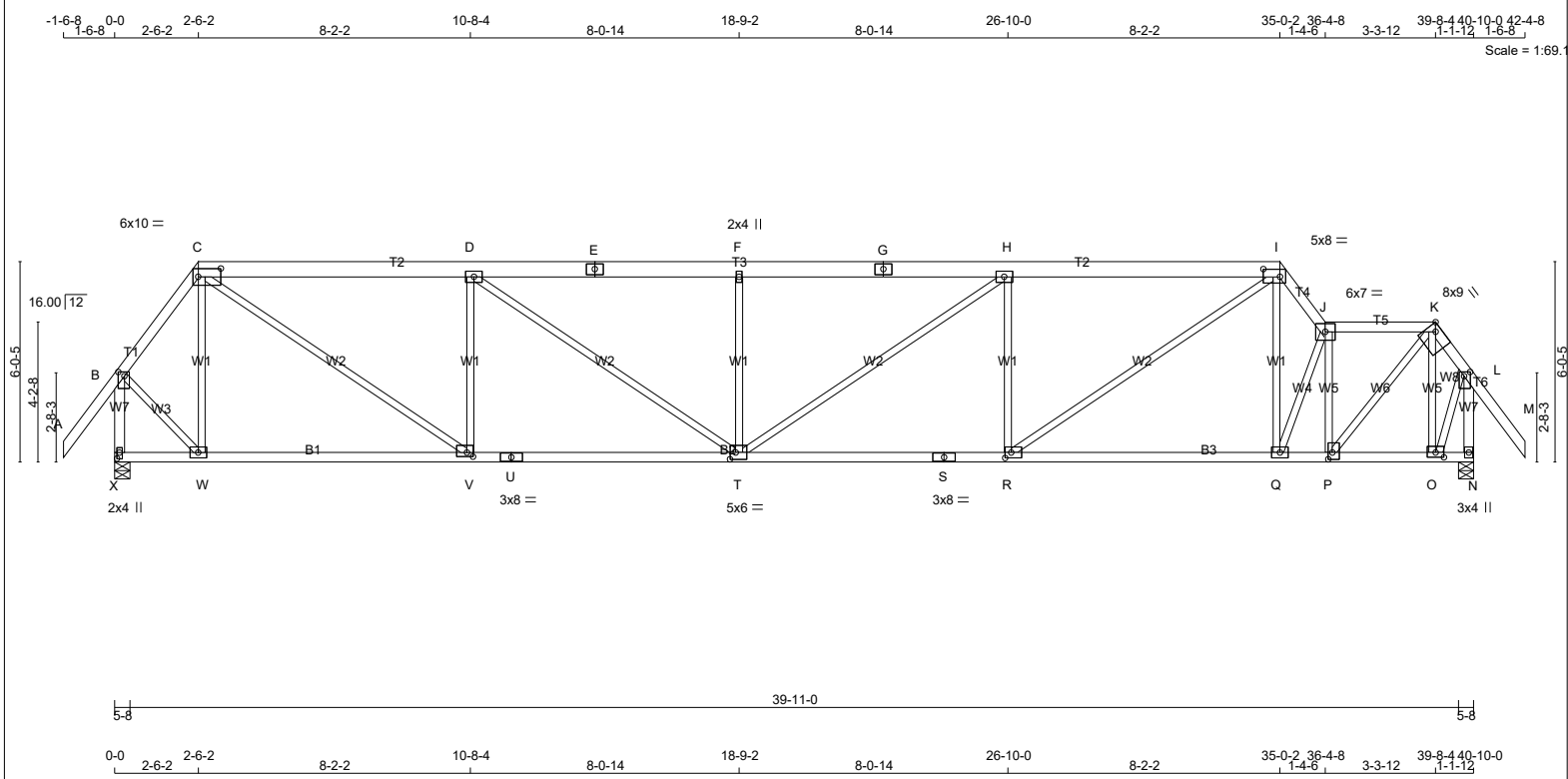
PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.84 (C) (INPUT = 0.90)
JSI METAL= 0.19 (E) (INPUT = 1.00)

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





TOTAL WEIGHT = 200 LB

LUMBER

N. L. G. A. RULES

CHORDS	SIZE	LUMBER	DESCR.
A - C	2x4	DRY No.2	SPF
C - E	2x6	DRY No.2	SPF
E - G	2x6	DRY No.2	SPF
G - I	2x6	DRY No.2	SPF
I - J	2x4	DRY No.2	SPF
J - K	2x4	DRY No.2	SPF
K - M	2x4	DRY No.2	SPF
X - B	2x4	DRY No.2	SPF
N - L	2x4	DRY No.2	SPF
X - U	2x4	DRY No.2	SPF
U - S	2x4	DRY No.2	SPF
S - N	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	1.50	2.25
C	TTWW-j	MT20	6.0	10.0	3.00	8.00
D	TMWW-t	MT20	4.0	6.0		
E	TS-t	MT20	4.0	6.0		
F	TMW+w	MT20	2.0	4.0		
G	TS-t	MT20	4.0	6.0		
H	TMWW-t	MT20	4.0	6.0		
I	TTWW-j	MT20	5.0	8.0	2.75	6.00
J	TTWW-j	MT20	6.0	7.0		
K	TTWW-h	MT20	8.0	9.0	Edge	2.75
L	TMVW+p	MT20	4.0	6.0	1.50	2.25
N	BMV1+p	MT20	3.0	4.0		
O	BMWW-t	MT20	4.0	6.0	1.75	3.00
P	BMWW+t	MT20	4.0	6.0	2.50	1.50
Q	BMWW-t	MT20	4.0	6.0		
R	BMWW-t	MT20	4.0	6.0	2.00	2.25
S	BS-t	MT20	3.0	8.0		
T	BMWWW-t	MT20	5.0	6.0	2.50	2.00
U	BS-t	MT20	3.0	8.0		
V	BMWW-t	MT20	4.0	6.0	1.50	2.25
W	BMWW-t	MT20	4.0	6.0		
X	BMV1+p	MT20	2.0	4.0	2.25	1.00

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

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

BEARINGS

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG	REQRD BRG
	VERT	HORZ	DOWN	HORZ		
X	2096	0	2096	0	5-8	3-5
N	2102	0	2102	0	5-8	3-5

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED		MAX./MIN. COMPONENT REACTIONS		WIND PERM.LIVE	DEAD	SOIL
	SNOW	LIVE	SNOW	LIVE			
X	1492	925/0	0/0	0/0	0/0	567/0	0/0
N	1496	928/0	0/0	0/0	0/0	567/0	0/0

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

BRACING
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.07 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 VERT. LOAD (PLF)	MAX. FACTORED UNBRAC LENGTH (LC)
A-B	0/52	-78.0	-78.0	10.00
B-C	-1416/0	-78.0	-78.0	5.38
C-D	-2850/0	-78.0	-78.0	4.54
D-E	-3599/0	-78.0	-78.0	4.10
E-F	-3599/0	-78.0	-78.0	4.10
F-G	-3599/0	-78.0	-78.0	4.10
G-H	-3599/0	-78.0	-78.0	4.10
H-I	-3299/0	-78.0	-78.0	4.27
I-J	-2833/0	-78.0	-78.0	4.07
J-K	-1941/0	-78.0	-78.0	4.66
K-L	-1059/0	-78.0	-78.0	5.92
L-M	0/52	-78.0	-78.0	10.00
X-B	-2106/0	0.0	0.0	5.84
N-L	-2125/0	0.0	0.0	5.81
X-W	0/0	-18.5	-18.5	10.00
W-V	0/837	-18.5	-18.5	10.00
V-U	0/2850	-18.5	-18.5	10.00
U-T	0/2850	-18.5	-18.5	10.00
T-S	0/3299	-18.5	-18.5	10.00
S-R	0/3299	-18.5	-18.5	10.00
R-Q	0/1741	-18.5	-18.5	10.00
Q-P	0/1988	-18.5	-18.5	10.00
P-O	0/552	-18.5	-18.5	10.00
O-N	0/0	-18.5	-18.5	10.00

DESIGN CRITERIA

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

SPACING = 24.0 IN. C/C

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

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

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

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

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

ALLOWABLE DEFL.(LL)= L/360 (1.36")
CALCULATED VERT. DEFL.(LL) = L/999 (0.20")
ALLOWABLE DEFL.(TL)= L/360 (1.36")
CALCULATED VERT. DEFL.(TL) = L/999 (0.43")

CSI: TC=0.48/1.00 (D-F:1), BC=0.66/1.00 (R-T:1), WB=0.65/1.00 (D-V:1), SSI=0.23/1.00 (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

AUTOSOLVE LEFT HEEL ONLY

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

NAIL VALUES

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

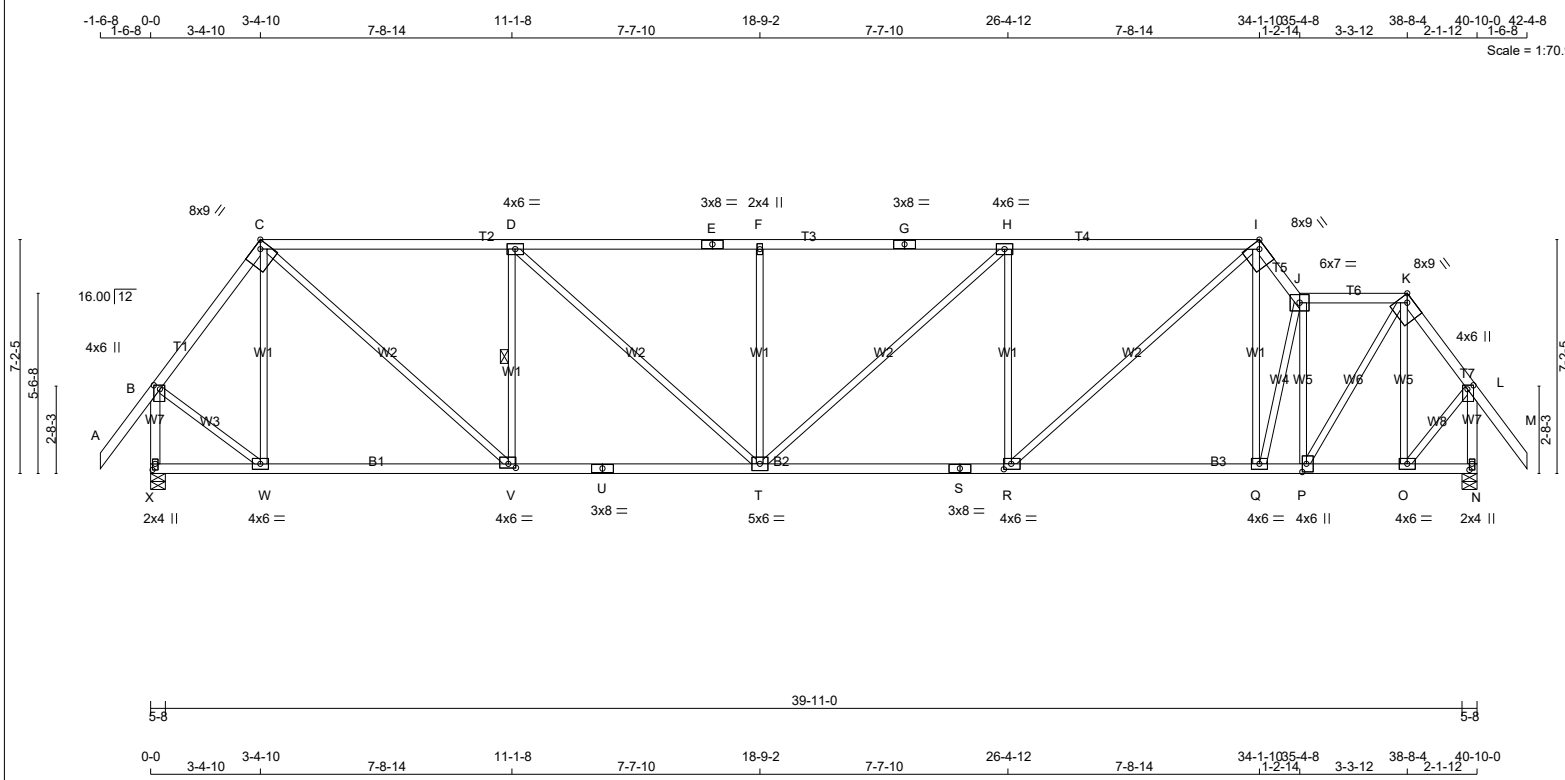
PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (X) (INPUT = 0.90)
JSI METAL= 0.97 (S) (INPUT = 1.00)

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





TOTAL WEIGHT = 192 lb

LUMBER

N. L. G. A. RULES

CHORDS	SIZE	LUMBER	DESCR.
A - C	2x4	DRY No.2	SPF
C - E	2x4	DRY 1650F 1.5E	SPF
E - G	2x4	DRY 1650F 1.5E	SPF
G - I	2x4	DRY 1650F 1.5E	SPF
I - J	2x4	DRY No.2	SPF
J - K	2x4	DRY No.2	SPF
K - M	2x4	DRY No.2	SPF
X - B	2x4	DRY No.2	SPF
N - L	2x4	DRY No.2	SPF
U - U	2x4	DRY No.2	SPF
U - S	2x4	DRY No.2	SPF
S - N	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	1.50	2.25
C, I, K						
C	TTWW-h	MT20	8.0	9.0	Edge	2.75
D	TMWW-t	MT20	4.0	6.0		
E	TS-t	MT20	3.0	8.0		
F	TMW+w	MT20	2.0	4.0		
G	TS-t	MT20	3.0	8.0		
H	TMWW-t	MT20	4.0	6.0		
J	TTWW-l	MT20	6.0	7.0		
L	TMVW+p	MT20	4.0	6.0	1.50	2.25
N	BMV1+p	MT20	2.0	4.0	2.25	1.00
O, Q, W						
O	BMWW-t	MT20	4.0	6.0		
P	BMWW+t	MT20	4.0	6.0	3.00	1.50
R	BMWW-t	MT20	4.0	6.0	2.00	2.75
S	BS-t	MT20	3.0	8.0		
T	BMWWW-t	MT20	5.0	6.0		
U	BS-t	MT20	3.0	8.0		
V	BMWW-t	MT20	4.0	6.0	1.50	2.75
X	BMV1+p	MT20	2.0	4.0	2.25	1.00

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

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



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

BEARINGS

	FACTORED GROSS REACTION	MAXIMUM FACTORED GROSS REACTION	INPUT BRG	REQRD BRG
JT	VERT	HORZ	DOWN	UP
X	2096	0	2096	0
N	2102	0	2102	0

UNFACTORED REACTIONS

JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
X	1492	925 / 0	0 / 0	0 / 0	0 / 0	567 / 0	0 / 0
N	1496	928 / 0	0 / 0	0 / 0	0 / 0	567 / 0	0 / 0

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

BRACING
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.75 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.
ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.
1 LATERAL BRACE(S) AT 1/2 LENGTH OF D-V.

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. FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 MAX CSI (LC)	MEMB. UNBRAC LENGTH	MEMB. MAX. FORCE (LBS)	FACTORED MAX CSI (LC)	
FR-TO		FROM	TO	FR-TO			
A-B	0 / 52	-78.0	-78.0	10.00	W-C	-476 / 0	0.43 (1)
B-C	-1527 / 0	-78.0	-78.0	5.13	C-V	0 / 1985	0.45 (1)
C-D	-2388 / 0	-78.0	-78.0	4.13	V-D	-1171 / 0	0.38 (1)
D-E	-2943 / 0	-78.0	-78.0	3.75	D-T	0 / 747	0.17 (1)
E-F	-2943 / 0	-78.0	-78.0	3.75	T-F	-550 / 0	0.50 (1)
F-G	-2943 / 0	-78.0	-78.0	3.76	T-H	0 / 278	0.06 (1)
G-H	-2943 / 0	-78.0	-78.0	3.76	R-H	-854 / 0	0.77 (1)
H-I	-2736 / 0	-78.0	-78.0	3.89	R-I	0 / 1510	0.34 (1)
I-J	-2656 / 0	-78.0	-78.0	4.20	Q-I	0 / 819	0.18 (1)
J-K	-1735 / 0	-78.0	-78.0	4.88	Q-J	-698 / 0	0.34 (1)
K-L	-1342 / 0	-78.0	-78.0	5.41	P-J	-1627 / 0	0.75 (1)
L-M	0 / 52	-78.0	-78.0	10.00	P-K	0 / 1860	0.42 (1)
X-B	-2085 / 0	0.0	0.0	5.86	O-K	-699 / 0	0.32 (1)
N-L	-2099 / 0	0.0	0.0	5.84	B-W	0 / 1089	0.25 (1)
					O-L	0 / 1104	0.25 (1)
X-W	0 / 0	-18.5	-18.5	10.00			
W-V	0 / 902	-18.5	-18.5	10.00			
V-U	0 / 2388	-18.5	-18.5	10.00			
U-T	0 / 2388	-18.5	-18.5	10.00			
T-S	0 / 2737	-18.5	-18.5	10.00			
S-R	0 / 2737	-18.5	-18.5	10.00			
R-Q	0 / 1606	-18.5	-18.5	10.00			
Q-P	0 / 1768	-18.5	-18.5	10.00			
P-O	0 / 758	-18.5	-18.5	10.00			
O-N	0 / 0	-18.5	-18.5	10.00			

DESIGN CRITERIA

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

SPACING = 24.0 IN. C/C

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

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

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

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

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

ALLOWABLE DEFL.(LL)= L/360 (1.36")
CALCULATED VERT. DEFL.(LL) = L/999 (0.17")
ALLOWABLE DEFL.(TL)= L/360 (1.36")
CALCULATED VERT. DEFL.(TL) = L/999 (0.36")

CSI: TC=0.86/1.00 (D-F:1), BC=0.56/1.00 (R-T:1), WB=0.77/1.00 (H-R:1), SSI=0.28/1.00 (C-D:1)

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

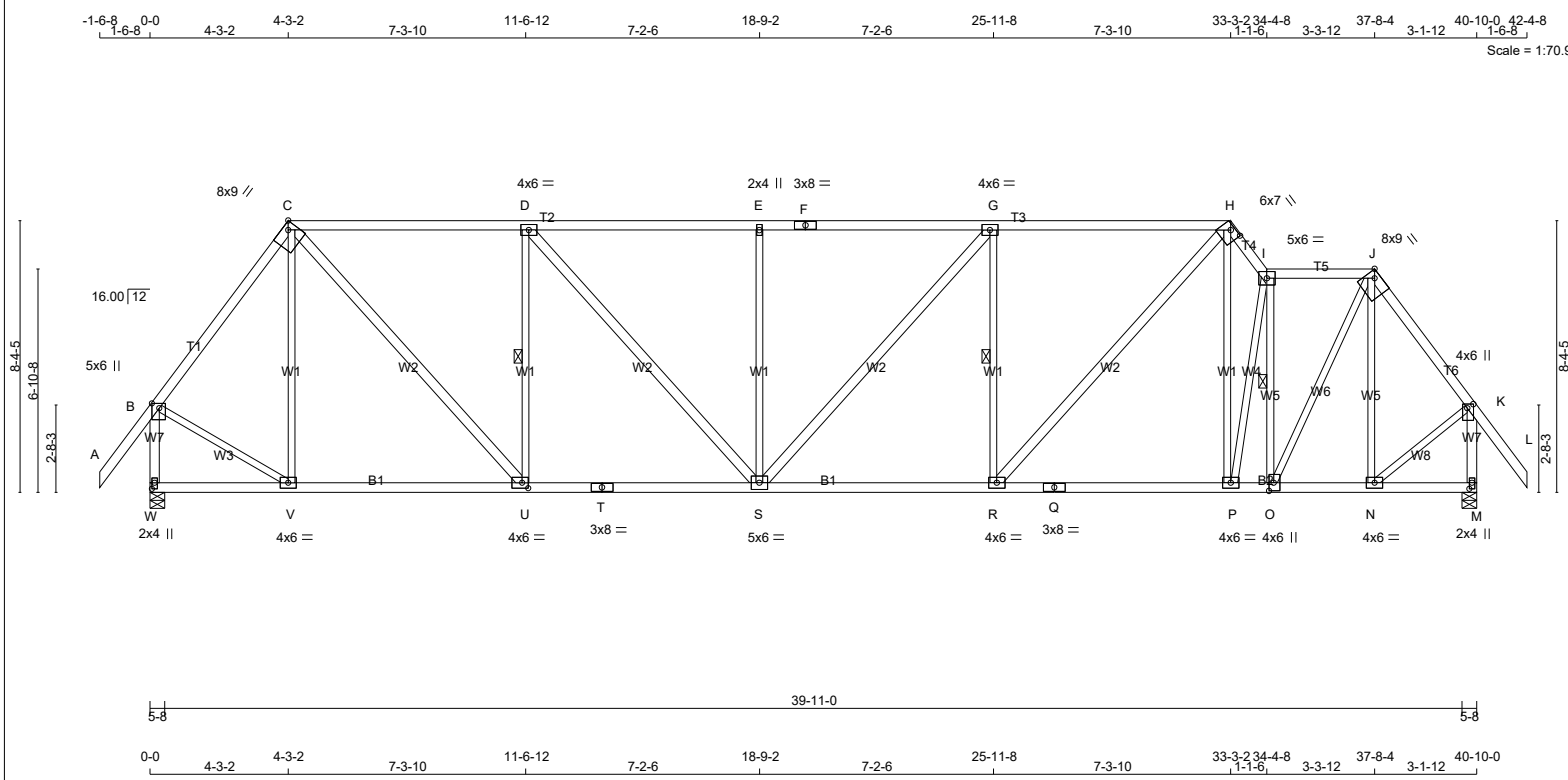
COMPANION LIVE LOAD FACTOR = 1.00

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

NAIL VALUES
PLATE GRIP(DRY) SHEAR SECTION (PSI) (PLI) (PSI) (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 (R) (INPUT = 0.90)
JSI METAL= 0.78 (U) (INPUT = 1.00)



TOTAL WEIGHT = 219 lb

LUMBER

N. L. G. A. RULES

CHORDS	SIZE	LUMBER	DESCR.
A - C	2x4	DRY No.2	SPF
C - F	2x4	DRY No.2	SPF
F - H	2x4	DRY No.2	SPF
H - I	2x4	DRY No.2	SPF
I - J	2x4	DRY No.2	SPF
J - L	2x4	DRY No.2	SPF
W - B	2x4	DRY No.2	SPF
M - K	2x4	DRY No.2	SPF
W - T	2x4	DRY No.2	SPF
T - Q	2x4	DRY No.2	SPF
Q - M	2x4	DRY No.2	SPF

ALL WEBS EXCEPT

CHORDS	SIZE	LUMBER	DESCR.
C - U	2x4	DRY No.2	SPF
D - S	2x4	DRY No.2	SPF
S - G	2x4	DRY No.2	SPF
R - H	2x4	DRY No.2	SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT TYPE	PLATES	W	LEN	Y	X
B	TMVW+p	MT20	5.0	6.0	1.75 2.75
C	TTWW-h	MT20	8.0	9.0	Edge 2.75
D	TMWW-t	MT20	4.0	6.0	
E	TMW+w	MT20	2.0	4.0	
F	TS-t	MT20	3.0	8.0	
G	TMWW-t	MT20	4.0	6.0	
H	TTWW-h	MT20	6.0	7.0	1.50 3.75
I	TTWW-t	MT20	5.0	6.0	
J	TTWW-h	MT20	8.0	9.0	Edge 2.75
K	TMVW+p	MT20	4.0	6.0	1.50 2.25
M	BMV1+p	MT20	2.0	4.0	2.25 1.00
N, P, R, V					
N	BMWW-t	MT20	4.0	6.0	
O	BMWW+t	MT20	4.0	6.0	3.00 1.75
Q	BS-t	MT20	3.0	8.0	
S	BMWW-t	MT20	5.0	6.0	
T	BS-t	MT20	3.0	8.0	
U	BMWW-t	MT20	4.0	6.0	2.00 2.25
W	BMV1+p	MT20	2.0	4.0	2.25 1.00

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

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

BEARINGS

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG	REQRD BRG
	VERT	HORZ	DOWN	HORZ		
W	2099	0	2099	0	5-8	3-5
M	2099	0	2099	0	5-8	3-5

UNFACTORED REACTIONS

JT	COMBINED	MAX./MIN. COMPONENT REACTIONS					SOIL
		1ST LCASE	SNOW	LIVE	PERM.LIVE	WIND	
W	1494	927/0	0/0	0/0	0/0	567/0	0/0
M	1494	927/0	0/0	0/0	0/0	567/0	0/0

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

BRACING
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.36 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.
1 LATERAL BRACE(S) AT 1/2 LENGTH OF D-U, G-R, I-O.

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

LOADING

TOTAL LOAD CASES: (4)

MEMB.	CHORDS			WEBS			
	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	FACTORED LC1 MAX (LC)	MAX. UNBRAC LENGTH	MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX. FACTORED CSI (LC)
A-B	0/52	-78.0	-78.0	0.15 (1)	10.00	V-C	-380/0 0.53 (1)
B-C	-1593/0	-78.0	-78.0	0.34 (1)	4.91	C-U	0/1695 0.27 (1)
C-D	-2087/0	-78.0	-78.0	0.87 (1)	3.71	U-D	-1116/0 0.50 (1)
D-E	-2518/0	-78.0	-78.0	0.95 (1)	3.36	D-S	0/647 0.10 (1)
E-F	-2518/0	-78.0	-78.0	0.95 (1)	3.36	S-E	-518/0 0.72 (1)
F-G	-2518/0	-78.0	-78.0	0.95 (1)	3.36	S-G	0/217 0.03 (1)
G-H	-2373/0	-78.0	-78.0	0.93 (1)	3.47	R-G	-793/0 0.35 (1)
H-I	-2547/0	-78.0	-78.0	0.08 (1)	4.28	R-H	0/1268 0.20 (1)
I-J	-1613/0	-78.0	-78.0	0.18 (1)	5.02	P-H	0/816 0.18 (1)
J-K	-1494/0	-78.0	-78.0	0.18 (1)	5.20	P-I	-698/0 0.58 (1)
K-L	0/52	-78.0	-78.0	0.15 (1)	10.00	O-I	-1521/0 0.46 (1)
W-B	-2073/0	0.0	0.0	0.30 (1)	5.87	O-J	0/1659 0.37 (1)
M-K	-2081/0	0.0	0.0	0.30 (1)	5.87	N-J	-540/0 0.43 (1)
						B-V	0/1074 0.24 (1)
						N-K	0/1090 0.25 (1)
W-V	0/0	-18.5	-18.5	0.15 (4)	10.00		
V-U	0/946	-18.5	-18.5	0.29 (4)	10.00		
U-T	0/2087	-18.5	-18.5	0.45 (1)	10.00		
T-S	0/2087	-18.5	-18.5	0.45 (1)	10.00		
S-R	0/2373	-18.5	-18.5	0.50 (1)	10.00		
R-Q	0/1520	-18.5	-18.5	0.37 (1)	10.00		
Q-P	0/1520	-18.5	-18.5	0.37 (1)	10.00		
P-O	0/1637	-18.5	-18.5	0.33 (1)	10.00		
O-N	0/881	-18.5	-18.5	0.19 (1)	10.00		
N-M	0/0	-18.5	-18.5	0.06 (4)	10.00		

DESIGN CRITERIA

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

SPACING = 24.0 IN. C/C

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

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

THIS DESIGN COMPLIES WITH:
- PART 9 OF 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 (1.36")
CALCULATED VERT. DEFL.(LL) = L/999 (0.14")
ALLOWABLE DEFL.(TL)= L/360 (1.36")
CALCULATED VERT. DEFL.(TL) = L/999 (0.28")

CSI: TC=0.95/1.00 (D-E:1), BC=0.50/1.00 (R-S:1), WB=0.72/1.00 (E-S:1), SSI=0.27/1.00 (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)
MT20 650 371 1747 788 1987 1873

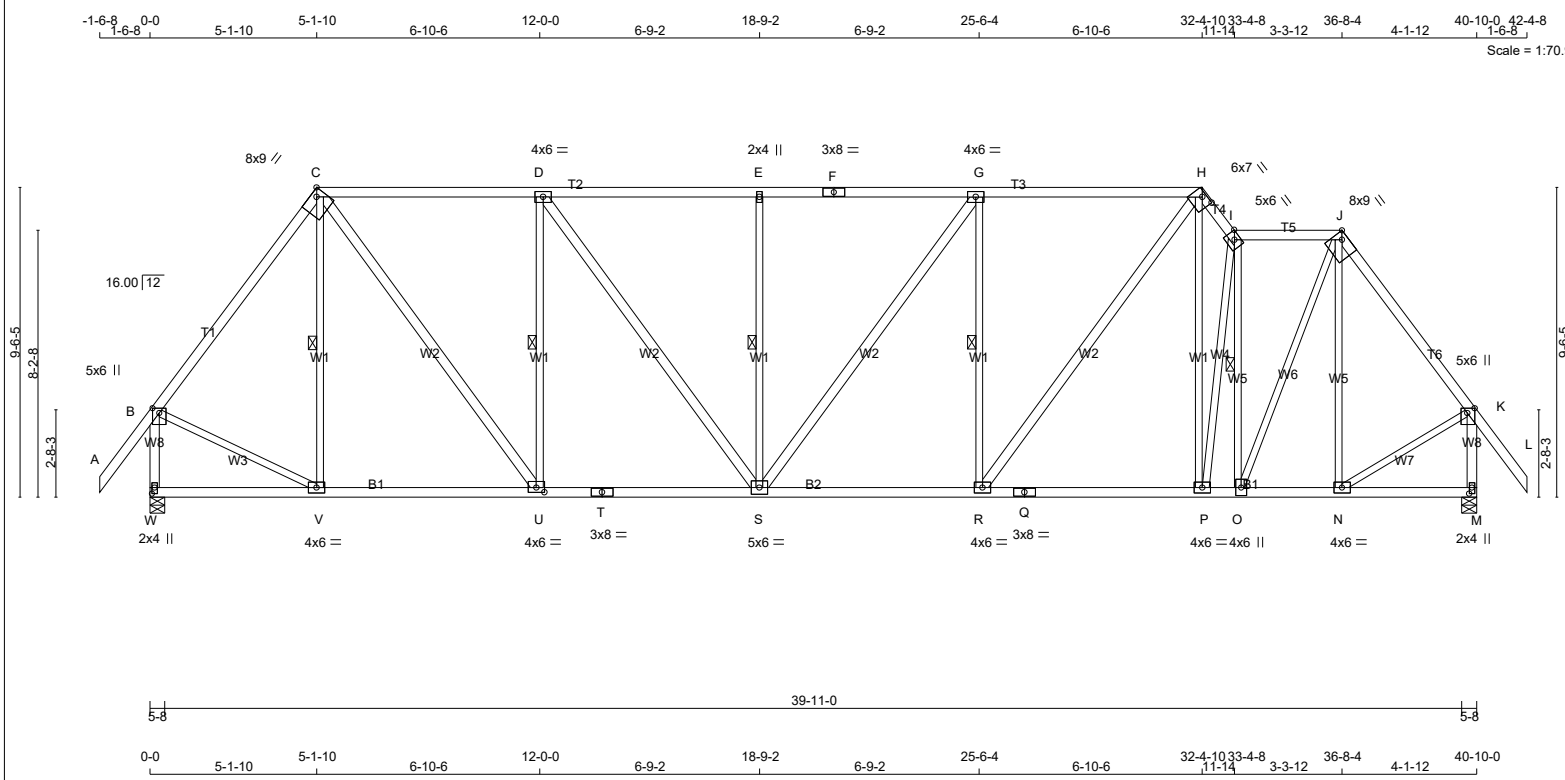
PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.89 (U) (INPUT = 0.90)
JSI METAL= 0.66 (T) (INPUT = 1.00)

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





TOTAL WEIGHT = 234 lb

LUMBER

N. L. G. A. RULES

CHORDS	SIZE	LUMBER	DESCR.
A - C	2x4	DRY No.2	SPF
C - F	2x4	DRY No.2	SPF
F - H	2x4	DRY No.2	SPF
H - I	2x4	DRY No.2	SPF
I - J	2x4	DRY No.2	SPF
J - L	2x4	DRY No.2	SPF
W - B	2x4	DRY No.2	SPF
M - K	2x4	DRY No.2	SPF
W - T	2x4	DRY No.2	SPF
T - Q	2x4	DRY No.2	SPF
Q - M	2x4	DRY No.2	SPF
ALL WEBS EXCEPT	2x3	DRY No.2	SPF
C - U	2x4	DRY No.2	SPF
D - S	2x4	DRY No.2	SPF
S - G	2x4	DRY No.2	SPF
R - H	2x4	DRY No.2	SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT TYPE	PLATES	W	LEN	Y	X
B	TMVW+p	MT20	5.0	6.0	1.75 2.50
C	TTWW-h	MT20	8.0	9.0	Edge 2.75
D	TMWW-t	MT20	4.0	6.0	
E	TMW+w	MT20	2.0	4.0	
F	TS-t	MT20	3.0	8.0	
G	TMWW-t	MT20	4.0	6.0	
H	TTWW-h	MT20	6.0	7.0	1.50 3.75
I	TTWW-h	MT20	5.0	6.0	Edge
J	TTWW-h	MT20	8.0	9.0	Edge 2.75
K	TMVW+p	MT20	5.0	6.0	1.75 2.75
M	BMV1+p	MT20	2.0	4.0	2.25 1.00
N, P, R, V					
N	BMWW-t	MT20	4.0	6.0	
O	BMWW+t	MT20	4.0	6.0	
Q	BS-t	MT20	3.0	8.0	
S	BMWWW-t	MT20	5.0	6.0	
T	BS-t	MT20	3.0	8.0	
U	BMWW-t	MT20	4.0	6.0	1.75 3.00
W	BMV1+p	MT20	2.0	4.0	2.25 1.00

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

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

BEARINGS

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG	REQRD BRG
	VERT	HORZ	DOWN	HORZ		
W	2099	0	2099	0	5-8	3-5
M	2099	0	2099	0	5-8	3-5

UNFACTORED REACTIONS

JT	COMBINED	1ST LCASE MAX./MIN. COMPONENT REACTIONS					SOIL
		SNOW	LIVE	PERM.LIVE	WIND	DEAD	
W	1494	927 / 0	0 / 0	0 / 0	0 / 0	567 / 0	0 / 0
M	1494	927 / 0	0 / 0	0 / 0	0 / 0	567 / 0	0 / 0

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

BRACING
 TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.78 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-V, D-U, E-S, G-R, I-O.

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

LOADING

TOTAL LOAD CASES: (4)

MEMB.	CHORDS		WEBS	
	FORCE (LBS)	VERT. LOAD (PLF)	MAX. FORCE (LBS)	MAX. FORCE (LBS)
FR-TO				
A-B	0 / 52	-78.0	-78.0	0.15 (1)
B-C	-1630 / 0	-78.0	-78.0	0.55 (1)
C-D	-1856 / 0	-78.0	-78.0	0.71 (1)
D-E	-2195 / 0	-78.0	-78.0	0.76 (1)
E-F	-2195 / 0	-78.0	-78.0	0.76 (1)
F-G	-2195 / 0	-78.0	-78.0	0.76 (1)
G-H	-2091 / 0	-78.0	-78.0	0.75 (1)
H-I	-2411 / 0	-78.0	-78.0	0.07 (1)
I-J	-1507 / 0	-78.0	-78.0	0.18 (1)
J-K	-1582 / 0	-78.0	-78.0	0.32 (1)
K-L	0 / 52	-78.0	-78.0	0.15 (1)
W-B	-2063 / 0	0.0	0.0	0.30 (1)
M-K	-2070 / 0	0.0	0.0	0.30 (1)
W-V	0 / 0	-18.5	-18.5	0.15 (4)
V-U	0 / 970	-18.5	-18.5	0.26 (4)
U-T	0 / 1856	-18.5	-18.5	0.39 (1)
T-S	0 / 1856	-18.5	-18.5	0.39 (1)
S-R	0 / 2092	-18.5	-18.5	0.45 (1)
R-Q	0 / 1439	-18.5	-18.5	0.35 (1)
Q-P	0 / 1439	-18.5	-18.5	0.35 (1)
P-O	0 / 1525	-18.5	-18.5	0.29 (1)
O-N	0 / 939	-18.5	-18.5	0.21 (1)
N-M	0 / 0	-18.5	-18.5	0.09 (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 ALL FLAT SECTIONS BASED ON A SLOPE OF 2.00/12 MINIMUM

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

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

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

ALLOWABLE DEFL.(LL)= L/360 (1.36")
 CALCULATED VERT. DEFL.(LL) = L/999 (0.12")
 ALLOWABLE DEFL.(TL)= L/360 (1.36")
 CALCULATED VERT. DEFL.(TL) = L/999 (0.24")

CSI: TC=0.76/1.00 (E-G:1), BC=0.45/1.00 (R-S:1), WB=0.94/1.00 (I-P:1), SSI=0.25/1.00 (G-H:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

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

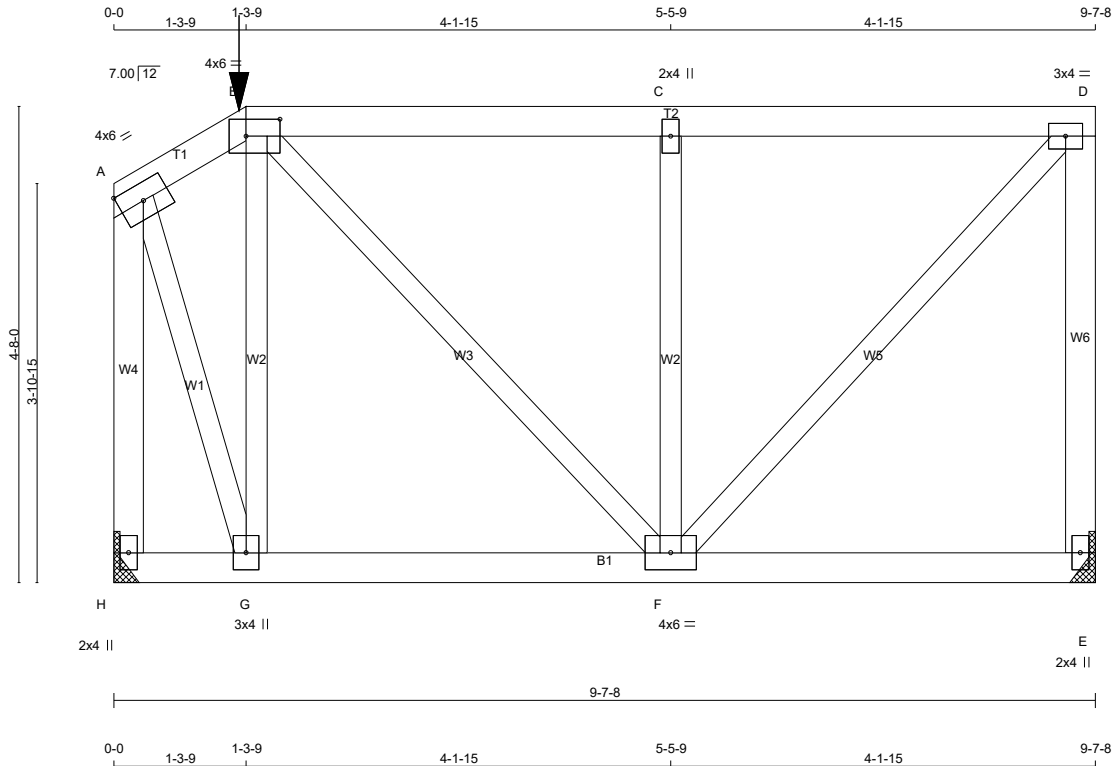
PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (B) (INPUT = 0.90)
 JSI METAL= 0.57 (T) (INPUT = 1.00)

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





TOTAL WEIGHT = 2 X 50 = 99 lb

LUMBER

N. L. G. A. RULES

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

DRY: SEASONED LUMBER.

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

CHORDS #ROWS	SURFACE SPACING (IN)	LOAD(PLF)
TOP CHORDS : (0.122"x3") SPIRAL NAILS		
A - B	12	SIDE(61.0)
B - D	12	SIDE(61.0)
D - E	12	TOP
H - A	12	TOP
BOTTOM CHORDS : (0.122"x3") SPIRAL NAILS		
H - E	12	SIDE(16.2)
WEBS : (0.122"x3") SPIRAL NAILS		
2x3	6	

NAILS TO BE DRIVEN FROM ONE SIDE ONLY.

GIRDER NAILING ASSUMES NAILED HANGERS ARE FASTENED WITH MIN. 3-0 INCH NAILS.

TOP - COMPONENTS ARE LOADED FROM THE TOP AND MUST BE PLACED ON TOP EDGE OF ALL PLYS FOR THE LOAD TO BE TRANSFERRED TO EACH PLY.

SIDE - PLF SHOWN IS THE EQUIVALENT UDL APPLIED TO ONE SIDE THAT THE CORRESPONDING NAILING PATTERN SHALL BE CAPABLE OF TRANSFERING. REMAINING PLF MUST BE APPLIED ON THE OPPOSITE SIDE OR ON THE TOP.

PLATES (table is in inches)

JT TYPE	PLATES	W	LEN	Y	X
A	TMVW-t	MT20	4.0	6.0	Edge
B	TTWW-I	MT20	4.0	6.0	2.00 4.00
C	TMW+w	MT20	2.0	4.0	
D	TMVW-t	MT20	3.0	4.0	
E	BMV1+p	MT20	2.0	4.0	
F	BMWWW-t	MT20	4.0	6.0	
G	BMWW+t	MT20	3.0	4.0	
H	BMV1+p	MT20	2.0	4.0	

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

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

BEARINGS

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG	REQRD BRG
	VERT	HORZ	DOWN	HORZ		
E	1195	0	1195	0	0	MECHANICAL
H	1148	0	1148	0	0	MECHANICAL

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

UNFACTORED REACTIONS

JT	COMBINED	MAX./MIN. COMPONENT REACTIONS					
		1ST LCASE	SNOW	LIVE	PERM.LIVE	WIND	DEAD
E	852	521 / 0	0 / 0	0 / 0	0 / 0	331 / 0	0 / 0
H	819	495 / 0	0 / 0	0 / 0	0 / 0	324 / 0	0 / 0

BRACING

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

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

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

LOADING

TOTAL LOAD CASES: (4)

MEMB.	MAX. FACTORED FORCE (LBS)	CHORDS				WEBS			
		VERT. LOAD (PLF)	LC1 MAX	MAX-	MAX+	MEMB. UNBRAC LENGTH	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)	
A-B	-402 / 0	-78.0	-78.0	0.01 (1)	6.25	G-B	-738 / 0	0.12 (1)	
B-C	-757 / 0	-199.8	-199.8	0.31 (1)	6.25	B-F	0 / 622	0.08 (1)	
C-D	-757 / 0	-199.8	-199.8	0.31 (1)	6.25	F-C	-1026 / 0	0.17 (1)	
E-D	-1113 / 0	0.0	0.0	0.20 (1)	7.81	F-D	0 / 1098	0.14 (1)	
H-A	-1142 / 0	0.0	0.0	0.15 (1)	7.81	A-G	0 / 952	0.12 (1)	
H-G	0 / 0	-47.4	-47.4	0.05 (4)	10.00				
G-F	0 / 328	-47.4	-47.4	0.13 (4)	10.00				
F-E	0 / 0	-47.4	-47.4	0.11 (4)	10.00				

FACTORED CONCENTRATED LOADS (LBS)

JT	LOC	LC1	MAX-	MAX+	FACE	DIR.	TYPE	HEEL	CONN.
B	1-3-9	-8	-8	---	FRONT	VERT	TOTAL	---	C1
B	1-3-9	-114	-114	---	BACK	VERT	TOTAL	---	C1

CONNECTION REQUIREMENTS

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

DESIGN CRITERIA

SPECIFIED LOADS:

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

SPACING = 24.0 IN. C/C

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

GIRDER TYPE: CPrimeHip
 LEFT SETBACK = 1-3-9
 RIGHT SETBACK = 0-0
 END SETBACK = 2-0-0
 END WALL WIDTH = 0-0
 CORNER FRAMING TYPE: CONVENTIONAL
 END JACK TYPE: CONVENTIONAL
 APPLIED TO FRONT SIDE
 - ADDTL LOADS BASED ON 55 % OF GSL.

GIRDER TYPE: CPrimeHip
 LEFT SETBACK = 1-3-9
 RIGHT SETBACK = 0-0
 END SETBACK = 8-3-0
 END WALL WIDTH = 0-0
 CORNER FRAMING TYPE: CONVENTIONAL
 END JACK TYPE: CONVENTIONAL
 APPLIED TO BACK 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 (0.32")
 CALCULATED VERT. DEFL.(LL) = L/999 (0.01")
 ALLOWABLE DEFL.(TL)= L/360 (0.32")
 CALCULATED VERT. DEFL.(TL) = L/999 (0.02")

CSI: TC=0.31/1.00 (C-D:1), BC=0.13/1.00 (F-G:4), WB=0.17/1.00 (C-F:1), SSI=0.22/1.00 (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 (PSI)	SECTION (PLI)
MT20	650	371	1747 788 1987 1873

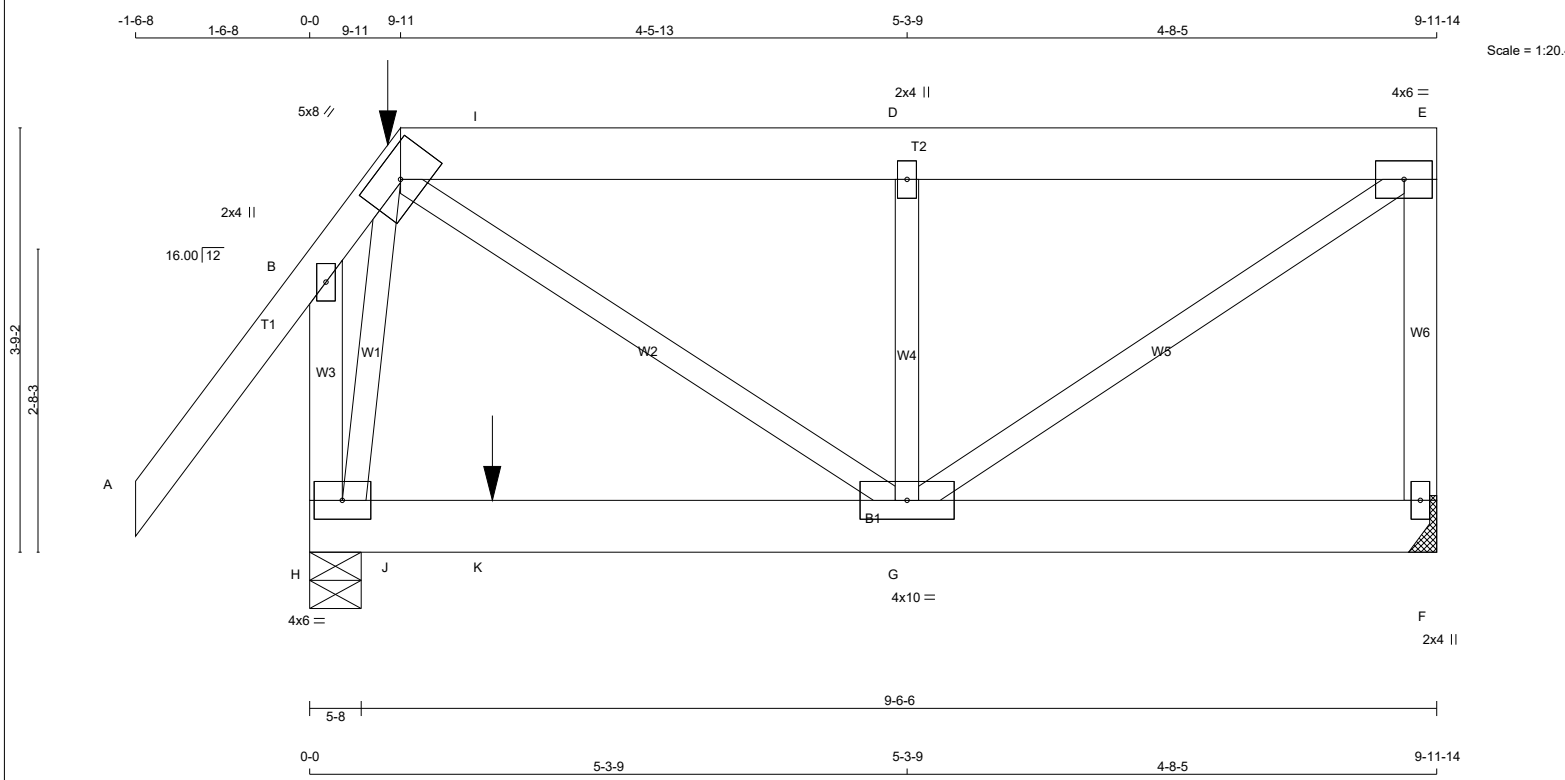
PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.84 (D) (INPUT = 0.90)
 JSI METAL= 0.17 (D) (INPUT = 1.00)

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





TOTAL WEIGHT = 2 X 58 = 116 lb

LUMBER
N. L. G. A. RULES

CHORDS	SIZE	LUMBER	DESCR.
A - C	2x4	No.2	SPF
C - E	2x6	No.2	SPF
F - E	2x4	No.2	SPF
H - B	2x4	No.2	SPF
H - F	2x6	No.2	SPF

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

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

CHORDS #ROWS	SURFACE SPACING (IN)	LOAD(PLF)
TOP CHORDS : (0.122"x3") SPIRAL NAILS		
A - C 1	12	SIDE(61.0)
E - F 1	12	TOP
H - B 1	12	TOP
C - E 2	12	SIDE(74.3)
BOTTOM CHORDS : (0.122"x3") SPIRAL NAILS		
H - F 2	12	SIDE(19.7)
WEBS : (0.122"x3") SPIRAL NAILS		
2x3 1	6	

NAILS TO BE DRIVEN FROM ONE SIDE ONLY.
 GIRDER NAILING ASSUMES NAILED HANGERS ARE FASTENED WITH MIN. 3-0 INCH NAILS.

TOP - COMPONENTS ARE LOADED FROM THE TOP AND MUST BE PLACED ON TOP EDGE OF ALL PLIES FOR THE LOAD TO BE TRANSFERRED TO EACH PLY.

SIDE - PLF SHOWN IS THE EQUIVALENT UDL APPLIED TO ONE SIDE THAT THE CORRESPONDING NAILING PATTERN SHALL BE CAPABLE OF TRANSFERING. REMAINING PLF MUST BE APPLIED ON THE OPPOSITE SIDE OR ON THE TOP.

PLATES (table is in inches)

JT TYPE	PLATES	W	LEN	Y	X
B	TMV+p	MT20	2.0	4.0	
C	TTWW-h	MT20	5.0	8.0	
D	TMW+w	MT20	2.0	4.0	
E	TMVW-t	MT20	4.0	6.0	
F	BMV1+p	MT20	2.0	4.0	
G	BMVWW-t	MT20	4.0	10.0	
H	BMVW1-t	MT20	4.0	6.0	

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
F	1800	0	1800	0
H	2504	0	2504	0

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

UNFACTORED REACTIONS

JT	1ST LCASE	MAX./MIN.	COMPONENT REACTIONS
JT	COMBINED	SNOW	LIVE PERM.LIVE WIND DEAD SOIL
F	1284	782 / 0	0 / 0 0 / 0 0 / 0 501 / 0 0 / 0
H	1782	1103 / 0	0 / 0 0 / 0 0 / 0 679 / 0 0 / 0

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

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

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

LOADING
 TOTAL LOAD CASES: (4)

MEMB.	CHORDS				WEBS			
	MAX. FACTORED FORCE (LBS)	FACTORED VERT. (PLF)	LC1 MAX	MAX CSI (LC)	MEMB. UNBRAC LENGTH	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)	
FR-TO		FROM TO			FR-TO			
A-B	0 / 52	-78.0	-78.0	0.08 (1)	10.00	C-G	0 / 1795	0.22 (1)
B-C	-106 / 0	-78.0	-78.0	0.08 (1)	6.25	G-D	-1435 / 0	0.15 (1)
C-I	-1780 / 0	-116.8	-116.8	0.20 (1)	6.25	G-E	0 / 2176	0.27 (1)
I-D	-1780 / 0	-265.4	-265.4	0.20 (1)	6.25	H-C	-1398 / 0	0.15 (1)
D-E	-1780 / 0	-265.4	-265.4	0.20 (1)	6.25			
F-E	-1762 / 0	0.0	0.0	0.17 (1)	7.81			
H-B	-293 / 0	0.0	0.0	0.02 (1)	7.81			
H-J	0 / 333	-27.7	-27.7	0.52 (1)	10.00			
J-K	0 / 333	-27.7	-27.7	0.52 (1)	10.00			
K-G	0 / 333	-63.0	-63.0	0.52 (1)	10.00			
G-F	0 / 0	-63.0	-63.0	0.19 (4)	10.00			

FACTORED CONCENTRATED LOADS (LBS)

JT	LOC.	LC1	MAX-	MAX+	FACE	DIR.	TYPE	HEEL	CONN.
C	9-11	-26	-26	---	FRONT	VERT	TOTAL	---	C1
K	1-7-7	-1198	-1198	---	BACK	VERT	TOTAL	---	C1

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

DESIGN CRITERIA

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

SPECIFIED LOADS:

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

SPACING = 24.0 IN. C/C

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

GIRDER TYPE: CPrimeHip
 LEFT SETBACK = 9-11
 RIGHT SETBACK = 0-0
 END SETBACK = 3-11-14
 END WALL WIDTH = 0-0
 CORNER FRAMING TYPE: CONVENTIONAL
 END JACK TYPE: CONVENTIONAL
 APPLIED TO FRONT SIDE
 - ADDTL LOADS BASED ON 55 % OF GSL.

GIRDER TYPE: CPrimeHip
 SIDE SETBACK = 0-0
 END SETBACK = 9-7-8
 END WALL WIDTH = 0-0
 CORNER FRAMING TYPE: CONVENTIONAL
 END JACK TYPE: CONVENTIONAL
 APPLIED TO BACK SIDE
 - ADDTL LOADS BASED ON 55 % OF GSL.
 LOADS APPLIED TO FIRST 8-4-7 OF SPAN MEASURED FROM THE RIGHT.

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

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

THIS DESIGN COMPLIES WITH:
 - PART 9 OF CBC2018, ABC 2019
 - PART 9 OF OBC 2012 (2019 AMENDMENT)
 - CSA 086-14
 - TPIC 2014

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

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

ALLOWABLE DEFL (LL) = L/360 (0.33")
 CALCULATED VERT. DEFL (LL) = L/999 (0.04")
 ALLOWABLE DEFL (TL) = L/360 (0.33")
 CALCULATED VERT. DEFL (TL) = L/999 (0.08")

CSI: TC=0.20/1.00 (D-E:1), BC=0.52/1.00 (G-H:1), WB=0.27/1.00 (E-G:1), SSI=0.28/1.00 (G-H:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

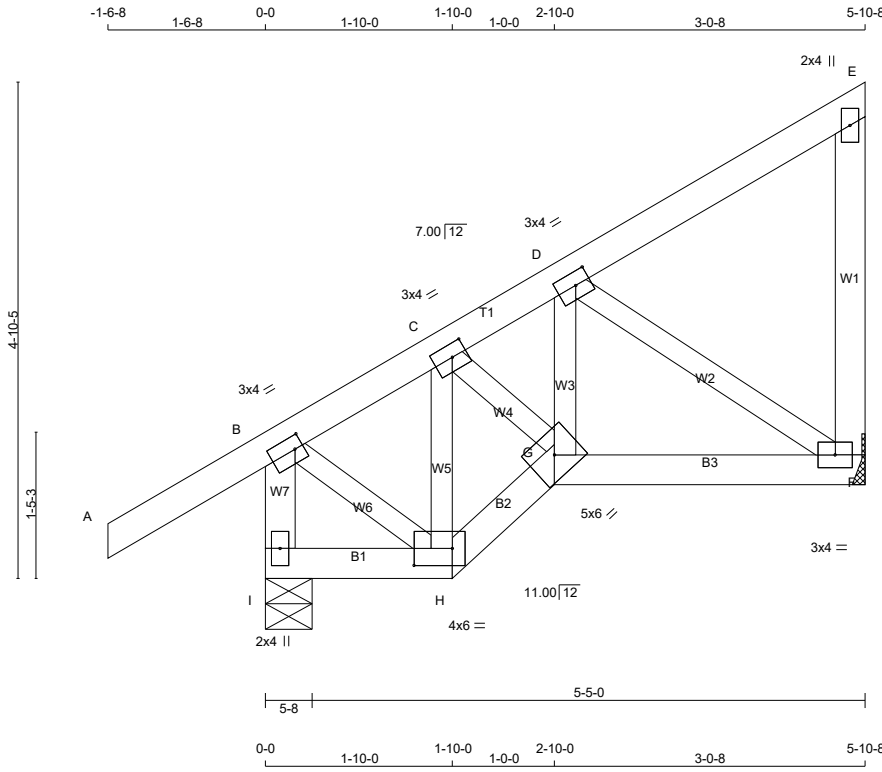
AUTOSOLVE RIGHT HEEL ONLY
 TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT.

NAIL VALUES

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

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

JSI GRIP= 0.78 (C) (INPUT = 0.90)
 JSI METAL= 0.24 (E) (INPUT = 1.00)



TOTAL WEIGHT = 7 X 30 = 210 lb

LUMBER
N. L. G. A. RULES

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

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMVW-t	MT20	3.0	4.0	1.50	1.00
C	TMWW-t	MT20	3.0	4.0	1.50	1.75
D	TMWW-t	MT20	3.0	4.0	1.50	1.75
E	TMV+p	MT20	2.0	4.0		
F	BMVW1-t	MT20	3.0	4.0		
G	BBWW-h	MT20	5.0	6.0		
H	BBWW-l	MT20	4.0	6.0	2.00	4.50
I	BMV1+p	MT20	2.0	4.0		

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

BEARINGS

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG		REQRD BRG	
	VERT	HORZ	DOWN	HORZ	IN-SX	IN-SX	IN-SX	IN-SX
I	427	0	427	0	5-8	1-8		
F	266	0	266	0	MECHANICAL			

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

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS					
		SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
I	301	200 / 0	0 / 0	0 / 0	0 / 0	101 / 0	0 / 0
F	190	114 / 0	0 / 0	0 / 0	0 / 0	76 / 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)

MEMB.	CHORDS MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)			MAX. UNBRAC LENGTH	WEBS MAX. FACTORED FORCE (LBS)		
		FROM	TO	CSI (LC)		MEMB.	FORCE (LBS)	MAX CSI (LC)
I-B	-410 / 0	0.0	0.0	0.04 (1)	7.81	B-H	0 / 142	0.03 (1)
A-B	0 / 32	-78.0	-78.0	0.14 (1)	10.00	H-C	-151 / 0	0.02 (1)
B-C	-178 / 0	-78.0	-78.0	0.14 (1)	6.25	C-G	0 / 163	0.04 (1)
C-D	-226 / 0	-78.0	-78.0	0.08 (1)	6.25	G-D	0 / 51	0.02 (4)
D-E	-10 / 0	-78.0	-78.0	0.08 (1)	6.25	D-F	-268 / 0	0.06 (1)
F-E	-94 / 0	0.0	0.0	0.02 (1)	7.81			
I-H	0 / 0	-18.5	-18.5	0.02 (4)	10.00			
H-G	0 / 155	-18.5	-18.5	0.03 (1)	10.00			
G-F	0 / 224	-18.5	-18.5	0.07 (4)	10.00			

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	DL	PSF
	21.0	6.0	PSF
BOT CH.	LL	DL	PSF
	0.0	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 BCBC 2018, ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

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

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

ALLOWABLE DEFL.(LL)= L/360 (0.20")
CALCULATED VERT. DEFL.(LL) = L/999 (0.00")
ALLOWABLE DEFL.(TL)= L/360 (0.20")
CALCULATED VERT. DEFL.(TL) = L/999 (0.01")
CSI: TC=0.14/1.00 (A-B:1), BC=0.07/1.00 (F-G:4), WB=0.06/1.00 (D-F:1), SSI=0.09/1.00 (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

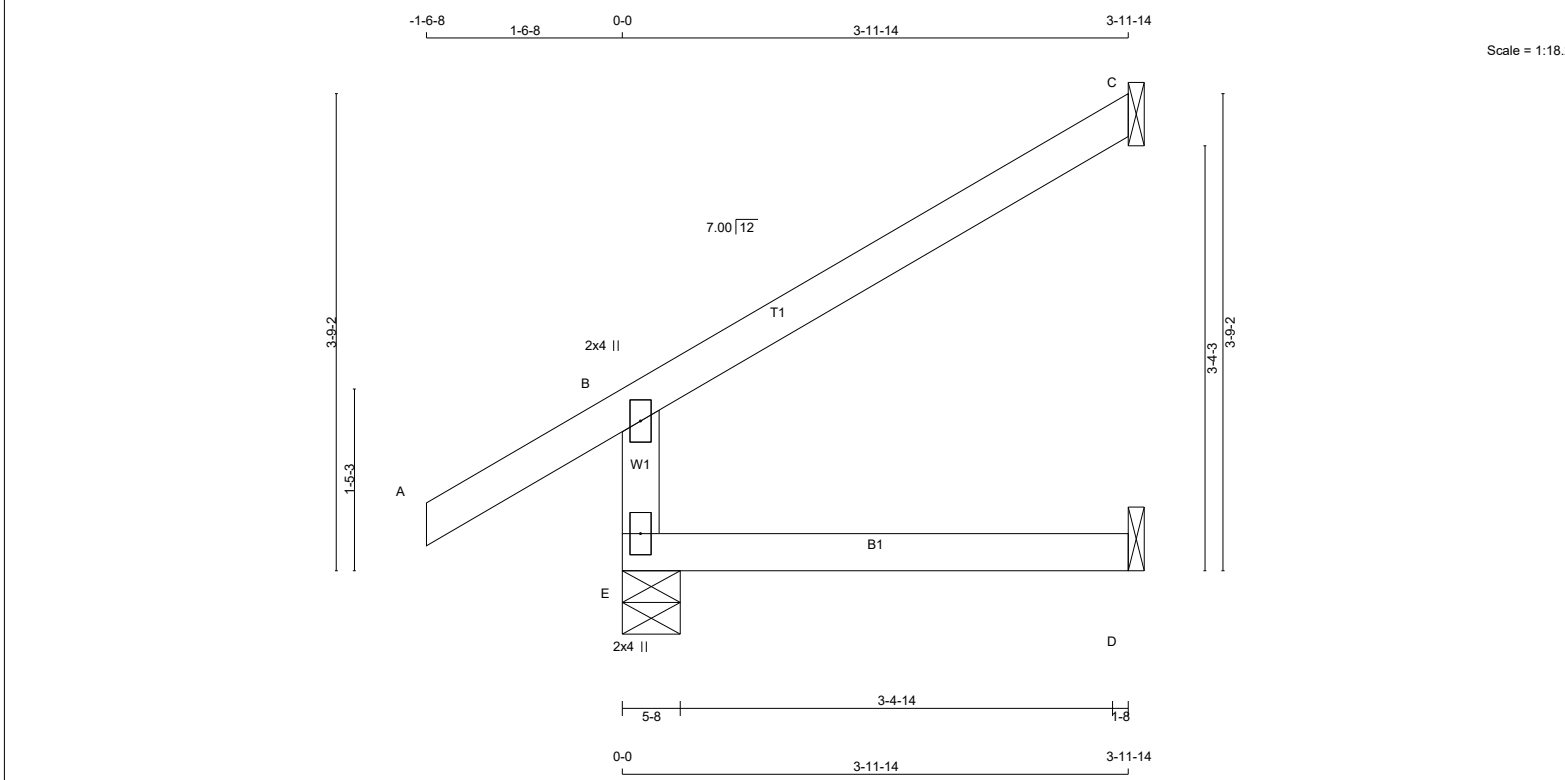
PLATE	GRIP(DRY) (PSI)	SHEAR (PLI)	SECTION (PLI)
MT20	650	371	1747 788 1987 1873

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

JSI GRIP= 0.46 (B) (INPUT = 0.90)
JSI METAL= 0.09 (B) (INPUT = 1.00)

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





TOTAL WEIGHT = 5 X 13 = 66 lb

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

DRY: SEASONED LUMBER.

PLATES (table is in inches)

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

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

BEARINGS

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG	REQRD BRG
	VERT	HORZ	DOWN	HORZ		
E	362	0	362	0	5-8	1-8
C	117	0	117	0	1-8	1-8
D	32	0	36	0	1-8	1-8

SEE MITEK STANDARD DETAIL MSD2015-H FOR CONNECTION TO JOINT(S) C, D

UNFACTORED REACTIONS

JT	1ST LCASE	MAX./MIN. COMPONENT REACTIONS				DEAD	SOIL
		SNOW	LIVE	PERM.LIVE	WIND		
E	255	172 / 0	0 / 0	0 / 0	0 / 0	83 / 0	0 / 0
C	81	63 / 0	0 / 0	0 / 0	0 / 0	18 / 0	0 / 0
D	26	0 / 0	0 / 0	0 / 0	0 / 0	26 / 0	0 / 0

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

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

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

LOADING
 TOTAL LOAD CASES: (7)

MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)		LC1 MAX	MAX. UNBRAC LENGTH	WEBS MAX. FACTORED FORCE (LBS)	
		FROM	TO			CSi (LC)	CSi (LC)
FR-TO							
E-B	-320 / 0	0.0	0.0	0.05 (4)	7.81		
A-B	0 / 32	-78.0	-78.0	0.17 (5)	10.00		
B-C	-20 / 0	-78.0	-78.0	0.21 (6)	6.25		
E-D	0 / 0	-18.5	-18.5	0.06 (4)	10.00		

CANTILEVER ANALYSIS HAS BEEN CONSIDERED IN THIS DESIGN
 PATTERN-LOADING CHECK APPLIED TO THIS TRUSS.

DESIGN CRITERIA

SPECIFIED LOADS:

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

SPACING = 24.0 IN. C/C

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

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

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

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

ALLOWABLE DEFL.(LL)= L/360 (0.19")
 CALCULATED VERT. DEFL.(LL) = L/999 (0.00")
 ALLOWABLE DEFL.(TL)= L/360 (0.19")
 CALCULATED VERT. DEFL.(TL) = L/999 (0.01")
 CSI: TC=0.21/1.00 (B-C:6), BC=0.06/1.00 (D-E:4),
 WB=0.00/1.00 (n/a:0), SSI=0.13/1.00 (B-C:6)

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

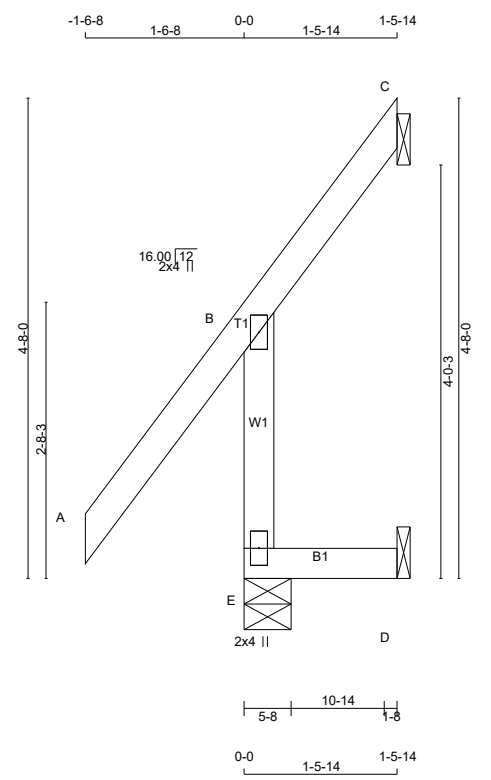
PLATE	GRIP(DRY)	SHEAR (PSI)	SECTION (PLI)	SECTION (PLI)	MAX MIN	MAX MIN
MT20	650	371	1747	788	1987	1873

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

JSI GRIP= 0.19 (B) (INPUT = 0.90)
 JSI METAL= 0.15 (B) (INPUT = 1.00)

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





Scale = 1:22.4

TOTAL WEIGHT = 5 X 11 = 53 lb

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

DRY: SEASONED LUMBER.

PLATES (table is in inches)

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

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

BEARINGS

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG	REQRD BRG
	VERT	HORZ	DOWN	HORZ		
E	273	0	273	0	5-8	1-8
C	0	0	0	-47	1-8	1-8
D	0	0	12	0	1-8	1-8

SEE MITEK STANDARD DETAIL MSD2015-H FOR CONNECTION TO JOINT(S) C, D
 PROVIDE ANCHORAGE AT BEARING JOINT C FOR 150 LBS. FACTORED UPLIFT
 PROVIDE ANCHORAGE AT BEARING JOINT D FOR 150 LBS. FACTORED UPLIFT

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS					
		SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
E	191	140 / 0	0 / 0	0 / 0	0 / 0	51 / 0	0 / 0
C	0	0 / -30	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0
D	0	0 / -9	0 / 0	0 / 0	0 / 0	9 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) E
BRACING
 TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.
 MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.
 ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

LOADING
 TOTAL LOAD CASES: (5)

MEMB.	CHORDS			WEBS		
	MAX. FORCE (LBS)	FACTORED VERT. LOAD (PLF)	FACTORED VERT. LOAD (LC)	MAX. UNBRAC LENGTH	MEMB. FORCE (LBS)	FACTORED MAX. FORCE (LC)
E-B	-245 / 0	0.0	0.0	0.03 (5)	7.81	
A-B	0 / 52	-78.0	-78.0	0.15 (1)	10.00	
B-C	-46 / 0	-78.0	-78.0	0.12 (1)	6.25	
E-D	0 / 0	-18.5	-18.5	0.03 (5)	10.00	

CANTILEVER ANALYSIS HAS BEEN CONSIDERED IN THIS DESIGN
 PATTERN-LOADING CHECK APPLIED TO THIS TRUSS.

DESIGN CRITERIA

SPECIFIED LOADS:

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

SPACING = 24.0 IN. C/C
 THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015

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

DESIGN ASSUMPTIONS
 -OVERHANG NOT TO BE ALTERED OR CUT OFF.
 (55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.19")
 CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")
 ALLOWABLE DEFL.(TL)= L/360 (0.19")
 CALCULATED VERT. DEFL.(TL) = L/ 999 (0.00")
 CSI: TC=0.15/1.00 (A-B:1), BC=0.03/1.00 (D-E:5), WB=0.00/1.00 (n/a:0), SSI=0.06/1.00 (A-B:1)
 DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10 COMP=1.10 SHEAR=1.10 TENS= 1.10
 COMPANION LIVE LOAD FACTOR = 1.00

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches
 PLATE ROTATION TOL. = 5.0 Deg.
 JSI GRIP= 0.21 (B) (INPUT = 0.90)
 JSI METAL= 0.12 (B) (INPUT = 1.00)

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



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:

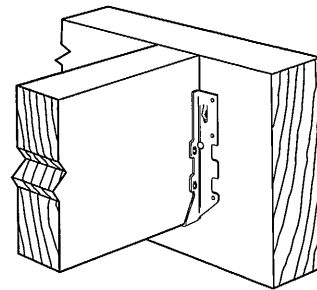
- Factored resistances are in accordance with CSA O86-14 and CSA O86:19.
- Uplift resistances have been increased 15%. No further increase is permitted.
- Wood shear is not considered in the factored resistances given. The specifier must ensure that the joist and header capacities are capable of withstanding these loads.

Installation:

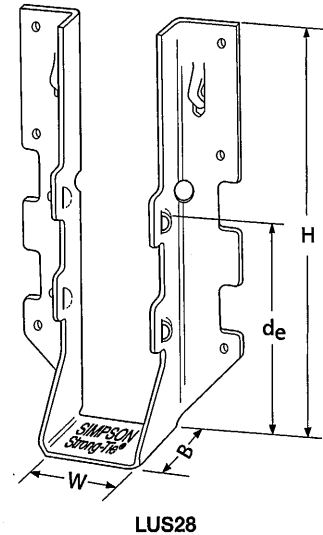
- Use all specified fasteners
- Nails: 16d = 0.162" dia. x 3½" long common wire, 10d = 0.148" x 3" long common wire
- Double-shear nails must be driven at an angle through the joist or truss into the header to achieve the table loads
- Not designed for welded or nailer applications

Options:

- These hangers cannot be modified

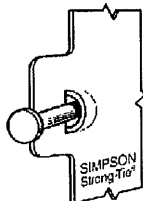


Typical LUS Installation



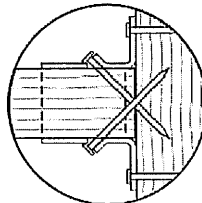
Model No.	Ga.	Dimensions (in.)				Fasteners		Factored Resistance (lb.)			
		W	H	B	d _o ¹	Face	Joist	D.Fir-L		S-P-F	
								Uplift	Normal	Uplift	Normal
LUS24	18	1 1/16	3 1/8	1 1/4	1 15/16	(4) 10d	(2) 10d	710	1630	645	1155
LUS24-2	18	3 1/8	3 1/8	2	1 13/16	(4) 16d	(2) 16d	835	2020	590	1435
LUS26	18	1 1/16	4 3/4	1 1/4	3 5/8	(4) 10d	(4) 10d	1420	2170	1290	1630
LUS26-2	18	3 1/8	4 7/8	2	4	(4) 16d	(4) 16d	1720	2595	1545	1920
LUS26-3	18	4 5/8	4 3/16	2	3 1/4	(4) 16d	(4) 16d	1720	2595	1545	2340
LUS28	18	1 1/16	6 5/8	1 1/4	3 3/4	(6) 10d	(6) 10d	1420	2520	1290	1790
LUS28-2	18	3 1/8	7	2	4	(6) 16d	(4) 16d	1720	3325	1545	2575
LUS28-3	18	4 5/8	6 1/4	2	3 1/4	(6) 16d	(4) 16d	1720	3325	1545	2375
LUS210	18	1 1/16	7 15/16	1 1/4	3 7/8	(8) 10d	(4) 10d	1420	2785	1290	2210
LUS210-2	18	3 1/8	9	2	6	(8) 16d	(6) 16d	2580	4500	2320	3195
LUS210-3	18	4 5/8	8 3/16	2	5 1/4	(8) 16d	(6) 16d	2580	3345	2320	2375

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

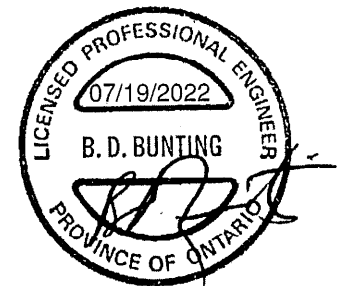


Dome double-shear nailing prevents tabs breaking off (available on some models).

US Patent 5,603,580



Double-shear nailing top view.



This technical bulletin is effective until December 31, 2024, and reflects information available as of July 1, 2022. This information is updated periodically and should not be relied upon after December 31, 2024. Contact Simpson Strong-Tie for current information and limited warranty or see 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:

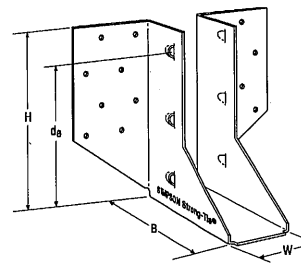
- Factored resistances are in accordance with CSA O86-14 and CSA O86:19.
- Uplift resistances have been increased 15%. No further increase is permitted.
- Wood shear is not considered in the factored resistances given. The specifier must ensure that the joist and header capacities are capable of withstanding these loads.

Installation:

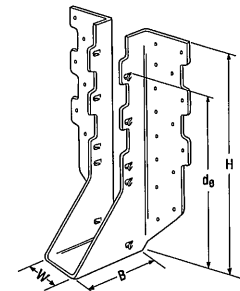
- Use all specified fasteners
- Nails: 16d = 0.162" dia. x 3½" long common wire
- Double-shear nails must be driven at an angle through the joist or truss into the header to achieve the table loads
- Not designed for welded or nailer applications

Options:

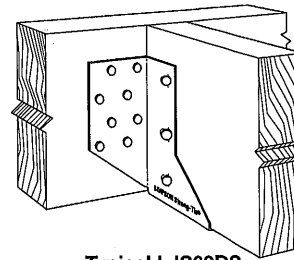
- See current catalogue for options



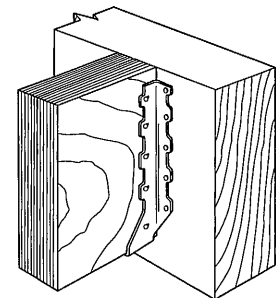
LJS26DS



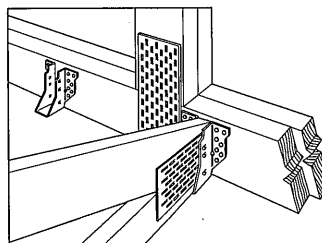
HUS210
(HUS26, HUS28, similar)



Typical LJS26DS Installation



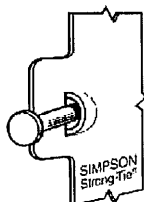
Typical HUS Installation



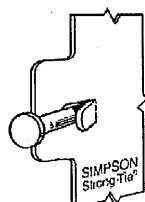
Typical HUS Installation
(Truss designer to provide fastener quantity for connecting multiple members together)

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)
lb.	lb.	lb.	lb.								
LJS26DS	18	1¾	5	3½	4⅝	(16) 16d	(6) 16d	2055	4265	1460	4115
HUS26	16	1⅝	5⅝	3	3⅛	(14) 16d	(6) 16d	2705	4940	2065	3875
HUS28	16	1⅝	7½	3	6⅞	(22) 16d	(8) 16d	3605	5365	2675	4345
HUS210	16	1⅝	9½	3	7⅞	(30) 16d	(10) 16d	4505	5795	4010	4740
HUS1.81/10	16	1¾	9	3	8	(30) 16d	(10) 16d	4505	6450	4010	5200

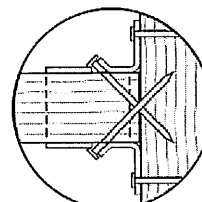
1. d_e is the distance from the seat of the hanger to the highest joist nail.



Dome double-shear nailing prevents tabs breaking off (available on some models).
 US Patent 5,603,580



Double-shear nailing side view. Do not bend tab back.



Double-shear nailing top view.



This technical bulletin is effective until December 31, 2024, and reflects information available as of July 1, 2022. This information is updated periodically and should not be relied upon after December 31, 2024. Contact Simpson Strong-Tie for current information and limited warranty or see strongtie.com.

HHUS — Double-Shear Joist Hangers

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

Material: 14 gauge

Finish: G90 galvanized

Design:

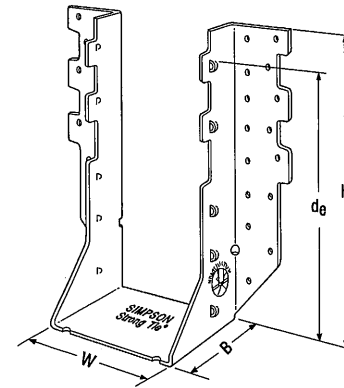
- Factored resistances are in accordance with CSA O86-14 and CSA O86:19.
- Uplift resistances have been increased 15%. No further increase is permitted.
- Wood shear is not considered in the factored resistances given. The specifier must ensure that the joist and header capacities are capable of withstanding these loads.

Installation:

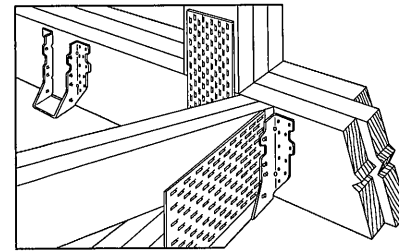
- Use all specified fasteners
- Nails: 16d = 0.162" dia. x 3½" long common wire
- Double-shear nails must be driven at an angle through the joist or truss into the header to achieve the table loads
- Not designed for welded or nailer applications

Options:

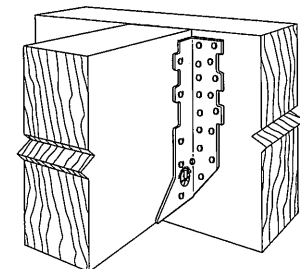
- See current catalogue for options



HHUS410



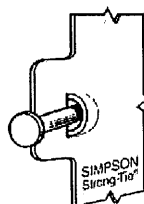
Typical HHUS Installation
(Truss designer to provide fastener quantity for connecting multiple members together)



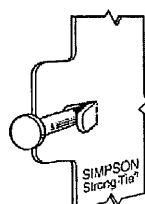
Typical HHUS Installation

Model No.	Ga.	Dimensions (in.)				Fasteners		Factored Resistance (lb.)			
		W	H	B	d _e ¹	Face	Joist	D.Fir-L		S-P-F	
								Uplift (K _p =1.15)	Normal (K _p =1.00)	Uplift (K _p =1.15)	Normal (K _p =1.00)
HHUS26-2	14	3 1/16	5 1/16	3	3 15/16	(14) 16d	(6) 16d	2850	7335	2065	5205
HHUS28-2	14	3 1/16	7 1/32	3	6 5/32	(22) 16d	(8) 16d	3765	8940	2675	6345
HHUS210-2	14	3 1/16	9 3/32	3	8	(30) 16d	(10) 16d	4670	9660	4235	7000
HHUS210-3	14	4 1/16	9	3	7 15/16	(30) 16d	(10) 16d	4670	9670	4235	6865
HHUS210-4	14	6 1/8	8 29/32	3	7 27/32	(30) 16d	(10) 16d	4670	10155	4235	7210
HHUS46	14	3 5/8	5 19/32	3	3 15/16	(14) 16d	(6) 16d	2540	7335	2065	5205
HHUS48	14	3 5/8	7 1/8	3	6 1/8	(22) 16d	(8) 16d	3765	8945	2267	6345
HHUS410	14	3 5/8	9	3	8	(30) 16d	(10) 16d	4670	9855	4235	7000
HHUS5.50/10	14	5 1/2	9	3	8	(30) 16d	(10) 16d	4670	10155	4235	7210
HHUS7.25/10	14	7 1/4	9	3 5/16	7 29/32	(30) 16d	(10) 16d	4670	10155	3370	7210

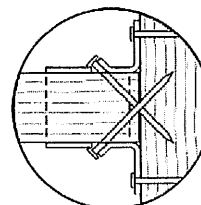
1. d_e is the distance from the seat of the hanger to the highest joist nail.



Dome double-shear nailing prevents tabs breaking off (available on some models).
US Patent 5,603,580



Double-shear nailing side view. Do not bend tab back.



Double-shear nailing top view.



This technical bulletin is effective until December 31, 2024, and reflects information available as of July 1, 2022. This information is updated periodically and should not be relied upon after December 31, 2024. Contact Simpson Strong-Tie for current information and limited warranty or see strongtie.com.

HGUS — Double-Shear Joist Hangers

All HGUS 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: 12 gauge

Finish: G90 galvanized

Design:

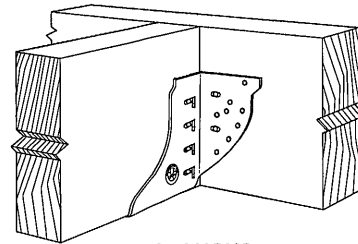
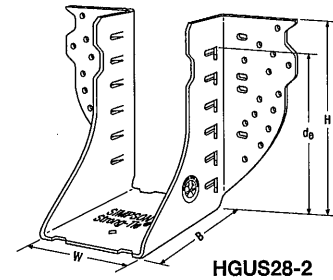
- Factored resistances are in accordance with CSA O86-14 and CSA O86:19.
- Uplift resistances have been increased 15%. No further increase is permitted.
- Wood shear is not considered in the factored resistances given. The specifier must ensure that the joist and header capacities are capable of withstanding these loads.

Installation:

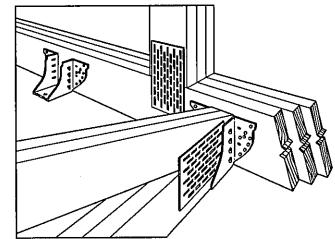
- Use all specified fasteners
- Nails: 16d = 0.162" dia x 3½" long common wire
- Double-shear nails must be driven at an angle through the joist or truss into the header to achieve the table loads
- Not designed for welded or nailer applications

Options:

- See current catalogue for options



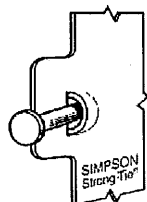
Typical HGUS Installation



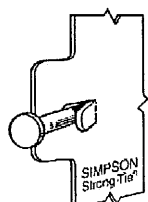
Typical HGUS Installation
(Truss designer to provide fastener quantity for connecting multiple members together)

Model No.	Ga.	Dimensions (in.)				Fasteners		Factored Resistance (lb.)			
		W	H	B	d ₀ ¹	Face	Joist	D.Fir-L		S-P-F	
								Uplift (K _p =1.15)	Normal (K _p =1.00)	Uplift (K _p =1.15)	Normal (K _p =1.00)
HGUS26	12	1 5/8	5 3/8	5	4 5/32	(20) 16d	(8) 16d	2685	6625	2685	5700
HGUS26-2	12	3 5/16	5 7/16	4	4 1/8	(20) 16d	(8) 16d	4385	8950	3100	6355
HGUS26-3	12	4 15/16	5 1/2	4	4 1/8	(20) 16d	(8) 16d	4385	8950	3100	6355
HGUS26-4	12	6 9/16	5 7/16	4	4 1/8	(20) 16d	(8) 16d	4385	8950	3100	6355
HGUS28	12	1 5/8	7 1/8	5	6 1/8	(36) 16d	(12) 16d	3310	7675	3100	6900
HGUS28-2	12	3 5/16	7 3/16	4	6 1/8	(36) 16d	(12) 16d	6070	12980	4310	9215
HGUS28-3	12	4 15/16	7 1/4	4	6 1/8	(36) 16d	(12) 16d	6070	12980	4310	9215
HGUS28-4	12	6 9/16	7 3/16	4	6 1/8	(36) 16d	(12) 16d	6070	12980	4310	9215
HGUS210-2	12	3 5/16	9 9/16	4	8 1/8	(46) 16d	(16) 16d	6840	14015	4855	10270
HGUS210-3	12	4 15/16	9 1/4	4	8 3/8	(46) 16d	(16) 16d	6840	14645	4855	10400
HGUS210-4	12	6 9/16	9 9/16	4	8 1/8	(46) 16d	(16) 16d	6840	14645	4855	10400
HGUS212-4	12	6 9/16	10 5/8	4	10 1/8	(56) 16d	(20) 16d	7640	14995	5425	10645
HGUS214-4	12	6 9/16	12 5/8	4	11 1/8	(66) 16d	(22) 16d	10130	16400	7195	11645

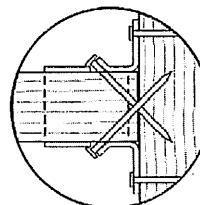
1. d₀ is the distance from the seat of the hanger to the highest joist nail.



Dome double-shear nailing prevents tabs breaking off (available on some models).
US Patent 5,603,580



Double-shear nailing side view. Do not bend tab back.



Double-shear nailing top view.



TC – Truss Connectors

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

Material: 16 gauge

Finish: G90 galvanized

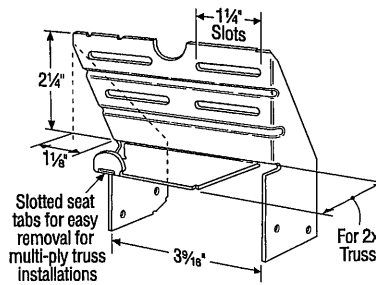
Design: Factored resistances are in accordance with CSA O86-14 and CSA O86:19

Installation:

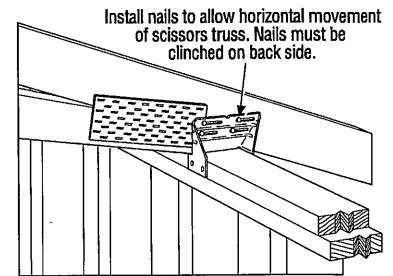
- Use all specified fasteners.
- Nails: 10d = 0.148" dia. x 3" long common wire, 10d x 1½ = 0.148" dia. x 1½" long.
- Drive 10d nails into the truss at the inside end of the slotted holes (inside end is towards the centre of the truss) and clinch on the back side. Do not seat these nails into the truss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

Optional TC Installation:

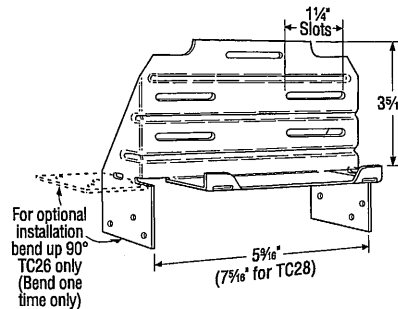
- Bend one flange up 90°. Drive specified nails into the top and face of the top plates or install Titen® screws into the top and face of masonry wall. See optional load tables and installation details.



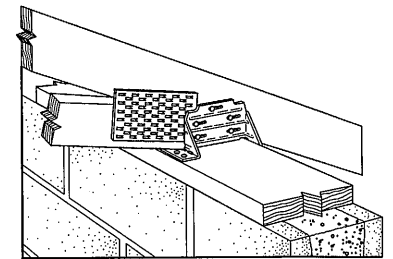
TC24
US Patent 4,932,173



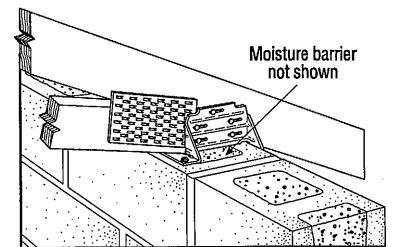
Typical TC24 Installation



TC26
(TC28 Similar)



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



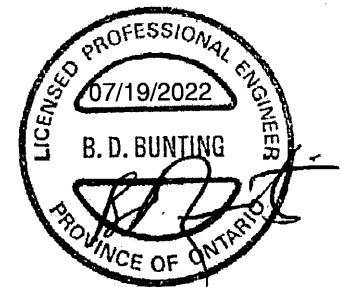
Optional TC26 Installation for Grouted Concrete Block using Titen Screws

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

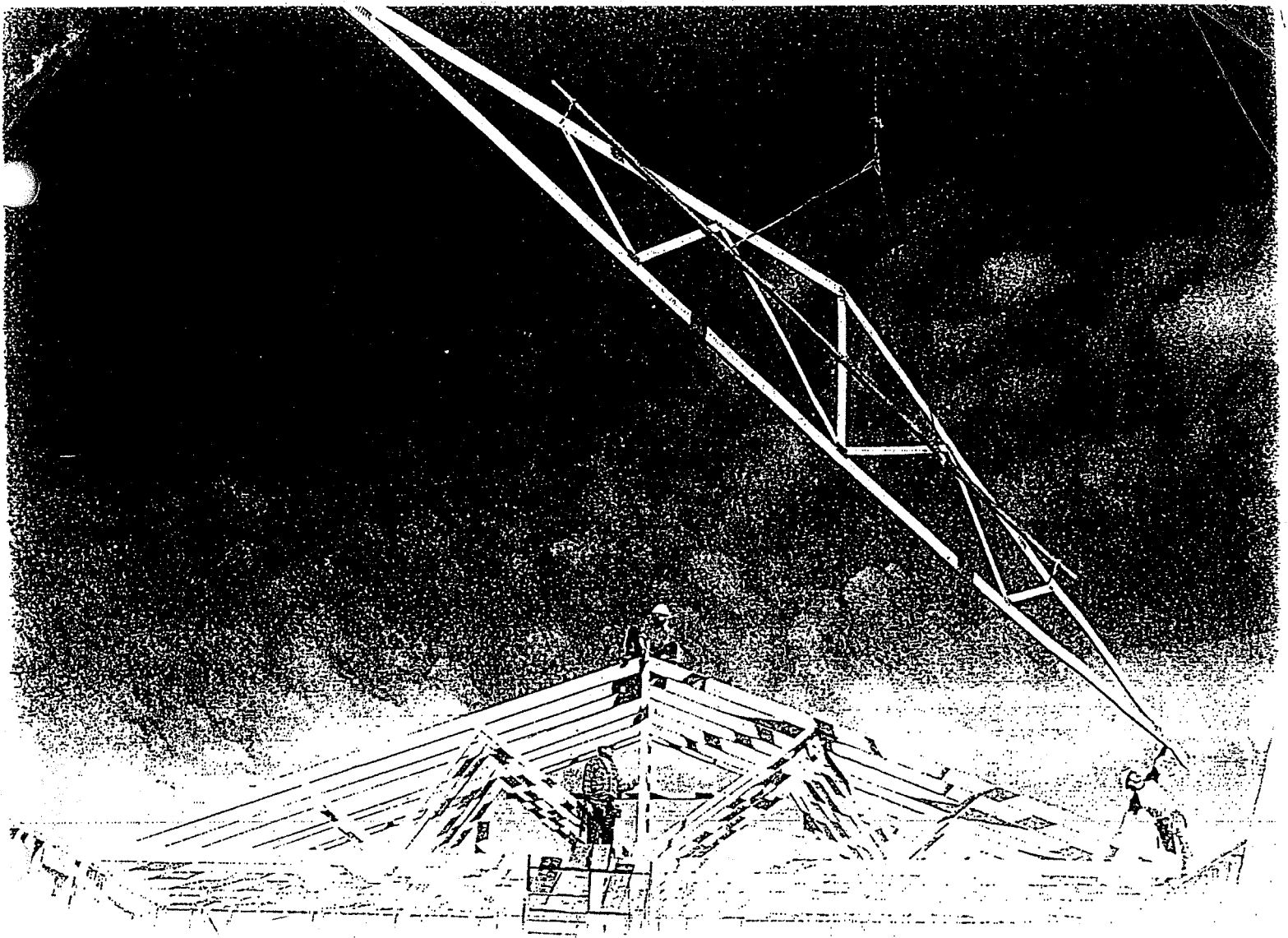
Optional TC Installation Table

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

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



This technical bulletin is effective until December 31, 2024, and reflects information available as of July 1, 2022. This information is updated periodically and should not be relied upon after December 31, 2024. Contact Simpson Strong-Tie for current information and limited warranty or see strongtie.com.



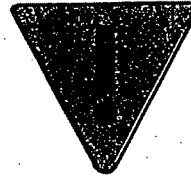
Wood Truss Installation

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

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1	Unloading & Lifting.....	5
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Warning



General

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

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

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

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

Temporary Erection Bracing

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

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

Permanent Truss Bracing

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

Special Design Requirements

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

1 Unloading & Lifting

Never handle trusses flat

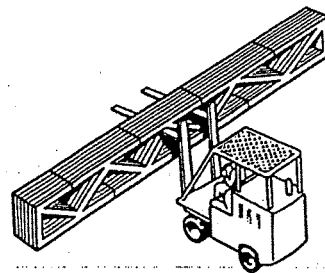
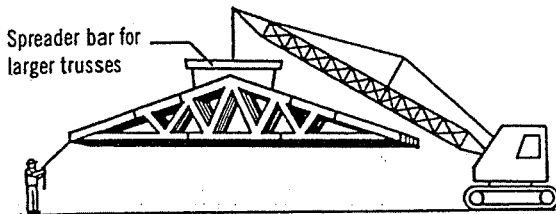
Beginning with the unloading process, and throughout all phases of construction, care must be taken to avoid lateral bending of trusses, which can cause damage to the lumber and metal connector plates at the joints.



Avoid lateral bending

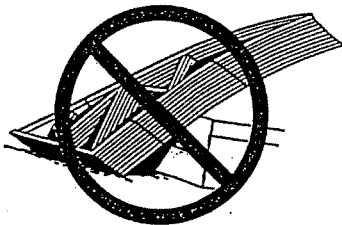
- Use special care in windy weather.
- If using a crane within 10 feet of an electric line, contact the local power company.
- If using a crane within 5 miles of an airport, contact the airport 30 days prior to erection to learn about any safety regulations that must be followed.

2 Job Site Handling



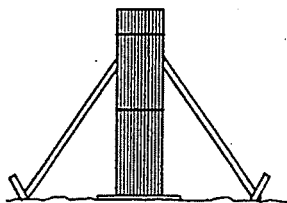
All trusses should be picked up at the top chords in a vertical position only

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



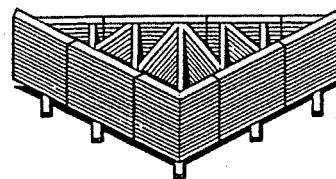
Do not store unbraced bundles upright

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



Do not store on uneven ground

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

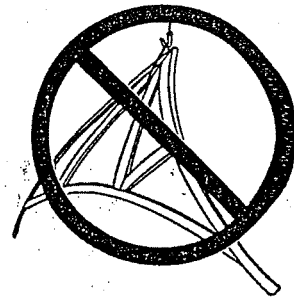


Care should be exercised when removing banding to avoid damaging trusses.

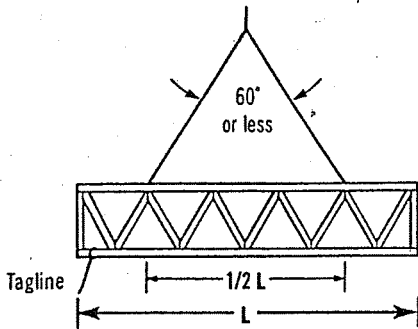
During long term storage, trusses shall be protected from the environment in a manner that provides for adequate ventilation of the trusses. If tarpaulins or other material is used, the ends shall be left open for ventilation. Plastic is not recommended, since it can trap moisture.

3 Hoisting

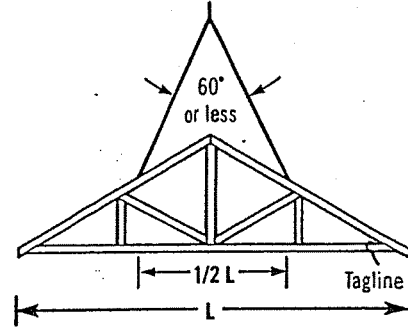
All trusses that are erected one at a time shall be held safely in position by the erection equipment until such time as all necessary bracing has been installed and the ends of the trusses are securely fastened to the building.



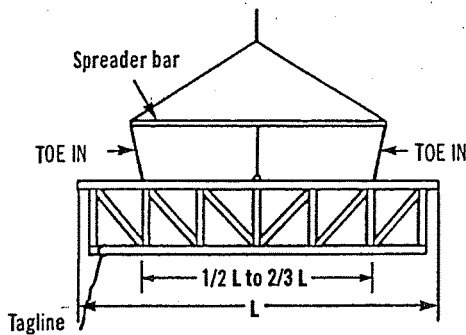
Avoid lateral bending



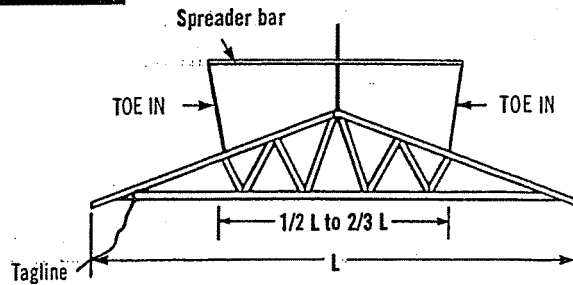
$L \leq 30'$



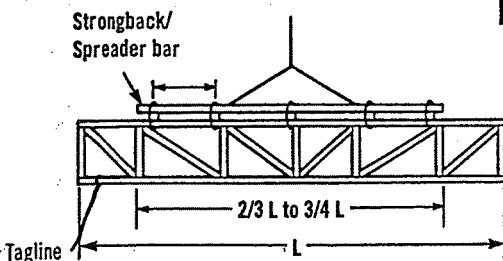
Truss sling is acceptable where these criteria are met.



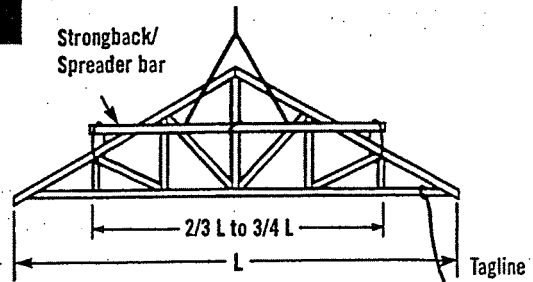
$30' < L \leq 60'$



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



$L > 60'$



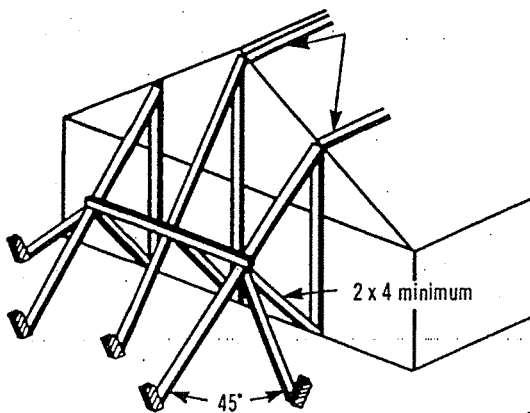
For lifting trusses with spans in excess of 60 feet, it is recommended that a strongback/spreader bar be used as illustrated. The strongback/spreader bar should be attached to the top chord and web members at intervals of approximately 10 feet. Further, the strongback/spreader bar should be at or above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

4 Beginning the Erection Process

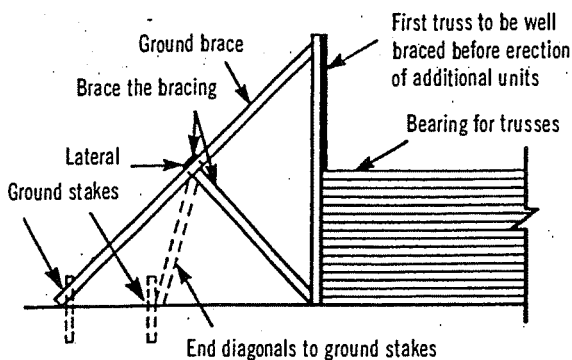
It is important for the builder or erection contractor to provide substantial bracing for the first truss erected. The two or more trusses making up the rest of the first set are tied to and rely upon the first truss for stability. Likewise, after this first set of trusses is adequately cross-braced,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

Ground Brace - Exterior

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

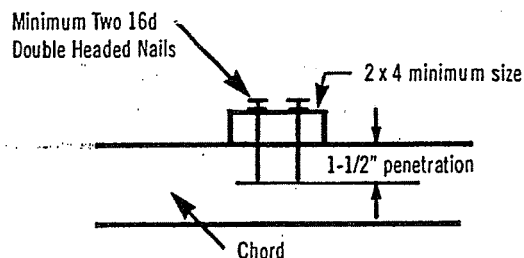
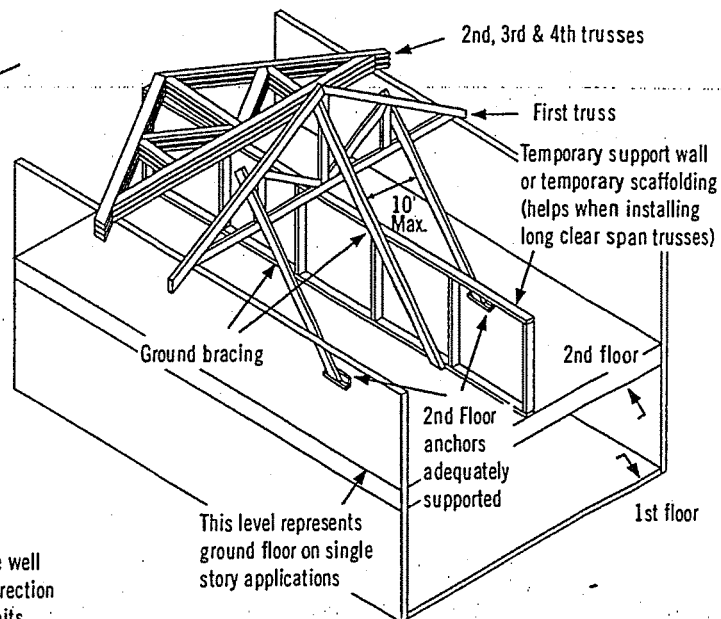


Note: Locate ground braces for first truss directly in line with all rows of top chord continuous lateral bracing (either temporary or permanent).



Ground Brace - Interior

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

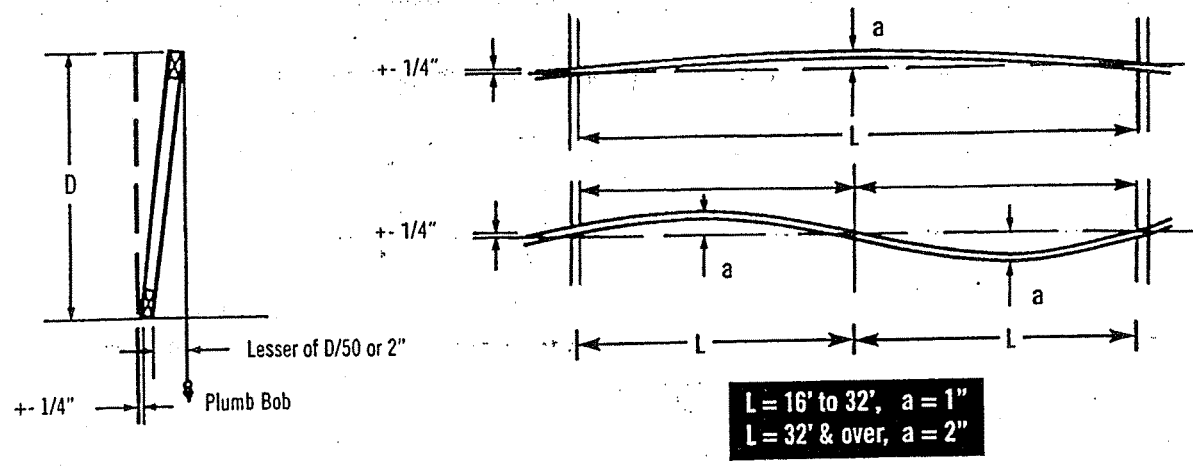


Inadequate size of bracing material or inadequate fastening is a major cause of erection dominoing.

5 Erection Tolerance

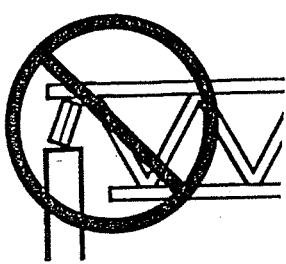
Complying with erection tolerances is critical to achieving an acceptable roof or floor line, and to accomplishing effective bracing. Setting trusses within tolerance the first time will prevent the need for the hazardous practice of respacing or adjusting trusses when roof sheathing or roof purlins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

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

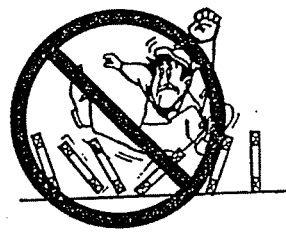


L = 16' to 32', a = 1"
L = 32' & over, a = 2"

6 Bracing



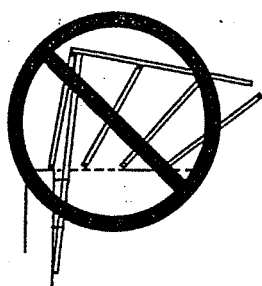
Do not install trusses on temporarily connected supports



Do not walk on unbraced trusses



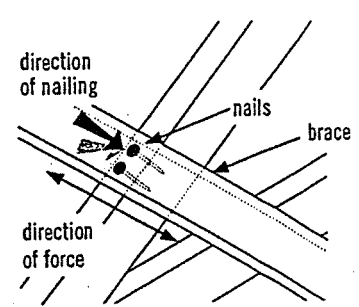
Do not walk on trusses or gable ends lying flat



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.



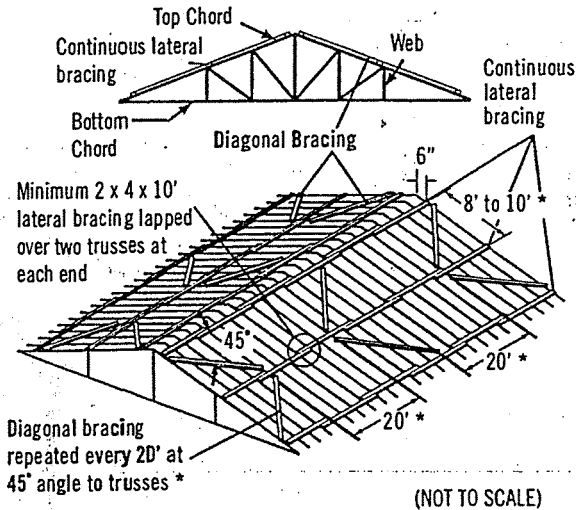
Well nailed (perpendicular to force)

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.

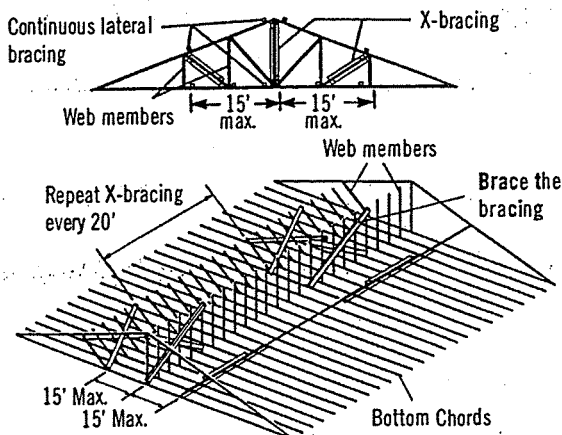


Exact spacing between trusses should be maintained as bracing is installed to avoid the hazardous practice of removing bracing to adjust spacing. This act of "adjusting spacing" can cause trusses to topple if connections are removed at the wrong time.

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.

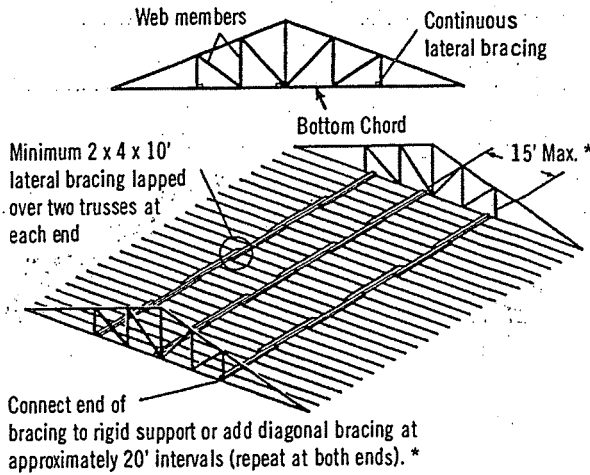
X-bracing should be installed on vertical web members wherever possible, at or near lateral bracing. Plywood or OSB may be substituted for X-bracing.



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

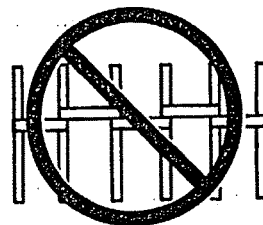
2) Bottom Chord Plane

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

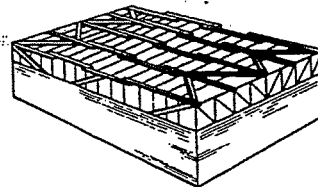


* Long spans, heavy loads or other spacing configurations may require closer spacing between lateral bracing and closer intervals between diagonals. Consult the building designer or HIB and DSB (*Recommended Design Specification for Temporary Bracing of Metal-Plate Connected Wood Trusses*) for details.

Diagonal or cross-bracing is very important!



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

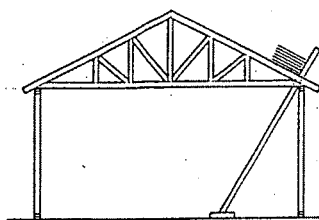
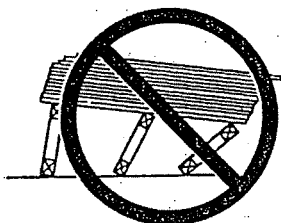


Bracing requirements using the same principles apply to parallel chord trusses

8 Stacking Materials

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

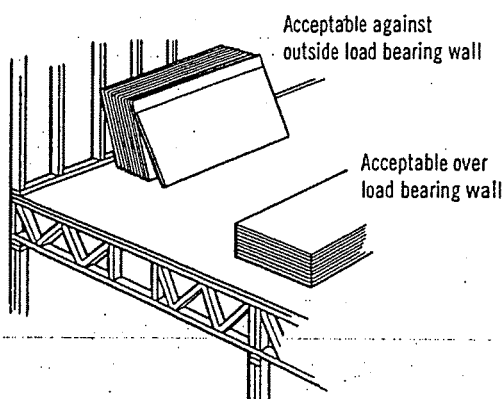
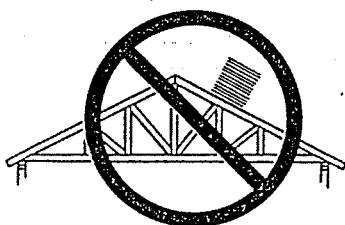
Never stack materials on unbraced or inadequately braced trusses



Platform must be rigidly braced

Proper distribution of construction materials is a must during construction.

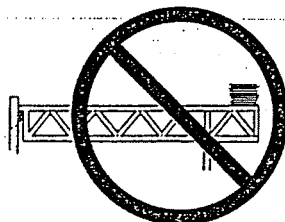
Never stack materials near a peak



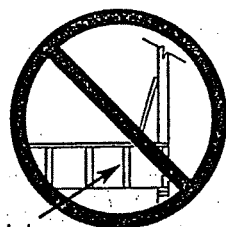
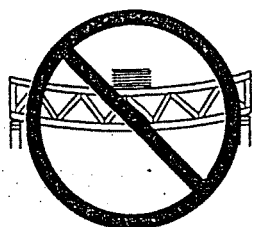
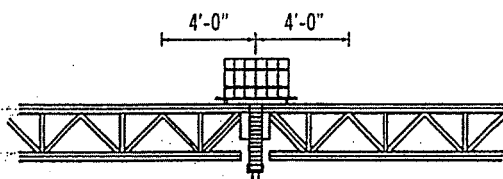
Acceptable against outside load bearing wall

Acceptable over load bearing wall

Never stack materials on the cantilever of a truss



Always stack materials over two or more trusses.

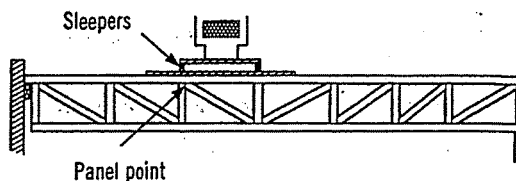
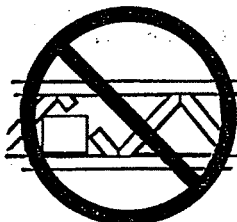


Single truss

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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