

CITY OF BRAMPTON
BUILDING DIVISION
REVIEWED
DEC 19 2018
BY
MARK DERKSEN

For conventional framing roof/ceilings
framing shall conform to OBC.9.23

All work shall conform to the Ontario
Building Code O. Reg. 332/12 as amended

TR - GREENPARK - MINNISALE HOMES - MILLWOOD 2 ELE 2

Page 2 of 24
TW0918-068

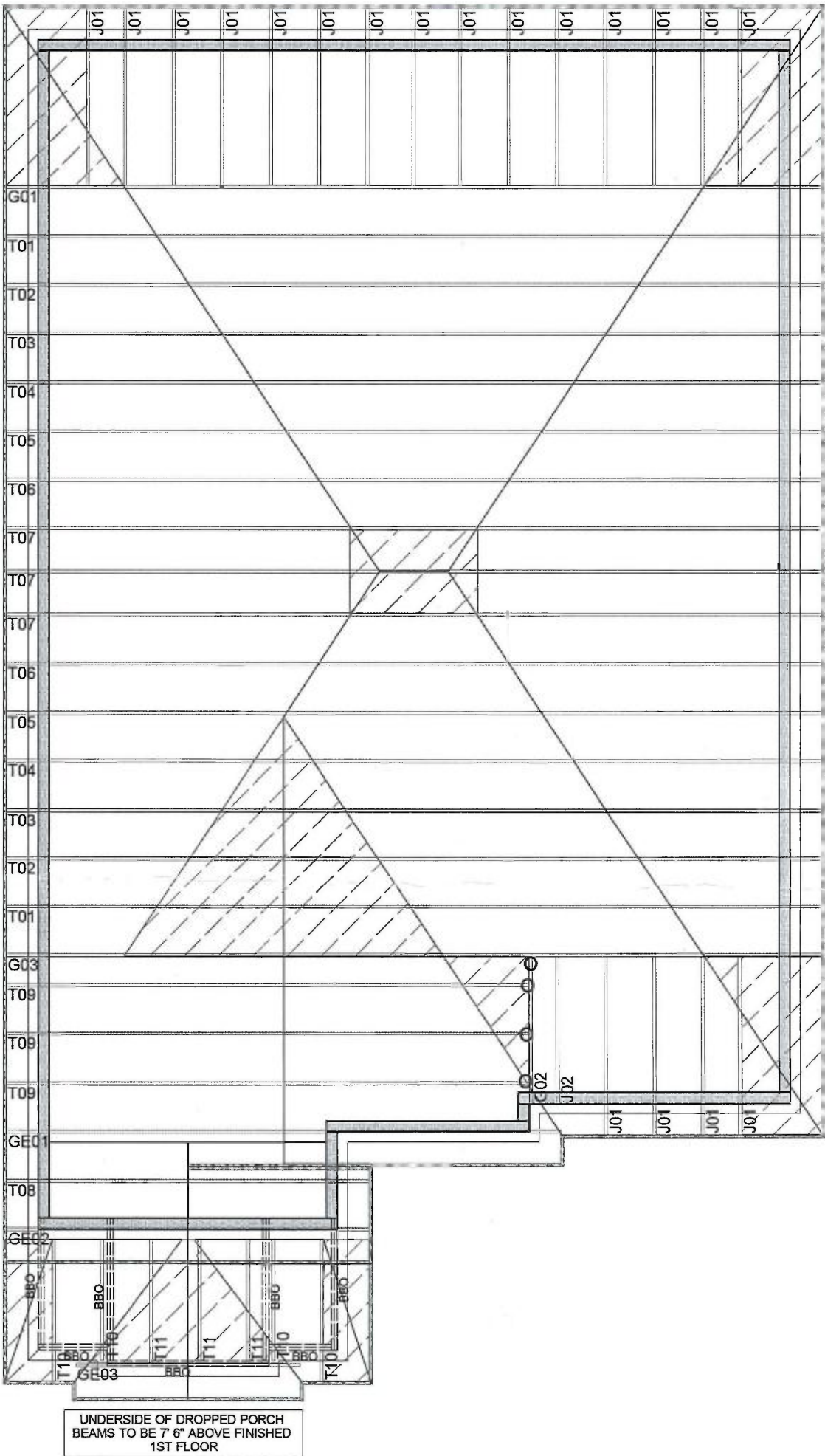


Layout based on plans provided by
JARDIN DESIGN GROUP INC
Dated April 26/18

This certification is for the engineering
review of structural components shown on
this drawing and is limited to the
components supplied by KOTT for the
loads and conditions shown on the
calculation page of each component. The
placement of these components on this
layout is shown for reference only. Roof
trusses must be installed according to
manufacturer's guidelines at 24" C/C
unless noted otherwise. Conventional
framing shown on the layout must be
designed and approved by the project
engineer. Temporary and permanent
bracing is to conform to BCSI guidelines.



September 14, 2018



ROOF TRUSS LAYOUT

LOT 7



CONVENTIONAL
FRAMING BY OTHERS

HANGER LEGEND

X - LUS24
- HGUS26

O - LJS26DS
% - HGUS26-2

DESIGN CRITERIA
SPECIFIED LOADS:
TOP CH. LL = 31.3 psf
DL = 3.0 psf
BOT CH. LL = 0.0 psf
DL = 7.0 psf
TOTAL LOAD = 41.3 psf

SPACING @ 24" CENTERS,
THIS TRUSS SYSTEM IS DESIGN FOR RESIDENTIAL
OR SMALL BUILDING REQUIREMENTS OF
PART 9, NBCC 2010

THIS DESIGN COMPLIES WITH PART 9 OF OBC 2012,
BCBC 2012, ABC 2012, CSA 086-09, TPIC 2011

ALLOWABLE DEFLECTION OF EACH COMPONENT = L/360

SIZE AND LOCATION OF CONVENTIONAL FRAMING IS APPROXIMATE. ALL AREAS
MAY NOT BE SHOWN. REFER TO ARCHITECTURAL PLANS FOR DETAILS.

ALL CONVENTIONAL FRAMING TO CONFORM WITH PART 9 OF THE O.B.C RAFTER THAT
CROSS MEET OVER TRUSSES TO BE 2X4 SPF @ 24" O/C WITH 2X4 VERT POST TO THE
TRUSS BELOW EA CROSS PT. VERT POS. THAN 6' TO HAVE A LATERAL BRACING SO THAT
THE DISTANCE BETEN PT & VERT ROWS OF BRACING DOES NOT EXCEED 6'

Model:	MILLWOOD 2 EL 2
Customer:	GREENPARK
Project:	MINNISALE HOMES
Location:	BRAMPTON
Drawn By:	DM
Date:	6/22/2018

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ENGINEERING NOTE PAGE (ENP-1)
PLEASE READ PRIOR TO INSTALLATION

RESPONSIBILITIES

THIS DESIGN IS FOR AN INDIVIDUAL BUILDING COMPONENT AND HAS BEEN BASED ON INFORMATION PROVIDED BY THE DESIGN OFFICE OF KOTT LUMBER. THE UNDERSIGNED ENGINEER DISCLAIMS ANY RESPONSIBILITY FOR DAMAGES AS A RESULT OF FAULTY OR INCORRECT INFORMATION, SPECIFICATION AND/OR DESIGNS FURNISHED TO THE ENGINEER. THE UNDERSIGNED ENGINEER IS ONLY RESPONSIBLE FOR THE STRUCTURAL INTEGRITY OF THIS BUILDING COMPONENT FOR THE CONDITIONS AND LOADS SHOWN ON THIS DRAWING. THE STRUCTURAL INTEGRITY OF THE BUILDING AND THE VERIFICATION OF THE DIMENSIONS AND THE DESIGN LOADS USED ARE THE RESPONSIBILITY OF THE BUILDING DESIGNER.

TRUSSES ARE DESIGNED IN CONFORMANCE WITH THE RELEVANT SECTIONS OF THE NATIONAL BUILDING CODE OF CANADA OR THE CANADIAN CODE FOR FARM BUILDINGS, WHICHEVER APPLIES TO THE BUILDING TYPE INDICATED ON THE DRAWING

IT IS THE RESPONSIBILITY OF KOTT LUMBER TO ENSURE THAT TRUSSES ARE MANUFACTURED IN CONFORMANCE WITH THESE DESIGNS AND WITH THE SPECIFICATIONS OUTLINED BELOW. THE UNDERSIGNED ENGINEER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT.

USE AND OCCUPANCY

- The building is of the type indicated on the drawing

LOADING

- The truss loading intensity and distribution as well as load transfer mechanism is that indicated on the drawing
- No buildings, trees, parapets or other projections higher than the roof for which the trusses are used are located within a distance less than ten (10) times the difference in height, or five metres (16 ft) whichever is greater, unless the drawing indicates that the snow drifting has been taken into account

HANDLING, INSTALLATION AND BRACING

- The trusses must be handled and installed by a qualified professional as per the supplied document titled *Information for Truss Installers* and the BCSI-B1 and BCSI-B3 Summary Sheets
- The compression chords are laterally braced by continuous rigid diaphragm sheathing or as specified on the drawing
- Temporary and permanent bracing must be installed as indicated on the truss drawing and according to the BCSI-B1 and BCSI-B3 Summary Sheets. Bracing for the lateral stability of the truss is to be provided by the building designer
- **It is recommended that a Professional Engineer's advice be obtained for the bracing of trusses spanning more than 12.37m (40'-7")**

SUPPORTS

- The trusses are to be supported at the bearing points indicated and anchored to the supports where considered necessary by the designer of the overall structure
- Bearing sizes shown are the minimum required to prevent crushing of the truss members and do not necessarily take into account stability of the overall building structure
- Elevation of bearings must be carefully checked and shimmed to alignment for solid bearings
- Adequate wood truss bearing is the responsibility of the building designer.

DIMENSIONS

- Geometry of the truss and dimensions indicated on the drawing are identical to those of the installed truss.

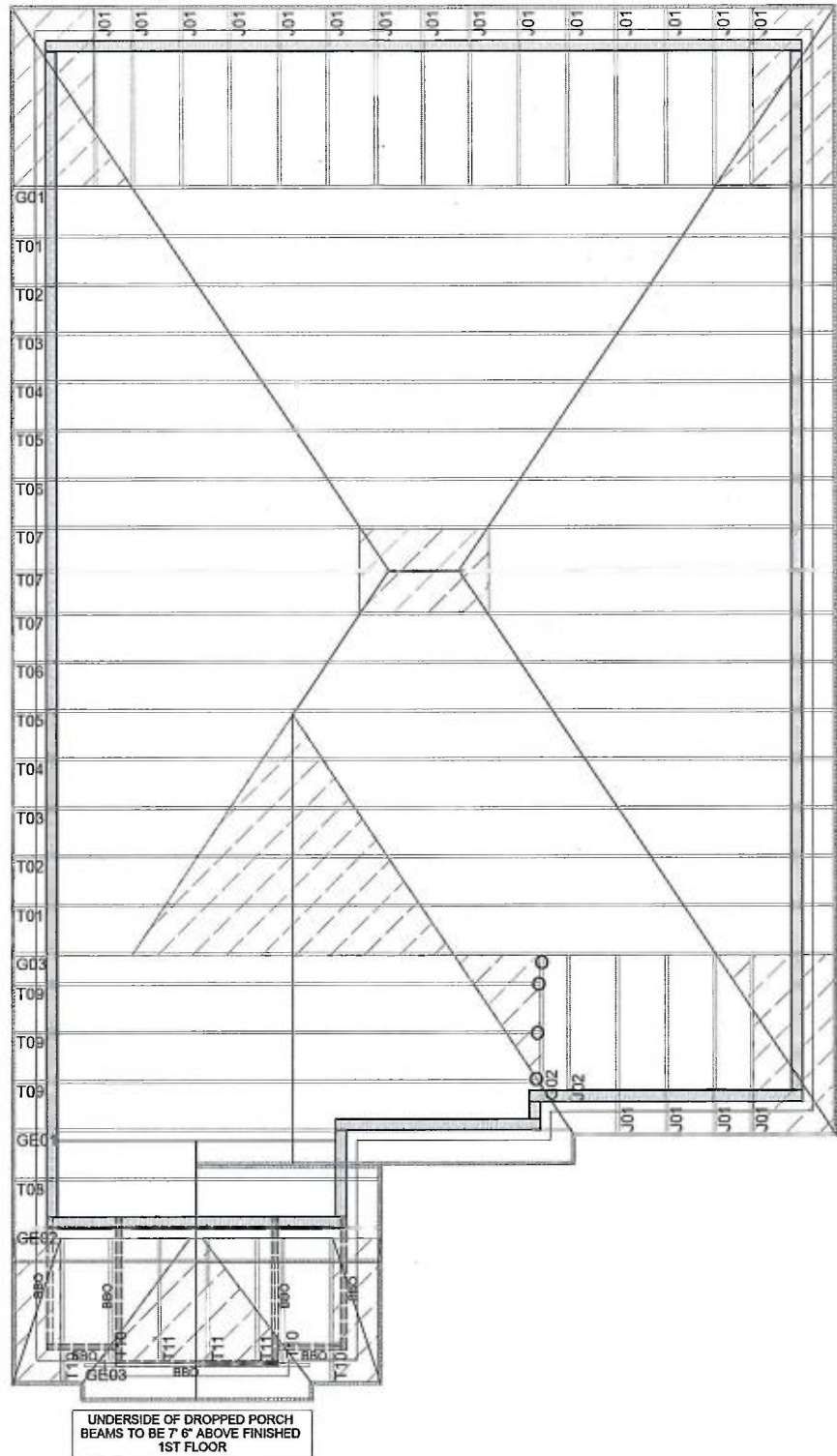


Layout based on plans provided by
JARDIN DESIGN GROUP INC
Dated April 26/18

This certification is for the engineering review of structural components shown on this drawing and is limited to the components supplied by KOTT for the loads and conditions shown on the calculation page of each component. The placement of these components on this layout is shown for reference only. Roof trusses must be installed according to manufacturer's guidelines at 24" C/C unless noted otherwise. Conventional framing shown on the layout must be designed and approved by the project engineer. Temporary and permanent bracing is to conform to BCSI guidelines.



September 14, 2018



ROOF TRUSS LAYOUT



**CONVENTIONAL
FRAMING** BY OTHERS

HANGER LEGEND

X - LUS24 O - LJS26DS
- HGUS26 % - HGUS26-2

SIZE AND LOCATION OF CONVENTIONAL FRAMING IS APPROXIMATE. ALL AREAS MAY NOT BE SHOWN. REFER TO ARCHITECTURAL PLANS FOR DETAILS.

ALL CONVENTIONAL FRAMING TO CONFORM WITH PART 9 OF THE O.B.C RAFTER THAT CROSS MEET OVER TRUSSES TO BE 2X4 SPF @ 24" O/C WITH 2X4 VERT POST TO THE TRUSS BELOW EA CROSS PT. VERT POS. THAN 6" TO HAVE A LATERAL BRACING SO THAT THE DISTANCE BETEN PT & VERT ROWS OF BRACING DOES NOT EXCEED 6'

DESIGN CRITERIA SPECIFIED LOADS:

TOP CH LL = 31.3 psf
DL = 3.0 psf
BOT CH LL = 0.0 psf
DL = 7.0 psf
TOTAL LOAD = 41.3 psf

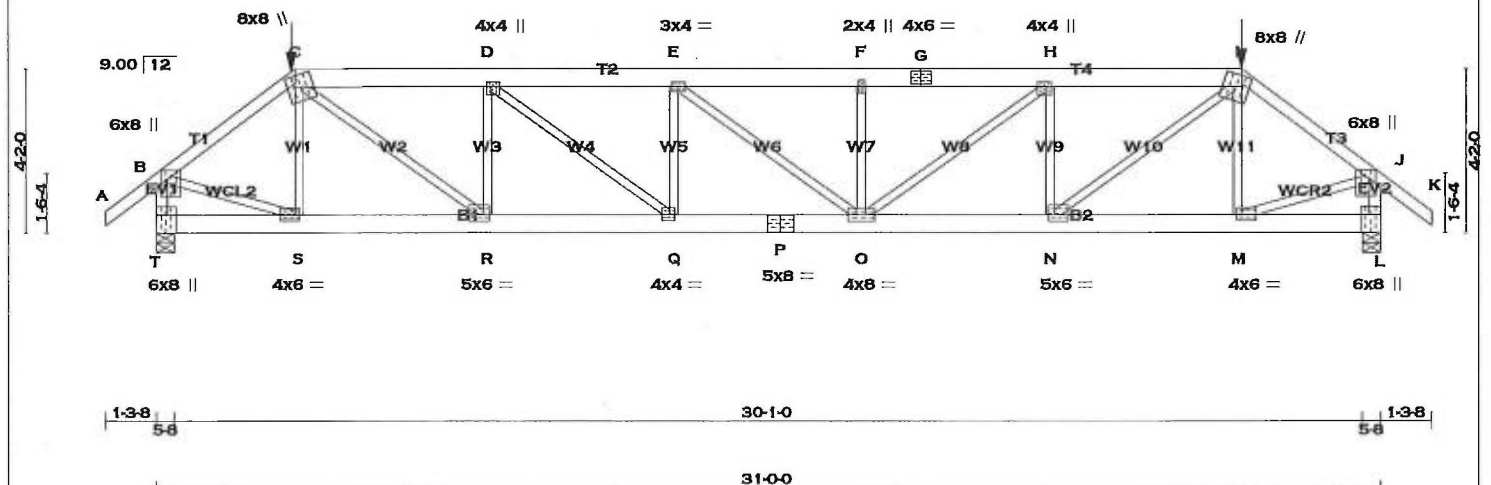
SPACING @ 24" CENTERS.
THIS TRUSS SYSTEM IS DESIGN FOR RESIDENTIAL
OR SMALL BUILDING REQUIREMENTS OF
PART 9, NBCC 2010

THIS DESIGN COMPLIES WITH PART 9 OF OBC 2012,
BCBC 2012, ABC 2012, CSA 086-09, TPIC 2011

ALLOWABLE DEFLECTION OF EACH COMPONENT = L/360

Model:	MILLWOOD 2 EL 2
Customer:	GREENPARK
Project:	MINNISALE HOMES
Location:	BRAMPTON
Drawn By:	DM
Date:	6/22/2018

1-3-8 3-6-5 23-11-5 3-6-5 1-3-8 SCALE = 1:55.9



TOTAL WEIGHT = 159 lb

LUMBER				DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER			
N. L. G. A. RULES	CHORDS	SIZE	LUMBER	DESCR.	BEARINGS	FACTORED	MAXIMUM FACTORED
A - C	2x4	DRY	No.2	SPF	FACTORED	GROSS REACTION	MAXIMUM FACTORED
C - G	2x6	DRY	No.2	SPF	FACTORED	GROSS REACTION	MAXIMUM FACTORED
G - I	2x6	DRY	No.2	SPF	FACTORED	GROSS REACTION	MAXIMUM FACTORED
I - K	2x4	DRY	No.2	SPF	FACTORED	GROSS REACTION	MAXIMUM FACTORED
T - B	2x4	DRY	No.2	SPF	FACTORED	GROSS REACTION	MAXIMUM FACTORED
L - J	2x4	DRY	No.2	SPF	FACTORED	GROSS REACTION	MAXIMUM FACTORED
T - P	2x6	DRY	No.2	SPF	FACTORED	GROSS REACTION	MAXIMUM FACTORED
P - L	2x6	DRY	No.2	SPF	FACTORED	GROSS REACTION	MAXIMUM FACTORED

ALL WEBS				UNFACTORED REACTIONS			
2x3	DRY	No.2	SPF	1ST LCASE	MAX./MIN. COMPONENT REACTIONS	INPUT	REQRD
EXCEPT				JT COMBINED	SNOW LIVE PERM.LIVE WIND DEAD SOIL	BRG	BRG
				T 1993	1403 / 0 0 / 0 0 / 0 0 / 0 590 / 0 0 / 0	IN-SX	IN-SX
				L 1993	1403 / 0 0 / 0 0 / 0 0 / 0 590 / 0 0 / 0		

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT TYPE	PLATES	W	LEN	Y	X
B TMVW+p	MT20	6.0	8.0	2.75	2.00
C TTWW+m	MT20	8.0	8.0	4.00	3.25
D TMWW+t	MT20	4.0	4.0	1.50	1.50
E TMWW-t	MT20	3.0	4.0		
F TMW+w	MT20	2.0	4.0		
G TS-t	MT20	4.0	6.0		
H TMWW+t	MT20	4.0	4.0	1.50	1.50
I TTWW+m	MT20	8.0	8.0	4.00	3.25
J TMVW+p	MT20	6.0	8.0	2.75	2.00
L BMV1+t	MT20	6.0	8.0	Edge 2.50	
M BMWW-t	MT20	4.0	6.0	1.75	1.50
N BMWW-t	MT20	5.0	6.0	2.00	1.75
O BMWW-t	MT20	4.0	8.0		
P BS-t	MT20	5.0	8.0		
Q BMWW-t	MT20	4.0	4.0	1.75	1.50
R BMWW-t	MT20	5.0	6.0	2.00	1.75
S BMWW-t	MT20	4.0	6.0	1.75	1.50
T BMV1+t	MT20	6.0	8.0	5.50	

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

A SIZE FOR SIZE SUBSTITUTION OF MITTEK M120 WITH TEE-LOK TL20 PLATES IS ALLOWED.

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.31 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	FORCE (LBS)	VERT. LOAD (PLF)	MAX. LC1 MAX. (CSI (LC))	MEMB.	FORCE (LBS)	MAX. LC1 MAX. (CSI (LC))	
FR-TO				FR-TO			
A-B	0 / 32	-77.4	-77.4 0.12 (1)	S-C	-569 / 0	0.14 (1)	
B-C	-3039 / 0	-77.4	-77.4 0.34 (1)	C-R	0 / 2892	0.72 (1)	
C-D	-4716 / 0	-145.9	-145.9 0.39 (1)	R-D	-1625 / 0	0.40 (1)	
D-E	-5783 / 0	-145.9	-145.9 0.43 (1)	D-Q	0 / 1354	0.34 (1)	
E-F	-5774 / 0	-145.9	-145.9 0.41 (1)	Q-E	-674 / 0	0.16 (1)	
F-G	-5774 / 0	-145.9	-145.9 0.43 (1)	E-O	-12 / 0	0.01 (1)	
G-H	-5774 / 0	-145.9	-145.9 0.43 (1)	O-F	-669 / 0	0.16 (1)	
H-I	-4718 / 0	-145.9	-145.9 0.39 (1)	O-H	0 / 1340	0.33 (1)	
I-J	-3039 / 0	-77.4	-77.4 0.34 (1)	N-H	-1621 / 0	0.40 (1)	
J-K	0 / 32	-77.4	-77.4 0.12 (1)	N-I	0 / 2895	0.72 (1)	
T-B	-2801 / 0	0.0	0.0 0.32 (1)	M-I	-571 / 0	0.14 (1)	
L-J	-2801 / 0	0.0	0.0 0.32 (1)	B-S	0 / 2550	0.63 (1)	
				M-J	0 / 2550	0.63 (1)	
T-S	0 / 0	-33.0	-33.0 0.07 (4)				
S-R	0 / 2423	-33.0	-33.0 0.37 (1)				
R-Q	0 / 4716	-33.0	-33.0 0.69 (1)				
Q-P	0 / 5783	-33.0	-33.0 0.84 (1)				
P-O	0 / 5783	-33.0	-33.0 0.84 (1)				
O-N	0 / 4718	-33.0	-33.0 0.70 (1)				
N-M	0 / 2423	-33.0	-33.0 0.37 (1)				
M-L	0 / 0	-33.0	-33.0 0.07 (4)				

FACTORED CONCENTRATED LOADS (LBS)

JT	LOC.	LC1	MAX.	MAX+	FACE	DIR.	TYPE
C	3-6-5	-205	-205	---	FRONT	VERT	TOTAL
I	27-5-11	-205	-205	---	FRONT	VERT	TOTAL

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH. LL = 23.3 PSF
DL = 3.0 PSF
BOT CH. LL = 0.0 PSF
DL = 7.0 PSF
TOTAL LOAD = 33.3 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 = 3-6-5
END SETBACK = 6-0-0
END WALL WIDTH = 5-8
CORNER FRAMING TYPE: CONVENTIONAL
END JACK TYPE: CONVENTIONAL
APPLIED TO FRONT SIDE
- ADDTL LOADS BASED ON 55 % OF GSL.

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 9 OF OBC 2012, BCBC 2012, ABC 2014
- CSA 086-09
- TPIC 2011

(55 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.03")
CALCULATED VERT. DEFL.(LL)= L/ 999 (0.25")
ALLOWABLE DEFL.(TL)= L/360 (1.03")
CALCULATED VERT. DEFL.(TL)= L/ 842 (0.44")

CSI: TC=0.43/1.00 (F-H:1), BC=0.84/1.00 (O-Q:1)
, WB=0.72/1.00 (I-N:1), SSI=0.27/1.00 (H-I: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 = 0.50

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 618 354 1667 822 2284 1656

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.89 (Q) (INPUT = 0.90)
JSI METAL= 0.95 (P) (INPUT = 1.00)

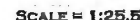


September 14, 2018

HANGERS NOTES
1) SPECIAL HANGER(S) OR CONNECTION(S) REQUIRED TO SUPPORT CONCENTRATED LOAD(S) 204.6 lbs FACTORED DOWN AT 27-5-11, AND 204.6 lbs FACTORED DOWN AT 3-6-5 ON TOP CHORD. DESIGN FOR UNSPECIFIED CONNECTION(S) IS DELEGATED TO THE BUILDING DESIGNER.



READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTE PAGE ENP-1. THE NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.



TOTAL WEIGHT = 29 lb

DRY: SEASONED LUMBER.

A SIZE FOR SIZE SUBSTITUTION OF MITEK MII20 WITH TEE-LOK TI 20 PLATES IS ALLOWED.

A SUITABLE MECHANICAL CONNECTION IS REQUIRED AT JOINT D TO RESIST THE MAX. FACTORED REACTIONS.

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

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.49 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY
APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED

TOTAL LOAD CASES: (4)

C H O R D S					W E B S				
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 MAX CSI (LC)	MAX. UNBRAC	MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED CSI (LC)		
FR-TO		FROM TO		LENGTH	FR-TO				
A-B	-1323 / 0	-77.4	-77.4	0.12 (1)	5.49	E-B	0 / 1227 0.30 (1)		
B-C	-9 / 0	-77.4	-77.4	0.09 (1)	10.00	B-D	-1495 / 0 0.36 (1)		
D-C	-96 / 0	0.0	0.0	0.02 (1)	7.81	A-E	0 / 1230 0.30 (1)		
F-A	-999 / 0	0.0	0.0	0.11 (1)	7.79				
E-E	0 / 0	-439.4	-439.4	0.25 (1)	10.00				
E-D	0 / 1191	-439.4	-439.4	0.41 (1)	10.00				

SPECIFIED LOADS:

TOP	CH.	LL =	23.3	PSF
		DL =	3.0	PSF
BOT	CH.	LL =	0.0	PSF
		DL =	7.0	PSF
TOTAL LOAD		=	33.3	PSF

GIRDER TYPE: CStdGirder
START DISTANCE = 0-0
START SPAN CARRIED = 20-3-0
END DISTANCE = 6-0-0
END SPAN CARRIED = 20-3-0
END WALL WIDTH = 5-8
APPLIED TO FRONT SIDE OF BOTTOM CHORD.
- ADD'TL LOADS BASED ON 55 % OF GSL.

THIS TRUSS IS DESIGNED FOR RESIDENTIAL
OR SMALL BUILDING REQUIREMENTS OF
PART 9, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 9 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

(55 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.20")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.02")
ALLOWABLE DEFL.(TL)= L/360 (0.20")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.03")

CSI: TC=0.12/1.00 (A-B:1), BC=0.41/1.00 (D-E:1)
 , WB=0.36/1.00 (B-D:1), SSI=0.51/1.00 (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 = 0.50

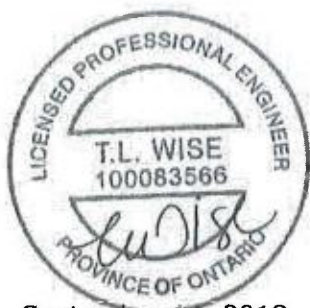
TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT.

NAIL VALUES	GRIP(DRY)		SHEAR		SECTION	
	(PSI)		(PLI)		(PLI)	
	MAX	MIN	MAX	MIN	MAX	MIN
MT20	618	354	1667	822	2284	1656

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL = 5.0 Deg

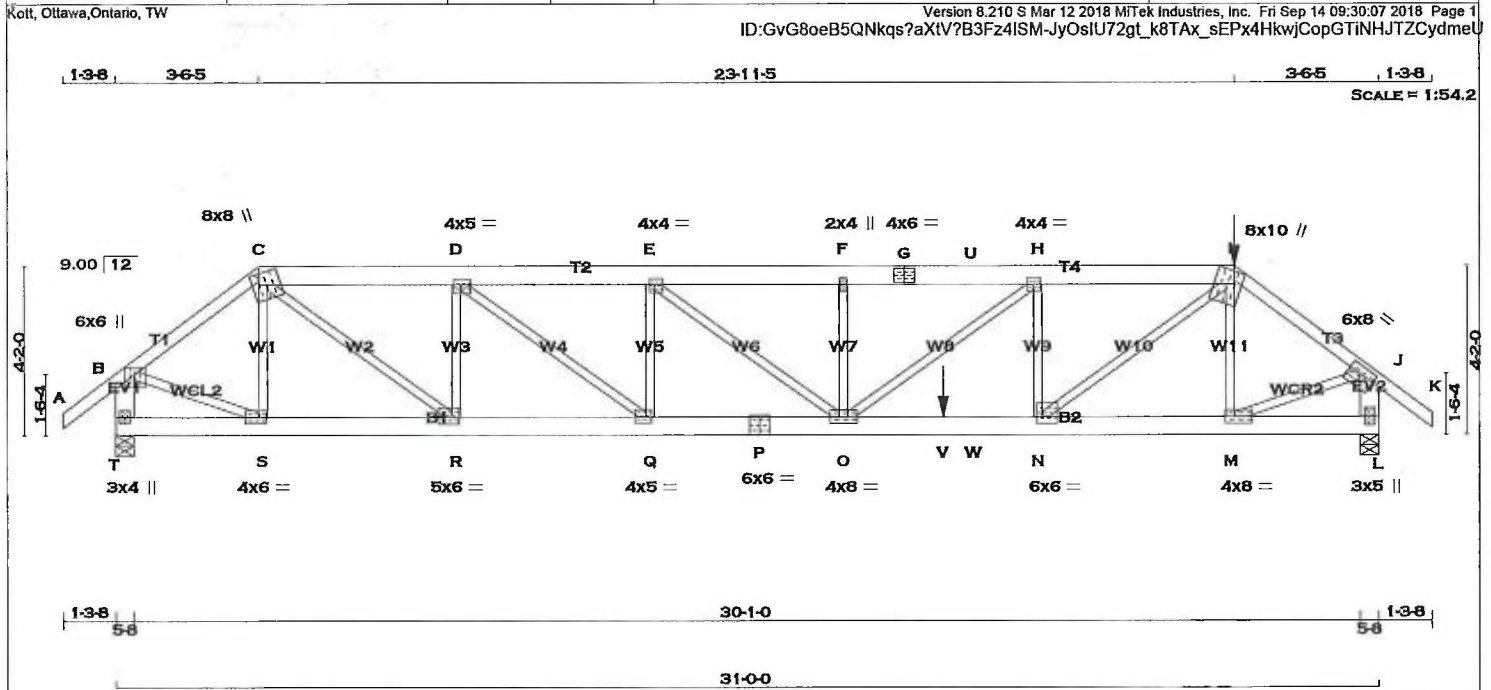
JSI GRIP= 0.89 (B) (INPUT = 0.90)
JSI METAL= 0.41 (B) (INPUT = 1.00)



September 14, 2018



**READ ALL NOTES ON THIS PAGE AND ON THE
ENGINEERING NOTE PAGE ENP-1. THE NOTE PAGE
IS AN INTEGRAL PART OF THIS DRAWING AS IT
CONTAINS SPECIFICATIONS AND CRITERIA USED
IN THE DESIGN OF THIS COMPONENT.**



TOTAL WEIGHT = 160 lb [M]

LUMBER			
N. L. G. A. RULES			
CHORDS	SIZE	LUMBER	DESCR.
A - C	2x4	DRY	No.2
C - G	2x6	DRY	No.2
G - I	2x6	DRY	No.2
I - K	2x4	DRY	No.2
T - B	2x6	DRY	No.2
L - J	2x6	DRY	No.2
T - P	2x6	DRY	No.2
P - L	2x6	DRY	2100F 1.8E
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	6.0	6.0	2.25	2.75
C	TTWW+m	MT20	8.0	8.0	4.00	3.75
D	TMWW-t	MT20	4.0	5.0	1.50	2.00
E	TMWW-t	MT20	4.0	4.0	1.75	1.50
F	TMW+w	MT20	2.0	4.0		
G	TS-t	MT20	4.0	6.0		
H	TMWW-t	MT20	4.0	4.0		
I	TTWW+m	MT20	8.0	10.0	4.50	3.50
J	TMVW-t	MT20	6.0	8.0	2.25	3.50
L	BMV1+p	MT20	3.0	5.0		
M	BMWW-t	MT20	4.0	8.0	2.00	2.75
N	BMWW-t	MT20	6.0	6.0	2.00	1.50
O	BMWWWW-t	MT20	4.0	8.0		
P	BS-t	MT20	6.0	6.0		
Q	BMWW-t	MT20	4.0	5.0	1.75	1.75
R	BMWW-t	MT20	5.0	6.0	2.25	2.00
S	BMWW-t	MT20	4.0	6.0	2.00	2.00
T	BMV1+p	MT20	3.0	4.0		

A SIZE FOR SIZE SUBSTITUTION OF MITEK MII20 WITH TEE-LOK TL20 PLATES IS ALLOWED.

HANGERS NOTES

1)

September 14, 2018

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

BEARINGS			
FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION	
JT	VERT	DOWN	UPLIFT
T	2256	0	0
L	3251	0	0

UNFACTORED REACTIONS

1ST LCASE		MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
T	1581	1121 / 0	0 / 0	0 / 0	0 / 0	460 / 0	0 / 0
L	2280	1603 / 0	0 / 0	0 / 0	0 / 0	677 / 0	0 / 0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.17 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX LC1 (LC)	MEMB.	FORCE (LBS)	FACTORED MAX (LBS)	MAX (LBS)
FR-TO		FROM	TO	FR-TO			
A-B	0 / 32	-77.4	-77.4 0.12 (1)	10.00	S-C	-486 / 0	0.12 (1)
B-C	-2369 / 0	-77.4	-77.4 0.28 (1)	4.17	C-R	0 / 2655	0.66 (1)
C-D	-3992 / 0	-77.4	-77.4 0.24 (1)	4.12	R-D	-1515 / 0	0.37 (1)
D-E	-5393 / 0	-77.4	-77.4 0.29 (1)	3.58	D-Q	0 / 1777	0.44 (1)
E-F	-6397 / 0	-77.4	-77.4 0.41 (1)	3.19	Q-E	-1161 / 0	0.28 (1)
F-G	-6397 / 0	-77.4	-77.4 0.43 (1)	3.17	E-O	0 / 1275	0.32 (1)
G-U	-6397 / 0	-77.4	-77.4 0.43 (1)	3.17	O-F	-333 / 0	0.08 (1)
U-H	-6397 / 0	-145.9	-145.9 0.43 (1)	3.17	O-H	0 / 810	0.20 (1)
H-I	-5759 / 0	-145.9	-145.9 0.49 (1)	3.24	N-H	-1234 / 0	0.30 (1)
I-J	-3487 / 0	-77.4	-77.4 0.39 (1)	3.41	N-I	0 / 3764	0.93 (1)
J-K	0 / 32	-77.4	-77.4 0.12 (1)	10.00	M-I	-841 / 0	0.21 (1)
T-B	-2237 / 0	0.0	0.0 0.16 (1)	6.80	B-S	0 / 1988	0.49 (1)
L-J	-3178 / 0	0.0	0.0 0.23 (1)	5.89	M-J	0 / 2926	0.72 (1)

T-S	0 / 0	-17.5	-17.5 0.04 (4)	10.00
S-R	0 / 1888	-17.5	-17.5 0.28 (1)	10.00
R-Q	0 / 3992	-17.5	-17.5 0.62 (1)	10.00
Q-P	0 / 5393	-17.5	-17.5 0.80 (1)	10.00
P-O	0 / 5393	-17.5	-17.5 0.80 (1)	10.00
O-V	0 / 5758	-17.5	-17.5 0.88 (1)	10.00
V-W	0 / 5758	-17.5	-17.5 0.88 (1)	10.00
W-N	0 / 5758	-33.0	-33.0 0.88 (1)	10.00
N-M	0 / 2775	-33.0	-33.0 0.34 (1)	10.00
M-L	0 / 0	-33.0	-33.0 0.03 (1)	10.00

FACTORED CONCENTRATED LOADS (LBS)

JT	LOC.	LC1	MAX-	MAX+	FACE	DIR.	TYPE
I	27-5-11	-205	-205		FRONT	VERT	TOTAL
V	20-3-12	-1550	-1550		FRONT	VERT	TOTAL

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 =	23.3 PSF
	DL =	3.0 PSF
BOT CH.	LL =	0.0 PSF
	DL =	7.0 PSF
TOTAL LOAD	=	33.3 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 = 3-6-5
END SETBACK = 6-0-0
END WALL WIDTH = 5-8
CORNER FRAMING TYPE: CONVENTIONAL
END JACK TYPE: CONVENTIONAL
APPLIED TO FRONT SIDE
- ADDTL LOADS BASED ON 55 % OF GSL.
LOADS APPLIED TO FIRST 10-0-0 OF SPAN MEASURED FROM THE RIGHT.

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

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 9 OF OBC 2012, BCBC 2012, ABC 2014
- CSA 086-09
- TPIC 2011

(55 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.03")
CALCULATED VERT. DEFL.(LL) = L/999 (0.28")
ALLOWABLE DEFL.(TL)= L/360 (1.03")
CALCULATED VERT. DEFL.(TL) = L/756 (0.49")

CSI: TC=0.49/1.00 (H-I:1), BC=0.88/1.00 (N-O:1), WB=0.93/1.00 (I-N:1), SS=0.58/1.00 (N-O: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 = 0.50

AUTOSOLVE HEELS OFF

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

CONTINUED ON PAGE 2



September 14, 2018

HANGERS NOTES

1) SPECIAL HANGER(S) OR CONNECTION(S) REQUIRED TO SUPPORT CONCENTRATED LOAD(S) 204.6 lbs FACTORED DOWN AT 27-5-11 ON TOP CHORD, AND 1550.3 lbs FACTORED DOWN AT 20-3-12 ON BOTTOM CHORD. DESIGN FOR UNSPECIFIED CONNECTION(S) IS DELEGATED TO THE BUILDING DESIGNER.

NAIL VALUES

PLATE	GRIP(DRY)	SHEAR	SECTION
(PSI)	(PLI)	(PLI)	(PLI)
MAX MIN	MAX MIN	MAX MIN	MAX MIN
MT20	618 354	1667 822	2284 1656

PLATE PLACEMENT TOL. = 0.250 inches

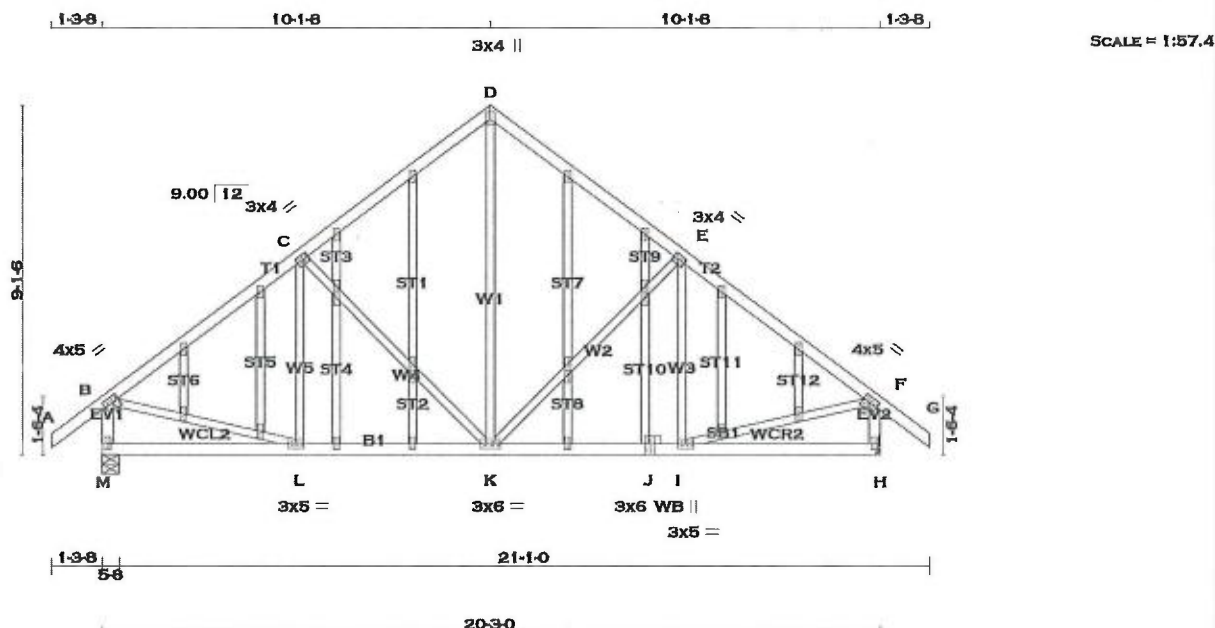
PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (R) (INPUT = 0.90)

JSI METAL= 0.75 (N) (INPUT = 1.00)



READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTE PAGE ENP-1. THE NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.



TOTAL WEIGHT = 122 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
M - B	2x4	DRY	No.2	SPF
H - F	2x4	DRY	No.2	SPF
M - J	2x4	DRY	No.2	SPF
J - H	2x4	DRY	No.2	SPF

ALL WEBS EXCEPT	2x3	DRY	No.2	SPF
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ALL GABLE WEBS
2x3 DRY No.2 SPF
DRY; SEASONED LUMBER.

GABLE STUDS SPACED AT 2'-0" OC.

PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y X
B	TMVW-t	MT20	4.0	5.0	1.75 2.00
C	TMVW-t	MT20	3.0	4.0	1.50 1.50
D	TTW+p	MT20	3.0	4.0	2.25 1.50
E	TMVW-t	MT20	3.0	4.0	1.50 1.50
F	TMVW-t	MT20	4.0	5.0	1.75 2.00
H	BMV1+p	MT20	2.0	4.0	
I	BMVW-t	MT20	3.0	5.0	
J					
J	BSW+I	MT20	3.0	6.0	
K	BMVWV-t	MT20	3.0	6.0	
L	BMVW-t	MT20	3.0	5.0	
M	BMV1+p	MT20	2.0	4.0	
N	Q, Z, AB				
N	NP+w	MT20	2.0	4.0	1.50 1.00
N	O, P, Q, R, S, T, U, V, W, X, Y, Z	AA, AB, AC, AD, AE, AF			
N	NP+w	MT20	2.0	4.0	

A SIZE FOR SIZE SUBSTITUTION OF MITEK MII20 WITH TEE-LOK TL20 PLATES IS ALLOWED.

WB - INDICATES BLOCKING REQUIRED

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

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION			INPUT BRG	REQRD BRG
	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX
M	1067	0	1067	0	0	5-8	1-13
H	1067	0	1067	0	0	MECHANICAL	

A SUITABLE MECHANICAL CONNECTION IS REQUIRED AT JOINT H TO RESIST THE MAX FACTORED REACTIONS.

UNFACTORED REACTIONS

1ST LCASE		MAX/MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
M	747	536 / 0	0 / 0	0 / 0	0 / 0	211 / 0	0 / 0
H	747	536 / 0	0 / 0	0 / 0	0 / 0	211 / 0	0 / 0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.04 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY
APPLIED.

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MAX. FACTORED		FACTORED		MEMB.		MAX. FACTORED	
MEMB.	FORCE (LBS)	VERT. LOAD (PLF)	LC1 MAX CSI (LC)	MAX. UNBRAC	MEMB.	FORCE (LBS)	MAX CSI (LC)
FR-TO		FROM TO		LENGTH	FR-TO		
A-B	0 / 32	-77.4	-77.4 0.11 (1)	10.00	K-D	0 / 548	0.12 (1)
B-C	-953 / 0	-77.4	-77.4 0.27 (1)	6.04	K-E	-325 / 0	0.31 (1)
C-D	-725 / 0	-77.4	-77.4 0.26 (1)	6.25	I-E	-83 / 60	0.04 (1)
D-E	-725 / 0	-77.4	-77.4 0.26 (1)	6.25	C-K	-325 / 0	0.31 (1)
E-F	-953 / 0	-77.4	-77.4 0.27 (1)	6.04	L-C	-83 / 60	0.04 (1)
F-G	0 / 32	-77.4	-77.4 0.11 (1)	10.00	B-L	0 / 805	0.18 (1)
M-B	-1030 / 0	0.0	0.0 0.11 (1)	7.74	I-F	0 / 805	0.18 (1)
H-F	-1030 / 0	0.0	0.0 0.11 (1)	7.74			
M-L	0 / 0	-17.5	-17.5 0.11 (4)	10.00			
L-K	0 / 784	-17.5	-17.5 0.18 (1)	10.00			
K-J	0 / 784	-17.5	-17.5 0.18 (1)	10.00			
J-I	0 / 784	-17.5	-17.5 0.18 (1)	10.00			
I-H	0 / 0	-17.5	-17.5 0.11 (4)	10.00			

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL =	23.3	PSF
	DL =	3.0	PSF
BOT CH.	LL =	0.0	PSF
	DL =	7.0	PSF
TOTAL LOAD =		33.3	PSF

SPACING = 24.0 IN. C/C

THIS TRUSS IS DESIGNED FOR RESIDENTIAL
OR SMALL BUILDING REQUIREMENTS OF
PART 9, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 9 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIQ 2011

(55 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIC ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.68")
CALCULATED VERT. DEFL.(LL) = L/999 (0.02")
ALLOWABLE DEFL.(TL)= L/360 (0.68")
CALCULATED VERT. DEFL.(TL) = L/999 (0.05")

CSI: TC=0.27/1.00 (B-C:1) , BC=0.18/1.00 (K-L:1) ,
WB=0.31/1.00 (C-K:1) , SSI=0.15/1.00 (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 = 0.50

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

NAIL VALUES

	GRIP(DRY)		SHEAR		SECTION	
	(PSI)	(PLI)	(PSI)	(PLI)	(PSI)	(PLI)
MT20	618	354	1667	822	2284	1656

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg

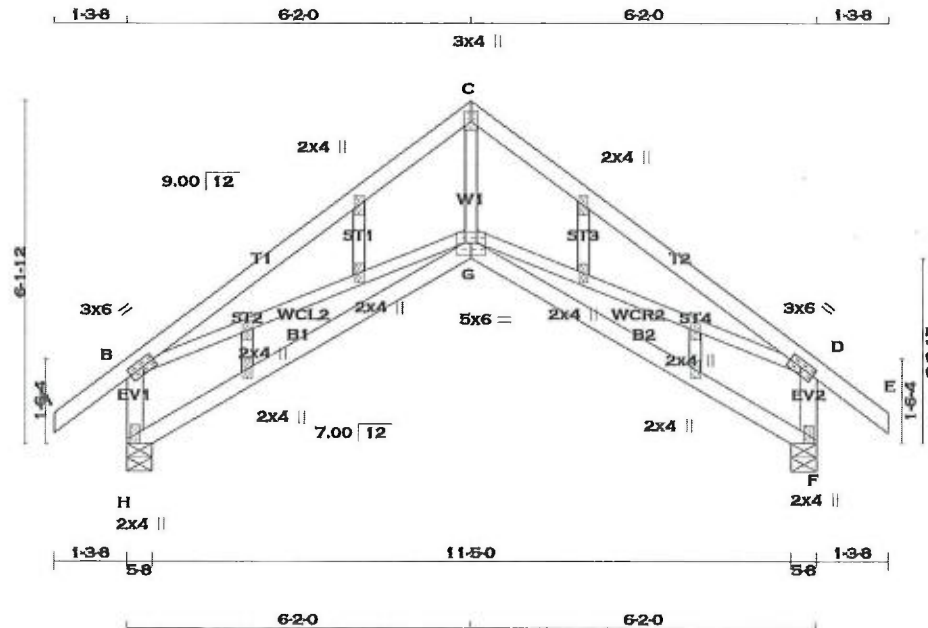
JSI GRIP= 0.88 (K) (INPUT = 0.90)
JSI METAL= 0.34 (F) (INPUT = 1.00)



September 14, 2018



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IS AN INTEGRAL PART OF THIS DRAWING AS IT
CONTAINS SPECIFICATIONS AND CRITERIA USED
IN THE DESIGN OF THIS COMPONENT.**



SCALE = 1:39.5

TOTAL WEIGHT = 57 lb

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

ALL WEBS 2x3 DRY No.2 SPF
EXCEPT

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

GABLE STUDS SPACED AT 2-0-0 OC.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMVW-I	MT20	3.0	6.0	1.50	2.75
C	TTW+p	MT20	3.0	4.0	2.25	1.50
D	TMVW-I	MT20	3.0	6.0	1.50	2.75
F	BMV1+p	MT20	2.0	4.0	Edge	
G	BBVWW+p	MT20	5.0	6.0	2.75	3.00
H	BMV1+p	MT20	2.0	4.0	Edge	
I, J, K, L, M, N, O, P						
I	NP+w	MT20	2.0	4.0		

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

A SIZE FOR SIZE SUBSTITUTION OF MITEK M1120 WITH TEE-LOK TL20 PLATES IS ALLOWED.

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

BEARINGS		FACTORED		MAXIMUM FACTORED		INPUT		REQRD	
JT	GROSS REACTION	DOWN	HORIZ	DOWN	HORIZ	UP	IN-SX	BRG	IN-SX
H	692	0	0	692	0	0	5-8	1-8	
F	692	0	0	692	0	0	5-8	1-8	

UNFACTORED REACTIONS

JT	1ST CASE	MAX/MIN. COMPONENT REACTIONS	SNOW	LIVE	PERM. LIVE	WIND	DEAD	SOIL
H	483	351 / 0	0 / 0	0 / 0	0 / 0	0 / 0	132 / 0	0 / 0
F	483	351 / 0	0 / 0	0 / 0	0 / 0	0 / 0	132 / 0	0 / 0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.93 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		FACTORED		MAX. FACTORED		WEBS		MAX. FACTORED	
MEMB.	FORCE (LBS)	VERT.	LC1 MAX	CS1 (LC)	UNBRAC	MEMB.	FORCE (LBS)	MAX	CS1 (LC)
FR-TO					LENGTH	FR-TO			
A-B	0 / 32	-77.4	-77.4	0.11 (1)	10.00	G-C	0 / 621	0.14 (1)	
B-C	-915 / 0	-77.4	-77.4	0.40 (1)	5.93	B-G	0 / 775	0.17 (1)	
C-D	-915 / 0	-77.4	-77.4	0.40 (1)	5.93	G-D	0 / 775	0.17 (1)	
D-E	0 / 32	-77.4	-77.4	0.11 (1)	10.00				
H-B	-638 / 0	0.0	0.0	0.07 (1)	7.81				
F-D	-638 / 0	0.0	0.0	0.07 (1)	7.81				
H-G	0 / 0	-17.5	-17.5	0.20 (4)	10.00				
G-F	0 / 0	-17.5	-17.5	0.20 (4)	10.00				

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL = 23.3	PSF
DL = 3.0	PSF	
BOT CH.	LL = 0.0	PSF
DL = 7.0	PSF	
TOTAL LOAD = 33.3	PSF	

SPACING = 24.0 IN./C/C

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBC 2010

THIS DESIGN COMPLIES WITH:
- PART 9 OF OBC 2012, BCBC 2012, ABC 2014
- CSA 086-09
- TPIC 2011

(55 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.41")
CALCULATED VERT. DEFL.(LL) = L/999 (0.04")
ALLOWABLE DEFL.(TL)= L/360 (0.41")
CALCULATED VERT. DEFL.(TL) = L/999 (0.11")

CSI: TC=0.40/1.00 (C-D:1), BC=0.20/1.00 (F-G:4), WB=0.17/1.00 (B-G:1), SSI=0.15/1.00 (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 = 0.50

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

NAIL VALUES

PLATE	GRIP(DRY)	SHEAR	SECTION
	(PSI)	(PLI)	(PLI)
	MAX	MIN	MAX
MT20	618	354	1667
	822	2284	1656

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

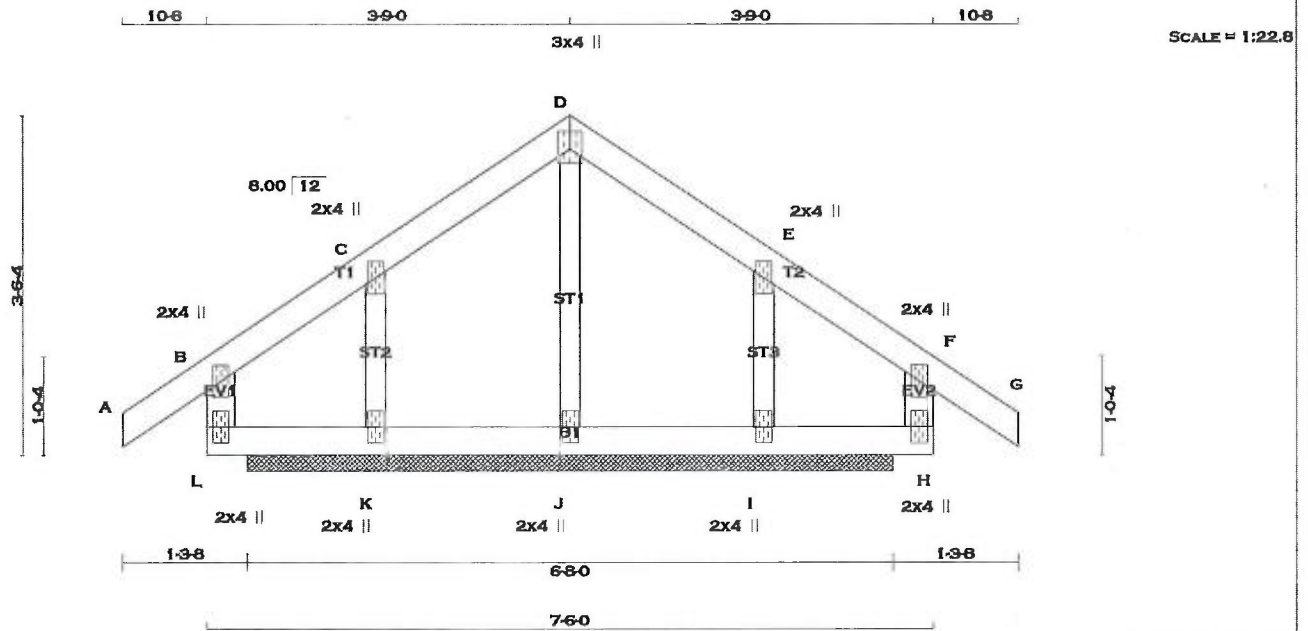
JSI GRIP= 0.89 (C) (INPUT = 0.90)
JSI METAL= 0.28 (D) (INPUT = 1.00)



September 14, 2018



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TOTAL WEIGHT = 28 lb

LUMBER

N. L. G. A. RULES
CHORDS SIZE

L - B	2x4	DRY	No.2	SPF
A - D	2x4	DRY	No.2	SPF
D - G	2x4	DRY	No.2	SPF
H - F	2x4	DRY	No.2	SPF
L - H	2x4	DRY	No.2	SPF

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

GABLE STUDS SPACED AT 2'-0" OC.

PLATES (tablets in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMV+p	MT20	2.0	4.0		
C	TMW+w	MT20	2.0	4.0		
D	TTV+p	MT20	3.0	4.0	2.25	1.50
E	TMW+w	MT20	2.0	4.0		
F	TMV+p	MT20	2.0	4.0		
H	BMV+p	MT20	2.0	4.0		
I, J, K						
I	BMW1+w	MT20	2.0	4.0		
L	BMV+p	MT20	2.0	4.0		

A SIZE FOR SIZE SUBSTITUTION OF MITEK MII20 WITH TEE-LOK TL20 PLATES IS ALLOWED.

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

THIS TRUSS DESIGNED FOR CONTINUOUS BEARINGS.

THIS TRUSS REQUIRES RIGID SHEATHING ON EXPOSED FACE.

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

BRACING

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

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS				
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 MAX CSI (LC)	MAX. UNBRAC	MEMB.	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)	
FR-TO		FROM TO		LENGTH	FR-TO			
L-B	-25 / 7	0.0	0.0	0.06 (1)	7.81	J-D	-295 / 0	0.06 (1)
A-B	0 / 21	-77.4	-77.4	0.05 (1)	10.00	K-C	-192 / 0	0.03 (1)
B-C	0 / 158	-77.4	-77.4	0.09 (1)	10.00	I-E	-192 / 0	0.03 (1)
C-D	0 / 139	-77.4	-77.4	0.09 (1)	10.00			
D-E	0 / 139	-77.4	-77.4	0.09 (1)	10.00			
E-F	0 / 158	-77.4	-77.4	0.09 (1)	10.00			
F-G	0 / 21	-77.4	-77.4	0.05 (1)	10.00			
H-F	-25 / 7	0.0	0.0	0.06 (1)	7.81			
L-K	-114 / 0	-17.5	-17.5	0.05 (1)	6.25			
K-J	-123 / 0	-17.5	-17.5	0.04 (1)	6.25			
J-I	-123 / 0	-17.5	-17.5	0.04 (1)	6.25			
I-H	-114 / 0	-17.5	-17.5	0.05 (1)	6.25			

DESIGN CRITERIA

SPECIFIED LOADS:

TOP	CH.	LL =	23.3	PSF
		DL =	3.0	PSF
BOT	CH.	LL =	0.0	PSF
		DL =	7.0	PSF
TOTAL LOAD		=	33.3	PSF

SPACING = 24.0 IN. C/C

THIS TRUSS IS DESIGNED FOR RESIDENTIAL
OR SMALL BUILDING REQUIREMENTS OF
PART 9, NBCC 2010

THIS DESIGN COMPLIES WITH:

- PART 9 OF OBC 2012, BCBC 2012, ABC 2014
- CSA 086-09
- TPIC 2011

DESIGN ASSUMPTIONS

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

(55 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD

CSI: TC=0.09/1.00 (B-C:1), BC=0.05/1.00 (H-I:1),
WB=0.06/1.00 (D-J:1), SSI=0.09/1.00 (B-L:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

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

NAIL VALUES

PLATE	GRIP(DRY) (PSI)		SHEAR (PLI)		SECTION (PLI)	
	MAX	MIN	MAX	MIN	MAX	MIN
MT20	618	354	1667	822	2284	1656

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

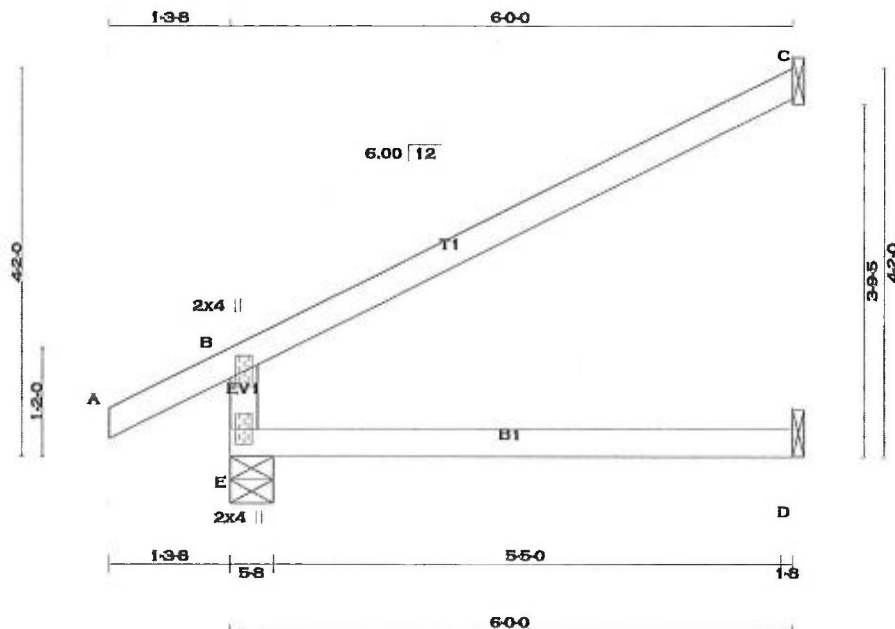
JSI GRIP= 0.20 (D) (INPUT = 0.90)
JSI METAL= 0.07 (L) (INPUT = 1.00)



September 14, 2018



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SCALE = 1:23.6

TOTAL WEIGHT = 20 X 17 = 342 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		

A SIZE FOR SIZE SUBSTITUTION OF MITEK M120 WITH TEE-LOK TL20 PLATES IS ALLOWED.

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

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG IN-SX	REQRD BRG IN-SX
	VERT	HORZ	DOWN	HORZ		
E	457	0	457	0	5-8	1-8
C	174	0	174	0	1-8	1-8
D	43	0	49	0	1-8	1-8

SEE MITEK STANDARD DETAIL B37579H FOR CONNECTION TO JOINT(S) C, D

UNFACTORED REACTIONS

JT	1ST LCASE	MAX./MIN. COMPONENT REACTIONS					SOIL
	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	
E	318	238 / 0	0 / 0	0 / 0	0 / 0	80 / 0	0 / 0
C	118	105 / 0	0 / 0	0 / 0	0 / 0	14 / 0	0 / 0
D	35	0 / 0	0 / 0	0 / 0	0 / 0	35 / 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		FACTORED		WEBS	
	MAX. FACTORED FORCE (LBS)	VERT. LOAD (PLF)	MAX. FACTORED VERT. LOAD (PLF)	MAX. FACTORED UNBRACED LENGTH (FT)	MAX. FACTORED FORCE (LBS)	MAX. FACTORED UNBRACED LENGTH (FT)
FR-TO						
E-B	-395 / 0	0.0	0.0	0.13 (4)	7.81	
A-B	0 / 23	-77.4	-77.4	0.10 (1)	10.00	
B-C	-26 / 0	-77.4	-77.4	0.47 (1)	6.25	
E-D	0 / 0	-17.5	-17.5	0.13 (4)	10.00	

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL = 23.3 PSF
	DL = 3.0 PSF
BOT CH.	LL = 0.0 PSF
	DL = 7.0 PSF
TOTAL LOAD	= 33.3 PSF

SPACING = 24.0 IN. C/C

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 9 OF OBC 2012, BCBC 2012, ABC 2014
- CSA 086-09
- TPIC 2011

DESIGN ASSUMPTIONS

- OVERHANG NOT TO BE ALTERED OR CUT OFF.

(55 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 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=0.47/1.00 (B-C:1), BC=0.13/1.00 (D-E:4), WB=0.00/1.00 (n/a:0), SSI=0.20/1.00 (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 = 0.50

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)
	MAX	MIN	MAX
MT20	618	354	1667

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

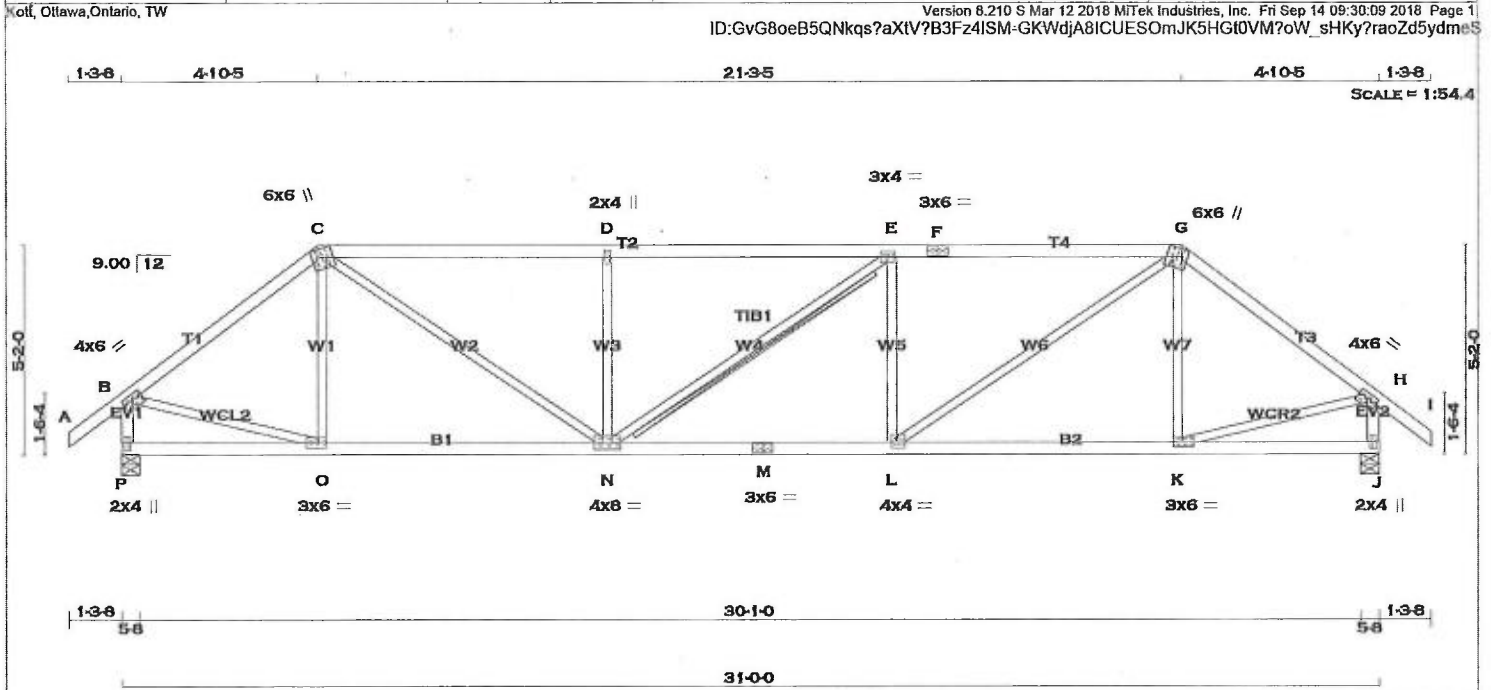
JSI GRIP= 0.23 (B) (INPUT = 0.90)
JSI METAL= 0.09 (B) (INPUT = 1.00)



September 14, 2018



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TOTAL WEIGHT = 2 X 123 = 246 lb [M]

LUMBER				N. L. G. A. RULES			
CHORDS	SIZE	LUMBER	DESCR.	CHORDS	SIZE	LUMBER	DESCR.
A - C	2x4	DRY	No.2	A - C	2x4	DRY	No.2
C - F	2x4	DRY	No.2	C - F	2x4	DRY	No.2
F - I	2x4	DRY	No.2	F - I	2x4	DRY	No.2
P - B	2x4	DRY	No.2	P - B	2x4	DRY	No.2
J - H	2x4	DRY	No.2	J - H	2x4	DRY	No.2
P - M	2x4	DRY	No.2	P - M	2x4	DRY	No.2
M - J	2x4	DRY	No.2	M - J	2x4	DRY	No.2

ALL WEBS 2x3 DRY No.2
EXCEPT

DRY: SEASONED LUMBER.

PLATES (table is in inches)						
JT	TYPE	PLATES	W	LEN	Y	X
B	TMVW-t	MT20	4.0	6.0	1.50	2.75
C	TTWW+m	MT20	6.0	6.0	Edge	4.25
D	TMW+w	MT20	2.0	4.0		
E	TMWW-t	MT20	3.0	4.0		
F	TS-t	MT20	3.0	6.0		
G	TTWW+m	MT20	6.0	6.0	Edge	4.25
H	TMVW-t	MT20	4.0	6.0	1.50	2.75
J	BMV1+p	MT20	2.0	4.0		
K	BMWW-t	MT20	3.0	6.0	1.50	2.50
L	BMWW-t	MT20	4.0	4.0	1.75	1.50
M	BS-t	MT20	3.0	6.0		
N	BMWWW-t	MT20	4.0	8.0		
O	BMWW-t	MT20	3.0	6.0	1.50	2.50
P	BMV1+p	MT20	2.0	4.0		

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

A SIZE FOR SIZE SUBSTITUTION OF MITEK M120 WITH TEE-LOK TL20 PLATES IS ALLOWED.

September 14, 2018

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		IN-SX	IN-SX
	VERT	HORZ	DOWN	HORZ		UP	DOWN		
P	1577	0	1577	0	0	5-8	2-11		
J	1577	0	1577	0	0	5-8	2-11		

UNFACTORED REACTIONS						
1ST LCASE	MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD
P	1104	786/0	0/0	0/0	0/0	318/0
J	1104	786/0	0/0	0/0	0/0	318/0

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

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

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX UNBRACED LENGTH (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX UNBRACED LENGTH (LC)	
FR-TO		FROM TO		FR-TO			
A-B	0/32	-77.4 -77.4	0.11 (1)	10.00	O-C	-184/39	0.07 (1)
B-C	-1577/0	-77.4 -77.4	0.39 (1)	4.82	C-N	0/1272	0.29 (1)
C-D	-2306/0	-77.4 -77.4	0.79 (1)	3.72	N-D	-594/0	0.23 (1)
D-E	-2306/0	-77.4 -77.4	0.78 (1)	3.72	N-E	0/0	0.00 (1)
E-F	-2307/0	-77.4 -77.4	0.78 (1)	3.72	L-E	-593/0	0.23 (1)
F-G	-2307/0	-77.4 -77.4	0.78 (1)	3.72	L-G	0/1272	0.29 (1)
G-H	-1577/0	-77.4 -77.4	0.39 (1)	4.83	K-G	-185/39	0.07 (1)
H-I	0/32	-77.4 -77.4	0.11 (1)	10.00	B-O	0/1295	0.29 (1)
P-B	-1546/0	0.0	0.0 0.16 (1)	6.62	K-H	0/1295	0.29 (1)
J-H	-1546/0	0.0	0.0 0.16 (1)	6.62			
P-O	0/0	-17.5 -17.5	0.15 (4)	10.00			
O-N	0/1255	-17.5 -17.5	0.29 (1)	10.00			
N-M	0/2307	-17.5 -17.5	0.46 (1)	10.00			
M-L	0/2307	-17.5 -17.5	0.46 (1)	10.00			
L-K	0/1255	-17.5 -17.5	0.29 (1)	10.00			
K-J	0/0	-17.5 -17.5	0.15 (4)	10.00			

READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTE PAGE ENP-1. THE NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

DESIGN CRITERIA

SPECIFIED LOADS:
TOP CH. LL = 23.3 PSF
DL = 3.0 PSF
BOT CH. LL = 0.0 PSF
DL = 7.0 PSF
TOTAL LOAD = 33.3 PSF

SPACING = 24.0 IN. C/C

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

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBC 2010

THIS DESIGN COMPLIES WITH:
- PART 9 OF OBC 2012, BCBC 2012, ABC 2014
- CSA 086-09
- TPIC 2011

(55% OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.03")
CALCULATED VERT. DEFL.(LL)= L/ 999 (0.12")
ALLOWABLE DEFL.(TL)= L/360 (1.03")
CALCULATED VERT. DEFL.(TL)= L/ 999 (0.24")

CSI: TC=0.79/1.00 (C-D:1), BC=0.46/1.00 (L-N:1), WB=0.29/1.00 (B-O:1), SSI=0.26/1.00 (C-D:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

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 618 354 1667 822 2284 1656

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.88 (O) (INPUT = 0.90)
JSI METAL= 0.68 (M) (INPUT = 1.00)

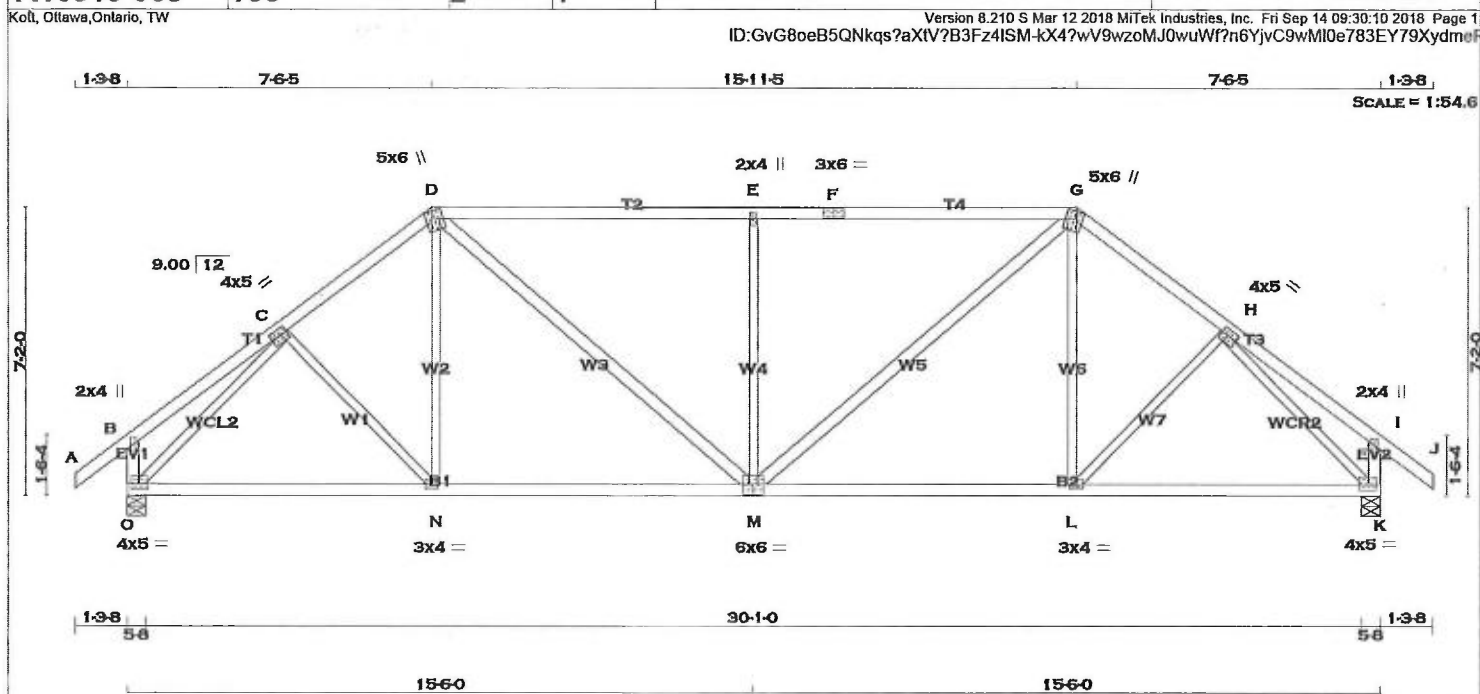


September 14, 2018



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1560 1560 TOTAL WEIGHT = 2 X 138 = 275 lb

LUMBER				DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER			
N. L. G. A. RULES	CHORDS	SIZE	LUMBER	DESCR.	BEARINGS		
A - D	2x4	DRY	No.2	SPF	FACTORED	MAXIMUM FACTORED	INPUT
D - F	2x4	DRY	2100F 1.8E	SPF	GROSS REACTION	GROSS REACTION	BRG
F - G	2x4	DRY	No.2	SPF	JT VERT	DOWN	IN-SX
G - J	2x4	DRY	No.2	SPF	O 1577	0	5-8
O - B	2x4	DRY	No.2	SPF	K 1577	0	5-8
K - I	2x4	DRY	No.2	SPF			
O - M	2x4	DRY	No.2	SPF			
M - K	2x4	DRY	No.2	SPF			
ALL WEBS	2x3	DRY	No.2	SPF	UNFACTORED REACTIONS		
EXCEPT					1ST LCASE	MAX/MIN. COMPONENT REACTIONS	
D - M	2x4	DRY	No.2	SPF	JT COMBINED	SNOW	LIVE
M - G	2x4	DRY	No.2	SPF	O 1104	786 / 0	0 / 0
					K 1104	786 / 0	0 / 0

DRY: SEASONED LUMBER.

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

BRACING
 TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.34 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					DESIGN CRITERIA				
TOTAL LOAD CASES: (4)					SPECIFIED LOADS:				
					TOP CH. LL = 23.3 PSF				
					DL = 3.0 PSF				
					BOT CH. LL = 0.0 PSF				
					DL = 7.0 PSF				
					TOTAL LOAD = 33.3 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 2010				
					THIS DESIGN COMPLIES WITH:				
					- PART 9 OF OBC 2012, BCBC 2012, ABC 2014				
					- CSA 086-09				
					- TPIC 2011				
					(55 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD				

CHORDS					WEBS				
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 MAX (CSI (LC))	MAX. UNBRAC LENGTH (FR-TO)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. UNBRAC LENGTH (FR-TO)	MEMB.	MAX. FACTORED FORCE (LBS)
A-B	0 / 32	-77.4	-77.4 0.11 (1)	10.00	C-N	0 / 56	0.02 (4)		
B-C	0 / 19	-77.4	-77.4 0.16 (1)	10.00	N-D	0 / 136	0.05 (4)		
C-D	-1568 / 0	-77.4	-77.4 0.20 (1)	5.07	D-M	0 / 687	0.11 (1)		
D-E	-1759 / 0	-77.4	-77.4 0.68 (1)	5.03	M-E	-766 / 0	0.69 (1)		
E-F	-1760 / 0	-77.4	-77.4 0.68 (1)	4.34	M-G	0 / 687	0.11 (1)		
F-G	-1760 / 0	-77.4	-77.4 0.68 (1)	4.34	L-G	0 / 136	0.05 (4)		
G-H	-1568 / 0	-77.4	-77.4 0.20 (1)	5.07	L-H	0 / 56	0.02 (4)		
H-I	0 / 19	-77.4	-77.4 0.16 (1)	10.00	O-C	-1786 / 0	0.87 (1)		
I-J	0 / 32	-77.4	-77.4 0.11 (1)	10.00	H-K	-1786 / 0	0.87 (1)		
O-B	-220 / 0	0.0	0.0 0.02 (1)	7.81					
K-I	-220 / 0	0.0	0.0 0.02 (1)	7.81					
O-N	0 / 1220	-17.5	-17.5 0.34 (4)	10.00					
N-M	0 / 1239	-17.5	-17.5 0.35 (4)	10.00					
M-L	0 / 1239	-17.5	-17.5 0.35 (4)	10.00					
L-K	0 / 1220	-17.5	-17.5 0.34 (4)	10.00					

ALLOWABLE DEFL.(LL)= L/360 (1.03")
 CALCULATED VERT. DEFL.(LL)= L/999 (0.07")
 ALLOWABLE DEFL.(TL)= L/360 (1.03")
 CALCULATED VERT. DEFL.(TL)= L/999 (0.14")

CSI: TC=0.68/1.00 (E-G:1), BC=0.35/1.00 (L-M:4), WB=0.87/1.00 (H-K:1), SSI=0.30/1.00 (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 = 0.50

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 618 354 1667 822 2284 1656

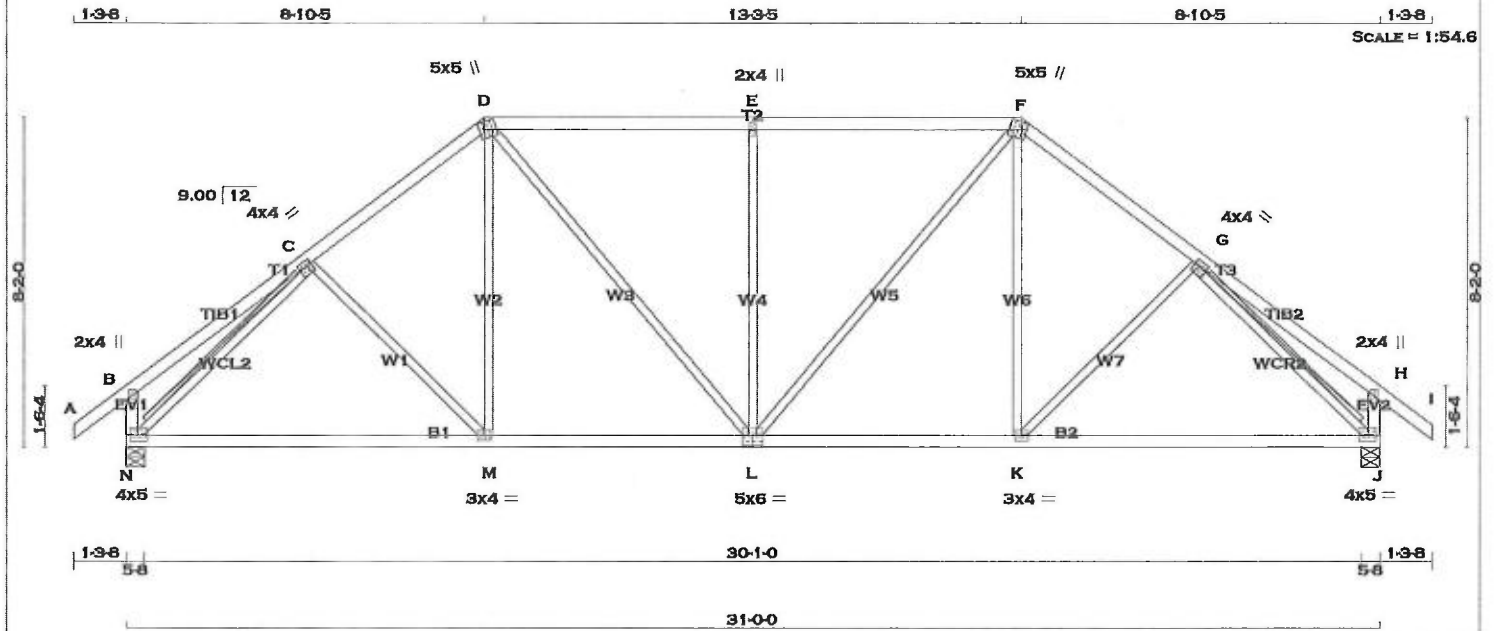
PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.89 (H) (INPUT = 0.90)
 JSI METAL= 0.53 (H) (INPUT = 1.00)

September 14, 2018

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LUMBER
N. L. G. A. RULES

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

SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMV+p	MT20	2.0	4.0		
C	TMWW-t	MT20	4.0	4.0	1.50	1.50
D	TTWW+m	MT20	5.0	5.0	2.25	1.50
E	TMW+w	MT20	2.0	4.0		
F	TTWW+m	MT20	5.0	5.0	2.25	1.50
G	TMWW-l	MT20	4.0	4.0	1.50	1.50
H	TMV+p	MT20	2.0	4.0		
J	BMVW-l	MT20	4.0	5.0	1.75	2.25
K	BMWW-t	MT20	3.0	4.0		
L	BSWW-l	MT20	5.0	6.0	3.00	3.00
M	BMWW-t	MT20	3.0	4.0		
N	BMVW-l	MT20	4.0	5.0	1.75	2.25

A SIZE FOR SIZE SUBSTITUTION OF MITTEK M1120 WITH TEE-LOK TL20 PLATES IS ALLOWED.

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
N	1577	0	1577	0	0	5-8	1-12	1-12
J	1577	0	1577	0	0	5-8	1-12	1-12

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED		MAX/MIN. COMPONENT REACTIONS		WIND	DEAD	SOIL
	SNOW	LIVE	PERM.LIVE	WIND			
N	1104	786/0	0/0	0/0	0/0	318/0	0/0
J	1104	786/0	0/0	0/0	0/0	318/0	0/0

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

BRACING
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.79 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

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

2x4 DRY SPF No.2 T-BRACE AT C-N, G-J

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

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

LOADING
TOTAL LOAD CASES: (4)

MEMB.	FORCE (LBS)	FACTORED VERT. LOAD LC1 MAX		MAX. UNBRAC LENGTH	MEMB.	FORCE (LBS)	FACTORED VERT. LOAD LC1 MAX	
		FROM	TO				FROM	TO
FR-TO					FR-TO			
A-B	0/32	-77.4	-77.4	0.11 (1)	C-M	-71/38	0.05 (1)	
B-C	0/23	-77.4	-77.4	0.24 (1)	M-D	0/216	0.06 (4)	
C-D	-1525/0	-77.4	-77.4	0.22 (1)	D-L	0/466	0.10 (1)	
D-E	-1502/0	-77.4	-77.4	0.48 (1)	L-E	-630/0	0.82 (1)	
E-F	-1502/0	-77.4	-77.4	0.48 (1)	F-F	0/466	0.10 (1)	
F-G	-1525/0	-77.4	-77.4	0.22 (1)	K-F	0/216	0.06 (4)	
G-H	0/23	-77.4	-77.4	0.24 (1)	K-G	-71/38	0.05 (1)	
H-I	0/32	-77.4	-77.4	0.11 (1)	N-C	-1785/0	0.53 (1)	
N-B	-238/0	0.0	0.0	0.02 (1)	G-J	-1785/0	0.53 (1)	
J-H	-238/0	0.0	0.0	0.02 (1)				
N-M	0/1249	-17.5	-17.5	0.40 (4)				
M-L	0/1202	-17.5	-17.5	0.40 (4)				
L-K	0/1202	-17.5	-17.5	0.40 (4)				
K-J	0/1249	-17.5	-17.5	0.40 (4)				

DESIGN CRITERIA

SPECIFIED LOADS:
TOP CH. LL = 23.3 PSF
DL = 3.0 PSF
BOT CH. LL = 0.0 PSF
DL = 7.0 PSF
TOTAL LOAD = 33.3 PSF

SPACING = 24.0 IN./C/C

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

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBC 2010

THIS DESIGN COMPLIES WITH:
- PART 9 OF OBC 2012, BCBC 2012, ABC 2014
- CSA 086-09
- TPIC 2011

(55 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.03")
CALCULATED VERT. DEFL.(LL)= L/999 (0.07")
ALLOWABLE DEFL.(TL)= L/360 (1.03")
CALCULATED VERT. DEFL.(TL)= L/999 (0.20")

CSI: TC=0.48/1.00 (D-E:1), BC=0.40/1.00 (K-L:4), WB=0.82/1.00 (E-L:1), SSI=0.25/1.00 (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 = 0.50

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 618 354 1667 822 2284 1656

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

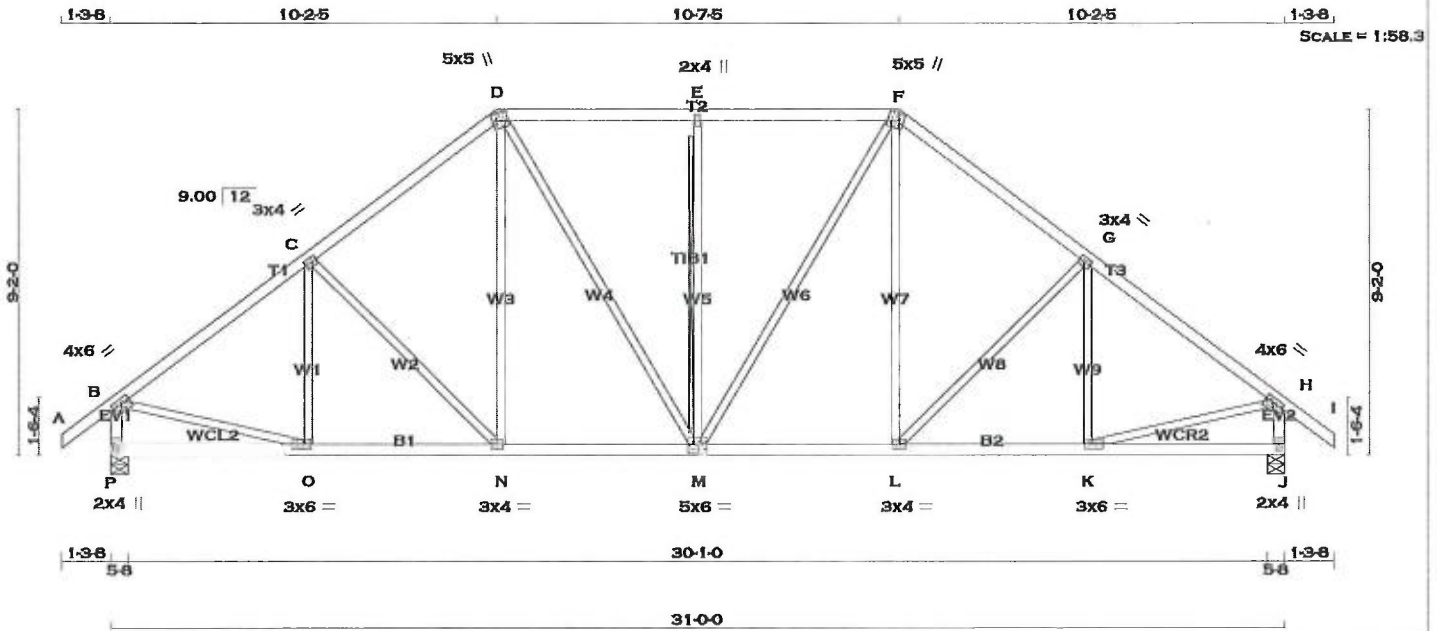
JSI GRIP= 0.89 (C) (INPUT = 0.90)
JSI METAL= 0.66 (C) (INPUT = 1.00)



September 14, 2018



READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTE PAGE ENP-1. THE NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.



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
P - B	2x4	DRY	No.2	SPF
J - H	2x4	DRY	No.2	SPF
P - M	2x4	DRY	No.2	SPF
M - J	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	6.0	1.50 2.75
C	TMVW-t	MT20	3.0	4.0	1.50 1.50
D	TTVW+m	MT20	5.0	5.0	2.25 1.50
E	TMVW+w	MT20	2.0	4.0	
F	TTVW+m	MT20	5.0	5.0	2.25 1.50
G	TMVW-t	MT20	3.0	4.0	1.50 1.50
H	TMVW-t	MT20	4.0	6.0	1.50 2.75
J	BMV1+p	MT20	2.0	4.0	
K	BMVW-t	MT20	3.0	6.0	1.50 2.25
L	BMVW-t	MT20	3.0	4.0	
M	BSVWVW-t	MT20	5.0	6.0	3.00 3.00
N	BMVW-t	MT20	3.0	4.0	
O	BMVW-t	MT20	3.0	6.0	1.50 2.25
P	BMV1+p	MT20	2.0	4.0	

A SIZE FOR SIZE SUBSTITUTION OF MITEK MI120 WITH TEE-LOK TL20 PLATES IS ALLOWED.

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		JT	VERT	HORZ	UPLIFT	IN-SX	IN-SX
P	1577	0		1577	0	0	0	5-8	2-11
J	1577	0		1577	0	0	0	5-8	2-11

UNFACTORED REACTIONS							
JT	1ST LCASE	MAX/MIN.	SNOW	LIVE	PERM.LIVE	WIND	DEAD
P	1104	786/0	0/0	0/0	0/0	0/0	318/0
J	1104	786/0	0/0	0/0	0/0	0/0	318/0

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

BRACING
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.93 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-M

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

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

LOADING
TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. CS1 (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. CS1 (LC)	
FR-TO		FROM TO		FR-TO			
A-B	0/32	-77.4 -77.4	0.11 (1)	10.00	O-C	-202/25	0.09 (1)
B-C	-1602/0	-77.4 -77.4	0.30 (1)	4.93	C-N	-235/0	0.24 (1)
C-D	-1453/0	-77.4 -77.4	0.29 (1)	5.13	N-D	0/256	0.06 (1)
D-E	-1317/0	-77.4 -77.4	0.30 (1)	5.30	D-M	0/344	0.08 (1)
E-F	-1317/0	-77.4 -77.4	0.30 (1)	5.30	M-E	-499/0	0.31 (1)
F-G	-1453/0	-77.4 -77.4	0.29 (1)	5.13	M-F	0/344	0.08 (1)
G-H	-1602/0	-77.4 -77.4	0.30 (1)	4.93	L-F	0/256	0.06 (1)
H-I	0/32	-77.4 -77.4	0.11 (1)	10.00	L-G	-235/0	0.24 (1)
P-B	-1538/0	0.0 0.0	0.16 (1)	6.64	K-G	-202/25	0.09 (1)
J-H	-1538/0	0.0 0.0	0.16 (1)	6.64	B-O	0/1337	0.30 (1)
					K-H	0/1337	0.30 (1)
P-O	0/0	-17.5 -17.5	0.11 (4)	10.00			
O-N	0/1304	-17.5 -17.5	0.26 (1)	10.00			
N-M	0/1141	-17.5 -17.5	0.23 (1)	10.00			
M-L	0/1141	-17.5 -17.5	0.23 (1)	10.00			
L-K	0/1304	-17.5 -17.5	0.26 (1)	10.00			
K-J	0/0	-17.5 -17.5	0.11 (4)	10.00			

DESIGN CRITERIA

SPECIFIED LOADS:
TOP CH. LL = 23.3 PSF
DL = 3.0 PSF
BOT CH. LL = 0.0 PSF
DL = 7.0 PSF
TOTAL LOAD = 33.3 PSF

SPACING = 24.0 IN./C

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

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBC 2010

THIS DESIGN COMPLIES WITH:
- PART 9 OF OBC 2012, BCBC 2012, ABC 2014
- CSA 086-09
- TPIC 2011

(55 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.03")
CALCULATED VERT. DEFL.(LL) = L/999 (0.06")
ALLOWABLE DEFL.(TL)= L/360 (1.03")
CALCULATED VERT. DEFL.(TL) = L/999 (0.10")

CSI=0.30/1.00 (G-H:1), BC=0.26/1.00 (K-L:1), WB=0.31/1.00 (E-M:1), SSI=0.20/1.00 (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 = 0.50

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 618 354 1667 822 2284 1656

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

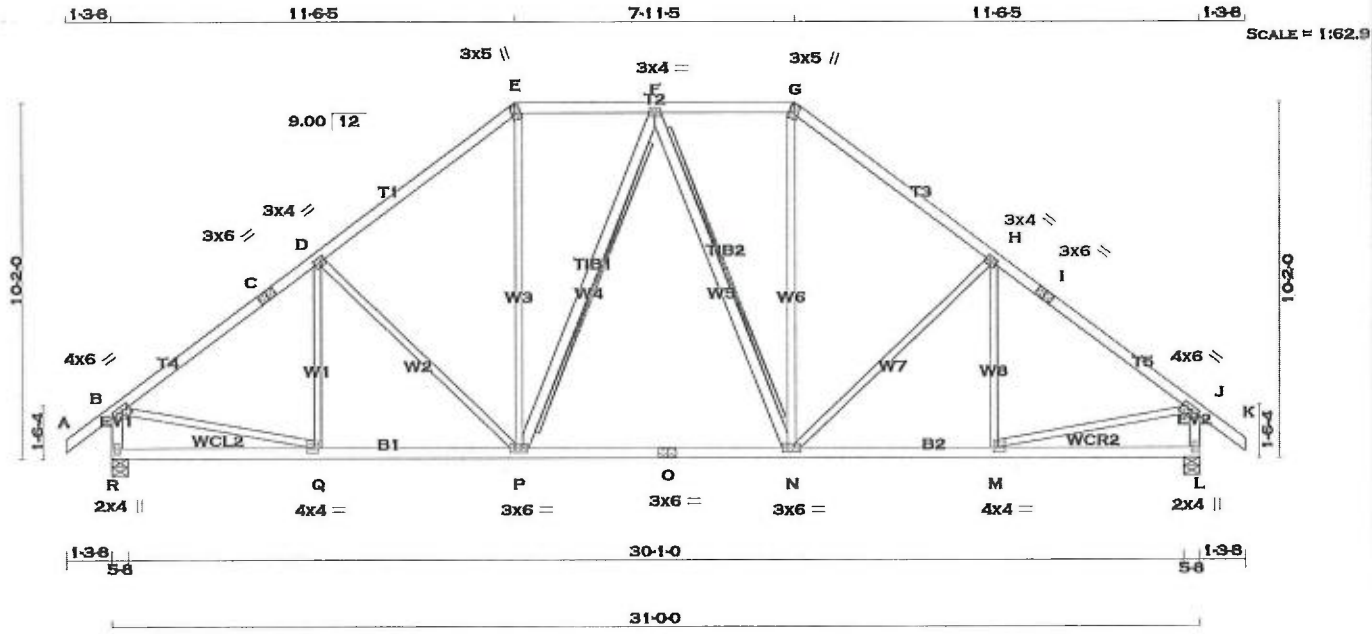
JSI GRIP= 0.83 (K) (INPUT = 0.90)
JSI METAL= 0.45 (B) (INPUT = 1.00)



September 14, 2018



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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
I - K	2x4	DRY	No.2	SPF
R - B	2x4	DRY	No.2	SPF
L - J	2x4	DRY	No.2	SPF
R - O	2x4	DRY	No.2	SPF
O - L	2x4	DRY	No.2	SPF
ALL WEBS	2x3	DRY	No.2	SPF
EXCEPT				
P - F	2x4	DRY	No.2	SPF
F - N	2x4	DRY	No.2	SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)				
JT TYPE	PLATES	W	LEN	Y X
B TMWV-I	MT20	4.0	6.0	1.50 2.75
C TS-I	MT20	3.0	6.0	
D TMWV-I	MT20	3.0	4.0	1.50 1.50
E TTW+m	MT20	3.0	5.0	Edge 1.25
F TMWV-I	MT20	3.0	4.0	
G TTW+m	MT20	3.0	5.0	Edge 1.25
H TMWV-I	MT20	3.0	4.0	1.50 1.50
I TS-I	MT20	3.0	6.0	
J TMWV-I	MT20	4.0	6.0	1.50 2.75
L BMV1+p	MT20	2.0	4.0	
M BMWV-I	MT20	4.0	4.0	1.50 1.50
N BMWV-I	MT20	3.0	6.0	
O BS-I	MT20	3.0	6.0	
P BMWV-I	MT20	3.0	6.0	
Q BMWV-I	MT20	4.0	4.0	1.50 1.50
R BMV1+p	MT20	2.0	4.0	

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

A SIZE FOR SIZE SUBSTITUTION OF MITEK MI20 WITH TEE-LOK TL20 PLATES IS ALLOWED.

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

BEARINGS		FACTORED		MAXIMUM FACTORED		INPUT		REQRD	
JT	GROSS REACTION	VERT	HORZ	GROSS REACTION	DOWN	HORZ	UPLIFT	BRG	IN-SX
R	1577	0	0	1577	0	0	5-8	2-11	
L	1577	0	0	1577	0	0	5-8	2-11	

UNFACTORED REACTIONS		1ST LCASE MAX./MIN. COMPONENT REACTIONS						
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL	
R	1104	786 / 0	0 / 0	0 / 0	0 / 0	318 / 0	0 / 0	
L	1104	786 / 0	0 / 0	0 / 0	0 / 0	318 / 0	0 / 0	

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

BRACING
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.81 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.

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

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. FACTORED HORZ. LOAD (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. FACTORED HORZ. LOAD (LC)	
FR-TO		FROM TO		FR-TO			
A-B	0 / 32	-77.4 -77.4 0.11 (1)	10.00	Q-D	-163 / 42	0.09 (1)	
B-C	-1610 / 0	-77.4 -77.4 0.40 (1)	4.81	D-P	-319 / 0	0.43 (1)	
C-D	-1610 / 0	-77.4 -77.4 0.40 (1)	4.81	P-E	0 / 529	0.12 (1)	
D-E	-1391 / 0	-77.4 -77.4 0.37 (1)	5.11	E-F	-197 / 0	0.16 (1)	
E-F	-1090 / 0	-77.4 -77.4 0.16 (1)	5.88	F-N	-197 / 0	0.16 (1)	
F-G	-1090 / 0	-77.4 -77.4 0.16 (1)	5.88	N-G	0 / 529	0.12 (1)	
G-H	-1391 / 0	-77.4 -77.4 0.37 (1)	5.11	H-I	-319 / 0	0.43 (1)	
H-I	-1610 / 0	-77.4 -77.4 0.40 (1)	4.81	I-J	-163 / 42	0.09 (1)	
I-J	-1610 / 0	-77.4 -77.4 0.40 (1)	4.81	J-K	0 / 1340	0.30 (1)	
J-K	0 / 32	-77.4 -77.4 0.11 (1)	10.00	M-J	0 / 1340	0.30 (1)	
R-B	-1533 / 0	0.0 0.0 0.16 (1)	6.64				
L-J	-1533 / 0	0.0 0.0 0.16 (1)	6.64				
R-Q	0 / 0	-17.5 -17.5 0.12 (4)	10.00				
Q-P	0 / 1314	-17.5 -17.5 0.31 (1)	10.00				
P-O	0 / 1162	-17.5 -17.5 0.29 (1)	10.00				
O-N	0 / 1162	-17.5 -17.5 0.29 (1)	10.00				
N-M	0 / 1314	-17.5 -17.5 0.31 (1)	10.00				
M-L	0 / 0	-17.5 -17.5 0.12 (4)	10.00				

DESIGN CRITERIA

SPECIFIED LOADS:
TOP CH. LL = 23.3 PSF
DL = 3.0 PSF
BOT CH. LL = 0.0 PSF
DL = 7.0 PSF
TOTAL LOAD = 33.3 PSF

SPACING = 24.0 IN./C

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

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 9 OF OBC 2012, BCBC 2012, ABC 2014
- CSA 086-09
- TPIC 2011

(55 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= 1/360 (1.03")
CALCULATED VERT. DEFL.(LL) = 1/999 (0.06")
ALLOWABLE DEFL.(TL)= 1/360 (1.03")
CALCULATED VERT. DEFL.(TL) = 1/999 (0.15")

CSI: TC=0.40/1.00 (H-J:1), BC=0.31/1.00 (M-N:1), WB=0.43/1.00 (H-N:1), SSI=0.17/1.00 (H-J:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

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	618	354	1667 822 2264 1656

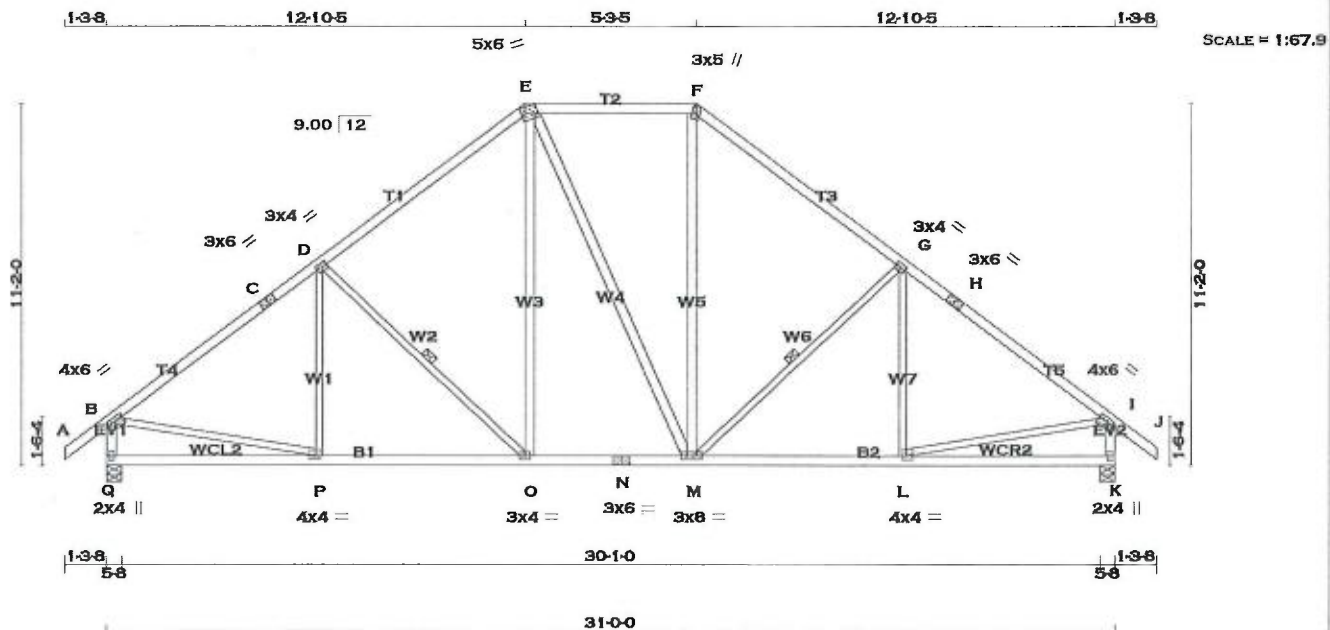
PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.88 (P) (INPUT = 0.90)
JSI METAL= 0.49 (Q) (INPUT = 1.00)



READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTE PAGE ENP-1. THE NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.



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 - F	2x4	DRY	No.2	SPF
F - H	2x4	DRY	No.2	SPF
H - J	2x4	DRY	No.2	SPF
Q - B	2x4	DRY	No.2	SPF
K - I	2x4	DRY	No.2	SPF
Q - N	2x4	DRY	No.2	SPF
N - K	2x4	DRY	No.2	SPF
ALL WEBS EXCEPT	2x3	DRY	No.2	SPF
O - E	2x4	DRY	No.2	SPF
E - M	2x4	DRY	No.2	SPF
M - F	2x4	DRY	No.2	SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMVW-I	MT20	4.0	6.0	1.50	2.75
C	TS-I	MT20	3.0	6.0		
D	TMVW-I	MT20	3.0	4.0	1.50	1.50
E	TTWW-m	MT20	5.0	6.0	2.00	1.50
F	TTW+m	MT20	3.0	5.0	Edge 1.25	
G	TMVW-I	MT20	3.0	4.0	1.50	1.50
H	TS-I	MT20	3.0	6.0		
I	TMVW-I	MT20	4.0	6.0	1.50	2.75
K	BMV1+p	MT20	2.0	4.0		
L	BMVW-I	MT20	4.0	4.0	1.50	1.50
M	BMVW-I	MT20	3.0	8.0		
N	BS-I	MT20	3.0	6.0		
O	BMVW-I	MT20	3.0	4.0		
P	BMVW-I	MT20	4.0	4.0	1.50	1.50
Q	BMV1+p	MT20	2.0	4.0		

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

A SIZE FOR SIZE SUBSTITUTION OF MITEK MI20 WITH TEE-LOK TL20 PLATES IS ALLOWED.

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		
Q	1577	0	1577	0	5-8	2-11
K	1577	0	1577	0	5-8	2-11

UNFACTORED REACTIONS

JT	COMBINED	MAX/MIN. COMPONENT REACTIONS					
		SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
Q	1104	786 / 0	0 / 0	0 / 0	0 / 0	318 / 0	0 / 0
K	1104	786 / 0	0 / 0	0 / 0	0 / 0	318 / 0	0 / 0

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

BRACING
 TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.66 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 - 1x4 LATERAL BRACE(S) AT 1/2 LENGTH OF D-O, G-M. DBS = 20'-0" CBF = 52 LBS.

DBS = DIAGONAL BRACE SPACING (MAX). CBF = CUMULATIVE BRACING FORCE (PER BRACE). FASTEN LATERAL BRACE(S) USING (0.122"x3") SPIRAL NAILS: 1 NAIL FOR 2x3 BRACE(S), 2 FOR 1x4, 2x4, 2x5, 3 FOR 2x6, 4 FOR 2x8, 5 FOR 2x10, AND 6 FOR 2x12.

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS				
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	FACTORED HORZ. LOAD (LC)	MAX. FACTORED FORCE (LBS)	MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	FACTORED HORZ. LOAD (LC)
FR-TO		FROM TO	MAX CSI (LC)	MAX. LENGTH	FR-TO			MAX CSI (LC)
A-B	0 / 32	-77.4	-77.4 0.11 (1)	10.00	P-D	-112 / 76		0.07 (1)
B-C	-1614 / 0	-77.4	-77.4 0.51 (1)	4.66	D-O	-414 / 0		0.22 (1)
C-D	-1614 / 0	-77.4	-77.4 0.51 (1)	4.66	O-E	0 / 379		0.06 (1)
D-E	-1312 / 0	-77.4	-77.4 0.47 (1)	5.09	E-M	0 / 0		0.00 (1)
E-F	-1024 / 0	-77.4	-77.4 0.29 (1)	5.84	M-F	0 / 380		0.06 (1)
F-G	-1312 / 0	-77.4	-77.4 0.47 (1)	5.09	M-G	-413 / 0		0.22 (1)
G-H	-1614 / 0	-77.4	-77.4 0.51 (1)	4.66	L-G	-113 / 76		0.08 (1)
H-I	-1614 / 0	-77.4	-77.4 0.51 (1)	4.66	B-P	0 / 1342		0.30 (1)
I-J	0 / 32	-77.4	-77.4 0.11 (1)	10.00	L-I	0 / 1342		0.30 (1)
Q-B	-1531 / 0	0.0	0.0 0.16 (1)	6.65				
K-I	-1530 / 0	0.0	0.0 0.16 (1)	6.65				
Q-P	0 / 0	-17.5	-17.5 0.18 (4)	10.00				
P-O	0 / 1320	-17.5	-17.5 0.31 (1)	10.00				
O-N	0 / 1024	-17.5	-17.5 0.23 (1)	10.00				
N-M	0 / 1024	-17.5	-17.5 0.23 (1)	10.00				
M-L	0 / 1320	-17.5	-17.5 0.31 (1)	10.00				
L-K	0 / 0	-17.5	-17.5 0.18 (4)	10.00				

DESIGN CRITERIA

SPECIFIED LOADS:
 TOP CH. LL = 23.3 PSF
 DL = 3.0 PSF
 BOT CH. LL = 0.0 PSF
 DL = 7.0 PSF
 TOTAL LOAD = 33.3 PSF

SPACING = 24.0 IN. C/C

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

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBC 2010

THIS DESIGN COMPLIES WITH:
 - PART 9 OF OBC 2012, BCBC 2012, ABC 2014
 - CSA 086-09
 - TPIC 2011

(55 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL) = L/360 (1.03")
 CALCULATED VERT. DEFL.(LL) = L/999 (0.06")
 ALLOWABLE DEFL.(TL) = L/360 (1.03")
 CALCULATED VERT. DEFL.(TL) = L/999 (0.11")

CSI: TC=0.51/1.00 (B-D:1), BC=0.31/1.00 (O-P:1), WB=0.30/1.00 (B-P:1), SSI=0.20/1.00 (B-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 = 0.50

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 618 354 1667 822 2284 1656

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

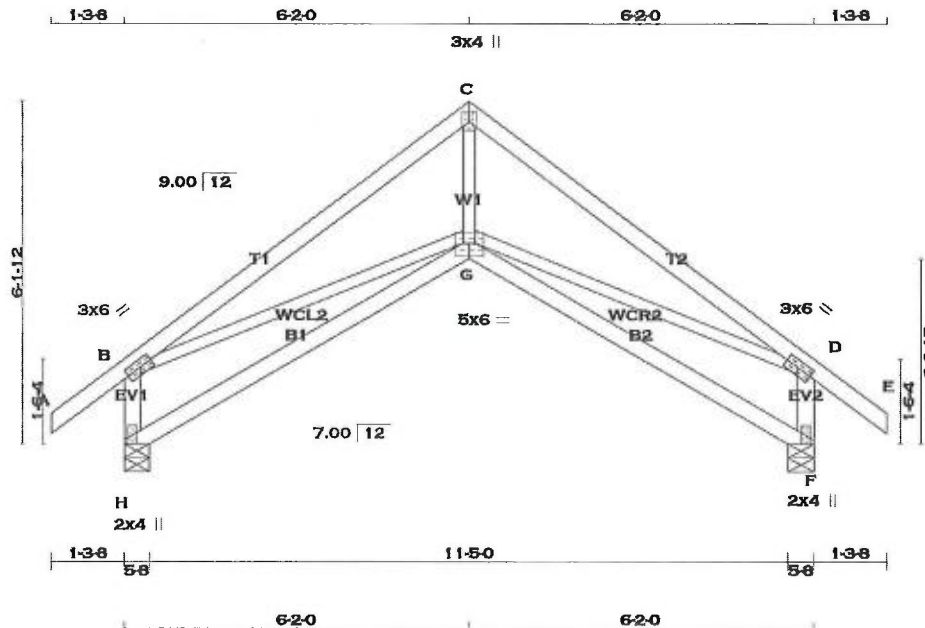
JSI GRIP= 0.88 (F) (INPUT = 0.90)
 JSI METAL= 0.49 (P) (INPUT = 1.00)



September 14, 2018



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SCALE = 1:39.5

TOTAL WEIGHT = 53 lb

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

ALL WEBS 2x3 DRY No.2 SPF
EXCEPT

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMW-t	MT20	3.0	6.0	1.50	2.75
C	TTW+p	MT20	3.0	4.0	2.25	1.50
D	TMW-t	MT20	3.0	6.0	1.50	2.75
F	BMV1+p	MT20	2.0	4.0	Edge	
G	BBWWW-p	MT20	5.0	6.0	2.75	3.00
H	BMV1+p	MT20	2.0	4.0	Edge	

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

A SIZE FOR SIZE SUBSTITUTION OF MITTEK MII20 WITH TEE-LOK TL20 PLATES IS ALLOWED.

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

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG	REQRD BRG
	VERT	HORZ	DOWN	HORZ		
H	692	0	692	0	5-8	1-8
F	692	0	692	0	5-8	1-8

UNFACTORED REACTIONS

JT	1ST LCASE		MAX./MIN. COMPONENT REACTIONS		WIND	DEAD	SOIL
	COMBINED	SNOW	LIVE	PERM.LIVE			
H	483	351/0	0/0	0/0	0/0	132/0	0/0
F	483	351/0	0/0	0/0	0/0	132/0	0/0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.93 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS					WEBS				
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 MAX. CSI (LC)	MAX. UNBRAC LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. CSI (LC)		
FR-TO		FROM TO		10.00	FR-TO				
A-B	0/32	-77.4	-77.4	0.11 (1)	G-C	0/621	0.14 (1)		
B-C	-915/0	-77.4	-77.4	0.40 (1)	B-G	0/775	0.17 (1)		
C-D	-915/0	-77.4	-77.4	0.40 (1)	G-D	0/775	0.17 (1)		
D-E	0/32	-77.4	-77.4	0.11 (1)					
H-B	-638/0	0.0	0.0	0.07 (1)					
F-D	-638/0	0.0	0.0	0.07 (1)					
H-G	0/0	-17.5	-17.5	0.20 (4)	10.00				
G-F	0/0	-17.5	-17.5	0.20 (4)	10.00				

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH. LL = 23.3 PSF
DL = 3.0 PSF
BOT CH. LL = 0.0 PSF
DL = 7.0 PSF
TOTAL LOAD = 33.3 PSF

SPACING = 24.0 IN. C/C

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 9 OF OBC 2012, BCBC 2012, ABC 2014
- CSA 086-09
- TPIC 2011

(55 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.41")
CALCULATED VERT. DEFL.(LL) = L/999 (0.04")
ALLOWABLE DEFL.(TL)= L/360 (0.41")
CALCULATED VERT. DEFL.(TL) = L/999 (0.11")

CSI: TC=0.40/1.00 (C-D:1), BC=0.20/1.00 (F-G:4)
WB=0.17/1.00 (B-G:1), SSI=0.15/1.00 (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 = 0.50

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 618 354 1667 822 2284 1656

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

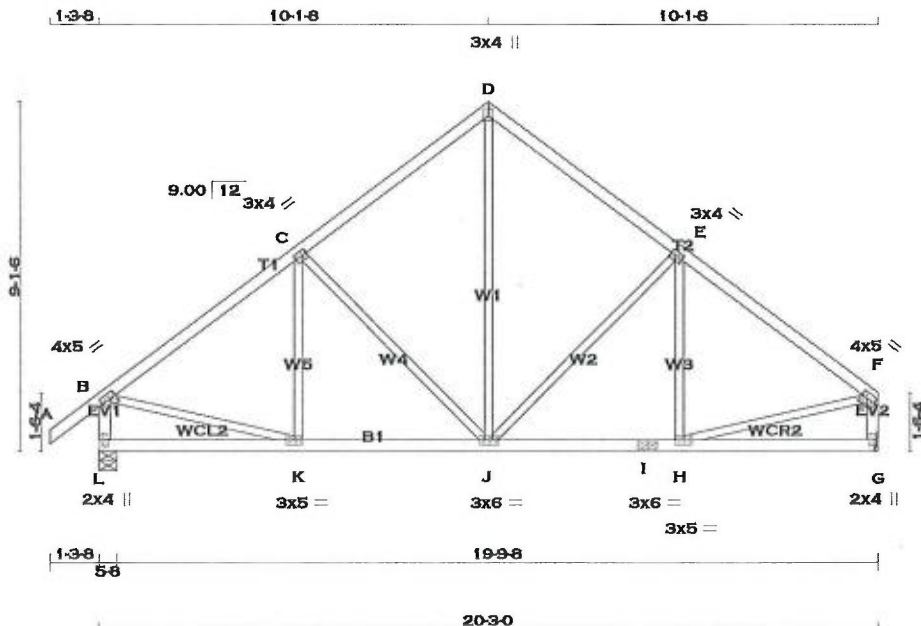
JSI GRIP= 0.89 (C) (INPUT= 0.90)
JSI METAL= 0.28 (D) (INPUT= 1.00)



September 14, 2018



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TOTAL WEIGHT = 3 X 90 = 271 lb [M]F

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

ALL WEBS 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	5.0	1.75	2.00
C	TMWW-t	MT20	3.0	4.0	1.50	1.50
D	TTW+p	MT20	3.0	4.0	2.25	1.50
E	TMWW-t	MT20	3.0	4.0	1.50	1.50
F	TMVW-t	MT20	4.0	5.0	1.75	Edge
G	BMV1+p	MT20	2.0	4.0		
H	BMWW-t	MT20	3.0	5.0		
I	BS-t	MT20	3.0	6.0		
J	BMWW-t	MT20	3.0	6.0		
K	BMWW-t	MT20	3.0	5.0		
L	BMV1+p	MT20	2.0	4.0		

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

A SIZE FOR SIZE SUBSTITUTION OF MITEK MII20 WITH TEE-LOK TL20 PLATES IS ALLOWED.

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

BEARINGS		FACTORED	MAXIMUM FACTORED	INPUT	REQRD
JT	GROSS REACTION	GROSS REACTION	GROSS REACTION	BRG	BRG
L	VERT	DOWN	HORZ	UPLIFT	IN-SX
L	1067	0	1067	0	5-8
G	960	0	960	0	MECHANICAL

A SUITABLE MECHANICAL CONNECTION IS REQUIRED AT JOINT G TO RESIST THE MAX FACTORED REACTIONS.

UNFACTORED REACTIONS

JT	1ST LCASE	MAX./MIN. COMPONENT REACTIONS	WIND	DEAD	SOIL
L	COMBINED	SNOW	LIVE	PERM.LIVE	
L	747	536 / 0	0 / 0	0 / 0	211 / 0
G	674	472 / 0	0 / 0	0 / 0	202 / 0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.04 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. UNBRACED LENGTH (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. UNBRACED LENGTH (LC)	
FR-TO		FROM TO		FR-TO			
A-B	0 / 32	-77.4 -77.4 0.11 (1)	10.00	J-D	0 / 548	0.12 (1)	
B-C	-953 / 0	-77.4 -77.4 0.27 (1)	6.04	J-E	-325 / 0	0.31 (1)	
C-D	-725 / 0	-77.4 -77.4 0.26 (1)	6.25	H-E	-83 / 60	0.04 (1)	
D-E	-725 / 0	-77.4 -77.4 0.26 (1)	6.25	C-J	-325 / 0	0.31 (1)	
E-F	-953 / 0	-77.4 -77.4 0.27 (1)	6.04	K-C	-83 / 60	0.04 (1)	
L-B	-1030 / 0	0.0 0.0 0.11 (1)	7.74	B-K	0 / 805	0.18 (1)	
G-F	-923 / 0	0.0 0.0 0.10 (1)	7.81	H-F	0 / 805	0.18 (1)	
L-K	0 / 0	-17.5 -17.5 0.11 (4)	10.00				
K-J	0 / 784	-17.5 -17.5 0.18 (1)	10.00				
J-I	0 / 784	-17.5 -17.5 0.18 (1)	10.00				
I-H	0 / 784	-17.5 -17.5 0.18 (1)	10.00				
H-G	0 / 0	-17.5 -17.5 0.11 (4)	10.00				

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL = 23.3	PSF
DL = 3.0	PSF	
BOT CH.	LL = 0.0	PSF
DL = 7.0	PSF	
TOTAL LOAD = 33.3	PSF	

SPACING = 24.0 IN./C/C

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2010

THIS DESIGN COMPLIES WITH:

- PART 9 OF OBC 2012, BCBC 2012, ABC 2014
- CSA 086-09
- TPIC 2011

(55 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.67")
CALCULATED VERT. DEFL.(LL) = L/999 (0.02")
ALLOWABLE DEFL.(TL)= L/360 (0.67")
CALCULATED VERT. DEFL.(TL) = L/999 (0.05")

CSI: TC=0.27/1.00 (B-C:1), BC=0.18/1.00 (H-J:1), WB=0.31/1.00 (E-J:1), SSI=0.15/1.00 (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 = 0.50

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

NAIL VALUES

PLATE	GRIP(DRY)	SHEAR	SECTION
(PSI)	(PLI)	(PLI)	(PLI)
MAX MIN	MAX MIN	MAX MIN	MAX MIN
MT20	618	354	1667

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

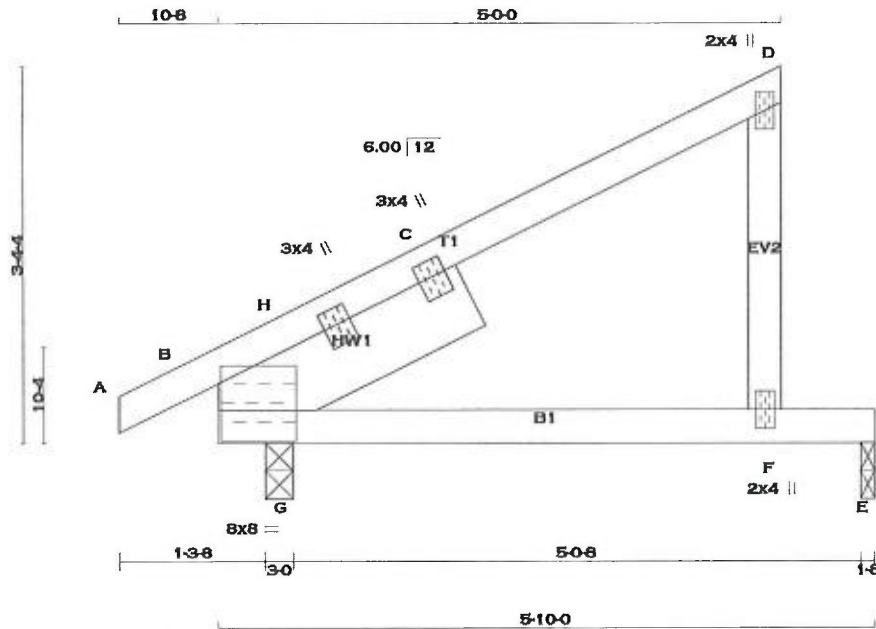
JSI GRIP= 0.88 (J) (INPUT = 0.90)
JSI METAL= 0.34 (B) (INPUT = 1.00)



September 14, 2018



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TOTAL WEIGHT = 4 X 23 = 93 lb

LUMBER

N. L. G. A. RULES

CHORDS	SIZE	LUMBER	DESCR.
A - D	2x4	DRY	No.2
F - E	2x4	DRY	No.2

REINFORCING MEMBERS

HW1	2x8	DRY	No.2	SPF
-----	-----	-----	------	-----

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMBMR1-I	MT20	8.0	8.0	6.00	0.25
B	RT+t	MT20	3.0	4.0	1.75	12.75
B	RT+t	MT20	3.0	4.0	1.75	24.00
D	TMV+p	MT20	2.0	4.0		
F	BMV+p	MT20	2.0	4.0		

A SIZE FOR SIZE SUBSTITUTION OF MITEK MH20 WITH TEE-LOK TL20 PLATES IS ALLOWED.

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	345	0	345	0	3-0	1-8
E	217	0	217	0	1-8	1-8

UNFACTORED REACTIONS

JT	1ST LCASE		MAX./MIN. COMPONENT REACTIONS				
	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
B	240	177 / 0	0 / 0	0 / 0	0 / 0	64 / 0	0 / 0
E	153	100 / 0	0 / 0	0 / 0	0 / 0	54 / 0	0 / 0

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

BRACING

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

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 MAX. UNBRACED LENGTH (FT)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. CSI (LC)	
FR-TO		FROM	TO	FR-TO			
A-B	-3 / 0	-77.4	-77.4	0.04 (1)	10.00	G-H -239 / 0 0.00 (1)	
B-H	-189 / 0	-77.4	-77.4	0.06 (1)	6.25	G-C 0 / 240 0.02 (1)	
H-C	-102 / 0	-77.4	-77.4	0.32 (1)	6.25		
C-D	-102 / 0	-77.4	-77.4	0.32 (1)	6.25		
F-D	-186 / 0	0.0	0.0	0.03 (1)	7.81		
B-G	0 / 154	-17.5	-17.5	0.13 (1)	10.00		
G-F	0 / 0	-17.5	-17.5	0.25 (1)	10.00		
F-E	0 / 0	-17.5	-17.5	0.24 (1)	10.00		

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL = 23.3 PSF
DL = 3.0 PSF	
BOT CH.	LL = 0.0 PSF
DL = 7.0 PSF	
TOTAL LOAD	= 33.3 PSF

SPACING = 24.0 IN. C/C

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2010

THIS DESIGN COMPLIES WITH:

- PART 9 OF OBC 2012, BCBC 2012, ABC 2014
- CSA 086-09
- TPIC 2011

(55 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.19")
 CALCULATED VERT. DEFL.(LL) = L/986 (0.07")
 ALLOWABLE DEFL.(TL)= L/360 (0.19")
 CALCULATED VERT. DEFL.(TL) = L/525 (0.13")

CSI: TC=0.32/1.00 (D-H:1), BC=0.25/1.00 (F-G:1), WB=0.02/1.00 (C-G:1), SSI=0.18/1.00 (D-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 = 0.50

AUTOSOLVE LEFT 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	618 354	1667 822	2284 1656

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

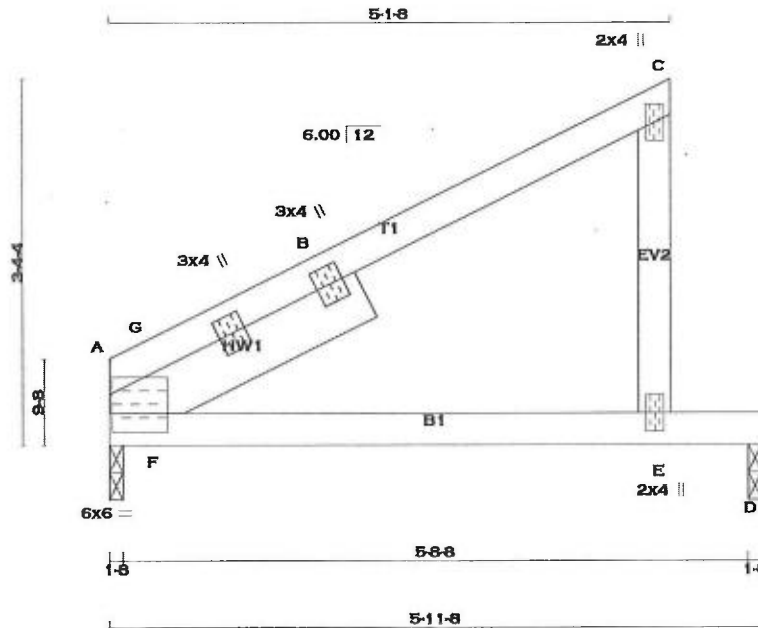
JSI GRIP= 0.12 (B) (INPUT = 0.90)
 JSI METAL= 0.04 (D) (INPUT = 1.00)



September 14, 2018



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SCALE = 1:20.2

TOTAL WEIGHT = 3 X 21 = 64 lb

LUMBER	N. L. G. A. RULES	CHORDS	SIZE	LUMBER	DESCR.
A - C	2x4	DRY	No.2	SPF	
E - C	2x4	DRY	No.2	SPF	
A - D	2x4	DRY	No.2	SPF	
REINFORCING MEMBERS					
HW1	2x6	DRY	No.2	SPF	

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT TYPE	PLATES	W	LEN	Y	X
A	TMBMR1-I	MT20	6.0	6.0	2.00 0.25
A	RT-t	MT20	3.0	4.0	
A	RT-t	MT20	3.0	4.0	
C	TMV+p	MT20	2.0	4.0	
E	BMV+p	MT20	2.0	4.0	

A SIZE FOR SIZE SUBSTITUTION OF MITEK MII20 WITH TEE-LOK TL20 PLATES IS ALLOWED.

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

BEARINGS							
JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT	REQRD	
	VERT	HORZ	DOWN	HORZ	BRG IN-SX	BRG IN-SX	
A	278	0	278	0	0	1-8	
D	223	0	223	0	0	1-8	

UNFACTORED REACTIONS

JT	1ST LCASE		MAX/MIN COMPONENT REACTIONS		WIND	DEAD	SOIL
	COMBINED	SNOW	LIVE	PERM.LIVE			
A	195	136 / 0	0 / 0	0 / 0	0 / 0	59 / 0	0 / 0
D	158	103 / 0	0 / 0	0 / 0	0 / 0	55 / 0	0 / 0

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

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		FACTORED		MEMB.	WEBS	
	MAX. FORCE (LBS)	VERT. LOAD (PLF)	MAX. CSI (LC)	MAX. UNBRACED LENGTH FR-TO		MAX. FORCE (LBS)	MAX. CSI (LC)
FR-TO		FROM	TO		FR-TO		
A-G	-192 / 0	-77.4	-77.4	0.08 (1)	6.25	F-G	-245 / 13
G-B	-111 / 0	-77.4	-77.4	0.34 (1)	6.25	F-B	0 / 246
B-C	-111 / 0	-77.4	-77.4	0.34 (1)	6.25		
E-C	-191 / 0	0.0	0.0	0.03 (1)	7.81		
A-F	0 / 176	-17.5	-17.5	0.13 (1)	10.00		
F-E	0 / 0	-17.5	-17.5	0.26 (1)	10.00		
E-D	0 / 0	-17.5	-17.5	0.24 (1)	10.00		

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL = 23.3	PSF
	DL = 3.0	PSF
BOT CH.	LL = 0.0	PSF
	DL = 7.0	PSF
TOTAL LOAD	= 33.3	PSF

SPACING = 24.0 IN. C/C

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 9 OF OBC 2012, BCBC 2012, ABC 2014
- CSA 086-09
- TPIC 2011

(55 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= $L/360$ (0.20")
CALCULATED VERT. DEFL.(LL) = $L/941$ (0.08")
ALLOWABLE DEFL.(TL)= $L/360$ (0.20")
CALCULATED VERT. DEFL.(TL) = $L/497$ (0.14")

CSI: TC=0.34/1.00 (C-G:1), BC=0.26/1.00 (E-F:1), WB=0.03/1.00 (B-F:1), SSI=0.17/1.00 (C-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 = 0.50

AUTOSOLVE LEFT HEEL ONLY

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

NAIL VALUES

PLATE	GRIP(DRY)	SHEAR	SECTION
	(PSI)	(PLI)	(PLI)
	MAX	MIN	MAX
MT20	618	354	1667
	822	2284	1656

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.11 (C) (INPUT = 0.90)
JSI METAL= 0.04 (C) (INPUT = 1.00)



September 14, 2018



READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTE PAGE ENP-1. THE NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

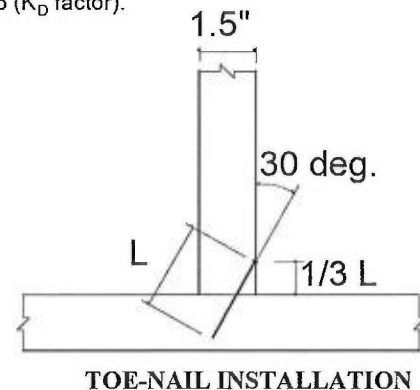
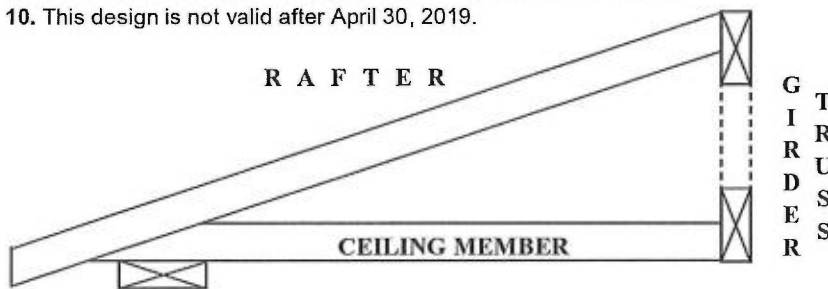
BEARING ANCHORAGE BY TOE-NAILS FOR LATERAL CAPACITY

B37579H1

NAIL TYPE	LENGTH (IN)	DIAMETER (IN)	NAIL LATERAL CAPACITY (LB)	
			S-P-F	D. FIR
COMMON WIRE	3.00	0.144	132	147
	3.25	0.144	132	147
	3.50	0.160	159	177

NOTES:

1. Rafter and ceiling members may be anchored to top and bottom chords of girder truss by toe-nailing rafter and ceiling members to girder chords provided the reaction does not exceed the lateral capacities in the table. Hangers (specified by others) are required for reactions higher than the maximum toe-nail capacity. Reactions are based on factored loads.
2. Toe nail capacities shown in the table are for **one** toe-nail. For additional toe-nails multiply values in table by the number of toe-nails used. Toe-nail capacities take into account toe-nailing factor J_A in CSA O86-09, section 10.9.4.1.
3. For 9- 3/4 gauge 3.25" common wire gun nails (diameter = 0.120") use 3" common spiral nail values.
4. Maximum number of toe-nails allowed depends on the lumber size & species to be toe-nailed to supporting member and nail diameter, as shown in tables below.
5. Nail values in table are based on the following relative lumber densities: G = 0.42 (SPF), G = 0.49 (D. Fir).
6. Toe-nails shall be driven at approximately 1/3 the nail length from the edge of the joist/truss chord and driven at an angle of 30° to the grain of the member (See next page for nailing on bearing plate).
7. For loads due to **wind** the nail lateral capacity in this table may be multiplied by 1.15 (K_D factor).
8. Lumber must be dry (< 19% moisture content) at the time of nail installation.
9. Nail values in this table comply with CSA O86-09, section 10.9.4
10. This design is not valid after April 30, 2019.



Nail type	Common wire	Common spiral	Common wire
Nail dia. (in)	0.160	0.152	0.144
	(3.5" nail)		(3" and 3.25" nail)
LUMBER SIZE	MAXIMUM NUMBER OF TOE-NAILS		
2X4 SPF	2	2	3
2X4 D. Fir	2	2	2
2X6 SPF	4	4	4
2X6 D. Fir	3	3	3



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Certificate No. 10889485



April 26, 2017

BEARING ANCHORAGE BY TOE-NAILS FOR WIND LOADING

B37579H2

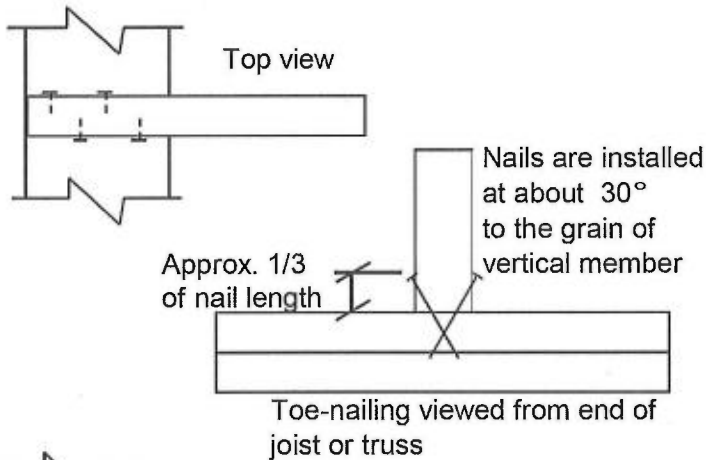
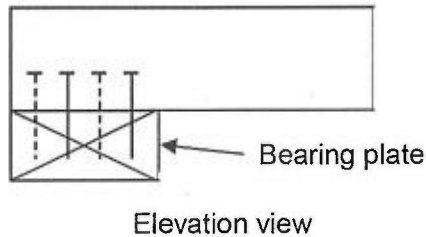
NAIL TYPE	LENGTH (IN)	DIAMETER (IN)	NAIL WITHDRAWAL CAPACITY (LB)	
			S-P-F	D. FIR
COMMON	3.00	0.144	30	42
	3.25	0.144	32	45
	3.50	0.160	38	52

Note: If using truss with D. Fir lumber and S-P-F bearing plate, use values in table for S-P-F.

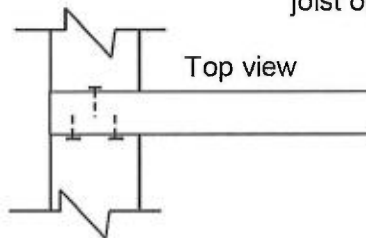
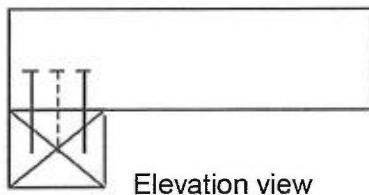
NOTES:

1. Truss chord, rafter, or ceiling members may be anchored to bearing plate by toe-nails, provided that the actual factored uplift force due to **wind or earthquake** load does not exceed the withdrawal capacities in the table. Hangers (specified by others) are required for uplift forces that are higher than the maximum toe-nail withdrawal capacity.
2. Toe nail capacities shown in the table are for **one** toe-nail. For additional toe-nails multiply values in table by the number of toe-nails used. Toe-nail capacities take into account toe-nailing factor J_A in CSA O86-09, section 10.9.5.2.
3. For 9- 3/4 gauge 3.25" common wire gun nails (diameter = 0.120") use 3" common spiral nail values.
4. Maximum number of toe-nails allowed depends on the lumber size & species to be toe-nailed to supporting member and nail diameter, as shown in table above.
5. Nail values in table are based on the following relative lumber densities: $G = 0.42$ (SPF), $G = 0.49$ (D. Fir).
6. Toe-nails shall be driven at approximately 1/3 the nail length from the edge of the joist/truss chord and driven at an angle of 30° to the grain of the member (See drawing on detail B37579H1).
7. Lumber must be dry (< 19% moisture content) at the time of nail installation.
8. Nail values in this table comply with CSA O86-09, section 10.9.5
9. This design is not valid after April 30, 2019

Toe-nailing on 2x6 Bearing Plate



Toe-nailing on 2x4 Bearing Plate



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