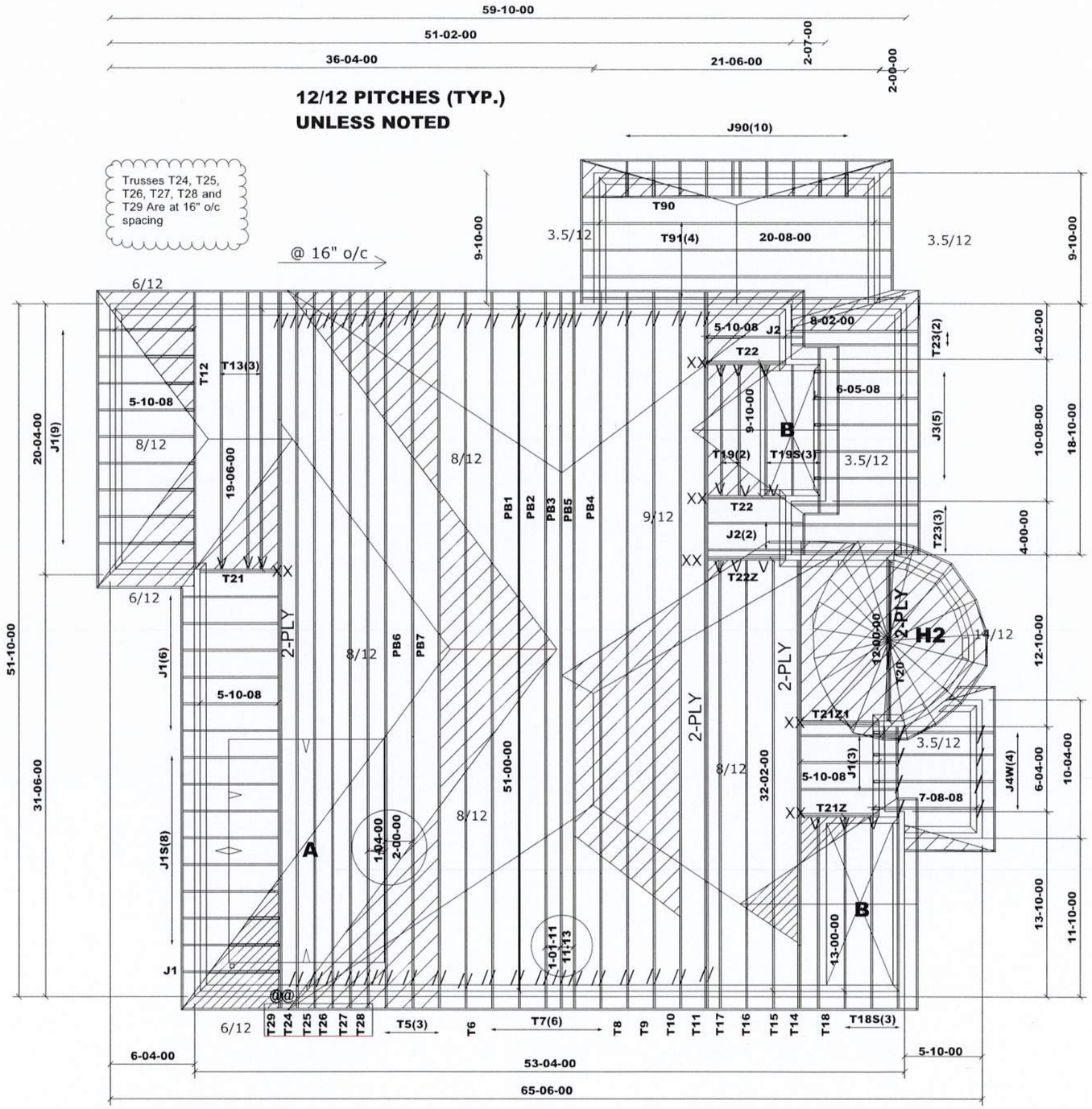


ASPHALT SHINGLES
FINISHED OVERHANG: 12"
2x6 EXTERIOR WALLS
2x6 FASCIA BOARD
HEEL: R.T.M.C.

HARDWARE:
LUS24 - (O)
LJS26DS - (V)
HGUS26-2 (XX)
LUS26-2- (VV)
H2.5T - (/)
TC26- (@)

DENOTE:

A- 12" RAISED COFF. CEILING

B- 8/12 CATH. CEILING

H2- 24" HIGHER PLATE

DENOTES CONVENTIONAL FRAMING

DESIGN CONFORMS WITH OBC 2012(2019 AMENDMENT)
OCCUPANCY: RESIDENTIAL | PART: 9
Ss = 27.2 psf | Sr = 8.4 psf

DESIGN LOADS:
TCSL = 23.3 psf
TCDL = 6.0 psf
BCLL = 0.0 psf
BCDL = 7.4 psf

All conventional framing to conform with Part 9 of O.B.C. 2012. Roof rafters that cross over or meet trusses to be min. 2x4 SPF #2 @ 24" o/c with a vertical post to the truss at each cross point. Vertical posts longer than 6' to have lateral bracing so that the distance between the post end points and lateral bracing does not exceed 6'.

DWG# T-2416596 to T-2416640, T-1800218

LICENSED PROFESSIONAL ENGINEER
07-30-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2417523

TRUSS PLACEMENT PLAN.

This is a truss placement plan only, NOT a final roof framing plan. These trusses are designed as individual building components to be incorporated into the building design at the specification of the building designer. See individual truss drawings for each component identified on this placement plan.

Please verify that all dimensions match the dimensions found on the job. The Building designer is responsible for the temporary/ permanent bracing of the roof and floor system and its integration into the bracing of the overall structure. The design of the truss support structure including headers, beams, walls, and columns is the responsability of the building designer unless otherwise noted in this plan. Building designer to review and approve this plan to ascertain conformity to his overall structural plan.

TAMARACK ROOF TRUSSES INC.

Job Track: 52545	Builder / Location: ROYAL PINE HOMES / BRAMPTON	Model / Elevation: UNIT 60-03 / A+ COFF@ MASTERBED -LOT7	Mitek ver 8.6.3.353
Layout ID: 439988	Project: VALES OF HUMBER		
Plan Log: 208484	Date: 2024-07-30 Designer:		

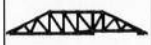
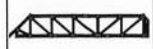
THESE DRAWINGS CONSTITUTE THE PROPERTY OF TAMARACK ROOF TRUSSES INC., SHALL NOT BE REPRODUCED, PUBLISHED, OR REDISTRIBUTED IN ANY MANNER OR UTILIZED FOR ANY PURPOSE OTHER THAN THE MANUFACTURE OF TRUSSES BY TAMARACK ROOF TRUSSES INC AND WILL BE RETRACTED BY TAMARACK ROOF TRUSSES INC IF UTLILZED FOR ANY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

DELIVERY SHIPLIST

TAMARACK ROOF TRUSSES INC.
ALPA LUMBER GROUP

Lumber Yard:	TAMARACK LUMBER	Job Track:	52545
Builder:	ROYAL PINE HOMES	PlanLog:	208484
Project:	VALES OF HUMBER	Layout ID:	439988
Location:	BRAMPTON	Ref #	
Model:	UNIT 60-03	Page:	1 of 4
Lot #:		Date:	07-10-2024
Elevation:	A+ COFF@ MASTERBED -LOT7	Designer:	
		Sales Rep:	Rick DiCiano

Roof Trusses

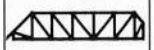
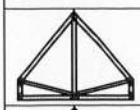
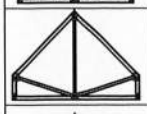
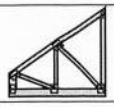
PROFILE	QTY PLY	MARK TYPE	PITCH	SPAN	HEIGHT	LUMBER	OVERHANG LEFT RIGHT	HEEL HEIGHT LEFT RIGHT	LBS. BFT.	BUNDLE # STACK #	LOAD BY REMARKS
	1 2-ply	T29 Hip Girder	6 /12	**51-00-00**	5-03-13	2 x 6	1-03-08 1-03-08	1-02-00 1-02-00	592.87 366.67		
	1	T24 Hip	6 /12	**51-00-00**	6-02-08	2 x 4 2 x 6	1-03-08 1-03-08	1-02-00 1-02-00	296.98 183.33		
	1	T25 Hip	6 /12	**51-00-00**	7-01-03	2 x 4 2 x 6	1-03-08 1-03-08	1-02-00 1-02-00	296.91 183.83		
	1	T26 Hip	6 /12	**51-00-00**	7-11-13	2 x 4 2 x 6	1-03-08 1-03-08	1-02-00 1-02-00	306.3 188.67		
	1	T27 Hip	6 /12	**51-00-00**	8-10-08	2 x 4 2 x 6	1-03-08 1-03-08	1-02-00 1-02-00	321.21 197.67		
	1	T28 Hip	6 /12	**51-00-00**	9-09-03	2 x 4 2 x 6	1-03-08 1-03-08	1-02-00 1-02-00	325.43 200.33		
	3	T5 Hip	6 /12	**51-00-00**	10-07-13	2 x 6	1-03-08 1-03-08	1-02-00 1-02-00	1042.69 620.00		
	1	T6 Hip	12 /12	**51-00-00**	9-04-10	2 x 6	1-03-08 1-03-08	1-10-08 1-10-08	359.28 214.67		
	6	T7 Hip	12 /12	**51-00-00**	10-08-10	2 x 6	1-03-08 1-03-08	1-10-08 1-10-08	2270.65 1356.00		
	1	T8 Hip	12 /12	**51-00-00**	10-05-14	2 x 6	1-03-08 1-03-08	1-10-08 1-10-08	374.91 224.67		
	1	T9 Hip	12 /12	**51-00-00**	8-11-14	2 x 6	1-03-08 1-03-08	1-10-08 1-10-08	353.04 214.67		
	1	T10 Hip	12 /12	**51-00-00**	7-05-14	2 x 6	1-03-08 1-03-08	1-10-08 1-10-08	329.54 200.67		
	1 2-ply	T11 Roof Special Girder	12 /12	**51-00-00**	10-00-09	2 x 6	1-03-08 1-03-08	1-10-08 1-10-08	754.88 464.00		
	1 2-ply	T14 Roof Special Girder	12 /12	**32-02-00**	5-03-13	2 x 4 2 x 6	1-03-08	1-10-08 4-01-05	358.81 218.33		

DELIVERY SHIPLIST

TAMARACK ROOF TRUSSES INC.
ALPA LUMBER GROUP

Lumber Yard:	TAMARACK LUMBER	Job Track:	52545
Builder:	ROYAL PINE HOMES	PlanLog:	208484
Project:	VALES OF HUMBER	Layout ID:	439988
Location:	BRAMPTON	Ref #	
Model:	UNIT 60-03	Page:	2 of 4
Lot #:		Date:	07-10-2024
Elevation:	A+ COFF@ MASTERBED -LOT7	Designer:	
		Sales Rep:	Rick DiCiano

Roof Trusses

PROFILE	QTY PLY	MARK TYPE	PITCH	SPAN	HEIGHT	LUMBER	OVERHANG LEFT RIGHT	HEEL HEIGHT LEFT RIGHT	LBS. BFT.	BUNDLE # STACK #	LOAD BY REMARKS
	1	T15 Roof Special	12 /12	**32-02-00**	6-07-13	2 x 4	1-03-08	1-10-08 4-01-05	155.59 98.83		
	1	T16 Roof Special	12 /12	**32-02-00**	7-11-13	2 x 4	1-03-08	1-10-08 4-01-05	159.36 101.17		
	1	T17 Roof Special	12 /12	**32-02-00**	9-03-13	2 x 4	1-03-08	1-10-08 4-01-05	170.4 105.17		
	1	T90 Hip Girder	3.5 /12	**20-08-00**	3-00-03	2 x 4	1-03-08 1-03-08	3-14 3-14	65.22 40.67		
	4	T91 Common	3.5 /12	**20-08-00**	3-08-05	2 x 4	1-03-08 1-03-08	3-14 3-14	246.66 157.33		
	1	T12 Hip Girder	6 /12	**19-06-00**	5-03-13	2 x 4 2 x 6	1-03-08 1-03-08	1-02-00 1-02-00	94.84 58.67		
	3	T13 Common	6 /12	**19-06-00**	6-00-08	2 x 4	1-03-08 1-03-08	1-02-00 1-02-00	231.21 147.00		
	1	T18 Common	12 /12	**13-00-00**	8-04-08	2 x 4	1-03-08 1-03-08	1-10-08 1-10-08	67.85 43.33		
	3	T18S Scissor	12 /12 8 /12	**13-00-00**	8-04-08	2 x 4	1-03-08 1-03-08	1-10-08 1-10-08	193.57 124.00		
	1 2-ply	T20 Common Girder	14 /12	**12-00-00**	9-01-05	2 x 6		2-01-05 2-01-05	177.17 104.00		
	2	T19 Common	12 /12	**9-10-00**	6-09-08	2 x 4		1-10-08 1-10-08	87.54 57.00		
	3	T19S Scissor	12 /12 8 /12	**9-10-00**	6-09-08	2 x 4	1-03-08 1-03-08	1-10-08 1-10-08	145.55 93.00		
	5	T23 Monopitch	3.5 /12	**8-02-00**	3-03-13	2 x 4	1-03-08	3-14 2-08-08	150.95 98.33		
	1 2-ply	T21 Jack-Closed Girder	8 /12	**5-10-08**	5-03-13	2 x 4 2 x 6		1-04-13 5-03-13	65.47 41.33		

DELIVERY SHIPLIST

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ALPA LUMBER GROUP

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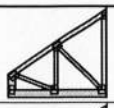
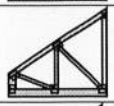
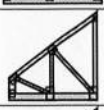
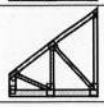
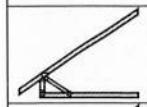
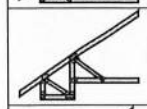
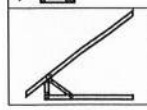
Project:	VALES OF HUMBER	Layout ID:	439988
Location:	BRAMPTON	Ref #	
Model:	UNIT 60-03	Page:	3 of 4
Lot #:		Date:	07-10-2024
Elevation:	A+ COFF@ MASTERBED -LOT7	Designer:	
		Sales Rep:	Rick DiCiano

Roof Trusses

PROFILE	QTY PLY	MARK TYPE	PITCH	SPAN	HEIGHT	LUMBER	OVERHANG LEFT RIGHT	HEEL HEIGHT LEFT RIGHT	LBS. BFT.	BUNDLE # STACK #	LOAD BY REMARKS
	1 2-ply	T21Z Jack-Closed Girder	8 /12	**5-10-08**	5-03-13	2 x 4 2 x 6		1-04-13 5-03-13	65.45 41.33		
	1 2-ply	T21Z1 Jack-Closed	8 /12	**5-10-08**	5-03-13	2 x 4 2 x 6		1-04-13 5-03-13	65.45 41.33		
	2 2-ply	T22 Jack-Closed Girder	9 /12	**5-10-08**	5-11-02	2 x 4 2 x 6		1-06-04 5-11-02	138.26 89.33		
	1 2-ply	T22Z Jack-Closed Girder	9 /12	**5-10-08**	5-11-02	2 x 4 2 x 6		1-06-04 5-11-02	69.13 44.67		
	1	PB1 Piggyback	12 /12	**33-05-05**	1-04-00	2 x 4			80.8 49.83		
	1	PB2 Piggyback	12 /12	**33-05-05**	2-08-00	2 x 4			108.41 67.67		
	1	PB3 Piggyback	12 /12	**33-05-05**	3-05-02	2 x 4			111.89 68.17		
	1	PB4 Piggyback	12 /12	**33-05-05**	1-03-05	2 x 4			80.31 49.83		
	1	PB5 Piggyback	12 /12	**33-05-05**	2-09-05	2 x 4			108.88 69.50		
	1	PB6 Piggyback	6 /12	**13-00-11**	1-04-00	2 x 4			29.79 18.83		
	1	PB7 Piggyback	6 /12	**13-00-11**	2-08-00	2 x 4			34.43 21.50		
	19	J1 Jack-Open	8 /12	**5-10-08**	5-03-13	2 x 4	1-03-08	1-04-13 5-03-13	369.05 221.67		
	8	J1S Jack-Open	8 /12	**5-10-08**	5-03-13	2 x 4	1-03-08	1-04-13 4-03-13	187.83 126.67		
	3	J2 Jack-Open	9 /12	**5-10-08**	5-11-02	2 x 4	1-03-08	1-06-04 5-11-02	60.13 40.50		

DELIVERY SHIPLIST

TAMARACK ROOF TRUSSES INC.
ALPA LUMBER GROUP

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Location:	BRAMPTON	Ref #	
Model:	UNIT 60-03	Page:	4 of 4
Lot #:		Date:	07-10-2024
Elevation:	A+ COFF@ MASTERBED -LOT7	Designer:	
		Sales Rep:	Rick DiCiano

Roof Trusses

PROFILE	QTY PLY	MARK TYPE	PITCH	SPAN	HEIGHT	LUMBER	OVERHANG LEFT RIGHT	HEEL HEIGHT LEFT RIGHT	LBS. BFT.	BUNDLE # STACK #	LOAD BY REMARKS
	5	**J3** **Jack-Open**	3.5 /12	**6-05-08**	2-06-12	2 x 4	1-03-08	3-14 2-02-08	83.34 53.33		
	4	**J4W** **Jack-Open**	3.5 /12	**7-08-08**	2-11-02	2 x 4	1-03-08	3-14 2-06-14	90.45 56.00		
	10	**J90** **Jack-Open**	12 /12	**1-04-00**	3-00-07	2 x 4	1-03-08	1-03-15 2-07-15	82.58 63.33		

TOTAL # TRUSS= **120** TOTAL BFT OF ALL TRUSSES= **7226.83** BFT. TOTAL WEIGHT OF ALL TRSSES **11761.06** LBS

HARDWARE

QTY	TYPE	MODEL	LENGTH
6	Hardware	HGUS26-2	
2	Hardware	TC26	
15	Hardware	LJS26DS	
88	Hardware	H2.5A	

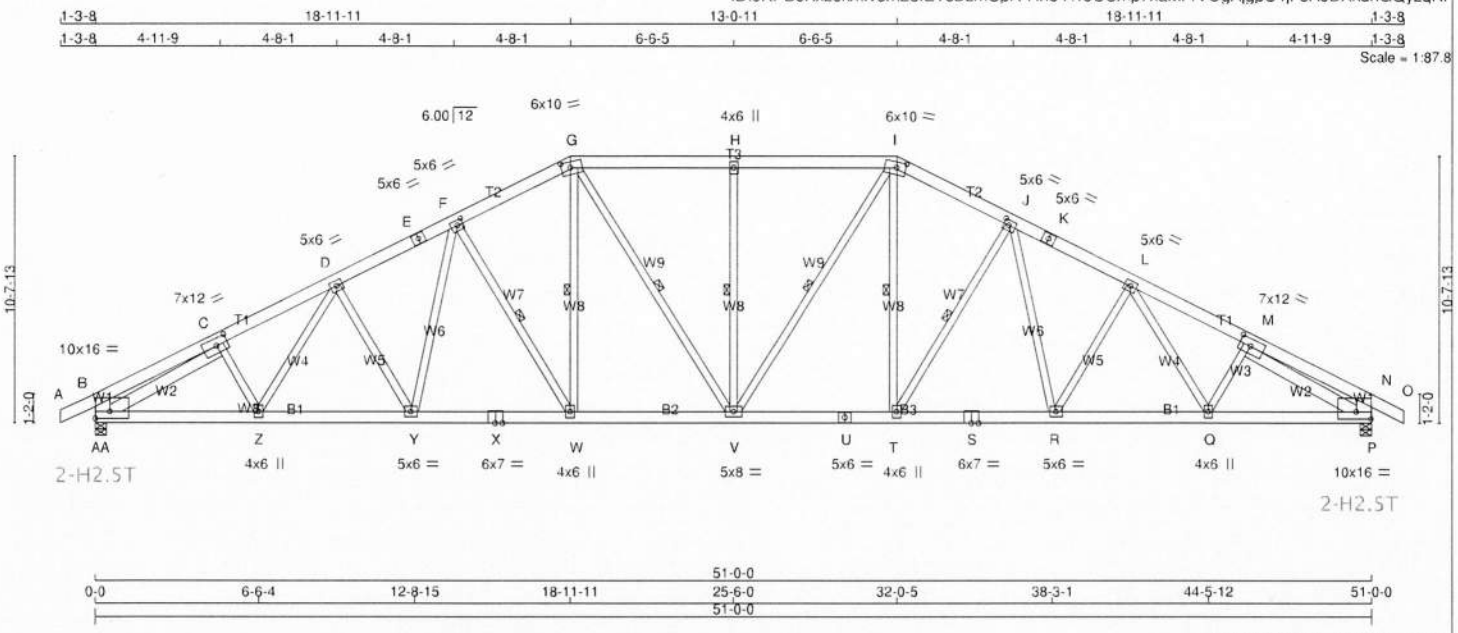
TOTAL NUMBER OF ITEMS= **111**

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
439988	T5	3	1	ROYAL PINE HOMES TRUSS DESC.	

Tamarack Roof Truss, Burlington

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Tue Jul 9 11:15:20 2024 Page 1

ID:9KPB6Kxz6kmfvem28IETcDzmCpR-Hno4?roOSmp7xaMr4VOgAjgpU4jFsRJDXkdhGQyzqNr



TOTAL WEIGHT = 3 X 348 = 1043 lb

[M]

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
A - E	2x6	DRY	No.2	SPF
E - G	2x6	DRY	No.2	SPF
G - I	2x6	DRY	No.2	SPF
I - K	2x6	DRY	No.2	SPF
K - O	2x6	DRY	No.2	SPF
AA- B	2x8	DRY	No.2	SPF
P - N	2x8	DRY	No.2	SPF
AA- X	2x6	DRY	No.2	SPF
X - U	2x6	DRY	No.2	SPF
U - S	2x6	DRY	No.2	SPF
S - P	2x6	DRY	No.2	SPF
ALL WEBS	2x4	DRY	No.2	SPF
EXCEPT				
AA- C	2x6	DRY	2100F 1.8E	SPF
M - P	2x6	DRY	2100F 1.8E	SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B, N, P, AA						
B						
B	TMBMVW1*-I	MT20	10.0	16.0	3.50	7.00
C	TMWW-t	MT20	7.0	12.0	3.50	5.50
D	TMWW-t	MT20	5.0	6.0		
E	TS-t	MT20	5.0	6.0		
F	TMWW-t	MT20	5.0	6.0	2.50	2.75
G	TTWW-m	MT20	6.0	10.0	2.75	4.25
H	TMW+w	MT20	4.0	6.0		
I	TTWW-m	MT20	6.0	10.0	2.75	4.25
J	TMWW-t	MT20	5.0	6.0	2.50	2.75
K	TS-t	MT20	5.0	6.0		
L	TMWW-t	MT20	5.0	6.0		
M	TMWW-t	MT20	7.0	12.0	3.50	5.50
P	TMBMVW1*-I	MT20	10.0	16.0	3.50	7.00
Q, T, W, Z						
Q	BMWW+t	MT20	4.0	6.0		
R	BMWW-t	MT20	5.0	6.0		
S	BS-t	MT20	6.0	7.0		
U	BS-t	MT20	5.0	6.0		
V	BMWWW-t	MT20	5.0	8.0		

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416609

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
AA	3902	0	3902	258	-1041	5-8	4-4
P	3902	0	3902	0	-1041	5-8	4-4

PROVIDE ANCHORAGE AT BEARING JOINT AA FOR 1041 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT P FOR 1041 LBS FACTORED UPLIFT

PROVIDE FOR 258 LBS FACTORED HORIZONTAL REACTION AT JOINT AA

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
AA	2906	1618 / 0	536 / 0	0 / 0	140 / -1114	752 / 0	0 / 0
P	2906	1618 / 0	536 / 0	0 / 0	140 / -1114	752 / 0	0 / 0
HORIZONTAL REACTIONS							
AA	---	0 / 0	0 / 0	0 / 0	184 / -184	0 / 0	0 /0

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

BRACING

FOR SECTION G-I, MAX. UNBRACED TOP CHORD LENGTH = 2.00 FT.
FOR OTHER SECTIONS, MAX. UNBRACED TOP CHORD LENGTH = 3.39 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

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

1 LATERAL BRACE(S) AT 1/ 2 LENGTH OF F-W, G-W, G-V, H-V, I-V, I-T, J-T.

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

LOADING

TOTAL LOAD CASES: (18)

CHORDS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD LC1 (PLF) FROM	TO	MAX CSI (LC)	MAX. UNBRAC LENGTH
A- B	0 / 38	-105.2	-105.2	0.08 (2)	10.00
B- C	-11 / 129	-105.2	-105.2	0.18 (2)	6.25
C- D	-6042 / 1668	-105.2	-105.2	0.33 (1)	3.39
D- E	-5725 / 1591	-105.2	-105.2	0.32 (1)	3.49
E- F	-5725 / 1591	-105.2	-105.2	0.32 (1)	3.49
F- G	-4987 / 1401	-105.2	-105.2	0.28 (1)	3.75
G- H	-4823 / 1302	-115.2	-115.2	0.54 (1)	2.00
H- I	-4823 / 1302	-115.2	-115.2	0.54 (1)	2.00
I- J	-4987 / 1401	-105.2	-105.2	0.28 (1)	3.75
J- K	-5725 / 1592	-105.2	-105.2	0.32 (1)	3.49
K- L	-5725 / 1592	-105.2	-105.2	0.32 (1)	3.49
L- M	-6042 / 1669	-105.2	-105.2	0.33 (1)	3.39
M- N	-11 / 128	-105.2	-105.2	0.18 (3)	6.25
N- O	0 / 38	-105.2	-105.2	0.08 (3)	10.00
AA- B	-425 / 228	0.0	0.0	0.02 (2)	7.81
P- N	-425 / 227	0.0	0.0	0.02 (3)	7.81
AA- Z	-1539 / 5305	-39.5	-39.5	0.75 (1)	6.25
Z- Y	-1403 / 5366	-39.5	-39.5	0.71 (1)	6.25
Y- X	-1174 / 4978	-39.5	-39.5	0.68 (1)	6.25
X- W	-1174 / 4978	-39.5	-39.5	0.68 (1)	6.25
W- V	-893 / 4455	-39.5	-39.5	0.61 (1)	6.25
V- U	-707 / 4455	-39.5	-39.5	0.61 (1)	6.25
U- T	-707 / 4455	-39.5	-39.5	0.61 (1)	6.25
T- S	-916 / 4978	-39.5	-39.5	0.68 (1)	6.25
S- R	-916 / 4978	-39.5	-39.5	0.68 (1)	6.25
R- Q	-1145 / 5366	-39.5	-39.5	0.71 (1)	6.25
Q- P	-1282 / 5305	-39.5	-39.5	0.75 (1)	6.25

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
C- Z	-23 / 350	0.06 (6)
Z- D	-96 / 226	0.05 (13)
D- Y	-643 / 357	0.30 (2)
Y- F	-266 / 828	0.25 (13)
F- W	-1221 / 554	0.49 (2)
W- G	-417 / 1303	0.21 (13)
G- V	-310 / 1108	0.24 (14)
V- H	-915 / 291	0.47 (1)
V- I	-311 / 1108	0.24 (13)
T- I	-418 / 1303	0.21 (14)
T- J	-1221 / 555	0.49 (3)
J- R	-266 / 828	0.25 (14)
R- L	-643 / 357	0.30 (3)
L- Q	-97 / 226	0.05 (14)
Q- M	-23 / 350	0.06 (5)
AA- C	-6305 / 1538	0.83 (1)
M- P	-6305 / 1539	0.83 (1)

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	30.1	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	10.5	PSF
	DL	=	7.4	PSF
TOTAL LOAD		=	54.0	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 4.0 P.S.F.

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2015

THIS DESIGN COMPLIES WITH:
- PART 4 OF BCBC 2018 , NBC-2019AE
- PART 4 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR NOT USED
- PERCENTAGE OF GROUND SNOW LOAD IS USER-DEFINED.

(80 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 30.1 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.70")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.25")
ALLOWABLE DEFL.(TL)= L/180 (3.40")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.37")

CSI: TC=0.54/1.00 (G-H:1) , BC=0.75/1.00 (P-Q:1) , WB=0.83/1.00 (C-AA:1) , SSI=0.29/1.00 (G-H:2)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 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) (PSI) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

CONTINUED ON PAGE 2

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
439988	T5	3	1	ROYAL PINE HOMES TRUSS DESC.	

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
X	BS-t	MT20	6.0	7.0		
Y	BMWW-t	MT20	5.0	6.0		

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING
AS PER NBCC 4.1.6.2.(8)

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 9.2} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 5.0 PSF RESPECTIVELY.

JSI GRIP= 0.73 (G) (INPUT = 0.90)
JSI METAL= 0.79 (U) (INPUT = 0.95)

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416609

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
439988	T6	1	1	ROYAL PINE HOMES TRUSS DESC.	

Tamarack Roof Truss, Burlington

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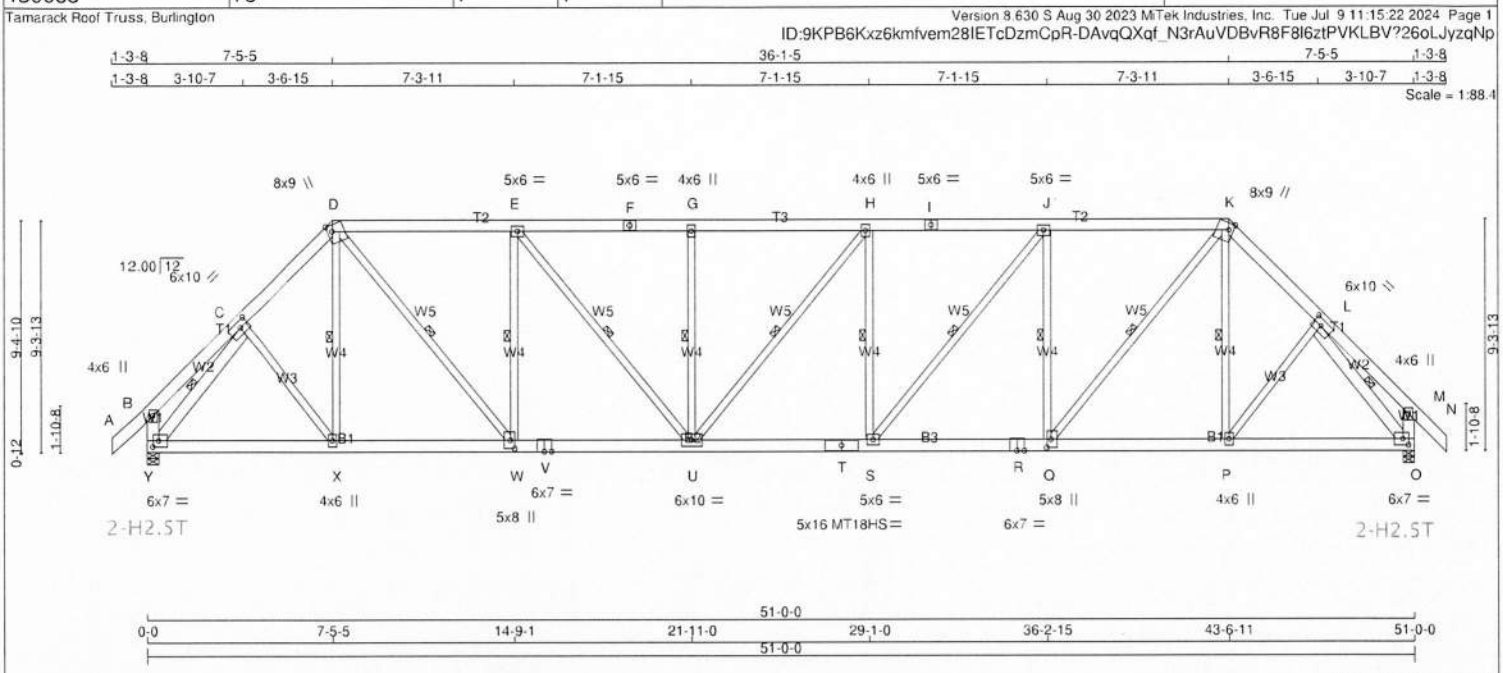

TOTAL WEIGHT = 359 lb

[M]

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
A - D	2x6	DRY	No.2	SPF
D - F	2x6	DRY	No.2	SPF
F - I	2x6	DRY	No.2	SPF
I - K	2x6	DRY	No.2	SPF
K - N	2x6	DRY	No.2	SPF
Y - B	2x6	DRY	No.2	SPF
O - M	2x6	DRY	No.2	SPF
Y - V	2x6	DRY	No.2	SPF
V - T	2x6	DRY	No.2	SPF
T - R	2x6	DRY	No.2	SPF
R - O	2x6	DRY	No.2	SPF
ALL WEBS EXCEPT	2x4	DRY	No.2	SPF
Y - C	2x6	DRY	No.2	SPF
L - O	2x6	DRY	No.2	SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMV+p	MT20	4.0	6.0		
C	TMWW-t	MT20	6.0	10.0	3.00	4.25
D	TTWW+m	MT20	8.0	9.0	Edge	2.25
E	TMWW-t	MT20	5.0	6.0		
F	TS-t	MT20	5.0	6.0		
G	TMW+w	MT20	4.0	6.0		
H	TMWW+t	MT20	4.0	6.0		
I	TS-t	MT20	5.0	6.0		
J	TMWW-t	MT20	5.0	6.0		
K	TTWW+m	MT20	8.0	9.0	Edge	2.25
L	TMWW-t	MT20	6.0	10.0	3.00	4.25
M	TMV+p	MT20	4.0	6.0		
O	BMVW1-t	MT20	6.0	7.0	3.00	2.75
P	BMWW+t	MT20	4.0	6.0		
Q	BMWW+t	MT20	5.0	8.0	4.00	2.00
R	BS-t	MT20	6.0	7.0		
S	BMWW-t	MT20	5.0	6.0		
T	BS-t	MT18HS	5.0	16.0		
U	BMWWW-t	MT20	6.0	10.0		
V	BS-t	MT20	6.0	7.0		
W	BMWW+t	MT20	5.0	8.0	4.00	2.00

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07-09-24
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100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416610

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
Y	3843	0	4225	-413	-1244	5-8	4-12
O	3843	0	4225	0	-1244	5-8	4-12

PROVIDE ANCHORAGE AT BEARING JOINT Y FOR 1244 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT O FOR 1244 LBS FACTORED UPLIFT

PROVIDE FOR 413 LBS FACTORED HORIZONTAL REACTION AT JOINT Y

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
Y	2858	1875 / 0	536 / 0	0 / 0	341 / -1226	701 / 0	0 / 0
O	2858	1875 / 0	536 / 0	0 / 0	173 / -1226	701 / 0	0 / 0
HORIZONTAL REACTIONS							
Y	---	0 / 0	0 / 0	0 / 0	295 / -295	0 / 0	0 /0

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

BRACING

MAX. UNBRACED TOP CHORD LENGTH = 3.08 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

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

1 LATERAL BRACE(S) AT 1/ 2 LENGTH OF D-X, D-W, E-W, E-U, G-U, H-U, H-S, J-S, J-Q, K-Q, K-P, C-Y, L-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: (18)

CHORDS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD LC1 (PLF) FROM	TO	MAX CSI (LC)	MAX. UNBRAC LENGTH
A- B	0 / 62	-105.2	-105.2	0.09 (2)	10.00
B- C	-48 / 272	-105.2	-105.2	0.14 (13)	6.25
C- D	-4206 / 1474	-105.2	-105.2	0.26 (13)	4.09
D- E	-4848 / 1711	-105.2	-105.2	0.65 (2)	3.39
E- F	-5711 / 1950	-105.2	-105.2	0.73 (2)	3.08
F- G	-5711 / 1950	-105.2	-105.2	0.73 (2)	3.08
G- H	-5711 / 1950	-105.2	-105.2	0.60 (2)	3.26
H- I	-5715 / 1952	-105.2	-105.2	0.72 (3)	3.08
I- J	-5715 / 1952	-105.2	-105.2	0.72 (3)	3.08
J- K	-4847 / 1711	-105.2	-105.2	0.65 (3)	3.40
K- L	-4207 / 1475	-105.2	-105.2	0.26 (14)	4.09
L- M	-47 / 272	-105.2	-105.2	0.14 (14)	6.25
M- N	0 / 62	-105.2	-105.2	0.09 (3)	10.00
Y- B	-363 / 331	0.0	0.0	0.04 (13)	7.81
O- M	-363 / 330	0.0	0.0	0.04 (14)	7.81
Y- X	-890 / 2743	-39.5	-39.5	0.47 (2)	6.25
X- W	-751 / 2941	-39.5	-39.5	0.50 (2)	6.25
W- V	-1320 / 4849	-39.5	-39.5	0.66 (2)	6.25
V- U	-1320 / 4849	-39.5	-39.5	0.66 (2)	6.25
U- T	-1532 / 5715	-39.5	-39.5	0.76 (3)	6.25
T- S	-1532 / 5715	-39.5	-39.5	0.76 (3)	6.25
S- R	-1238 / 4848	-39.5	-39.5	0.66 (3)	6.25
R- Q	-1238 / 4848	-39.5	-39.5	0.66 (3)	6.25
Q- P	-614 / 2941	-39.5	-39.5	0.50 (3)	6.25
P- O	-665 / 2743	-39.5	-39.5	0.47 (3)	6.25

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
C- X	-33 / 562	0.09 (3)
X- D	-171 / 277	0.06 (10)
D- W	-979 / 3138	0.66 (14)
W- E	-2144 / 814	0.80 (3)
E- U	-462 / 1521	0.31 (14)
U- G	-869 / 392	0.31 (2)
U- H	-80 / 68	0.06 (3)
S- H	-903 / 427	0.34 (2)
S- J	-467 / 1529	0.32 (13)
Q- J	-2147 / 815	0.80 (2)
Q- K	-978 / 3136	0.66 (13)
P- K	-155 / 292	0.06 (9)
P- L	-98 / 562	0.09 (2)
Y- C	-4639 / 1165	0.53 (2)
L- O	-4640 / 1166	0.53 (3)

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	30.1	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	10.5	PSF
	DL	=	7.4	PSF
TOTAL LOAD		=	54.0	PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 6.00/12

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2015

THIS DESIGN COMPLIES WITH:
- PART 4 OF BCBC 2018 , NBC-2019AE
- PART 4 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR NOT USED
- PERCENTAGE OF GROUND SNOW LOAD IS USER-DEFINED.

(80 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 30.1 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.70")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.28")
ALLOWABLE DEFL.(TL)= L/180 (3.40")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.38")

CSI: TC=0.73/1.00 (E-G:2) , BC=0.76/1.00 (S-U:3) , WB=0.80/1.00 (J-Q:2) , SSI=0.32/1.00 (D-E:3)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 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) (PSI) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873
MT18HS	586	403	2455	1382	3163	3004

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.78 (O) (INPUT = 0.90)
JSI METAL= 0.72 (W) (INPUT = 0.95)

CONTINUED ON PAGE 2

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
X	BMWW+t	MT20	4.0	6.0		
Y	BMVW1-t	MT20	6.0	7.0	3.00	2.75

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

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF (9.2) PSF AT (30-0-0) FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE (MAIN WIND FORCE RESISTING SYSTEM).INTERNAL WIND PRESSURE IS BASED ON DESIGN (CATEGORY 2). BUILDING MAY BE LOCATED ON (OPEN TERRAIN), AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST (0-0) FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 5.0 PSF RESPECTIVELY.

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416610

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
439988	T7	6	1	ROYAL PINE HOMES TRUSS DESC.	

Tamarack Roof Truss, Burlington

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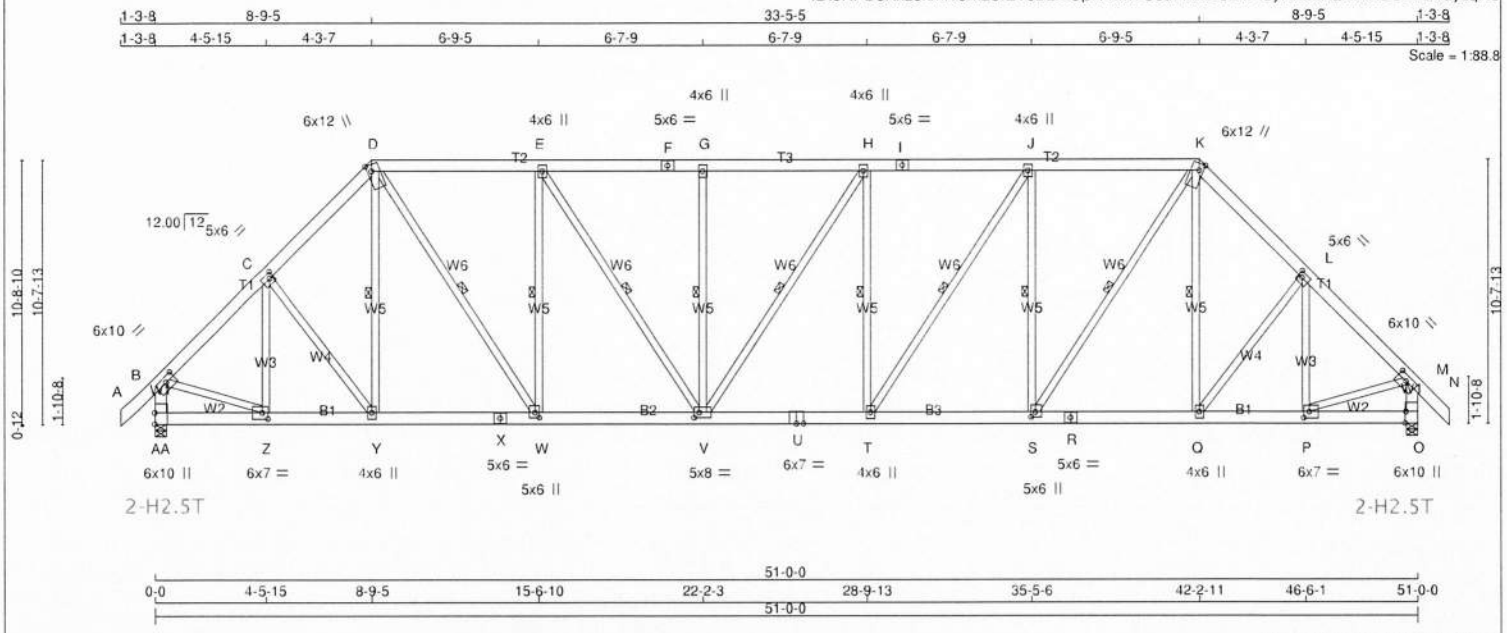

TOTAL WEIGHT = 6 X 378 = 2271 lb

[M]

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
A - D	2x6	DRY	No.2	SPF
D - F	2x6	DRY	No.2	SPF
F - I	2x6	DRY	No.2	SPF
I - K	2x6	DRY	No.2	SPF
K - N	2x6	DRY	No.2	SPF
AA- B	2x6	DRY	No.2	SPF
O - M	2x6	DRY	No.2	SPF
AA- X	2x6	DRY	No.2	SPF
X - U	2x6	DRY	No.2	SPF
U - R	2x6	DRY	No.2	SPF
R - O	2x6	DRY	No.2	SPF
ALL WEBS EXCEPT	2x4	DRY	No.2	SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMVW-t	MT20	6.0	10.0	2.50	4.75
C	TMWW-t	MT20	5.0	6.0	2.50	2.25
D	TTWW+m	MT20	6.0	12.0	3.25	2.00
E, H, J						
E	TMWW+t	MT20	4.0	6.0		
F	TS-t	MT20	5.0	6.0		
G	TMW+w	MT20	4.0	6.0		
I	TS-t	MT20	5.0	6.0		
K	TTWW+m	MT20	6.0	12.0	3.25	2.00
L	TMWW-t	MT20	5.0	6.0	2.50	2.25
M	TMVW-t	MT20	6.0	10.0	2.50	4.75
O	BMV1+t	MT20	6.0	10.0	Edge	0.50
P	BMWW-t	MT20	6.0	7.0	3.00	2.75
Q, T, Y						
Q	BMWW+t	MT20	4.0	6.0		
R	BS-t	MT20	5.0	6.0		
S	BMWW+t	MT20	5.0	6.0	2.50	2.00
U	BS-t	MT20	6.0	7.0		
V	BMWWW-t	MT20	5.0	8.0	2.50	2.50
W	BMWW+t	MT20	5.0	6.0	2.50	2.00
X	BS-t	MT20	5.0	6.0		
Z	BMWW-t	MT20	6.0	7.0	3.00	2.75
AA	BMV1+t	MT20	6.0	10.0	5.50	

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416611

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
AA	4011	0	4011	-465	-969	5-8	5-8
O	4011	0	4011	0	-969	5-8	5-8

PROVIDE ANCHORAGE AT BEARING JOINT AA FOR 969 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT O FOR 969 LBS FACTORED UPLIFT

PROVIDE FOR 465 LBS FACTORED HORIZONTAL REACTION AT JOINT AA

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
AA	2991	1621 / 0	536 / 0	0 / 0	456 / -1116	835 / 0	0 / 0
O	2991	1621 / 0	536 / 0	0 / 0	456 / -1116	835 / 0	0 / 0
HORIZONTAL REACTIONS							
AA	---	0 / 0	0 / 0	0 / 0	332 / -332	0 / 0	0 /0

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

BRACING

FOR SECTION D-K, MAX. UNBRACED TOP CHORD LENGTH = 2.00 FT.
FOR OTHER SECTIONS, MAX. UNBRACED TOP CHORD LENGTH = 4.15 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

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

1 LATERAL BRACE(S) AT 1/ 2 LENGTH OF D-Y, K-Q, K-S, D-W, J-S, E-W, J-T, E-V, H-T, G-V, H-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: (18)

CHORDS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD LC1 (PLF) FROM	TO	MAX CSI (LC)	MAX. UNBRAC LENGTH
A- B	0 / 62	-105.2	-105.2	0.09 (2)	10.00
B- C	-3878 / 970	-105.2	-105.2	0.26 (13)	4.22
C- D	-4015 / 1180	-105.2	-105.2	0.28 (13)	4.15
D- E	-4210 / 1196	-115.2	-115.2	0.53 (2)	2.00
E- F	-4857 / 1241	-115.2	-115.2	0.54 (2)	2.00
F- G	-4857 / 1241	-115.2	-115.2	0.54 (2)	2.00
G-AB	-4857 / 1241	-115.2	-115.2	0.44 (1)	2.00
AB- H	-4857 / 1241	-115.2	-115.2	0.44 (1)	2.00
H- I	-4861 / 1243	-115.2	-115.2	0.54 (1)	2.00
I- J	-4861 / 1243	-115.2	-115.2	0.54 (1)	2.00
J- K	-4209 / 1196	-115.2	-115.2	0.52 (3)	2.00
K- L	-4015 / 1180	-105.2	-105.2	0.28 (14)	4.15
L- M	-3878 / 970	-105.2	-105.2	0.26 (14)	4.22
M- N	0 / 62	-105.2	-105.2	0.09 (3)	10.00
AA- B	-3923 / 981	0.0	0.0	0.27 (1)	5.42
O- M	-3923 / 982	0.0	0.0	0.27 (1)	5.42
AA- Z	-440 / 453	-39.5	-39.5	0.07 (4)	6.25
Z- Y	-706 / 2765	-39.5	-39.5	0.41 (1)	6.25
Y- X	-501 / 2803	-39.5	-39.5	0.43 (1)	6.25
X- W	-501 / 2803	-39.5	-39.5	0.43 (1)	6.25
W- V	-753 / 4210	-39.5	-39.5	0.59 (1)	6.25
V- U	-684 / 4861	-39.5	-39.5	0.65 (1)	6.25
U- T	-684 / 4861	-39.5	-39.5	0.65 (1)	6.25
T- S	-497 / 4209	-39.5	-39.5	0.59 (1)	6.25
S- R	-240 / 2803	-39.5	-39.5	0.42 (1)	6.25
R- Q	-240 / 2803	-39.5	-39.5	0.42 (1)	6.25
Q- P	-446 / 2765	-39.5	-39.5	0.42 (1)	6.25
P- O	-12 / 25	-39.5	-39.5	0.07 (4)	6.25

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
Z- C	-676 / 190	0.27 (1)
C- Y	-54 / 345	0.05 (13)
Y- D	-230 / 308	0.12 (13)
Q- K	-231 / 308	0.12 (14)
Q- L	-53 / 345	0.05 (14)
P- L	-676 / 190	0.27 (1)
B- Z	-490 / 2882	0.46 (1)
P- M	-491 / 2882	0.46 (1)
S- K	-479 / 2532	0.41 (1)
D- W	-479 / 2534	0.41 (1)
S- J	-1839 / 460	0.97 (1)
W- E	-1836 / 459	0.97 (1)
T- J	-342 / 1325	0.28 (13)
E- V	-339 / 1321	0.27 (14)
T- H	-846 / 344	0.44 (2)
V- G	-796 / 302	0.41 (2)
V- H	-750 / 740	0.62 (3)

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	30.1	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	10.5	PSF
	DL	=	7.4	PSF
TOTAL LOAD		=	54.0	PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON PIGGYBACK TRUSS WITH SLOPES OF 12.00/12 AND -12.00/12 AND RESPECTIVE HEEL HEIGHTS OF 0-0 AND 0-0 AND AN ADDITIONAL DEAD LOAD OF 4.0 P.S.F.

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2015

THIS DESIGN COMPLIES WITH:
- PART 4 OF BCBC 2018 , NBC-2019AE
- PART 4 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR NOT USED
- PERCENTAGE OF GROUND SNOW LOAD IS USER-DEFINED.

(80 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 30.1 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.70")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.21")
ALLOWABLE DEFL.(TL)= L/180 (3.40")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.32")

CSI: TC=0.54/1.00 (E-G:2) , BC=0.65/1.00 (T-V:1) , WB=0.97/1.00 (J-S:1) , SSI=0.32/1.00 (D-E:2)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 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) (PSI) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

CONTINUED ON PAGE 2

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

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF (9.2) PSF AT (30-0-0) FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE (MAIN WIND FORCE RESISTING SYSTEM).INTERNAL WIND PRESSURE IS BASED ON DESIGN (CATEGORY 2). BUILDING MAY BE LOCATED ON (OPEN TERRAIN), AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST (0-0) FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 5.0 PSF RESPECTIVELY.

JSI GRIP= 0.77 (Z) (INPUT = 0.90)
JSI METAL= 0.76 (U) (INPUT = 0.95)

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416611

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
439988	T8	1	1	ROYAL PINE HOMES TRUSS DESC.	

Tamarack Roof Truss, Burlington

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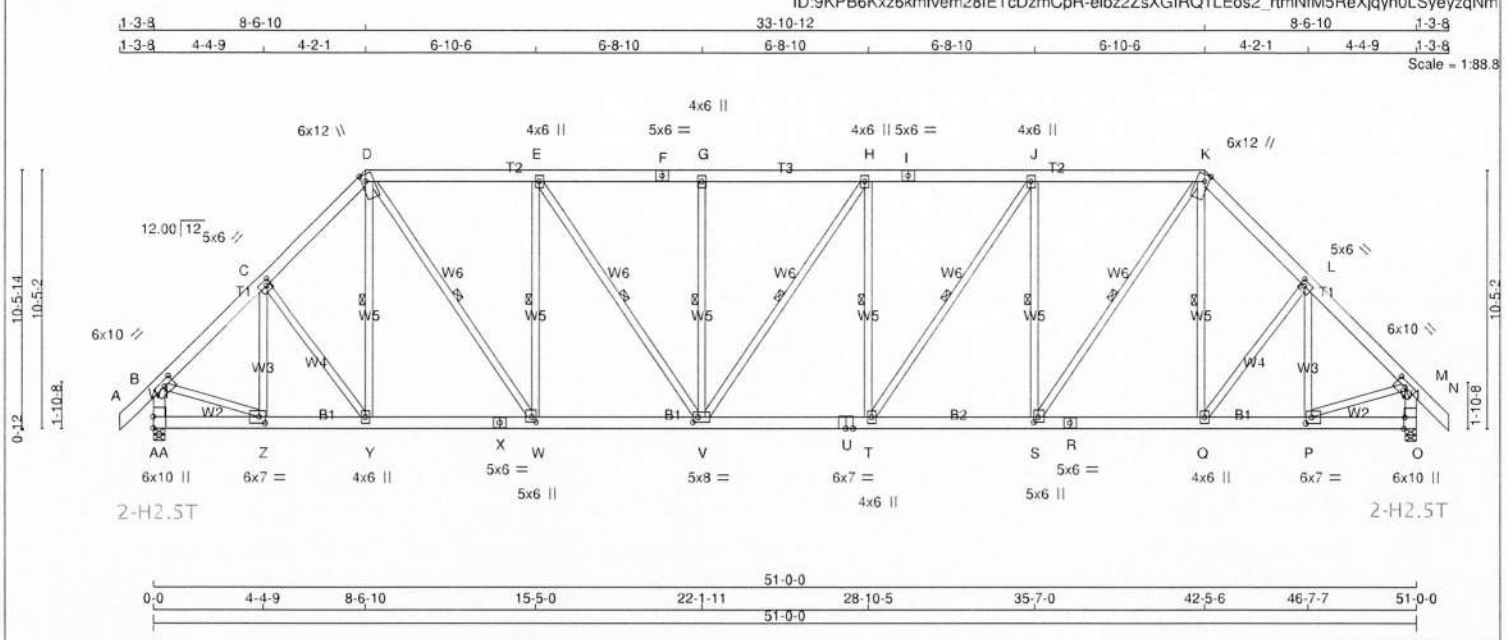

TOTAL WEIGHT = 375 lb

[M]

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
A - D	2x6	DRY	No.2	SPF
D - F	2x6	DRY	No.2	SPF
F - I	2x6	DRY	No.2	SPF
I - K	2x6	DRY	No.2	SPF
K - N	2x6	DRY	No.2	SPF
AA- B	2x6	DRY	No.2	SPF
O - M	2x6	DRY	No.2	SPF
AA- X	2x6	DRY	No.2	SPF
X - U	2x6	DRY	No.2	SPF
U - R	2x6	DRY	No.2	SPF
R - O	2x6	DRY	No.2	SPF
ALL WEBS	2x4	DRY	No.2	SPF
EXCEPT				
Y - D	2x4	DRY	2100F 1.8E	SPF
Q - K	2x4	DRY	2100F 1.8E	SPF
S - J	2x4	DRY	2100F 1.8E	SPF
W - E	2x4	DRY	2100F 1.8E	SPF
T - H	2x4	DRY	2100F 1.8E	SPF
V - G	2x4	DRY	2100F 1.8E	SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMVW-t	MT20	6.0	10.0	2.50	4.75
C	TMWW-t	MT20	5.0	6.0	2.50	2.25
D	TTWW+m	MT20	6.0	12.0	3.25	2.00
E, H, J						
E	TMWW+t	MT20	4.0	6.0		
F	TS-t	MT20	5.0	6.0		
G	TMW+w	MT20	4.0	6.0		
I	TS-t	MT20	5.0	6.0		
K	TTWW+m	MT20	6.0	12.0	3.25	2.00
L	TMWW-t	MT20	5.0	6.0	2.50	2.25
M	TMVW-t	MT20	6.0	10.0	2.50	4.75
O	BMV1+t	MT20	6.0	10.0	Edge	0.50
P	BMWW-t	MT20	6.0	7.0	3.00	2.75
Q, T, Y						
Q	BMWW+t	MT20	4.0	6.0		
R	BS-t	MT20	5.0	6.0		
S	BMWW+t	MT20	5.0	6.0	2.50	2.00

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416612

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
AA	3843	0	4055	-455	-1234	5-8	5-8
O	3843	0	4055	0	-1234	5-8	5-8

PROVIDE ANCHORAGE AT BEARING JOINT AA FOR 1234 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT O FOR 1234 LBS FACTORED UPLIFT

PROVIDE FOR 455 LBS FACTORED HORIZONTAL REACTION AT JOINT AA

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	SNOW	MAX./MIN. COMPONENT REACTIONS LIVE	PERM.LIVE	WIND	DEAD	SOIL
AA	2858	1762 / 0	536 / 0	0 / 0	348 / -1219	701 / 0	0 / 0
O	2858	1762 / 0	536 / 0	0 / 0	170 / -1219	701 / 0	0 / 0
HORIZONTAL REACTIONS							
AA	---	0 / 0	0 / 0	0 / 0	325 / -325	0 / 0	0 /0

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

BRACING

MAX. UNBRACED TOP CHORD LENGTH = 3.41 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

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

1 LATERAL BRACE(S) AT 1/ 2 LENGTH OF D-Y, K-Q, K-S, D-W, J-S, E-W, J-T, E-V, H-T, G-V, H-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: (18)

CHORDS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD LC1 (PLF) FROM	TO	MAX CSI (LC)	MAX. UNBRAC LENGTH
A- B	0 / 54	-105.2	-105.2	0.08 (1)	10.00
B- C	-3910 / 1253	-105.2	-105.2	0.28 (13)	4.21
C- D	-4076 / 1503	-105.2	-105.2	0.30 (13)	4.13
D- E	-4340 / 1602	-105.2	-105.2	0.54 (2)	3.69
E- F	-5006 / 1782	-105.2	-105.2	0.59 (2)	3.41
F- G	-5006 / 1782	-105.2	-105.2	0.59 (2)	3.41
G- H	-5006 / 1782	-105.2	-105.2	0.48 (2)	3.56
H- I	-5009 / 1784	-105.2	-105.2	0.59 (3)	3.42
I- J	-5009 / 1784	-105.2	-105.2	0.59 (3)	3.42
J- K	-4339 / 1602	-105.2	-105.2	0.54 (3)	3.69
K- L	-4076 / 1503	-105.2	-105.2	0.31 (14)	4.13
L- M	-3910 / 1254	-105.2	-105.2	0.28 (14)	4.21
M- N	0 / 54	-105.2	-105.2	0.08 (1)	10.00
AA- B	-3968 / 1245	0.0	0.0	0.27 (2)	5.40
O- M	-3968 / 1245	0.0	0.0	0.27 (3)	5.40
AA- Z	-430 / 443	-39.5	-39.5	0.07 (5)	6.25
Z- Y	-902 / 2786	-39.5	-39.5	0.42 (2)	6.25
Y- X	-732 / 2846	-39.5	-39.5	0.43 (2)	6.25
X- W	-732 / 2846	-39.5	-39.5	0.43 (2)	6.25
W- V	-1166 / 4340	-39.5	-39.5	0.60 (2)	6.25
V- U	-1317 / 5009	-39.5	-39.5	0.67 (3)	6.25
U- T	-1317 / 5009	-39.5	-39.5	0.67 (3)	6.25
T- S	-1079 / 4339	-39.5	-39.5	0.60 (3)	6.25
S- R	-586 / 2846	-39.5	-39.5	0.43 (3)	6.25
R- Q	-586 / 2846	-39.5	-39.5	0.43 (3)	6.25
Q- P	-649 / 2786	-39.5	-39.5	0.42 (3)	6.25
P- O	-12 / 25	-39.5	-39.5	0.07 (6)	6.25

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
Z- C	-702 / 257	0.27 (2)
C- Y	-58 / 353	0.06 (3)
Y- D	-187 / 306	0.06 (13)
Q- K	-188 / 317	0.06 (14)
Q- L	-112 / 353	0.07 (12)
P- L	-703 / 257	0.27 (3)
B- Z	-703 / 2910	0.47 (2)
P- M	-704 / 2910	0.47 (3)
S- K	-866 / 2782	0.68 (13)
D- W	-867 / 2783	0.68 (14)
S- J	-2021 / 777	0.63 (2)
W- E	-2019 / 776	0.63 (3)
T- J	-426 / 1354	0.33 (13)
E- V	-422 / 1347	0.33 (14)
T- H	-857 / 412	0.27 (2)
V- G	-815 / 368	0.25 (10)
V- H	-84 / 80	0.07 (3)

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	30.1	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	10.5	PSF
	DL	=	7.4	PSF
TOTAL LOAD		=	54.0	PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 6.00/12

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2015

THIS DESIGN COMPLIES WITH:
- PART 4 OF BCBC 2018 , NBC-2019AE
- PART 4 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED
- PERCENTAGE OF GROUND SNOW LOAD IS USER-DEFINED.

(80 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 30.1 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.70")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.23")
ALLOWABLE DEFL.(TL)= L/180 (3.40")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.32")

CSI: TC=0.59/1.00 (E-G:2) , BC=0.67/1.00 (T-V:3) , WB=0.68/1.00 (D-W:14) , SSI=0.30/1.00 (D-E:2)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 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) (PSI) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.79 (Z) (INPUT = 0.90)
JSI METAL= 0.71 (U) (INPUT = 0.95)

CONTINUED ON PAGE 2

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC. ROYAL PINE HOMES	DRWG NO.
439988	T8	1	1	TRUSS DESC.	

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
U	BS-t	MT20	6.0	7.0		
V	BMWWW-t	MT20	5.0	8.0	2.50	2.50
W	BMWW+t	MT20	5.0	6.0	2.50	2.00
X	BS-t	MT20	5.0	6.0		
Z	BMWW-t	MT20	6.0	7.0	3.00	2.75
AA	BMV1+t	MT20	6.0	10.0	5.50	

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

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 9.2} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 5.0 PSF RESPECTIVELY.

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416612

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
439988	T9	1	1	ROYAL PINE HOMES TRUSS DESC.	

Tamarack Roof Truss, Burlington

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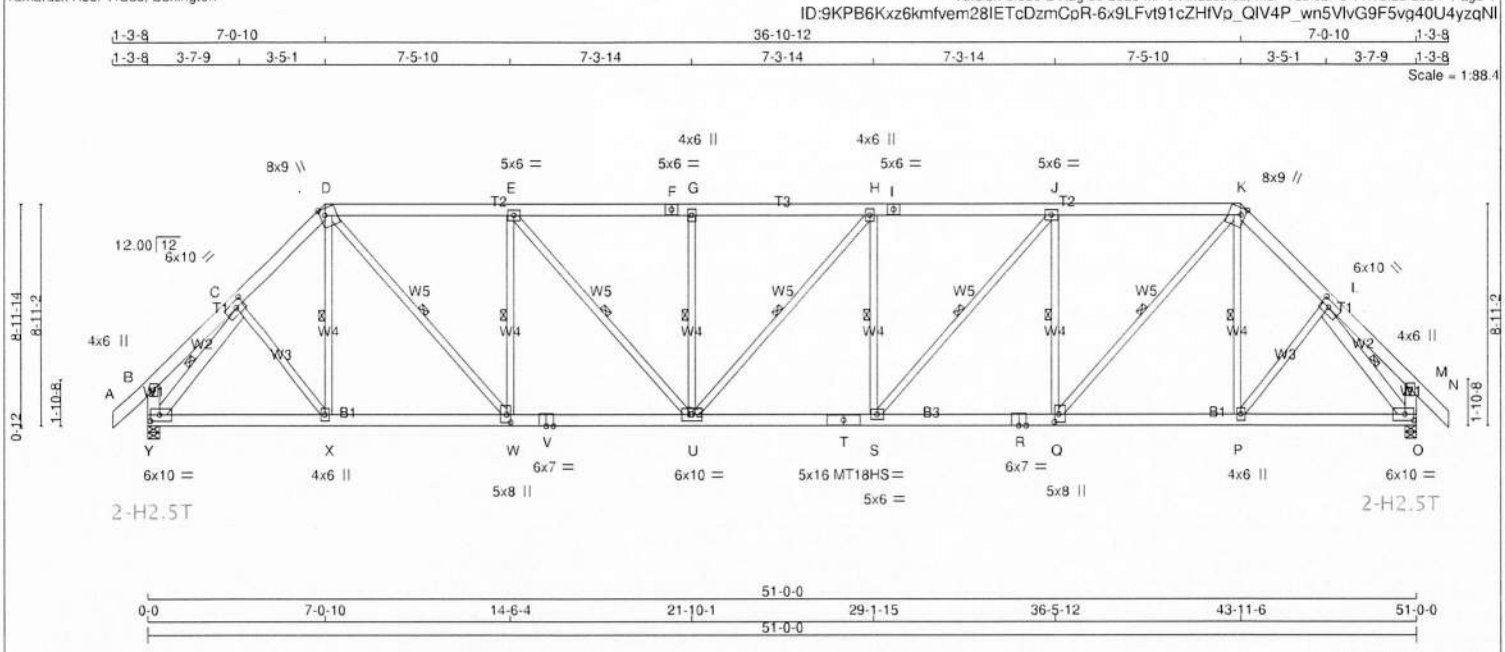

TOTAL WEIGHT = 353 lb

[M]

LUMBER
N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
A - D	2x6	DRY	No.2	SPF
D - F	2x6	DRY	No.2	SPF
F - I	2x6	DRY	No.2	SPF
I - K	2x6	DRY	No.2	SPF
K - N	2x6	DRY	No.2	SPF
Y - B	2x6	DRY	No.2	SPF
O - M	2x6	DRY	No.2	SPF
Y - V	2x6	DRY	No.2	SPF
V - T	2x6	DRY	No.2	SPF
T - R	2x6	DRY	No.2	SPF
R - O	2x6	DRY	No.2	SPF
ALL WEBS EXCEPT	2x4	DRY	No.2	SPF
Y - C	2x6	DRY	No.2	SPF
L - O	2x6	DRY	No.2	SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMV+p	MT20	4.0	6.0		
C	TMWW-t	MT20	6.0	10.0	3.00	4.25
D	TTWW+m	MT20	8.0	9.0	Edge	2.25
E	TMWW-t	MT20	5.0	6.0		
F	TS-t	MT20	5.0	6.0		
G	TMW+w	MT20	4.0	6.0		
H	TMWW+t	MT20	4.0	6.0		
I	TS-t	MT20	5.0	6.0		
J	TMWW-t	MT20	5.0	6.0		
K	TTWW+m	MT20	8.0	9.0	Edge	2.25
L	TMWW-t	MT20	6.0	10.0	3.00	4.25
M	TMV+p	MT20	4.0	6.0		
O	BMVW1-t	MT20	6.0	10.0	3.00	4.25
P	BMWW+t	MT20	4.0	6.0		
Q	BMWW+t	MT20	5.0	8.0	3.75	2.00
R	BS-t	MT20	6.0	7.0		
S	BMWW-t	MT20	5.0	6.0		
T	BS-t	MT18HS	5.0	16.0		
U	BMWWW-t	MT20	6.0	10.0		
V	BS-t	MT20	6.0	7.0		
W	BMWW+t	MT20	5.0	8.0	3.75	2.00

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416613

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
Y	3843	0	4100	-398	-1247	5-8	4-7
O	3843	0	4100	0	-1247	5-8	4-7

PROVIDE ANCHORAGE AT BEARING JOINT Y FOR 1247 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT O FOR 1247 LBS FACTORED UPLIFT

PROVIDE FOR 398 LBS FACTORED HORIZONTAL REACTION AT JOINT Y

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	SNOW	MAX./MIN. COMPONENT REACTIONS LIVE	PERM.LIVE	WIND	DEAD	SOIL
Y	2858	1792 / 0	536 / 0	0 / 0	338 / -1228	701 / 0	0 / 0
O	2858	1792 / 0	536 / 0	0 / 0	174 / -1228	701 / 0	0 / 0
HORIZONTAL REACTIONS							
Y	---	0 / 0	0 / 0	0 / 0	284 / -284	0 / 0	0 /0

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

BRACING
MAX. UNBRACED TOP CHORD LENGTH = 2.95 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.17 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-X, K-P, C-Y, L-O, K-Q, D-W, J-Q, E-W, J-S, E-U, H-S, G-U, H-U.

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: (18)

CHORDS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD LC1 (PLF) FROM	TO	MAX CSI (LC)	MAX. UNBRAC LENGTH
A- B	0 / 54	-105.2	-105.2	0.08 (1)	10.00
B- C	-48 / 263	-105.2	-105.2	0.12 (13)	6.25
C- D	-4152 / 1467	-105.2	-105.2	0.24 (13)	4.13
D- E	-5006 / 1757	-105.2	-105.2	0.70 (2)	3.30
E- F	-5962 / 2021	-105.2	-105.2	0.78 (2)	2.95
F- G	-5962 / 2021	-105.2	-105.2	0.78 (2)	2.95
G- H	-5962 / 2021	-105.2	-105.2	0.64 (2)	3.16
H- I	-5966 / 2024	-105.2	-105.2	0.78 (3)	2.96
I- J	-5966 / 2024	-105.2	-105.2	0.78 (3)	2.96
J- K	-5005 / 1757	-105.2	-105.2	0.69 (3)	3.30
K- L	-4152 / 1467	-105.2	-105.2	0.25 (14)	4.13
L- M	-47 / 263	-105.2	-105.2	0.12 (14)	6.25
M- N	0 / 54	-105.2	-105.2	0.08 (1)	10.00
Y- B	-351 / 319	0.0	0.0	0.04 (13)	7.81
O- M	-350 / 319	0.0	0.0	0.04 (14)	7.81
Y- X	-877 / 2648	-39.5	-39.5	0.46 (2)	6.25
X- W	-757 / 2906	-39.5	-39.5	0.49 (2)	6.25
W- V	-1382 / 5007	-39.5	-39.5	0.69 (2)	6.25
V- U	-1382 / 5007	-39.5	-39.5	0.69 (2)	6.25
U- T	-1620 / 5966	-39.5	-39.5	0.80 (3)	6.17
T- S	-1620 / 5966	-39.5	-39.5	0.80 (3)	6.17
S- R	-1303 / 5006	-39.5	-39.5	0.68 (3)	6.25
R- Q	-1303 / 5006	-39.5	-39.5	0.68 (3)	6.25
Q- P	-624 / 2906	-39.5	-39.5	0.49 (3)	6.25
P- O	-661 / 2649	-39.5	-39.5	0.46 (3)	6.25

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
C- X	-33 / 603	0.10 (3)
X- D	-204 / 249	0.07 (10)
P- K	-188 / 264	0.06 (9)
P- L	-103 / 603	0.10 (2)
Y- C	-4533 / 1174	0.48 (2)
L- O	-4534 / 1175	0.48 (3)
Q- K	-1022 / 3281	0.66 (13)
D- W	-1023 / 3283	0.66 (14)
Q- J	-2178 / 829	0.73 (2)
W- E	-2176 / 828	0.73 (3)
S- J	-486 / 1585	0.31 (13)
E- U	-481 / 1578	0.31 (14)
S- H	-907 / 433	0.31 (2)
U- G	-888 / 401	0.29 (2)
U- H	-64 / 63	0.04 (3)

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	30.1	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	10.5	PSF
	DL	=	7.4	PSF
TOTAL LOAD		=	54.0	PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 6.00/12

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2015

THIS DESIGN COMPLIES WITH:
- PART 4 OF BCBC 2018 , NBC-2019AE
- PART 4 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED
- PERCENTAGE OF GROUND SNOW LOAD IS USER-DEFINED.

(80 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 30.1 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.70")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.29")
ALLOWABLE DEFL.(TL)= L/180 (3.40")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.41")

CSI: TC=0.78/1.00 (E-G:2) , BC=0.80/1.00 (S-U:3) , WB=0.73/1.00 (J-Q:2) , SSI=0.33/1.00 (D-E:3)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 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) (PSI) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873
MT18HS	586	403	2455	1382	3163	3004

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.78 (W) (INPUT = 0.90)
JSI METAL= 0.79 (W) (INPUT = 0.95)

CONTINUED ON PAGE 2

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
X	BMWW+t	MT20	4.0	6.0		
Y	BMVW1-t	MT20	6.0	10.0	3.00	4.25

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

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 9.2} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 5.0 PSF RESPECTIVELY.

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416613

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
439988	T10	1	1	ROYAL PINE HOMES TRUSS DESC.	

Tamarack Roof Truss, Burlington

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Tue Jul 9 11:15:28 2024 Page 1
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1-3-8 5-6-10 6-8-15 6-7-3 6-7-3 6-7-3 6-7-3 6-8-15 5-6-10 1-3-8

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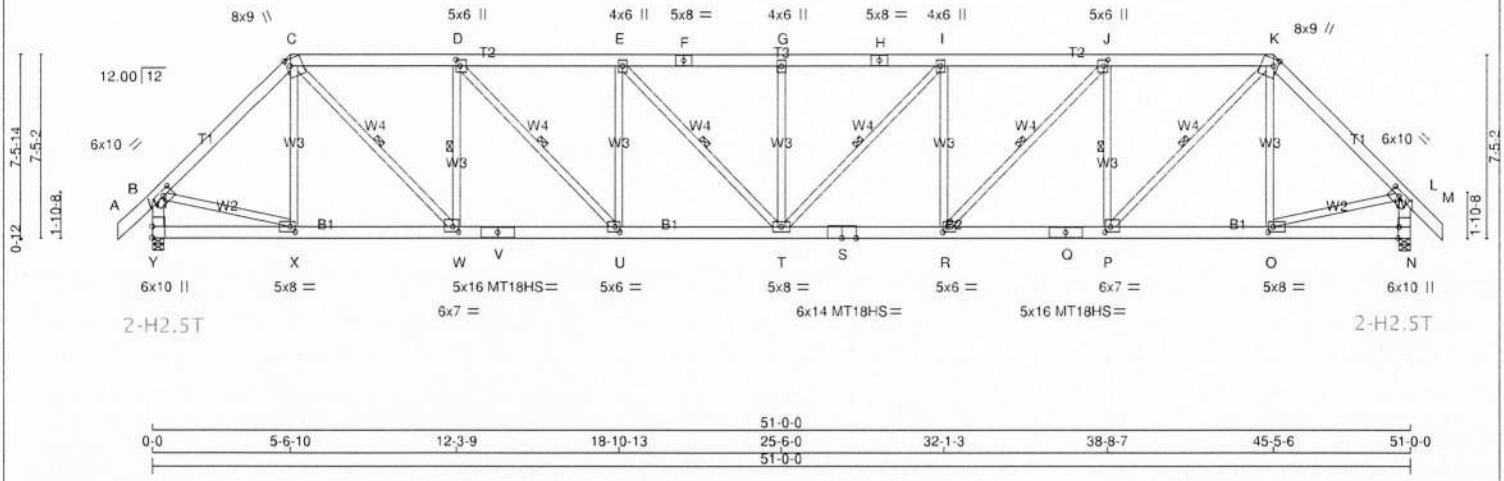

51-0-0

0-0 5-6-10 12-3-9 18-10-13 25-6-0 32-1-3 38-8-7 45-5-6 51-0-0

51-0-0

TOTAL WEIGHT = 330 lb

[M]

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
A - C	2x6	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
Y - B	2x6	DRY	No.2	SPF
N - L	2x6	DRY	No.2	SPF
Y - V	2x6	DRY	No.2	SPF
V - S	2x6	DRY	No.2	SPF
S - Q	2x6	DRY	No.2	SPF
Q - N	2x6	DRY	No.2	SPF
ALL WEBS EXCEPT	2x4	DRY	No.2	SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMVW-t	MT20	6.0	10.0	2.50	4.75
C	TTWW+m	MT20	8.0	9.0	3.25	2.00
D	TMWW+t	MT20	5.0	6.0	3.00	2.00
E	TMWW+t	MT20	4.0	6.0		
F	TS-t	MT20	5.0	8.0		
G	TMW+w	MT20	4.0	6.0		
H	TS-t	MT20	5.0	8.0		
I	TMWW+t	MT20	4.0	6.0		
J	TMWW+t	MT20	5.0	6.0	3.00	2.00
K	TTWW+m	MT20	8.0	9.0	3.25	2.00
L	TMVW-t	MT20	6.0	10.0	2.50	4.75
N	BMV1+t	MT20	6.0	10.0	Edge	0.50
O	BMWW-t	MT20	5.0	8.0	2.50	2.50
P	BMWW-t	MT20	6.0	7.0	2.50	2.75
Q	BS-t	MT18HS	5.0	16.0		
R	BMWW-t	MT20	5.0	6.0	2.50	2.25
S	BS-t	MT18HS	6.0	14.0		
T	BMWWW-t	MT20	5.0	8.0		
U	BMWW-t	MT20	5.0	6.0	2.50	2.25
V	BS-t	MT18HS	5.0	16.0		
W	BMWW-t	MT20	6.0	7.0	2.50	2.75
X	BMWW-t	MT20	5.0	8.0	2.50	2.50
Y	BMV1+t	MT20	6.0	10.0	5.50	

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416614

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
Y	3843	0	4141	-341	-1257	5-8	5-8
N	3843	0	4141	0	-1257	5-8	5-8

PROVIDE ANCHORAGE AT BEARING JOINT Y FOR 1257 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT N FOR 1257 LBS FACTORED UPLIFT

PROVIDE FOR 341 LBS FACTORED HORIZONTAL REACTION AT JOINT Y

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
Y	2858	1820 / 0	536 / 0	0 / 0	326 / -1235	701 / 0	0 / 0
N	2858	1820 / 0	536 / 0	0 / 0	180 / -1235	701 / 0	0 / 0
HORIZONTAL REACTIONS							
Y	---	0 / 0	0 / 0	0 / 0	244 / -244	0 / 0	0 /0

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

BRACING

MAX. UNBRACED TOP CHORD LENGTH = 2.79 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 5.75 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-W, D-W, D-U, E-T, I-T, J-R, J-P, K-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: (18)

CHORDS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1	MAX CSI (LC)	MAX. UNBRAC LENGTH
A- B	0 / 54	-105.2	-105.2	0.08 (1)		10.00
B- C	-4134 / 1288	-105.2	-105.2	0.42 (2)		3.92
C- D	-5504 / 1862	-105.2	-105.2	0.61 (2)		3.27
D- E	-6964 / 2281	-105.2	-105.2	0.75 (2)		2.80
E- F	-7444 / 2412	-105.2	-105.2	0.71 (2)		2.79
F- G	-7444 / 2412	-105.2	-105.2	0.71 (2)		2.79
G- H	-7444 / 2412	-105.2	-105.2	0.71 (2)		2.79
H- I	-7444 / 2412	-105.2	-105.2	0.71 (2)		2.79
I- J	-6964 / 2281	-105.2	-105.2	0.75 (3)		2.80
J- K	-5504 / 1862	-105.2	-105.2	0.61 (3)		3.27
K- L	-4134 / 1288	-105.2	-105.2	0.42 (3)		3.92
L- M	0 / 54	-105.2	-105.2	0.08 (1)		10.00
Y- B	-4056 / 1278	0.0	0.0	0.28 (2)		5.34
N- L	-4056 / 1278	0.0	0.0	0.28 (3)		5.34
Y- X	-316 / 329	-39.5	-39.5	0.14 (17)		6.25
X- W	-773 / 2903	-39.5	-39.5	0.45 (2)		6.25
W- V	-1547 / 5504	-39.5	-39.5	0.73 (2)		6.25
V- U	-1547 / 5504	-39.5	-39.5	0.73 (2)		6.25
U- T	-1964 / 6964	-39.5	-39.5	0.91 (2)		5.75
T- S	-1926 / 6964	-39.5	-39.5	0.91 (3)		5.79
S- R	-1926 / 6964	-39.5	-39.5	0.91 (3)		5.79
R- Q	-1471 / 5504	-39.5	-39.5	0.73 (3)		6.25
Q- P	-1471 / 5504	-39.5	-39.5	0.73 (3)		6.25
P- O	-658 / 2903	-39.5	-39.5	0.45 (3)		6.25
O- N	-12 / 25	-39.5	-39.5	0.14 (17)		6.25

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
X- C	-448 / 217	0.27 (9)
C- W	-1165 / 3804	0.61 (3)
W- D	-2470 / 895	0.56 (3)
D- U	-662 / 2197	0.35 (3)
U- E	-1334 / 539	0.83 (3)
E- T	-246 / 774	0.12 (3)
T- G	-840 / 379	0.51 (10)
T- I	-246 / 774	0.12 (2)
R- I	-1334 / 539	0.83 (2)
R- J	-662 / 2197	0.35 (2)
P- J	-2470 / 895	0.56 (2)
P- K	-1165 / 3804	0.61 (2)
O- K	-467 / 218	0.28 (10)
B- X	-706 / 2988	0.48 (2)
O- L	-706 / 2988	0.48 (3)

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	30.1	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	10.5	PSF
	DL	=	7.4	PSF
TOTAL LOAD		=	54.0	PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 6.00/12

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2015

THIS DESIGN COMPLIES WITH:
- PART 4 OF BCBC 2018 , NBC-2019AE
- PART 4 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED
- PERCENTAGE OF GROUND SNOW LOAD IS USER-DEFINED.

(80 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 30.1 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.70")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.40")
ALLOWABLE DEFL.(TL)= L/180 (3.40")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.54")

CSI: TC=0.75/1.00 (D-E:2) , BC=0.91/1.00 (T-U:2) , WB=0.83/1.00 (I-R:2) , SSI=0.29/1.00 (C-D:3)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 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) (PSI) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873
MT18HS	586	403	2455	1382	3163	3004

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.80 (P) (INPUT = 0.90)
JSI METAL= 0.70 (S) (INPUT = 0.95)

CONTINUED ON PAGE 2

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

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 9.2} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 5.0 PSF RESPECTIVELY.

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416614

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
439988	T11	1	2	ROYAL PINE HOMES TRUSS DESC.	

Tamarack Roof Truss, Burlington

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Tue Jul 9 11:15:30 2024 Page 1
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1-3-8 4-0-10 5-5-12 4-7-2 9-7 3-9-9 1-8-3 3-5-12 6-4-11 6-2-15 6-4-11 3-11-7 4-1-15 1-3-8

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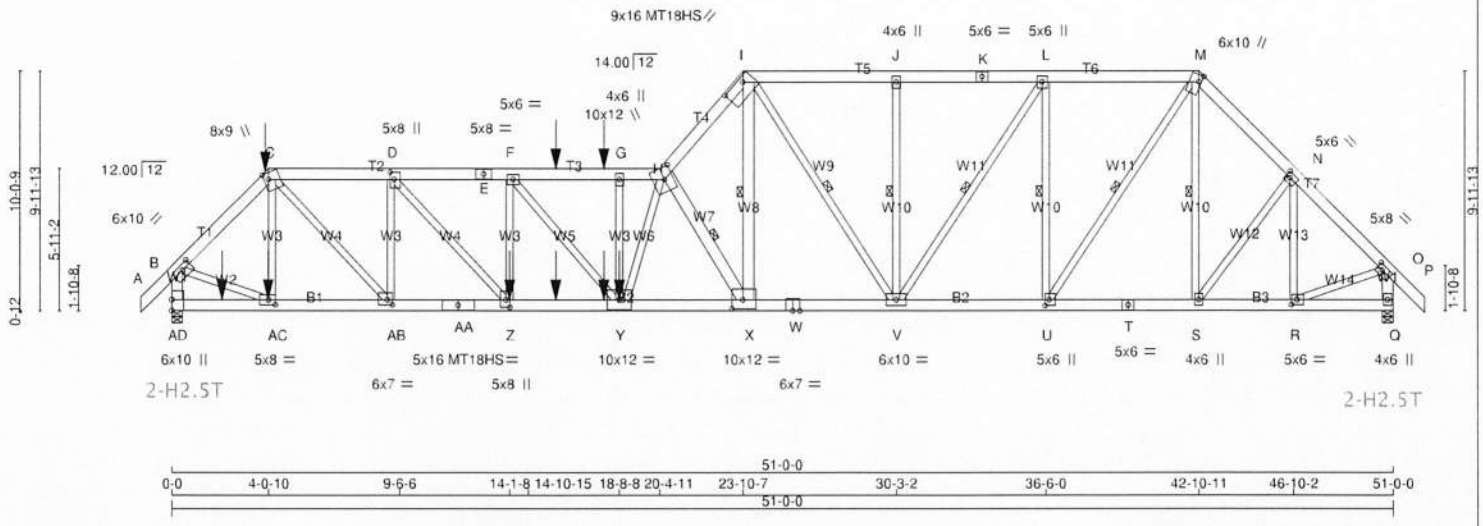

TOTAL WEIGHT = 2 X 377 = 755 lb

[M]

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
A - C	2x6	DRY	No.2	SPF
C - E	2x6	DRY	No.2	SPF
E - H	2x6	DRY	No.2	SPF
H - I	2x6	DRY	No.2	SPF
I - K	2x6	DRY	No.2	SPF
K - M	2x6	DRY	No.2	SPF
M - P	2x6	DRY	No.2	SPF
AD- B	2x6	DRY	No.2	SPF
Q - O	2x6	DRY	No.2	SPF
AD- AA	2x6	DRY	1650F 1.5E	SPF
AA- W	2x6	DRY	1650F 1.5E	SPF
W - T	2x6	DRY	1650F 1.5E	SPF
T - Q	2x6	DRY	1650F 1.5E	SPF
ALL WEBS	2x4	DRY	No.2	SPF
EXCEPT				
H - X	2x6	DRY	2100F 1.8E	SPF
X - I	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	2	12	SIDE(140.3)
C- E	2	12	SIDE(70.1)
E- H	2	12	SIDE(0.0)
H- I	2	12	TOP
I- K	2	12	TOP
K- M	2	12	TOP
M- P	2	12	TOP
AD- B	2	12	TOP
Q- O	2	12	TOP
BOTTOM CHORDS : (0.122"X3") SPIRAL NAILS			
AD- AA	2	12	SIDE(210.5)
AA- W	2	12	SIDE(210.5)
W- T	2	12	TOP
T- Q	2	12	TOP
WEBS : (0.122"X3") SPIRAL NAILS			
AC- C	1	6	SIDE(111.5)
G- Y	1	6	SIDE(534.8)

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416615

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
AD	7975	0	8206	-444	-1204	5-8	5-8
Q	5403	0	5403	0	-1110	5-8	3-5

PROVIDE ANCHORAGE AT BEARING JOINT AD FOR 1204 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT Q FOR 1110 LBS FACTORED UPLIFT

PROVIDE FOR 444 LBS FACTORED HORIZONTAL REACTION AT JOINT AD

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
AD	5779	3695 / 0	536 / 0	0 / 0	321 / -1222	1702 / 0	0 / 0
Q	3962	2339 / 0	536 / 0	0 / 0	189 / -1132	1087 / 0	0 / 0
HORIZONTAL REACTIONS							
AD	---	0 / 0	0 / 0	0 / 0	312 / -317	0 / 0	0 /0

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

BRACING

MAX. UNBRACED TOP CHORD LENGTH = 2.45 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

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

1 LATERAL BRACE(S) AT 1/ 2 LENGTH OF H-X, I-X, M-S, M-U, I-V, L-U, J-V, L-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: (18)

CHORDS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	MAX CSI (LC)	MAX. UNBRAC LENGTH
A- B	0 / 54	-105.2	-105.2	0.04 (1)	10.00
B- C	-8324 / 1200	-105.2	-105.2	0.19 (2)	4.09
C- D	-11046 / 1794	-105.2	-105.2	0.31 (2)	3.50
D- E	-15372 / 2354	-105.2	-105.2	0.45 (2)	2.86
E- F	-15372 / 2354	-105.2	-105.2	0.45 (2)	2.86
F-AE	-17645 / 2675	-105.2	-105.2	0.64 (2)	2.45
AE-AF	-17645 / 2675	-105.2	-105.2	0.64 (2)	2.45
AF- G	-17645 / 2675	-105.2	-105.2	0.64 (2)	2.45
G- H	-17645 / 2675	-105.2	-105.2	0.47 (2)	2.62
H- I	-14558 / 2577	-105.2	-105.2	0.36 (2)	3.01
I- J	-8463 / 1778	-105.2	-105.2	0.30 (2)	3.97
J- K	-8463 / 1780	-105.2	-105.2	0.29 (2)	3.97
K- L	-8463 / 1780	-105.2	-105.2	0.29 (2)	3.97
L- M	-6579 / 1509	-105.2	-105.2	0.24 (2)	4.46
M- N	-5730 / 1351	-105.2	-105.2	0.15 (14)	4.86
N- O	-5314 / 1127	-105.2	-105.2	0.14 (14)	5.01
O- P	0 / 54	-105.2	-105.2	0.04 (1)	10.00
AD- B	-8129 / 1221	0.0	0.0	0.30 (2)	5.28
Q- O	-5312 / 1120	0.0	0.0	0.20 (1)	6.35
AD-AG	-412 / 433	-39.5	-39.5	0.04 (17)	6.25
AG-AC	-412 / 433	-39.5	-39.5	0.04 (17)	6.25
AC-AB	-822 / 5839	-39.5	-39.5	0.26 (2)	6.25
AB-AA	-1643 / 11046	-39.5	-39.5	0.49 (2)	6.25
AA- Z	-1643 / 11046	-39.5	-39.5	0.49 (2)	6.25
Z-AH	-2201 / 15372	-39.5	-39.5	0.70 (2)	6.25
AH-AI	-2201 / 15372	-39.5	-39.5	0.70 (2)	6.25
AI- Y	-2201 / 15372	-39.5	-39.5	0.70 (2)	6.25
Y- X	-2599 / 17401	-39.5	-39.5	0.78 (2)	6.25
X- W	-1421 / 9688	-39.5	-39.5	0.44 (2)	6.25

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
AC- C	-474 / 230	0.08 (2)
C-AB	-1196 / 7592	0.67 (2)
AB- D	-5330 / 921	0.93 (2)
H- X	-14567 / 2220	0.61 (2)
X- I	-1799 / 12363	0.80 (2)
S- M	-304 / 218	0.07 (9)
S- N	-114 / 666	0.06 (2)
R- N	-1094 / 264	0.20 (1)
B-AC	-640 / 6135	0.54 (2)
R- O	-700 / 3961	0.35 (1)
Y- G	-507 / 196	0.09 (2)
F- Y	-524 / 3539	0.31 (2)
Z- F	-3407 / 652	0.59 (2)
D- Z	-831 / 6436	0.57 (2)
Y- H	0 / 882	0.07 (1)
U- M	-883 / 4677	0.41 (2)
I- V	-2190 / 109	0.75 (2)
U- L	-3659 / 794	0.83 (2)
V- J	-793 / 374	0.17 (10)
V- L	-492 / 3436	0.30 (2)

DESIGN CRITERIA

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

SPECIFIED LOADS:

TOP CH.	LL	=	30.1	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	10.5	PSF
	DL	=	7.4	PSF
TOTAL LOAD		=	54.0	PSF

SPACING = 24.0 IN. C/C

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

*** NON STANDARD GIRDER ***
ADDT'L USER-DEFINED LOADS APPLIED TO ALL LOAD CASES.

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2015

THIS DESIGN COMPLIES WITH:
- PART 4 OF BCBC 2018 , NBC-2019AE
- PART 4 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED
- PERCENTAGE OF GROUND SNOW LOAD IS USER-DEFINED.

(80 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 30.1 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.70")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.43")
ALLOWABLE DEFL.(TL)= L/180 (3.40")
CALCULATED VERT. DEFL.(TL) = L/ 955 (0.64")

CSI: TC=0.64/1.00 (F-G:2) , BC=0.78/1.00 (X-Y:2) , WB=0.93/1.00 (D-AB:2) , SSI=0.15/1.00 (L-M:3)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 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) (PSI) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	798	1987	1873

CONTINUED ON PAGE 2

F- Z	1	6	SIDE(111
2x4	1	6	
2x6	2	6	

NAILS TO BE DRIVEN FROM ONE SIDE ONLY.

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

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	6.0	10.0	2.50	4.75
C	TTWW+m	MT20	8.0	9.0	Edge	2.25
D	TMWW+t	MT20	5.0	8.0	3.75	2.00
E	TS-t	MT20	5.0	8.0		
F	TMWW-t	MT20	5.0	6.0		
G	TMW+w	MT20	4.0	6.0		
H	TTWW+m	MT20	10.0	12.0	6.00	4.50
I	TTWW-h	MT18HS	9.0	16.0	2.50	11.00
J	TMW+w	MT20	4.0	6.0		
K	TS-t	MT20	5.0	6.0		
L	TMWW+t	MT20	5.0	6.0		
M	TTWW+m	MT20	6.0	10.0	3.50	1.50
N	TMWW-t	MT20	5.0	6.0	2.50	2.25
O	TMVW-t	MT20	5.0	8.0	2.50	3.00
Q	BMV1+p	MT20	4.0	6.0		
R	BMWW-t	MT20	5.0	6.0	2.50	2.75
S	BMWW+t	MT20	4.0	6.0		
T	BS-t	MT20	5.0	6.0		
U	BMWW+t	MT20	5.0	6.0	3.00	2.00
V	BMWWW-t	MT20	6.0	10.0		
W	BS-t	MT20	6.0	7.0		
X	BMWW-t	MT20	10.0	12.0	4.50	5.50
Y	BMWWW-t	MT20	10.0	12.0		
Z	BMWW+t	MT20	5.0	8.0	3.75	2.00
AA	BS-t	MT18HS	5.0	16.0		
AB	BMWW-t	MT20	6.0	7.0	2.50	2.50
AC	BMWW-t	MT20	5.0	8.0	2.50	3.50
AD	BMV1+t	MT20	6.0	10.0	5.50	

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

LOADING

TOTAL LOAD CASES: (18)

CHORDS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 MAX CSI (LC)	MAX. UNBRAC LENGTH
W- V	-1421 / 9688	-39.5	-39.5	0.44 (2)	6.25
V- U	-1091 / 6580	-39.5	-39.5	0.31 (2)	6.25
U- T	-597 / 4008	-39.5	-39.5	0.20 (2)	6.25
T- S	-597 / 4008	-39.5	-39.5	0.20 (2)	6.25
S- R	-642 / 3775	-39.5	-39.5	0.19 (1)	6.25
R- Q	-12 / 25	-39.5	-39.5	0.03 (17)	6.25

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)

SPECIFIED CONCENTRATED LOADS (LBS)

JT	LOC.	LC1	MAX-	MAX+	FACE	DIR.	TYPE	HEEL	CONN.
C	4-0-10	-41	-41	---	FRONT	VERT	DEAD	---	C1
C	4-0-10	-156	-156	---	FRONT	VERT	SNOW	---	C1
Y	18-8-8	-1949	-1949	---	BACK	VERT	TOTAL	---	C1
Z	14-1-8	-797	-797	---	BACK	VERT	TOTAL	---	C1
AC	4-0-8	-797	-797	---	BACK	VERT	TOTAL	---	C1
AE	16-0-12	-100	-160	---	BACK	VERT	TOTAL	---	C1
AF	18-0-12	-100	-160	---	BACK	VERT	TOTAL	---	C1
AG	2-1-4	-29	-29	---	BACK	VERT	TOTAL	---	C1
AH	16-0-12	-29	-29	---	BACK	VERT	TOTAL	---	C1
AI	18-0-12	-29	-29	---	BACK	VERT	TOTAL	---	C1

CONNECTION REQUIREMENTS

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

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF (9.2) PSF AT (30-0-0) FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE (MAIN WIND FORCE RESISTING SYSTEM). INTERNAL WIND PRESSURE IS BASED ON DESIGN (CATEGORY 2). BUILDING MAY BE LOCATED ON (OPEN TERRAIN), AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST (0-0) FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 5.0 PSF RESPECTIVELY.

MT18HS 586 403 2455 1382 3163 3004

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.80 (C) (INPUT = 0.90)
JSI METAL= 0.78 (D) (INPUT = 0.95)

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416615

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
439988	T12	1	1	ROYAL PINE HOMES TRUSS DESC.	

Tamarack Roof Truss, Burlington

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Tue Jul 9 11:15:32 2024 Page 1
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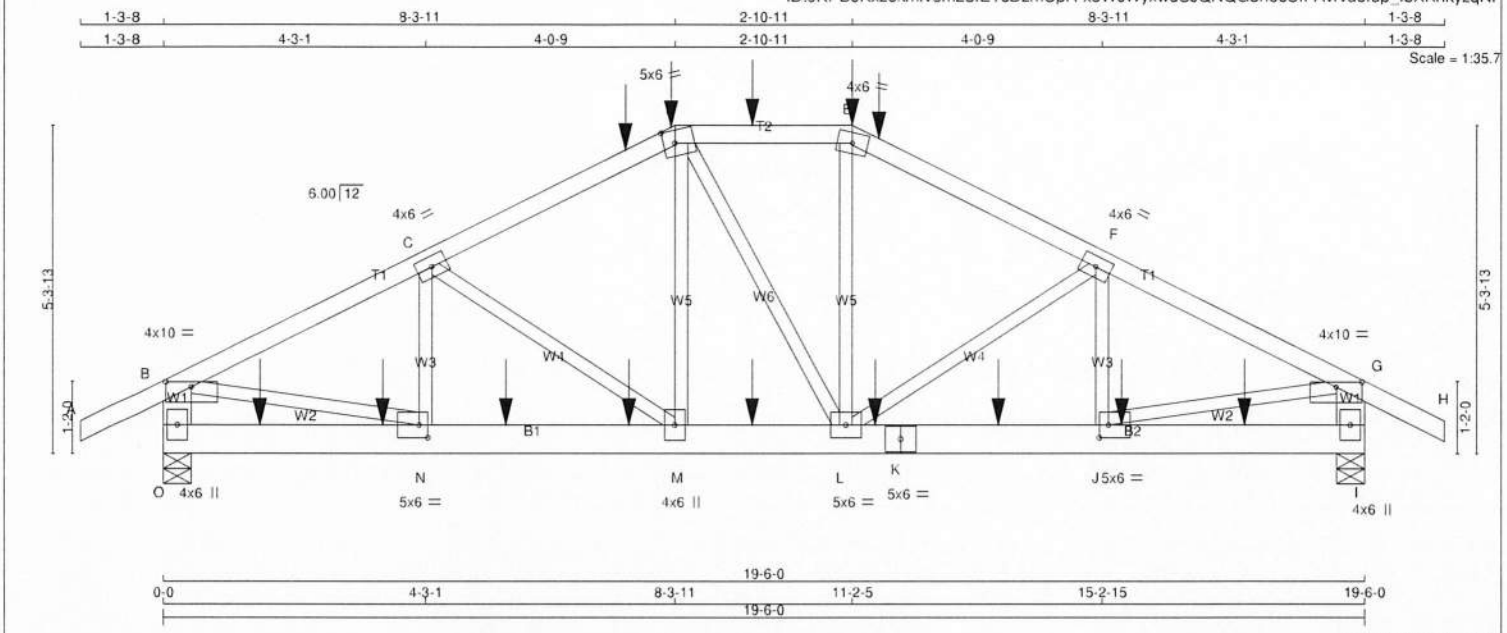

TOTAL WEIGHT = 95 lb

[M]

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
A - D	2x4	DRY	No.2	SPF
D - E	2x4	DRY	No.2	SPF
E - H	2x4	DRY	No.2	SPF
O - B	2x6	DRY	No.2	SPF
I - G	2x6	DRY	No.2	SPF
O - K	2x6	DRY	No.2	SPF
K - I	2x6	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	10.0	1.00	5.00
C	TMWW-t	MT20	4.0	6.0		
D	TTWW-m	MT20	5.0	6.0	2.50	2.25
E	TTW-m	MT20	4.0	6.0		
F	TMWW-t	MT20	4.0	6.0		
G	TMVW-p	MT20	4.0	10.0	1.00	5.00
I	BMV1+p	MT20	4.0	6.0		
J	BMWW-t	MT20	5.0	6.0	2.50	1.75
K	BS-t	MT20	5.0	6.0		
L	BMWWW-t	MT20	5.0	6.0		
M	BMWW+t	MT20	4.0	6.0		
N	BMWW-t	MT20	5.0	6.0	2.50	1.75
O	BMV1+p	MT20	4.0	6.0		

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
O	2139	0	2139	0	0	5-8	2-5
I	2125	0	2125	0	0	5-8	2-5

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
O	1514	984 / 0	0 / 0	0 / 0	0 / 0	530 / 0	0 / 0
I	1504	980 / 0	0 / 0	0 / 0	0 / 0	524 / 0	0 / 0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.62 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 CSI (LC)	MAX. UNBRAC LENGTH
A- B	0 / 26	-84.9	-84.9	0.12 (1)	10.00
B- C	-2940 / 0	-84.9	-84.9	0.45 (1)	3.62
C- P	-2846 / 0	-84.9	-84.9	0.43 (1)	3.68
P- D	-2846 / 0	-84.9	-84.9	0.43 (1)	3.68
D- Q	-2554 / 0	-84.9	-84.9	0.40 (1)	3.84
Q- E	-2554 / 0	-84.9	-84.9	0.40 (1)	3.84
E- R	-2837 / 0	-84.9	-84.9	0.41 (1)	3.72
R- F	-2837 / 0	-84.9	-84.9	0.41 (1)	3.72
F- G	-2923 / 0	-84.9	-84.9	0.42 (1)	3.66
G- H	0 / 26	-84.9	-84.9	0.12 (1)	10.00
O- B	-2058 / 0	0.0	0.0	0.14 (1)	7.03
I- G	-2050 / 0	0.0	0.0	0.14 (1)	7.03
O- S	0 / 0	-18.5	-18.5	0.09 (4)	10.00
S- T	0 / 0	-18.5	-18.5	0.09 (4)	10.00
T- N	0 / 0	-18.5	-18.5	0.09 (4)	10.00
N- U	0 / 2647	-18.5	-18.5	0.42 (1)	10.00
U- V	0 / 2647	-18.5	-18.5	0.42 (1)	10.00
V- M	0 / 2647	-18.5	-18.5	0.42 (1)	10.00
M- W	0 / 2552	-18.5	-18.5	0.35 (1)	10.00
W- L	0 / 2552	-18.5	-18.5	0.35 (1)	10.00
L- X	0 / 2630	-18.5	-18.5	0.42 (1)	10.00
X- K	0 / 2630	-18.5	-18.5	0.42 (1)	10.00
K- Y	0 / 2630	-18.5	-18.5	0.42 (1)	10.00
Y- J	0 / 2630	-18.5	-18.5	0.42 (1)	10.00
J- Z	0 / 0	-18.5	-18.5	0.09 (4)	10.00
Z-AA	0 / 0	-18.5	-18.5	0.09 (4)	10.00
AA- I	0 / 0	-18.5	-18.5	0.09 (4)	10.00

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
N- C	-359 / 14	0.07 (1)
C- M	-121 / 0	0.06 (4)
M- D	0 / 208	0.07 (4)
D- L	0 / 5	0.00 (4)
L- E	0 / 200	0.08 (4)
L- F	-99 / 0	0.05 (4)
J- F	-360 / 9	0.07 (1)
B- N	0 / 2690	0.67 (1)
J- G	0 / 2673	0.66 (1)

SPECIFIED CONCENTRATED LOADS (LBS)

JT	LOC.	LC1	MAX-	MAX+	FACE	DIR.	TYPE	HEEL	CONN.
D	8-3-11	-83	-83	---	FRONT	VERT	DEAD	---	C1
D	8-3-11	-319	-319	---	FRONT	VERT	SNOW	---	C1
E	11-2-5	-83	-83	---	FRONT	VERT	DEAD	---	C1
E	11-2-5	-319	-319	---	FRONT	VERT	SNOW	---	C1
P	7-6-12	-121	-121	---	FRONT	VERT	TOTAL	---	C1
Q	9-6-12	-113	-113	---	FRONT	VERT	TOTAL	---	C1
R	11-6-12	-132	-132	---	FRONT	VERT	TOTAL	---	C1
S	1-6-12	-29	-29	---	FRONT	VERT	TOTAL	---	C1
T	3-6-12	-29	-29	---	FRONT	VERT	TOTAL	---	C1
U	5-6-12	-29	-29	---	FRONT	VERT	TOTAL	---	C1
V	7-6-12	-29	-29	---	FRONT	VERT	TOTAL	---	C1

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	=	6.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.4	PSF
TOTAL LOAD		=	36.7	PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 6.00/12

*** NON STANDARD GIRDER ***
ADDT'L USER-DEFINED LOADS APPLIED TO ALL LOAD CASES.

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

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

(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 (0.65")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.07")
ALLOWABLE DEFL.(TL)= L/360 (0.65")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.14")

CSI: TC=0.45/1.00 (B-C:1) , BC=0.42/1.00 (M-N:1) , WB=0.67/1.00 (B-N:1) , SSI=0.23/1.00 (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

AUTOSOLVE HEELS OFF

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.79 (N) (INPUT = 0.90)
JSI METAL= 0.60 (N) (INPUT = 0.95)

CONTINUED ON PAGE 2

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416616

SPECIFIED CONCENTRATED LOADS (LBS)

JT	LOC.	LC1	MAX-	MAX+	FACE	DIR.	TYPE	HEEL	CONN.
W	9-6-12	-29	-29	---	FRONT	VERT	TOTAL	---	C1
X	11-6-12	-29	-29	---	FRONT	VERT	TOTAL	---	C1
Y	13-6-12	-29	-29	---	FRONT	VERT	TOTAL	---	C1
Z	15-6-12	-29	-29	---	FRONT	VERT	TOTAL	---	C1
AA	17-6-12	-29	-29	---	FRONT	VERT	TOTAL	---	C1

CONNECTION REQUIREMENTS

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

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416616

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
439988	T13	3	1	ROYAL PINE HOMES TRUSS DESC.	

Tamarack Roof Truss, Burlington

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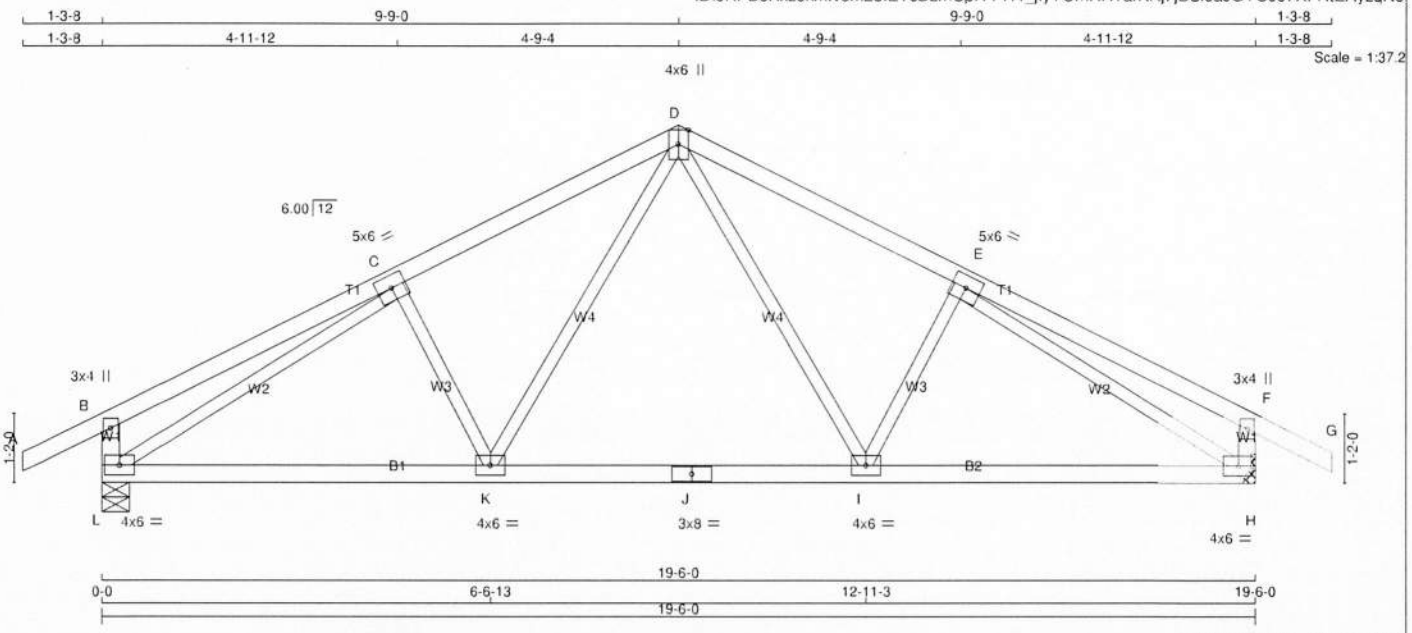

TOTAL WEIGHT = 3 X 77 = 231 lb

[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
L - B	2x4	DRY	No.2	SPF
H - F	2x4	DRY	No.2	SPF
L - 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	TMV+p	MT20	3.0	4.0		
C	TMWW-t	MT20	5.0	6.0		
D	TTWW+p	MT20	4.0	6.0	Edge	
E	TMWW-t	MT20	5.0	6.0		
F	TMV+p	MT20	3.0	4.0		
H	BMVW1-t	MT20	4.0	6.0		
I	BMWW-t	MT20	4.0	6.0		
J	BS-t	MT20	3.0	8.0		
K	BMWW-t	MT20	4.0	6.0		
L	BMVW1-t	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

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
L	1123	0	1123	0	0	5-8	1-8
H	1123	0	1123	0	0	MECHANICAL	

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

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
L	795	517 / 0	0 / 0	0 / 0	0 / 0	278 / 0	0 / 0
H	795	517 / 0	0 / 0	0 / 0	0 / 0	278 / 0	0 / 0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.54 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS

MEMB. FR-TO	MAX. FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 CSI (LC)	MAX UNBRAC LENGTH
A- B	0 / 26	-84.9	-84.9	0.11 (1)	10.00
B- C	0 / 21	-84.9	-84.9	0.32 (1)	10.00
C- D	-1204 / 0	-84.9	-84.9	0.27 (1)	5.54
D- E	-1204 / 0	-84.9	-84.9	0.27 (1)	5.54
E- F	0 / 21	-84.9	-84.9	0.32 (1)	10.00
F- G	0 / 26	-84.9	-84.9	0.11 (1)	10.00
L- B	-274 / 0	0.0	0.0	0.03 (1)	7.81
H- F	-274 / 0	0.0	0.0	0.03 (1)	7.81
L- K	0 / 1181	-18.5	-18.5	0.28 (1)	10.00
K- J	0 / 852	-18.5	-18.5	0.25 (4)	10.00
J- I	0 / 852	-18.5	-18.5	0.25 (4)	10.00
I- H	0 / 1181	-18.5	-18.5	0.28 (1)	10.00

WEBS

MEMB. FR-TO	MAX. FORCE (LBS)	MAX CSI (LC)
D- I	0 / 423	0.10 (1)
I- E	-270 / 0	0.07 (1)
K- D	0 / 423	0.10 (1)
C- K	-270 / 0	0.07 (1)
L- C	-1425 / 0	0.82 (1)
E- H	-1425 / 0	0.82 (1)

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	23.3	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.4	PSF
TOTAL LOAD		=	36.7	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 , NBC-2019AE
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(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 (0.65")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.04")
ALLOWABLE DEFL.(TL)= L/360 (0.65")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.09")

CSI: TC=0.32/1.00 (E-F:1) , BC=0.28/1.00 (H-I:1) , WB=0.82/1.00 (E-H:1) , SSI=0.18/1.00 (E-F:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.71 (L) (INPUT = 0.90)
JSI METAL= 0.32 (E) (INPUT = 0.95)

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416617

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
439988	T14	1	2	ROYAL PINE HOMES TRUSS DESC.	

Tamarack Roof Truss, Burlington

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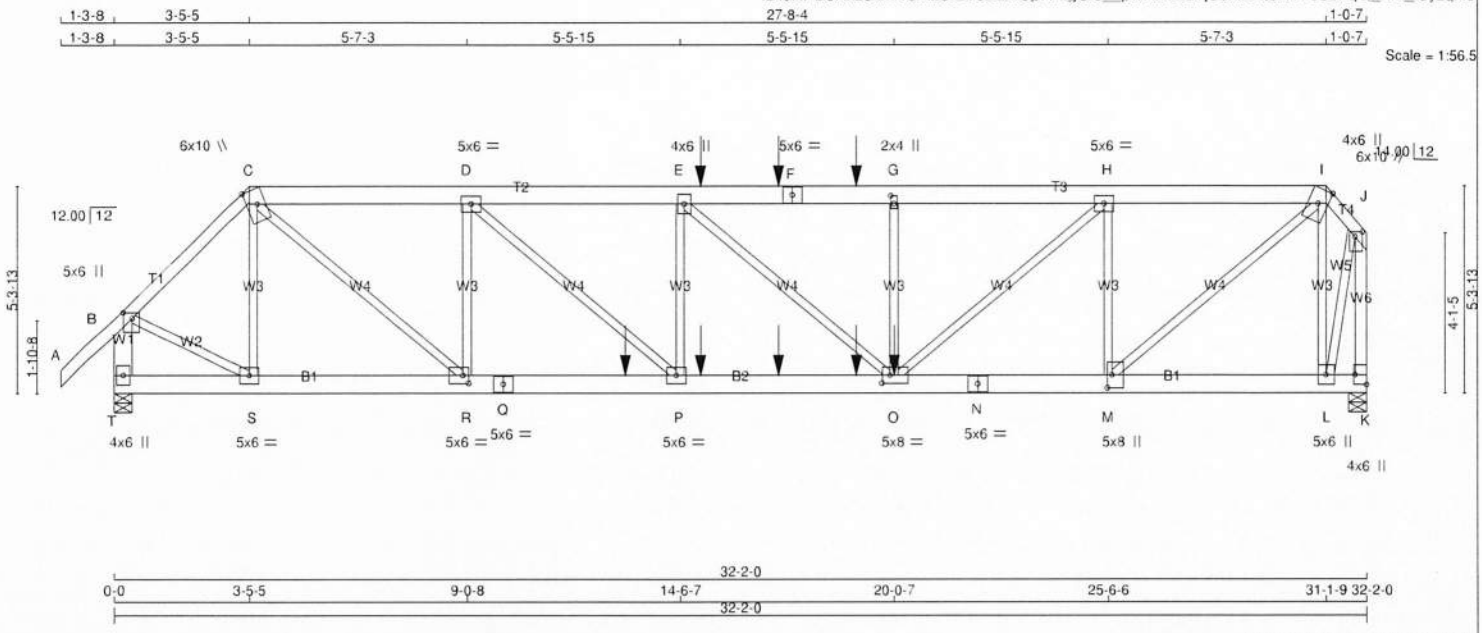

TOTAL WEIGHT = 2 X 179 = 359 lb

[M]

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 - I	2x6	DRY	No.2	SPF
I - J	2x4	DRY	No.2	SPF
T - B	2x6	DRY	No.2	SPF
K - J	2x4	DRY	No.2	SPF
T - Q	2x6	DRY	No.2	SPF
Q - N	2x6	DRY	No.2	SPF
N - K	2x6	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- C	1	12	TOP
I- J	1	12	SIDE(28.8)
K- J	1	12	TOP
C- F	2	12	SIDE(0.0)
F- I	2	12	SIDE(44.1)
T- B	2	12	TOP
BOTTOM CHORDS : (0.122"X3") SPIRAL NAILS			
T- Q	2	12	TOP
Q- N	2	12	SIDE(183.1)
N- K	2	12	TOP
WEBS : (0.122"X3") SPIRAL NAILS			
G- O	1	6	SIDE(103.3)
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.

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416618

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
T	3446	0	3446	0	0	5-8	1-14
K	4063	0	4063	0	0	5-8	3-2

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
T	2439	1588 / 0	0 / 0	0 / 0	0 / 0	851 / 0	0 / 0
K	2880	1850 / 0	0 / 0	0 / 0	0 / 0	1030 / 0	0 / 0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1	MAX CSI (LC)	MAX. UNBRAC LENGTH
A- B	0 / 42	-84.9	-84.9	0.07 (1)	10.00	
B- C	-3172 / 0	-84.9	-84.9	0.14 (1)	5.09	
C- D	-5416 / 0	-84.9	-84.9	0.15 (1)	4.93	
D- E	-7482 / 0	-84.9	-84.9	0.19 (1)	4.30	
E- U	-7262 / 0	-84.9	-84.9	0.25 (1)	4.28	
U- V	-7262 / 0	-84.9	-84.9	0.25 (1)	4.28	
V- F	-7262 / 0	-84.9	-84.9	0.25 (1)	4.28	
F- W	-7262 / 0	-84.9	-84.9	0.25 (1)	4.28	
W- G	-7262 / 0	-84.9	-84.9	0.25 (1)	4.28	
G- H	-7262 / 0	-173.1	-173.1	0.28 (1)	4.25	
H- I	-4787 / 0	-173.1	-173.1	0.22 (1)	5.08	
I- J	-1215 / 0	-173.1	-173.1	0.02 (1)	6.25	
T- B	-3416 / 0	0.0	0.0	0.13 (1)	7.55	
K- J	-4012 / 0	0.0	0.0	0.55 (1)	5.91	
T- S	0 / 0	-18.5	-18.5	0.02 (4)	10.00	
S- R	0 / 2228	-18.5	-18.5	0.25 (1)	10.00	
R- Q	0 / 5416	-18.5	-18.5	0.70 (1)	10.00	
Q- X	0 / 5416	-18.5	-18.5	0.70 (1)	10.00	
X- P	0 / 5416	-18.5	-18.5	0.70 (1)	10.00	
P- Y	0 / 7482	-18.5	-18.5	0.68 (1)	10.00	
Y- Z	0 / 7482	-18.5	-18.5	0.68 (1)	10.00	
Z- AA	0 / 7482	-18.5	-18.5	0.68 (1)	10.00	
AA- O	0 / 7482	-18.5	-18.5	0.68 (1)	10.00	
O- N	0 / 4787	-18.5	-18.5	0.39 (1)	10.00	
N- M	0 / 4787	-18.5	-18.5	0.39 (1)	10.00	
M- L	0 / 836	-18.5	-18.5	0.08 (1)	10.00	
L- K	0 / 0	-18.5	-18.5	0.01 (1)	10.00	

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
S- C	-876 / 0	0.17 (1)
C- R	0 / 4224	0.52 (1)
R- D	-2329 / 0	0.44 (1)
D- P	0 / 2758	0.34 (1)
P- E	-530 / 0	0.10 (1)
E- O	-294 / 0	0.15 (1)
O- G	-925 / 0	0.18 (1)
O- H	0 / 3303	0.41 (1)
M- H	-3264 / 0	0.62 (1)
M- I	0 / 5233	0.65 (1)
L- I	-2996 / 0	0.57 (1)
B- S	0 / 2425	0.30 (1)
L- J	0 / 3103	0.38 (1)

SPECIFIED CONCENTRATED LOADS (LBS)

JT	LOC.	LC1	MAX-	MAX+	FACE	DIR.	TYPE	HEEL	CONN.
O	20-0-8	-778	-778	---	FRONT	VERT	TOTAL	---	C1
U	15-0-12	-113	-113	---	FRONT	VERT	TOTAL	---	C1
V	17-0-12	-113	-113	---	FRONT	VERT	TOTAL	---	C1
W	19-0-12	-113	-113	---	FRONT	VERT	TOTAL	---	C1
X	13-1-8	-913	-913	---	FRONT	VERT	TOTAL	---	C1
Y	15-0-12	-29	-29	---	FRONT	VERT	TOTAL	---	C1
Z	17-0-12	-29	-29	---	FRONT	VERT	TOTAL	---	C1
AA	19-0-12	-29	-29	---	FRONT	VERT	TOTAL	---	C1

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	23.3	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.4	PSF
TOTAL LOAD		=	36.7	PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 12.00/12

GIRDER TYPE: CStdGirder
START DISTANCE = 20-0-0
START SPAN CARRIED = 5-10-8
END DISTANCE = 32-2-0
END SPAN CARRIED = 5-10-8
END WALL WIDTH = 5-8
APPLIED TO FRONT SIDE OF TOP CHORD.
- ADDT'L LOADS BASED ON 55 % OF GSL.

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

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

(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 (1.07")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.16")
ALLOWABLE DEFL.(TL)= L/360 (1.07")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.29")

CSI: TC=0.55/1.00 (J-K:1) , BC=0.70/1.00 (P-R:1) , WB=0.65/1.00 (I-M:1) , SSI=0.35/1.00 (P-R: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) (PSI) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.79 (R) (INPUT = 0.90)
JSI METAL= 0.71 (M) (INPUT = 0.95)

CONTINUED ON PAGE 2

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+m	MT20	6.0	10.0	Edge	3.25
D	TMWW-t	MT20	5.0	6.0		
E	TMWW+t	MT20	4.0	6.0		
F	TS-t	MT20	5.0	6.0		
G	TMW+w	MT20	2.0	4.0	2.50	1.00
H	TMWW-t	MT20	5.0	6.0		
I	TTWW+m	MT20	6.0	10.0	Edge	
J	TMVW+p	MT20	4.0	6.0	1.50	2.25
K	BMV1+p	MT20	4.0	6.0	3.00	Edge
L	BMWW+t	MT20	5.0	6.0		
M	BMWW+t	MT20	5.0	8.0	4.00	1.50
N	BS-t	MT20	5.0	6.0		
O	BMWWW-t	MT20	5.0	8.0	2.50	2.50
P	BMWW-t	MT20	5.0	6.0		
Q	BS-t	MT20	5.0	6.0		
R	BMWW-t	MT20	5.0	6.0	2.50	1.75
S	BMWW-t	MT20	5.0	6.0		
T	BMV1+p	MT20	4.0	6.0		

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

CONNECTION REQUIREMENTS

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

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416618

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
439988	T15	1	1	ROYAL PINE HOMES TRUSS DESC.	

Tamarack Roof Truss, Burlington

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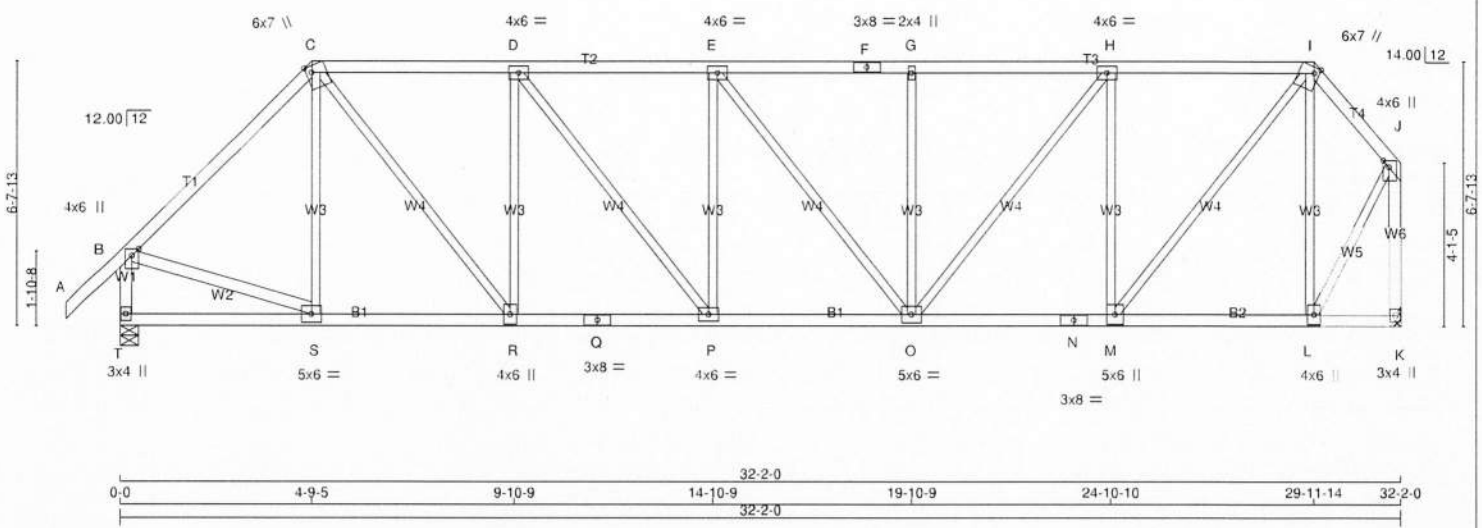

TOTAL WEIGHT = 156 lb [M]

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 - I	2x4	DRY	No.2	SPF
I - J	2x4	DRY	No.2	SPF
T - B	2x4	DRY	No.2	SPF
K - J	2x4	DRY	No.2	SPF
T - Q	2x4	DRY	No.2	SPF
Q - N	2x4	DRY	No.2	SPF
N - K	2x4	DRY	No.2	SPF
ALL WEBS	2x3	DRY	No.2	SPF
EXCEPT				
B - S	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	Edge	
C	TTWW+m	MT20	6.0	7.0	Edge	1.75
D, E, H						
D	TMWW-t	MT20	4.0	6.0		
F	TS-t	MT20	3.0	8.0		
G	TMW+w	MT20	2.0	4.0		
I	TTWW+m	MT20	6.0	7.0	Edge	1.50
J	TMVW+p	MT20	4.0	6.0	2.00	Edge
K	BMV1+p	MT20	3.0	4.0		
L	BMWW+t	MT20	4.0	6.0		
M	BMWW+t	MT20	5.0	6.0		
N	BS-t	MT20	3.0	8.0		
O	BMWWW-t	MT20	5.0	6.0		
P	BMWW-t	MT20	4.0	6.0		
Q	BS-t	MT20	3.0	8.0		
R	BMWW+t	MT20	4.0	6.0		
S	BMWW-t	MT20	5.0	6.0		
T	BMV1+p	MT20	3.0	4.0		

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

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416619

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
T	1781	0	1781	0	0	5-8	2-5
K	1662	0	1662	0	0	MECHANICAL	

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT K. MINIMUM BEARING LENGTH AT JOINT K = 1-14.

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
T	1262	814 / 0	0 / 0	0 / 0	0 / 0	448 / 0	0 / 0
K	1180	749 / 0	0 / 0	0 / 0	0 / 0	431 / 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 = 4.27 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS

MEMB. FR-TO	MAX. FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 CSI (LC)	MAX UNBRAC LENGTH
A- B	0 / 42	-84.9	-84.9	0.12 (1)	10.00
B- C	-1533 / 0	-84.9	-84.9	0.43 (1)	4.85
C- D	-1828 / 0	-84.9	-84.9	0.38 (1)	4.55
D- E	-2121 / 0	-84.9	-84.9	0.40 (1)	4.27
E- F	-2013 / 0	-84.9	-84.9	0.31 (1)	4.48
F- G	-2013 / 0	-84.9	-84.9	0.31 (1)	4.48
G- H	-2013 / 0	-84.9	-84.9	0.40 (1)	4.36
H- I	-1513 / 0	-84.9	-84.9	0.36 (1)	4.93
I- J	-859 / 0	-84.9	-84.9	0.08 (1)	6.25
T- B	-1745 / 0	0.0	0.0	0.19 (1)	6.31
K- J	-1657 / 0	0.0	0.0	0.48 (1)	6.44
T- S	0 / 0	-18.5	-18.5	0.11 (4)	10.00
S- R	0 / 1077	-18.5	-18.5	0.24 (1)	10.00
R- Q	0 / 1829	-18.5	-18.5	0.34 (1)	10.00
Q- P	0 / 1829	-18.5	-18.5	0.34 (1)	10.00
P- O	0 / 2121	-18.5	-18.5	0.38 (1)	10.00
O- N	0 / 1513	-18.5	-18.5	0.29 (1)	10.00
N- M	0 / 1513	-18.5	-18.5	0.29 (1)	10.00
M- L	0 / 541	-18.5	-18.5	0.14 (4)	10.00
L- K	0 / 0	-18.5	-18.5	0.07 (4)	10.00

WEBS

MEMB. FR-TO	MAX. FORCE (LBS)	MAX CSI (LC)
S- C	-232 / 0	0.17 (1)
C- R	0 / 1198	0.27 (1)
R- D	-844 / 0	0.62 (1)
D- P	0 / 472	0.11 (1)
P- E	-278 / 0	0.20 (1)
E- O	-173 / 0	0.24 (1)
O- G	-411 / 0	0.30 (1)
O- H	0 / 810	0.18 (1)
M- H	-1110 / 0	0.81 (1)
M- I	0 / 1547	0.35 (1)
L- I	-824 / 0	0.60 (1)
B- S	0 / 1132	0.18 (1)
L- J	0 / 1064	0.24 (1)

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	23.3	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.4	PSF
TOTAL LOAD		=	36.7	PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 12.00/12

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

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

(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 (1.07")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.10")
ALLOWABLE DEFL.(TL)= L/360 (1.07")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.19")

CSI: TC=0.48/1.00 (J-K:1) , BC=0.38/1.00 (O-P:1) , WB=0.81/1.00 (H-M:1) , SSI=0.20/1.00 (H-I:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

AUTOSOLVE RIGHT HEEL ONLY

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.78 (B) (INPUT = 0.90)
JSI METAL= 0.65 (B) (INPUT = 0.95)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
439988	T16	1	1	ROYAL PINE HOMES TRUSS DESC.	

Tamarack Roof Truss, Burlington

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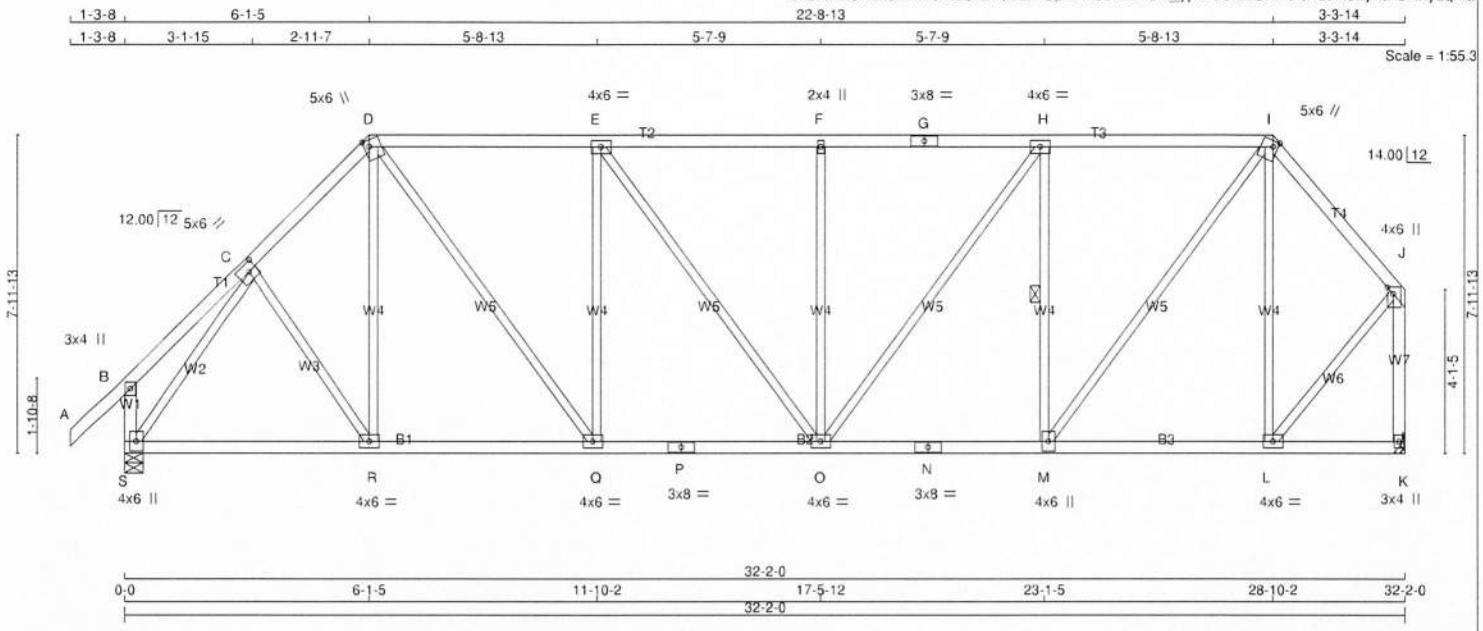

TOTAL WEIGHT = 159 lb
[M]

LUMBER
N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
A - D	2x4	DRY	No.2	SPF
D - G	2x4	DRY	No.2	SPF
G - I	2x4	DRY	No.2	SPF
I - J	2x4	DRY	No.2	SPF
S - B	2x4	DRY	No.2	SPF
K - J	2x4	DRY	No.2	SPF
S - P	2x4	DRY	No.2	SPF
P - N	2x4	DRY	No.2	SPF
N - K	2x4	DRY	No.2	SPF
ALL WEBS EXCEPT	2x3	DRY	No.2	SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMV+p	MT20	3.0	4.0		
C	TMWW-t	MT20	5.0	6.0	2.50	2.50
D	TTWW+m	MT20	5.0	6.0	2.00	1.50
E	TMWW-t	MT20	4.0	6.0		
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+m	MT20	5.0	6.0	1.75	1.50
J	TMVW+p	MT20	4.0	6.0	2.00	Edge
K	BMV1+p	MT20	3.0	4.0		
L, Q, R						
L	BMWW-t	MT20	4.0	6.0		
M	BMWW+t	MT20	4.0	6.0		
N	BS-t	MT20	3.0	8.0		
O	BMWWW-t	MT20	4.0	6.0		
P	BS-t	MT20	3.0	8.0		
S	BMVW1+p	MT20	4.0	6.0		

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

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416620

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
S	1781	0	1781	0	0	5-8	1-15
K	1662	0	1662	0	0	MECHANICAL	

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT K. MINIMUM BEARING LENGTH AT JOINT K = 1-14.

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
S	1262	814 / 0	0 / 0	0 / 0	0 / 0	448 / 0	0 / 0
K	1180	749 / 0	0 / 0	0 / 0	0 / 0	431 / 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 = 4.47 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

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

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

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 CSI (LC)	MAX UNBRAC LENGTH
A- B	0 / 42	-84.9	-84.9	0.12 (1)	10.00
B- C	0 / 19	-84.9	-84.9	0.11 (1)	10.00
C- D	-1557 / 0	-84.9	-84.9	0.15 (1)	5.15
D- E	-1660 / 0	-84.9	-84.9	0.49 (1)	4.58
E- F	-1753 / 0	-84.9	-84.9	0.49 (1)	4.47
F- G	-1753 / 0	-84.9	-84.9	0.49 (1)	4.47
G- H	-1753 / 0	-84.9	-84.9	0.49 (1)	4.47
H- I	-1449 / 0	-84.9	-84.9	0.47 (1)	4.85
I- J	-1023 / 0	-84.9	-84.9	0.18 (1)	5.98
S- B	-220 / 0	0.0	0.0	0.02 (1)	7.81
K- J	-1644 / 0	0.0	0.0	0.47 (1)	6.46
S- R	0 / 1006	-18.5	-18.5	0.25 (1)	10.00
R- Q	0 / 1093	-18.5	-18.5	0.27 (1)	10.00
Q- P	0 / 1660	-18.5	-18.5	0.32 (1)	10.00
P- O	0 / 1660	-18.5	-18.5	0.32 (1)	10.00
O- N	0 / 1449	-18.5	-18.5	0.29 (1)	10.00
N- M	0 / 1449	-18.5	-18.5	0.29 (1)	10.00
M- L	0 / 654	-18.5	-18.5	0.17 (4)	10.00
L- K	0 / 0	-18.5	-18.5	0.10 (4)	10.00

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
C- R	0 / 134	0.03 (1)
R- D	0 / 73	0.03 (4)
D- Q	0 / 962	0.22 (1)
Q- E	-670 / 0	0.81 (1)
E- O	0 / 158	0.04 (1)
O- F	-440 / 0	0.53 (1)
O- H	0 / 514	0.12 (1)
M- H	-956 / 0	0.38 (1)
M- I	0 / 1327	0.30 (1)
L- I	-626 / 0	0.76 (1)
S- C	-1818 / 0	0.89 (1)
L- J	0 / 980	0.22 (1)

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	23.3	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.4	PSF
TOTAL LOAD		=	36.7	PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 12.00/12

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

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

(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 (1.07")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.08")
ALLOWABLE DEFL.(TL)= L/360 (1.07")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.16")

CSI: TC=0.49/1.00 (E-F:1) , BC=0.32/1.00 (O-Q:1) , WB=0.89/1.00 (C-S:1) , SSI=0.23/1.00 (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) (PSI) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.80 (Q) (INPUT = 0.90)
JSI METAL= 0.54 (P) (INPUT = 0.95)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
439988	T17	1	1	ROYAL PINE HOMES TRUSS DESC.	

Tamarack Roof Truss, Burlington

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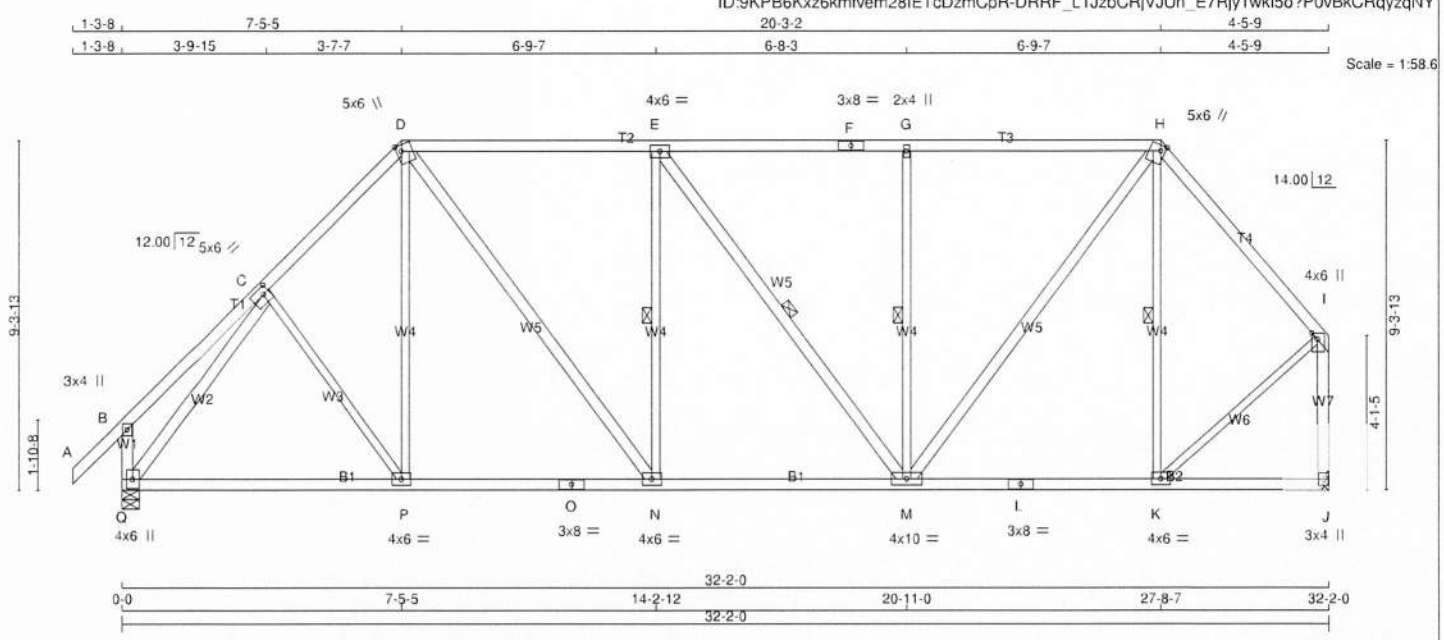

TOTAL WEIGHT = 170 lb

[M]

LUMBER

N. L. G. A. RULES

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

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMV+p	MT20	3.0	4.0		
C	TMWW-t	MT20	5.0	6.0	2.25	2.00
D	TTWW+m	MT20	5.0	6.0	2.00	1.50
E	TMWW-t	MT20	4.0	6.0		
F	TS-t	MT20	3.0	8.0		
G	TMW+w	MT20	2.0	4.0		
H	TTWW+m	MT20	5.0	6.0	1.75	1.50
I	TMVW+p	MT20	4.0	6.0	2.00	Edge
J	BMV1+p	MT20	3.0	4.0		
K, N, P						
K	BMWW-t	MT20	4.0	6.0		
L	BS-t	MT20	3.0	8.0		
M	BMWWW-t	MT20	4.0	10.0		
O	BS-t	MT20	3.0	8.0		
Q	BMVW1+p	MT20	4.0	6.0		

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

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416621

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
Q	1781	0	1781	0	0	5-8	1-15
J	1662	0	1662	0	0	MECHANICAL	

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT J. MINIMUM BEARING LENGTH AT JOINT J = 1-14.

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
Q	1262	814 / 0	0 / 0	0 / 0	0 / 0	448 / 0	0 / 0
J	1180	749 / 0	0 / 0	0 / 0	0 / 0	431 / 0	0 / 0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.50 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

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

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

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD LC1 (PLF) FROM	TO	MAX CSI (LC)	MAX. UNBRAC LENGTH
A- B	0 / 42	-84.9	-84.9	0.12 (1)	10.00
B- C	0 / 26	-84.9	-84.9	0.18 (1)	10.00
C- D	-1541 / 0	-84.9	-84.9	0.23 (1)	5.07
D- E	-1510 / 0	-84.9	-84.9	0.65 (1)	4.50
E- F	-1396 / 0	-84.9	-84.9	0.63 (1)	4.66
F- G	-1396 / 0	-84.9	-84.9	0.63 (1)	4.66
G- H	-1396 / 0	-84.9	-84.9	0.63 (1)	4.68
H- I	-1118 / 0	-84.9	-84.9	0.35 (1)	5.58
Q- B	-238 / 0	0.0	0.0	0.03 (1)	7.81
J- I	-1634 / 0	0.0	0.0	0.47 (1)	6.48
Q- P	0 / 1050	-18.5	-18.5	0.33 (4)	10.00
P- O	0 / 1069	-18.5	-18.5	0.34 (4)	10.00
O- N	0 / 1069	-18.5	-18.5	0.34 (4)	10.00
N- M	0 / 1510	-18.5	-18.5	0.33 (1)	10.00
M- L	0 / 719	-18.5	-18.5	0.23 (4)	10.00
L- K	0 / 719	-18.5	-18.5	0.23 (4)	10.00
K- J	0 / 0	-18.5	-18.5	0.14 (4)	10.00

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
C- P	0 / 52	0.02 (4)
P- D	0 / 128	0.04 (4)
D- N	0 / 732	0.12 (1)
N- E	-468 / 0	0.27 (1)
E- M	-191 / 0	0.13 (1)
M- G	-618 / 0	0.35 (1)
M- H	0 / 1124	0.18 (1)
K- H	-476 / 0	0.27 (1)
Q- C	-1820 / 0	0.93 (1)
K- I	0 / 936	0.21 (1)

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	23.3	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.4	PSF
TOTAL LOAD		=	36.7	PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 12.00/12

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

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

(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 (1.07")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.06")
ALLOWABLE DEFL.(TL)= L/360 (1.07")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.12")

CSI: TC=0.65/1.00 (D-E:1) , BC=0.34/1.00 (N-P:4) , WB=0.93/1.00 (C-Q:1) , SSI=0.27/1.00 (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

AUTOSOLVE RIGHT HEEL ONLY

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.79 (Q) (INPUT = 0.90)
JSI METAL= 0.47 (Q) (INPUT = 0.95)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
439988	T18	1	1	ROYAL PINE HOMES TRUSS DESC.	

Tamarack Roof Truss, Burlington

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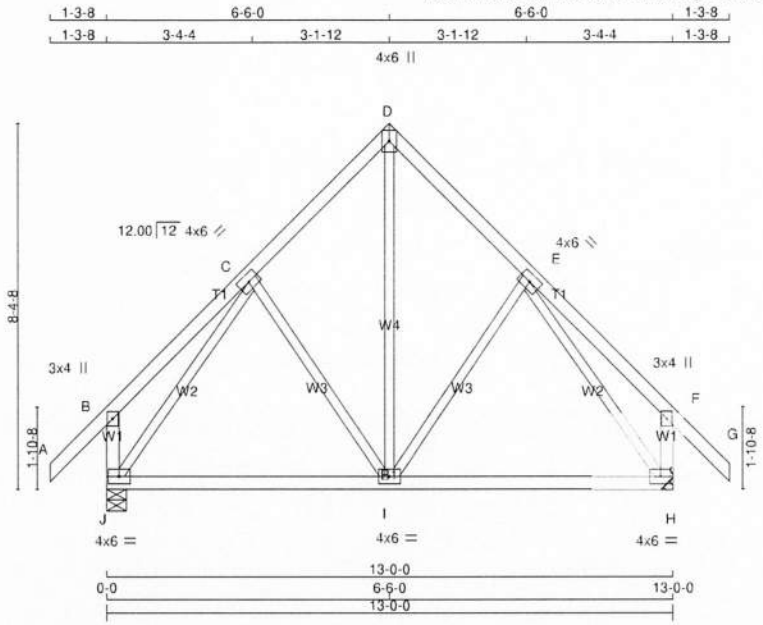

TOTAL WEIGHT = 68 lb
[M][F]

LUMBER
N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
A - D	2x4	DRY	No.2	SPF
D - G	2x4	DRY	No.2	SPF
J - B	2x4	DRY	No.2	SPF
H - F	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	TMV+p	MT20	3.0	4.0	
C	TMWW-t	MT20	4.0	6.0	
D	TTW+p	MT20	4.0	6.0	
E	TMWW-t	MT20	4.0	6.0	
F	TMV+p	MT20	3.0	4.0	
H	BMVW1-t	MT20	4.0	6.0	
I	BMWWW-t	MT20	4.0	6.0	
J	BMVW1-t	MT20	4.0	6.0	

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
J	790	0	790	0	0	5-8	1-8
H	790	0	790	0	0	MECHANICAL	

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

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
J	559	368 / 0	0 / 0	0 / 0	0 / 0	191 / 0	0 / 0
H	559	368 / 0	0 / 0	0 / 0	0 / 0	191 / 0	0 / 0

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

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

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

LOADING
TOTAL LOAD CASES: (4)

CHORDS

MEMB. FR-TO	MAX. FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 CSI	MAX (LC)	MAX. UNBRAC LENGTH
A- B	0 / 42	-84.9	-84.9	0.12	(1)	10.00
B- C	0 / 23	-84.9	-84.9	0.14	(1)	10.00
C- D	-423 / 0	-84.9	-84.9	0.11	(1)	6.25
D- E	-423 / 0	-84.9	-84.9	0.11	(1)	6.25
E- F	0 / 23	-84.9	-84.9	0.14	(1)	10.00
F- G	0 / 42	-84.9	-84.9	0.12	(1)	10.00
J- B	-222 / 0	0.0	0.0	0.02	(1)	7.81
H- F	-222 / 0	0.0	0.0	0.02	(1)	7.81
J- I	0 / 354	-18.5	-18.5	0.25	(4)	10.00
I- H	0 / 354	-18.5	-18.5	0.25	(4)	10.00

WEBS

MEMB. FR-TO	MAX. FORCE (LBS)	MAX CSI (LC)
I- D	0 / 349	0.08 (1)
I- E	-123 / 0	0.07 (1)
C- I	-123 / 0	0.07 (1)
J- C	-630 / 0	0.34 (1)
E- H	-630 / 0	0.34 (1)

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	23.3	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.4	PSF
TOTAL LOAD		=	36.7	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 , NBC-2019AE
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(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 (0.43")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.01")
ALLOWABLE DEFL.(TL)= L/360 (0.43")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.04")

CSI: TC=0.14/1.00 (E-F:1) , BC=0.25/1.00 (H-I:4) , WB=0.34/1.00 (E-H:1) , SSI=0.10/1.00 (H-I:4)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.45 (C) (INPUT = 0.90)
JSI METAL= 0.15 (C) (INPUT = 0.95)

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416622

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
439988	T18S	3	1	ROYAL PINE HOMES TRUSS DESC.	

Tamarack Roof Truss, Burlington

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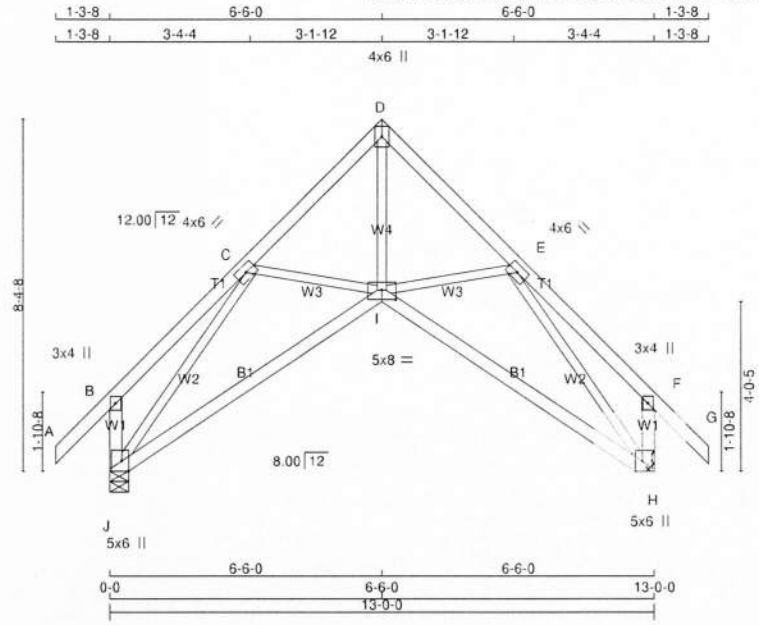

TOTAL WEIGHT = 3 X 65 = 194 lb

LUMBER
N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
A - D	2x4	DRY	No.2	SPF
D - G	2x4	DRY	No.2	SPF
J - B	2x4	DRY	No.2	SPF
H - F	2x4	DRY	No.2	SPF
J - I	2x4	DRY	No.2	SPF
I - 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	TMV+p	MT20	3.0	4.0		
C	TMWW-t	MT20	4.0	6.0		
D	TTW+p	MT20	4.0	6.0		
E	TMWW-t	MT20	4.0	6.0		
F	TMV+p	MT20	3.0	4.0		
H	BMVW1+p	MT20	5.0	6.0	Edge	2.00
I	BBWWW-p	MT20	5.0	8.0	2.75	4.00
J	BMVW1+p	MT20	5.0	6.0	Edge	2.00

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 VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
J	790	0	790	0	0	5-8	1-8
H	790	0	790	0	0	MECHANICAL	

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

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
J	559	368 / 0	0 / 0	0 / 0	0 / 0	191 / 0	0 / 0
H	559	368 / 0	0 / 0	0 / 0	0 / 0	191 / 0	0 / 0

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

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

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

LOADING
TOTAL LOAD CASES: (4)

CHORDS

MEMB. FR-TO	MAX. FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 CSI (LC)	MAX UNBRAC LENGTH
A- B	0 / 42	-84.9	-84.9	0.12 (1)	10.00
B- C	0 / 19	-84.9	-84.9	0.12 (1)	10.00
C- D	-798 / 0	-84.9	-84.9	0.10 (1)	6.25
D- E	-798 / 0	-84.9	-84.9	0.10 (1)	6.25
E- F	0 / 19	-84.9	-84.9	0.12 (1)	10.00
F- G	0 / 42	-84.9	-84.9	0.12 (1)	10.00
J- B	-229 / 0	0.0	0.0	0.03 (1)	7.81
H- F	-229 / 0	0.0	0.0	0.03 (1)	7.81
J- I	0 / 679	-18.5	-18.5	0.28 (4)	10.00
I- H	0 / 679	-18.5	-18.5	0.28 (4)	10.00

WEBS

MEMB. FR-TO	MAX. FORCE (LBS)	MAX CSI (LC)
I- D	0 / 880	0.20 (1)
I- E	-15 / 27	0.01 (4)
C- I	-15 / 27	0.01 (4)
J- C	-1044 / 0	0.60 (1)
E- H	-1044 / 0	0.60 (1)

[M][F]

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	23.3	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.4	PSF
TOTAL LOAD		=	36.7	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 , NBC-2019AE
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(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 (0.43")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.03")
ALLOWABLE DEFL.(TL)= L/360 (0.43")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.13")

CSI: TC=0.12/1.00 (E-F:1) , BC=0.28/1.00 (H-I:4) , WB=0.60/1.00 (E-H:1) , SSI=0.09/1.00 (E-F:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

AUTOSOLVE HEELS OFF

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.73 (H) (INPUT = 0.90)
JSI METAL= 0.37 (J) (INPUT = 0.95)

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416623

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
439988	T19	2	1	ROYAL PINE HOMES TRUSS DESC.	

Tamarack Roof Truss, Burlington

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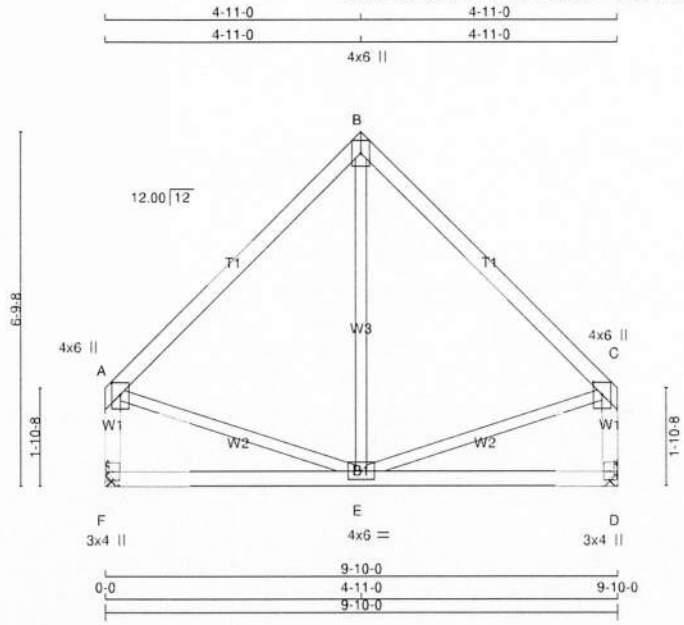

TOTAL WEIGHT = 2 X 44 = 88 lb

[M][F]

LUMBER

N. L. G. A. RULES

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

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
A	TMVW+p	MT20	4.0	6.0	2.75	2.00
B	TTW+p	MT20	4.0	6.0		
C	TMVW+p	MT20	4.0	6.0	2.75	2.00
D	BMV1+p	MT20	3.0	4.0		
E	BMWWW-t	MT20	4.0	6.0		
F	BMV1+p	MT20	3.0	4.0		

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
F	508	0	508	0	0	MECHANICAL	
D	508	0	508	0	0	MECHANICAL	

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

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
F	361	229 / 0	0 / 0	0 / 0	0 / 0	132 / 0	0 / 0
D	361	229 / 0	0 / 0	0 / 0	0 / 0	132 / 0	0 / 0

BRACING

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

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 MAX CSI (LC)	MAX. UNBRAC LENGTH
A- B	-286 / 0	-84.9	-84.9	0.26 (1)	6.25
B- C	-286 / 0	-84.9	-84.9	0.26 (1)	6.25
F- A	-473 / 0	0.0	0.0	0.05 (1)	7.81
D- C	-473 / 0	0.0	0.0	0.05 (1)	7.81
F- E	0 / 0	-18.5	-18.5	0.13 (4)	10.00
E- D	0 / 0	-18.5	-18.5	0.13 (4)	10.00

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
E- B	-13 / 77	0.03 (4)
A- E	0 / 212	0.05 (1)
E- C	0 / 212	0.05 (1)

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	23.3	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.4	PSF
TOTAL LOAD		=	36.7	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 , NBC-2019AE
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(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 (0.33")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")
ALLOWABLE DEFL.(TL)= L/360 (0.33")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.01")

CSI: TC=0.26/1.00 (B-C:1) , BC=0.13/1.00 (E-F:4) , WB=0.05/1.00 (A-E:1) , SSI=0.12/1.00 (B-C:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.33 (E) (INPUT = 0.90)
JSI METAL= 0.16 (C) (INPUT = 0.95)

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416624

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
439988	T19S	3	1	ROYAL PINE HOMES TRUSS DESC.	

Tamarack Roof Truss, Burlington

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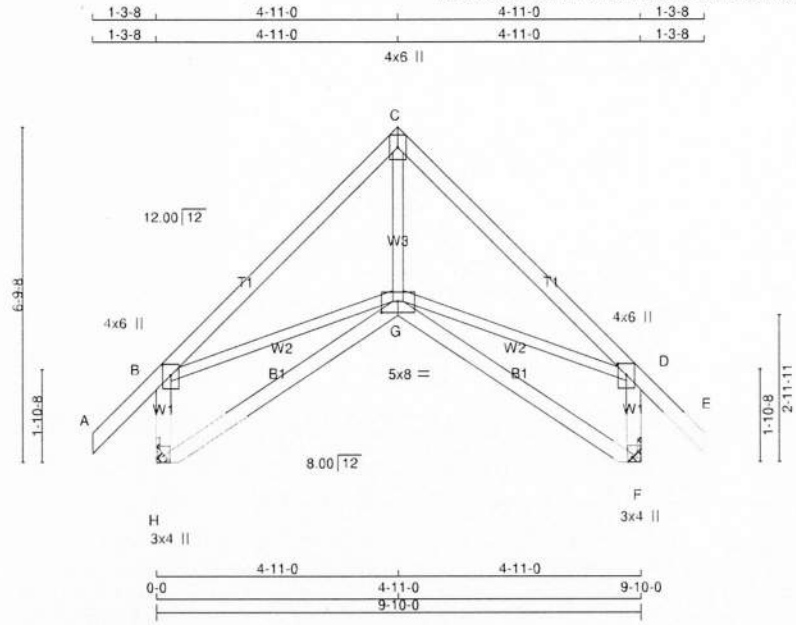

TOTAL WEIGHT = 3 X 49 = 146 lb
[M][F]

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 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	2.75	2.00
C	TTW+p	MT20	4.0	6.0		
D	TMVW+p	MT20	4.0	6.0	2.75	2.00
F	BMV1+p	MT20	3.0	4.0	Edge	
G	BBWWW+p	MT20	5.0	8.0	2.75	4.00
H	BMV1+p	MT20	3.0	4.0	Edge	

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

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
H	627	0	627	0	0	MECHANICAL	
F	627	0	627	0	0	MECHANICAL	

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

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
H	442	294 / 0	0 / 0	0 / 0	0 / 0	149 / 0	0 / 0
F	442	294 / 0	0 / 0	0 / 0	0 / 0	149 / 0	0 / 0

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

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

LOADING
TOTAL LOAD CASES: (4)

CHORDS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD LC1 (PLF) FROM	TO	MAX CSI (LC)	MAX. UNBRAC LENGTH
A- B	0 / 42	-84.9	-84.9	0.12 (1)	10.00
B- C	-514 / 0	-84.9	-84.9	0.27 (1)	6.25
C- D	-514 / 0	-84.9	-84.9	0.27 (1)	6.25
D- E	0 / 42	-84.9	-84.9	0.12 (1)	10.00
H- B	-581 / 0	0.0	0.0	0.07 (1)	7.81
F- D	-581 / 0	0.0	0.0	0.07 (1)	7.81
H- G	0 / 0	-18.5	-18.5	0.13 (4)	10.00
G- F	0 / 0	-18.5	-18.5	0.13 (4)	10.00

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
G- C	0 / 310	0.07 (1)
B- G	0 / 379	0.09 (1)
G- D	0 / 379	0.09 (1)

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	23.3	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.4	PSF
TOTAL LOAD		=	36.7	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 , NBC-2019AE
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(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 (0.33")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.01")
ALLOWABLE DEFL.(TL)= L/360 (0.33")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.04")

CSI: TC=0.27/1.00 (C-D:1) , BC=0.13/1.00 (G-H:4) , WB=0.09/1.00 (D-G:1) , SSI=0.12/1.00 (C-D:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

AUTOSOLVE HEELS OFF

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.42 (D) (INPUT = 0.90)
JSI METAL= 0.28 (D) (INPUT = 0.95)

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416625

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
439988	T20	1	2	ROYAL PINE HOMES TRUSS DESC.	

Tamarack Roof Truss, Burlington

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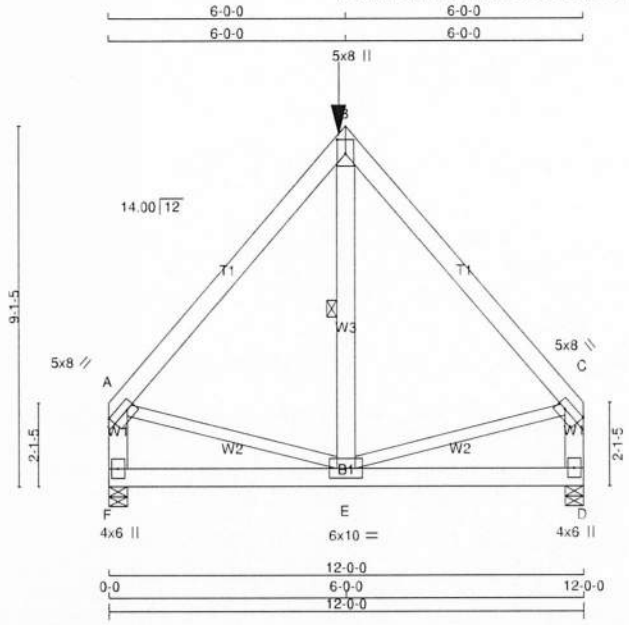

TOTAL WEIGHT = 2 X 89 = 177 lb

[M]

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
A - B	2x6	DRY	No.2	SPF
B - C	2x6	DRY	No.2	SPF
F - A	2x6	DRY	No.2	SPF
D - C	2x6	DRY	No.2	SPF
F - D	2x6	DRY	No.2	SPF
ALL WEBS EXCEPT	2x6	DRY	No.2	SPF
A - E	2x4	DRY	No.2	SPF
E - C	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- B	2	12	SIDE(122.0)
B- C	2	12	SIDE(61.0)
F- A	2	12	TOP
D- C	2	12	TOP
BOTTOM CHORDS : (0.122"X3") SPIRAL NAILS			
F- D	2	12	SIDE(9.2)
WEBS : (0.122"X3") SPIRAL NAILS			
2x4	1	6	
E- B	2	6	SIDE(16.2)

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.

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416626

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
F	1580	0	1580	0	0	5-8	1-8
D	1580	0	1580	0	0	5-8	1-8

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
F	1125	699 / 0	0 / 0	0 / 0	0 / 0	426 / 0	0 / 0
D	1125	699 / 0	0 / 0	0 / 0	0 / 0	426 / 0	0 / 0

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

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

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 MAX CSI (LC)	MAX. UNBRAC LENGTH	WEBS MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
A- B	-1303 / 0	-84.9	-84.9	0.15 (1)	6.25	E- B	-58 / 277	0.03 (4)
B- C	-1303 / 0	-84.9	-84.9	0.15 (1)	6.25	A- E	0 / 875	0.08 (1)
F- A	-1460 / 0	0.0	0.0	0.06 (1)	7.81	E- C	0 / 875	0.08 (1)
D- C	-1460 / 0	0.0	0.0	0.06 (1)	7.81			
F- E	0 / 0	-51.3	-51.3	0.14 (4)	10.00			
E- D	0 / 0	-51.3	-51.3	0.14 (4)	10.00			

SPECIFIED CONCENTRATED LOADS (LBS)

JT	LOC.	LC1	MAX-	MAX+	FACE	DIR.	TYPE	HEEL	CONN.
B	6-0-0	-527	-527	---	FRONT	VERT	TOTAL	---	C1
B	6-0-0	-527	-527	---	BACK	VERT	TOTAL	---	C1

CONNECTION REQUIREMENTS

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

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	23.3	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.4	PSF
TOTAL LOAD		=	36.7	PSF

SPACING = 24.0 IN. C/C

GIRDER TYPE: CPrimeHip
SIDE SETBACK = 6-0-0
END SETBACK = 6-0-0
END WALL WIDTH = 5-8
CORNER FRAMING TYPE: CONVENTIONAL
END JACK TYPE: CONVENTIONAL
APPLIED TO FRONT SIDE
- ADDT'L LOADS BASED ON 55 % OF GSL.

GIRDER TYPE: CPrimeHip
SIDE SETBACK = 6-0-0
END SETBACK = 6-0-0
END WALL WIDTH = 5-8
CORNER FRAMING TYPE: CONVENTIONAL
END JACK TYPE: CONVENTIONAL
APPLIED TO BACK SIDE
- ADDT'L LOADS BASED ON 55 % OF GSL.

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

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

(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 (0.40")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")
ALLOWABLE DEFL.(TL)= L/360 (0.40")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.01")

CSI: TC=0.15/1.00 (A-B:1) , BC=0.14/1.00 (E-F:4) , WB=0.08/1.00 (A-E:1) , SSI=0.11/1.00 (E-F:4)

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

CONTINUED ON PAGE 2

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
439988	T20	1	2	ROYAL PINE HOMES TRUSS DESC.	

Tamarack Roof Truss, Burlington

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
A	TMVW-t	MT20	5.0	8.0	Edge	5.50
B	TTW+p	MT20	5.0	8.0	4.25	2.50
C	TMVW-t	MT20	5.0	8.0	Edge	5.50
D	BMV1+p	MT20	4.0	6.0		
E	BMWWW-t	MT20	6.0	10.0		
F	BMV1+p	MT20	4.0	6.0		

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

JSI GRIP= 0.23 (E) (INPUT = 0.90)
JSI METAL= 0.13 (A) (INPUT = 0.95)

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416626

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
439988	T21	1	2	ROYAL PINE HOMES TRUSS DESC.	

Tamarack Roof Truss, Burlington

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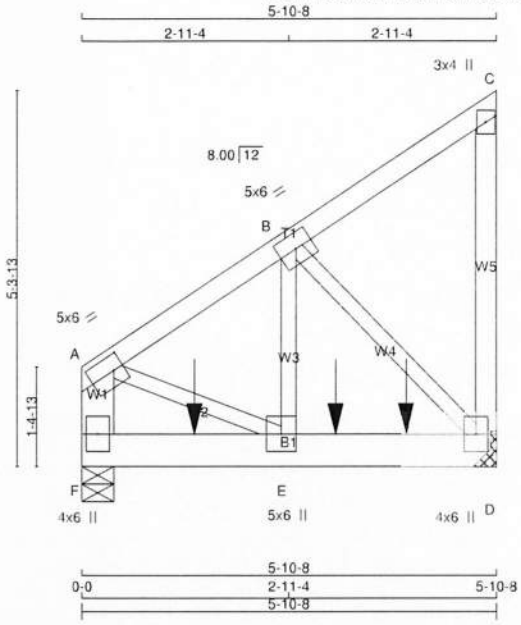

TOTAL WEIGHT = 2 X 33 = 65 lb
[M]

LUMBER
N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
F - A	2x6	DRY	No.2	SPF
A - C	2x4	DRY	No.2	SPF
D - C	2x4	DRY	No.2	SPF
F - D	2x6	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	2	12	TOP
A- C	1	12	TOP
C- D	1	12	TOP
BOTTOM CHORDS : (0.122"X3") SPIRAL NAILS			
F- D	2	12	SIDE(0.0)
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
A	TMVW-t	MT20	5.0	6.0	2.50	1.75
B	TMWW-t	MT20	5.0	6.0		
C	TMV+p	MT20	3.0	4.0		
D	BMVW1+p	MT20	4.0	6.0		

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416627

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG	REQRD BRG
F	1772	0	1772	0	0	5-8	1-8
D	2148	0	2148	0	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
F	1253	825 / 0	0 / 0	0 / 0	0 / 0	428 / 0	0 / 0
D	1518	1001 / 0	0 / 0	0 / 0	0 / 0	518 / 0	0 / 0

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

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

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

LOADING
TOTAL LOAD CASES: (4)

CHORDS

MEMB. FR-TO	MAX. FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 CSI (LC)	MAX UNBRAC LENGTH
F- A	-1464 / 0	0.0	0.0	0.05 (1)	7.81
A- B	-1614 / 0	-84.9	-84.9	0.06 (1)	6.25
B- C	-12 / 0	-84.9	-84.9	0.05 (1)	6.25
D- C	-102 / 0	0.0	0.0	0.02 (1)	7.81
F- G	0 / 0	-18.5	-18.5	0.24 (1)	10.00
G- E	0 / 0	-18.5	-18.5	0.24 (1)	10.00
E- H	0 / 1353	-18.5	-18.5	0.40 (1)	10.00
H- I	0 / 1353	-18.5	-18.5	0.40 (1)	10.00
I- D	0 / 1353	-18.5	-18.5	0.40 (1)	10.00

WEBS

MEMB. FR-TO	MAX. FORCE (LBS)	MAX CSI (LC)
A- E	0 / 1429	0.18 (1)
E- B	0 / 1970	0.24 (1)
B- D	-1920 / 0	0.27 (1)

SPECIFIED CONCENTRATED LOADS (LBS)

JT	LOC.	LC1	MAX-	MAX+	FACE	DIR.	TYPE	HEEL	CONN.
G	1-7-4	-780	-780	---	BACK	VERT	TOTAL	---	C1
H	3-7-4	-780	-780	---	BACK	VERT	TOTAL	---	C1
I	4-7-4	-780	-780	---	BACK	VERT	TOTAL	---	C1

CONNECTION REQUIREMENTS

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

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	23.3	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.4	PSF
TOTAL LOAD		=	36.7	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 , NBC-2019AE
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(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 (0.01")
ALLOWABLE DEFL.(TL)= L/360 (0.20")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.02")

CSI: TC=0.06/1.00 (A-B:1) , BC=0.40/1.00 (D-E:1) , WB=0.27/1.00 (B-D:1) , SSI=0.52/1.00 (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) (PSI) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.67 (B) (INPUT = 0.90)
JSI METAL= 0.30 (D) (INPUT = 0.95)

CONTINUED ON PAGE 2

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
E	BMWW+t	MT20	5.0	6.0		
F	BMV1+p	MT20	4.0	6.0		

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416627

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
439988	T21Z	1	2	ROYAL PINE HOMES TRUSS DESC.	

Tamarack Roof Truss, Burlington

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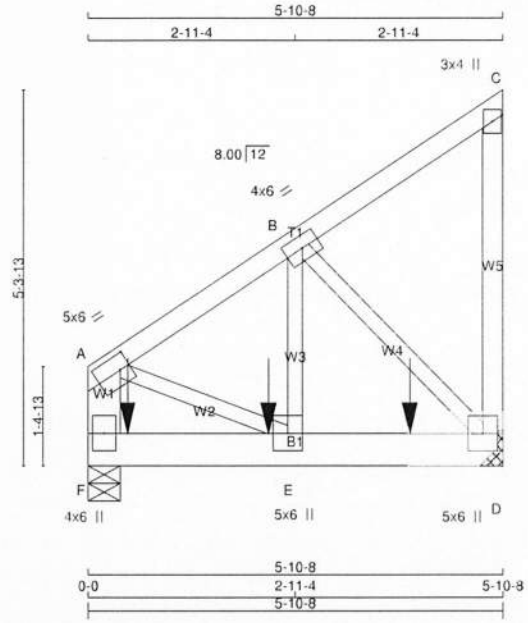

TOTAL WEIGHT = 2 X 33 = 65 lb [M]

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
F - A	2x6	DRY	No.2	SPF
A - C	2x4	DRY	No.2	SPF
D - C	2x4	DRY	No.2	SPF
F - D	2x6	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	2	2	SIDE(19.3)
A- C	1	12	TOP
C- D	1	12	TOP
BOTTOM CHORDS : (0.122"X3") SPIRAL NAILS			
F- D	2	12	SIDE(183.1)
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
A	TMVW-t	MT20	5.0	6.0	2.50	1.75
B	TMWW-t	MT20	4.0	6.0		
C	TMV+p	MT20	3.0	4.0		
D	BMVW1+p	MT20	5.0	6.0		

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416628

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG	REQRD BRG
F	1613	0	1613	0	0	IN-SX	IN-SX
D	1314	0	1314	0	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
F	1138	759 / 0	0 / 0	0 / 0	0 / 0	380 / 0	0 / 0
D	927	618 / 0	0 / 0	0 / 0	0 / 0	310 / 0	0 / 0

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

BRACING

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

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 MAX CSI (LC)	MAX. UNBRAC LENGTH
F- A	-965 / 0	0.0	0.0	0.03 (1)	7.81
A- B	-1020 / 0	-84.9	-84.9	0.06 (1)	6.25
B- C	-14 / 0	-84.9	-84.9	0.06 (1)	6.25
D- C	-99 / 0	0.0	0.0	0.02 (1)	7.81
F- G	0 / 0	-18.5	-18.5	0.13 (1)	10.00
G- H	0 / 0	-18.5	-18.5	0.13 (1)	10.00
H- E	0 / 0	-18.5	-18.5	0.13 (1)	10.00
E- I	0 / 861	-18.5	-18.5	0.22 (1)	10.00
I- D	0 / 861	-18.5	-18.5	0.22 (1)	10.00

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
A- E	0 / 909	0.11 (1)
E- B	0 / 1139	0.14 (1)
B- D	-1221 / 0	0.17 (1)

SPECIFIED CONCENTRATED LOADS (LBS)

JT	LOC.	LC1	MAX-	MAX+	FACE	DIR.	TYPE	HEEL	CONN.
G	6-12	-547	-547	---	BACK	VERT	TOTAL	---	C1
H	2-6-12	-544	-544	---	BACK	VERT	TOTAL	---	C1
I	4-6-12	-544	-544	---	BACK	VERT	TOTAL	---	C1

CONNECTION REQUIREMENTS

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

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	23.3	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.4	PSF
TOTAL LOAD		=	36.7	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 , NBC-2019AE
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(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 (0.01")
ALLOWABLE DEFL.(TL)= L/360 (0.20")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.01")

CSI: TC=0.06/1.00 (A-B:1) , BC=0.22/1.00 (D-E:1) , WB=0.17/1.00 (B-D:1) , SSI=0.32/1.00 (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) (PSI) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.48 (B) (INPUT = 0.90)
JSI METAL = 0.16 (D) (INPUT = 0.95)

CONTINUED ON PAGE 2

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC. ROYAL PINE HOMES	DRWG NO.
439988	T21Z	1	2	TRUSS DESC.	

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
E	BMWW+t	MT20	5.0	6.0		
F	BMV1+p	MT20	4.0	6.0		

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416628

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
439988	T21Z1	1	2	ROYAL PINE HOMES TRUSS DESC.	

Tamarack Roof Truss, Burlington

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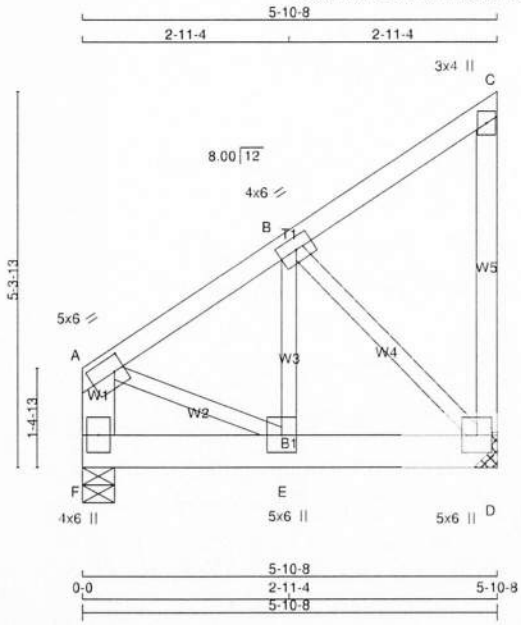

TOTAL WEIGHT = 2 X 33 = 65 lb [M]

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
F - A	2x6	DRY	No.2	SPF
A - C	2x4	DRY	No.2	SPF
D - C	2x4	DRY	No.2	SPF
F - D	2x6	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	2	12	TOP
A- C	1	12	SIDE(115.1)
C- D	1	12	TOP
BOTTOM CHORDS : (0.122"X3") SPIRAL NAILS			
F- D	2	12	TOP
WEBS : (0.122"X3") SPIRAL NAILS			
2x3	1	6	

NAILS TO BE DRIVEN FROM ONE SIDE ONLY.

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

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

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
A	TMVW-t	MT20	5.0	6.0	2.50	1.75
B	TMWW-t	MT20	4.0	6.0		
C	TMV+p	MT20	3.0	4.0		
D	BMVW1+p	MT20	5.0	6.0		
E	BMWW+t	MT20	5.0	6.0		
F	BMV1+p	MT20	4.0	6.0		

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416629

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
F	1116	0	1116	0	0	5-8	1-8
D	1116	0	1116	0	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
F	793	503 / 0	0 / 0	0 / 0	0 / 0	289 / 0	0 / 0
D	793	503 / 0	0 / 0	0 / 0	0 / 0	289 / 0	0 / 0

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

BRACING

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

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 CSI (LC)	MAX UNBRAC LENGTH
F- A	-1072 / 0	0.0	0.0	0.04 (1)	7.81
A- B	-729 / 0	-361.6	-361.6	0.29 (1)	6.25
B- C	-71 / 0	-361.6	-361.6	0.28 (1)	6.25
D- C	-403 / 0	0.0	0.0	0.09 (1)	7.81
F- E	0 / 0	-18.5	-18.5	0.02 (1)	10.00
E- D	0 / 666	-18.5	-18.5	0.06 (1)	10.00

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
A- E	0 / 703	0.09 (1)
E- B	-205 / 0	0.02 (1)
B- D	-944 / 0	0.13 (1)

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	23.3	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.4	PSF
TOTAL LOAD		=	36.7	PSF

SPACING = 24.0 IN. C/C

GIRDER TYPE: CStdGirder
START DISTANCE = 0-0
START SPAN CARRIED = 12-10-0
END DISTANCE = 5-10-8
END SPAN CARRIED = 12-10-0
END WALL WIDTH = 1-8
APPLIED TO FRONT SIDE OF TOP CHORD.
- ADDT'L LOADS BASED ON 55 % OF GSL.

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

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

(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 (0.01")

CSI: TC=0.29/1.00 (A-B:1) , BC=0.06/1.00 (D-E:1) , WB=0.13/1.00 (B-D:1) , SSI=0.24/1.00 (B-C:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.30 (E) (INPUT = 0.90)
JSI METAL= 0.12 (D) (INPUT = 0.95)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
439988	T22	2	2	ROYAL PINE HOMES TRUSS DESC.	

Tamarack Roof Truss, Burlington

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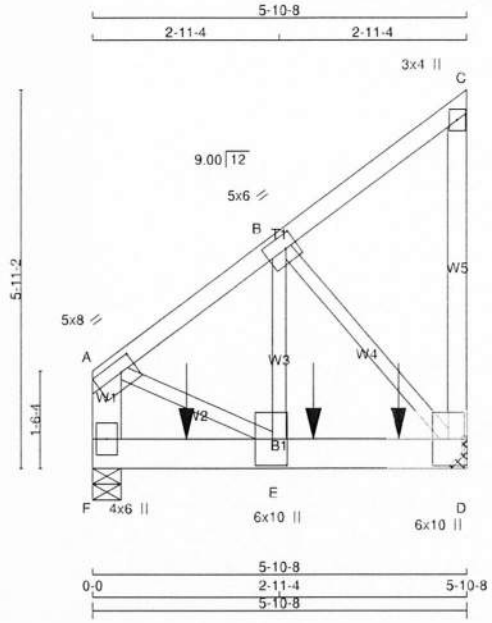

TOTAL WEIGHT = 4 X 35 = 138 lb

[M]

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
F - A	2x6	DRY	No.2	SPF
A - C	2x4	DRY	No.2	SPF
D - C	2x4	DRY	No.2	SPF
F - D	2x6	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	2	12	TOP
A- C	1	12	TOP
C- D	1	12	TOP
BOTTOM CHORDS : (0.122"X3") SPIRAL NAILS			
F- D	2	12	SIDE(0.0)
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
A	TMWW-t	MT20	5.0	8.0	2.25	3.00
B	TMWW-t	MT20	5.0	6.0	2.50	2.25
C	TMV+p	MT20	3.0	4.0		
D	BMVW1+p	MT20	6.0	10.0		

Structural component only
DWG# T-2416630

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG	REQRD BRG
F	1047	0	1047	0	0	IN-SX	IN-SX
D	1148	0	1148	0	0	5-8 MECHANICAL	1-8

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
F	739	492 / 0	0 / 0	0 / 0	0 / 0	248 / 0	0 / 0
D	811	534 / 0	0 / 0	0 / 0	0 / 0	277 / 0	0 / 0

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

BRACING

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

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 MAX CSI (LC)	MAX. UNBRAC LENGTH
F- A	-817 / 0	0.0	0.0	0.03 (1)	7.81
A- B	-781 / 0	-84.9	-84.9	0.06 (1)	6.25
B- C	-16 / 0	-84.9	-84.9	0.06 (1)	6.25
D- C	-97 / 0	0.0	0.0	0.03 (1)	7.81
F- G	0 / 0	-18.5	-18.5	0.12 (1)	10.00
G- E	0 / 0	-18.5	-18.5	0.12 (1)	10.00
E- H	0 / 638	-18.5	-18.5	0.17 (1)	10.00
H- I	0 / 638	-18.5	-18.5	0.17 (1)	10.00
I- D	0 / 638	-18.5	-18.5	0.17 (1)	10.00

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
A- E	0 / 682	0.08 (1)
E- B	0 / 894	0.11 (1)
B- D	-962 / 0	0.15 (1)

SPECIFIED CONCENTRATED LOADS (LBS)

JT	LOC.	LC1	MAX-	MAX+	FACE	DIR.	TYPE	HEEL	CONN.
G	1-5-12	-428	-428	---	FRONT	VERT	TOTAL	---	C1
H	3-5-12	-346	-346	---	FRONT	VERT	TOTAL	---	C1
I	4-9-12	-346	-346	---	FRONT	VERT	TOTAL	---	C1

CONNECTION REQUIREMENTS

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

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	23.3	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.4	PSF
TOTAL LOAD		=	36.7	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 , NBC-2019AE
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(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 (0.01")
ALLOWABLE DEFL.(TL)= L/360 (0.20")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.01")

CSI: TC=0.06/1.00 (A-B:1) , BC=0.17/1.00 (D-E:1) , WB=0.15/1.00 (B-D:1) , SSI=0.23/1.00 (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) (PSI) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.22 (B) (INPUT = 0.90)
JSI METAL= 0.10 (E) (INPUT = 0.95)

CONTINUED ON PAGE 2

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
E	BMWW+t	MT20	6.0	10.0	5.00	2.75
F	BMV1+p	MT20	4.0	6.0		

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416630

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
439988	T22Z	1	2	ROYAL PINE HOMES TRUSS DESC.	

Tamarack Roof Truss, Burlington

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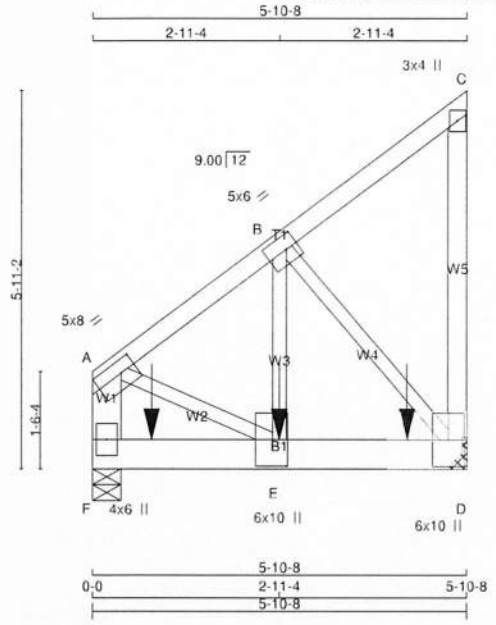

TOTAL WEIGHT = 2 X 35 = 69 lb

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
F - A	2x6	DRY	No.2	SPF
A - C	2x4	DRY	No.2	SPF
D - C	2x4	DRY	No.2	SPF
F - D	2x6	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	2	12	TOP
A- C	1	12	TOP
C- D	1	12	TOP
BOTTOM CHORDS : (0.122"X3") SPIRAL NAILS			
F- D	2	12	SIDE(183.1)
WEBS : (0.122"X3") SPIRAL NAILS			
B- E	1	5	SIDE(245.8)
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
A	TMVW-t	MT20	5.0	8.0	2.25	3.00
B	TMWW-t	MT20	5.0	6.0	2.50	2.25
C	TMV+p	MT20	3.0	4.0		

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416631

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG	REQRD BRG
F	2770	0	2770	0	0	IN-SX	IN-SX
D	2770	0	2770	0	0	MECHANICAL	

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

UNFACTORED REACTIONS

MAX./MIN. COMPONENT REACTIONS

JT	1ST LCASE COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
F	1964	1260 / 0	0 / 0	0 / 0	0 / 0	703 / 0	0 / 0
D	1964	1261 / 0	0 / 0	0 / 0	0 / 0	704 / 0	0 / 0

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

BRACING

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

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 CSI (LC)	MAX. UNBRAC LENGTH
F- A	-1775 / 0	0.0	0.0	0.06 (1)	7.81
A- B	-1841 / 0	-84.9	-84.9	0.06 (1)	6.25
B- C	-13 / 0	-84.9	-84.9	0.05 (1)	6.25
D- C	-102 / 0	0.0	0.0	0.03 (1)	7.81
F- G	0 / 0	-18.5	-18.5	0.34 (1)	10.00
G- E	0 / 0	-18.5	-18.5	0.34 (1)	10.00
E- H	0 / 1483	-18.5	-18.5	0.44 (1)	10.00
H- D	0 / 1483	-18.5	-18.5	0.44 (1)	10.00

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
A- E	0 / 1586	0.20 (1)
E- B	0 / 2492	0.31 (1)
B- D	-2236 / 0	0.35 (1)

SPECIFIED CONCENTRATED LOADS (LBS)

JT	LOC.	LC1	MAX-	MAX+	FACE	DIR.	TYPE	HEEL	CONN.
E	2-11-4	-1165	-1165	---	BACK	VERT	TOTAL	---	C1
G	11-4	-1166	-1166	---	BACK	VERT	TOTAL	---	C1
H	4-11-4	-1166	-1166	---	BACK	VERT	TOTAL	---	C1

CONNECTION REQUIREMENTS

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

[M]

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	23.3	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.4	PSF
TOTAL LOAD		=	36.7	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 , NBC-2019AE
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(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 (0.01")
ALLOWABLE DEFL.(TL)= L/360 (0.20")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.02")

CSI: TC=0.06/1.00 (A-F:1) , BC=0.44/1.00 (D-E:1) , WB=0.35/1.00 (B-D:1) , SSI=0.33/1.00 (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) (PSI) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.61 (B) (INPUT = 0.90)
JSI METAL= 0.26 (E) (INPUT = 0.95)

CONTINUED ON PAGE 2

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
D	BMVW1+p	MT20	6.0	10.0		
E	BMWW+t	MT20	6.0	10.0	5.00	2.75
F	BMV1+p	MT20	4.0	6.0		

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07-09-24
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100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416631

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
439988	T23	5	1	ROYAL PINE HOMES TRUSS DESC.	

Tamarack Roof Truss, Burlington

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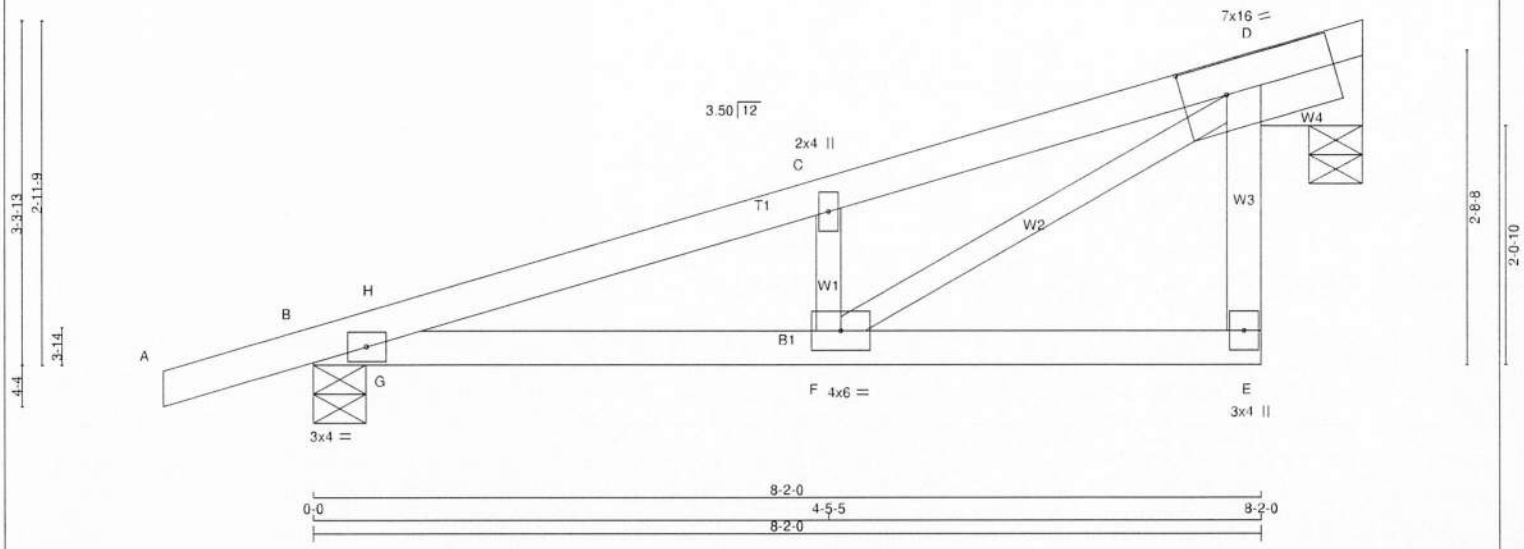

TOTAL WEIGHT = 5 X 30 = 151 lb
[M][F]

LUMBER
N. L. G. A. RULES

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

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMB1-I	MT20	3.0	4.0		
C	TMW+w	MT20	2.0	4.0		
D	TMVWW1-I	MT20	7.0	16.0	3.25	4.50
E	BMV+p	MT20	3.0	4.0		
F	BMWW-I	MT20	4.0	6.0		

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
D	422	0	422	0	0	5-8	1-8
B	535	0	535	0	0	5-8	1-8

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

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
		MAX./MIN. COMPONENT REACTIONS					
D	300	190 / 0	0 / 0	0 / 0	0 / 0	109 / 0	0 / 0
B	378	252 / 0	0 / 0	0 / 0	0 / 0	125 / 0	0 / 0

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

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

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

LOADING
TOTAL LOAD CASES: (4)

CHORDS

MEMB. FR-TO	FORCE (LBS)	VERT. LOAD LC1 FROM (PLF)	TO	MAX CSI (LC)	MAX. UNBRAC LENGTH
A- B	0 / 15	-84.9	-84.9	0.10 (1)	10.00
B- H	-814 / 0	-84.9	-84.9	0.03 (4)	6.25
H- C	-786 / 0	-84.9	-84.9	0.14 (1)	6.25
C- D	-794 / 0	-84.9	-84.9	0.14 (1)	6.25
E- D	0 / 30	0.0	0.0	0.01 (4)	10.00
B- G	0 / 765	-18.5	-18.5	0.23 (1)	10.00
G- F	0 / 765	-18.5	-18.5	0.23 (1)	10.00
F- E	0 / 0	-18.5	-18.5	0.06 (4)	10.00

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
F- C	-386 / 0	0.06 (1)
F- D	0 / 897	0.20 (1)
G- H	-93 / 11	0.00 (1)

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	23.3	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.4	PSF
TOTAL LOAD		=	36.7	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 , NBC-2019AE
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(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 (0.27")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.02")
ALLOWABLE DEFL.(TL)= L/360 (0.27")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.05")

CSI: TC=0.14/1.00 (C-D:1) , BC=0.23/1.00 (F-G:1) , WB=0.20/1.00 (D-F:1) , SSI=0.15/1.00 (C-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) (PSI) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.49 (F) (INPUT = 0.90)
JSI METAL= 0.31 (B) (INPUT = 0.95)

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DWG# T-2416632

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
439988	T24	1	1	ROYAL PINE HOMES TRUSS DESC.	

Tamarack Roof Truss, Burlington

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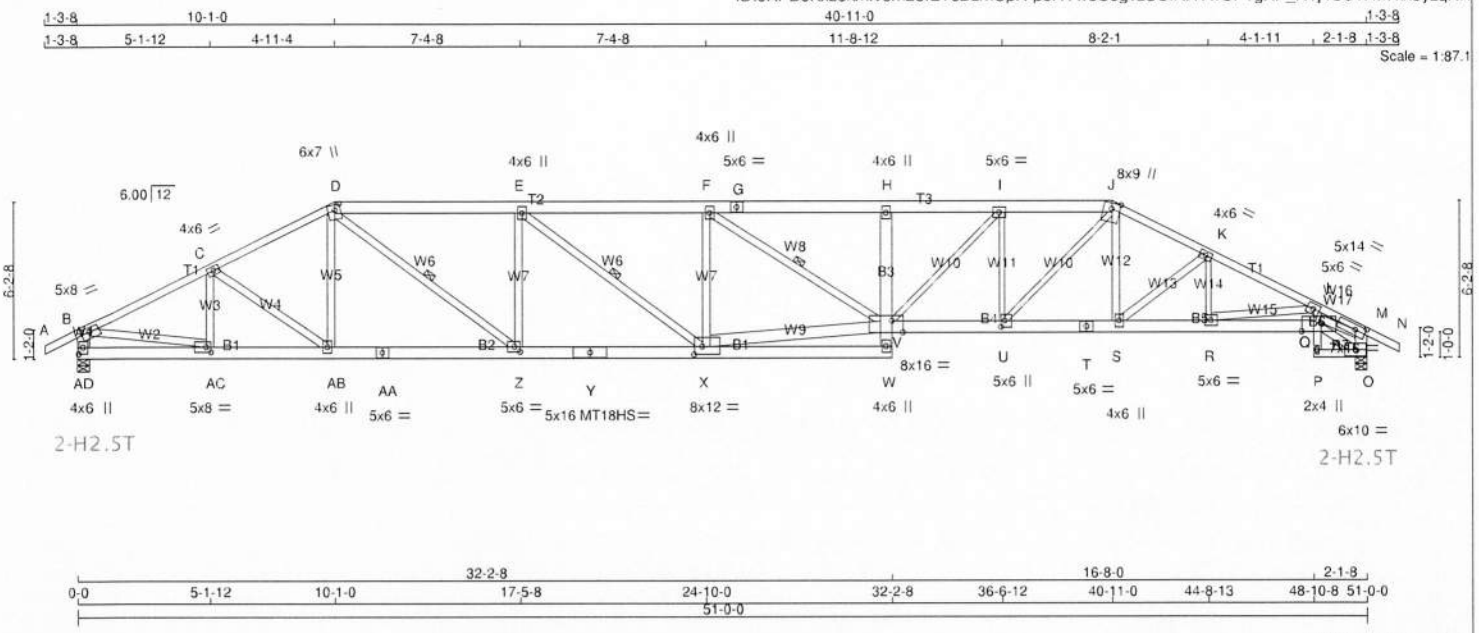

TOTAL WEIGHT = 297 lb

[M]

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
A - D	2x4	DRY	No.2	SPF
D - G	2x6	DRY	2100F 1.8E	SPF
G - J	2x6	DRY	2100F 1.8E	SPF
J - N	2x4	DRY	No.2	SPF
AD- B	2x6	DRY	No.2	SPF
O - M	2x6	DRY	No.2	SPF
AD- AA	2x6	DRY	No.2	SPF
AA- Y	2x6	DRY	No.2	SPF
Y - W	2x6	DRY	No.2	SPF
W - H	2x6	DRY	No.2	SPF
V - T	2x6	DRY	2100F 1.8E	SPF
T - Q	2x6	DRY	2100F 1.8E	SPF
P - L	2x4	DRY	No.2	SPF
P - O	2x4	DRY	No.2	SPF
ALL WEBS	2x4	DRY	No.2	SPF
EXCEPT				
X - V	2x6	DRY	No.2	SPF
Q - M	2x4	DRY	2100F 1.8E	SPF
R - K	2x3	DRY	No.2	SPF
U - J	2x3	DRY	No.2	SPF
V - I	2x3	DRY	No.2	SPF
U - I	2x3	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	3.75
C	TMWW-t	MT20	4.0	6.0		
D	TTWW+m	MT20	6.0	7.0	2.50	2.75
E	TMWW+t	MT20	4.0	6.0		
F	TMWW+t	MT20	4.0	6.0		
G	TS-t	MT20	5.0	6.0		
H	TMV+p	MT20	4.0	6.0		
I	TMWW-t	MT20	5.0	6.0		
J	TTWW+m	MT20	8.0	9.0	Edge	
K	TMWW-t	MT20	4.0	6.0		
L	TMVW-t	MT20	5.0	6.0		
M	TMVW-t	MT20	5.0	14.0	2.50	5.00
O	BMVW1-t	MT20	6.0	10.0		
P	BMV+p	MT20	2.0	4.0		

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100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416633

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
AD	2556	0	2776	-104	-826	5-8	3-8
O	2556	0	2776	0	-826	5-8	3-0

PROVIDE ANCHORAGE AT BEARING JOINT AD FOR 826 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT O FOR 826 LBS FACTORED UPLIFT

PROVIDE FOR 104 LBS FACTORED HORIZONTAL REACTION AT JOINT AD

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
AD	1900	1224 / 0	357 / 0	0 / 0	148 / -815	466 / 0	0 / 0
O	1900	1224 / 0	357 / 0	0 / 0	70 / -815	466 / 0	0 / 0
HORIZONTAL REACTIONS							
AD	---	0 / 0	0 / 0	0 / 0	75 / -75	0 / 0	0 /0

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

BRACING

MAX. UNBRACED TOP CHORD LENGTH = 2.16 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

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

1 LATERAL BRACE(S) AT 1/ 2 LENGTH OF D-Z, E-X, F-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: (18)

CHORDS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1	MAX CSI (LC)	MAX. UNBRAC LENGTH
A- B	0 / 25	-70.1	-70.1	0.11 (2)	10.00	
B- C	-4135 / 1255	-70.1	-70.1	0.69 (2)	2.98	
C- D	-4176 / 1317	-70.1	-70.1	0.67 (2)	2.96	
D- E	-5321 / 1704	-70.1	-70.1	0.22 (2)	4.50	
E- F	-5830 / 1846	-70.1	-70.1	0.24 (3)	4.33	
F- G	-6529 / 2040	-70.1	-70.1	0.24 (3)	4.14	
G- H	-6529 / 2040	-70.1	-70.1	0.24 (3)	4.14	
H- I	-6623 / 2066	-70.1	-70.1	0.15 (3)	4.18	
I- J	-5761 / 1802	-70.1	-70.1	0.13 (3)	4.44	
J- K	-5044 / 1559	-70.1	-70.1	0.58 (3)	2.70	
K- L	-5598 / 1673	-70.1	-70.1	0.74 (3)	2.44	
L- M	-6731 / 1992	-70.1	-70.1	0.62 (3)	2.16	
M- N	0 / 25	-70.1	-70.1	0.11 (3)	10.00	
AD- B	-2692 / 831	0.0	0.0	0.17 (2)	6.36	
O- M	-2556 / 770	0.0	0.0	0.17 (3)	6.48	
AD-AC	-93 / 108	-26.3	-26.3	0.09 (5)	6.25	
AC-AB	-1128 / 3716	-26.3	-26.3	0.51 (2)	6.25	
AB-AA	-1054 / 3722	-26.3	-26.3	0.51 (2)	6.25	
AA- Z	-1054 / 3722	-26.3	-26.3	0.51 (2)	6.25	
Z- Y	-1536 / 5321	-26.3	-26.3	0.70 (2)	6.25	
Y- X	-1536 / 5321	-26.3	-26.3	0.70 (2)	6.25	
X- W	-129 / 446	-26.3	-26.3	0.15 (6)	6.25	
W- V	0 / 100	0.0	0.0	0.31 (3)	10.00	
V- H	-491 / 223	0.0	0.0	0.32 (3)	7.81	
V- U	-1550 / 5761	-26.3	-26.3	0.30 (3)	6.25	
U- T	-1162 / 4492	-26.3	-26.3	0.24 (3)	6.25	
T- S	-1162 / 4492	-26.3	-26.3	0.24 (3)	6.25	
S- R	-1370 / 5031	-26.3	-26.3	0.29 (3)	6.25	
R- Q	-1862 / 6503	-26.3	-26.3	0.36 (3)	6.25	

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
AC- C	-485 / 207	0.07 (2)
C-AB	-23 / 350	0.06 (3)
AB- D	-79 / 228	0.04 (5)
D- Z	-687 / 2267	0.36 (3)
Z- E	-1222 / 474	0.46 (3)
E- X	-254 / 876	0.14 (3)
X- F	-1071 / 408	0.41 (3)
X- V	-1573 / 5464	0.69 (13)
F- V	-229 / 835	0.13 (3)
S- J	-162 / 591	0.09 (3)
B-AC	-1056 / 3758	0.60 (2)
Q- O	-404 / 130	0.04 (3)
Q- M	-1737 / 6039	0.45 (3)
R- K	-31 / 284	0.06 (6)
S- K	-665 / 259	0.16 (3)
R- L	-1495 / 500	0.34 (3)
U- J	-618 / 2071	0.47 (2)
V- I	-443 / 1439	0.32 (2)
U- I	-1429 / 499	0.50 (2)

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	30.1	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	10.5	PSF
	DL	=	7.4	PSF
TOTAL LOAD		=	54.0	PSF

SPACING = 16.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 6.00/12

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2015

THIS DESIGN COMPLIES WITH:
- PART 4 OF BCBC 2018 , NBC-2019AE
- PART 4 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED
- PERCENTAGE OF GROUND SNOW LOAD IS USER-DEFINED.

(80 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 30.1 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.70")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.42")
ALLOWABLE DEFL.(TL)= L/180 (3.40")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.59")

CSI: TC=0.74/1.00 (K-L:3) , BC=0.70/1.00 (X-Z:2) , WB=0.69/1.00 (V-X:13) , SSI=0.39/1.00 (L-Q:3)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 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) (PSI) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873
MT18HS	586	403	2455	1382	3163	3004

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.78 (B) (INPUT = 0.90)
JSI METAL= 0.78 (Q) (INPUT = 0.95)

CONTINUED ON PAGE 2

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
Q	BVMWW-I	MT20	7.0	16.0	4.00	8.75
R	BMWW-t	MT20	5.0	6.0		
S	BMWW+t	MT20	4.0	6.0		
T	BS-t	MT20	5.0	6.0		
U	BMWW+t	MT20	5.0	6.0	3.00	1.75
V	BVMWWW-I	MT20	8.0	16.0	Edge	5.25
W	BMV+p	MT20	4.0	6.0		
X	BMWWW-t	MT20	8.0	12.0	3.75	3.75
Y	BS-t	MT18HS	5.0	16.0		
Z	BMWW-t	MT20	5.0	6.0	2.50	2.50
AA	BS-t	MT20	5.0	6.0		
AB	BMWW+t	MT20	4.0	6.0		
AC	BMWW-t	MT20	5.0	8.0	2.50	2.25
AD	BMV1+p	MT20	4.0	6.0	3.25	2.00

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

LOADING

TOTAL LOAD CASES: (18)

CHORDS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD LC1 (PLF) FROM	TO	MAX CSI (LC)	MAX. UNBRAC LENGTH
P-Q	0 / 33	0.0	0.0	0.53 (3)	10.00
Q-L	-130 / 604	0.0	0.0	0.62 (3)	7.81
P-O	-103 / 354	-26.3	-26.3	0.07 (3)	6.25

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF (9.2) PSF AT (30-0-0) FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE (MAIN WIND FORCE RESISTING SYSTEM).INTERNAL WIND PRESSURE IS BASED ON DESIGN (CATEGORY 2). BUILDING MAY BE LOCATED ON (OPEN TERRAIN), AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST (0-0) FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 5.0 PSF RESPECTIVELY.

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416633

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
439988	T25	1	1	ROYAL PINE HOMES TRUSS DESC.	

Tamarack Roof Truss, Burlington

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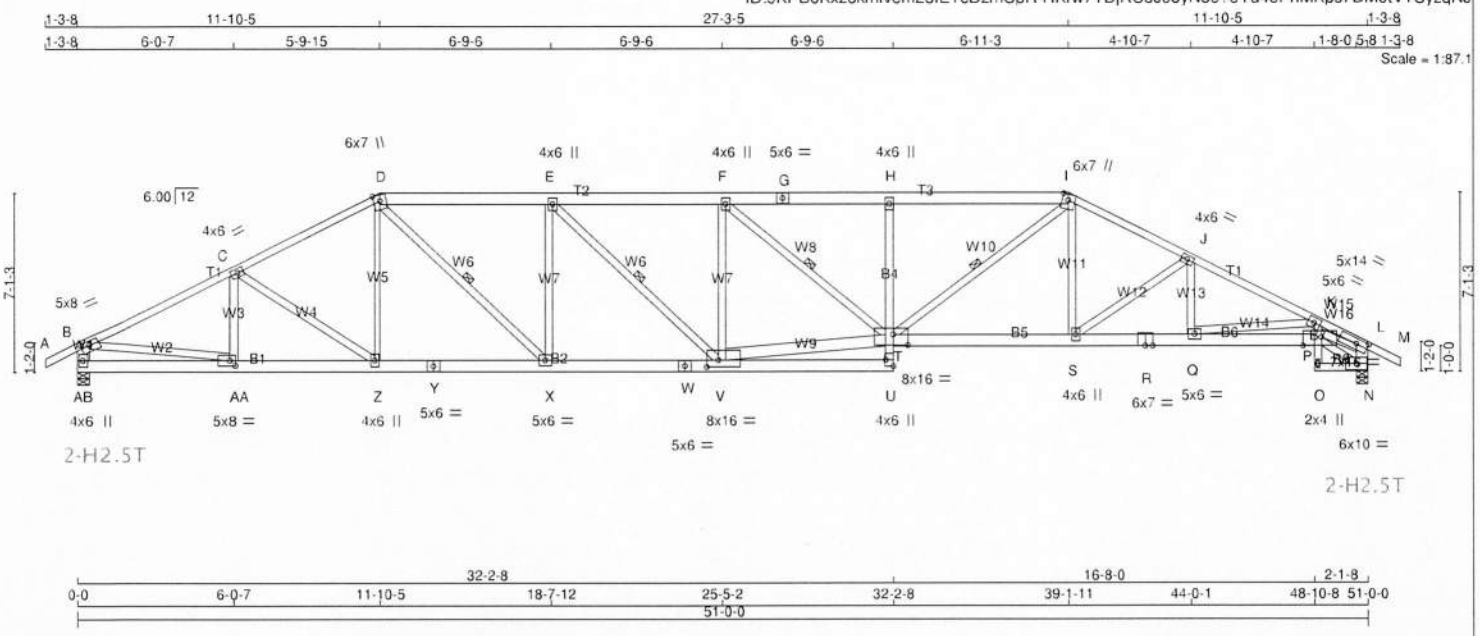

TOTAL WEIGHT = 297 lb

[M]

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
A - D	2x4	DRY	2100F 1.8E	SPF
D - G	2x6	DRY	No.2	SPF
G - I	2x6	DRY	No.2	SPF
I - M	2x4	DRY	2100F 1.8E	SPF
AB- B	2x6	DRY	No.2	SPF
N - L	2x6	DRY	No.2	SPF
AB- Y	2x6	DRY	No.2	SPF
Y - W	2x6	DRY	No.2	SPF
W - U	2x6	DRY	No.2	SPF
U - H	2x4	DRY	No.2	SPF
T - R	2x6	DRY	2100F 1.8E	SPF
R - P	2x6	DRY	2100F 1.8E	SPF
O - K	2x4	DRY	No.2	SPF
O - N	2x4	DRY	No.2	SPF
ALL WEBS	2x4	DRY	No.2	SPF
EXCEPT				
Z - D	2x3	DRY	No.2	SPF
V - T	2x6	DRY	No.2	SPF
P - L	2x4	DRY	2100F 1.8E	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	3.75
C	TMWW-t	MT20	4.0	6.0		
D	TTWW+m	MT20	6.0	7.0	Edge	
E	TMWW+t	MT20	4.0	6.0		
F	TMWW+t	MT20	4.0	6.0		
G	TS-t	MT20	5.0	6.0		
H	TMV+p	MT20	4.0	6.0		
I	TTWW+m	MT20	6.0	7.0	2.75	2.75
J	TMWW-t	MT20	4.0	6.0		
K	TMVW-t	MT20	5.0	6.0		
L	TMVW-t	MT20	5.0	14.0	2.50	5.50
N	BMVW1-t	MT20	6.0	10.0		
O	BMV+p	MT20	2.0	4.0		
P	BVMWW-t	MT20	7.0	16.0	4.00	8.75
Q	BMWW-t	MT20	5.0	6.0		
R	BS-t	MT20	6.0	7.0		
S	BMWW+t	MT20	4.0	6.0		

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416634

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
AB	2556	0	2749	-116	-818	5-8	3-7
N	2556	0	2749	0	-818	5-8	3-0

PROVIDE ANCHORAGE AT BEARING JOINT AB FOR 818 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT N FOR 818 LBS FACTORED UPLIFT

PROVIDE FOR 116 LBS FACTORED HORIZONTAL REACTION AT JOINT AB

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
AB	1900	1206 / 0	357 / 0	0 / 0	143 / -809	466 / 0	0 / 0
N	1900	1206 / 0	357 / 0	0 / 0	58 / -809	466 / 0	0 / 0
HORIZONTAL REACTIONS							
AB	---	0 / 0	0 / 0	0 / 0	83 / -83	0 / 0	0 /0

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

BRACING

MAX. UNBRACED TOP CHORD LENGTH = 3.27 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

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

1 LATERAL BRACE(S) AT 1/ 2 LENGTH OF D-X, E-V, F-T, I-T.

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

LOADING

TOTAL LOAD CASES: (18)

CHORDS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1	MAX CSI (LC)	MAX. UNBRAC LENGTH
A- B	0 / 25	-70.1	-70.1	0.07 (2)	10.00	
B- C	-4183 / 1268	-70.1	-70.1	0.50 (2)	3.89	
C- D	-4017 / 1283	-70.1	-70.1	0.47 (2)	3.97	
D- E	-4657 / 1526	-70.1	-70.1	0.40 (2)	3.75	
E- F	-4931 / 1598	-70.1	-70.1	0.43 (3)	3.64	
F- G	-5493 / 1755	-70.1	-70.1	0.45 (3)	3.45	
G- H	-5493 / 1755	-70.1	-70.1	0.45 (3)	3.45	
H- I	-5509 / 1760	-70.1	-70.1	0.48 (3)	3.42	
I- J	-4732 / 1469	-70.1	-70.1	0.38 (3)	3.77	
J- K	-5439 / 1631	-70.1	-70.1	0.44 (3)	3.51	
K- L	-6726 / 1998	-70.1	-70.1	0.26 (3)	3.27	
L- M	0 / 25	-70.1	-70.1	0.07 (3)	10.00	
AB- B	-2666 / 827	0.0	0.0	0.17 (2)	6.38	
N- L	-2558 / 770	0.0	0.0	0.17 (3)	6.48	
AB-AA	-104 / 123	-26.3	-26.3	0.10 (5)	6.25	
AA- Z	-1148 / 3763	-26.3	-26.3	0.51 (2)	6.25	
Z- Y	-1006 / 3574	-26.3	-26.3	0.49 (2)	6.25	
Y- X	-1006 / 3574	-26.3	-26.3	0.49 (2)	6.25	
X- W	-1334 / 4657	-26.3	-26.3	0.61 (2)	6.25	
W- V	-1334 / 4657	-26.3	-26.3	0.61 (2)	6.25	
V- U	-25 / 89	-26.3	-26.3	0.11 (17)	6.25	
U- T	0 / 93	0.0	0.0	0.13 (3)	10.00	
T- H	-660 / 298	0.0	0.0	0.36 (3)	7.81	
T- S	-1051 / 4207	-26.3	-26.3	0.25 (3)	6.25	
S- R	-1327 / 4893	-26.3	-26.3	0.28 (3)	6.25	
R- Q	-1327 / 4893	-26.3	-26.3	0.28 (3)	6.25	
Q- P	-1847 / 6423	-26.3	-26.3	0.35 (3)	6.25	
O- P	0 / 33	0.0	0.0	0.45 (3)	10.00	
P- K	-132 / 624	0.0	0.0	0.55 (3)	7.81	

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
AA- C	-372 / 187	0.06 (2)
C- Z	-221 / 211	0.14 (2)
Z- D	-67 / 326	0.07 (5)
D- X	-549 / 1804	0.29 (3)
X- E	-1104 / 430	0.60 (3)
E- V	-190 / 662	0.11 (3)
V- F	-988 / 369	0.54 (3)
V- T	-1403 / 4911	0.58 (2)
F- T	-200 / 725	0.12 (3)
T- I	-618 / 1980	0.32 (2)
S- I	-153 / 679	0.11 (3)
S- J	-814 / 330	0.31 (3)
Q- J	-36 / 308	0.05 (6)
Q- K	-1548 / 526	0.47 (3)
B-AA	-1058 / 3794	0.61 (2)
P- N	-345 / 113	0.04 (3)
P- L	-1744 / 6033	0.45 (3)

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	30.1	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	10.5	PSF
	DL	=	7.4	PSF
TOTAL LOAD		=	54.0	PSF

SPACING = 16.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 6.00/12

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2015

THIS DESIGN COMPLIES WITH:
- PART 4 OF BCBC 2018 , NBC-2019AE
- PART 4 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED
- PERCENTAGE OF GROUND SNOW LOAD IS USER-DEFINED.

(80 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 30.1 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.70")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.35")
ALLOWABLE DEFL.(TL)= L/180 (3.40")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.49")

CSI: TC=0.50/1.00 (B-C:2) , BC=0.61/1.00 (V-X:2) , WB=0.61/1.00 (B-AA:2) , SSI=0.33/1.00 (K-P:3)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 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) (PSI) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.79 (I) (INPUT = 0.90)
JSI METAL= 0.79 (W) (INPUT = 0.95)

CONTINUED ON PAGE 2

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
T	BVMWWW-l	MT20	8.0	16.0	5.00	7.00
U	BMV+p	MT20	4.0	6.0	3.00	Edge
V	BMWWW-t	MT20	8.0	16.0	3.25	5.50
W	BS-t	MT20	5.0	6.0		
X	BMWW-t	MT20	5.0	6.0		
Y	BS-t	MT20	5.0	6.0		
Z	BMWW+t	MT20	4.0	6.0		
AA	BMWW-t	MT20	5.0	8.0	2.50	2.50
AB	BMV1+p	MT20	4.0	6.0		

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

LOADING

TOTAL LOAD CASES: (18)

CHORDS					WEBS			
MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD LC1 (PLF) FROM	TO	MAX CSI (LC)	MAX. UNBRAC LENGTH	MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
O- N	-88 / 302	-26.3	-26.3	0.07 (3)	6.25			

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF (9.2) PSF AT (30-0-0) FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE (MAIN WIND FORCE RESISTING SYSTEM).INTERNAL WIND PRESSURE IS BASED ON DESIGN (CATEGORY 2), BUILDING MAY BE LOCATED ON (OPEN TERRAIN), AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST (0-0) FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 5.0 PSF RESPECTIVELY.

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416634

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
439988	T26	1	1	ROYAL PINE HOMES TRUSS DESC.	

Tamarack Roof Truss, Burlington

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Tue Jul 9 11:15:56 2024 Page 1
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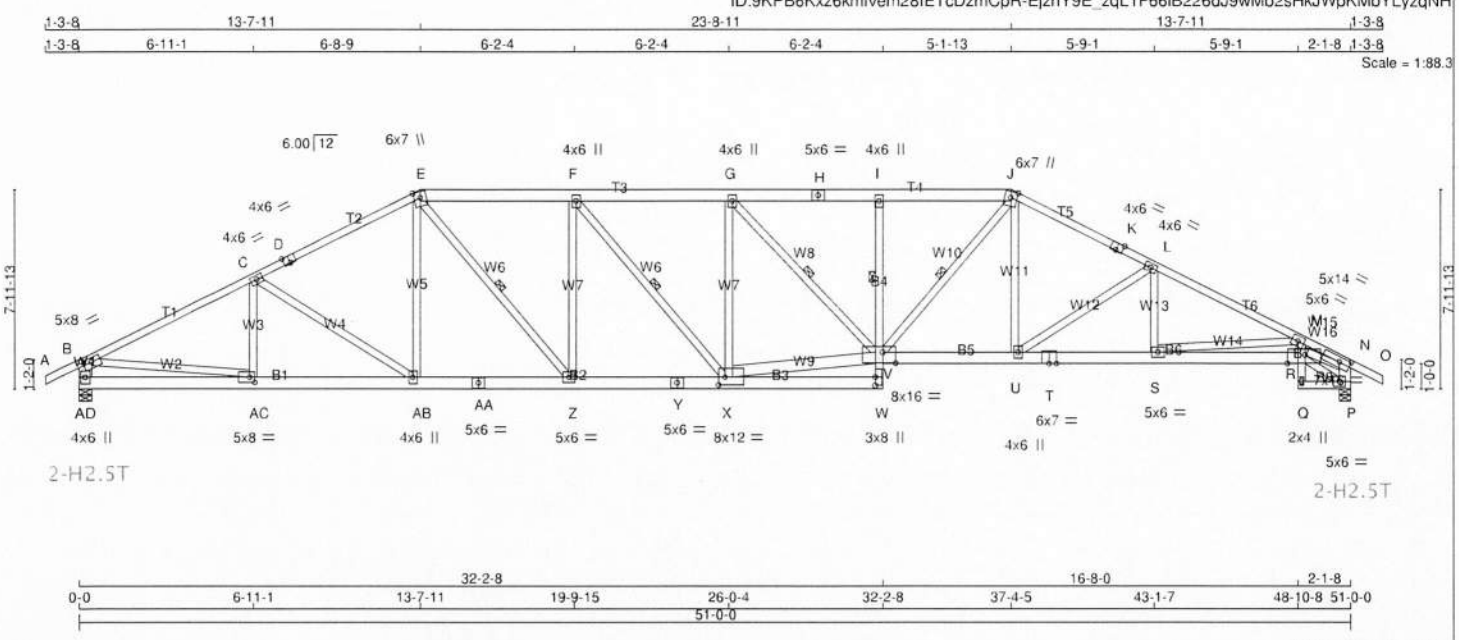

TOTAL WEIGHT = 306 lb

[M]

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
A - D	2x4	DRY	2100F 1.8E	SPF
D - E	2x4	DRY	2100F 1.8E	SPF
E - H	2x6	DRY	No.2	SPF
H - J	2x6	DRY	No.2	SPF
J - K	2x4	DRY	2100F 1.8E	SPF
K - O	2x4	DRY	2100F 1.8E	SPF
AD- B	2x6	DRY	No.2	SPF
P - N	2x6	DRY	No.2	SPF
AD- AA	2x6	DRY	No.2	SPF
AA- Y	2x6	DRY	No.2	SPF
Y - W	2x6	DRY	No.2	SPF
W - I	2x4	DRY	No.2	SPF
V - T	2x6	DRY	2100F 1.8E	SPF
T - R	2x6	DRY	2100F 1.8E	SPF
Q - M	2x4	DRY	No.2	SPF
Q - P	2x4	DRY	No.2	SPF
ALL WEBS	2x4	DRY	No.2	SPF
EXCEPT				
X - V	2x6	DRY	No.2	SPF
R - N	2x4	DRY	2100F 1.8E	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	3.75
C	TMWW-t	MT20	4.0	6.0		
D	TS-t	MT20	4.0	6.0	Edge	3.00
E	TTWW+m	MT20	6.0	7.0	Edge	
F	TMWW+t	MT20	4.0	6.0		
G	TMWW+t	MT20	4.0	6.0		
H	TS-t	MT20	5.0	6.0		
I	TMV+p	MT20	4.0	6.0		
J	TTWW+m	MT20	6.0	7.0	Edge	
K	TS-t	MT20	4.0	6.0	Edge	3.00
L	TMWW-t	MT20	4.0	6.0		
M	TMVW-t	MT20	5.0	6.0		
N	TMVW-t	MT20	5.0	14.0	2.25	5.50
P	BMVW1-t	MT20	5.0	6.0		
Q	BMV+p	MT20	2.0	4.0		
R	BVMWW-t	MT20	7.0	16.0	4.00	8.75

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100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416635

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
AD	2556	0	2718	-128	-809	5-8	3-5
P	2556	0	2718	0	-809	5-8	2-15

PROVIDE ANCHORAGE AT BEARING JOINT AD FOR 809 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT P FOR 809 LBS FACTORED UPLIFT

PROVIDE FOR 128 LBS FACTORED HORIZONTAL REACTION AT JOINT AD

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
AD	1900	1185 / 0	357 / 0	0 / 0	138 / -802	466 / 0	0 / 0
P	1900	1185 / 0	357 / 0	0 / 0	47 / -802	466 / 0	0 / 0
HORIZONTAL REACTIONS							
AD	---	0 / 0	0 / 0	0 / 0	91 / -91	0 / 0	0 /0

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

BRACING

MAX. UNBRACED TOP CHORD LENGTH = 3.32 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

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

1 LATERAL BRACE(S) AT 1/ 2 LENGTH OF I-V, E-Z, F-X, G-V, J-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: (18)

CHORDS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD LC1 (PLF) FROM	TO	MAX CSI (LC)	MAX. UNBRAC LENGTH
A- B	0 / 25	-70.1	-70.1	0.07 (2)	10.00
B- C	-4177 / 1267	-70.1	-70.1	0.73 (2)	3.75
C- D	-3826 / 1239	-70.1	-70.1	0.66 (2)	3.91
D- E	-3826 / 1239	-70.1	-70.1	0.66 (2)	3.91
E- F	-4106 / 1381	-70.1	-70.1	0.31 (2)	4.04
F- G	-4241 / 1415	-70.1	-70.1	0.32 (3)	3.97
G- H	-4637 / 1516	-70.1	-70.1	0.29 (3)	3.86
H- I	-4637 / 1516	-70.1	-70.1	0.29 (3)	3.86
I- J	-4647 / 1519	-70.1	-70.1	0.27 (3)	3.88
J- K	-4403 / 1389	-70.1	-70.1	0.50 (3)	3.80
K- L	-4403 / 1389	-70.1	-70.1	0.50 (3)	3.80
L- M	-5246 / 1573	-70.1	-70.1	0.60 (3)	3.48
M- N	-6701 / 2005	-70.1	-70.1	0.22 (3)	3.32
N- O	0 / 25	-70.1	-70.1	0.07 (3)	10.00
AD- B	-2629 / 820	0.0	0.0	0.17 (2)	6.42
P- N	-2527 / 760	0.0	0.0	0.16 (3)	6.52
AD-AC	-115 / 138	-26.3	-26.3	0.11 (5)	6.25
AC-AB	-1154 / 3760	-26.3	-26.3	0.51 (2)	6.25
AB-AA	-949 / 3395	-26.3	-26.3	0.47 (2)	6.25
AA- Z	-949 / 3395	-26.3	-26.3	0.47 (2)	6.25
Z- Y	-1165 / 4106	-26.3	-26.3	0.54 (2)	6.25
Y- X	-1165 / 4106	-26.3	-26.3	0.54 (2)	6.25
X- W	-17 / 62	-26.3	-26.3	0.09 (17)	6.25
W- V	0 / 84	0.0	0.0	0.09 (3)	10.00
V- I	-536 / 242	0.0	0.0	0.10 (3)	6.25
V- U	-948 / 3909	-26.3	-26.3	0.21 (3)	6.25
U- T	-1265 / 4717	-26.3	-26.3	0.25 (3)	6.25
T- S	-1265 / 4717	-26.3	-26.3	0.25 (3)	6.25
S- R	-1859 / 6410	-26.3	-26.3	0.35 (3)	6.25

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
AC- C	-295 / 173	0.06 (9)
C-AB	-425 / 242	0.37 (2)
AB- E	-102 / 419	0.08 (13)
E- Z	-448 / 1463	0.24 (3)
Z- F	-986 / 386	0.76 (3)
F- X	-151 / 524	0.08 (3)
X- G	-909 / 333	0.70 (3)
X- V	-1198 / 4246	0.50 (3)
G- V	-142 / 566	0.09 (3)
V- J	-468 / 1504	0.24 (2)
U- J	-177 / 701	0.11 (3)
U- L	-950 / 375	0.55 (3)
S- L	-28 / 366	0.06 (6)
S- M	-1707 / 599	0.75 (3)
B-AC	-1047 / 3784	0.61 (2)
R- P	-344 / 113	0.04 (3)
R- N	-1755 / 6021	0.45 (3)

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	30.1	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	10.5	PSF
	DL	=	7.4	PSF
TOTAL LOAD		=	54.0	PSF

SPACING = 16.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 6.00/12

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2015

THIS DESIGN COMPLIES WITH:
- PART 4 OF BCBC 2018 , NBC-2019AE
- PART 4 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED
- PERCENTAGE OF GROUND SNOW LOAD IS USER-DEFINED.

(80 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 30.1 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.70")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.29")
ALLOWABLE DEFL.(TL)= L/180 (3.40")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.42")

CSI: TC=0.73/1.00 (B-C:2) , BC=0.54/1.00 (M-R:3) , WB=0.76/1.00 (F-Z:3) , SSI=0.33/1.00 (M-R:3)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 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) (PSI) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.78 (B) (INPUT = 0.90)
JSI METAL= 0.78 (B) (INPUT = 0.95)

CONTINUED ON PAGE 2

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
S	BMWW-t	MT20	5.0	6.0		
T	BS-t	MT20	6.0	7.0		
U	BMWW+t	MT20	4.0	6.0		
V	BVMWWW-t	MT20	8.0	16.0	5.25	6.25
W	BMV+p	MT20	3.0	8.0	4.00	
X	BMWWW-t	MT20	8.0	12.0	3.75	3.00
Y	BS-t	MT20	5.0	6.0		
Z	BMWW-t	MT20	5.0	6.0		
AA	BS-t	MT20	5.0	6.0		
AB	BMWW+t	MT20	4.0	6.0		
AC	BMWW-t	MT20	5.0	8.0	2.50	2.50
AD	BMV1+p	MT20	4.0	6.0		

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

LOADING

TOTAL LOAD CASES: (18)

CHORDS MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD LC1 (PLF) FROM	TO	MAX CSI (LC)	MAX. UNBRAC LENGTH	WEBS MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
Q- R	0 / 33	0.0	0.0	0.45 (3)	10.00			
R- M	-129 / 623	0.0	0.0	0.54 (3)	7.81			
Q- P	-89 / 301	-26.3	-26.3	0.07 (3)	6.25			

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF (9.2) PSF AT (30-0-0) FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE (MAIN WIND FORCE RESISTING SYSTEM).INTERNAL WIND PRESSURE IS BASED ON DESIGN (CATEGORY 2). BUILDING MAY BE LOCATED ON (OPEN TERRAIN), AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST (0-0) FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 5.0 PSF RESPECTIVELY.

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416635

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
439988	T27	1	1	ROYAL PINE HOMES TRUSS DESC.	

Tamarack Roof Truss, Burlington

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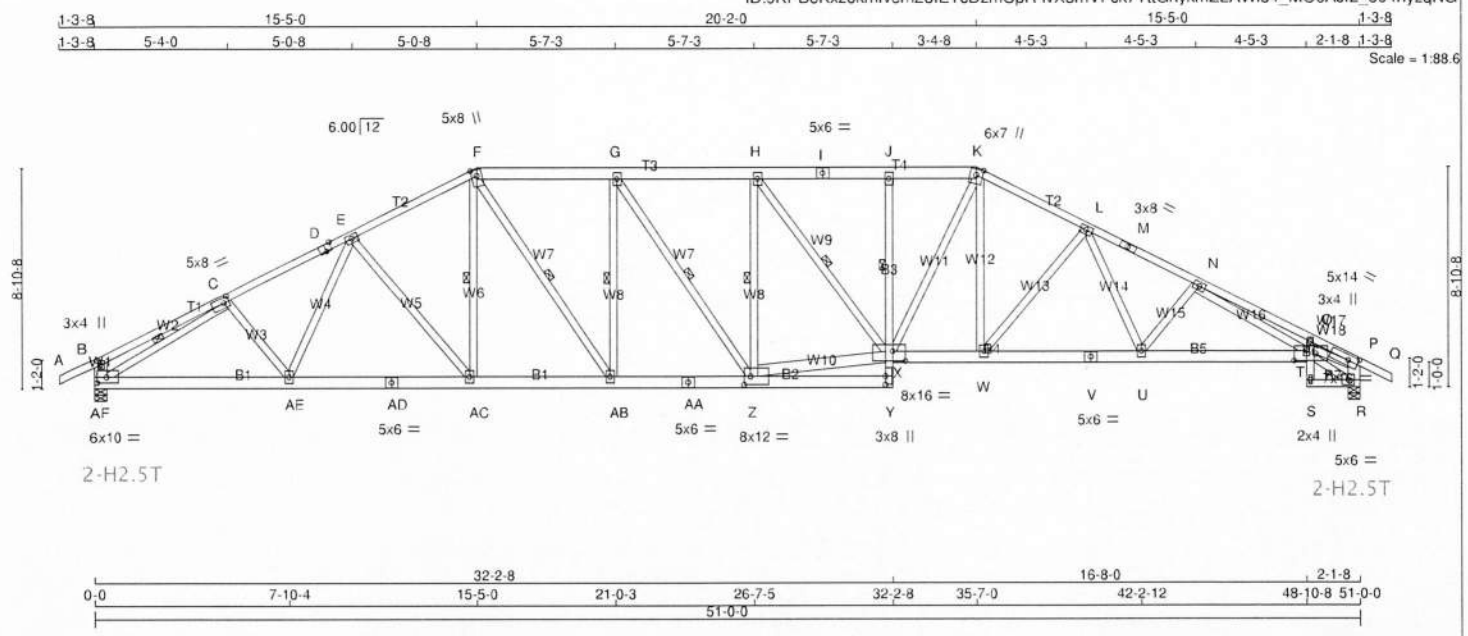

TOTAL WEIGHT = 321 lb

[M]

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
A - D	2x4	DRY	2100F 1.8E	SPF
D - F	2x4	DRY	2100F 1.8E	SPF
F - I	2x6	DRY	No.2	SPF
I - K	2x6	DRY	No.2	SPF
K - M	2x4	DRY	2100F 1.8E	SPF
M - Q	2x4	DRY	2100F 1.8E	SPF
R - P	2x6	DRY	No.2	SPF
AF- B	2x6	DRY	No.2	SPF
AF- AD	2x6	DRY	No.2	SPF
AD- AA	2x6	DRY	No.2	SPF
AA- Y	2x6	DRY	No.2	SPF
Y - J	2x4	DRY	No.2	SPF
X - V	2x6	DRY	No.2	SPF
V - T	2x6	DRY	No.2	SPF
S - O	2x4	DRY	No.2	SPF
S - R	2x4	DRY	No.2	SPF
ALL WEBS	2x4	DRY	No.2	SPF
EXCEPT				
Z - X	2x6	DRY	No.2	SPF
T - P	2x4	DRY	2100F 1.8E	SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMV+p	MT20	3.0	4.0	2.00	1.25
C	TMWW-t	MT20	5.0	8.0	2.50	2.50
D	TS-t	MT20	4.0	6.0	Edge	3.00
E, L, N						
E	TMWW-t	MT20	4.0	6.0		
F	TTWW+m	MT20	5.0	8.0	Edge	
G	TMWW+t	MT20	4.0	6.0		
H	TMWW+t	MT20	4.0	6.0		
I	TS-t	MT20	5.0	6.0		
J	TMV+p	MT20	4.0	6.0		
K	TTWW+m	MT20	6.0	7.0	Edge	
M	TS-t	MT20	3.0	8.0		
O	TMV+p	MT20	3.0	4.0		
P	TMVW-t	MT20	5.0	14.0	2.50	5.00
R	BMVW1-t	MT20	5.0	6.0		
S	BMV+p	MT20	2.0	4.0		

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416636

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
AF	2556	0	2682	-143	-798	5-8	2-14
R	2556	0	2682	0	-798	5-8	2-14

PROVIDE ANCHORAGE AT BEARING JOINT AF FOR 798 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT R FOR 798 LBS FACTORED UPLIFT

PROVIDE FOR 143 LBS FACTORED HORIZONTAL REACTION AT JOINT AF

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
AF	1900	1161 / 0	357 / 0	0 / 0	133 / -794	466 / 0	0 / 0
R	1900	1161 / 0	357 / 0	0 / 0	42 / -794	466 / 0	0 / 0
HORIZONTAL REACTIONS							
AF	---	0 / 0	0 / 0	0 / 0	99 / -102	0 / 0	0 /0

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

BRACING

MAX. UNBRACED TOP CHORD LENGTH = 3.08 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

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

1 LATERAL BRACE(S) AT 1/ 2 LENGTH OF J-X, F-AC, F-AB, G-AB, G-Z, H-Z, H-X, C-AF.

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: (18)

CHORDS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1	MAX CSI (LC)	MAX. UNBRAC LENGTH
A- B	0 / 25	-70.1	-70.1	0.07 (2)	10.00	
B- C	-6 / 90	-70.1	-70.1	0.18 (2)	10.00	
C- D	-4014 / 1277	-70.1	-70.1	0.31 (2)	4.12	
D- E	-4014 / 1277	-70.1	-70.1	0.31 (2)	4.12	
E- F	-3589 / 1207	-70.1	-70.1	0.28 (2)	4.33	
F- G	-3636 / 1260	-70.1	-70.1	0.24 (2)	4.32	
G- H	-3748 / 1271	-70.1	-70.1	0.24 (3)	4.28	
H- I	-3979 / 1337	-70.1	-70.1	0.23 (3)	4.17	
I- J	-3979 / 1337	-70.1	-70.1	0.23 (3)	4.17	
J- K	-3985 / 1340	-70.1	-70.1	0.17 (14)	4.24	
K- L	-4062 / 1325	-70.1	-70.1	0.22 (3)	4.17	
L- M	-4964 / 1538	-70.1	-70.1	0.35 (3)	3.72	
M- N	-4964 / 1538	-70.1	-70.1	0.35 (3)	3.72	
N- O	-6770 / 2080	-70.1	-70.1	0.54 (3)	3.08	
O- P	-6419 / 1903	-70.1	-70.1	0.35 (3)	3.23	
P- Q	0 / 25	-70.1	-70.1	0.07 (3)	10.00	
R- P	-2501 / 753	0.0	0.0	0.16 (3)	6.55	
AF- B	-287 / 158	0.0	0.0	0.02 (2)	7.81	
AF-AE	-1138 / 3549	-26.3	-26.3	0.53 (2)	6.25	
AE-AD	-1055 / 3527	-26.3	-26.3	0.48 (2)	6.25	
AD-AC	-1055 / 3527	-26.3	-26.3	0.48 (2)	6.25	
AC-AB	-884 / 3193	-26.3	-26.3	0.44 (2)	6.25	
AB-AA	-1021 / 3636	-26.3	-26.3	0.48 (1)	6.25	
AA- Z	-1021 / 3636	-26.3	-26.3	0.48 (1)	6.25	
Z- Y	-12 / 44	-26.3	-26.3	0.07 (17)	6.25	
Y- X	0 / 76	0.0	0.0	0.07 (3)	10.00	
X- J	-422 / 191	0.0	0.0	0.08 (3)	6.25	
X- W	-865 / 3617	-26.3	-26.3	0.47 (3)	6.25	
W- V	-1062 / 4146	-26.3	-26.3	0.54 (3)	6.25	

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
C-AE	0 / 310	0.05 (3)
AE- E	-102 / 195	0.05 (10)
E-AC	-511 / 265	0.43 (2)
AC- F	-173 / 580	0.09 (2)
F-AB	-371 / 1201	0.19 (3)
AB- G	-872 / 344	0.29 (3)
G- Z	-121 / 421	0.07 (3)
Z- H	-847 / 300	0.28 (3)
Z- X	-1027 / 3772	0.45 (1)
H- X	-107 / 476	0.08 (3)
X- K	-383 / 1221	0.37 (13)
W- K	-235 / 784	0.18 (14)
W- L	-814 / 339	0.48 (3)
L- U	-198 / 741	0.12 (3)
U- N	-635 / 298	0.11 (3)
N- T	-500 / 1529	0.25 (3)
AF- C	-4230 / 1203	0.77 (2)
T- R	-323 / 106	0.04 (3)
T- P	-1650 / 5732	0.43 (3)

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	30.1	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	10.5	PSF
	DL	=	7.4	PSF
TOTAL LOAD		=	54.0	PSF

SPACING = 16.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 6.00/12

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2015

THIS DESIGN COMPLIES WITH:
- PART 4 OF BCBC 2018 , NBC-2019AE
- PART 4 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED
- PERCENTAGE OF GROUND SNOW LOAD IS USER-DEFINED.

(80 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 30.1 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.70")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.28")
ALLOWABLE DEFL.(TL)= L/180 (3.40")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.39")

CSI: TC=0.54/1.00 (N-O:3) , BC=0.65/1.00 (T-U:3) , WB=0.77/1.00 (C-AF:2) , SSI=0.33/1.00 (O-T:3)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 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) (PSI) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	798	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.79 (C) (INPUT = 0.90)
JSI METAL= 0.79 (T) (INPUT = 0.95)

CONTINUED ON PAGE 2

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
T	BVMWWW-I	MT20	7.0	16.0	4.75	6.00
U, W, AB, AC, AE						
U	BMWW+t	MT20	4.0	6.0		
V, AA, AD						
V	BS-t	MT20	5.0	6.0		
X	BVMWWW-I	MT20	8.0	16.0	4.75	6.25
Y	BMV+p	MT20	3.0	8.0	4.00	
Z	BMWWW-t	MT20	8.0	12.0	4.00	3.00
AF	BMVW1-t	MT20	6.0	10.0	2.75	4.25

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

LOADING

TOTAL LOAD CASES: (18)

CHORDS

MEMB. FR-TO	MAX. FORCE (LBS)	FACTORED VERT. LOAD LC1 (PLF) FROM	TO	MAX CSI (LC)	MAX. UNBRAC LENGTH
V- U	-1062 / 4146	-26.3	-26.3	0.54 (3)	6.25
U- T	-1321 / 4823	-26.3	-26.3	0.65 (3)	6.25
S- T	0 / 33	0.0	0.0	0.42 (3)	10.00
T- O	-221 / 151	0.0	0.0	0.42 (3)	7.81
S- R	-82 / 293	-26.3	-26.3	0.06 (3)	6.25

WEBS

MEMB. FR-TO	MAX. FORCE (LBS)	MAX CSI (LC)

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 9.2} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 5.0 PSF RESPECTIVELY.

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416636

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
439988	T28	1	1	ROYAL PINE HOMES TRUSS DESC.	

Tamarack Roof Truss, Burlington

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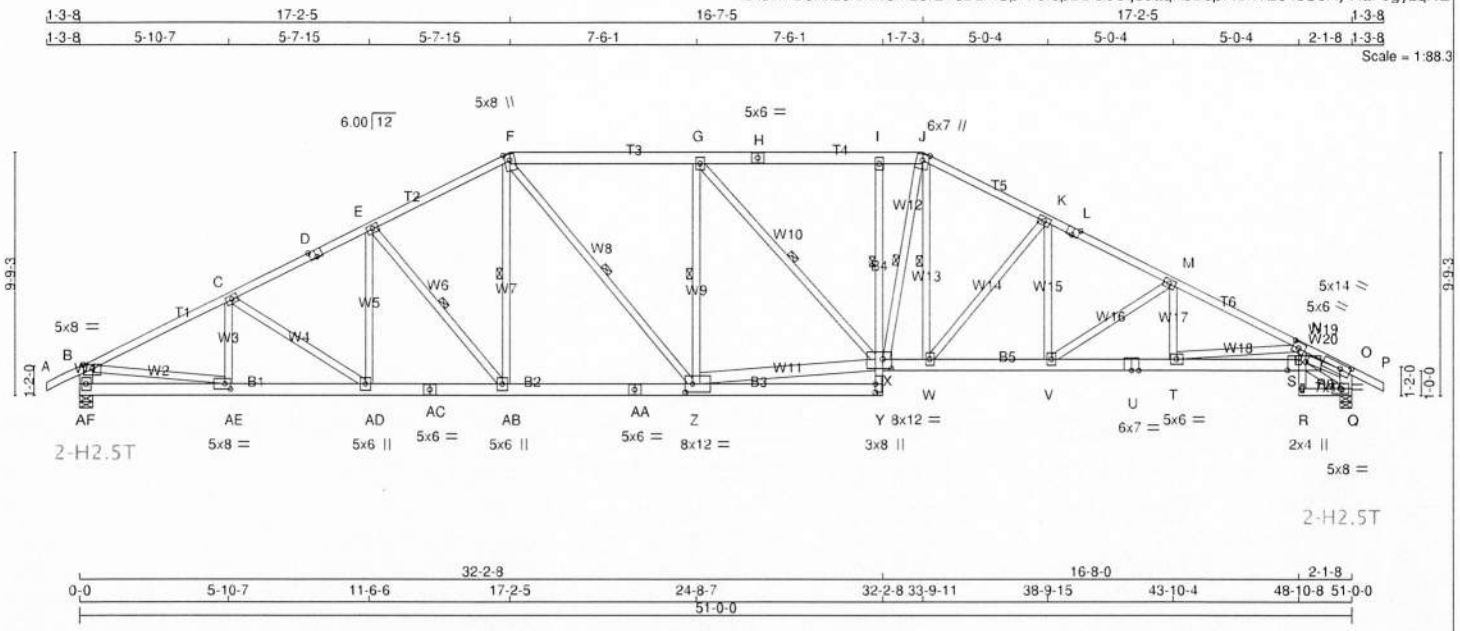

TOTAL WEIGHT = 325 lb

[M]

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
A - D	2x4	DRY	2100F 1.8E	SPF
D - F	2x4	DRY	2100F 1.8E	SPF
F - H	2x6	DRY	No.2	SPF
H - J	2x6	DRY	No.2	SPF
J - L	2x4	DRY	2100F 1.8E	SPF
L - P	2x4	DRY	2100F 1.8E	SPF
AF - B	2x6	DRY	No.2	SPF
Q - O	2x6	DRY	No.2	SPF
AF- AC	2x6	DRY	No.2	SPF
AC- AA	2x6	DRY	No.2	SPF
AA- Y	2x6	DRY	No.2	SPF
Y - I	2x4	DRY	No.2	SPF
X - U	2x6	DRY	2100F 1.8E	SPF
U - S	2x6	DRY	2100F 1.8E	SPF
R - N	2x4	DRY	No.2	SPF
R - Q	2x4	DRY	No.2	SPF
ALL WEBS	2x4	DRY	No.2	SPF
EXCEPT				
Z - X	2x6	DRY	No.2	SPF
S - O	2x4	DRY	2100F 1.8E	SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMVW-p	MT20	5.0	8.0	Edge	
C, E, K, M						
C	TMWW-t	MT20	4.0	6.0		
D	TS-t	MT20	4.0	6.0	Edge	3.00
F	TTWW+m	MT20	5.0	8.0	Edge	
G	TMWW+t	MT20	4.0	6.0		
H	TS-t	MT20	5.0	6.0		
I	TMV+p	MT20	4.0	6.0		
J	TTWW+m	MT20	6.0	7.0	Edge	
L	TS-t	MT20	4.0	6.0	Edge	3.00
N	TMVW-t	MT20	5.0	6.0	2.75	3.00
O	TMVW-t	MT20	5.0	14.0	2.50	5.00
Q	BMVW1-t	MT20	5.0	8.0		
R	BMV+p	MT20	2.0	4.0		
S	BVMWW-l	MT20	7.0	16.0	4.00	8.75
T	BMWW-t	MT20	5.0	6.0		

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416637

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
AF	2556	0	2641	-158	-785	5-8	3-1
Q	2555	0	2641	0	-785	5-8	2-14

PROVIDE ANCHORAGE AT BEARING JOINT AF FOR 785 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT Q FOR 785 LBS FACTORED UPLIFT

PROVIDE FOR 158 LBS FACTORED HORIZONTAL REACTION AT JOINT AF

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
AF	1900	1134 / 0	357 / 0	0 / 0	126 / -785	466 / 0	0 / 0
Q	1900	1134 / 0	357 / 0	0 / 0	52 / -785	466 / 0	0 / 0
HORIZONTAL REACTIONS							
AF	---	0 / 0	0 / 0	0 / 0	110 / -113	0 / 0	0 /0

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

BRACING

MAX. UNBRACED TOP CHORD LENGTH = 3.37 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

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

1 LATERAL BRACE(S) AT 1/ 2 LENGTH OF I-X, E-AB, F-AB, F-Z, G-Z, G-X, J-X, J-W.

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: (18)

CHORDS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1	MAX CSI (LC)	MAX. UNBRAC LENGTH
A- B	0 / 25	-70.1	-70.1	0.07 (2)	10.00	
B- C	-3973 / 1200	-70.1	-70.1	0.39 (2)	4.09	
C- D	-3818 / 1228	-70.1	-70.1	0.38 (2)	4.16	
D- E	-3818 / 1228	-70.1	-70.1	0.38 (2)	4.16	
E- F	-3386 / 1149	-70.1	-70.1	0.34 (2)	4.41	
F- G	-3425 / 1167	-70.1	-70.1	0.43 (2)	4.27	
G- H	-3537 / 1207	-70.1	-70.1	0.43 (3)	4.18	
H- I	-3537 / 1207	-70.1	-70.1	0.43 (3)	4.18	
I- J	-3545 / 1210	-70.1	-70.1	0.17 (14)	4.44	
J- K	-3785 / 1246	-70.1	-70.1	0.28 (3)	4.27	
K- L	-4400 / 1382	-70.1	-70.1	0.34 (3)	3.94	
L- M	-4400 / 1382	-70.1	-70.1	0.34 (3)	3.94	
M- N	-5162 / 1541	-70.1	-70.1	0.41 (3)	3.63	
N- O	-6472 / 1930	-70.1	-70.1	0.24 (3)	3.37	
O- P	0 / 25	-70.1	-70.1	0.07 (3)	10.00	
AF- B	-2562 / 794	0.0	0.0	0.16 (2)	6.48	
Q- O	-2456 / 739	0.0	0.0	0.16 (3)	6.59	
AF-AE	-144 / 168	-26.3	-26.3	0.09 (5)	6.25	
AE-AD	-1130 / 3570	-26.3	-26.3	0.48 (2)	6.25	
AD-AC	-1019 / 3415	-26.3	-26.3	0.46 (2)	6.25	
AC-AB	-1019 / 3415	-26.3	-26.3	0.46 (2)	6.25	
AB-AA	-813 / 3011	-26.3	-26.3	0.45 (1)	6.25	
AA- Z	-813 / 3011	-26.3	-26.3	0.45 (1)	6.25	
Z- Y	-12 / 45	-26.3	-26.3	0.14 (17)	6.25	
Y- X	0 / 99	0.0	0.0	0.07 (1)	10.00	
X- I	-494 / 223	0.0	0.0	0.09 (3)	6.25	
X- W	-788 / 3368	-26.3	-26.3	0.18 (1)	6.25	
W- V	-980 / 3933	-26.3	-26.3	0.21 (3)	6.25	
V- U	-1241 / 4639	-26.3	-26.3	0.26 (3)	6.25	

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
AE- C	-349 / 179	0.06 (2)
C-AD	-185 / 143	0.11 (2)
AD- E	-45 / 262	0.04 (5)
E-AB	-675 / 314	0.23 (2)
AB- F	-203 / 689	0.11 (2)
F- Z	-307 / 1000	0.24 (14)
Z- G	-988 / 392	0.41 (3)
Z- X	-903 / 3418	0.44 (13)
G- X	-197 / 351	0.13 (2)
X- J	-372 / 1133	0.18 (2)
W- J	-266 / 837	0.13 (3)
W- K	-934 / 372	0.75 (3)
V- K	-143 / 599	0.10 (3)
V- M	-848 / 314	0.37 (3)
T- M	-38 / 358	0.06 (6)
T- N	-1564 / 549	0.50 (3)
B-AE	-995 / 3601	0.58 (2)
S- Q	-332 / 110	0.04 (3)
S- O	-1686 / 5811	0.44 (3)

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	30.1	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	10.5	PSF
	DL	=	7.4	PSF
TOTAL LOAD		=	54.0	PSF

SPACING = 16.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 6.00/12

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2015

THIS DESIGN COMPLIES WITH:
- PART 4 OF BCBC 2018 , NBC-2019AE
- PART 4 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED
- PERCENTAGE OF GROUND SNOW LOAD IS USER-DEFINED.

(80 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 30.1 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.70")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.25")
ALLOWABLE DEFL.(TL)= L/180 (3.40")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.36")

CSI: TC=0.43/1.00 (G-I:3) , BC=0.53/1.00 (N-S:3) , WB=0.75/1.00 (K-W:3) , SSI=0.32/1.00 (N-S:3)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 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) (PSI) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.79 (B) (INPUT = 0.90)
JSI METAL= 0.74 (S) (INPUT = 0.95)

CONTINUED ON PAGE 2

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
U	BS-t	MT20	6.0	7.0		
V	BMWW+t	MT20	4.0	6.0		
W	BMWW+t	MT20	4.0	6.0		
X	BVMWWW-l	MT20	8.0	12.0	4.50	4.25
Y	BMV+p	MT20	3.0	8.0	4.00	
Z	BMWWW-t	MT20	8.0	12.0	4.00	3.50
AA	BS-t	MT20	5.0	6.0		
AB	BMWW+t	MT20	5.0	6.0		
AC	BS-t	MT20	5.0	6.0		
AD	BMWW+t	MT20	5.0	6.0		
AE	BMWW-t	MT20	5.0	8.0	2.50	2.75
AF	BMV1+p	MT20	4.0	6.0		

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

LOADING

TOTAL LOAD CASES: (18)

CHORDS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1	MAX CSI (LC)	MAX. UNBRAC LENGTH
U- T	-1241 / 4639	-26.3	-26.3	0.26	(3)	6.25
T- S	-1785 / 6186	-26.3	-26.3	0.33	(3)	6.25
R- S	0 / 33	0.0	0.0	0.43	(3)	10.00
S- N	-125 / 598	0.0	0.0	0.53	(3)	7.81
R- Q	-85 / 291	-26.3	-26.3	0.06	(3)	6.25

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF (9.2) PSF AT (30-0-0) FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE (MAIN WIND FORCE RESISTING SYSTEM).INTERNAL WIND PRESSURE IS BASED ON DESIGN (CATEGORY 2). BUILDING MAY BE LOCATED ON (OPEN TERRAIN), AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST (0-0) FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 5.0 PSF RESPECTIVELY.

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416637

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
439988	T29	1	2	ROYAL PINE HOMES TRUSS DESC.	

Tamarack Roof Truss, Burlington

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Tue Jul 9 11:16:03 2024 Page 1
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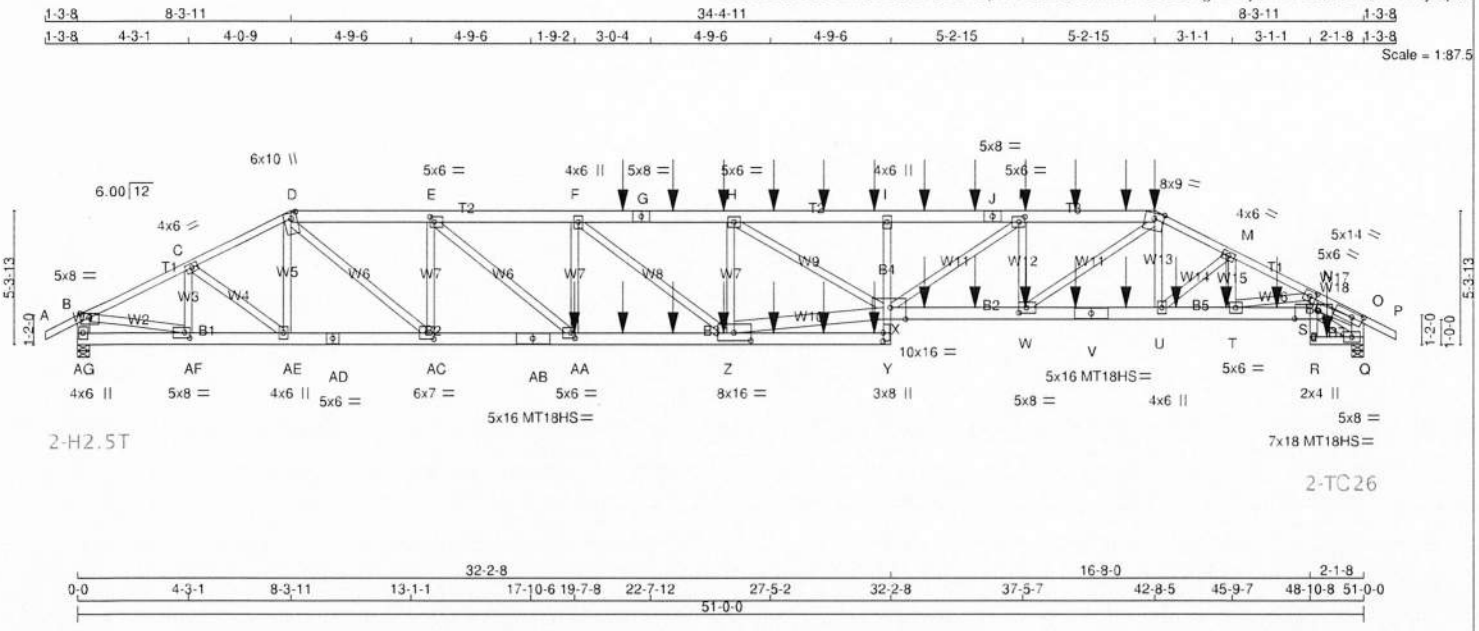

TOTAL WEIGHT = 2 X 296 = 593 lb

[M]

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
A - D	2x4	DRY	2100F 1.8E	SPF
D - G	2x6	DRY	2100F 1.8E	SPF
G - J	2x6	DRY	2100F 1.8E	SPF
J - L	2x6	DRY	2100F 1.8E	SPF
L - P	2x4	DRY	2100F 1.8E	SPF
AG- B	2x6	DRY	No.2	SPF
Q - O	2x6	DRY	No.2	SPF
AG- AD	2x6	DRY	2100F 1.8E	SPF
AD- AB	2x6	DRY	2100F 1.8E	SPF
AB- Y	2x6	DRY	2100F 1.8E	SPF
Y - I	2x4	DRY	No.2	SPF
X - V	2x6	DRY	2100F 1.8E	SPF
V - S	2x6	DRY	2100F 1.8E	SPF
R - N	2x4	DRY	No.2	SPF
R - Q	2x4	DRY	No.2	SPF
ALL WEBS	2x4	DRY	No.2	SPF
EXCEPT				
Z - X	2x6	DRY	2100F 1.8E	SPF
S - O	2x4	DRY	2100F 1.8E	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- D	1	12	TOP
L- P	1	12	SIDE(75.8)
D- G	2	12	SIDE(0.0)
G- J	2	12	SIDE(227.4)
J- L	2	12	SIDE(227.4)
AG- B	2	12	TOP
Q- O	2	12	TOP
BOTTOM CHORDS : (0.122"X3") SPIRAL NAILS			
AG- AD	2	12	TOP
AD- AB	2	12	TOP
AB- Y	2	12	SIDE(227.4)
X- V	2	12	SIDE(227.4)
V- S	2	12	SIDE(227.4)
Y- I	1	12	TOP
N- R	1	12	TOP

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
AG	4933	0	5132	-93	-821	5-8	2-12
Q	5759	0	5929	0	-771	5-8	3-3

PROVIDE ANCHORAGE AT BEARING JOINT AG FOR 821 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT Q FOR 771 LBS FACTORED UPLIFT

PROVIDE FOR 93 LBS FACTORED HORIZONTAL REACTION AT JOINT AG

ALLOW FOR 0.3" OF HORIZONTAL MOVEMENT DUE TO TOTAL LOAD

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	SNOW	MAX./MIN. COMPONENT REACTIONS LIVE	PERM.LIVE	WIND	DEAD	SOIL
AG	3585	2298 / 0	357 / 0	0 / 0	151 / -820	1062 / 0	0 / 0
Q	4174	2636 / 0	357 / 0	0 / 0	82 / -820	1293 / 0	0 / 0
HORIZONTAL REACTIONS							
AG	---	0 / 0	0 / 0	0 / 0	67 / -67	0 / 0	0 /0

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

BRACING

MAX. UNBRACED TOP CHORD LENGTH = 2.83 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: (18)

CHORDS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 CSI (LC)	MAX. UNBRAC LENGTH
A- B	0 / 25	-70.1	-70.1	0.04 (2)	10.00
B- C	-7779 / 1200	-70.1	-70.1	0.16 (2)	4.27
C- D	-8679 / 1316	-70.1	-70.1	0.16 (2)	4.08
D- E	-12242 / 1732	-70.1	-70.1	0.15 (2)	4.29
E- F	-16019 / 2023	-70.1	-70.1	0.21 (2)	3.80
F-AH	-16443 / 2106	-70.1	-70.1	0.30 (3)	3.67
AH- G	-16443 / 2106	-70.1	-70.1	0.30 (3)	3.67
G-AI	-16443 / 2106	-70.1	-70.1	0.30 (3)	3.67
AI- H	-16443 / 2106	-70.1	-70.1	0.30 (3)	3.67
H-AJ	-18840 / 2408	-70.1	-70.1	0.36 (3)	3.41
AJ-AK	-18840 / 2408	-70.1	-70.1	0.36 (3)	3.41
AK-AL	-18840 / 2408	-70.1	-70.1	0.36 (3)	3.41
AL- I	-18840 / 2408	-70.1	-70.1	0.36 (3)	3.41
I-AM	-18924 / 2418	-70.1	-70.1	0.30 (3)	3.45
AM-AN	-18924 / 2418	-70.1	-70.1	0.30 (3)	3.45
AN- J	-18924 / 2418	-70.1	-70.1	0.30 (3)	3.45
J- K	-18924 / 2418	-70.1	-70.1	0.30 (3)	3.45
K-AO	-15825 / 2007	-70.1	-70.1	0.23 (3)	3.79
AO-AP	-15825 / 2007	-70.1	-70.1	0.23 (3)	3.79
AP- L	-15825 / 2007	-70.1	-70.1	0.23 (3)	3.79
L- M	-12467 / 1496	-70.1	-70.1	0.24 (3)	3.39
M- N	-13178 / 1589	-70.1	-70.1	0.45 (3)	3.07
N- O	-14891 / 1831	-70.1	-70.1	0.46 (3)	2.83
O- P	0 / 25	-70.1	-70.1	0.04 (3)	10.00
AG- B	-5010 / 820	0.0	0.0	0.18 (2)	6.50
Q- O	-5524 / 727	0.0	0.0	0.20 (3)	6.24
AG-AF	-82 / 93	-26.3	-26.3	0.06 (2)	6.25
AF-AE	-1071 / 6967	-26.3	-26.3	0.24 (2)	6.25
AE-AD	-1071 / 7789	-26.3	-26.3	0.23 (2)	6.25
AD-AC	-1071 / 7789	-26.3	-26.3	0.23 (2)	6.25
AC-AB	-1588 / 12242	-26.3	-26.3	0.36 (2)	6.25
AB-AA	-1588 / 12242	-26.3	-26.3	0.36 (2)	6.25

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
AF- C	-1330 / 237	0.09 (2)
C-AE	-85 / 1259	0.11 (3)
AE- D	-552 / 60	0.08 (10)
D-AC	-734 / 6065	0.54 (3)
AC- E	-3846 / 524	0.52 (3)
Z- H	-2628 / 433	0.36 (3)
Z- X	-1957 / 16385	0.43 (3)
H- X	-343 / 2745	0.24 (3)
X- K	-560 / 3977	0.35 (2)
W- K	-3111 / 561	0.29 (2)
W- L	-852 / 5993	0.53 (2)
U- L	-141 / 1140	0.10 (3)
U- M	-868 / 211	0.08 (3)
T- M	-30 / 530	0.05 (3)
T- N	-2382 / 382	0.19 (3)
B-AF	-1019 / 7082	0.63 (2)
AA- F	-1029 / 313	0.14 (3)
E-AA	-430 / 5100	0.45 (3)
F- Z	-154 / 690	0.07 (14)
S- Q	-762 / 104	0.05 (3)
S- O	-1587 / 13314	0.55 (3)

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	=	30.1	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	10.5	PSF
	DL	=	7.4	PSF
TOTAL LOAD		=	54.0	PSF

SPACING = 16.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 6.00/12

*** NON STANDARD GIRDER ***
ADDT'L USER-DEFINED LOADS APPLIED TO ALL LOAD CASES.

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2015

THIS DESIGN COMPLIES WITH:
- PART 4 OF BCBC 2018 , NBC-2019AE
- PART 4 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED
- PERCENTAGE OF GROUND SNOW LOAD IS USER-DEFINED.

(80 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 30.1 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.70")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.52")
ALLOWABLE DEFL.(TL)= L/180 (3.40")
CALCULATED VERT. DEFL.(TL) = L/ 778 (0.79")

CSI: TC=0.46/1.00 (N-O:3) , BC=0.67/1.00 (N-S:3) , WB=0.63/1.00 (B-AF:2) , SSI=0.41/1.00 (N-S:3)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 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) (PSI) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

CONTINUED ON PAGE 2

R- Q	1	12	SIDE(0.0)
WEBS : (0.122"X3") SPIRAL NAILS			
U- L	1	6	SIDE(20.1)
2x4	1	6	
F- AA	1	6	SIDE(359.4)
2x6	2	6	

NAILS TO BE DRIVEN FROM ONE SIDE ONLY.

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

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

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMVW-p	MT20	5.0	8.0	Edge	
C	TMWW-t	MT20	4.0	6.0		
D	TTWW+m	MT20	6.0	10.0	2.75	2.75
E	TMWW-t	MT20	5.0	6.0	2.50	2.00
F	TMWW+t	MT20	4.0	6.0		
G	TS-t	MT20	5.0	8.0		
H	TMWW-t	MT20	5.0	6.0		
I	TMV+p	MT20	4.0	6.0		
J	TS-t	MT20	5.0	8.0		
K	TMWW-t	MT20	5.0	6.0	2.50	2.75
L	TTWW-m	MT20	8.0	9.0	Edge	
M	TMWW-t	MT20	4.0	6.0		
N	TMVW-t	MT20	5.0	6.0	2.50	3.00
O	TMVW-t	MT20	5.0	14.0	2.50	5.25
Q	BMVW1-t	MT20	5.0	8.0		
R	BMV+p	MT20	2.0	4.0		
S	BVMWW-l	MT18HS	7.0	18.0	4.00	10.75
T	BMWW-t	MT20	5.0	6.0		
U	BMWW+t	MT20	4.0	6.0		
V	BS-t	MT18HS	5.0	16.0		
W	BMWW-t	MT20	5.0	8.0	2.50	3.50
X	BVMWWW-l	MT20	10.0	16.0	Edge	7.25
Y	BMV+p	MT20	3.0	8.0	4.00	
Z	BMWWW-t	MT20	8.0	16.0	3.75	8.00
AA	BMWW-t	MT20	5.0	6.0	2.50	2.00
AB	BS-t	MT18HS	5.0	16.0		
AC	BMWW-t	MT20	6.0	7.0	3.00	3.25
AD	BS-t	MT20	5.0	6.0		
AE	BMWW+t	MT20	4.0	6.0		
AF	BMWW-t	MT20	5.0	8.0	2.50	2.50
AG	BMV1+p	MT20	4.0	6.0		

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

LOADING

TOTAL LOAD CASES: (18)

CHORDS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1	MAX CSI (LC)	MAX. UNBRAC LENGTH
AA-AQ	-1880 / 16019	-26.3	-26.3		0.47 (2)	6.25
AQ-AR	-1880 / 16019	-26.3	-26.3		0.47 (2)	6.25
AR- Z	-1880 / 16019	-26.3	-26.3		0.47 (2)	6.25
Z-AS	-39 / 324	-26.3	-26.3		0.06 (17)	6.25
AS-AT	-39 / 324	-26.3	-26.3		0.06 (17)	6.25
AT-AU	-39 / 324	-26.3	-26.3		0.06 (17)	6.25
AU- Y	-39 / 324	-26.3	-26.3		0.06 (17)	6.25
Y- X	0 / 160	0.0	0.0		0.25 (3)	10.00
X- I	-786 / 203	0.0	0.0		0.26 (3)	7.81
X-AV	-1789 / 15825	-26.3	-26.3		0.47 (3)	6.25
AV-AW	-1789 / 15825	-26.3	-26.3		0.47 (3)	6.25
AW- W	-1789 / 15825	-26.3	-26.3		0.47 (3)	6.25
W-AX	-1139 / 11140	-26.3	-26.3		0.34 (3)	6.25
AX- V	-1139 / 11140	-26.3	-26.3		0.34 (3)	6.25
V-AY	-1139 / 11140	-26.3	-26.3		0.34 (3)	6.25
AY- U	-1139 / 11140	-26.3	-26.3		0.34 (3)	6.25
U-AZ	-1309 / 11857	-26.3	-26.3		0.38 (3)	6.25
AZ- T	-1309 / 11857	-26.3	-26.3		0.38 (3)	6.25
T-BA	-1680 / 14176	-26.3	-26.3		0.44 (3)	6.25
BA- S	-1680 / 14176	-26.3	-26.3		0.44 (3)	6.25
R- S	0 / 66	0.0	0.0		0.55 (3)	10.00
S- N	-131 / 1426	0.0	0.0		0.67 (3)	7.81
R-BB	-81 / 669	-26.3	-26.3		0.08 (3)	6.25
BB- Q	-81 / 669	-26.3	-26.3		0.08 (3)	6.25

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)

SPECIFIED CONCENTRATED LOADS (LBS)

JT	LOC.	LC1	MAX-	MAX+	FACE	DIR.	TYPE	HEEL	CONN.
H	25-6-12	-124	-124	---	FRONT	VERT	TOTAL	---	C1
K	37-6-12	-66	-66	---	FRONT	VERT	TOTAL	---	C1
L	42-8-5	-83	-83	---	FRONT	VERT	DEAD	---	C1
L	42-8-5	-319	-319	---	FRONT	VERT	SNOW	---	C1
T	45-6-12	-92	-92	---	FRONT	VERT	TOTAL	---	C1
W	37-6-12	-92	-92	---	FRONT	VERT	TOTAL	---	C1
Z	25-6-12	-34	-34	---	FRONT	VERT	TOTAL	---	C1
AA	19-7-8	-1508	-1508	---	FRONT	VERT	TOTAL	---	C1
AH	21-6-12	-124	-124	---	FRONT	VERT	TOTAL	---	C1
AI	23-6-12	-124	-124	---	FRONT	VERT	TOTAL	---	C1
AJ	27-6-12	-124	-124	---	FRONT	VERT	TOTAL	---	C1
AK	29-6-12	-124	-124	---	FRONT	VERT	TOTAL	---	C1
AL	31-6-12	-124	-124	---	FRONT	VERT	TOTAL	---	C1
AM	33-6-12	-66	-66	---	FRONT	VERT	TOTAL	---	C1
AN	35-6-12	-66	-66	---	FRONT	VERT	TOTAL	---	C1
AO	39-6-12	-66	-66	---	FRONT	VERT	TOTAL	---	C1
AP	41-6-12	-66	-66	---	FRONT	VERT	TOTAL	---	C1
AQ	21-6-12	-34	-34	---	FRONT	VERT	TOTAL	---	C1
AR	23-6-12	-34	-34	---	FRONT	VERT	TOTAL	---	C1
AS	27-6-12	-34	-34	---	FRONT	VERT	TOTAL	---	C1
AT	29-6-12	-34	-34	---	FRONT	VERT	TOTAL	---	C1
AU	31-6-12	-36	-36	---	FRONT	VERT	TOTAL	---	C1
AV	33-6-12	-92	-92	---	FRONT	VERT	TOTAL	---	C1
AW	35-6-12	-92	-92	---	FRONT	VERT	TOTAL	---	C1
AX	39-6-12	-92	-92	---	FRONT	VERT	TOTAL	---	C1
AY	41-6-12	-92	-92	---	FRONT	VERT	TOTAL	---	C1
AZ	43-6-12	-92	-92	---	FRONT	VERT	TOTAL	---	C1
BA	47-6-12	-92	-92	---	FRONT	VERT	TOTAL	---	C1
BB	49-6-12	-36	-36	---	FRONT	VERT	TOTAL	---	C1

CONNECTION REQUIREMENTS

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

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF (9.2) PSF AT (30-0-0) FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE (MAIN WIND FORCE RESISTING SYSTEM).INTERNAL WIND PRESSURE IS BASED ON DESIGN (CATEGORY 2). BUILDING MAY BE LOCATED ON (OPEN TERRAIN), AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST (0-0) FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 5.0 PSF RESPECTIVELY.

MT18HS 586 403 2455 1382 3163 3004

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.80 (D) (INPUT = 0.90)
JSI METAL= 0.80 (X) (INPUT = 0.95)

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416638

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
439988	T90	1	1	ROYAL PINE HOMES TRUSS DESC.	

Tamarack Roof Truss, Burlington

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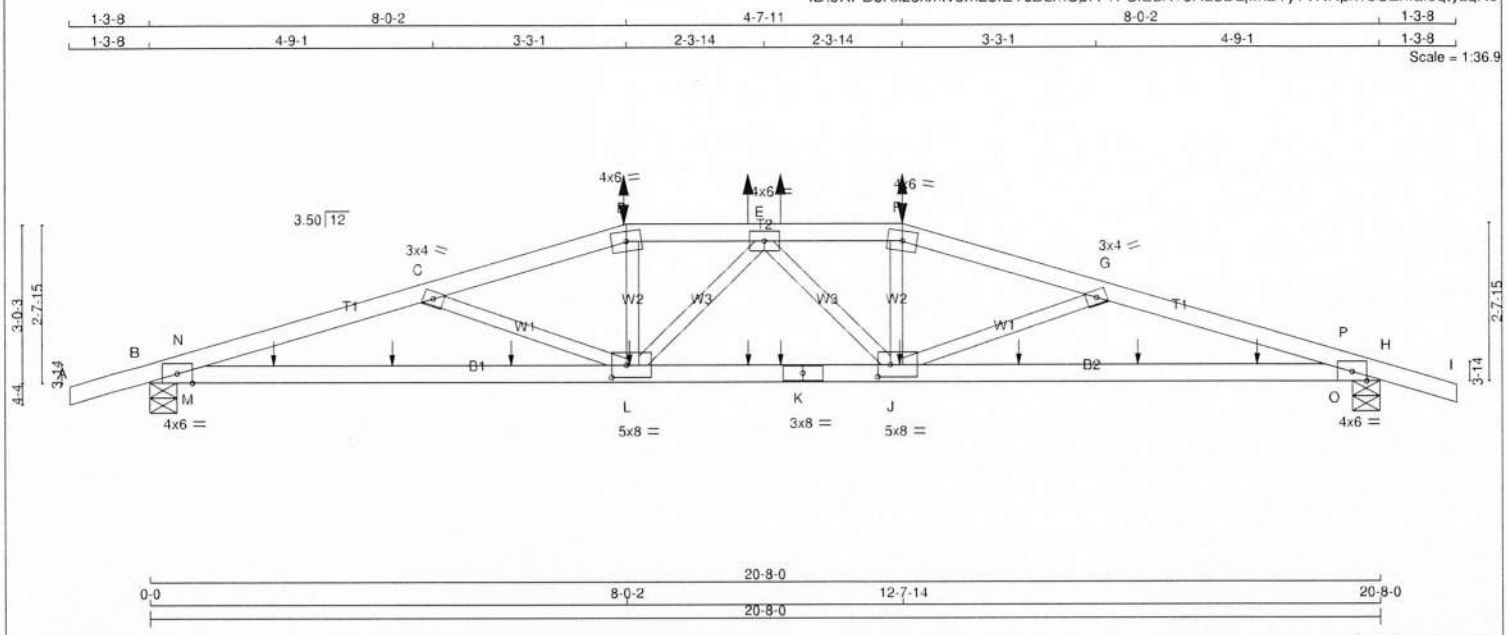

TOTAL WEIGHT = 65 lb

[M]

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 - K	2x4	DRY	No.2	SPF
K - 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	4.0	6.0	Edge	
C	TMW+w	MT20	3.0	4.0		
D	TTW-m	MT20	4.0	6.0		
E	TMWW-t	MT20	4.0	6.0		
F	TTW-m	MT20	4.0	6.0		
G	TMW+w	MT20	3.0	4.0		
H	TMB1-I	MT20	4.0	6.0	Edge	
J	BMWWW-t	MT20	5.0	8.0	2.50	2.50
K	BS-t	MT20	3.0	8.0		
L	BMWWW-t	MT20	5.0	8.0	2.50	3.00

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

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416639

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
B	1269	0	1269	0	0	5-8	1-8
H	1269	0	1269	0	0	5-8	1-8

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
B	894	605 / 0	0 / 0	0 / 0	0 / 0	289 / 0	0 / 0
H	894	605 / 0	0 / 0	0 / 0	0 / 0	289 / 0	0 / 0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.53 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)

CHORDS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 MAX CSI (LC)	MAX. UNBRAC LENGTH
A- B	0 / 15	-84.9	-84.9	0.12 (1)	10.00
B- N	-3233 / 0	-84.9	-84.9	0.20 (4)	3.71
N- C	-3169 / 0	-84.9	-84.9	0.41 (1)	3.53
C- D	-2637 / 0	-84.9	-84.9	0.23 (1)	4.03
D- E	-2543 / 0	-84.9	-84.9	0.15 (1)	4.17
E- F	-2543 / 0	-84.9	-84.9	0.15 (1)	4.17
F- G	-2637 / 0	-84.9	-84.9	0.23 (1)	4.03
G- P	-3169 / 0	-84.9	-84.9	0.41 (1)	3.53
P- H	-3233 / 0	-84.9	-84.9	0.20 (4)	3.71
H- I	0 / 15	-84.9	-84.9	0.12 (1)	10.00
B- M	0 / 3051	-18.5	-18.5	0.59 (1)	10.00
M- Q	0 / 3051	-18.5	-18.5	0.72 (1)	10.00
Q- R	0 / 3051	-18.5	-18.5	0.72 (1)	10.00
R- S	0 / 3051	-18.5	-18.5	0.72 (1)	10.00
S- L	0 / 3051	-18.5	-18.5	0.72 (1)	10.00
L- T	0 / 2627	-18.5	-18.5	0.55 (1)	10.00
T- U	0 / 2627	-18.5	-18.5	0.55 (1)	10.00
U- K	0 / 2627	-18.5	-18.5	0.55 (1)	10.00
K- J	0 / 2627	-18.5	-18.5	0.55 (1)	10.00
J- V	0 / 3051	-18.5	-18.5	0.72 (1)	10.00
V- W	0 / 3051	-18.5	-18.5	0.72 (1)	10.00
W- X	0 / 3051	-18.5	-18.5	0.72 (1)	10.00
X- O	0 / 3051	-18.5	-18.5	0.72 (1)	10.00
O- H	0 / 3051	-18.5	-18.5	0.59 (1)	10.00

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
C- L	-597 / 0	0.16 (5)
L- D	0 / 430	0.11 (1)
L- E	-123 / 33	0.03 (1)
E- J	-123 / 33	0.03 (1)
J- F	0 / 430	0.11 (1)
J- G	-597 / 0	0.16 (5)
M- N	0 / 129	0.00 (1)
O- P	0 / 129	0.00 (1)

SPECIFIED CONCENTRATED LOADS (LBS)

JT	LOC.	LC1	MAX-	MAX+	FACE	DIR.	TYPE	HEEL	CONN.
D	8-0-2	-16	-16	---	FRONT	VERT	DEAD	---	C1
D	8-0-2	7	1	88	BACK	VERT	TOTAL	---	C1
D	8-0-2	-62	-62	---	FRONT	VERT	SNOW	---	C1
E	10-0-12	13	1	93	BACK	VERT	TOTAL	---	C1
E	10-7-4	13	1	93	BACK	VERT	TOTAL	---	C1
F	12-7-14	-16	-16	---	FRONT	VERT	DEAD	---	C1
F	12-7-14	7	1	88	BACK	VERT	TOTAL	---	C1
F	12-7-14	-62	-62	---	FRONT	VERT	SNOW	---	C1
J	12-7-4	1	1	---	BACK	VERT	TOTAL	---	C1
L	8-0-12	1	1	---	BACK	VERT	TOTAL	---	C1
Q	2-0-12	1	1	---	BACK	VERT	TOTAL	---	C1
R	4-0-12	1	1	---	BACK	VERT	TOTAL	---	C1
S	6-0-12	1	1	---	BACK	VERT	TOTAL	---	C1
T	10-0-12	1	1	---	BACK	VERT	TOTAL	---	C1

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	=	6.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.4	PSF
TOTAL LOAD		=	36.7	PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 6.00/12

*** NON STANDARD GIRDER ***
ADDT'L USER-DEFINED LOADS APPLIED TO ALL LOAD CASES.

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

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

(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 (0.69")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.17")
ALLOWABLE DEFL.(TL)= L/360 (0.69")
CALCULATED VERT. DEFL.(TL) = L/ 760 (0.33")

CSI: TC=0.41/1.00 (G-P:1) , BC=0.72/1.00 (J-O:1) , WB=0.16/1.00 (G-J:5) , SSI=0.18/1.00 (G-P:5)

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.72 (H) (INPUT = 0.90)
JSI METAL= 0.78 (K) (INPUT = 0.95)

CONTINUED ON PAGE 2

SPECIFIED CONCENTRATED LOADS (LBS)

JT	LOC.	LC1	MAX-	MAX+	FACE	DIR.	TYPE	HEEL	CONN.
U	10-7-4	1	1	---	BACK	VERT	TOTAL	---	C1
V	14-7-4	1	1	---	BACK	VERT	TOTAL	---	C1
W	16-7-4	1	1	---	BACK	VERT	TOTAL	---	C1
X	18-7-4	1	1	---	BACK	VERT	TOTAL	---	C1

CONNECTION REQUIREMENTS

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

Structural component only
DWG# T-2416639

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
439988	T91	4	1	ROYAL PINE HOMES TRUSS DESC.	

Tamarack Roof Truss, Burlington

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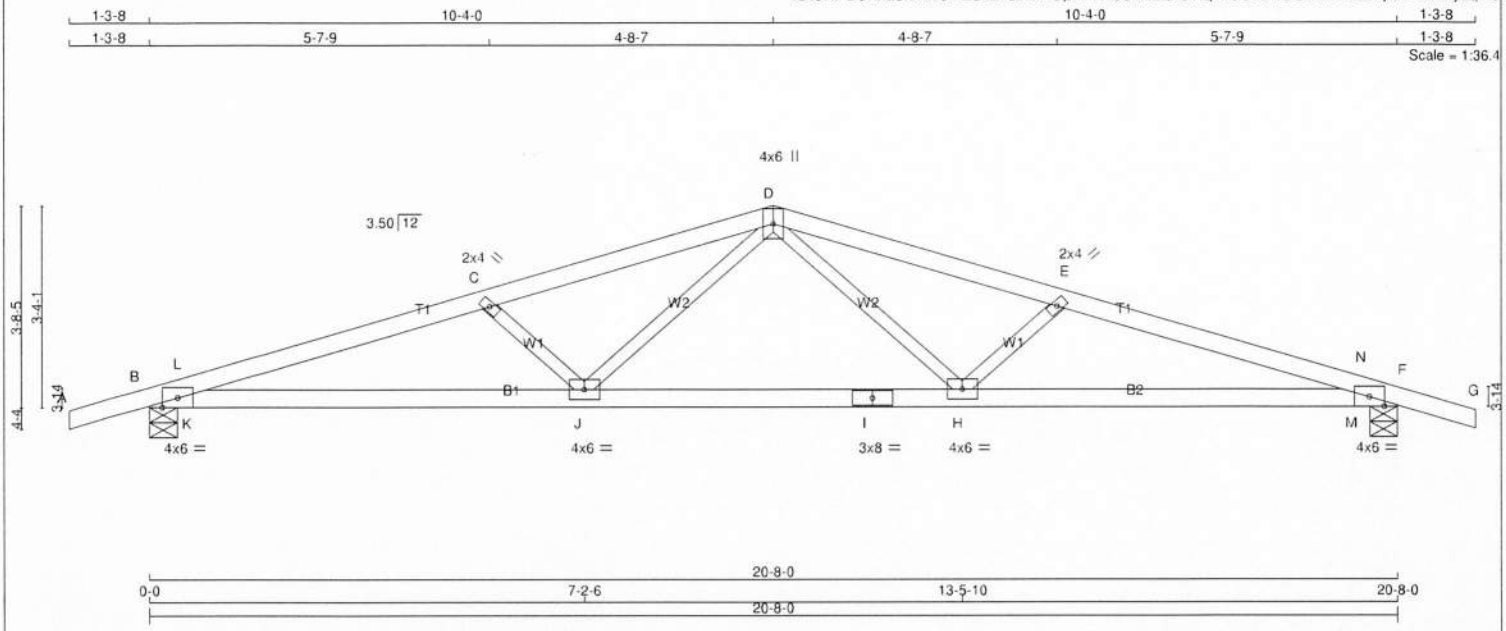

TOTAL WEIGHT = 4 X 62 = 247 lb

[M][F]

LUMBER

N. L. G. A. RULES

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

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMB1-I	MT20	4.0	6.0	Edge	
C	TMW+w	MT20	2.0	4.0		
D	TTWW+p	MT20	4.0	6.0		
E	TMW+w	MT20	2.0	4.0		
F	TMB1-I	MT20	4.0	6.0	Edge	
H	BMWW-t	MT20	4.0	6.0		
I	BS-t	MT20	3.0	8.0		
J	BMWW-t	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

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
B	1181	0	1181	0	0	5-8	1-8
F	1181	0	1181	0	0	5-8	1-8

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
B	836	543 / 0	0 / 0	0 / 0	0 / 0	293 / 0	0 / 0
F	836	543 / 0	0 / 0	0 / 0	0 / 0	293 / 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 = 3.86 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD LC1 (PLF) FROM	TO	MAX CSI (LC)	MAX. UNBRAC LENGTH
A- B	0 / 15	-84.9	-84.9	0.10 (1)	10.00
B- L	-2875 / 0	-84.9	-84.9	0.10 (1)	4.05
L- C	-2824 / 0	-84.9	-84.9	0.34 (1)	3.86
C- D	-2458 / 0	-84.9	-84.9	0.30 (1)	4.14
D- E	-2458 / 0	-84.9	-84.9	0.30 (1)	4.14
E- N	-2824 / 0	-84.9	-84.9	0.34 (1)	3.86
N- F	-2875 / 0	-84.9	-84.9	0.10 (1)	4.05
F- G	0 / 15	-84.9	-84.9	0.10 (1)	10.00
B- K	0 / 2723	-18.5	-18.5	0.54 (1)	10.00
K- J	0 / 2723	-18.5	-18.5	0.60 (1)	10.00
J- I	0 / 1806	-18.5	-18.5	0.38 (1)	10.00
I- H	0 / 1806	-18.5	-18.5	0.38 (1)	10.00
H- M	0 / 2723	-18.5	-18.5	0.60 (1)	10.00
M- F	0 / 2723	-18.5	-18.5	0.54 (1)	10.00

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
D- H	0 / 756	0.17 (1)
H- E	-539 / 0	0.09 (1)
J- D	0 / 756	0.17 (1)
C- J	-539 / 0	0.09 (1)
K- L	-64 / 72	0.00 (1)
M- N	-64 / 72	0.00 (1)

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	23.3	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.4	PSF
TOTAL LOAD		=	36.7	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 , NBC-2019AE
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(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 (0.69")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.14")
ALLOWABLE DEFL.(TL)= L/360 (0.69")
CALCULATED VERT. DEFL.(TL) = L/ 905 (0.27")

CSI: TC=0.34/1.00 (E-N:1) , BC=0.60/1.00 (J-K:1) , WB=0.17/1.00 (D-H:1) , SSI=0.19/1.00 (E-N:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.73 (D) (INPUT = 0.90)
JSI METAL= 0.58 (B) (INPUT = 0.95)

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416640

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
439988	PB1	1	1	ROYAL PINE HOMES TRUSS DESC.	

Tamarack Roof Truss, Burlington

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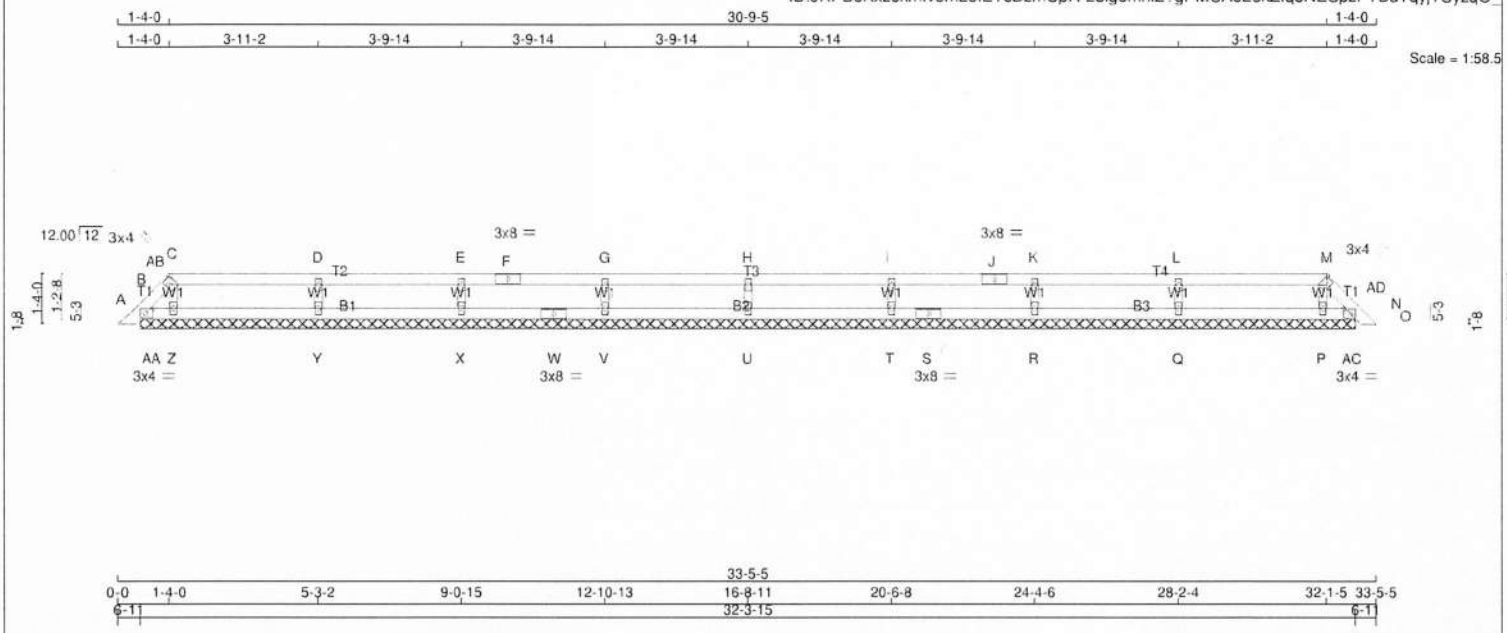

TOTAL WEIGHT = 81 lb

[M]

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 - J	2x4	DRY	No.2	SPF
J - M	2x4	DRY	No.2	SPF
M - O	2x4	DRY	No.2	SPF
B - W	2x4	DRY	No.2	SPF
W - S	2x4	DRY	No.2	SPF
S - N	2x4	DRY	No.2	SPF
ALL WEBS	2x3	DRY	No.2	SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMB1-I	MT20	3.0	4.0	1.50	2.50
C	TTW+h	MT20	3.0	4.0	Edge	2.00
D, E, G, H, I, K, L						
D	TMW+w	MT20	2.0	4.0		
F	TS-t	MT20	3.0	8.0		
J	TS-t	MT20	3.0	8.0		
M	TTW+h	MT20	3.0	4.0	Edge	2.00
N	TMB1-I	MT20	3.0	4.0	1.50	2.50
P, Q, R, T, U, V, X, Y, Z						
P	BMW1+w	MT20	2.0	4.0		
S	BS-t	MT20	3.0	8.0		
W	BS-t	MT20	3.0	8.0		

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 VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
B	80	0	80	0	0	32-3-15 (9-11/8)	
Z	206	0	206	0	0	32-3-15 (9-11/8)	
P	206	0	206	0	0	32-3-15 (9-11/8)	
N	80	0	80	0	0	32-3-15 (9-11/8)	
Q	446	0	446	0	0	32-3-15 (9-11/8)	
Y	446	0	446	0	0	32-3-15 (9-11/8)	
R	381	0	381	0	0	32-3-15 (9-11/8)	
X	381	0	381	0	0	32-3-15 (9-11/8)	
T	399	0	399	0	0	32-3-15 (9-11/8)	
V	399	0	399	0	0	32-3-15 (9-11/8)	
U	393	0	393	0	0	32-3-15 (9-11/8)	

VALUE IN PARENTHESIS INDICATES EFFECTIVE BEARING LENGTH

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
B	54	51 / 0	0 / 0	0 / 0	0 / 0	2 / 0	0 / 0
Z	149	78 / 0	0 / 0	0 / 0	0 / 0	71 / 0	0 / 0
P	149	78 / 0	0 / 0	0 / 0	0 / 0	71 / 0	0 / 0
N	53	51 / 0	0 / 0	0 / 0	0 / 0	2 / 0	0 / 0
Q	316	205 / 0	0 / 0	0 / 0	0 / 0	111 / 0	0 / 0
Y	316	205 / 0	0 / 0	0 / 0	0 / 0	111 / 0	0 / 0
R	271	171 / 0	0 / 0	0 / 0	0 / 0	100 / 0	0 / 0
X	271	171 / 0	0 / 0	0 / 0	0 / 0	100 / 0	0 / 0
T	283	180 / 0	0 / 0	0 / 0	0 / 0	103 / 0	0 / 0
V	283	180 / 0	0 / 0	0 / 0	0 / 0	103 / 0	0 / 0
U	279	177 / 0	0 / 0	0 / 0	0 / 0	102 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) B, Z, P, N, Q, Y, R, X, T, V, U

BRACING

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

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1	MAX CSI (LC)	MAX. UNBRAC LENGTH
A- B	0 / 12	-84.9	-84.9	0.01 (1)	10.00	
B-AB	-11 / 11	-84.9	-84.9	0.01 (4)	6.25	
AB- C	-33 / 0	-84.9	-84.9	0.01 (4)	6.25	
C- D	-3 / 0	-84.9	-84.9	0.18 (1)	10.00	
D- E	-3 / 0	-84.9	-84.9	0.18 (1)	10.00	
E- F	-3 / 0	-84.9	-84.9	0.14 (1)	10.00	
F- G	-3 / 0	-84.9	-84.9	0.14 (1)	10.00	
G- H	-3 / 0	-84.9	-84.9	0.14 (1)	10.00	
H- I	-3 / 0	-84.9	-84.9	0.14 (1)	10.00	
I- J	-3 / 0	-84.9	-84.9	0.14 (1)	10.00	
J- K	-3 / 0	-84.9	-84.9	0.14 (1)	10.00	
K- L	-3 / 0	-84.9	-84.9	0.18 (1)	10.00	
L- M	-3 / 0	-84.9	-84.9	0.18 (1)	10.00	
M-AD	-33 / 0	-84.9	-84.9	0.01 (4)	6.25	
AD- N	-11 / 11	-84.9	-84.9	0.01 (4)	6.25	
N- O	0 / 12	-84.9	-84.9	0.01 (1)	10.00	
B-AA	0 / 19	-18.5	-18.5	0.01 (1)	10.00	
AA- Z	0 / 19	-18.5	-18.5	0.04 (4)	10.00	
Z- Y	0 / 3	-18.5	-18.5	0.06 (4)	10.00	
Y- X	0 / 3	-18.5	-18.5	0.06 (4)	10.00	
X- W	0 / 3	-18.5	-18.5	0.05 (4)	10.00	

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
Z- C	-129 / 0	0.02 (1)
P- M	-129 / 0	0.02 (1)
Q- L	-374 / 0	0.05 (1)
Y- D	-374 / 0	0.05 (1)
R- K	-311 / 0	0.04 (1)
X- E	-311 / 0	0.04 (1)
T- I	-328 / 0	0.05 (1)
V- G	-328 / 0	0.05 (1)
U- H	-322 / 0	0.05 (1)
AA-AB	-61 / 0	0.00 (1)
AC-AD	-61 / 0	0.00 (1)

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	23.3	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.4	PSF
TOTAL LOAD		=	36.7	PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 12.00/12

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

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

(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=0.18/1.00 (D-E:1) , BC=0.06/1.00 (Y-Z:4) , WB=0.05/1.00 (D-Y:1) , SSI=0.16/1.00 (C-D:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.74 (C) (INPUT = 0.90)
JSI METAL= 0.10 (F) (INPUT = 0.95)

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416602

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LOADING
TOTAL LOAD CASES: (4)

CHORDS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD LC1 (PLF) FROM	TO	MAX CSI (LC)	MAX. UNBRAC LENGTH
W- V	0 / 3	-18.5	-18.5	0.05 (4)	10.00
V- U	0 / 3	-18.5	-18.5	0.05 (4)	10.00
U- T	0 / 3	-18.5	-18.5	0.05 (4)	10.00
T- S	0 / 3	-18.5	-18.5	0.05 (4)	10.00
S- R	0 / 3	-18.5	-18.5	0.05 (4)	10.00
R- Q	0 / 3	-18.5	-18.5	0.06 (4)	10.00
Q- P	0 / 3	-18.5	-18.5	0.06 (4)	10.00
P-AC	0 / 13	-18.5	-18.5	0.04 (4)	10.00
AC- N	0 / 13	-18.5	-18.5	0.01 (1)	10.00

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)

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100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416602

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
439988	PB2	1	1	ROYAL PINE HOMES TRUSS DESC.	

Tamarack Roof Truss, Burlington

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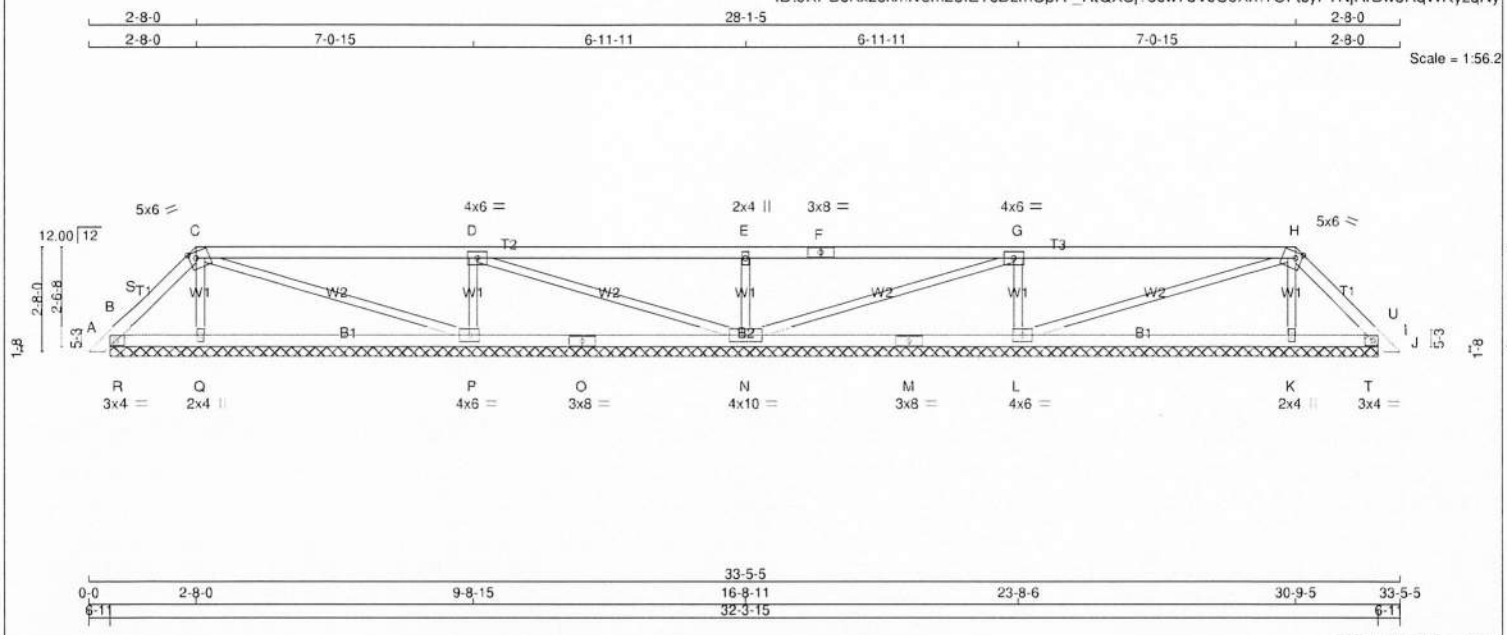

TOTAL WEIGHT = 108 lb

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 - O	2x4	DRY	No.2	SPF
O - 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	2.25
C	TTWW-m	MT20	5.0	6.0	1.75	2.00
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-m	MT20	5.0	6.0	1.75	2.00
I	TMB1-I	MT20	3.0	4.0	1.50	2.25
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	4.0	10.0		
O	BS-t	MT20	3.0	8.0		
P	BMWW1-t	MT20	4.0	6.0		
Q	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 VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
B	180	0	180	0	0	32-3-15 (11-11-$2)	
Q	369	0	369	0	0	32-3-15 (11-11-$2)	
P	809	0	809	0	0	32-3-15 (11-11-$2)	
N	702	0	702	0	0	32-3-15 (11-11-$2)	
L	809	0	809	0	0	32-3-15 (11-11-$2)	
K	369	0	369	0	0	32-3-15 (11-11-$2)	
I	179	0	179	0	0	32-3-15 (11-11-$2)	

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	123	104 / 0	0 / 0	0 / 0	0 / 0	19 / 0	0 / 0
Q	267	141 / 0	0 / 0	0 / 0	0 / 0	126 / 0	0 / 0
P	573	371 / 0	0 / 0	0 / 0	0 / 0	202 / 0	0 / 0
N	498	316 / 0	0 / 0	0 / 0	0 / 0	183 / 0	0 / 0
L	573	371 / 0	0 / 0	0 / 0	0 / 0	202 / 0	0 / 0
K	267	141 / 0	0 / 0	0 / 0	0 / 0	126 / 0	0 / 0
I	123	104 / 0	0 / 0	0 / 0	0 / 0	19 / 0	0 / 0

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

CHORDS MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD LC1 (PLF) FROM	TO	MAX. CSI (LC)	MAX. UNBRAC LENGTH	WEBS MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
A- B	0 / 12	-84.9	-84.9	0.01 (1)	10.00	Q- C	-240 / 0	0.04 (1)
B- S	-2 / 34	-84.9	-84.9	0.03 (4)	10.00	C- P	-28 / 0	0.03 (1)
S- C	-90 / 0	-84.9	-84.9	0.04 (1)	6.25	P- D	-669 / 0	0.11 (1)
C- D	-18 / 0	-84.9	-84.9	0.62 (1)	6.25	D- N	-46 / 0	0.05 (1)
D- E	0 / 26	-84.9	-84.9	0.62 (1)	10.00	N- E	-546 / 0	0.09 (1)
E- F	0 / 26	-84.9	-84.9	0.62 (1)	10.00	N- G	-46 / 0	0.05 (1)
F- G	0 / 26	-84.9	-84.9	0.62 (1)	10.00	L- G	-669 / 0	0.11 (1)
G- H	-18 / 0	-84.9	-84.9	0.62 (1)	6.25	L- H	-28 / 0	0.03 (1)
H- U	-89 / 0	-84.9	-84.9	0.04 (1)	6.25	K- H	-239 / 0	0.04 (1)
U- I	-2 / 34	-84.9	-84.9	0.03 (4)	10.00	R- S	-197 / 0	0.00 (1)
I- J	0 / 12	-84.9	-84.9	0.01 (1)	10.00	T- U	-197 / 0	0.00 (1)
B- R	0 / 57	-18.5	-18.5	0.06 (1)	10.00			
R- Q	0 / 57	-18.5	-18.5	0.14 (4)	10.00			
Q- P	0 / 45	-18.5	-18.5	0.19 (4)	10.00			
P- O	0 / 19	-18.5	-18.5	0.19 (4)	10.00			
O- N	0 / 19	-18.5	-18.5	0.19 (4)	10.00			
N- M	0 / 19	-18.5	-18.5	0.19 (4)	10.00			
M- L	0 / 19	-18.5	-18.5	0.19 (4)	10.00			
L- K	0 / 45	-18.5	-18.5	0.19 (4)	10.00			
K- T	0 / 57	-18.5	-18.5	0.14 (4)	10.00			
T- I	0 / 57	-18.5	-18.5	0.06 (1)	10.00			

[M]

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	23.3	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.4	PSF
TOTAL LOAD		=	36.7	PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 12.00/12

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

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

(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=0.62/1.00 (D-E:1) , BC=0.19/1.00 (P-Q:4) , WB=0.11/1.00 (D-P: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) (PSI) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.67 (C) (INPUT = 0.90)
JSI METAL= 0.22 (F) (INPUT = 0.95)

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416603

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
439988	PB3	1	1	ROYAL PINE HOMES TRUSS DESC.	

Tamarack Roof Truss, Burlington

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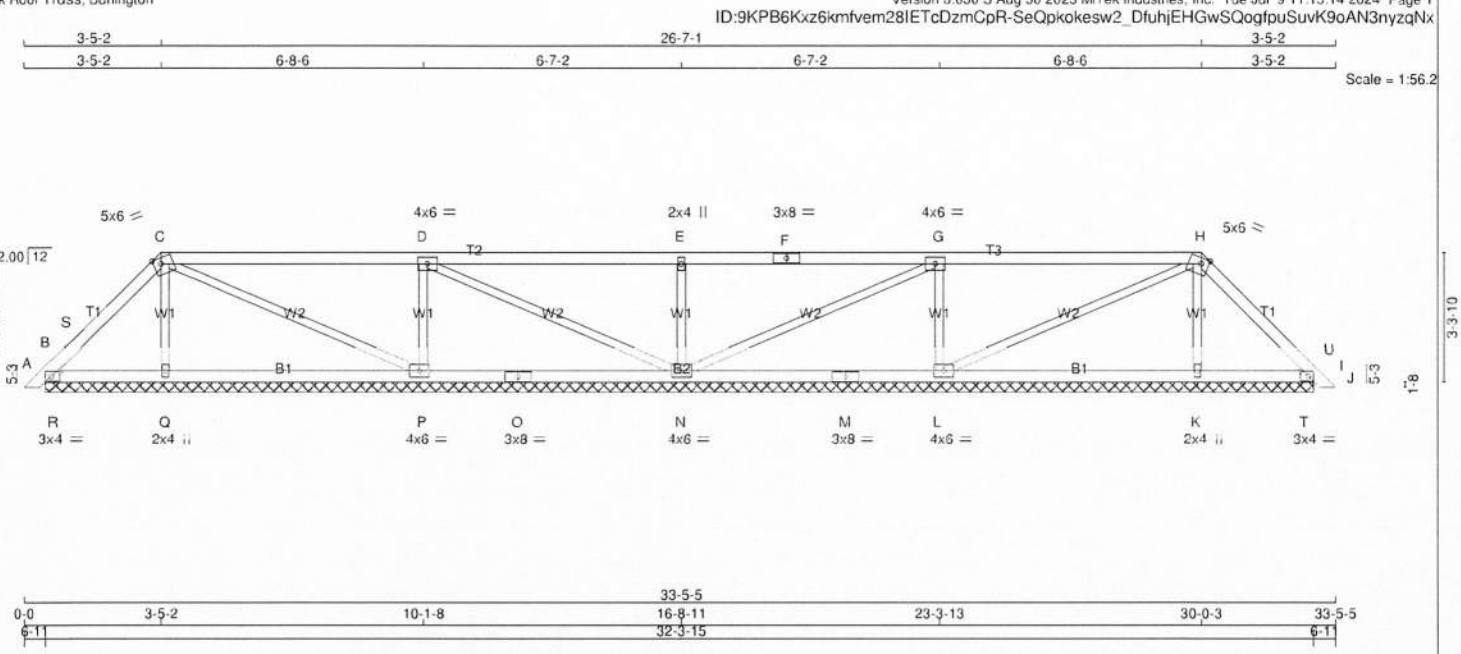

TOTAL WEIGHT = 112 lb

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 - O	2x4	DRY	No.2	SPF
O - 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	2.50
C	TTWW-m	MT20	5.0	6.0	Edge	2.25
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-m	MT20	5.0	6.0	Edge	2.25
I	TMB1-I	MT20	3.0	4.0	1.50	2.50
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	4.0	6.0		
O	BS-t	MT20	3.0	8.0		
P	BMWW1-t	MT20	4.0	6.0		
Q	BMW1+w	MT20	2.0	4.0		

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

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416604

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
B	248	0	248	0	0	32-3-15 (11-11-$2)	
Q	354	0	354	0	0	32-3-15 (11-11-$2)	
P	755	0	755	0	0	32-3-15 (11-11-$2)	
N	704	0	704	0	0	32-3-15 (11-11-$2)	
L	755	0	755	0	0	32-3-15 (11-11-$2)	
K	354	0	354	0	0	32-3-15 (11-11-$2)	
I	248	0	248	0	0	32-3-15 (11-11-$2)	

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	172	131 / 0	0 / 0	0 / 0	0 / 0	41 / 0	0 / 0
Q	256	137 / 0	0 / 0	0 / 0	0 / 0	119 / 0	0 / 0
P	535	345 / 0	0 / 0	0 / 0	0 / 0	190 / 0	0 / 0
N	499	320 / 0	0 / 0	0 / 0	0 / 0	178 / 0	0 / 0
L	535	345 / 0	0 / 0	0 / 0	0 / 0	190 / 0	0 / 0
K	256	137 / 0	0 / 0	0 / 0	0 / 0	119 / 0	0 / 0
I	172	131 / 0	0 / 0	0 / 0	0 / 0	41 / 0	0 / 0

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

CHORDS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD LC1 (PLF) FROM	TO	MAX CSI (LC)	MAX. UNBRAC LENGTH
A- B	0 / 12	-84.9	-84.9	0.01 (1)	10.00
B- S	0 / 14	-84.9	-84.9	0.05 (1)	10.00
S- C	-120 / 0	-84.9	-84.9	0.08 (1)	6.25
C- D	-29 / 0	-84.9	-84.9	0.55 (1)	6.25
D- E	0 / 44	-84.9	-84.9	0.56 (1)	10.00
E- F	0 / 44	-84.9	-84.9	0.56 (1)	10.00
F- G	0 / 44	-84.9	-84.9	0.56 (1)	10.00
G- H	-29 / 0	-84.9	-84.9	0.55 (1)	6.25
H- U	-120 / 0	-84.9	-84.9	0.08 (1)	6.25
U- I	0 / 14	-84.9	-84.9	0.05 (1)	10.00
I- J	0 / 12	-84.9	-84.9	0.01 (1)	10.00
B- R	0 / 78	-18.5	-18.5	0.09 (1)	10.00
R- Q	0 / 78	-18.5	-18.5	0.13 (4)	10.00
Q- P	0 / 70	-18.5	-18.5	0.17 (4)	10.00
P- O	0 / 29	-18.5	-18.5	0.17 (4)	10.00
O- N	0 / 29	-18.5	-18.5	0.17 (4)	10.00
N- M	0 / 29	-18.5	-18.5	0.17 (4)	10.00
M- L	0 / 29	-18.5	-18.5	0.17 (4)	10.00
L- K	0 / 70	-18.5	-18.5	0.17 (4)	10.00
K- T	0 / 78	-18.5	-18.5	0.13 (4)	10.00
T- I	0 / 78	-18.5	-18.5	0.09 (1)	10.00

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
Q- C	-227 / 0	0.04 (1)
C- P	-45 / 0	0.05 (1)
P- D	-613 / 0	0.12 (1)
D- N	-80 / 0	0.08 (1)
N- E	-516 / 0	0.10 (1)
N- G	-80 / 0	0.08 (1)
L- G	-613 / 0	0.12 (1)
L- H	-45 / 0	0.05 (1)
K- H	-227 / 0	0.04 (1)
R- S	-286 / 0	0.00 (1)
T- U	-286 / 0	0.00 (1)

[M]

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	23.3	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.4	PSF
TOTAL LOAD		=	36.7	PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 12.00/12

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

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

(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=0.56/1.00 (D-E:1) , BC=0.17/1.00 (P-Q:4) , WB=0.12/1.00 (D-P: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) (PSI) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.79 (N) (INPUT = 0.90)
JSI METAL= 0.35 (F) (INPUT = 0.95)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
439988	PB4	1	1	ROYAL PINE HOMES TRUSS DESC.	

Tamarack Roof Truss, Burlington

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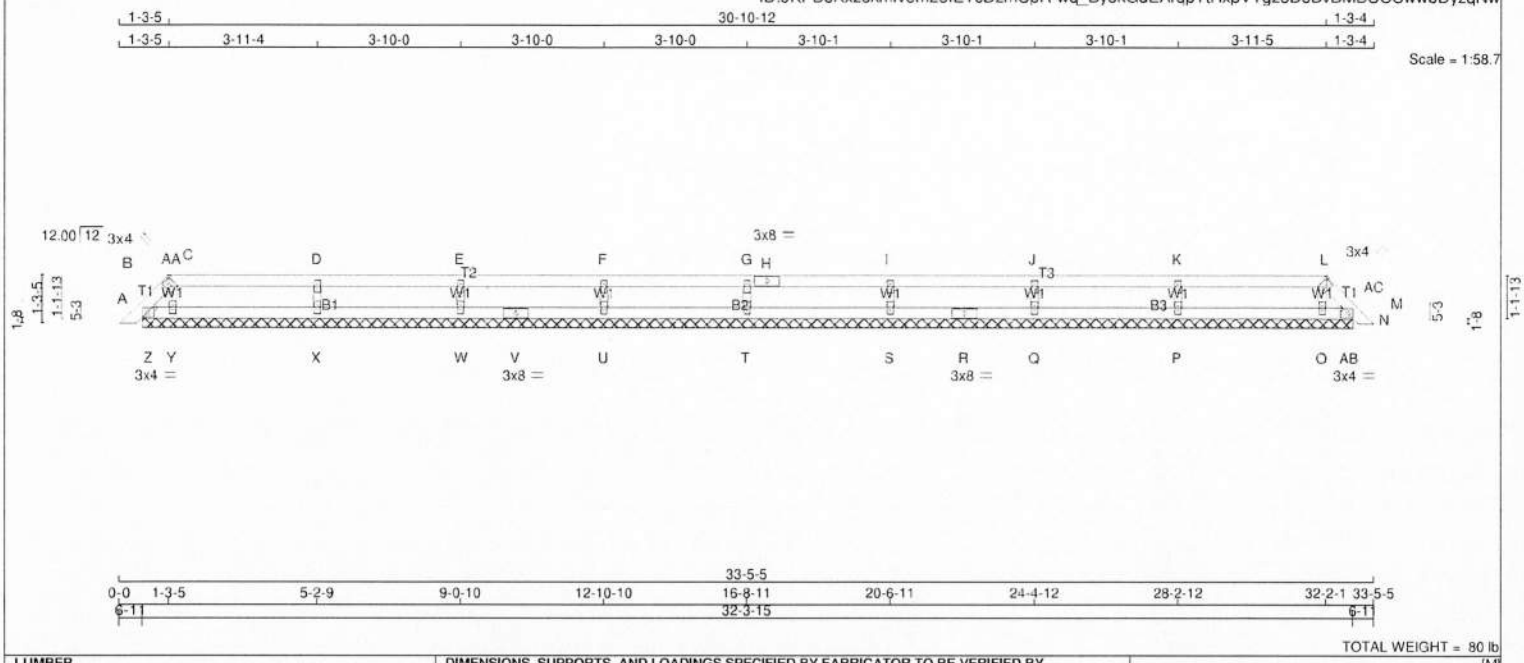

TOTAL WEIGHT = 80 lb

LUMBER
N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
A - C	2x4	DRY	No.2	SPF
C - H	2x4	DRY	No.2	SPF
H - L	2x4	DRY	No.2	SPF
L - N	2x4	DRY	No.2	SPF
B - V	2x4	DRY	No.2	SPF
V - R	2x4	DRY	No.2	SPF
R - M	2x4	DRY	No.2	SPF
ALL WEBS	2x3	DRY	No.2	SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMB1-I	MT20	3.0	4.0	1.50	2.50
C	TTW+h	MT20	3.0	4.0	Edge	2.00
D, E, F, G, I, J, K						
D	TMW+w	MT20	2.0	4.0		
H	TS-I	MT20	3.0	8.0		
L	TTW+h	MT20	3.0	4.0	Edge	2.00
M	TMB1-I	MT20	3.0	4.0	1.50	2.50
O, P, Q, S, T, U, W, X, Y						
O	BMW1+w	MT20	2.0	4.0		
R	BS-I	MT20	3.0	8.0		
V	BS-I	MT20	3.0	8.0		

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 VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
B	75	0	75	0	0	32-3-15 (11-11-$2)	
Y	205	0	205	0	0	32-3-15 (11-11-$2)	
M	75	0	75	0	0	32-3-15 (11-11-$2)	
O	205	0	205	0	0	32-3-15 (11-11-$2)	
P	448	0	448	0	0	32-3-15 (11-11-$2)	
X	448	0	448	0	0	32-3-15 (11-11-$2)	
Q	382	0	382	0	0	32-3-15 (11-11-$2)	
W	382	0	382	0	0	32-3-15 (11-11-$2)	
S	400	0	400	0	0	32-3-15 (11-11-$2)	
U	400	0	400	0	0	32-3-15 (11-11-$2)	
T	395	0	395	0	0	32-3-15 (11-11-$2)	

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	50	50 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0
Y	149	77 / 0	0 / 0	0 / 0	0 / 0	72 / 0	0 / 0
M	50	50 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0
O	149	77 / 0	0 / 0	0 / 0	0 / 0	72 / 0	0 / 0
P	317	206 / 0	0 / 0	0 / 0	0 / 0	111 / 0	0 / 0
X	317	206 / 0	0 / 0	0 / 0	0 / 0	111 / 0	0 / 0
Q	272	171 / 0	0 / 0	0 / 0	0 / 0	101 / 0	0 / 0
W	272	171 / 0	0 / 0	0 / 0	0 / 0	101 / 0	0 / 0
S	284	181 / 0	0 / 0	0 / 0	0 / 0	103 / 0	0 / 0
U	284	181 / 0	0 / 0	0 / 0	0 / 0	103 / 0	0 / 0
T	280	178 / 0	0 / 0	0 / 0	0 / 0	102 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) B, Y, M, O, P, X, Q, W, S, U, T

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

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

LOADING
TOTAL LOAD CASES: (4)

CHORDS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1	MAX CSI (LC)	MAX. UNBRAC LENGTH
A- B	0 / 12	-84.9	-84.9	0.01 (1)	10.00	
B-AA	-11 / 12	-84.9	-84.9	0.01 (4)	6.25	
AA- C	-35 / 0	-84.9	-84.9	0.01 (4)	6.25	
C- D	-3 / 0	-84.9	-84.9	0.19 (1)	10.00	
D- E	-3 / 0	-84.9	-84.9	0.19 (1)	10.00	
E- F	-3 / 0	-84.9	-84.9	0.14 (1)	10.00	
F- G	-3 / 0	-84.9	-84.9	0.14 (1)	10.00	
G- H	-3 / 0	-84.9	-84.9	0.14 (1)	10.00	
H- I	-3 / 0	-84.9	-84.9	0.14 (1)	10.00	
I- J	-3 / 0	-84.9	-84.9	0.14 (1)	10.00	
J- K	-3 / 0	-84.9	-84.9	0.19 (1)	10.00	
K- L	-3 / 0	-84.9	-84.9	0.19 (1)	10.00	
L-AC	-35 / 0	-84.9	-84.9	0.01 (4)	6.25	
AC- M	-11 / 12	-84.9	-84.9	0.01 (4)	6.25	
M- N	0 / 12	-84.9	-84.9	0.01 (1)	10.00	
B- Z	0 / 19	-18.5	-18.5	0.01 (1)	10.00	
Z- Y	0 / 19	-18.5	-18.5	0.05 (4)	10.00	
Y- X	0 / 3	-18.5	-18.5	0.06 (4)	10.00	
X- W	0 / 3	-18.5	-18.5	0.06 (4)	10.00	
W- V	0 / 3	-18.5	-18.5	0.05 (4)	10.00	
V- U	0 / 3	-18.5	-18.5	0.05 (4)	10.00	

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
Y- C	-125 / 0	0.02 (1)
O- L	-125 / 0	0.02 (1)
P- K	-375 / 0	0.05 (1)
X- D	-375 / 0	0.05 (1)
Q- J	-312 / 0	0.04 (1)
W- E	-312 / 0	0.04 (1)
S- I	-329 / 0	0.05 (1)
U- F	-329 / 0	0.05 (1)
T- G	-324 / 0	0.05 (1)
Z-AA	-61 / 0	0.00 (1)
AB-AC	-61 / 0	0.00 (1)

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	23.3	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.4	PSF
TOTAL LOAD		=	36.7	PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 12.00/12

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

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

(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=0.19/1.00 (D-E:1) , BC=0.06/1.00 (X-Y:4) , WB=0.05/1.00 (D-X:1) , SSI=0.16/1.00 (C-D:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.74 (L) (INPUT = 0.90)
JSI METAL= 0.08 (H) (INPUT = 0.95)

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416605

CONTINUED ON PAGE 2

LOADING
TOTAL LOAD CASES: (4)

CHORDS MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD LC1 (PLF) FROM	TO	MAX CSI (LC)	MAX. UNBRAC LENGTH	WEBS MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
U- T	0 / 3	-18.5	-18.5	0.05 (4)	10.00			
T- S	0 / 3	-18.5	-18.5	0.05 (4)	10.00			
S- R	0 / 3	-18.5	-18.5	0.05 (4)	10.00			
R- Q	0 / 3	-18.5	-18.5	0.05 (4)	10.00			
Q- P	0 / 3	-18.5	-18.5	0.06 (4)	10.00			
P- O	0 / 3	-18.5	-18.5	0.06 (4)	10.00			
O-AB	0 / 19	-18.5	-18.5	0.05 (4)	10.00			
AB- M	0 / 19	-18.5	-18.5	0.01 (1)	10.00			

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416605

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
439988	PB5	1	1	ROYAL PINE HOMES TRUSS DESC.	

Tamarack Roof Truss, Burlington

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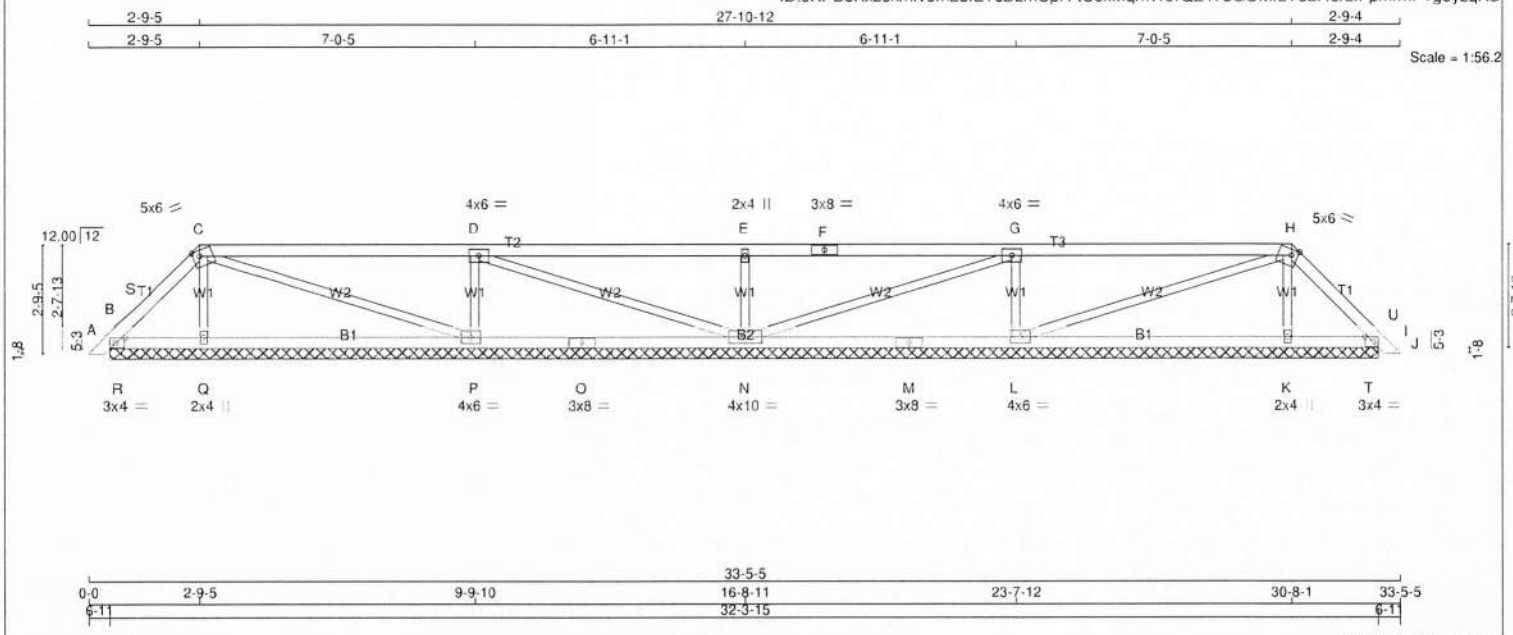

TOTAL WEIGHT = 109 lb

[M]

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 - O	2x4	DRY	No.2	SPF
O - 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	2.50
C	TTWW-m	MT20	5.0	6.0	1.75	2.00
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-m	MT20	5.0	6.0	1.75	2.00
I	TMB1-I	MT20	3.0	4.0	1.50	2.50
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	4.0	10.0		
O	BS-t	MT20	3.0	8.0		
P	BMWW1-t	MT20	4.0	6.0		
Q	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 VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
B	189	0	189	0	0	32-3-15 (11-11-$2)	
Q	367	0	367	0	0	32-3-15 (11-11-$2)	
P	802	0	802	0	0	32-3-15 (11-11-$2)	
N	701	0	701	0	0	32-3-15 (11-11-$2)	
L	802	0	802	0	0	32-3-15 (11-11-$2)	
K	367	0	367	0	0	32-3-15 (11-11-$2)	
I	189	0	189	0	0	32-3-15 (11-11-$2)	

VALUE IN PARENTHESIS INDICATES EFFECTIVE BEARING LEVEL

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
B	130	107 / 0	0 / 0	0 / 0	0 / 0	23 / 0	0 / 0
Q	265	140 / 0	0 / 0	0 / 0	0 / 0	125 / 0	0 / 0
P	568	368 / 0	0 / 0	0 / 0	0 / 0	200 / 0	0 / 0
N	498	316 / 0	0 / 0	0 / 0	0 / 0	182 / 0	0 / 0
L	568	368 / 0	0 / 0	0 / 0	0 / 0	200 / 0	0 / 0
K	265	140 / 0	0 / 0	0 / 0	0 / 0	125 / 0	0 / 0
I	130	107 / 0	0 / 0	0 / 0	0 / 0	23 / 0	0 / 0

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

CHORDS MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD LC1 (PLF) FROM	TO	MAX CSI (LC)	MAX. UNBRAC LENGTH	WEBS MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
A- B	0 / 12	-84.9	-84.9	0.01 (1)	10.00	Q- C	-238 / 0	0.04 (1)
B- S	-1 / 30	-84.9	-84.9	0.03 (1)	10.00	C- P	-30 / 0	0.03 (1)
S- C	-93 / 0	-84.9	-84.9	0.04 (1)	6.25	P- D	-662 / 0	0.11 (1)
C- D	-20 / 0	-84.9	-84.9	0.61 (1)	6.25	D- N	-51 / 0	0.05 (1)
D- E	0 / 28	-84.9	-84.9	0.61 (1)	10.00	N- E	-542 / 0	0.09 (1)
E- F	0 / 28	-84.9	-84.9	0.61 (1)	10.00	N- G	-51 / 0	0.05 (1)
F- G	0 / 28	-84.9	-84.9	0.61 (1)	10.00	L- G	-662 / 0	0.11 (1)
G- H	-20 / 0	-84.9	-84.9	0.61 (1)	6.25	L- H	-30 / 0	0.03 (1)
H- U	-93 / 0	-84.9	-84.9	0.04 (1)	6.25	K- H	-238 / 0	0.04 (1)
U- I	-1 / 30	-84.9	-84.9	0.03 (1)	10.00	R- S	-207 / 0	0.00 (1)
I- J	0 / 12	-84.9	-84.9	0.01 (1)	10.00	T- U	-207 / 0	0.00 (1)
B- R	0 / 59	-18.5	-18.5	0.06 (1)	10.00			
R- Q	0 / 59	-18.5	-18.5	0.14 (4)	10.00			
Q- P	0 / 49	-18.5	-18.5	0.19 (4)	10.00			
P- O	0 / 20	-18.5	-18.5	0.18 (4)	10.00			
O- N	0 / 20	-18.5	-18.5	0.18 (4)	10.00			
N- M	0 / 20	-18.5	-18.5	0.18 (4)	10.00			
M- L	0 / 20	-18.5	-18.5	0.18 (4)	10.00			
L- K	0 / 49	-18.5	-18.5	0.19 (4)	10.00			
K- T	0 / 59	-18.5	-18.5	0.14 (4)	10.00			
T- I	0 / 59	-18.5	-18.5	0.06 (1)	10.00			

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	23.3	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.4	PSF
TOTAL LOAD		=	36.7	PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 12.00/12

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

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

(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=0.61/1.00 (D-E:1) , BC=0.19/1.00 (P-Q:4) , WB=0.11/1.00 (D-P: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) (PSI) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.65 (C) (INPUT = 0.90)
JSI METAL= 0.25 (F) (INPUT = 0.95)

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416606

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC. ROYAL PINE HOMES	DRWG NO.
439988	PB6	1	1	TRUSS DESC.	

Tamarack Roof Truss, Burlington

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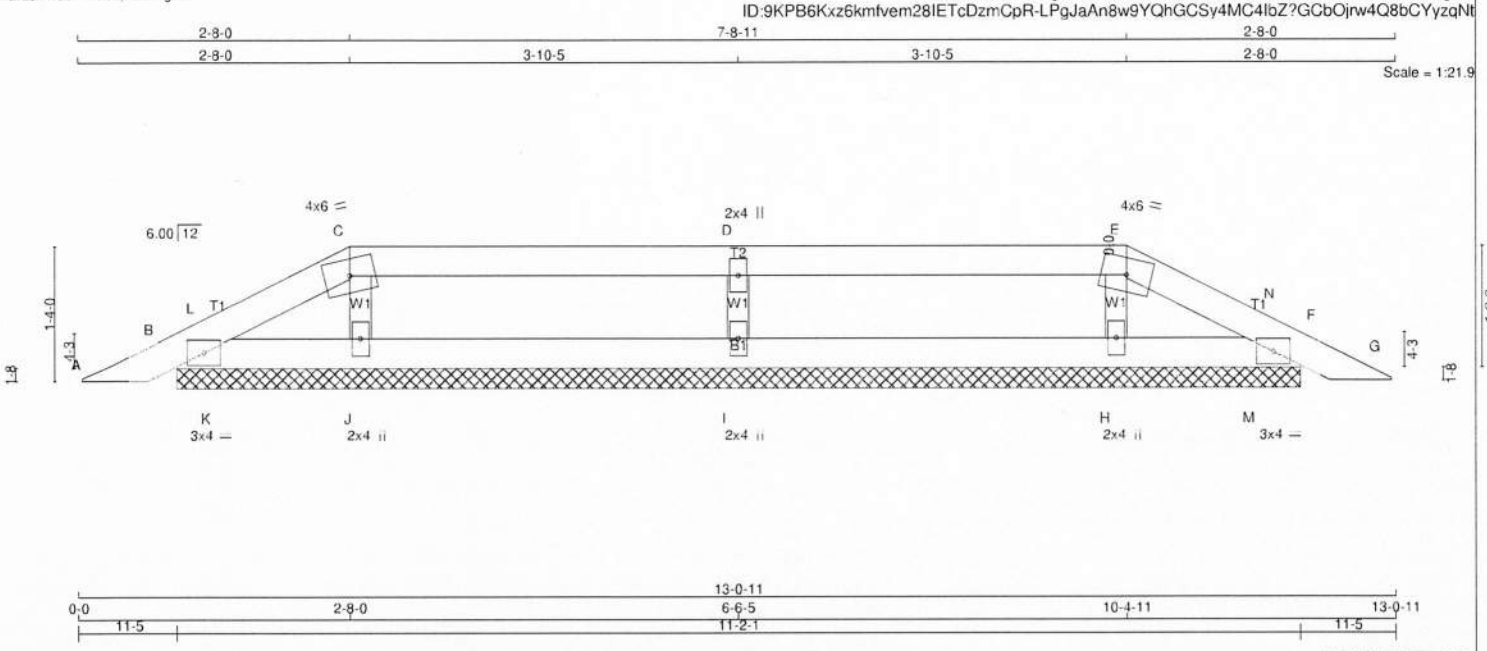

TOTAL WEIGHT = 30 lb

[M]

LUMBER

N. L. G. A. RULES

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

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN Y	X
B	TMB1-I	MT20	3.0	4.0	
C	TTW-m	MT20	4.0	6.0	
D	TMW+w	MT20	2.0	4.0	
E	TTW-m	MT20	4.0	6.0	
F	TMB1-I	MT20	3.0	4.0	
H, I, J					
H	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 VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
B	164	0	164	0	0	11-2-0	1-8
F	164	0	164	0	0	11-2-0	1-8
J	245	0	245	0	0	11-2-0	1-8
I	479	0	479	0	0	11-2-0	1-8
H	245	0	245	0	0	11-2-0	1-8

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
B	114	86 / 0	0 / 0	0 / 0	0 / 0	28 / 0	0 / 0
F	114	86 / 0	0 / 0	0 / 0	0 / 0	28 / 0	0 / 0
J	176	103 / 0	0 / 0	0 / 0	0 / 0	73 / 0	0 / 0
I	339	222 / 0	0 / 0	0 / 0	0 / 0	116 / 0	0 / 0
H	176	103 / 0	0 / 0	0 / 0	0 / 0	73 / 0	0 / 0

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

BRACING

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

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 CSI (LC)	MAX UNBRAC LENGTH
A- B	0 / 15	-84.9	-84.9	0.04 (1)	10.00
B- L	-30 / 0	-84.9	-84.9	0.00 (1)	6.25
L- C	-28 / 0	-84.9	-84.9	0.03 (1)	6.25
C- D	-6 / 0	-84.9	-84.9	0.21 (1)	10.00
D- E	-6 / 0	-84.9	-84.9	0.21 (1)	10.00
E- N	-28 / 0	-84.9	-84.9	0.03 (1)	6.25
N- F	-30 / 0	-84.9	-84.9	0.00 (1)	6.25
F- G	0 / 15	-84.9	-84.9	0.04 (1)	10.00
B- K	0 / 25	-18.5	-18.5	0.03 (1)	10.00
K- J	0 / 25	-18.5	-18.5	0.04 (4)	10.00
J- I	0 / 6	-18.5	-18.5	0.06 (4)	10.00
I- H	0 / 6	-18.5	-18.5	0.06 (4)	10.00
H- M	0 / 25	-18.5	-18.5	0.04 (4)	10.00
M- F	0 / 25	-18.5	-18.5	0.03 (1)	10.00

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
J- C	-168 / 0	0.02 (1)
I- D	-409 / 0	0.06 (1)
H- E	-168 / 0	0.02 (1)
K- L	-68 / 0	0.00 (1)
M- N	-68 / 0	0.00 (1)

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	23.3	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.4	PSF
TOTAL LOAD		=	36.7	PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION 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 , NBC-2019AE
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(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=0.21/1.00 (D-E:1) , BC=0.06/1.00 (I-J:4) , WB=0.06/1.00 (D-I:1) , SSI=0.16/1.00 (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) (PSI) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.20 (D) (INPUT = 0.90)
JSI METAL= 0.09 (D) (INPUT = 0.95)

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416607

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
439988	PB7	1	1	ROYAL PINE HOMES TRUSS DESC.	

Tamarack Roof Truss, Burlington

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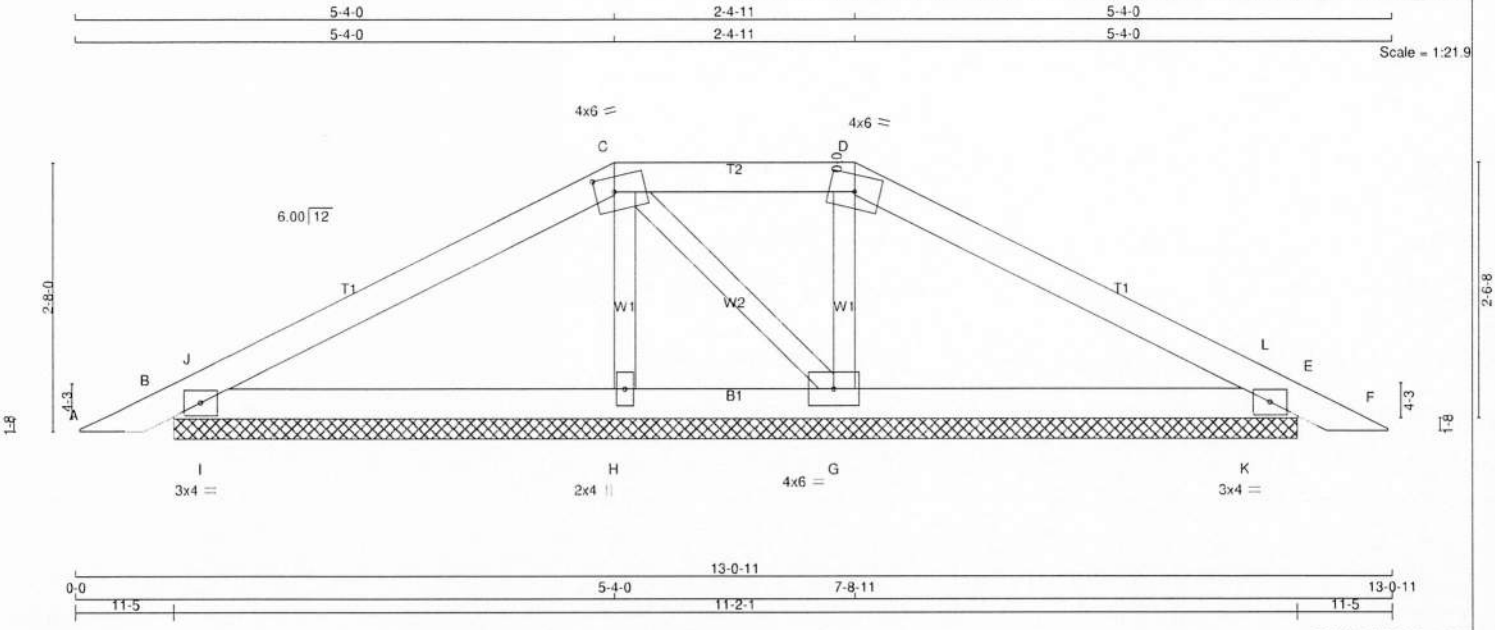

TOTAL WEIGHT = 34 lb

LUMBER
N. L. G. A. RULES

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

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMB1-I	MT20	3.0	4.0		
C	TTWW-m	MT20	4.0	6.0	1.75	2.25
D	TTW-m	MT20	4.0	6.0		
E	TMB1-I	MT20	3.0	4.0		
G	BMWW1-t	MT20	4.0	6.0		
H	BMW1+w	MT20	2.0	4.0		

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
B	342	0	342	0	0	11-2-0	1-8
E	326	0	326	0	0	11-2-0	1-8
H	274	0	274	0	0	11-2-0	1-8
G	357	0	357	0	0	11-2-0	1-8

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
B	240	165 / 0	0 / 0	0 / 0	0 / 0	75 / 0	0 / 0
E	229	156 / 0	0 / 0	0 / 0	0 / 0	73 / 0	0 / 0
H	196	116 / 0	0 / 0	0 / 0	0 / 0	80 / 0	0 / 0
G	253	162 / 0	0 / 0	0 / 0	0 / 0	91 / 0	0 / 0

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

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

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

LOADING
TOTAL LOAD CASES: (4)

CHORDS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD LC1 (PLF) FROM	TO	MAX CSI (LC)	MAX. UNBRAC LENGTH
A- B	0 / 15	-84.9	-84.9	0.04 (1)	10.00
B- J	-76 / 0	-84.9	-84.9	0.06 (1)	6.25
J- C	-127 / 0	-84.9	-84.9	0.20 (1)	6.25
C- D	-67 / 0	-84.9	-84.9	0.08 (1)	6.25
D- L	-91 / 0	-84.9	-84.9	0.20 (1)	6.25
L- E	-40 / 0	-84.9	-84.9	0.05 (1)	6.25
E- F	0 / 15	-84.9	-84.9	0.04 (1)	10.00
B- I	0 / 109	-18.5	-18.5	0.17 (1)	10.00
I- H	0 / 109	-18.5	-18.5	0.17 (1)	10.00
H- G	0 / 101	-18.5	-18.5	0.10 (1)	10.00
G- K	0 / 78	-18.5	-18.5	0.17 (1)	10.00
K- E	0 / 78	-18.5	-18.5	0.17 (1)	10.00

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
H- C	-172 / 0	0.03 (1)
C- G	-47 / 0	0.01 (1)
G- D	-222 / 0	0.04 (1)
I- J	-287 / 0	0.00 (1)
K- L	-289 / 0	0.00 (1)

[M]

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	23.3	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.4	PSF
TOTAL LOAD		=	36.7	PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION 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 , NBC-2019AE
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(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=0.20/1.00 (D-L:1) , BC=0.17/1.00 (B-I:1) , WB=0.04/1.00 (D-G:1) , SSI=0.23/1.00 (E-K:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.27 (B) (INPUT = 0.90)
JSI METAL= 0.06 (B) (INPUT = 0.95)

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416608

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
439988	J1	19	1	ROYAL PINE HOMES TRUSS DESC.	

Tamarack Roof Truss, Burlington

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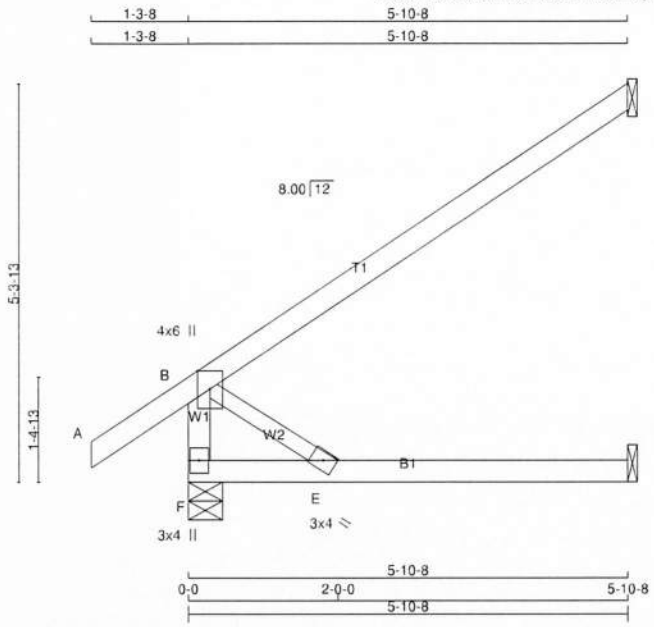

TOTAL WEIGHT = 19 X 19 = 369 lb
[M]

LUMBER
N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
F - B	2x4	DRY	No.2	SPF
A - C	2x4	DRY	No.2	SPF
F - 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	TMVW+p	MT20	4.0	6.0	Edge	
E	BMW+w	MT20	3.0	4.0		
F	BMV1+p	MT20	3.0	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 VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
F	420	0	420	0	0	5-8	1-8
C	249	0	249	0	0	1-8	1-8
D	54	0	61	0	0	1-8	1-8

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

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
F	296	201 / 0	0 / 0	0 / 0	0 / 0	95 / 0	0 / 0
C	172	137 / 0	0 / 0	0 / 0	0 / 0	35 / 0	0 / 0
D	43	0 / 0	0 / 0	0 / 0	0 / 0	43 / 0	0 / 0

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

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

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

LOADING
TOTAL LOAD CASES: (4)

CHORDS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 MAX CSI (LC)	MAX. UNBRAC LENGTH
F- B	-366 / 0	0.0	0.0	0.04 (1)	7.81
A- B	0 / 32	-84.9	-84.9	0.11 (1)	10.00
B- C	0 / 0	-84.9	-84.9	0.50 (1)	10.00
F- E	0 / 0	-18.5	-18.5	0.16 (4)	10.00
E- D	0 / 0	-18.5	-18.5	0.19 (4)	10.00

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
B- E	0 / 0	0.00 (1)

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	23.3	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.4	PSF
TOTAL LOAD		=	36.7	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 , NBC-2019AE
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(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 (0.05")

CSI: TC=0.50/1.00 (B-C:1) , BC=0.19/1.00 (D-E:4) , WB=0.00/1.00 (B-E:1) , SSI=0.16/1.00 (B-C:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

AUTOSOLVE RIGHT HEEL ONLY

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.19 (B) (INPUT = 0.90)
JSI METAL= 0.09 (B) (INPUT = 0.95)

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416596

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
439988	J1S	8	1	ROYAL PINE HOMES TRUSS DESC.	

Tamarack Roof Truss, Burlington

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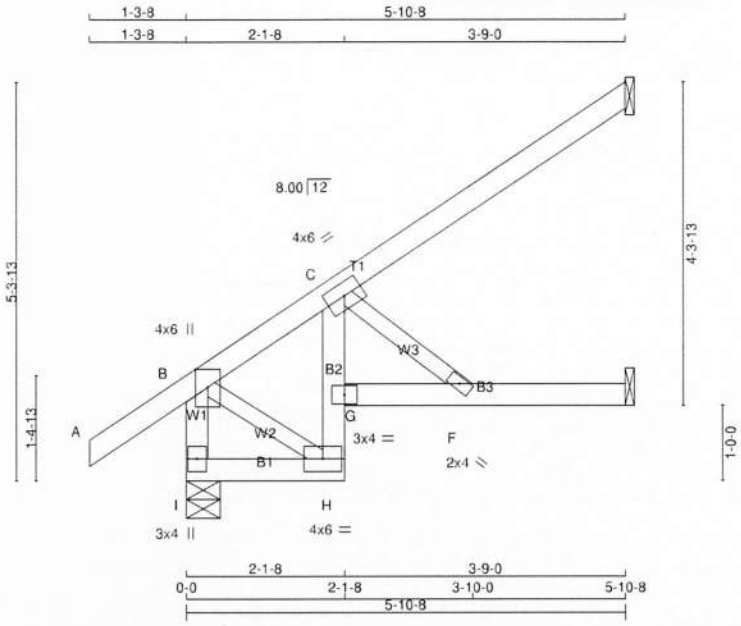

TOTAL WEIGHT = 8 X 23 = 188 lb

LUMBER
N. L. G. A. RULES

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

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMVW+p	MT20	4.0	6.0	Eage	
C	TMVW-t	MT20	4.0	6.0		
F	BMW+w	MT20	2.0	4.0		
G	BVM-l	MT20	3.0	4.0		
H	BMVW-t	MT20	4.0	6.0		
I	BMV1+p	MT20	3.0	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 VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
I	420	0	420	0	0	5-8	1-8
D	164	0	164	0	0	1-8	1-8
E	140	0	140	0	0	1-8	1-8

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

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
I	296	201 / 0	0 / 0	0 / 0	0 / 0	95 / 0	0 / 0
D	114	86 / 0	0 / 0	0 / 0	0 / 0	27 / 0	0 / 0
E	102	50 / 0	0 / 0	0 / 0	0 / 0	51 / 0	0 / 0

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

BRACING
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 7.81 FT OR RIGID CEILING DIRECTLY APPLIED.

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

LOADING
TOTAL LOAD CASES: (4)

CHORDS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1	MAX CSI (LC)	MAX. UNBRAC LENGTH
I- B	-402 / 0	0.0	0.0		0.04 (1)	7.81
A- B	0 / 32	-84.9	-84.9		0.11 (1)	10.00
B- C	-201 / 0	-84.9	-84.9		0.05 (1)	6.25
C- D	0 / 3	-84.9	-84.9		0.22 (1)	10.00
I- H	0 / 0	-18.5	-18.5		0.02 (4)	10.00
H- G	-74 / 0	0.0	0.0		0.23 (1)	7.81
G- C	0 / 99	0.0	0.0		0.24 (1)	10.00
G- F	0 / 288	-18.5	-18.5		0.41 (1)	10.00
F- E	0 / 0	-18.5	-18.5		0.36 (1)	10.00

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
B- H	0 / 192	0.04 (1)
C- F	-375 / 0	0.06 (1)

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	23.3	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.4	PSF
TOTAL LOAD		=	36.7	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 , NBC-2019AE
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(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 (0.05")
ALLOWABLE DEFL.(TL)= L/360 (0.20")
CALCULATED VERT. DEFL.(TL) = L/ 644 (0.11")

CSI: TC=0.22/1.00 (C-D:1) , BC=0.41/1.00 (F-G:1) , WB=0.06/1.00 (C-F:1) , SSI=0.13/1.00 (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) (PSI) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.31 (F) (INPUT = 0.90)
JSI METAL= 0.19 (F) (INPUT = 0.95)

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416597

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
439988	J2	3	1	ROYAL PINE HOMES TRUSS DESC.	

Tamarack Roof Truss, Burlington

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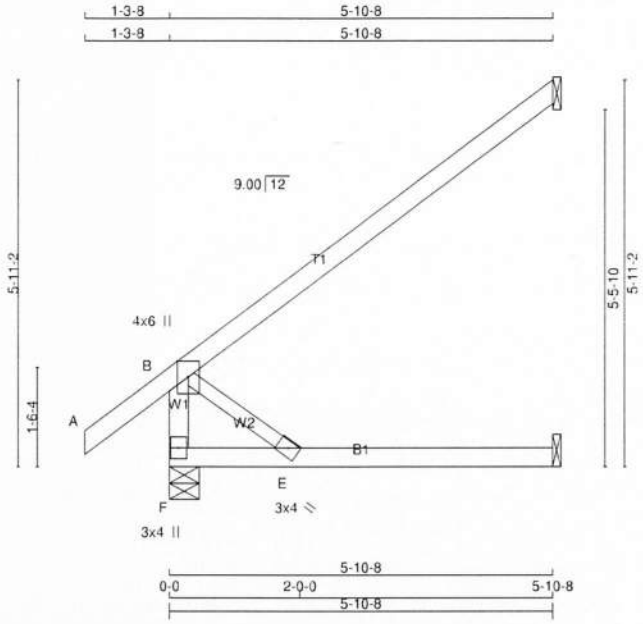

TOTAL WEIGHT = 3 X 20 = 60 lb

LUMBER
N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
F - B	2x4	DRY	No.2	SPF
A - C	2x4	DRY	No.2	SPF
F - 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	TMVW+p	MT20	4.0	6.0	Edge	
E	BMW+w	MT20	3.0	4.0		
F	BMV1+p	MT20	3.0	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 VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
F	421	0	421	0	0	5-8	1-8
C	249	0	249	0	0	1-8	1-8
D	54	0	61	0	0	1-8	1-8

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

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
F	296	201 / 0	0 / 0	0 / 0	0 / 0	95 / 0	0 / 0
C	172	137 / 0	0 / 0	0 / 0	0 / 0	35 / 0	0 / 0
D	43	0 / 0	0 / 0	0 / 0	0 / 0	43 / 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 = 10.00 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

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

LOADING
TOTAL LOAD CASES: (4)

CHORDS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 MAX CSI (LC)	MAX. UNBRAC LENGTH
F- B	-366 / 0	0.0	0.0	0.04 (1)	7.81
A- B	0 / 35	-84.9	-84.9	0.12 (1)	10.00
B- C	0 / 0	-84.9	-84.9	0.50 (1)	10.00
F- E	0 / 0	-18.5	-18.5	0.16 (4)	10.00
E- D	0 / 0	-18.5	-18.5	0.19 (4)	10.00

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
B- E	0 / 0	0.00 (1)

[M]

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	23.3	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.4	PSF
TOTAL LOAD		=	36.7	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 , NBC-2019AE
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(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 (0.05")

CSI: TC=0.50/1.00 (B-C:1) , BC=0.19/1.00 (D-E:4) , WB=0.00/1.00 (B-E:1) , SSI=0.16/1.00 (B-C:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

AUTOSOLVE RIGHT HEEL ONLY

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.21 (B) (INPUT = 0.90)
JSI METAL= 0.10 (B) (INPUT = 0.95)

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416598

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
439988	J3	5	1	ROYAL PINE HOMES TRUSS DESC.	

Tamarack Roof Truss, Burlington

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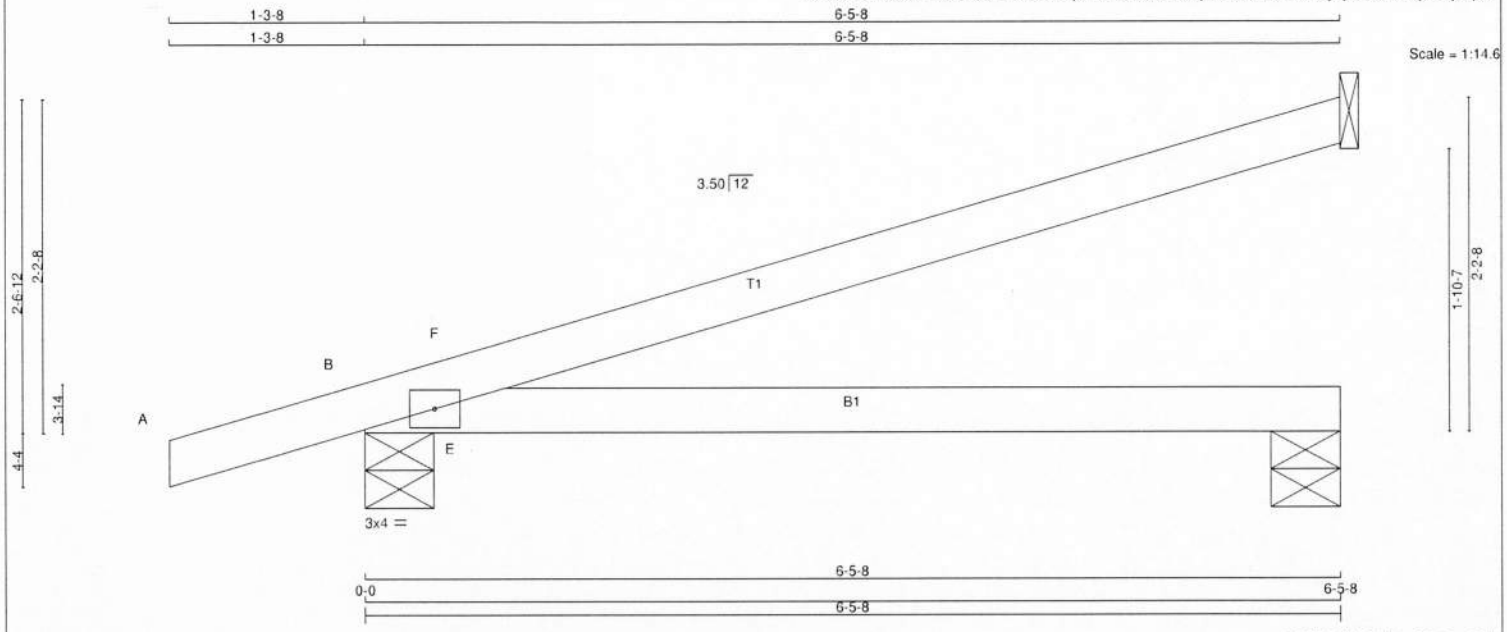

TOTAL WEIGHT = 5 X 17 = 83 lb

[M][F]

LUMBER
N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
A - C	2x4	DRY	No.2	SPF
B - D	2x4	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	

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

BEARINGS

	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION			INPUT BRG	REQRD BRG
JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX
C	240	0	240	0	0	1-8	1-8
B	447	0	447	0	0	5-8	1-8
D	94	0	94	0	0	5-8	1-8

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

UNFACTORED REACTIONS

	1ST LCASE	MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
C	167	127 / 0	0 / 0	0 / 0	0 / 0	40 / 0	0 / 0
B	315	212 / 0	0 / 0	0 / 0	0 / 0	103 / 0	0 / 0
D	70	24 / 0	0 / 0	0 / 0	0 / 0	47 / 0	0 / 0

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

CHORDS

MEMB. FR-TO	MAX. FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 CSI (LC)	MAX UNBRAC LENGTH
A- B	0 / 15	-84.9	-84.9	0.10 (1)	10.00
B- F	-19 / 11	-84.9	-84.9	0.07 (4)	6.25
F- C	-1 / 2	-84.9	-84.9	0.46 (1)	10.00
B- E	0 / 0	-18.5	-18.5	0.32 (1)	10.00
E- D	0 / 0	-18.5	-18.5	0.32 (1)	10.00

WEBS

MEMB. FR-TO	MAX. FORCE (LBS)	MAX CSI (LC)
E- F	-315 / 14	0.00 (1)

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	23.3	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.4	PSF
TOTAL LOAD		=	36.7	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 , NBC-2019AE
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 27.2 P.S.F. G.S.L. PLUS 9.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.22")
CALCULATED VERT. DEFL.(LL) = L/ 829 (0.09")
ALLOWABLE DEFL.(TL)= L/360 (0.22")
CALCULATED VERT. DEFL.(TL) = L/ 392 (0.20")

CSI: TC=0.46/1.00 (C-F:1) , BC=0.32/1.00 (D-E:1) , WB=0.00/1.00 (E-F:1) , SSI=0.27/1.00 (B-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) (PSI) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.28 (B) (INPUT = 0.90)
JSI METAL= 0.08 (B) (INPUT = 0.95)

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416599

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
439988	J4W	4	1	ROYAL PINE HOMES TRUSS DESC.	

Tamarack Roof Truss, Burlington

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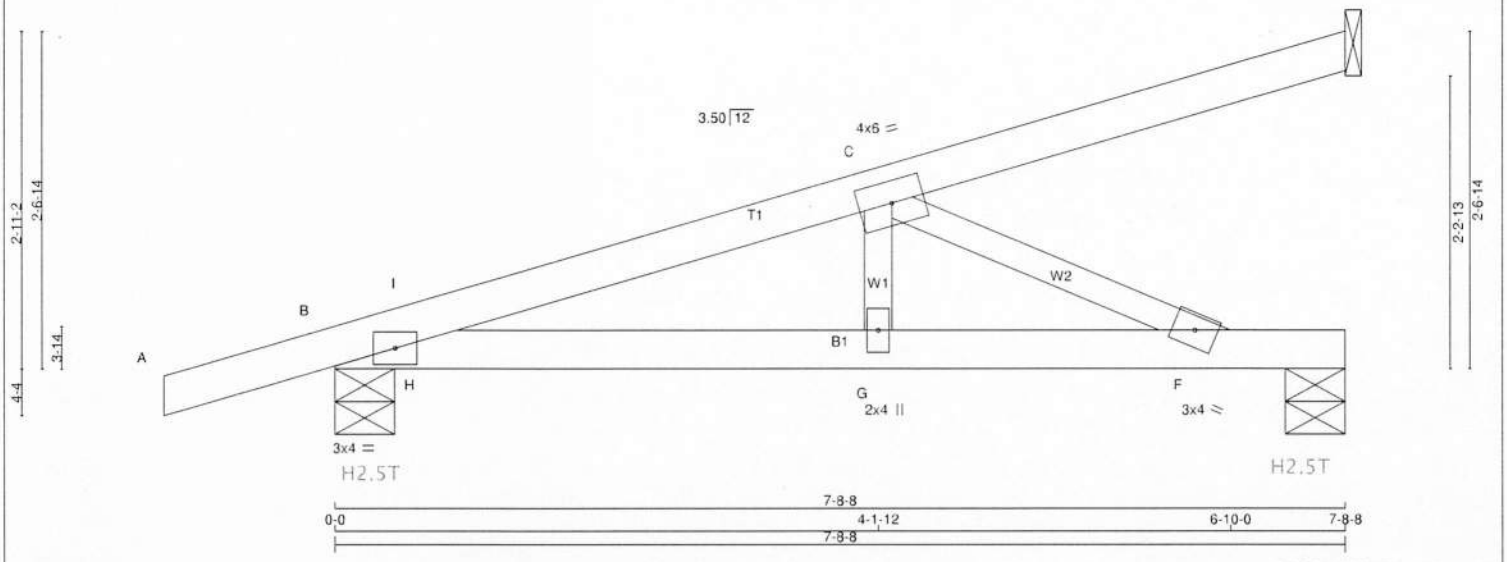

TOTAL WEIGHT = 4 X 23 = 90 lb

[M][F]

LUMBER

N. L. G. A. RULES

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

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN Y	X
B	TMB1-I	MT20	3.0	4.0	
C	TMWW-I	MT20	4.0	6.0	
F	BMW+w	MT20	3.0	4.0	
G	BMW+w	MT20	2.0	4.0	

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
D	132	0	132	0	-97	1-8	1-8
B	511	0	511	154	-376	5-8	1-8
E	266	0	266	0	-265	5-8	1-8

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

PROVIDE ANCHORAGE AT BEARING JOINT D FOR 150 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT B FOR 376 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT E FOR 265 LBS FACTORED UPLIFT

PROVIDE FOR 154 LBS FACTORED HORIZONTAL REACTION AT JOINT B

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
D	92	71 / 0	0 / 0	0 / 0	0 / -76	21 / 0	0 / 0
B	361	242 / 0	0 / 0	0 / 0	0 / -323	119 / 0	0 / 0
E	191	109 / 0	0 / 0	0 / 0	0 / -231	83 / 0	0 / 0
HORIZONTAL REACTIONS							
B	---	0 / 0	0 / 0	0 / 0	110 / 0	0 / 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 = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

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

LOADING

TOTAL LOAD CASES: (12)

CHORDS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 CSI	MAX (LC)	MAX. UNBRAC LENGTH
A- B	0 / 15	-84.9	-84.9	0.10	(1)	10.00
B- I	-775 / 571	-84.9	-84.9	0.09	(5)	6.25
I- C	-763 / 595	-84.9	-84.9	0.17	(5)	6.25
C- D	-30 / 0	-84.9	-84.9	0.13	(1)	6.25
B- H	-668 / 738	-18.5	-18.5	0.24	(1)	6.25
H- G	-668 / 738	-18.5	-18.5	0.24	(1)	6.25
G- F	-668 / 738	-18.5	-18.5	0.52	(1)	6.25
F- E	0 / 0	-18.5	-18.5	0.40	(1)	10.00

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
G- C	-303 / 258	0.06 (1)
C- F	-829 / 750	0.16 (1)
H- I	-138 / 77	0.00 (1)

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 9.2} PSF AT {15-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS. CpCg. BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 3.0 PSF AND 7.0 PSF RESPECTIVELY.

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	23.3	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.4	PSF
TOTAL LOAD		=	36.7	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 , NBC-2019AE
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(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 (0.26")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.06")
ALLOWABLE DEFL.(TL)= L/360 (0.26")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.09")

CSI: TC=0.17/1.00 (C-I:5) , BC=0.52/1.00 (F-G:1) , WB=0.16/1.00 (C-F:1) , SSI=0.21/1.00 (E-F:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.55 (F) (INPUT = 0.90)
JSI METAL= 0.32 (F) (INPUT = 0.95)

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416600

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
439988	J90	10	1	ROYAL PINE HOMES TRUSS DESC.	

Tamarack Roof Truss, Burlington

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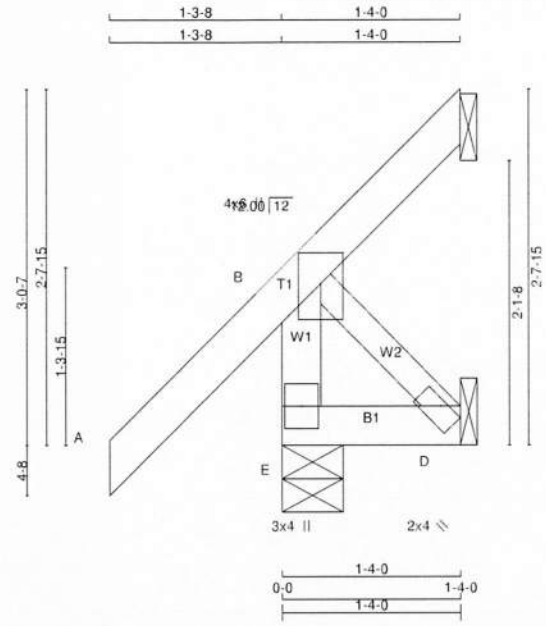


TOTAL WEIGHT = 10 X 8 = 83 lb

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
ALL WEBS	2x3	DRY	No.2	SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMVW+p	MT20	4.0	6.0	2.75	2.00
D	BMW1+w	MT20	2.0	4.0		Edge
E	BMV1+p	MT20	3.0	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 VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
E	248	0	248	0	0	5-8	1-8
C	-5	0	0	0	-55	1-8	1-8
D	11	0	12	0	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

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX /MIN COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
E	172	130 / 0	0 / 0	0 / 0	0 / 0	42 / 0	0 / 0
C	-4	0 / -34	0 / 0	0 / 0	0 / 0	0 / -1	0 / 0
D	9	0 / 0	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)

CHORDS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 MAX CSI (LC)	MAX. UNBRAC LENGTH
E- B	-237 / 0	0.0	0.0	0.02 (1)	7.81
A- B	0 / 42	-84.9	-84.9	0.12 (1)	10.00
B- C	-44 / 0	-84.9	-84.9	0.11 (1)	6.25
E- D	0 / 0	-18.5	-18.5	0.01 (4)	10.00

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
B- D	0 / 0	0.00 (1)

CANTILEVER ANALYSIS HAS BEEN CONSIDERED IN THIS DESIGN

[M]

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	23.3	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.4	PSF
TOTAL LOAD		=	36.7	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 , NBC-2019AE
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

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

CSI: TC=0.12/1.00 (A-B:1) , BC=0.01/1.00 (D-E:4) , WB=0.00/1.00 (B-D: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) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.16 (B) (INPUT = 0.90)
JSI METAL= 0.06 (B) (INPUT = 0.95)

LICENSED PROFESSIONAL ENGINEER
07-09-24
H. J. G. ALVES
100009024
PROVINCE OF ONTARIO

Structural component only
DWG# T-2416601

Alves Engineering Services Inc.
5208 Easton road
Burlington, Ontario L7L 6N6
(289) 259 5455

LICENSED PROFESSIONAL ENGINEER
06/11/18
H.J.G. ALVES
PROVINCE OF ONTARIO

RESPONSABILITIES

1-Alves Engineering Services 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 this drawing meet or exceed the actual dead load imposed by the structure and the live load imposed by the local building code or the authorities having jurisdictions.

3- All dimensions are to be verified by owner, contractor, architect or other authority before manufacture.

4- Alves Engineering Services Inc. bears no responsibility for the erection of the trusses. Persons erecting trusses are cautioned to seek professional advice regarding temporary and permanent bracing system. Bracing shown on Alves Engineering Services Inc. drawings is specified for the truss as a single component and forms an integral part of the truss design, but is not meant to represent the only required bracing for that truss when trusses are installed in a series of trusses forming a roof truss system.

5- It is the manufactures responsibility to ensure that the trusses are manufactured in conformance with Alves Engineering Services Inc. specifications outlined below.

SPECIFICATIONS

1-Truss components sealed by Alves Engineering Services Inc. conform to the relevant sections of the current Building Code of Ontario and Canada (part 4 or part 9) or the current Canadian code for Farm Buildings in accordance with the application specified on the sealed truss component drawing. All truss component design procedures must conform to the current design standard issued by the truss plate institute of Canada (TPIC). All lumber and nailing stresses to conform to the current CSA wood design standard identified on the current Building Code and TPIC.

2- Lumber is to be the sizes and grade specified on the truss drawing.

3- Moist content of lumber is not to exceed 19% in service unless otherwise specified.

4- Plates shall be applied to both faces of the each truss joint and shall be positioned as shown on the truss drawings

5- Lumber used on manufacture of trusses is not to be treated with chemicals unless otherwise specified on the truss drawings.

6- The top chord is assumed to be continuously laterally braced by the roof sheathing or purlins at intervals specified on the truss drawing but not exceeding 24" c/c for (part 9) and not exceeding 48" for (part 4 or farm design)

7- When rigid ceiling is not attached directly to the bottom chord, lateral bracing is required and it should not exceed more than 3m or 10' intervals.

8-Refer to Mitek sheet MII7473C REV.10-08 attached for information on symbols, numbering system and General Safety notes.

T-1800218 Feb 09, 2018

TECHNICAL BULLETIN

LUS — Double-Shear Joist Hangers

SIMPSON Strong-Tie

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:

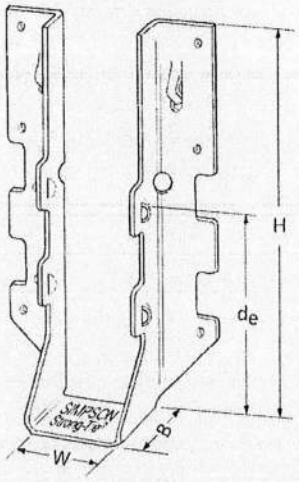
- Factored resistances are in accordance with CSA O86-14 and CSA O86:19.
- Uplift resistances have been increased 15%. No further increase is permitted.
- Wood shear is not considered in the factored resistances given. The specifier must ensure that the joist and header capacities are capable of withstanding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

Installation:

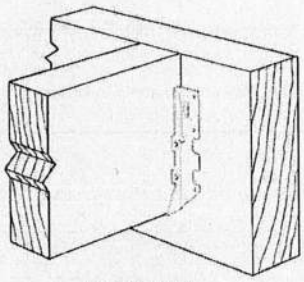
- Use all specified fasteners
- Nails: 16d = 0.162" dia. x 3½" long common wire, 10d = 0.148" x 3" long common wire
- Double-shear nails must be driven at an angle through the joist or truss into the header to achieve the table loads
- Not designed for welded or nailer applications

Options:

- These hangers cannot be modified



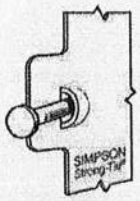
LUS28



Typical LUS Installation

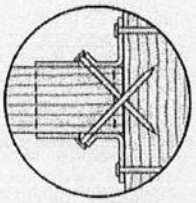
Model No.	Ga.	Dimensions (in.)				Fasteners		Factored Resistance (lb.)			
								D.Fir-L		S-P-F	
		W	H	B	d_e[1]	Face	Joist	Uplift (K_D=1.15)	Normal (K_D=1.00)	Uplift (K_D=1.15)	Normal (K_D=1.00)
LUS24	18	1 3/16	3 1/8	1 3/4	1 15/16	(4) 10d	(2) 10d	710	1630	645	1155
LUS24-2	18	3 1/8	3 1/8	2	1 13/16	(4) 16d	(2) 16d	835	2020	590	1435
LUS26	18	1 3/16	4 3/4	1 3/4	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 3/16	6 5/8	1 3/4	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 3/16	7 13/16	1 3/4	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_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 top view.

LICENSED PROFESSIONAL ENGINEER
07/19/2022
B. D. BUNTING
PROVINCE OF ONTARIO

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TECHNICAL BULLETIN

HUS/LJS — Double-Shear Joist Hangers

SIMPSON Strong-Tie

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

Material: See table

Finish: G90 galvanized

Design:

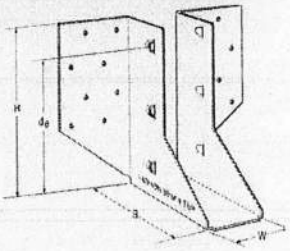
- Factored resistances are in accordance with CSA O86-14 and CSA O86:19.
- Uplift resistances have been increased 15%. No further increase is permitted.
- Wood shear is not considered in the factored resistances given. The specifier must ensure that the joist and header capacities are capable of withstanding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

Installation:

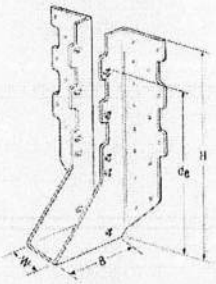
- Use all specified fasteners
- Nails: 16d = 0.162" dia. x 3½" long common wire
- Double-shear nails must be driven at an angle through the joist or truss into the header to achieve the table loads
- Not designed for welded or nailer applications

Options:

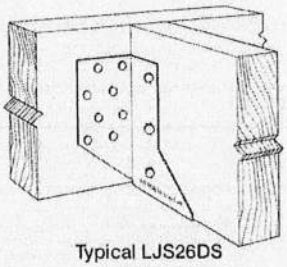
- See current catalogue for options



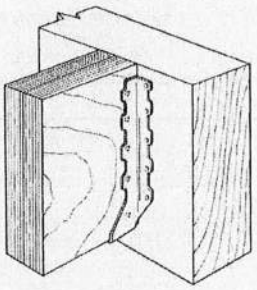
LJS26DS



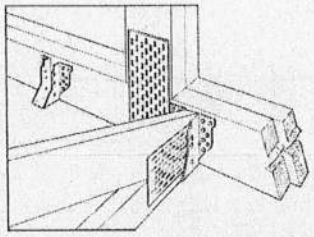
HUS210
(HUS26, HUS28, similar)



Typical LJS26DS Installation



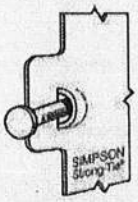
Typical HUS Installation



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

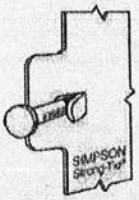
Model No.	Ga.	Dimensions (in.)				Fasteners		Factored Resistance (lb.)			
								D.Fir–L		S-P-F	
		W	H	B	d_e[1]	Face	Joist	Uplift (K_D=1.15) lb.	Normal (K_D=1.00) lb.	Uplift (K_D=1.15) lb.	Normal (K_D=1.00) lb.
LJS26DS	18	1 9/16	5	3½	4⅝	(16) 16d	(6) 16d	2055	4265	1460	4115
HUS26	16	1⅝	5⅜	3	3 15/16	(14) 16d	(6) 16d	2705	4940	2065	3875
HUS28	16	1⅝	7 3/32	3	6 3/32	(22) 16d	(8) 16d	3605	5365	2675	4345
HUS210	16	1⅝	9 3/32	3	7 31/32	(30) 16d	(10) 16d	4505	5795	4010	4740
HUS1.81/10	16	1 13/16	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.

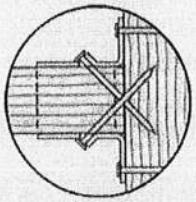


Dome double-shear nailing prevents tabs breaking off (available on some models).

US Patent 5,603,580



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



Double-shear nailing top view.

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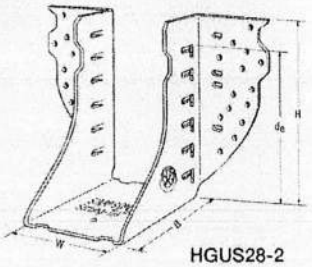
TECHNICAL BULLETIN

HGUS — Double-Shear Joist Hangers

SIMPSON Strong-Tie

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.



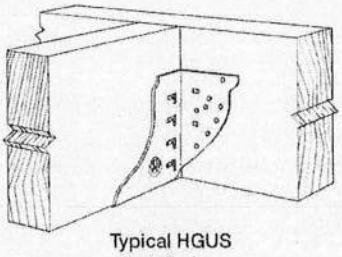
HGUS28-2

Material: 12 gauge

Finish: G90 galvanized

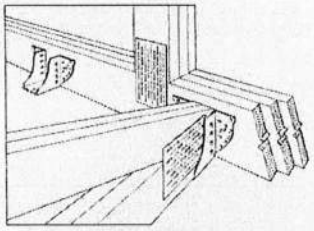
Design:

- 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.


Typical HGUS Installation

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

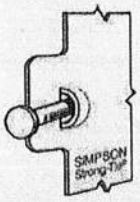

Typical HGUS Installation
(Truss designer to provide fastener quantity for connecting multiple members together)

Options:

- See current catalogue for options

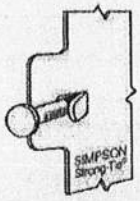
Model No.	Ga.	Dimensions (in.)				Fasteners		Factored Resistance (lb.)			
								D.Fir–L		S-P-F	
		W	H	B	d_e[1]	Face	Joist	Uplift (K_D=1.15)	Normal (K_D=1.00)	Uplift (K_D=1.15)	Normal (K_D=1.00)
HGUS26	12	1⅝	5⅜	5	4 5/32	(20) 16d	(8) 16d	2685	6625	2685	5700
HGUS26-2	12	3 5/16	5 7/16	4	4⅛	(20) 16d	(8) 16d	4385	8950	3100	6355
HGUS26-3	12	4 15/16	5½	4	4⅛	(20) 16d	(8) 16d	4385	8950	3100	6355
HGUS26-4	12	6 9/16	5 7/16	4	4⅛	(20) 16d	(8) 16d	4385	8950	3100	6355
HGUS28	12	1⅝	7⅛	5	6⅛	(36) 16d	(12) 16d	3310	7675	3100	6900
HGUS28-2	12	3 5/16	7 3/16	4	6⅛	(36) 16d	(12) 16d	6070	12980	4310	9215
HGUS28-3	12	4 15/16	7¼	4	6⅜	(36) 16d	(12) 16d	6070	12980	4310	9215
HGUS28-4	12	6 9/16	7 3/16	4	6⅛	(36) 16d	(12) 16d	6070	12980	4310	9215
HGUS210-2	12	3 5/16	9 3/16	4	8⅛	(46) 16d	(16) 16d	6840	14015	4855	10270
HGUS210-3	12	4 15/16	9¼	4	8⅜	(46) 16d	(16) 16d	6840	14645	4855	10400
HGUS210-4	12	6 9/16	9 3/16	4	8⅛	(46) 16d	(16) 16d	6840	14645	4855	10400
HGUS212-4	12	6 9/16	10⅝	4	10⅛	(56) 16d	(20) 16d	7640	14995	5425	10645
HGUS214-4	12	6 9/16	12⅝	4	11⅛	(66) 16d	(22) 16d	10130	16400	7195	11645

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

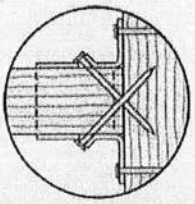


Dome double-shear nailing prevents tabs breaking off (available on some models).

US Patent 5,603,580



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


Double-shear nailing top view.

LICENSED PROFESSIONAL ENGINEER
07/19/2022
B. D. BUNTING
PROVINCE OF ONTARIO

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SIMPSON Strong-Tie

H/TSP

Seismic and Hurricane Ties (cont.)

LICENSED PROFESSIONAL ENGINEER 04/19/2022 B. D. BUNTING PROVINCE OF ONTARIO

These products are available with additional corrosion protection. For more information, see p. 20.

SD Many of these products are approved for installation with Simpson Strong-Tie SD Connector screws. See pp. 366–3[illegible] for more information.

Model No.	Ga.	Fasteners: To Rafters/Truss	Fasteners: To Plates	Fasteners: To Studs	Factored Resistance (kN): D.Fir-L Uplift	D.Fir-L Lateral F_1	D.Fir-L Lateral F_2	S-P-F Uplift	S-P-F Lateral F_1	S-P-F Lateral F_2
					lb. / kN	lb. / kN	lb. / kN	lb. / kN	lb. / kN	lb. / kN
H1	18	(6) 8d x 1½"	(4) 8d	—	740 / 3.29	685 / 3.05	300 / 1.33	680 / 3.02	485 / 2.16	215 / 0.96
H1.81Z	18	(6) 8d x 1½"	(4) 8d	—	740 / 3.29	685 / 3.05	300 / 1.33	680 / 3.02	485 / 2.16	215 / 0.96
H2A	18	(5) 8d x 1½"	(2) 8d x 1½"	(5) 8d x 1½"	830 / 3.69	220 / 0.98	75 / 0.33	590 / 2.62	155 / 0.69	55 / 0.24
H2.5A	18	(5) 8d	(5) 8d	—	805 / 3.58	160 / 0.71	160 / 0.71	755 / 3.36	160 / 0.71	160 / 0.71
H2.5T	18	(5) 8d	(5) 8d	—	835 / 3.71	175 / 0.78	210 / 0.93	740 / 3.29	160 / 0.71	210 / 0.93
H3	18	(4) 8d	(4) 8d	—	740 / 3.29	180 / 0.80	265 / 1.18	615 / 2.74	125 / 0.56	190 / 0.85
H6	16	—	(8) 8d	(8) 8d	1585 / 7.05	1085 / 4.83	— / —	1125 / 5.00	770 / 3.43	— / —
H7Z	16	(4) 8d	(2) 8d	(8) 8d	1390 / 6.18	670 / 2.98	— / —	990 / 4.40	475 / 2.11	— / —
H8[3]	18	(5) 10d x 1½"	(5) 10d x 1½"	—	1120 / 4.98	— / —	— / —	1025 / 4.56	— / —	— / —
H10A[9]	18	(9) 10d x 1½"	(9) 10d x 1½"	—	1735 / 7.72	795 / 3.54	410 / 1.82	1505 / 6.69	565 / 2.51	290 / 1.29
H10AR	18	(9) 10d x 1½"	(9) 10d x 1½"	—	1485 / 6.61	690 / 3.07	430 / 1.91	1220 / 5.43	570 / 2.54	305 / 1.36
H10A-2	18	(9) 10d x 1½"	(9) 10d x 1½"	—	1835 / 8.16	1275 / 5.67	430 / 1.91	1645 / 7.32	880 / 3.91	305 / 1.36
H10S[7,8]	18	(8) 8d x 1½"	(8) 8d x 1½"	(8) 8d	1465 / 6.52	795 / 3.54	315 / 1.40	1040 / 4.63	565 / 2.51	225 / 1.00
H11Z	18	(6) 16d x 2½"	(6) 16d x 2½"	—	1095 / 4.87	920 / 4.09	545 / 2.42	780 / 3.47	655 / 2.91	390 / 1.73
H14	18	[1] (12) 8d x 1½"	(13) 8d	—	2390 / 10.63	855 / 3.80	320 / 1.42	1805 / 8.03	610 / 2.71	230 / 1.02
		[2] (12) 8d x 1½"	(15) 8d	—	2390 / 10.63	855 / 3.80	320 / 1.42	1805 / 8.03	610 / 2.71	230 / 1.02
TSP	16	(9) 10d x 1½"	(6) 10d x 1½"	—	1295 / 5.76	440 / 1.96	— / —	920 / 4.09	310 / 1.38	— / —
		(9) 10d x 1½"	(6) 10d	—	1560 / 6.94	440 / 1.96	— / —	1105 / 4.92	310 / 1.38	— / —

1. Factored resistances have been increased 15% for short term loading; no further increase is allowed.
2. Factored resistances are for one anchor. A minimum rafter thickness of 2½" must be used when framing anchors are installed on the same side of the plate (exception: H2.5A).
3. H8 factored uplift resistances for stud-to-bottom plate installations are 595 lb. (2.65 kN) for D.Fir-L and 390 lb. (1.74 kN) for S-P-F.
4. When cross-grain bending or cross-grain tension cannot be avoided, mechanical reinforcement to resist such forces should be considered.
5. Hurricane ties are shown installed on the outside of the wall for clarity. Installation on the inside of the wall is acceptable. For a continuous load path, connections at the top and bottom of the wall must be on the same side of the wall (see technical bulletin T-HTIECONPATH).
6. Factored resistances in the F_1 direction are not intended to replace diaphragm boundary members or prevent cross grain bending of the truss or rafter members. Additional shear transfer elements shall be considered where there may be effects of cross grain bending or tension.
7. H10S can have the stud offset a maximum of 1" from the rafter (centre to centre) for a reduced uplift of 1435 lb. (6.38 kN) D.Fir-L and 1015 lb. (4.51 kN) S-P-F.
8. H10S nails to plates are optional for uplift but required for lateral loads.
9. H10A may be field-bent up to a slope of 6/12. Multiply the tabulated uplift value x 0.75. Full tabulated lateral resistances apply.
10. The factored resistances of stainless-steel connectors match carbon-steel connectors when installed with Simpson Strong-Tie® stainless-steel, SCNR ring-shank nails. For more information, refer to engineering letter L-F-SSNAILS at **strongtie.com**.
11. D.Fir-L/S-P-F factored uplift resistances for the H2.5A fastened to a 2x4 truss bottom chord and double top plates using (5) 8d x 1½" nails into the top plates and (3) 8d x 1½" nails into the lowest three flange holes into the truss bottom chord is 495 lb. (2.20 kN).
12. **Nails:** 16d x 2½" = 0.162" dia. x 2½" long, 10d = 0.148" dia. x 3" long, 10d x 1½" = 0.148" dia. x 1½" long, 8d = 0.131" dia. x 2½" long, 8d x 1½" = 0.131" dia. x 1½" long. See pp. 22–23 for other nail sizes and information.

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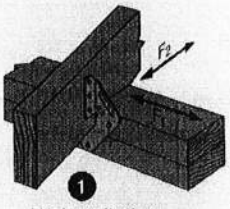
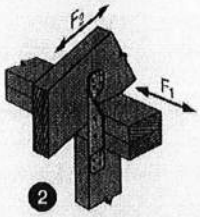
H/TSP

SIMPSON Strong-Tie

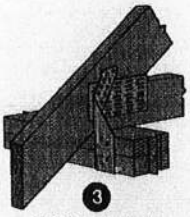
Seismic and Hurricane Ties (cont.)



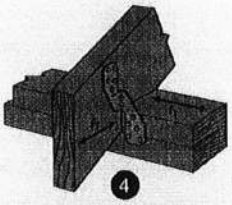
1 H1 Installation
(H1.31Z similar)



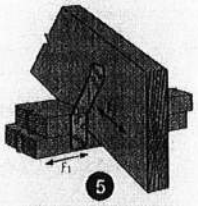
2 H2A Installation



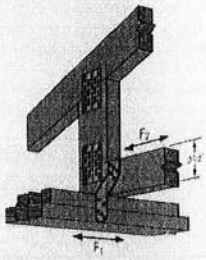
3 TSP Installation



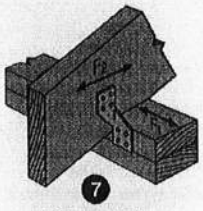
4 H2.5A Installation
(Nails into both top plates)



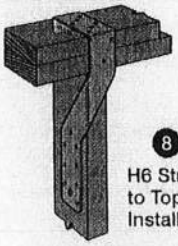
5 H2.5T Installation
(Nails into both top plates)



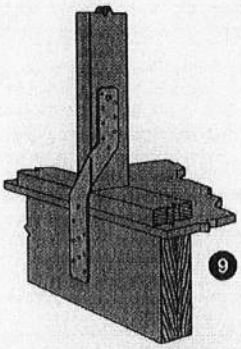
6 H2.5T Installation



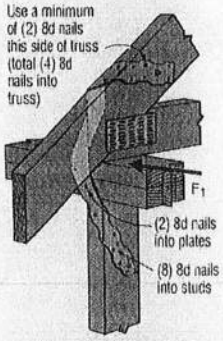
7 H3 Installation
(Nails into upper top plate)



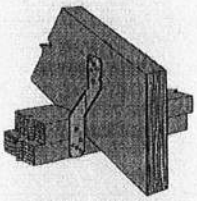
8 H6 Stud to Top Plate Installation



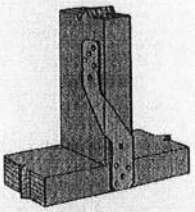
9 H6 Stud to Band Joist Installation



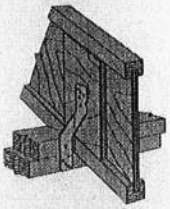
10 H7Z Installation



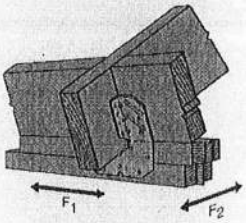
11 H8 Attaching Rafter to Double Top Plates



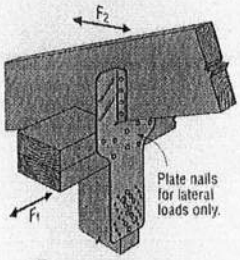
12 H8 attaching Stud to Sill
((4) 8d into plate, (5) 8d into stud)



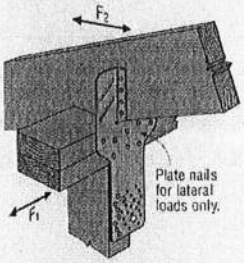
13 H8 attaching I-Joist to Double Top Plates



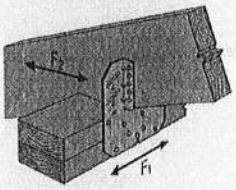
14 H10A Field-Bent Installation



15 H10S Installation



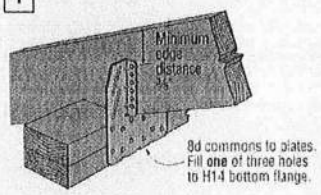
16 H10S Installation with Stud Offset



17 H10A Installation

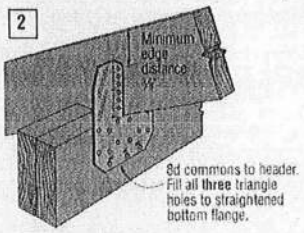
H10A optional positive angle nailing connects shear blocking to rafter. Use 8d common nails. Slot allows maximum field-bending up to a pitch of 6/12, use 75% of the table uplift value; bend one time only.

1



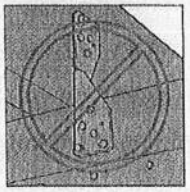
18 H14 Installation to Double Top Plates

2



19 H14 Installation to Double 2x Header

Avoid a Misinstallation



Do not make new holes or overdrive nails.

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TOE-NAIL CAPACITY DETAILS

LATERAL AND WITHDRAWAL RESISTANCE OF BEARING ANCHORAGE BY TOE-NAILS

NAIL TYPE	Length (in)	Diameter (in)	LATERAL Resistance per nail (Lbs.)		WITHDRAWAL Resistance per nail (Lbs.)	
			SPF	D. FIR	SPF	D. FIR
COMMON WIRE	3.00	0.144	122	139	30	42
	3.25	0.144	127	144	32	45
	3.50	0.160	152	173	38	52
COMMON SPIRAL	3.00	0.122	96	108	26	36
	3.25	0.122	97	108	28	40
	3.50	0.152	142	161	36	50
3.25" Gun nail	3.25	0.120	94	105	28	39

Note: If using truss with D. Fir lumber and SPF bearing plate, use tabulated SPF values in table.

Nail type:	Common wire	Common spiral	Common wire	Common spiral	Gun Nail
Diameter (in.)	0.160	0.152	0.144	0.122	0.120
Length (in.)	3.50	3.50	3.00	3.00	3.25
LUMBER	**MAXIMUM NUMBER OF TOE-NAILS**				
2x4 SPF	2	2	3	3	3
2x6 SPF	4	4	4	5	5
2x4 D. FIR	2	2	2	2	2
2x6 D. FIR	3	3	3	4	4

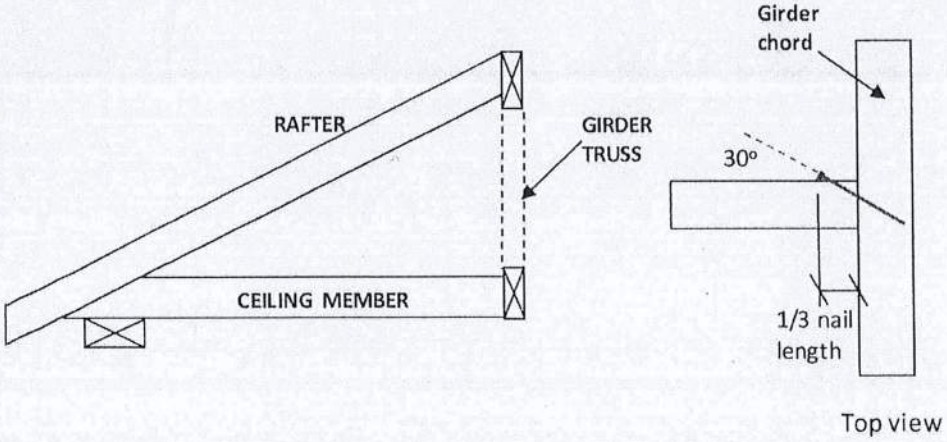

Figure 1: Toe-Nailing Rafter / Ceiling Member to Girder Truss

PEO
Certificate No. 10889485

LICENSED PROFESSIONAL ENGINEER
2024-03-20
C. Cordogiannis
90553736
PROVINCE OF ONTARIO

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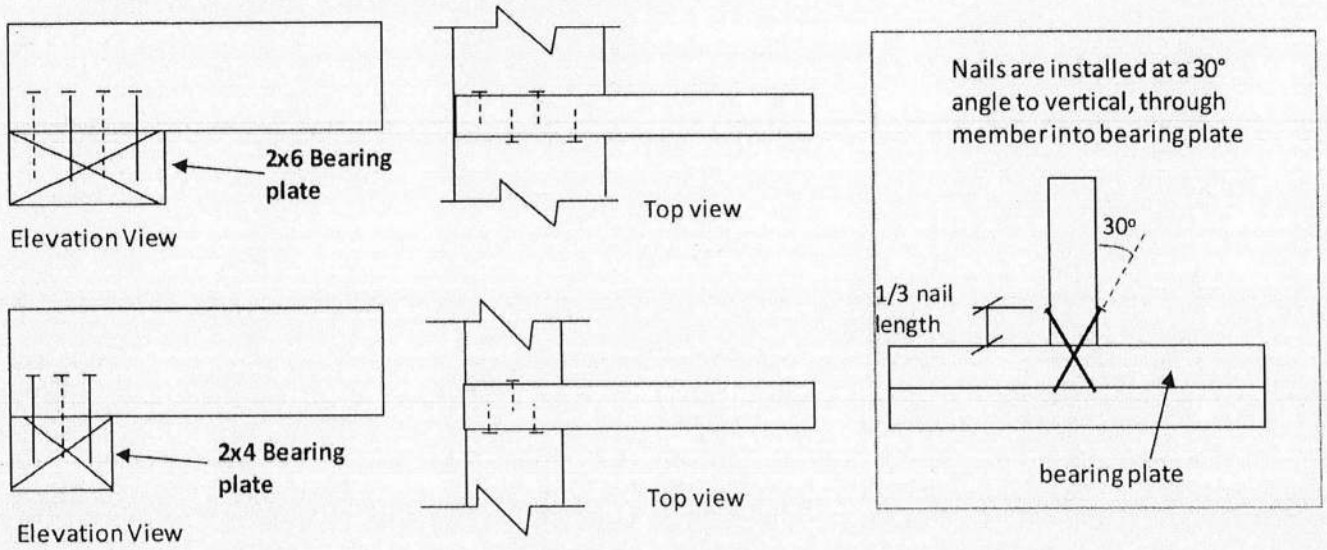
TOE-NAIL CAPACITY DETAILS

Figure 2: Toe-Nail Anchorage to Bearing Plate for Uplift



NOTES:

1. Rafter and ceiling members may be connected to top and bottom chords of girder truss by toe-nailing the members into the girder chords (see fig. 1), provided the factored vertical reactions of the supported members do not exceed the lateral resistance of the toe-nails. Mechanical connectors (hangers) are required if factored vertical reactions exceed the toe-nail capacity, or if the connection must resist horizontal loads (loads perpendicular to the face of girder or rafter).

2. Trusses, rafters or ceiling members may be anchored to the bearing plate with toe-nails (see fig. 2), provided that the factored uplift reactions due to **wind or earthquake loads** do not exceed the **withdrawal resistance of the toe-nails.** Mechanical anchors (tie-downs) are required for reactions that exceed the toe-nail withdrawal capacity. Toe-nail anchorage to bearing plates is **NOT** permitted if uplift reactions are generated from gravity loads (snow, floor live, dead).

3. Tabulated toe-nail resistances on page 1 are for **one** toe-nail. Multiply unit values by the number of nails used in the connection. Maximum number of nails in a connection shall not exceed the tabulated limits shown on page 1 for a given lumber size /species.

4. Nail values are based on specific gravity of G = 0.42 (SPF) and G = 0.49 (D. Fir).

5. 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.

6. For wind / earthquake loads, tabulated lateral resistances may be multiplied by 1.15 (K_D factor). No increases are permitted for tabulated withdrawal resistances.

7. Lumber must be dry (< 19% moisture content) at the time of nail installation.

8. Nail values in this table comply with CSA O86-19, Clause 12.9.

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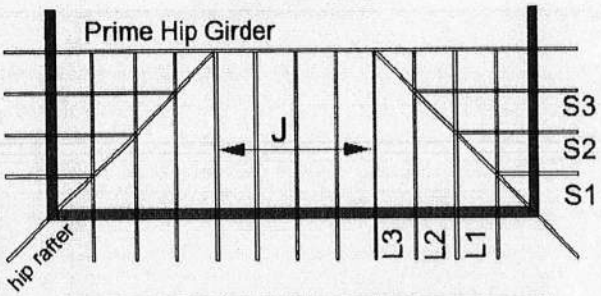
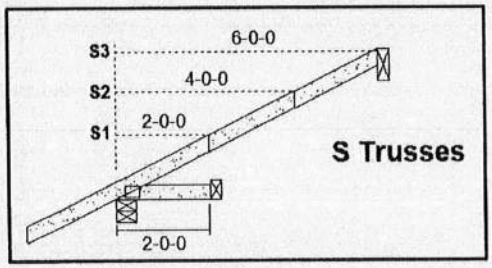
STANDARD DETAIL MSD2015-J

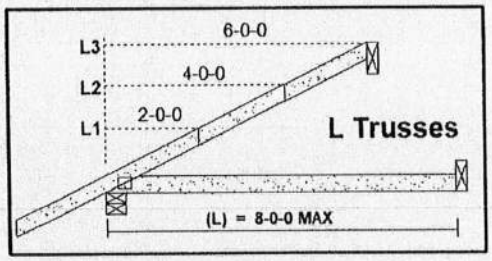
Issued: **MARCH 17, 2021**
Expiry: **MARCH 30, 2025**

STANDARD HIP END FRAMING

PLAN VIEW



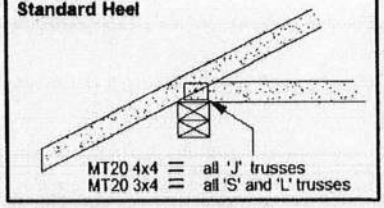




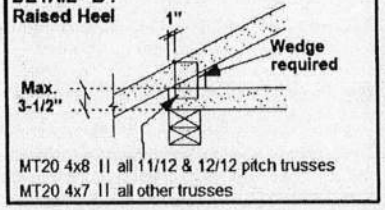
Specified Load Rating:

Top chord Live:	51.0 PSF or less
Top chord Dead:	6.0 PSF or less
Bottom chord Live:	0.0 PSF
Bottom chord Dead:	7.3 PSF or less

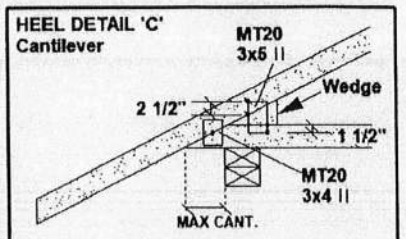
HEEL DETAIL 'A'
Standard Heel



DETAIL "B":
Raised Heel



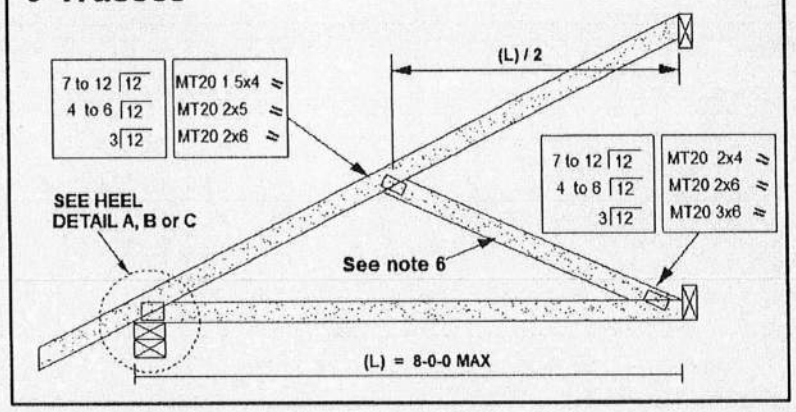
HEEL DETAIL 'C'
Cantilever



CANTILEVER DETAIL "C"

SLOPE	MAX CANT.	WEDGE PLATE	WEDGE SIZE
3/12	17"	3 X 5	2 X 3
4/12	14"	3 X 5	2 X 3
5/12	12"	3 X 5	2 X 4
6/12	10"	3 X 5	2 X 4
7/12	9"	3 X 5	2 X 6
8/12	8.5"	3 X 5	2 X 6
9/12	8"	3 X 5	2 X 6
10/12	7.5"	3 X 5	2 X 6

J Trusses



NOTES:

1. This detail is valid only for projects conforming to **PART 9 NBCC 2015** that do not require a wind analysis to be incorporated into the design of the trusses.
2. Overhang length shall not exceed 24 inches.
3. All lumber shall be 2x4 SPF (or D-Fir) DRY No. 2 grade or better.
4. All plates specified are MITEK MT20, pressed into both faces of each truss. Heel plates of all trusses shall conform to heel details 'A', 'B' or 'C'.
5. Diagonal hip rafter design shall conform to section 9.23.14.6 of NBCC 2015.
6. For 6.0 ft. or less span, diagonal web on truss 'J" is optional. Girder design must reflect choice of partial jack ('J' with diagonal web) or open jack ('J' without diagonal web)
7. All truss-to-rafter and truss-to-truss connections shall be specified as per MITEK standard detail *'MSD2015-H: Toe-Nail Capacity Details'*

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STANDARD DETAIL MSD2015-P

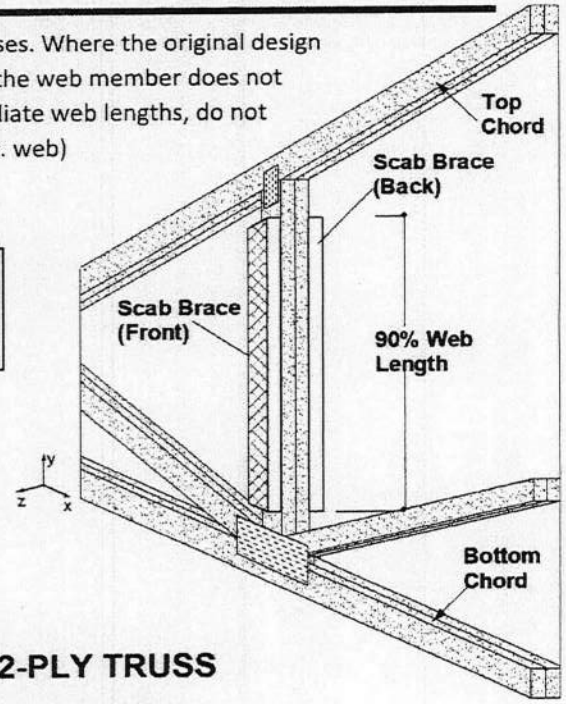
Issued: **APRIL 27, 2022**
Expiry: **MARCH 30, 2025**

ALTERNATIVE WEB BRACING SOLUTIONS

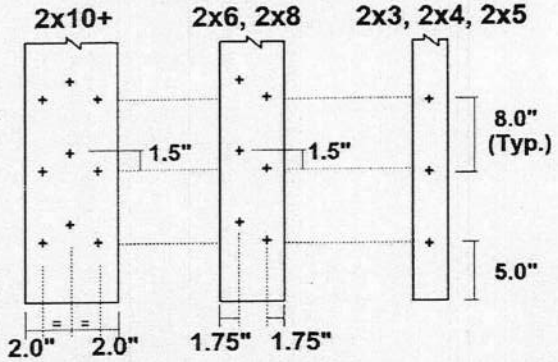
The scab brace detail shown on this page provides an alternative method of bracing compression webs of 2-PLY trusses. Where the original design calls for web bracing, the scab-brace is an acceptable alternative provided that the maximum factored axial force in the web member does not exceed the tabulated values shown below. This detail applies to web lengths of 4.0 Ft. to 10.0 Ft. only. For intermediate web lengths, do not interpolate, use the tabulated value of the longer length. (ex. For a 6.25 ft. web, use the tabulated values for a 6.5 ft. web)

	Maximum factored web force, lbs (2-Ply Truss)					
WEB LENGTH (Ft.)	Web size	2x3	2x4	2x5	2x6	2x8+
4.0		8663	12128	15593	19058	25122
4.5		7588	10623	13659	16694	22006
5.0		6570	9198	11826	14455	19054
5.5		5645	7903	10162	12420	16371
6.0		4830	6762	8694	10626	14007
6.5		4126	5776	7426	9077	11965
7.0		3526	4937	6347	7758	10226
7.5		3020	4228	5436	6644	8758
8.0		2594	3632	4670	5708	7524
8.5		2235	3128	4022	4916	6480
9.0		1933	2706	3479	4253	5606
9.5		1680	2352	3024	3696	4872
10.0		1467	2054	2640	3227	4254

SCAB BRACE DETAIL
2-PLY TRUSS



SCAB CONNECTION: 2-PLY TRUSS



+ MITEK MIFLK006 Screw @ 8 in. cc
Note: Connect scabs to truss along their entire length.

PEO
Certificate No. 10889485

LICENSED PROFESSIONAL ENGINEER
2024-03-20
C. Cordogiannis
90553736
PROVINCE OF ONTARIO

NOTES:

1. This detail **CANNOT** be used to repair damaged webs.
2. Scab sizes must be equal to web size (i.e. use a 2x6 scab on a 2x6 web, etc.).
3. Scabs &web lumber must be DRY (≤ 19% moisture content) at time of installation.
4. Scabs must cover 90% of the entire length of web and installed on both faces.
5. This detail shall NOT apply to vertical webs used for girder load transfer.
6. Web & scab lumber to be SPF No. 2 (or better) grade.
7. This detail is for webs loaded axially only (not for axial/bending members).
8. Ensure scabs will not interfere with incoming trusses, prior to using this detail.
9. Tabulated resistances are for standard load duration only (K_D=1.0) and DRY service conditions (K_S =1.0). Do not use detail for WET service applications.
10. This detail shall be used only in conjunction with sealed MiTek truss drawings.

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TECHNICAL BULLETIN

TC — Truss Connectors

SIMPSON Strong-Tie

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

Material: 16 gauge

Finish: G90 galvanized

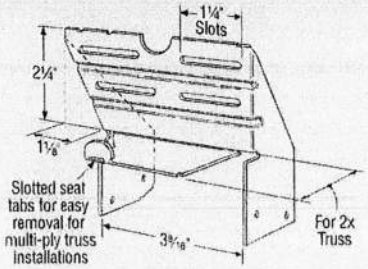
Design: Factored resistances are in accordance with CSA O86-14 and CSA O86:19

Installation:

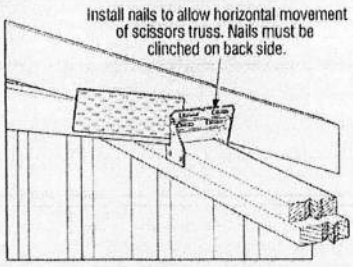
- Use all specified fasteners.
- Nails: 10d = 0.148" dia. x 3" long common wire, 10d x 1½ = 0.148" dia. x 1½" long.
- Drive 10d nails into the truss at the inside end of the slotted holes (inside end is towards the centre of the truss) and clinch on the back side. Do not seat these nails into the truss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

Optional TC Installation:

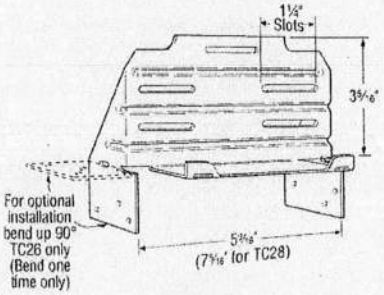
- Bend one flange up 90°. Drive specified nails into the top and face of the top plates or install Titen™ screws into the top and face of masonry wall. See optional load tables and installation details.



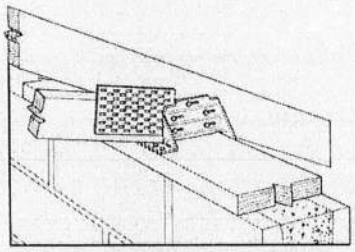
TC24
US Patent 4,932,173



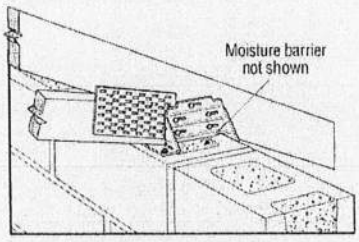
Typical TC24 Installation



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_D=1.15)	Uplift (K_D=1.15)
			lb.	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_D=1.15)	Uplift (K_D=1.15)
			lb.	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) – ⅜" 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

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(800) 999-5099
strongtie.com

CERTIFICATION

QUALITY CONTROL
CERTIFIED
TRUSS PLANT

This certifies that

Tamarack Lumber

Subscribes to and maintains a compliance level through a third-party audited in-plant quality control program inspecting the pre-engineered components as required by the

OSWA Plant Quality Program

This plant is a member in good standing complying with all the by-laws and regulations of the Ontario Structural Wood Association

OSWA Plant Number: 523

Ontario Structural Wood Association

Mike Phillips, Executive Director

November 16, 2023

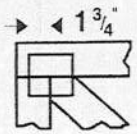
Date

Ontario Structural Wood Association (OSWA)
5 Glenaden Avenue East, Toronto, Ontario M8Y 2L2
416-235-0194 | mphillips@oswa.ca | www.oswa.ca

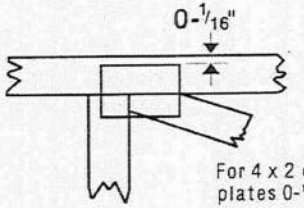
This certificate is the property of the Ontario Structural Wood Association and becomes invalid upon suspension cancellation, revocation or expiration of certification

Symbols

PLATE LOCATION AND ORIENTATION



Center plate on joint unless x, y offsets are indicated. Dimensions are in ft-in-sixteenths or mm. Apply plates to both sides of truss and fully embed teeth.



For 4 x 2 orientation, locate plates 0-1/16" from outside edge of truss.

This symbol indicates the required direction of slots in connector plates.

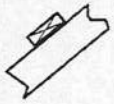
*Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

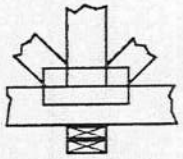
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



Indicated by symbol shown and/or by text in the bracing section of the output. Use T, I or Eliminator bracing if indicated.

BEARING

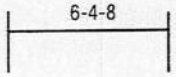


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur.

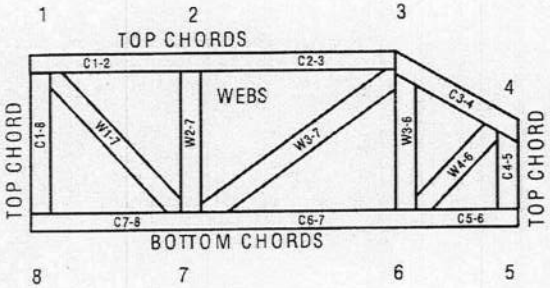
Industry Standards:

TPIC: Truss Design Procedures and Specifications for Light Metal Plate Connected Wood Trusses
DSB-89: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



dimensions shown in ft-in-sixteenths or mm (Drawings not to scale)



JOINTS ARE GENERALLY NUMBERED/LETTERED CLOCKWISE AROUND THE TRUSS STARTING AT THE JOINT FARTHEST TO THE LEFT.

CHORDS AND WEBS ARE IDENTIFIED BY END JOINT NUMBERS/LETTERS.

PRODUCT CODE APPROVALS

CCMC Reports:

11996-L, 10319-L, 13270-L, 12691-R

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MiTek®
POWER TO PERFORM.™

MiTek Engineering Reference Sheet: MII-7473C rev. 10-'08

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative T, I, or Eliminator bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by TPIC.
7. Design assumes trusses will be suitably protected from the environment in accord with TPIC.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with TPIC Quality Criteria.