

RECEIVED  
Planning & Development  
Services

DEC 4 2018

ALL CORNER BRACING TO  
CONFORM WITH PARTS OF  
O.B.C. 2012 REQUIREMENTS  
THAT CROSS BRACE OVER  
TRUSSES TO BE 2x4 STRONG  
2x6 CANT. VERT. POST TO  
THE TRUSS UNDERMINING AT  
EACH CROSS PT. VERT. POST  
LONGER THAN 6" TO HAVE  
LATERAL BRACING SO THAT  
THE DIST. BETWEEN END PT. &  
BETWEEN ROWS OF BRACING  
DOES NOT EXCEED 6'

19-10-00

17-08-00

11-06-00

2-04-00

4-11-00

3-08-00

H1  
H2  
H3  
H4  
H5  
H6  
H7

H30(4)  
H7C  
H6  
H5  
H4  
H3  
H3G  
H8  
H33  
H35

J5(7)

T.O.P. @ 9-01-00  
1/4" HEEL-7 1/4" DROP

CANT.

2x4 INT BRG

6/12

10/12

9/12

4/12

J1(10)

CATH. CEIL  
@ 4/12 I.P.

BEAM(S) A.P.P.  
BY BUILDERS  
(FLUSH)

BEAM(S) A.P.P.  
BY BUILDERS  
(FLUSH)

T.O.P. @ 9-06-00  
RSD HEEL-0" DROP

J1(2)

J7(4)

J8(9)

3-10-00

7-09-00

14-10-00

5-04-00

3-10-00

22-07-00

5-04-00

26-05-00

5-04-00

9-03-00

31-09-00

29-09-00

14-08-00

2-00-00

2-01-00

2" FIN. OH.  
RSD HEEL-0" DROP  
(2"x6" FASCIA)-FM  
ASPHALT SHINGLES  
2"x6" BRG./BRK.

PIGGYBACK TRS  
PURLINES BY OTHERS

32.5, 10.5, 7

H42G

H42(2)

15-04-00

10/12

12-08-00

45-07-00

55-00-00

2-00-00

1-00-00

6-00-00

H37

H36

H36

H36G

// LUS24  
/ LUS26DS

A.1813050-A.1813072

CONVENTIONAL  
FRAMING BY  
OTHERS  
MAY 25.6

SITE COPY



Job Track: 38514

Layout ID: 304777

Plan Log: 100828

Builder / Location:

BAYVIEW WELLINGTON HOMES / BRADFORD

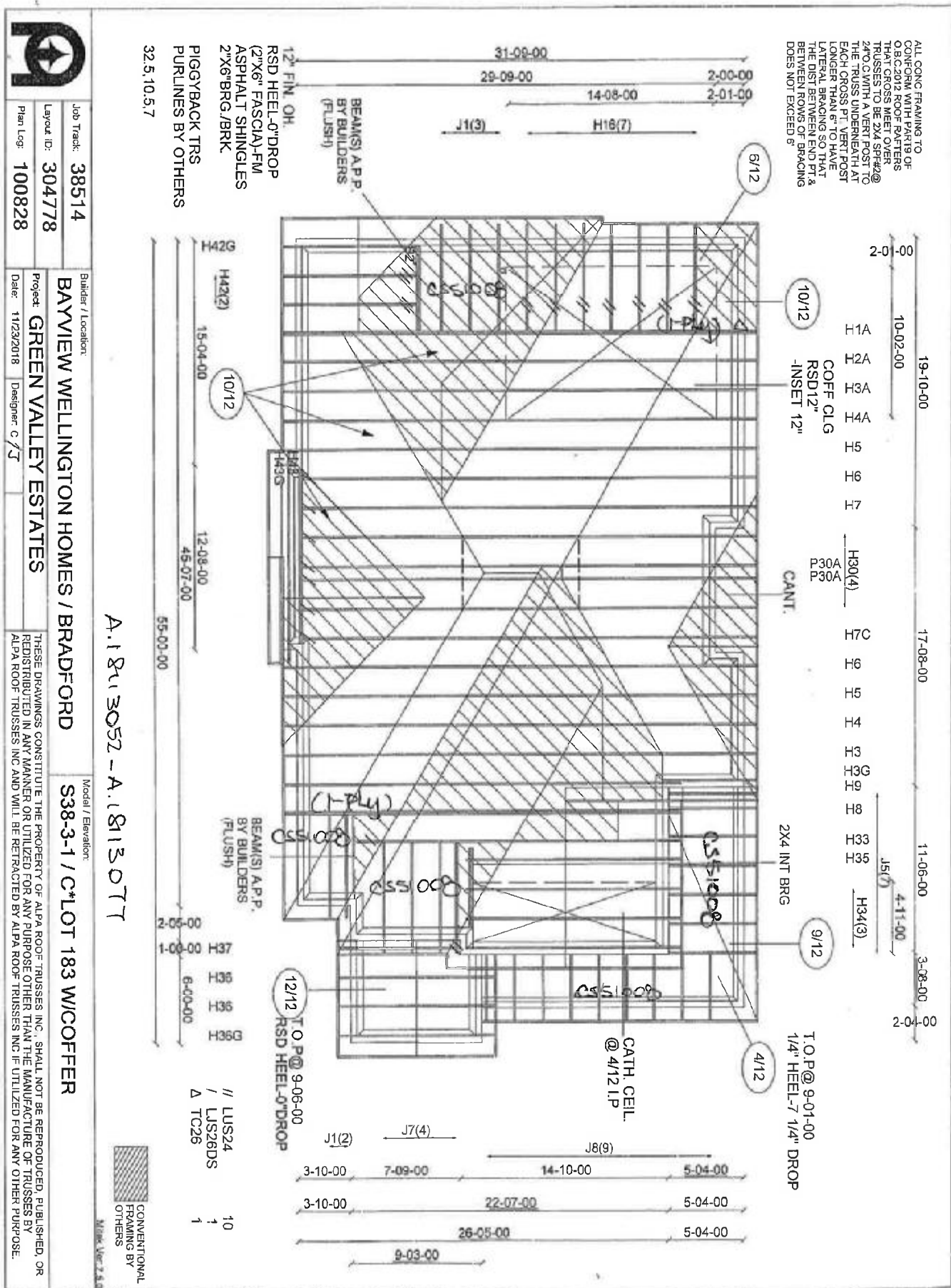
Model / Elevation:

S38-3-1 / C\*LOT 183

Project: GREEN VALLEY ESTATES

Date: 11/23/2018 Designer: C/J

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



# **Stracon Engineering Inc.**

69 Graydon Crescent  
Richmond Hill, Ontario  
L4B 3W7  
(905) 832-2250 Fax (905) 832-0286



## RESPONSIBILITIES

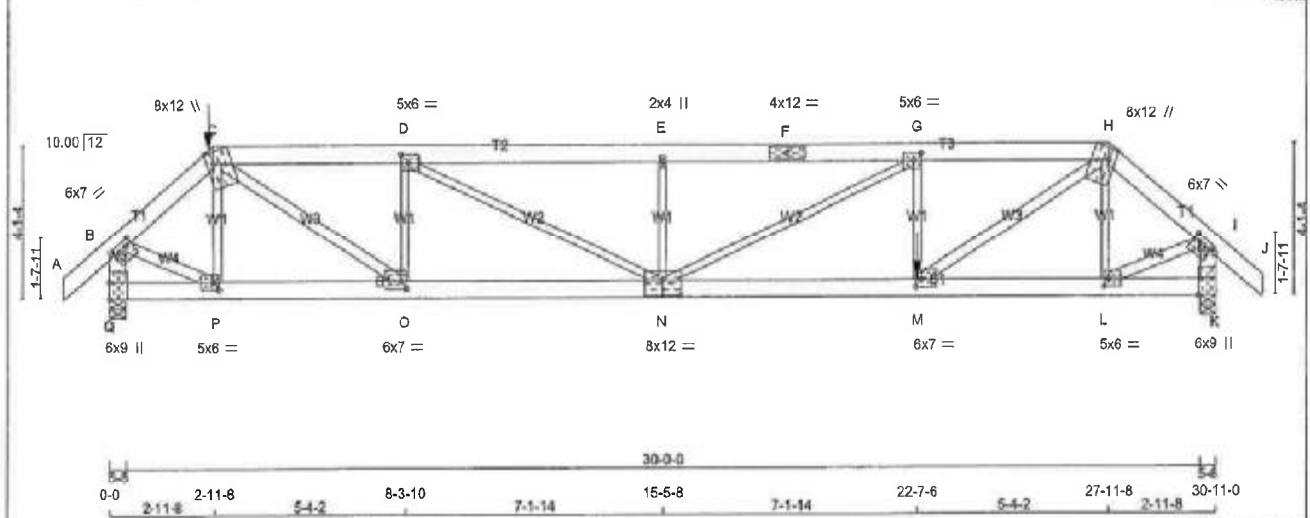
1. Stracon Engineering Inc. is responsible for the design of trusses as individual components.
2. It is the responsibility of others to ascertain that the design loads utilized on this drawing meet or exceed the actual dead load imposed by the structure and the live load imposed by the local building code or the authorities with jurisdictions.
3. All dimensions are to be verified by owner contractor, architect or other authority before manufacture.
4. Stracon Engineering 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 Stracon Engineering Inc. drawings is specified for the truss as a component only and forms an integral part of the truss design.
5. It is the truss manufacture's responsibility to ensure that trusses are manufactured in conformance with Stracon Engineering Inc. specifications outlined below.

## SPECIFICATIONS

1. Trusses designed by Stracon Engineering Inc. conforms to the relevant section of the Ontario Building Code of Canada (Part 9 or Part 4) or to the Canadian code for farm buildings, whichever applies to the building type indicated on the drawings as well as to the procedures established by the truss plate institute of Canada. Unit stresses used are as per CSA-086-09.
2. Lumber is to be the sizes and grade specified.
3. Moisture content of lumber is not to exceed 19% in service unless otherwise specified.
4. Lumber not to be treated with chemicals unless otherwise specified.
5. Plates shall be applied to both faces of the truss at each joint and shall be positioned as specified.
6. The top chord is assumed to be continuously laterally braced by the roof sheathing or purlins at intervals not exceeding 12.5 times in thickness.
7. Where not rigid ceiling is attached directly to the bottom chord, laterally brace the chords at intervals not exceeding 3M (10' o.c).

January 15, 2014

|                                                                                                                                                                                                                                                                                                                                                             |                          |                      |                 |                                 |                             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|----------------------|-----------------|---------------------------------|-----------------------------|
| JOB NAME<br><b>304777</b>                                                                                                                                                                                                                                                                                                                                   | TRUSS NAME<br><b>H1D</b> | QUANTITY<br><b>1</b> | PLY<br><b>1</b> | JOB DESC.<br><b>TRUSS DESC.</b> | DRWG NO.<br><b>JT 38514</b> |
| Alpha Roof Truss, Maple<br>ID: QrBCxxBvat3wVquoWRZ7W8ylCpx-oeMMQRVtSvBxsq1vp2zmhy3JARYT23hs_WGYWylZgo<br>Version 8.210 5 Jan 13 2018 M/Tec Industries, Inc. Tue Nov 27 14:36:51 2018 Page 1<br>1-3-8 0-0 2-11-8 5-4-2 8-3-10 7-1-14 15-5-8 22-7-6 27-1-8 30-11-0 32-2-8<br>1-3-8 2-11-8 5-4-2 7-1-14 15-5-8 22-7-6 27-1-8 30-11-0 32-2-8<br>Scale = 1/163.0 |                          |                      |                 |                                 |                             |



| CHORDS          | SIZE | LUMBER | DESCR.     |
|-----------------|------|--------|------------|
| A - C           | 2x6  | DRY    | No.2       |
| C - F           | 2x6  | DRY    | 1850F 1.5E |
| F - H           | 2x6  | DRY    | 1850F 1.5E |
| H - J           | 2x6  | DRY    | No.2       |
| J - L           | 2x6  | DRY    | No.2       |
| L - N           | 2x6  | DRY    | 1850F 1.5E |
| N - K           | 2x6  | DRY    | 1850F 1.5E |
| ALL WEBS EXCEPT | 2x3  | DRY    | No.2       |
| C - O           | 2x4  | DRY    | No.2       |
| M - N           | 2x4  | DRY    | No.2       |
| B - P           | 2x4  | DRY    | No.2       |
| L - I           | 2x4  | DRY    | No.2       |

DRY: SEASONED LUMBER.

| PLATE TYPE | PLATES  | W    | LEN | Y    | X         |
|------------|---------|------|-----|------|-----------|
| B          | TMW-t   | MT20 | 6.0 | 7.0  | 2.00 2.25 |
| C          | TTWW+m  | MT20 | 6.0 | 12.0 | Edge 2.25 |
| D          | TMWW-l  | MT20 | 5.0 | 6.0  | 2.50 2.50 |
| E          | TMW-w   | MT20 | 2.0 | 4.0  |           |
| F          | TS-l    | MT20 | 4.0 | 12.0 |           |
| G          | TMWW-l  | MT20 | 5.0 | 6.0  | 2.50 2.50 |
| H          | TTWW+m  | MT20 | 6.0 | 12.0 | Edge 2.25 |
| I          | TMW-t   | MT20 | 6.0 | 7.0  | 2.00 2.25 |
| K          | BMV1+l  | MT20 | 6.0 | 9.0  | Edge 0.50 |
| L          | BMWW-l  | MT20 | 5.0 | 6.0  | 2.50 1.75 |
| M          | BMWW-l  | MT20 | 6.0 | 7.0  | 2.50 1.75 |
| N          | BSWWH-l | MT20 | 6.0 | 12.0 | 5.00 6.00 |
| O          | BMWW-l  | MT20 | 6.0 | 7.0  | 2.50 1.75 |
| P          | BMWW-t  | MT20 | 5.0 | 6.0  | 2.50 1.75 |
| Q          | BMV1+l  | MT20 | 6.0 | 9.0  | 5.50      |

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

NOTE: Lateral brace(s) shown shall be 1x4 for Part 9 design as per OBC 9.23.13.11, and no less than 2x4 for Part 4 design.

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

| BEARINGS | FACTORED       |         | MAXIMUM FACTORED |         | INPUT  | REQD  |
|----------|----------------|---------|------------------|---------|--------|-------|
|          | GROSS REACTION | MAXIMUM | GROSS REACTION   | MAXIMUM |        |       |
| JT       | VERT           | HORZ    | DOWN             | HORZ    | UPLIFT | IN-SX |
| Q        | 3940           | 0       | 3940             | 0       | 0      | 5-8   |
| K        | 3729           | 0       | 3729             | 0       | 0      | 5-8   |

| UNFACTORED REACTIONS | 1ST LCASE |          | MAX MIN COMPONENT REACTIONS |          | WIND  | DEAD    | SOIL  |
|----------------------|-----------|----------|-----------------------------|----------|-------|---------|-------|
|                      | COMBINED  | SNOW     | LIVE                        | PERMLIVE |       |         |       |
| JT                   | 2736      | 2096 / 0 | 0 / 0                       | 0 / 0    | 0 / 0 | 656 / 0 | 0 / 0 |
| K                    | 2586      | 1977 / 0 | 0 / 0                       | 0 / 0    | 0 / 0 | 611 / 0 | 0 / 0 |

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

**BRACING**  
TOP CHORD TO BE SHEATHED OR MAX. PURLINE SPACING = 2.90 FT.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

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

**LOADING**  
TOTAL LOAD CASES: (4)

| MEMB. | CHORDS    | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX. LC1 (LC) | MAX. UNBRACED LENGTH FR-TO | MEMB.   | MAX. FACTORED FORCE (LBS) | MAX. LC1 (LC) |
|-------|-----------|---------------------------|---------------------------|---------------|----------------------------|---------|---------------------------|---------------|
|       |           |                           |                           |               |                            |         |                           |               |
| FR-TO | FROM TO   | FROM TO                   | FROM TO                   | FROM TO       | FROM TO                    | FROM TO | FROM TO                   | FROM TO       |
| A-B   | 0 / 48    | -104.9                    | -104.9                    | 0.09 (1)      | 10.00                      | P-C     | -864 / 0                  | 0.21 (1)      |
| B-C   | -3913 / 0 | -104.9                    | -104.9                    | 0.16 (1)      | 4.21                       | C-D     | 0 / 4603                  | 0.81 (1)      |
| C-D   | -6775 / 0 | -206.6                    | -206.6                    | 0.53 (1)      | 3.41                       | D-N     | -2350 / 0                 | 0.56 (1)      |
| D-E   | -8689 / 0 | -206.6                    | -206.6                    | 0.73 (1)      | 2.90                       | N-G     | 0 / 2147                  | 0.53 (1)      |
| E-F   | -8689 / 0 | -206.6                    | -206.6                    | 0.73 (1)      | 2.90                       | N-E     | -1619 / 0                 | 0.36 (1)      |
| F-G   | -8689 / 0 | -206.6                    | -206.6                    | 0.73 (1)      | 2.90                       | N-G     | 0 / 1746                  | 0.43 (1)      |
| G-H   | -7132 / 0 | -104.9                    | -104.9                    | 0.45 (1)      | 3.44                       | M-G     | -1837 / 0                 | 0.44 (1)      |
| H-I   | -3711 / 0 | -104.9                    | -104.9                    | 0.16 (1)      | 4.31                       | M-H     | 0 / 5220                  | 0.92 (1)      |
| I-J   | 0 / 48    | -104.9                    | -104.9                    | 0.09 (1)      | 10.00                      | L-H     | -908 / 0                  | 0.22 (1)      |
| Q-B   | -3916 / 0 | 0.0                       | 0.0                       | 0.28 (1)      | 5.37                       | B-P     | 0 / 3179                  | 0.66 (1)      |
| K-I   | -3730 / 0 | 0.0                       | 0.0                       | 0.27 (1)      | 5.49                       | L-I     | 0 / 3015                  | 0.53 (1)      |
| Q-P   | 0 / 0     | -36.4                     | -36.4                     | 0.05 (4)      | 10.00                      |         |                           |               |
| P-O   | 0 / 2993  | -36.4                     | -36.4                     | 0.29 (1)      | 10.00                      |         |                           |               |
| O-N   | 0 / 6776  | -36.4                     | -36.4                     | 0.66 (1)      | 10.00                      |         |                           |               |
| N-M   | 0 / 7193  | -36.4                     | -36.4                     | 0.70 (1)      | 10.00                      |         |                           |               |
| M-L   | 0 / 2806  | -18.5                     | -18.5                     | 0.27 (1)      | 10.00                      |         |                           |               |
| L-K   | 0 / 0     | -18.5                     | -18.5                     | 0.05 (1)      | 10.00                      |         |                           |               |

| FACTORED CONCENTRATED LOADS (LBS) | LOC.   | LC1  | MAX. | MAX+ | FACE  | DIR. | TYPE  |
|-----------------------------------|--------|------|------|------|-------|------|-------|
|                                   |        |      |      |      |       |      |       |
| JT                                | 2-11-8 | -228 | -228 | ---  | FRONT | VERT | TOTAL |
| C                                 | 22-7-8 | -921 | -921 | ---  | FRONT | VERT | TOTAL |

### DESIGN CRITERIA

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

|                |            |
|----------------|------------|
| SPECIAL LOADS: |            |
| TOP CH. LL     | = 32.5 PSF |
| DL             | = 3.0 PSF  |
| BOT CH. LL     | = 0.0 PSF  |
| DL             | = 7.4 PSF  |
| TOTAL LOAD     | = 42.9 PSF |

**SPACING = 24.0 IN C/C**

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

GIRDER TYPE: C/PtmeHlp  
SIDE SETBACK = 2-11-8  
END SETBACK = 5-10-6  
END WALL WIDTH = 0-0  
CORNER FRAMING TYPE: CONVENTIONAL  
END JACK TYPE: CONVENTIONAL  
APPLIED TO FRONT SIDE  
- ADDTL LOADS BASED ON 55 % OF GSL  
LOADS APPLIED TO FIRST 22-7-8 OF SPAN  
MEASURED FROM THE LEFT.

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

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

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

(55 % OF 43.9 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 32.5 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL (LL) = L/360 (1.03")  
CALCULATED VERT. DEFL (LL) = L/999 (0.36")  
ALLOWABLE DEFL (TL) = L/360 (1.03")  
CALCULATED VERT. DEFL (TL) = L/617 (0.60")

CSL: TC=0.73/1.00 (E-G:1), BC=0.70/1.00 (M-N:1), WB=0.92/1.00 (H-M:1), SS=0.61/1.00 (E-G:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

AUTOSOLVE HEELS OFF

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



|          |            |          |     |             |          |
|----------|------------|----------|-----|-------------|----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.   | DRWG NO. |
| 304777   | H1D        |          | 1   | TRUSS DESC. | JT 38514 |

Alpa Roof Truss, Maple

Version 6.210 5 Jun 13 2018 MITek Industries, Inc. Tue Nov 27 14:06:51 2018 Page 2  
ID:Or8CoxBvat3wVoucWBZ7WeylCpx-caMMORVtSvBzsq1vp2zmhy3JARYTZ3hs\_lW0YWrEzpp

# HANGERS NOTES

1) SPECIAL HANGER(S) OR CONNECTION(S) REQUIRED TO SUPPORT CONCENTRATED LOAD(S) 226.3 lbs FACTORED DOWN AT 2-11-8 ON TOP CHORD, AND 921.2 lbs FACTORED DOWN AT 22-7-8 ON BOTTOM CHORD. DESIGN FOR UNSPECIFIED CONNECTION(S) IS DELEGATED TO THE BUILDING DESIGNER.

NAIL VALUES  
 PLATE GRIP(DRY) SHEAR SECTION  
 (PSI) (PLI) (PLI)  
 MAX MIN MAX MIN MAX MIN  
 MT20 6/8 354 1667 768 1987 1656  
 PLATE PLACEMENT TOL. = 0.250 inches  
 PLATE ROTATION TOL. = 5.0 Deg.  
 JSI GRIP= 0.89 (I) (INPUT = 0.90 )  
 JSI METAL= 1.00 (N) (INPUT = 1.00 )

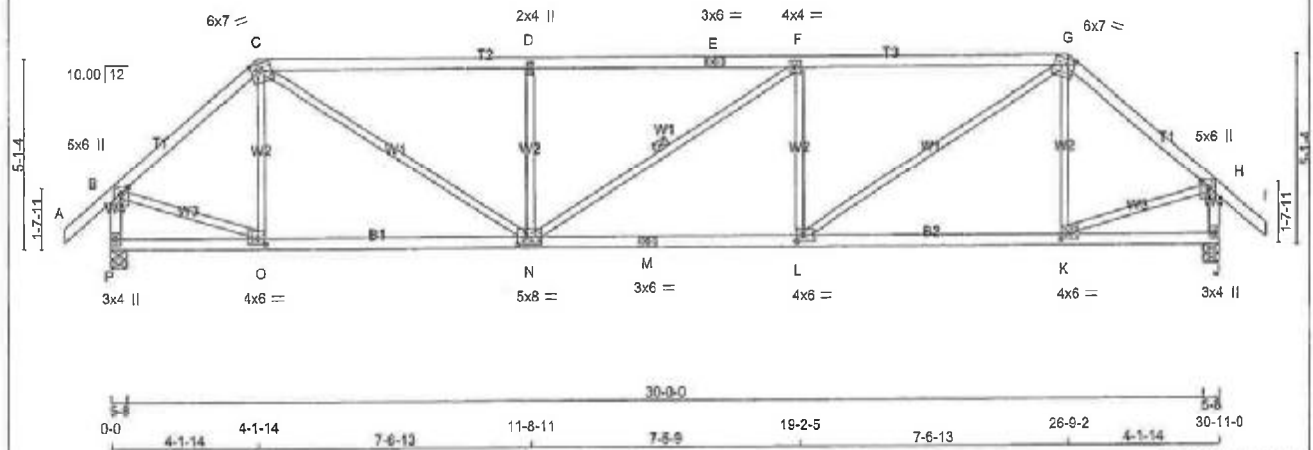
NOTE: Lateral brace(s) shown shall be 1x4 for Part 9 design as per OBC 9.23.13.11, and no less than 2x4 for Part 4 design.



A18113050(2)

|          |            |          |     |             |          |
|----------|------------|----------|-----|-------------|----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.   | DRWG NO. |
| 304777   | H2         | 1        |     | TRUSS DESC. | JT 38514 |

Agas Roof Truss, Maple Version 8.210 S Jan 13 2018 Mitel Industries, Inc. Tue Nov 27 14:06:02 2018 Page 1  
 ID: Cx8CxxBveG3wVqu0WRZ7W8yCpx-GrwkdVVDJ0T\_b5N1U7E9cQhVWlep7DPFa5zyEzgn  
 1-3-8 0-0 4-1-14 7-6-13 11-8-11 7-5-9 19-2-5 7-6-13 26-9-2 4-1-14 30-11-0  
 1-3-8 1-3-8 1-3-8  
 Scale = 1/50.4



| LUMBER                |      | RULES  |            |       |  |
|-----------------------|------|--------|------------|-------|--|
| CHORDS                | SIZE | LUMBER |            | DESCR |  |
| A - C                 | 2x4  | DRY    | No.2       | SPF   |  |
| C - E                 | 2x4  | DRY    | 1650F 1.5E | SPF   |  |
| E - G                 | 2x4  | DRY    | 1650F 1.5E | SPF   |  |
| G - I                 | 2x4  | DRY    | No.2       | SPF   |  |
| I - B                 | 2x4  | DRY    | No.2       | SPF   |  |
| J - H                 | 2x4  | DRY    | No.2       | SPF   |  |
| P - M                 | 2x4  | DRY    | No.2       | SPF   |  |
| M - J                 | 2x4  | DRY    | No.2       | SPF   |  |
| ALL WEBS<br>EXCEPT    | 2x3  | DRY    | No.2       | SPF   |  |
| DRY, SEASONED LUMBER, |      |        |            |       |  |

DRY: SEASONED LUMBER

#### PLATES (Tables in inches)

| JT TYPE    | PLATES | W   | LEN | Y    | X    |
|------------|--------|-----|-----|------|------|
| B - TMVW+p | MT20   | 5.0 | 6.0 | Edge | 2.75 |
| C - TTWW-m | MT20   | 6.0 | 7.0 | 1.75 | 2.25 |
| D - TMW+w  | MT20   | 2.0 | 4.0 |      |      |
| E - TS-t   | MT20   | 3.0 | 6.0 |      |      |
| F - TMVW-l | MT20   | 4.0 | 4.0 |      |      |
| G - TTWW-m | MT20   | 6.0 | 7.0 | 1.75 | 2.25 |
| H - TMVW+p | MT20   | 5.0 | 6.0 | Edge | 2.75 |
| J - BMV1+p | MT20   | 3.0 | 4.0 |      |      |
| K - BMVW-l | MT20   | 4.0 | 6.0 | 1.75 | 2.50 |
| L - BMVW-l | MT20   | 4.0 | 6.0 | 2.00 | 2.25 |
| M - BS-t   | MT20   | 3.0 | 6.0 |      |      |
| N - BMVW-l | MT20   | 5.0 | 8.0 | 2.50 | 3.00 |
| O - BMVW-l | MT20   | 4.0 | 6.0 | 1.75 | 2.50 |
| P - 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 | FACTORED       | MAXIMUM FACTORED | INPUT | RECORD |
|----------|----------------|------------------|-------|--------|
|          | GROSS REACTION | GROSS REACTION   | BRG   | BRG    |
| JT       | VERT           | HORZ             | DOWN  | HORZ   |
| P        | 2053           | 0                | 2053  | 0      |
| J        | 2053           | 0                | 2053  | 0      |

#### UNFACTORED REACTIONS

| JT | 1ST CASE | MAX. AIN | COMPONENT REACTIONS | DEAD  | SOL   |
|----|----------|----------|---------------------|-------|-------|
| P  | 1424     | 1064 / 0 | 0 / 0               | 0 / 0 | 0 / 0 |
| J  | 1424     | 1064 / 0 | 0 / 0               | 0 / 0 | 0 / 0 |

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

#### BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.44 FT.  
 MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT. OR RIGID CEILING DIRECTLY APPLIED.

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

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

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.     | FACTORED | FORCE  | VERT. LOAD | LC1 | MAX.     | MAX.   | MEMB.     | FACTORED | FORCE | MAX.     |
|--------|-----------|----------|--------|------------|-----|----------|--------|-----------|----------|-------|----------|
|        |           |          | (LBS)  | (PLF)      |     | CS1 (LC) | UNBRAC |           |          | (LBS) | CS1 (LC) |
| FR-TO  |           |          |        |            |     |          | LENGTH | FR-TO     |          |       |          |
| A-B    | 0 / 47    | -104.9   | -104.9 | 0.14       | (1) | 10.00    | Q-C    | -320 / 28 | 0.12     | (1)   |          |
| B-C    | -1902 / 0 | -104.9   | -104.9 | 0.40       | (1) | 4.46     | C-N    | 0 / 1857  | 0.42     | (1)   |          |
| C-D    | -3019 / 0 | -104.9   | -104.9 | 0.99       | (1) | 3.44     | N-D    | -855 / 0  | 0.33     | (1)   |          |
| D-E    | -3020 / 0 | -104.9   | -104.9 | 0.99       | (1) | 3.44     | N-F    | -1 / 0    | 0.00     | (1)   |          |
| E-F    | -3020 / 0 | -104.9   | -104.9 | 0.99       | (1) | 3.44     | L-F    | -858 / 0  | 0.33     | (1)   |          |
| F-G    | -3020 / 0 | -104.9   | -104.9 | 1.00       | (1) | 3.44     | L-G    | 0 / 1859  | 0.42     | (1)   |          |
| G-H    | -1901 / 0 | -104.9   | -104.9 | 0.40       | (1) | 4.46     | K-G    | -320 / 28 | 0.12     | (1)   |          |
| H-I    | 0 / 47    | -104.9   | -104.9 | 0.14       | (1) | 10.00    | B-O    | 0 / 1524  | 0.34     | (1)   |          |
| P-B    | -2031 / 0 | 0.0      | 0.0    | 0.22       | (1) | 5.93     | K-H    | 0 / 1524  | 0.34     | (1)   |          |
| J-H    | -2031 / 0 | 0.0      | 0.0    | 0.22       | (1) | 5.93     |        |           |          |       |          |
| P-O    | 0 / 0     | -18.5    | -18.5  | 0.16       | (4) | 10.00    |        |           |          |       |          |
| O-N    | 0 / 1450  | -18.5    | -18.5  | 0.33       | (1) | 10.00    |        |           |          |       |          |
| N-M    | 0 / 3021  | -18.5    | -18.5  | 0.58       | (1) | 10.00    |        |           |          |       |          |
| M-L    | 0 / 3021  | -18.5    | -18.5  | 0.58       | (1) | 10.00    |        |           |          |       |          |
| L-K    | 0 / 1450  | -18.5    | -18.5  | 0.33       | (1) | 10.00    |        |           |          |       |          |
| K-J    | 0 / 0     | -18.5    | -18.5  | 0.16       | (4) | 10.00    |        |           |          |       |          |

NOTE: Lateral brace(s) shown shall be 1x4 for Part 9 design as per OBC 9.23.13.11, and no less than 2x4 for Part 4 design.



#### DESIGN CRITERIA

SPECIFIED LOADS:  
 TOP CH. LL = 32.5 PSF  
 DL = 3.0 PSF  
 BOT CH. LL = 0.0 PSF  
 DL = 7.4 PSF  
 TOTAL LOAD = 42.9 PSF

SPACING = 24.0 IN. O.C

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

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

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

(55 % OF 43.5 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 32.5 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL. (LL) = L/360 (1.03")  
 CALCULATED VERT. DEFL. (LL) = L/999 (0.17")  
 ALLOWABLE DEFL. (TL) = L/360 (1.03")  
 CALCULATED VERT. DEFL. (TL) = L/999 (0.31")

CSI: TC=1.00/1.00 (F-G:1), BC=0.58/1.00 (L-N:1)  
 WB=0.42/1.00 (G-L:1), SSI=0.37/1.00 (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 = 0.50

AUTOSOLVE HEELS OFF

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

#### NAIL VALUES

PLATE GRIP(DRY) SHEAR SECTION (PSI) (PLI) (PLI)  
 MAX MIN MAX MIN MAX MIN  
 MT20 618 354 1657 788 1987 1656

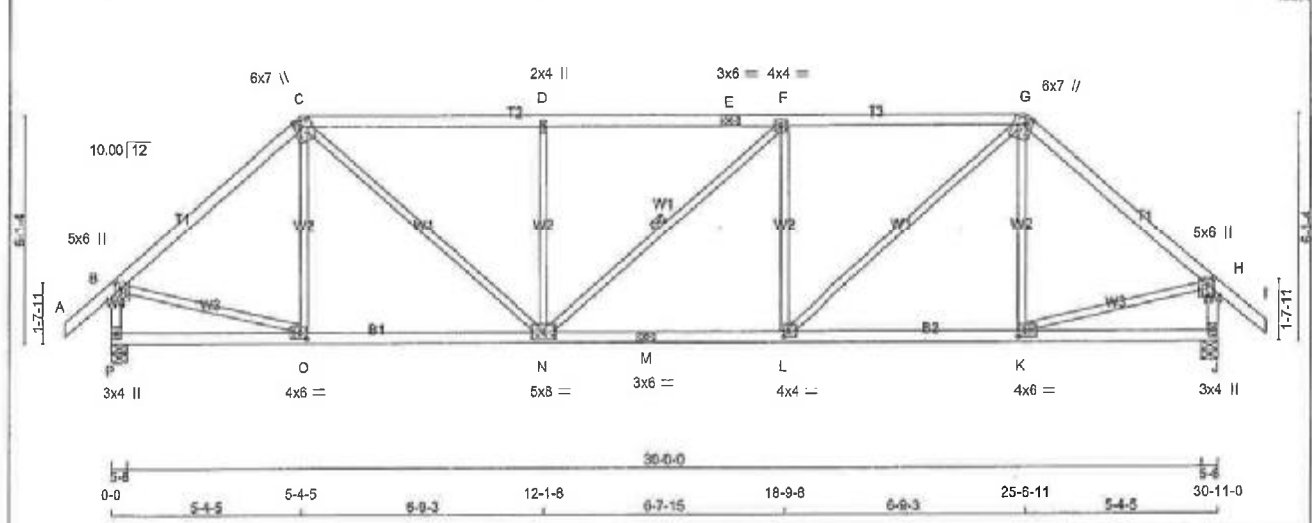
PLATE PLACEMENT TOL. = 0.250 Inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.89 (N) (INPUT = 0.90)  
 JSI METAL= 1.00 (M) (INPUT = 1.00)

A18113051

|                                                                                                                                                                                                                                                                                            |                         |                      |                 |                                 |                             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|----------------------|-----------------|---------------------------------|-----------------------------|
| JOB NAME<br><b>304777</b>                                                                                                                                                                                                                                                                  | TRUSS NAME<br><b>H3</b> | QUANTITY<br><b>1</b> | PLY<br><b>1</b> | JOB DESC.<br><b>TRUSS DESC.</b> | DRWG NO.<br><b>JT 38514</b> |
| Nga Roof Truss, Maple<br>ID: Qr8CxxBvat3wVquwRZ?W8yCpx-1U6r7W7 WRf58AHwt?EnN8clFHL1Sc95377dPyEggn<br>Version 4.210 6 Jun 13 2018 M/Tek Industries, Inc. Tue Nov 27 14:36:53 2018 Page 1<br>1-3-8 0-0 5-4-5 5-9-3 12-1-8 6-7-15 18-9-8 6-9-3 25-6-11 5-4-5 30-11-0 1-3-8<br>Scale = 1/163.4 |                         |                      |                 |                                 |                             |



| <b>LUMBER</b><br>N. L. G. A. RULES<br>CHORDS SIZE LUMBER DESCR.<br>A - C 2x4 DRY No.2 SPF<br>C - E 2x4 DRY No.2 SPF<br>E - G 2x4 DRY No.2 SPF<br>G - I 2x4 DRY No.2 SPF<br>P - B 2x4 DRY No.2 SPF<br>P - H 2x4 DRY No.2 SPF<br>P - M 2x4 DRY No.2 SPF<br>P - J 2x4 DRY No.2 SPF<br>ALL WEBS 2x3 DRY No.2 SPF<br>EXCEPT<br>DRY: SEASONED LUMBER. |                           | <b>DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER</b><br><b>BEARINGS</b><br><table border="1"> <thead> <tr> <th></th> <th>FACTORED GROSS REACTION</th> <th>MAXIMUM FACTORED GROSS REACTION</th> <th>INPUT BRG</th> <th>REQD BRG</th> </tr> </thead> <tbody> <tr> <td>JT</td> <td>2053</td> <td>2053</td> <td>0</td> <td>0</td> </tr> <tr> <td>P</td> <td>2053</td> <td>2053</td> <td>0</td> <td>0</td> </tr> <tr> <td>J</td> <td>2053</td> <td>2053</td> <td>0</td> <td>0</td> </tr> </tbody> </table> <b>UNFACTORED REACTIONS</b><br><table border="1"> <thead> <tr> <th></th> <th>1ST CASE</th> <th>MAX</th> <th>MIN</th> <th>COMPONENT REACTIONS</th> <th>WIND</th> <th>DEAD</th> <th>SOL</th> </tr> </thead> <tbody> <tr> <td>JT</td> <td>1424</td> <td>1094/0</td> <td>0/0</td> <td>0/0</td> <td>0/0</td> <td>330/0</td> <td>0/0</td> </tr> <tr> <td>P</td> <td>1424</td> <td>1094/0</td> <td>0/0</td> <td>0/0</td> <td>0/0</td> <td>330/0</td> <td>0/0</td> </tr> <tr> <td>J</td> <td>1424</td> <td>1094/0</td> <td>0/0</td> <td>0/0</td> <td>0/0</td> <td>330/0</td> <td>0/0</td> </tr> </tbody> </table> BEARING MATERIAL TO BE SPF NO 2 OR BETTER AT JOINT(S) P, J<br><b>BRACING</b><br>TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.26 FT.<br>MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.<br>ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE LATERALLY RESTRAINED.<br>1 LATERAL BRACE(S) AT 1/2 LENGTH OF F-N.<br>END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW<br><b>LOADING</b><br>TOTAL LOAD CASES: (4)<br><table border="1"> <thead> <tr> <th colspan="4">CHORDS</th> <th colspan="4">WEBS</th> </tr> <tr> <th>MEMB.</th> <th>MAX. FACTORED FORCE (LBS)</th> <th>FACTORED VERT. LOAD (PLF)</th> <th>MAX. CS (LC)</th> <th>MEMB.</th> <th>MAX. FACTORED FORCE (LBS)</th> <th>MAX. CS (LC)</th> <th></th> </tr> </thead> <tbody> <tr> <td>FR-TO</td> <td></td> <td></td> <td></td> <td>FR-TO</td> <td></td> <td></td> <td></td> </tr> <tr> <td>A-B</td> <td>0/47</td> <td>-104.9</td> <td>-104.9 0.14 (1)</td> <td>C-C</td> <td>-226/54</td> <td>0.13 (1)</td> <td></td> </tr> <tr> <td>B-C</td> <td>-1926/0</td> <td>-104.9</td> <td>-104.9 0.70 (1)</td> <td>C-N</td> <td>0/1362</td> <td>0.31 (1)</td> <td></td> </tr> <tr> <td>C-D</td> <td>-2507/0</td> <td>-104.9</td> <td>-104.9 0.94 (1)</td> <td>N-D</td> <td>-764/0</td> <td>0.45 (1)</td> <td></td> </tr> <tr> <td>D-E</td> <td>-2507/0</td> <td>-104.9</td> <td>-104.9 0.93 (1)</td> <td>N-F</td> <td>-2/0</td> <td>0.00 (1)</td> <td></td> </tr> <tr> <td>E-F</td> <td>-2507/0</td> <td>-104.9</td> <td>-104.9 0.93 (1)</td> <td>L-F</td> <td>-764/0</td> <td>0.45 (1)</td> <td></td> </tr> <tr> <td>F-G</td> <td>-2508/0</td> <td>-104.9</td> <td>-104.9 0.94 (1)</td> <td>L-G</td> <td>0/1364</td> <td>0.31 (1)</td> <td></td> </tr> <tr> <td>G-H</td> <td>-1926/0</td> <td>-104.9</td> <td>-104.9 0.70 (1)</td> <td>K-G</td> <td>-227/54</td> <td>0.13 (1)</td> <td></td> </tr> <tr> <td>H-I</td> <td>0/47</td> <td>-104.9</td> <td>-104.9 0.14 (1)</td> <td>B-O</td> <td>0/1518</td> <td>0.34 (1)</td> <td></td> </tr> <tr> <td>P-B</td> <td>-2015/0</td> <td>0.0</td> <td>0.0 0.21 (1)</td> <td>K-H</td> <td>0/1518</td> <td>0.34 (1)</td> <td></td> </tr> <tr> <td>J-H</td> <td>-2015/0</td> <td>0.0</td> <td>0.0 0.21 (1)</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>P-O</td> <td>0/0</td> <td>-18.5</td> <td>-18.5 0.16 (4)</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>O-N</td> <td>0/1472</td> <td>-18.5</td> <td>-18.5 0.33 (1)</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>N-M</td> <td>0/2509</td> <td>-18.5</td> <td>-18.5 0.48 (1)</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>M-L</td> <td>0/2509</td> <td>-18.5</td> <td>-18.5 0.48 (1)</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>L-K</td> <td>0/1472</td> <td>-18.5</td> <td>-18.5 0.33 (1)</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>K-J</td> <td>0/0</td> <td>-18.5</td> <td>-18.5 0.16 (4)</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> |                 |                     | FACTORED GROSS REACTION   | MAXIMUM FACTORED GROSS REACTION | INPUT BRG | REQD BRG | JT | 2053 | 2053 | 0 | 0 | P | 2053 | 2053 | 0 | 0 | J | 2053 | 2053 | 0 | 0 |  | 1ST CASE | MAX | MIN | COMPONENT REACTIONS | WIND | DEAD | SOL | JT | 1424 | 1094/0 | 0/0 | 0/0 | 0/0 | 330/0 | 0/0 | P | 1424 | 1094/0 | 0/0 | 0/0 | 0/0 | 330/0 | 0/0 | J | 1424 | 1094/0 | 0/0 | 0/0 | 0/0 | 330/0 | 0/0 | CHORDS |  |  |  | WEBS |  |  |  | MEMB. | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX. CS (LC) | MEMB. | MAX. FACTORED FORCE (LBS) | MAX. CS (LC) |  | FR-TO |  |  |  | FR-TO |  |  |  | A-B | 0/47 | -104.9 | -104.9 0.14 (1) | C-C | -226/54 | 0.13 (1) |  | B-C | -1926/0 | -104.9 | -104.9 0.70 (1) | C-N | 0/1362 | 0.31 (1) |  | C-D | -2507/0 | -104.9 | -104.9 0.94 (1) | N-D | -764/0 | 0.45 (1) |  | D-E | -2507/0 | -104.9 | -104.9 0.93 (1) | N-F | -2/0 | 0.00 (1) |  | E-F | -2507/0 | -104.9 | -104.9 0.93 (1) | L-F | -764/0 | 0.45 (1) |  | F-G | -2508/0 | -104.9 | -104.9 0.94 (1) | L-G | 0/1364 | 0.31 (1) |  | G-H | -1926/0 | -104.9 | -104.9 0.70 (1) | K-G | -227/54 | 0.13 (1) |  | H-I | 0/47 | -104.9 | -104.9 0.14 (1) | B-O | 0/1518 | 0.34 (1) |  | P-B | -2015/0 | 0.0 | 0.0 0.21 (1) | K-H | 0/1518 | 0.34 (1) |  | J-H | -2015/0 | 0.0 | 0.0 0.21 (1) |  |  |  |  | P-O | 0/0 | -18.5 | -18.5 0.16 (4) |  |  |  |  | O-N | 0/1472 | -18.5 | -18.5 0.33 (1) |  |  |  |  | N-M | 0/2509 | -18.5 | -18.5 0.48 (1) |  |  |  |  | M-L | 0/2509 | -18.5 | -18.5 0.48 (1) |  |  |  |  | L-K | 0/1472 | -18.5 | -18.5 0.33 (1) |  |  |  |  | K-J | 0/0 | -18.5 | -18.5 0.16 (4) |  |  |  |  | <b>DESIGN CRITERIA</b><br>SPECIFIED LOADS:<br>TOP CH. LL = 32.5 PSF<br>DL = 3.0 PSF<br>BOT CH. LL = 0.0 PSF<br>DL = 7.4 PSF<br>TOTAL LOAD = 42.9 PSF<br>SPACING = 24.0 IN. C/C<br>LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM<br>THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBC 2010<br>THIS DESIGN COMPLIES WITH:<br>- PART 9 OF OBC 2012, BCBC 2012, ABC 2014<br>- CSA 086-09<br>- TPIC 2011<br>(55% OF 43.9 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 32.5 P.S.F., SPECIFIED ROOF LIVE LOAD<br>ALLOWABLE DEFL.(LL) = L/360 (1.03")<br>CALCULATED VERT. DEFL.(LL) = L/999 (0.13")<br>ALLOWABLE DEFL.(TL) = L/360 (1.03")<br>CALCULATED VERT. DEFL.(TL) = L/999 (0.23")<br>CSI: TC=0.94/1.00 (F-G:1), BC=0.48/1.00 (L-N:1), WB=0.45/1.00 (F-L:1), SS=0.33/1.00 (F-G:1)<br>DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10<br>COMP=1.10 SHEAR=1.10 TENS=1.10<br>COMPANION LIVE LOAD FACTOR = 0.50<br>AUTOSOLVE HEELS OFF<br>TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT<br>NAIL VALUES<br>PLATE GRIP(DRY) SHEAR SECTION (PSI) (PLI) (PLI)<br>MAX MIN MAX MIN MAX MIN<br>MT20 616 354 1667 822 2284 1655<br>PLATE PLACEMENT TOL. = 0.250 Inches<br>PLATE ROTATION TOL. = 5.0 Deg.<br>JSI GRIP= 0.89 (L) (INPUT = 0.90)<br>JSI METAL= 0.72 (W) (INPUT = 1.00) |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---------------------|---------------------------|---------------------------------|-----------|----------|----|------|------|---|---|---|------|------|---|---|---|------|------|---|---|--|----------|-----|-----|---------------------|------|------|-----|----|------|--------|-----|-----|-----|-------|-----|---|------|--------|-----|-----|-----|-------|-----|---|------|--------|-----|-----|-----|-------|-----|--------|--|--|--|------|--|--|--|-------|---------------------------|---------------------------|--------------|-------|---------------------------|--------------|--|-------|--|--|--|-------|--|--|--|-----|------|--------|-----------------|-----|---------|----------|--|-----|---------|--------|-----------------|-----|--------|----------|--|-----|---------|--------|-----------------|-----|--------|----------|--|-----|---------|--------|-----------------|-----|------|----------|--|-----|---------|--------|-----------------|-----|--------|----------|--|-----|---------|--------|-----------------|-----|--------|----------|--|-----|---------|--------|-----------------|-----|---------|----------|--|-----|------|--------|-----------------|-----|--------|----------|--|-----|---------|-----|--------------|-----|--------|----------|--|-----|---------|-----|--------------|--|--|--|--|-----|-----|-------|----------------|--|--|--|--|-----|--------|-------|----------------|--|--|--|--|-----|--------|-------|----------------|--|--|--|--|-----|--------|-------|----------------|--|--|--|--|-----|--------|-------|----------------|--|--|--|--|-----|-----|-------|----------------|--|--|--|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|                                                                                                                                                                                                                                                                                                                                                 | FACTORED GROSS REACTION   | MAXIMUM FACTORED GROSS REACTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | INPUT BRG       | REQD BRG            |                           |                                 |           |          |    |      |      |   |   |   |      |      |   |   |   |      |      |   |   |  |          |     |     |                     |      |      |     |    |      |        |     |     |     |       |     |   |      |        |     |     |     |       |     |   |      |        |     |     |     |       |     |        |  |  |  |      |  |  |  |       |                           |                  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 |     |        |       |                |  |  |  |  |     |     |       |                |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  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| JT                                                                                                                                                                                                                                                                                                                                              | 2053                      | 2053                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     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 |     |        |       |                |  |  |  |  |     |     |       |                |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |
| P                                                                                                                                                                                                                                                                                                                                               | 2053                      | 2053                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     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| A-B                                                                                                                                                                                                                                                                                                                                             | 0/47                      | -104.9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   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| B-C                                                                                                                                                                                                                                                                                                                                             | -1926/0                   | -104.9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   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| C-D                                                                                                                                                                                                                                                                                                                                             | -2507/0                   | -104.9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   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| D-E                                                                                                                                                                                                                                                                                                                                             | -2507/0                   | -104.9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   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| E-F                                                                                                                                                                                                                                                                                                                                             | -2507/0                   | -104.9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   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| F-G                                                                                                                                                                                                                                                                                                                                             | -2508/0                   | -104.9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   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| G-H                                                                                                                                                                                                                                                                                                                                             | -1926/0                   | -104.9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | -104.9 0.70 (1) | K-G                 | -227/54                   | 0.13 (1)                        |           |          |    |      |      |   |   |   |      |      |   |   |   |      |      |   |   |  |          |     |     |                     |      |      |     |    |      |        |     |     |     |       |     |   |      |        |     |     |     |       |     |   |      |        |     |     |     |       |     |        |  |  |  |      |  |  |  |       |                           |                  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| H-I                                                                                                                                                                                                                                                                                                                                             | 0/47                      | -104.9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | -104.9 0.14 (1) | B-O                 | 0/1518                    | 0.34 (1)                        |           |          |    |      |      |   |   |   |      |      |   |   |   |      |      |   |   |  |          |     |     |                     |      |      |     |    |      |        |     |     |     |       |     |   |      |        |     |     |     |       |     |   |      |        |     |     |     |       |     |        |  |  |  |      |  |  |  |       |                           |                  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| P-B                                                                                                                                                                                                                                                                                                                                             | -2015/0                   | 0.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      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| J-H                                                                                                                                                                                                                                                                                                                                             | -2015/0                   | 0.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      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| P-O                                                                                                                                                                                                                                                                                                                                             | 0/0                       | -18.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    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| O-N                                                                                                                                                                                                                                                                                                                                             | 0/1472                    | -18.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    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         |              |       |                           |              |  |       |  |  |  |       |  |  |  |     |      |        |                 |     |         |          |  |     |         |        |                 |     |        |          |  |     |         |        |                 |     |        |          |  |     |         |        |                 |     |      |          |  |     |         |        |                 |     |        |          |  |     |         |        |                 |     |        |          |  |     |         |        |                 |     |         |          |  |     |      |        |                 |     |        |          |  |     |         |     |              |     |        |          |  |     |         |     |              |  |  |  |  |     |     |       |                |  |  |  |  |     |        |       |                |  |  |  |  |     |        |       |                |  |  |  |  |     |        |       |                |  |  |  |  |     |        |       |                |  |  |  |  |     |     |       |                |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |
| K-J                                                                                                                                                                                                                                                                                                                                             | 0/0                       | -18.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | -18.5 0.16 (4)  |                     |                           |                                 |           |          |    |      |      |   |   |   |      |      |   |   |   |      |      |   |   |  |          |     |     |                     |      |      |     |    |      |        |     |     |     |       |     |   |      |        |     |     |     |       |     |   |      |        |     |     |     |       |     |        |  |  |  |      |  |  |  |       |                           |                           |              |       |                           |              |  |       |  |  |  |       |  |  |  |     |      |        |                 |     |         |          |  |     |         |        |                 |     |        |          |  |     |         |        |                 |     |        |          |  |     |         |        |                 |     |      |          |  |     |         |        |                 |     |        |          |  |     |         |        |                 |     |        |          |  |     |         |        |                 |     |         |          |  |     |      |        |                 |     |        |          |  |     |         |     |              |     |        |          |  |     |         |     |              |  |  |  |  |     |     |       |                |  |  |  |  |     |        |       |                |  |  |  |  |     |        |       |                |  |  |  |  |     |        |       |                |  |  |  |  |     |        |       |                |  |  |  |  |     |     |       |                |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |

NOTE: Lateral brace(s) shown shall be 1x4 for Part 9 design as per OBC 9.23.13.11, and no less than 2x4 for Part 4 design.

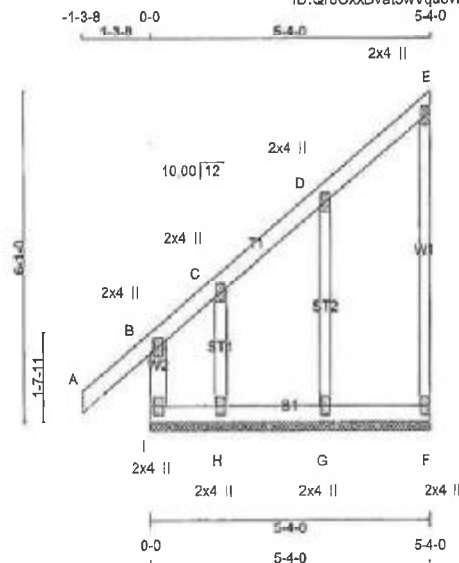


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|          |            |          |     |             |          |
|----------|------------|----------|-----|-------------|----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.   | DRWG NO. |
| 304777   | H3G        | 1        |     | TRUSS DESC. | JT 38514 |

Alpa Roof Truss, Maple

ID:Qr8CxxBvat3wVqucWRZ?W8yiCpx-DD1U2TXlqZWJlTUAWT JahzVWcUmdklychDryEzg



Scale = 1/8" = 1'-0"

TOTAL WEIGHT = 27.8

#### LUMBER

| MEMBER | SIZE | DRY | NO. 2 | DESCR. |
|--------|------|-----|-------|--------|
| CHORDS | 2x4  | DRY | No. 2 | SPF    |
| I - B  | 2x4  | DRY | No. 2 | SPF    |
| A - E  | 2x4  | DRY | No. 2 | SPF    |
| F - E  | 2x4  | DRY | No. 2 | SPF    |
| I - F  | 2x4  | DRY | No. 2 | SPF    |

ALL WEBS 2x3 DRY No. 2  
ALL CABLE WEBS 2x3 DRY No. 2  
DRY: SEASONED LUMBER.

GABLE STUDS SPACED AT 2'-0" O.C.

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

BEARINGS

THIS TRUSS DESIGNED FOR CONTINUOUS BEARINGS.

THIS TRUSS REQUIRES RIGID SHEATHING ON EXPOSED FACE.

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

#### BRACING

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

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

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

#### LOADING

TOTAL LOAD CASES: (4)

| MEMB. | CHORDS   | MAX. FACTORED FORCE (LBS) | VERT. LOAD (PLF) | LC1 MAX  | CS1 (LC) | UNBRAC LENGTH | FR-TO    | MEMB.    | WEBS | MAX. FACTORED FORCE (LBS) | MAX CS1 (LC) |
|-------|----------|---------------------------|------------------|----------|----------|---------------|----------|----------|------|---------------------------|--------------|
|       |          |                           |                  |          |          |               |          |          |      |                           |              |
| I-B   | -280 / 0 | 0.0                       | 0.0              | 0.04 (1) | 7.81     | G-D           | -248 / 0 | 0.07 (1) |      |                           |              |
| A-B   | 0 / 47   | -104.9                    | -104.9           | 0.14 (1) | 10.00    | H-C           | -89 / 0  | 0.01 (1) |      |                           |              |
| B-C   | -52 / 0  | -104.9                    | -104.9           | 0.12 (1) | 8.25     |               |          |          |      |                           |              |
| C-D   | 0 / 2    | -104.9                    | -104.9           | 0.06 (1) | 10.00    |               |          |          |      |                           |              |
| D-E   | -15 / 0  | -104.9                    | -104.9           | 0.06 (1) | 8.25     |               |          |          |      |                           |              |
| F-E   | -89 / 0  | 0.0                       | 0.0              | 0.02 (1) | 7.81     |               |          |          |      |                           |              |
| I-H   | 0 / 11   | -18.5                     | -18.5            | 0.04 (1) | 10.00    |               |          |          |      |                           |              |
| H-G   | 0 / 7    | -18.5                     | -18.5            | 0.02 (4) | 10.00    |               |          |          |      |                           |              |
| G-F   | 0 / 1    | -18.5                     | -18.5            | 0.02 (4) | 10.00    |               |          |          |      |                           |              |

#### DESIGN CRITERIA

##### SPECIFIED LOADS:

|                       |               |
|-----------------------|---------------|
| TOP CH.               | LL = 32.5 PSF |
| DL = 3.0 PSF          |               |
| BOT CH.               | LL = 0.0 PSF  |
| DL = 7.4 PSF          |               |
| TOTAL LOAD = 42.9 PSF |               |

SPACING = 24.0 IN. C/C

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

##### THIS DESIGN COMPLIES WITH:

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

##### DESIGN ASSUMPTIONS

- OVERHANG NOT TO BE ALTERED OR CUT OFF.

(55% OF 43.9 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 32.5 P.S.F. SPECIFIED ROOF LIVE LOAD

CSI: TC=0.14/1.00 (A-B:1), BC=0.04/1.00 (H-I:1), WB=0.07/1.00 (D-G:1), SS=0.09/1.00 (A-B:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

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

##### NAIL VALUES

| PLATE   | GRIP (DRY) | SHEAR    | SECTION   |
|---------|------------|----------|-----------|
| (PSI)   | (PLI)      | (PLI)    | (PLI)     |
| MAX MIN | MAX MIN    | MAX MIN  | MAX MIN   |
| MT20    | 618 354    | 1667 822 | 2264 1656 |

PLATE PLACEMENT TOL = 0.250 inches

PLATE ROTATION TOL = 5.0 Deg.

JSI GRIP= 0.21 (B) (INPUT = 0.90)

JSI METAL= 0.08 (B) (INPUT = 1.00)

NOTE: Lateral brace(s) shown shall be 1x4 for Part 9 design as per OBC 9.23.13.11, and no less than 2x4 for Part 4 design.

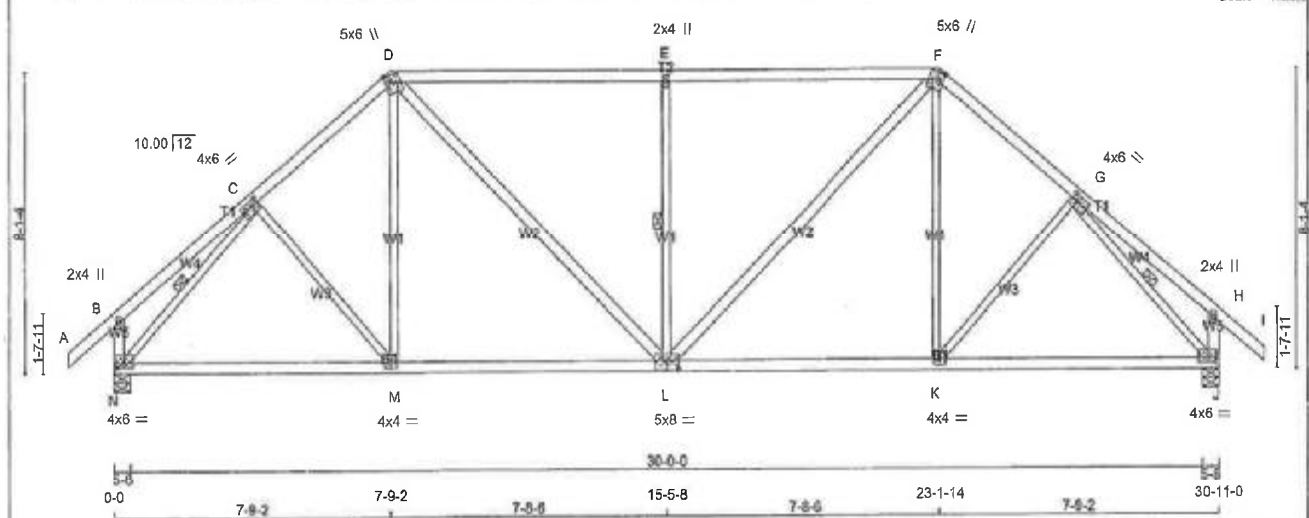


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|          |            |          |     |             |          |
|----------|------------|----------|-----|-------------|----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.   | DRWG NO. |
| 304777   | H5         |          | 1   | TRUSS DESC. | JT 38514 |

Version 6.310.5 Jun 13 2015 MTek Industries, Inc. Tue Nov 27 14:06:58 2015 Page 1  
 ID: 0r8CxaBvnt3wVqucWRZ7WByHCax-9c9FT9YCHRpEybvsobYxO7m6CSJZEQds1OnEkyBzq  
 1-3-8 0-0 3-11-13 3-11-13 3-9-5 7-9-2 7-8-6 15-5-8 7-8-6 23-1-14 26-11-3 30-11-11 1-3-8  
 1-3-8 3-11-13 3-11-13 3-9-5 7-9-2 7-8-6 15-5-8 7-8-6 23-1-14 26-11-3 30-11-11 1-3-8  
 Scale = 1:53.8



| LUMBER   | N. L. G. A. RULES | CHORDS | SIZE       | LUMBER | DESCR.         |
|----------|-------------------|--------|------------|--------|----------------|
| A - D    | 2x4               | DRY    | No.2       | SPF    | FACTORED       |
| D - F    | 2x4               | DRY    | 2100F 1.8E | SPF    | GROSS REACTION |
| F - I    | 2x4               | DRY    | No.2       | SPF    | VERT           |
| N - B    | 2x4               | DRY    | No.2       | SPF    | HORZ           |
| J - H    | 2x4               | DRY    | No.2       | SPF    | DOWN           |
| N - L    | 2x4               | DRY    | No.2       | SPF    | HORZ           |
| L - J    | 2x4               | DRY    | No.2       | SPF    | UPLIFT         |
| ALL WEBS | 2x3               | DRY    | No.2       | SPF    | IN-SX          |
| EXCEPT   |                   |        |            |        | IN-SX          |
| D - L    | 2x4               | DRY    | No.2       | SPF    |                |
| L - F    | 2x4               | DRY    | No.2       | SPF    |                |

DRY: SEASONED LUMBER.

| PLATES (MINIMUM IN INCHES) | W    | LEN | Y   | X    |
|----------------------------|------|-----|-----|------|
| B - TMV+p                  | MT20 | 2.0 | 4.0 |      |
| C - TMWV+q                 | MT20 | 4.0 | 6.0 | 1.75 |
| D - TTWV+m                 | MT20 | 5.0 | 6.0 | 2.25 |
| E - TMW+w                  | MT20 | 2.0 | 4.0 |      |
| F - TTWV+m                 | MT20 | 5.0 | 6.0 | 2.25 |
| G - TMWV+q                 | MT20 | 4.0 | 6.0 | 1.75 |
| H - TMV+q                  | MT20 | 2.0 | 4.0 |      |
| J - BMWV+q                 | MT20 | 4.0 | 6.0 | 1.50 |
| K - BMWV+q                 | MT20 | 4.0 | 4.0 |      |
| L - BSWV+q                 | MT20 | 5.0 | 8.0 | 3.00 |
| M - BMWV+q                 | MT20 | 4.0 | 4.0 |      |
| N - BMWV+q                 | MT20 | 4.0 | 6.0 | 1.50 |

NOTE: Lateral brace(s) shown shall be 1x4 for Part 9 design as per OBC 9.23.13.11, and no less than 2x4 for Part 4 design.

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

| BEARINGS | FACTORED       | MAXIMUM FACTORED | INPUT | REQD |
|----------|----------------|------------------|-------|------|
| JT       | GROSS REACTION | DOWN             | BRG   | BRG  |
| N        | 2053           | 0                | 0     | 5-8  |
| J        | 2053           | 0                | 0     | 5-8  |

| UNFACTORED REACTIONS | 1ST CASE | MAX/MIN  | COMPONENT REACTIONS |
|----------------------|----------|----------|---------------------|
| JT                   | COMBINED | SNOW     | LIVE                |
| N                    | 1424     | 1094 / 0 | 0 / 0               |
| J                    | 1424     | 1094 / 0 | 0 / 0               |

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

**BRACING**  
 TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.42 FT.  
 MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT. OR RIGID CEILING DIRECTLY APPLIED

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

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

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

| LOADING | TOTAL LOAD CASES: (4) |
|---------|-----------------------|
| CHORDS  | WEBS                  |
| MEMB.   | MAX. FACTORED         |
| FR-TO   | FORCE (LBS)           |
| A-B     | 0 / 47                |
| B-C     | 0 / 29                |
| C-D     | -1904 / 0             |
| D-E     | -1994 / 0             |
| E-F     | -1984 / 0             |
| F-G     | -1904 / 0             |
| G-H     | 0 / 29                |
| H-I     | 0 / 47                |
| N-B     | -302 / 0              |
| J-H     | -302 / 0              |
| N-M     | 0 / 1445              |
| M-L     | 0 / 1439              |
| L-K     | 0 / 1439              |
| K-J     | 0 / 1445              |

#### DESIGN CRITERIA

##### SPECIFIED LOADS:

|            |            |
|------------|------------|
| TOP CH. LL | = 32.5 PSF |
| BOT CH. LL | = 0.0 PSF  |
| DL         | = 7.4 PSF  |
| TOTAL LOAD | = 42.9 PSF |

SPACING = 24.0 IN. C/C

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

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

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

(55% OF 43.9 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 32.5 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL. (LL) = L/360 (1.03")  
 CALCULATED VERT. DEFL. (LL) = L/999 (0.08")  
 ALLOWABLE DEFL. (TL) = L/360 (1.03")  
 CALCULATED VERT. DEFL. (TL) = L/999 (0.15")

CSI: TC=0.84/1.00 (D-E:1), BC=0.39/1.00 (M-N:1), WB=0.56/1.00 (C-M:1), SS=0.39/1.00 (D-E:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

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

NAIL VALUES  
 PLATE GRIP(DRY) SHEAR SECTION  
 (PSI) (PLI) (PLI)  
 MAX MIN MAX MIN MAX MIN  
 MT20 618 354 1667 788 1937 1656

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.88 (N) (INPUT = 0.90)  
 JSI METAL= 0.55 (C) (INPUT = 1.00)

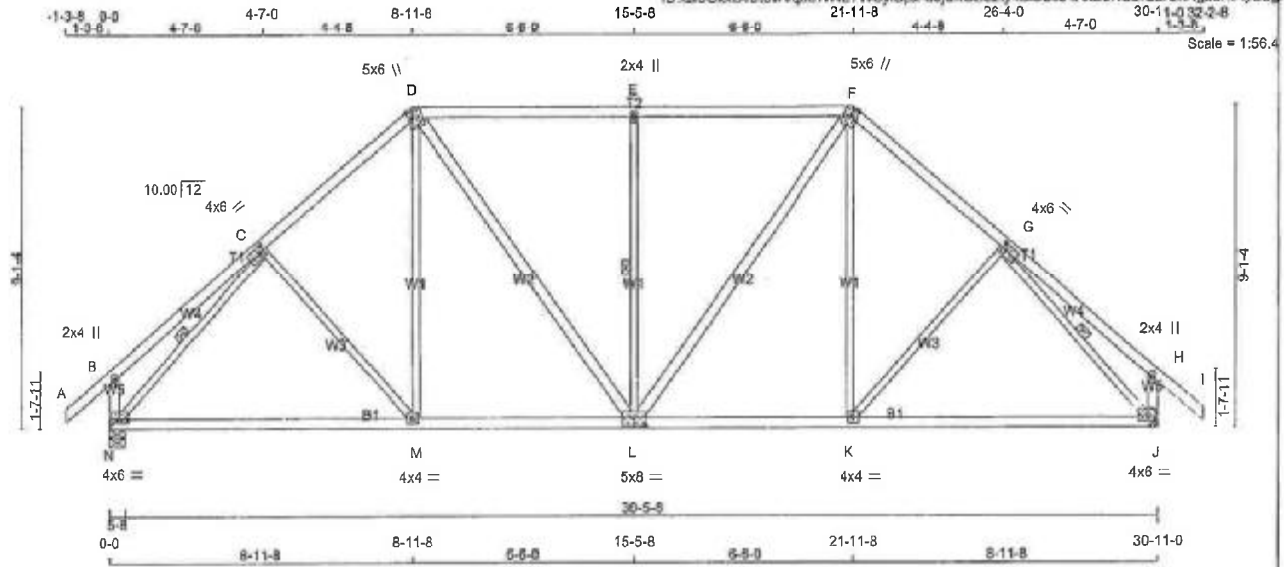
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|                           |                         |                      |                 |                                 |                             |
|---------------------------|-------------------------|----------------------|-----------------|---------------------------------|-----------------------------|
| JOB NAME<br><b>304777</b> | TRUSS NAME<br><b>H6</b> | QUANTITY<br><b>1</b> | PLY<br><b>1</b> | JOB DESC.<br><b>TRUSS DESC.</b> | DRWG NO.<br><b>JT 38514</b> |
|---------------------------|-------------------------|----------------------|-----------------|---------------------------------|-----------------------------|

Alpa Roof Truss, Maple

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TOTAL WEIGHT = 2 X 150 = 299 lb

| LUMBER   | 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    |
| N - B    | 2x4    | DRY  | No.2   | SPF    |
| J - H    | 2x4    | DRY  | No.2   | SPF    |
| N - L    | 2x4    | DRY  | No.2   | SPF    |
| L - J    | 2x4    | DRY  | No.2   | SPF    |
| ALL WEBS | 2x3    | DRY  | No.2   | SPF    |
| EXCEPT   |        |      |        |        |
| D - L    | 2x4    | DRY  | No.2   | SPF    |
| L - F    | 2x4    | DRY  | No.2   | SPF    |

DRY: SEASONED LUMBER

| PLATES (Plate is in inches) | W    | LEN | Y   | X         |
|-----------------------------|------|-----|-----|-----------|
| B TMV+p                     | MT20 | 2.0 | 4.0 |           |
| C TMW+t                     | MT20 | 4.0 | 6.0 | 2.00 1.50 |
| D TTW+m                     | MT20 | 5.0 | 6.0 | 2.25 1.50 |
| E TMW+w                     | MT20 | 2.0 | 4.0 |           |
| F TTVW+m                    | MT20 | 5.0 | 6.0 | 2.25 1.50 |
| G TMW+t                     | MT20 | 4.0 | 6.0 | 2.00 1.50 |
| H TMV+p                     | MT20 | 2.0 | 4.0 |           |
| J BMVW+1                    | MT20 | 4.0 | 6.0 | 1.50 2.75 |
| K BMW+1                     | MT20 | 4.0 | 4.0 |           |
| L BSWW+1                    | MT20 | 5.0 | 8.0 | 3.00 4.00 |
| M BMW+t                     | MT20 | 4.0 | 4.0 |           |
| N BMVW+1                    | MT20 | 4.0 | 6.0 | 1.50 2.75 |

NOTE: Lateral brace(s) shown shall be 1x4 for Part 9 design as per OBC 9.23.13.11, and no less than 2x4 for Part 4 design.

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

| BEARINGS | FACTORED GROSS REACTION | MAXIMUM FACTORED GROSS REACTION | INPUT BRG | REQRD BRG  |
|----------|-------------------------|---------------------------------|-----------|------------|
| JT       | VERT                    | DOWN                            | IN-SX     | IN-SX      |
| N        | 2053                    | 0                               | 5-8       | 2-4        |
| J        | 2053                    | 0                               | 0         | MECHANICAL |

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT J. MINIMUM BEARING LENGTH: I AT JOINT J = 2-4.

#### UNFACTORED REACTIONS

| 1ST CASE | SNOW | LIVE     | PERM LIVE | WIND  | DEAD    | SOIL  |
|----------|------|----------|-----------|-------|---------|-------|
| JT       | 1424 | 1094 / 0 | 0 / 0     | 0 / 0 | 330 / 0 | 0 / 0 |
| J        | 1424 | 1094 / 0 | 0 / 0     | 0 / 0 | 330 / 0 | 0 / 0 |

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

#### 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.

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

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

#### LOADING

TOTAL LOAD CASES: (4)

| CHORDS |                           |                           |              | WEBS  |                           |                    |  |
|--------|---------------------------|---------------------------|--------------|-------|---------------------------|--------------------|--|
| MEMB.  | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX. CS (LC) | MEMB. | MAX. FACTORED FORCE (LBS) | MAX. CS (LC)       |  |
| FR-TO  |                           | FROM TO                   |              | FR-TO |                           |                    |  |
| A-B    | 0 / 47                    | -104.9 -104.9             | 0.14 (1)     | 10.00 | C-M                       | -118 / 36 0.10 (1) |  |
| B-C    | 0 / 35                    | -104.9 -104.9             | 0.34 (1)     | 10.00 | M-D                       | 0 / 263 0.06 (4)   |  |
| C-D    | -1854 / 0                 | -104.9 -104.9             | 0.31 (1)     | 4.64  | D-L                       | 0 / 571 0.09 (1)   |  |
| D-E    | -1737 / 0                 | -104.9 -104.9             | 0.53 (1)     | 4.25  | L-E                       | -837 / 0 0.45 (1)  |  |
| E-F    | -1737 / 0                 | -104.9 -104.9             | 0.63 (1)     | 4.25  | F-F                       | 0 / 571 0.09 (1)   |  |
| F-G    | -1854 / 0                 | -104.9 -104.9             | 0.31 (1)     | 4.64  | K-F                       | 0 / 263 0.06 (4)   |  |
| G-H    | 0 / 35                    | -104.9 -104.9             | 0.34 (1)     | 10.00 | K-G                       | -118 / 36 0.10 (1) |  |
| H-I    | 0 / 47                    | -104.9 -104.9             | 0.14 (1)     | 10.00 | N-C                       | -2220 / 0 0.67 (1) |  |
| N-B    | -324 / 0                  | 0.0 0.0                   | 0.03 (1)     | 7.81  | G-J                       | -2220 / 0 0.67 (1) |  |
| J-H    | -324 / 0                  | 0.0 0.0                   | 0.03 (1)     | 7.81  |                           |                    |  |
| N-M    | 0 / 1474                  | -18.5 -18.5               | 0.42 (1)     | 10.00 |                           |                    |  |
| M-L    | 0 / 1398                  | -18.5 -18.5               | 0.42 (4)     | 10.00 |                           |                    |  |
| L-K    | 0 / 1398                  | -18.5 -18.5               | 0.42 (4)     | 10.00 |                           |                    |  |
| K-J    | 0 / 1474                  | -18.5 -18.5               | 0.42 (1)     | 10.00 |                           |                    |  |

#### DESIGN CRITERIA

SPECIFIED LOADS:  
TOP CH LL = 32.5 PSF  
DL = 3.0 PSF  
BOT CH LL = 0.0 PSF  
DL = 7.4 PSF  
TOTAL LOAD = 42.9 PSF

SPACING = 24.0 IN. C/C

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

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

THIS DESIGN COMPLIES WITH:  
- PART 9 OF OBC 2012, BCBC 2012, ABC 2014  
- CSA 088-09  
- TPIC 2011

(55 % OF 43.9 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 32.5 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL (LL) = L/360 (1.03")  
CALCULATED VERT. DEFL (LL) = L/999 (0.08")  
ALLOWABLE DEFL (TL) = L/360 (1.03")  
CALCULATED VERT. DEFL (TL) = L/959 (0.23")

CSI: TC=0.63/1.00 (D-E:1), BC=0.42/1.00 (M-N:1), WB=0.67/1.00 (G-J:1), SSI=0.33/1.00 (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 = 0.50

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

NAIL VALUES  
PLATE GRIP(DRY) SHEAR SECTION (PSI) (PLI) (PLI)  
MAX MIN MAX MIN MAX MIN  
MT20 616 354 1667 736 1987 1656

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

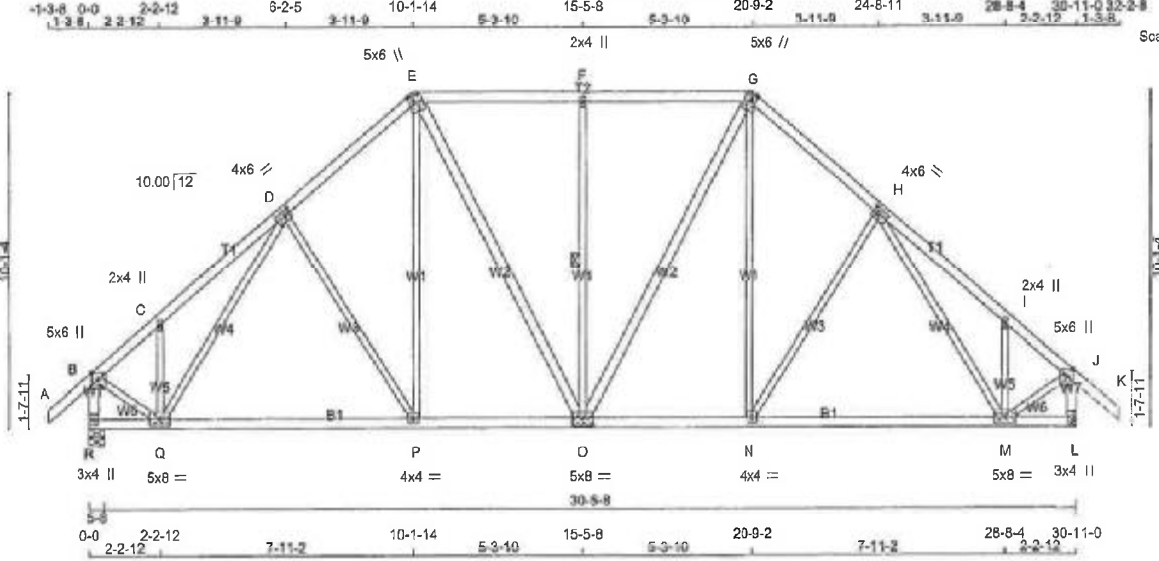
JSI GRIP= 0.89 (C) (INPUT = 0.90)  
JSI METAL = 0.55 (C) (INPUT = 1.00)



A18113056

|                           |                          |                      |                 |                                 |                             |
|---------------------------|--------------------------|----------------------|-----------------|---------------------------------|-----------------------------|
| JOB NAME<br><b>304777</b> | TRUSS NAME<br><b>H07</b> | QUANTITY<br><b>1</b> | PLY<br><b>1</b> | JOB DESC.<br><b>TRUSS DESC.</b> | DRWG NO.<br><b>JT 38514</b> |
|---------------------------|--------------------------|----------------------|-----------------|---------------------------------|-----------------------------|

Alpa Roof Truss, Maple  
Version: 8.11.18.8 Jun 18 2018 Mitek Industries, Inc. Tue Nov 27 14:07:00 2018 Page 1  
ID: Gr8CxxBval3wVquWRZ7WByiCpx-1NPmJWcWLgkRrDDdRdtZrxxw3i7AEyB3eB7NVyEzg  
15-5-8 20-9-2 24-8-11 28-8-4 30-11-0 32-2-8  
1-3-8 0-0 2-2-12 3-11-9 6-2-5 3-11-9 10-1-14 5-3-10 5-3-10 1-11-0 3-11-0 3-3-12 1-3-8  
Scale = 1:60.0



| MEMBER   | SIZE | DRY | NO.2 | SPF |
|----------|------|-----|------|-----|
| CHORDS   |      |     |      |     |
| A - E    | 2x4  | DRY | No.2 | SPF |
| E - G    | 2x4  | DRY | No.2 | SPF |
| G - K    | 2x4  | DRY | No.2 | SPF |
| R - J    | 2x4  | DRY | No.2 | SPF |
| L - B    | 2x4  | DRY | No.2 | SPF |
| R - O    | 2x4  | DRY | No.2 | SPF |
| O - L    | 2x4  | DRY | No.2 | SPF |
| ALL WEBS | 2x3  | DRY | No.2 | SPF |
| EXCEPT   |      |     |      |     |
| E - O    | 2x4  | DRY | No.2 | SPF |
| O - G    | 2x4  | DRY | No.2 | SPF |

| PLATES (Table in inches) | W    | LEN | Y    | X         |
|--------------------------|------|-----|------|-----------|
| JL 1x4                   | 5.0  | 6.0 | Edge |           |
| B TMVW+p                 | MT20 | 5.0 | 6.0  | Edge      |
| C, F, I                  |      |     |      |           |
| C TMVW+w                 | MT20 | 2.0 | 4.0  |           |
| D TMVW-t                 | MT20 | 4.0 | 6.0  | 2.00 2.00 |
| E TTWW+m                 | MT20 | 5.0 | 6.0  | 2.25 1.50 |
| G TTWW+m                 | MT20 | 6.0 | 8.0  | 2.25 1.50 |
| H TMVW-t                 | MT20 | 4.0 | 6.0  | 2.00 2.00 |
| J TMVW+p                 | MT20 | 5.0 | 6.0  | Edge      |
| L BMV1+p                 | MT20 | 3.0 | 4.0  |           |
| M BMVWAW-t               | MT20 | 5.0 | 8.0  |           |
| N BMVW-t                 | MT20 | 4.0 | 4.0  |           |
| O BSWWW-t                | MT20 | 5.0 | 8.0  | 3.00 4.00 |
| P BMVW-t                 | MT20 | 4.0 | 4.0  |           |
| Q BMVW-t                 | MT20 | 5.0 | 8.0  |           |
| R BMV1+p                 | MT20 | 3.0 | 4.0  |           |

Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.  
NOTE: Lateral brace(s) shown shall be 1x4 for Part 9 design as per OBC 9.23.13.11, and no less than 2x4 for Part 4 design.



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

| FACTORED       | MAXIMUM FACTORED | INPUT  | REQD  |
|----------------|------------------|--------|-------|
| GROSS REACTION | GROSS REACTION   | BRG    | BRG   |
| JT VERT        | DOWN             | UPLIFT | IN-SX |
| R 2053         | 0                | 0      | 5-8   |
| L 2053         | 0                | 0      | 3-3   |

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

| 1ST CASE    | MAX    | MIN  | COMPONENT REACTIONS |
|-------------|--------|------|---------------------|
| JT COMBINED | SNOW   | LIVE | PERM LIVE           |
| R 1424      | 1094/0 | 0/0  | 0/0                 |
| L 1424      | 1094/0 | 0/0  | 0/0                 |

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

BRACING  
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4 FT 8 IN.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

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

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

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

LOADING  
TOTAL LOAD CASES: (4)

| CHORDS | MEMB.   | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX. UNBRACED LENGTH (FT) | MEMB. | MAX. FACTORED FORCE (LBS) | MAX. UNBRACED LENGTH (FT) |
|--------|---------|---------------------------|---------------------------|---------------------------|-------|---------------------------|---------------------------|
| FR-TO  |         |                           |                           |                           | TO-FR |                           |                           |
| A-B    | 0/47    | -104.9                    | -104.9                    | 0.12 (1)                  | Q-C   | -334/0                    | 0.07 (1)                  |
| B-C    | -1569/0 | -104.9                    | -104.9                    | 0.12 (1)                  | Q-D   | -356/0                    | 0.41 (1)                  |
| C-D    | -1567/0 | -104.9                    | -104.9                    | 0.23 (1)                  | D-P   | -270/0                    | 0.32 (1)                  |
| D-E    | -1771/0 | -104.9                    | -104.9                    | 0.23 (1)                  | P-E   | 0/366                     | 0.08 (1)                  |
| E-F    | -1540/0 | -104.9                    | -104.9                    | 0.41 (1)                  | E-O   | 0/424                     | 0.07 (1)                  |
| F-G    | -1540/0 | -104.9                    | -104.9                    | 0.41 (1)                  | O-F   | -677/0                    | 0.47 (1)                  |
| G-H    | -1771/0 | -104.9                    | -104.9                    | 0.23 (1)                  | O-G   | 0/424                     | 0.07 (1)                  |
| H-I    | -1567/0 | -104.9                    | -104.9                    | 0.23 (1)                  | N-G   | 0/366                     | 0.08 (1)                  |
| I-J    | -1569/0 | -104.9                    | -104.9                    | 0.12 (1)                  | N-H   | -270/0                    | 0.32 (1)                  |
| J-K    | 0/47    | -104.9                    | -104.9                    | 0.14 (1)                  | H-N   | -356/0                    | 0.41 (1)                  |
| R-B    | -2063/0 | 0.0                       | 0.0                       | 0.22 (1)                  | M-I   | -334/0                    | 0.07 (1)                  |
| L-J    | -2063/0 | 0.0                       | 0.0                       | 0.22 (1)                  | B-Q   | 0/1509                    | 0.34 (1)                  |
| R-Q    | 0/0     | -18.5                     | -18.5                     | 0.19 (4)                  | M-J   | 0/1509                    | 0.34 (1)                  |
| Q-P    | 0/1478  | -18.5                     | -18.5                     | 0.36 (1)                  |       |                           |                           |
| P-D    | 0/1339  | -18.5                     | -18.5                     | 0.33 (1)                  |       |                           |                           |
| O-N    | 0/1339  | -18.5                     | -18.5                     | 0.33 (1)                  |       |                           |                           |
| N-M    | 0/1478  | -18.5                     | -18.5                     | 0.35 (1)                  |       |                           |                           |
| M-L    | 0/0     | -18.5                     | -18.5                     | 0.19 (4)                  |       |                           |                           |

### DESIGN CRITERIA

SPECIFIED LOADS:  
TOP CH. LL = 32.5 PSF  
DL = 3.0 PSF  
BOT CH. LL = 0.0 PSF  
DL = 7.4 PSF  
TOTAL LOAD = 42.9 PSF

SPACING = 24.0 IN. C/C

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

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

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

(55% OF 43.9 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 32.5 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL. (LL) = L/360 (1.03")  
CALCULATED VERT. DEFL. (LL) = L/999 (0.06")  
ALLOWABLE DEFL. (TL) = L/360 (1.03")  
CALCULATED VERT. DEFL. (TL) = L/999 (0.14")

CSI: TC=0.41/1.00 (E-F:1), BC=0.35/1.00 (P-Q:1), WB=0.47/1.00 (F-O:1), SSI=0.27/1.00 (E-F:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

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

NAIL VALUES  
PLATE GRIP(DRY) SHEAR SECTION (PSI) (PLI) (PLI)  
MAX MIN MAX MIN MAX MIN  
MT20 618 354 1667 768 1987 1658

PLATE PLACEMENT TOL. = 0.250 inches

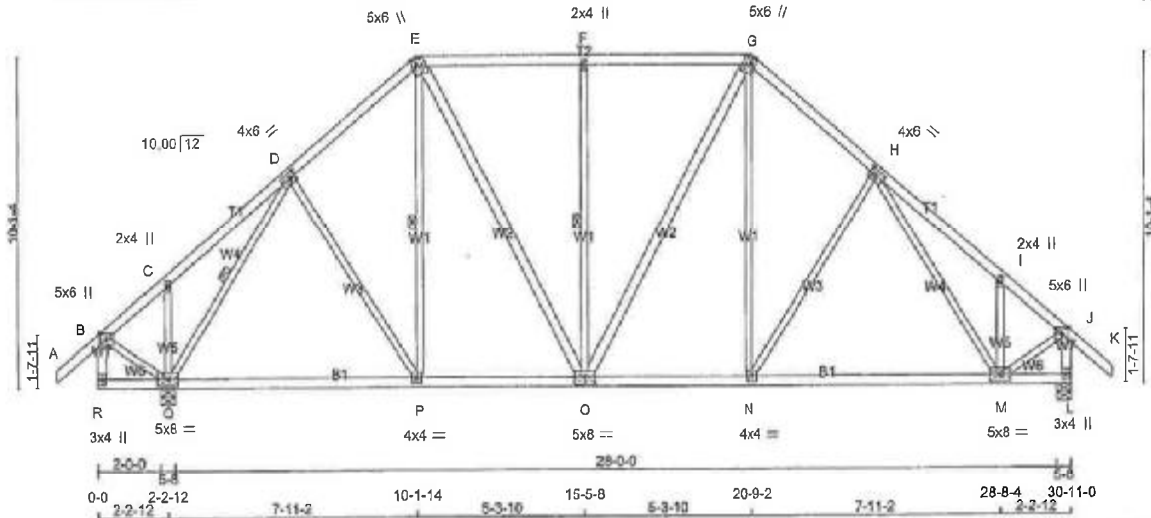
PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP=0.89 (B) (INPUT = 0.90)  
JSI METAL=0.61 (B) (INPUT = 1.00)

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|          |            |          |     |             |          |
|----------|------------|----------|-----|-------------|----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC    | DRWG NO. |
| 304777   | H7C-Cond1  |          | 1   | TRUSS DESC. | JT 38514 |

Version 6.210.5 Jun 15 2018 Mital Industries, Inc. Tue Mar 27 14:37:09 2018 Page 1  
 ID: Q8C6x8v83wVqpsWRZ7WByICpx-1NfmsJWcWtLgKfRDdRtZxx43IOAAIB3eB7NVyEzg  
 1-3-8 0-0 2-2-12 3-11-0 6-2-5 3-11-0 10-1-14 5-3-10 15-5-8 5-3-10 20-9-2 3-11-0 24-6-11 3-11-0 28-8-4 30-11-0 32-2-8  
 1-3-8 2-2-12 3-11-0 6-2-5 3-11-0 10-1-14 5-3-10 15-5-8 5-3-10 20-9-2 3-11-0 24-6-11 3-11-0 28-8-4 30-11-0 32-2-8  
 Scale = 1:50.0



| LUMBERS        |      |        |       |
|----------------|------|--------|-------|
| N.L.G.A. RULES | SIZE | LUMBER | DESCR |
| CHORDS         |      |        |       |
| A - E          | 2x4  | DRY    | No.2  |
| E - G          | 2x4  | DRY    | No.2  |
| G - K          | 2x4  | DRY    | No.2  |
| R - B          | 2x4  | DRY    | No.2  |
| L - J          | 2x4  | DRY    | No.2  |
| R - O          | 2x4  | DRY    | No.2  |
| O - L          | 2x4  | DRY    | No.2  |
| ALL WEBS       | 2x3  | DRY    | No.2  |
| EXCEPT         |      |        |       |
| E - O          | 2x4  | DRY    | No.2  |
| O - G          | 2x4  | DRY    | No.2  |

DRY: SEASONED LUMBER.

| PLATES (Plate is in inches) |        |     |     |      |      |
|-----------------------------|--------|-----|-----|------|------|
| JT TYPE                     | PLATES | W   | LEN | Y    | X    |
| B TMW+p                     | MT20   | 5.0 | 6.0 | Edge |      |
| C, F, I                     |        |     |     |      |      |
| C TMW+u                     | MT20   | 2.0 | 4.0 |      |      |
| D TMW+u                     | MT20   | 4.0 | 6.0 | 2.00 | 2.00 |
| E TMW+u                     | MT20   | 5.0 | 6.0 | 2.25 | 1.50 |
| G TMW+u                     | MT20   | 5.0 | 6.0 | 2.25 | 1.50 |
| H TMW+u                     | MT20   | 4.0 | 6.0 | 2.00 | 2.00 |
| J TMW+p                     | MT20   | 5.0 | 6.0 | Edge |      |
| L BMV+p                     | MT20   | 3.0 | 4.0 |      |      |
| M BMW+u                     | MT20   | 5.0 | 8.0 |      |      |
| N BMW+u                     | MT20   | 4.0 | 4.0 |      |      |
| O BSWWW+u                   | MT20   | 5.0 | 8.0 | 3.00 | 4.00 |
| P BMW+u                     | MT20   | 4.0 | 4.0 |      |      |
| Q BMW+u                     | MT20   | 5.0 | 8.0 |      |      |
| R BMV+p                     | MT20   | 3.0 | 4.0 |      |      |

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

NOTE: Lateral brace(s) shown shall be 1x4 for Part 9 design as per CBC 9.23.13.11, and no less than 2x4 for Part 4 design.



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

| BEARINGS       |                  |       |       |
|----------------|------------------|-------|-------|
| FACTORED       | MAXIMUM FACTORED | INPUT | REQD  |
| GROSS REACTION | GROSS REACTION   | BRG   | BRG   |
| JT VERT        | DOWN             | UP    | IN-SX |
| Q 2213         | 0                | 0     | 5-8   |
| L 1894         | 0                | 0     | 5-8   |

| UNFACTORED REACTIONS |          |      |      |           |      |      |
|----------------------|----------|------|------|-----------|------|------|
| JT                   | COMBINED | SNOW | LIVE | PERM LIVE | WIND | DEAD |
| Q                    | 1535     | 1179 | 0    | 0         | 0    | 355  |
| L                    | 1313     | 1009 | 0    | 0         | 0    | 304  |

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

**BRACING**  
 TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.07 FT.  
 MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

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

1 LATERAL BRACE(S) AT 1/2 LENGTH OF D-Q, E-P, F-O.

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

#### LOADING

TOTAL LOAD CASES: (4)

| CHORDS |                           |                           |                                |
|--------|---------------------------|---------------------------|--------------------------------|
| MEMB.  | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX. MAX. UNBRACED LENGTH (FT) |
| FR-TO  |                           |                           |                                |
| A-B    | 0/47                      | -104.9 -104.9             | 0.14 (1)                       |
| B-C    | -4/191                    | -104.9 -104.9             | 0.22 (1)                       |
| C-D    | -8/168                    | -104.9 -104.9             | 0.25 (1)                       |
| D-E    | -1331/0                   | -104.9 -104.9             | 0.21 (1)                       |
| E-F    | -1289/0                   | -104.9 -104.9             | 0.40 (1)                       |
| F-G    | -1289/0                   | -104.9 -104.9             | 0.40 (1)                       |
| G-H    | -1555/0                   | -104.9 -104.9             | 0.22 (1)                       |
| H-I    | -1521/0                   | -104.9 -104.9             | 0.22 (1)                       |
| I-J    | -1523/0                   | -104.9 -104.9             | 0.12 (1)                       |
| J-K    | 0/47                      | -104.9 -104.9             | 0.14 (1)                       |
| R-B    | -29/0                     | 0.0 0.0                   | 0.00 (4)                       |
| L-J    | -1904/0                   | 0.0 0.0                   | 0.20 (1)                       |
| R-Q    | 0/0                       | -18.5 -18.5               | 0.21 (1)                       |
| Q-P    | 0/868                     | -18.5 -18.5               | 0.29 (1)                       |
| P-O    | 0/999                     | -18.5 -18.5               | 0.26 (1)                       |
| O-N    | 0/1173                    | -18.5 -18.5               | 0.30 (1)                       |
| N-M    | 0/1326                    | -18.5 -18.5               | 0.33 (1)                       |
| M-L    | 0/0                       | -18.5 -18.5               | 0.19 (4)                       |

#### DESIGN CRITERIA

SPECIFIED LOADS:  
 TOP CH. LL = 32.5 PSF  
 DL = 3.0 PSF  
 BOT CH. LL = 0.0 PSF  
 DL = 7.4 PSF  
 TOTAL LOAD = 42.9 PSF

SPACING = 24.0 IN. C/C

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

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

THIS DESIGN COMPLIES WITH:  
 - PART 9 OF CBC 2012, BCSC 2012, ABC 2014  
 - CSA 068-09  
 - TPIC 2011

(55 % OF 43.9 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 32.5 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL. (LL) = L/360 (0.66")  
 CALCULATED VERT. DEFL. (LL) = L/999 (0.05")  
 ALLOWABLE DEFL. (TL) = L/360 (0.66")  
 CALCULATED VERT. DEFL. (TL) = L/999 (0.13")

CANTILEVER DEFLECTION:  
 ALLOWABLE DEFL. (LL) = L/120 (0.22")  
 CALCULATED VERT. DEFL. (LL) = L/999 (0.01")  
 ALLOWABLE DEFL. (TL) = L/120 (0.22")  
 CALCULATED VERT. DEFL. (TL) = L/999 (0.01")

CSI: TC=0.40/1.00 (E-F:1), SC=0.33/1.00 (M-N:1), WB=0.73/1.00 (D-Q:1), SS=0.27/1.00 (E-F:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

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

NAIL VALUES  
 PLATE GRIP (CRY) SHEAR SECTION (PSI) (PLI) (PLI)  
 MAX MIN MAX MIN MAX MIN  
 MT20 618 354 1667 768 1987 1656

PLATE PLACEMENT TOL = 0.250 inches

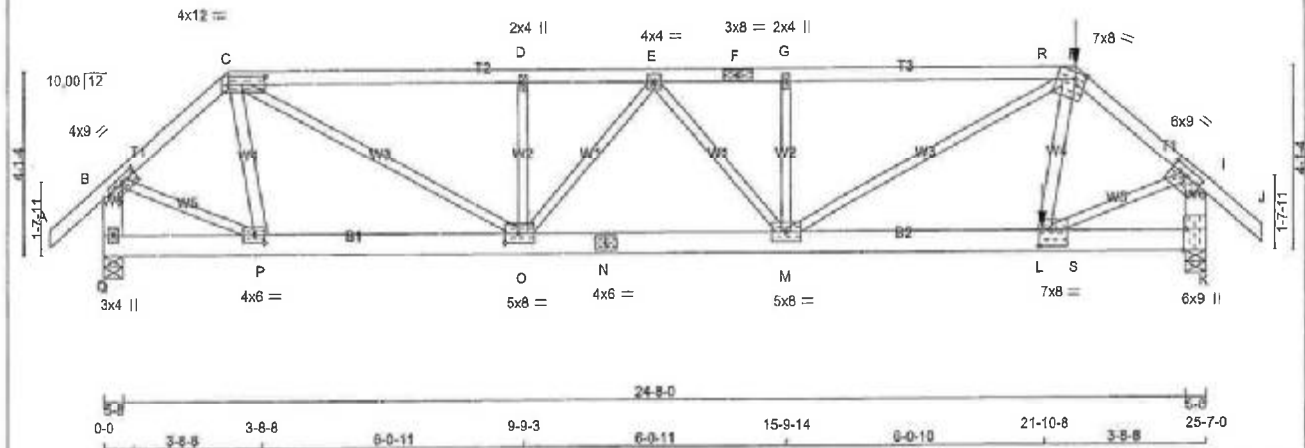
PLATE ROTATION TOL = 5.0 Deg.

JSI GR/P= 0.89 (D) (INPUT = 0.90)

JSI METAL= 0.58 (B) (INPUT = 1.00)

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|                                                                                                                                                                                                                                                                               |                         |                      |                 |                                 |                             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|----------------------|-----------------|---------------------------------|-----------------------------|
| JOB NAME<br><b>304777</b>                                                                                                                                                                                                                                                     | TRUSS NAME<br><b>H8</b> | QUANTITY<br><b>1</b> | PLY<br><b>1</b> | JOB DESC.<br><b>TRUSS DESC.</b> | DRWG NO.<br><b>JT 38514</b> |
| Alps Roof Truss, Maple<br>Version 8.210.5 Jun 13 2018 MTL Industries, Inc. Tue Nov 27 14:07:01 2018 Page 1<br>ID: Q8C6x8vot3wVqudWR27WdyCpx-Waz5Wac86_5W2NagQ89653T_0TgydsKilxVxyPage<br>1-3-8 0-0 2-11-8 6-0-11 9-9-3 12-9-9 15-9-14 22-7-8 25-7-0-8<br>Scale = 1/4" = 1'-0" |                         |                      |                 |                                 |                             |



| LUMBER          |      |        |            |
|-----------------|------|--------|------------|
| N.L.B.A. RULES  |      |        |            |
| CHORDS          | SIZE | LUMBER | DESCR.     |
| A - C           | 2x4  | DRY    | No.2       |
| C - F           | 2x4  | DRY    | 1650F 1.5E |
| F - H           | 2x4  | DRY    | 1650F 1.5E |
| H - J           | 2x4  | DRY    | No.2       |
| J - L           | 2x4  | DRY    | No.2       |
| L - M           | 2x4  | DRY    | No.2       |
| M - N           | 2x4  | DRY    | No.2       |
| N - K           | 2x4  | DRY    | No.2       |
| ALL WEBS EXCEPT | 2x3  | DRY    | No.2       |
| C - P           | 2x4  | DRY    | No.2       |
| L - H           | 2x4  | DRY    | No.2       |

DRY: SEASONED LUMBER.

| PLATES (table in inches) |        |     |      |      |       |
|--------------------------|--------|-----|------|------|-------|
| PLATE TYPE               | PLATES | W   | LEN  | Y    | X     |
| B - TMWV-I               | MT20   | 4.0 | 9.0  | 1.50 | 4.25  |
| C - TMWV-I               | MT20   | 4.0 | 12.0 | 2.00 | 10.25 |
| D - TMWV-I               | MT20   | 2.0 | 4.0  |      |       |
| E - TMWV-I               | MT20   | 4.0 | 4.0  |      |       |
| F - TS-I                 | MT20   | 3.0 | 8.0  |      |       |
| G - TMWV-I               | MT20   | 2.0 | 4.0  |      |       |
| H - TMWV-I               | MT20   | 7.0 | 8.0  | Edge | 2.75  |
| I - TMWV-I               | MT20   | 5.0 | 9.0  | Edge | 4.25  |
| K - BMV-I                | MT20   | 8.0 | 9.0  | Edge | 0.50  |
| L - BMWV-I               | MT20   | 7.0 | 8.0  | 4.25 | 3.25  |
| M - BS-I                 | MT20   | 5.0 | 8.0  |      |       |
| N - BMWV-I               | MT20   | 5.0 | 8.0  | 2.50 | 3.75  |
| O - BMWV-I               | MT20   | 4.0 | 6.0  | 2.00 | 2.75  |
| P - BMV-I                | MT20   | 3.0 | 4.0  |      |       |

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

#### HANGERS NOTES

NOTE: Lateral brace(s) shown shall be 1x4 for Part 9 design as per OBC 9.23.13.11, and no less than 2x4 for Part 4 design.



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

| FACTORED GROSS REACTION |      | MAXIMUM FACTORED GROSS REACTION |      | INPUT BRG |       | REQD BRG |       |
|-------------------------|------|---------------------------------|------|-----------|-------|----------|-------|
| JT                      | VERT | JT                              | DOWN | BRG       | IN-SX | BRG      | IN-SX |
| Q                       | 2054 | 0                               | 2054 | 0         | 0     | 2-4      | 2-4   |
| K                       | 3736 | 0                               | 3736 | 0         | 0     | 5-8      | 5-8   |

#### UNFACTORED REACTIONS

| 1ST CASE - MAX/MIN. COMPONENT REACTIONS |          | 2ND CASE - MAX/MIN. COMPONENT REACTIONS |          | 3RD CASE - MAX/MIN. COMPONENT REACTIONS |          | 4TH CASE - MAX/MIN. COMPONENT REACTIONS |          |
|-----------------------------------------|----------|-----------------------------------------|----------|-----------------------------------------|----------|-----------------------------------------|----------|
| JT                                      | COMBINED | JT                                      | COMBINED | JT                                      | COMBINED | JT                                      | COMBINED |
| Q                                       | 1425     | 1094/0                                  | 0/0      | 0/0                                     | 0/0      | 331/0                                   | 0/0      |
| K                                       | 2596     | 1961/0                                  | 0/0      | 0/0                                     | 0/0      | 635/0                                   | 0/0      |

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

#### SPACING

TOP CHORD TO BE SHEATHED OR MAX. PURLINE SPACING = 3.10 FT.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT. OR RIGID CEILING DIRECTLY APPLIED.

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

#### LOADING

TOTAL LOAD CASES: (4)

| CHORDS |                  |                           |                          | WEBS  |                  |                           |                          |
|--------|------------------|---------------------------|--------------------------|-------|------------------|---------------------------|--------------------------|
| MEMB.  | MAX. FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX. UNI-AXIAL (CS) (LC) | MEMB. | MAX. FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX. UNI-AXIAL (CS) (LC) |
| FR-TO  |                  |                           |                          | FR-TO |                  |                           |                          |
| A-B    | 0/47             | -104.9                    | -104.9 0.16 (1)          | 10.00 | C-P              | -347/6                    | 0.07 (1)                 |
| B-C    | -1956/0          | -104.9                    | -104.9 0.24 (1)          | 4.56  | C-O              | 0/2381                    | 0.59 (1)                 |
| C-D    | -3517/0          | -104.9                    | -104.9 0.86 (1)          | 3.40  | O-D              | -746/0                    | 0.19 (1)                 |
| D-E    | -3517/0          | -104.9                    | -104.9 0.64 (1)          | 3.40  | E-M              | -414/0                    | 0.16 (1)                 |
| E-F    | -4071/0          | -104.9                    | -104.9 0.68 (1)          | 3.10  | M-G              | 0/465                     | 0.12 (1)                 |
| F-G    | -4071/0          | -104.9                    | -104.9 0.68 (1)          | 3.10  | G-H              | -753/0                    | 0.19 (1)                 |
| G-H    | -4071/0          | -205.6                    | -205.6 0.96 (1)          | 3.10  | H-I              | 0/1073                    | 0.27 (1)                 |
| H-I    | -3787/0          | -104.9                    | -104.9 0.39 (1)          | 3.27  | I-J              | 0/1175                    | 0.21 (1)                 |
| I-J    | 0/47             | -104.9                    | -104.9 0.16 (1)          | 10.00 | J-K              | 0/1575                    | 0.39 (1)                 |
| O-B    | -2049/0          | 0.0                       | 0.0 0.15 (1)             | 7.03  |                  |                           |                          |
| K-I    | -3665/0          | 0.0                       | 0.0 0.27 (1)             | 6.63  |                  |                           |                          |
| Q-P    | 0/0              | -18.5                     | -18.5 0.08 (1)           | 10.00 |                  |                           |                          |
| P-O    | 0/1426           | -18.5                     | -18.5 0.27 (1)           | 10.00 |                  |                           |                          |
| O-N    | 0/3778           | -18.5                     | -18.5 0.58 (1)           | 10.00 |                  |                           |                          |
| N-M    | 0/3778           | -18.5                     | -18.5 0.58 (1)           | 10.00 |                  |                           |                          |
| M-L    | 0/3129           | -19.5                     | -19.5 0.47 (1)           | 10.00 |                  |                           |                          |
| L-S    | 0/0              | -36.4                     | -36.4 0.06 (4)           | 10.00 |                  |                           |                          |
| S-K    | 0/0              | -36.4                     | -36.4 0.06 (4)           | 10.00 |                  |                           |                          |

#### FACTORED CONCENTRATED LOADS (LBS)

| JT | LOC.    | LC1   | MAX.  | FACE  | DIR. | TYPE  |
|----|---------|-------|-------|-------|------|-------|
| H  | 22-7-8  | -226  | -226  | FRONT | VERT | TOTAL |
| L  | 21-10-0 | -433  | -484  | FRONT | VERT | DEAD  |
| L  | 21-10-0 | -1539 | -1539 | FRONT | VERT | SNOW  |

#### 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 | = 32.5 PSF |
| DL         | = 3.0 PSF  |
| BOT CH. LL | = 0.0 PSF  |
| DL         | = 7.4 PSF  |
| TOTAL LOAD | = 42.9 PSF |

#### SPACING = 24.0 IN. G/C

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

GIRDER TYPE: CPrime-Hip  
SIDE SETBACK = 2-11-8  
END SETBACK = 5-10-8  
END WALL WIDTH = 0-0  
CORNER FRAMING TYPE: CONVENTIONAL  
END JACK TYPE: CONVENTIONAL  
APPLIED TO FRONT SIDE  
- ADDTL LOADS BASED ON 55% OF GSL.  
LOADS APPLIED TO FIRST 3-8/8 OF SPAN MEASURED FROM THE RIGHT.

#### \*\*\* NON STANDARD GIRDER \*\*\*

ADDTL USER-DEFINED LOADS APPLIED TO ALL LOAD CASES.  
THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBC 2010

#### THIS DESIGN COMPLIES WITH:

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

(55% OF 43.9 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 32.5 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL. (LL) =  $L/900$  (0.65")  
CALCULATED VERT. DEFL. (LL) =  $L/999$  (0.17")  
ALLOWABLE DEFL. (TL) =  $L/360$  (0.65")  
CALCULATED VERT. DEFL. (TL) =  $L/999$  (0.29")

CSI: TC=0.96/1.00 (G-H:1), BC=0.58/1.00 (M-O:1), WB=0.75/1.00 (I-L:1), SS=0.37/1.00 (G-H:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

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

A18113059

CONTINUED ON PAGE 2

|          |            |          |     |             |          |
|----------|------------|----------|-----|-------------|----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.   | DRWG NO. |
| 304777   | H8         |          | 1   | TRUSS DESC. | JT 38514 |

Alpha Roof Truss, Maple

Version 6.2.10 5 Jun 15 2018 M/Tek Industries, Inc. Tue Nov 27 14:07:01 2019 Page 2  
ID: Qr8Cdx@va3wVquwRZ7WByICpx-Waz8Wsc86 SW2NagQ88653T 0TzqudsKllyYvxyE2gg

HANGER NOTES

1) SPECIAL HANGER(S) OR CONNECTION(S) REQUIRED TO SUPPORT CONCENTRATED LOAD(S) 228.3 lbs FACTORED DOWN AT 22-7-9 ON TOP CHORD, AND 1971.5 lbs FACTORED DOWN AT 21-10-0 ON BOTTOM CHORD. DESIGN FOR UNSPECIFIED CONNECTION(S) IS DELEGATED TO THE BUILDING DESIGNER.

NAIL VALUES

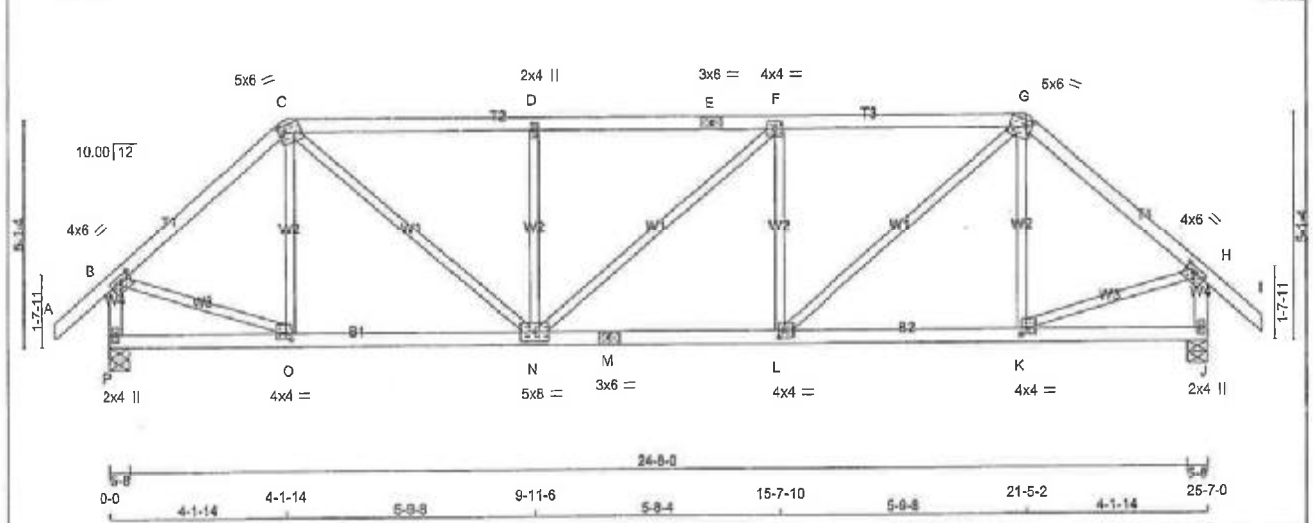
PLATE GRIP(DRY) SHEAR SECTION  
(FS) (PL) (PLI)  
MAX MIN MAX MIN MAX MIN  
MT20 618 354 1667 822 2284 1656  
  
PLATE PLACEMENT TOL. = 0.250 inches  
  
PLATE ROTATION TOL. = 5.0 Deg.  
  
JSI GRIP = 0.89 (B) (INPUT = 0.90 )  
JSI METAL = 0.86 (N) (INPUT = 1.00 )

NOTE: Lateral brace(s) shown shall be 1x4 for Part 3 design as per CBC 9.23.13.11, and no less than 2x4 for Part 4 design.



A18113059(2)

|                                                                                                                                                                                                                                                                                       |                         |                      |                 |                                 |                             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|----------------------|-----------------|---------------------------------|-----------------------------|
| JOB NAME<br><b>304777</b>                                                                                                                                                                                                                                                             | TRUSS NAME<br><b>H9</b> | QUANTITY<br><b>1</b> | PLY<br><b>1</b> | JOB DESC.<br><b>TRUSS DESC.</b> | DRWG NO.<br><b>JT 38514</b> |
| Version 3.210.5 Jun 13 2014 Mittek Industries, Inc. File Nov 27 14:07:02 2015 Page 1                                                                                                                                                                                                  |                         |                      |                 |                                 |                             |
| ID:Qr8CxxBvat3wVquovWRZ7W8yCpx-mWWWdmtHaNgWM0ysLeG0EQtmWeBYUWyg6RCyEzgd                                                                                                                                                                                                               |                         |                      |                 |                                 |                             |
| <div style="display: flex; justify-content: space-between;"> <span>-1-3-8 0-0</span> <span>4-1-14</span> <span>5-9-8</span> <span>9-11-6</span> <span>5-9-4</span> <span>15-7-10</span> <span>5-9-8</span> <span>21-5-2</span> <span>4-1-14</span> <span>25-7-8 25-10-8</span> </div> |                         |                      |                 |                                 |                             |
| Scale = 1/4" = 1'-0"                                                                                                                                                                                                                                                                  |                         |                      |                 |                                 |                             |



|                                                                                                                                                                                                                                                                                                                                          |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>LUMBER</b><br>N L S A RULES<br>CHORDS SIZE LUMBER DESCR.<br>A - C 2x4 DRY No.2 SPF<br>C - E 2x4 DRY No.2 SPF<br>E - G 2x4 DRY No.2 SPF<br>G - I 2x4 DRY No.2 SPF<br>P - B 2x4 DRY No.2 SPF<br>J - H 2x4 DRY No.2 SPF<br>P - M 2x4 DRY No.2 SPF<br>M - J 2x4 DRY No.2 SPF<br>ALL WEBS EXCEPT 2x3 DRY No.2 SPF<br>DRY: SEASONED LUMBER. |  | <b>DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER</b><br><b>BEARINGS</b><br>FACTORED MAXIMUM FACTORED INPUT REQ'D<br>GROSS REACTION GROSS REACTION BRG BRG<br>JT VERT HORZ DOWN HORZ UPLIFT IN-SX IN-SX<br>P 1724 0 1724 0 0 5-8 2-9<br>J 1724 0 1724 0 0 5-8 2-9<br><b>UNFACTORED REACTIONS</b><br>1ST CASE MAX. MIN. COMPONENT REACTIONS<br>JT COMBINED SNOW LIVE PERM. LIVE WIND DEAD SOIL<br>P 1185 821/0 0/0 0/0 0/0 274/0 0/0<br>J 1185 821/0 0/0 0/0 0/0 274/0 0/0<br>BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) P, J<br><b>BRACING</b><br>TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.03 FT.<br>MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT. OR RIGID CEILING DIRECTLY APPLIED.<br>ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.<br><b>LOADING</b><br>TOTAL LOAD CASES: (4)<br><b>CHORDS</b><br>MAX. FACTORED FORCE (LBS) FROM TO LENGTH FR-TO<br>A-B 0/47 -104.9 -104.9 0.14 (1) 10.00<br>B-C -1519/0 -104.9 -104.9 0.37 (1) 4.90<br>C-D -2071/0 -104.9 -104.9 0.59 (1) 4.05<br>D-E -2071/0 -104.9 -104.9 0.59 (1) 4.03<br>E-F -2071/0 -104.9 -104.9 0.59 (1) 4.03<br>F-G -2072/0 -104.9 -104.9 0.60 (1) 4.03<br>G-H -1518/0 -104.9 -104.9 0.37 (1) 4.90<br>H-I 0/47 -104.9 -104.9 0.14 (1) 10.00<br>P-B -1698/0 0.0 0.0 0.18 (1) 6.38<br>J-H -1695/0 0.0 0.0 0.18 (1) 6.38<br><b>WEBS</b><br>MAX. FACTORED FORCE (LBS) MAX. FACTORED FORCE (LBS)<br>O-C -251/28 0.10 (1)<br>C-N 0/1184 0.27 (1)<br>N-D -651/0 0.25 (1)<br>D-F -2/0 0.00 (1)<br>F-L -651/0 0.25 (1)<br>L-G 0/1188 0.27 (1)<br>G-K -252/28 0.10 (1)<br>K-O 0/1217 0.27 (1)<br>O-N 0/1159 -18.5 -18.5 0.25 (1) 10.00<br>N-M 0/2072 -18.5 -18.5 0.38 (1) 10.00<br>M-L 0/2072 -18.5 -18.5 0.38 (1) 10.00<br>L-K 0/1158 -18.5 -18.5 0.25 (1) 10.00<br>K-J 0/0 -18.5 -18.5 0.11 (4) 10.00 |  | <b>DESIGN CRITERIA</b><br>SPECIFIED LOADS:<br>TOP CH. LL = 32.5 PSF<br>DL = 3.0 PSF<br>BOT CH. LL = 0.0 PSF<br>DL = 7.4 PSF<br>TOTAL LOAD = 42.9 PSF<br>SPACING = 24.0 IN./C<br>LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM<br>THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2010<br>THIS DESIGN COMPLIES WITH:<br>- PART 9 OF OBC 2012, BCBC 2012, ABC 2014<br>- CSA 086-09<br>- TPIC 2011<br>(55% OF 43.9 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 32.5 P.S.F. SPECIFIED ROOF LIVE LOAD<br>ALLOWABLE DEFL. (LL) = L/360 (0.85")<br>CALCULATED VERT. DEFL. (LL) = L/999 (0.09")<br>ALLOWABLE DEFL. (TL) = L/360 (0.85")<br>CALCULATED VERT. DEFL. (TL) = L/999 (0.15")<br>CSI: TC=0.60/1.30 (F-G-1), BC=0.39/1.00 (L-N-1), WB=0.27/1.00 (B-C-1), SS=0.28/1.00 (F-G-1)<br>DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10 COMP=1.10 SHEAR=1.10 TENS=1.10<br>COMPANION LIVE LOAD FACTOR = 0.60<br>AUTOSOLVE HEELS OFF<br>TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT.<br><b>NAIL VALUES</b><br>PLATE GRIP(DRY) SHEAR SECTION (PSI) (PLI) (PLI)<br>MAX MIN MAX MIN MAX MIN<br>MT20 618 354 1667 822 2284 1656<br>PLATE PLACEMENT TOL = 0.250 inches<br>PLATE ROTATION TOL. = 5.0 Deg.<br>JSI GRIP= 0.90 (G) (INPUT = 0.90)<br>JSI METAL= 0.57 (M) (INPUT = 1.00) |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|

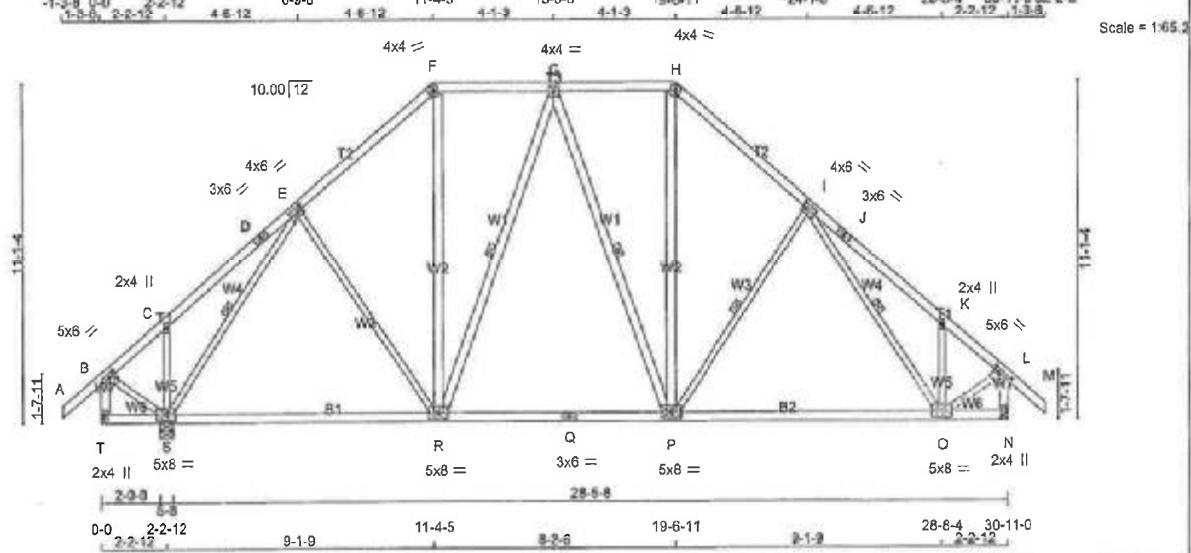
NOTE: Lateral brace(s) shown shall be 1x4 for Part 9 design as per OBC 9.23.13.11, and no less than 2x4 for Part 4 design.



A18113060

|          |            |          |     |             |          |
|----------|------------|----------|-----|-------------|----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.   | DRWG NO. |
| 304777   | H30        |          | 1   | TRUSS DESC. | JT 38514 |

Version 8.210.8 Jun 13 2018 MTM Industries, Inc. Tue Nov 27 14:27:23 2018 Page 1  
 ID: QrGcxvBvz3wVquWRZ7N3yICps-Sy4uxYePebElgCNZBaBUZTOHjNNVHsioQzgyEzgc



| 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 - J           | 2x4      | DRY   | No.2   | SPF  |        |        |
| J - M           | 2x4      | DRY   | No.2   | SPF  |        |        |
| T - B           | 2x4      | DRY   | No.2   | SPF  |        |        |
| N - L           | 2x4      | DRY   | No.2   | SPF  |        |        |
| T - Q           | 2x4      | DRY   | No.2   | SPF  |        |        |
| Q - N           | 2x4      | DRY   | No.2   | SPF  |        |        |
| ALL WEBS EXCEPT | 2x3      | DRY   | No.2   | SPF  |        |        |
| R - F           | 2x4      | DRY   | No.2   | SPF  |        |        |
| R - G           | 2x4      | DRY   | No.2   | SPF  |        |        |
| G - P           | 2x4      | DRY   | No.2   | SPF  |        |        |
| P - H           | 2x4      | DRY   | No.2   | SPF  |        |        |

DRY: SEASONED LUMBER

| PLATES (width in inches) | JT TYPE | PLATES | W   | LEN | Y    | X    |
|--------------------------|---------|--------|-----|-----|------|------|
| B                        | TMWV-1  | MT20   | 5.0 | 6.0 | 1.50 | 2.75 |
| C                        | TMWV-w  | MT20   | 2.0 | 4.0 |      |      |
| D                        | TS-1    | MT20   | 3.0 | 6.0 |      |      |
| E                        | TMWV-1  | MT20   | 4.0 | 6.0 | 2.00 | 2.00 |
| F                        | TTW-m   | MT20   | 4.0 | 4.0 |      |      |
| G                        | TMWV-1  | MT20   | 4.0 | 4.0 |      |      |
| H                        | TTW-m   | MT20   | 4.0 | 4.0 |      |      |
| I                        | TMWV-1  | MT20   | 4.0 | 6.0 | 2.00 | 2.00 |
| J                        | TS-1    | MT20   | 3.0 | 6.0 |      |      |
| K                        | TMWV-w  | MT20   | 2.0 | 4.0 |      |      |
| L                        | TMWV-1  | MT20   | 5.0 | 6.0 | 1.50 | 2.75 |
| N                        | BMV1+p  | MT20   | 2.0 | 4.0 | 2.25 | 1.00 |
| O, P, R                  |         |        |     |     |      |      |
| Q                        | BMWVW-1 | MT20   | 5.0 | 8.0 |      |      |
| Q                        | BS-1    | MT20   | 3.0 | 6.0 |      |      |
| S                        | BMWVW-1 | MT20   | 5.0 | 8.0 |      |      |
| T                        | BMV+p   | MT20   | 2.0 | 4.0 | 2.25 | 1.00 |

NOTE: Lateral brace(s) shown shall be 1x4 for Part 9 design as per OBC 9.23.13.11, and no less than 2x4 for Part 4 design.



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

| BEARINGS | FACTORED       | MAXIMUM FACTORED | INPUT | REQD           |
|----------|----------------|------------------|-------|----------------|
|          | GROSS REACTION | GROSS REACTION   | BRG   | BRG            |
| JT       | VERT           | DOWN             | UP    | IN-SX          |
| S        | 2213           | 0                | 0     | 5-8            |
| N        | 1894           | 0                | 0     | 2-5 MECHANICAL |

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT N. MINIMUM BEARING LENGTH AT JOINT N = 2-11.

## UNFACTORED REACTIONS

| 1ST CASE | MAX. MIN. | COMPONENT REACTIONS |
|----------|-----------|---------------------|
| JT       | COMBINED  | SNOW                |
| S        | 1535      | 1179 / 0            |
| N        | 1313      | 1009 / 0            |

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

## BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.00 FT. MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT. OR RIGID CEILING DIRECTLY APPLIED.

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

1 LATERAL BRACE(S) AT 1/2 LENGTH OF E-S, G-R, G-P, I-P, I-O.

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

## LOADING

TOTAL LOAD CASES: (4)

| CHORDS | MEMB.     | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (LBS) | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (LBS) | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (LBS) | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (LBS) |
|--------|-----------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
| FR-TO  |           |                           |                           |                           |                           |                           |                           |                           |                           |
| A-B    | 0 / 47    | -104.9                    | -104.9                    | 0.14 (1)                  | 10.00                     | S-C                       | -412 / 0                  | 0.08 (1)                  |                           |
| B-C    | -17 / 176 | -104.9                    | -104.9                    | 0.25 (1)                  | 6.25                      | S-E                       | -1079 / 0                 | 0.88 (1)                  |                           |
| C-D    | -21 / 150 | -104.9                    | -104.9                    | 0.33 (1)                  | 6.25                      | E-R                       | 0 / 125                   | 0.03 (1)                  |                           |
| D-E    | -21 / 150 | -104.9                    | -104.9                    | 0.33 (1)                  | 6.25                      | R-F                       | 0 / 470                   | 0.08 (1)                  |                           |
| E-F    | -1325 / 0 | -104.9                    | -104.9                    | 0.28 (1)                  | 5.33                      | R-G                       | -449 / 0                  | 0.34 (1)                  |                           |
| F-G    | -997 / 0  | -104.9                    | -104.9                    | 0.23 (1)                  | 5.98                      | G-P                       | -104 / 18                 | 0.08 (1)                  |                           |
| G-H    | -1116 / 0 | -104.9                    | -104.9                    | 0.23 (1)                  | 5.74                      | P-H                       | 0 / 572                   | 0.09 (1)                  |                           |
| H-I    | -1480 / 0 | -104.9                    | -104.9                    | 0.25 (1)                  | 5.08                      | P-I                       | -375 / 0                  | 0.18 (1)                  |                           |
| I-J    | -1540 / 0 | -104.9                    | -104.9                    | 0.30 (1)                  | 5.00                      | I-O                       | -222 / 24                 | 0.10 (1)                  |                           |
| J-K    | -1540 / 0 | -104.9                    | -104.9                    | 0.30 (1)                  | 5.00                      | O-K                       | -375 / 0                  | 0.08 (1)                  |                           |
| K-L    | -1539 / 0 | -104.9                    | -104.9                    | 0.14 (1)                  | 5.18                      | B-S                       | -112 / 20                 | 0.02 (1)                  |                           |
| L-M    | 0 / 47    | -104.9                    | -104.9                    | 0.14 (1)                  | 10.00                     | O-L                       | 0 / 1399                  | 0.31 (1)                  |                           |
| T-B    | -42 / 0   | 0.0                       | 0.0                       | 0.01 (4)                  | 7.61                      |                           |                           |                           |                           |
| N-L    | -1917 / 0 | 0.0                       | 0.0                       | 0.20 (1)                  | 6.07                      |                           |                           |                           |                           |
| T-S    | 0 / 0     | -18.5                     | -18.5                     | 0.28 (4)                  | 10.00                     |                           |                           |                           |                           |
| S-R    | 0 / 920   | -18.5                     | -18.5                     | 0.34 (1)                  | 10.00                     |                           |                           |                           |                           |
| R-Q    | 0 / 1152  | -18.5                     | -18.5                     | 0.35 (1)                  | 10.00                     |                           |                           |                           |                           |
| Q-P    | 0 / 1152  | -18.5                     | -18.5                     | 0.35 (1)                  | 10.00                     |                           |                           |                           |                           |
| P-O    | 0 / 1318  | -18.5                     | -18.5                     | 0.37 (1)                  | 10.00                     |                           |                           |                           |                           |
| O-N    | 0 / 0     | -18.5                     | -18.5                     | 0.26 (4)                  | 10.00                     |                           |                           |                           |                           |

## DESIGN CRITERIA

SPECIFIED LOADS:  
 TOP CH. LL = 32.5 PSF  
 DL = 3.0 PSF  
 BOT CH. LL = 0.0 PSF  
 DL = 7.4 PSF  
 TOTAL LOAD = 42.9 PSF

SPACING = 24.0 IN. C/C

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

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

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

(55% OF 43.9 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 32.5 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL. (LL) = 1/360 (0.96")  
 CALCULATED VERT. DEFL. (LL) = 1/999 (0.05")  
 ALLOWABLE DEFL. (TL) = 1/360 (0.96")  
 CALCULATED VERT. DEFL. (TL) = 1/999 (0.18")

CANTILEVER DEFLECTION:  
 ALLOWABLE DEFL. (LL) = 1/200 (0.22")  
 CALCULATED VERT. DEFL. (LL) = 1/999 (0.01")  
 ALLOWABLE DEFL. (TL) = 1/200 (0.22")  
 CALCULATED VERT. DEFL. (TL) = 1/999 (0.01")

CSI: TC=0.33/1.00 (C-E), BC=0.37/1.00 (O-P-1),  
 WB=0.88/1.00 (E-S-1), SSI=0.21/1.00 (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 = 0.50

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

NAIL VALUES  
 PLATE GRIP (DRY) SHEAR SECTION  
 (PSI) (PLI) (PLI)  
 MAX MIN MAX MIN MAX MIN  
 MT20 618 354 1667 788 1987 1658

PLATE PLACEMENT TOL. = 0.250 inches

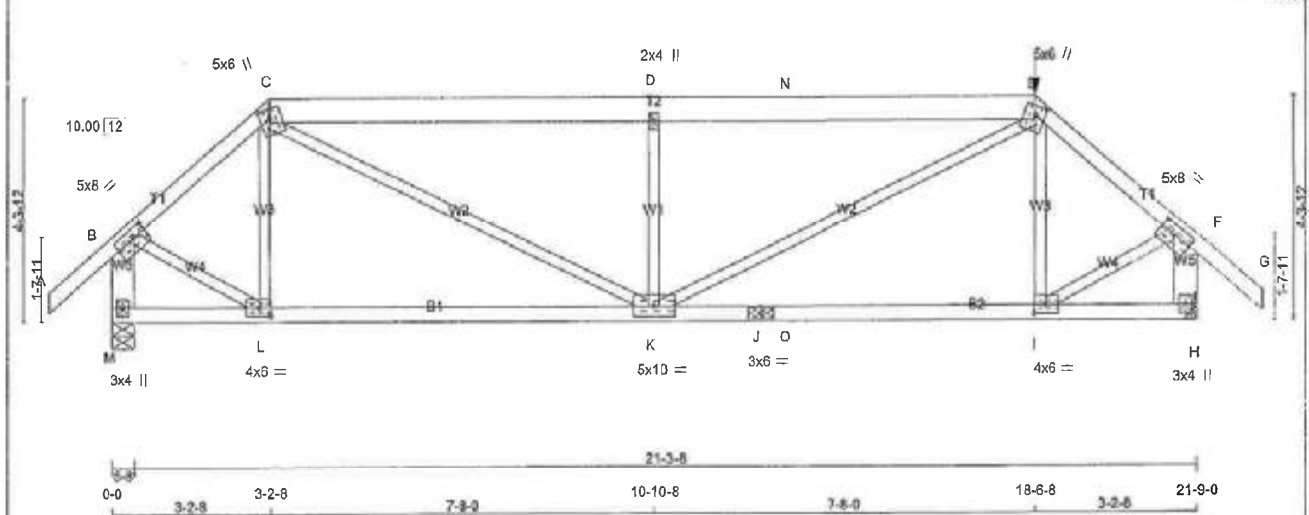
PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (E) (INPUT = 0.90 )  
 JSI METAL= 0.45 (I) (INPUT = 1.00 )

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CONTINUED ON PAGE 2

|                                                                                                                                                               |                          |                      |                 |                                 |                             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|----------------------|-----------------|---------------------------------|-----------------------------|
| JOB NAME<br><b>304777</b>                                                                                                                                     | TRUSS NAME<br><b>H33</b> | QUANTITY<br><b>1</b> | PLY<br><b>1</b> | JOB DESC.<br><b>TRUSS DESC.</b> | DRWG NO.<br><b>JT 38514</b> |
| Version 6.210 5 Jun 13 2015 Mitek Industries, Inc. Tue Nov 27 14:07:04 2018 Page 1<br>ID: Qr8CxoBvat3w/vquWRZ7WByKpx-w8eG9uf1Ovc5vqW04Hph5W_h1d83Lm_O8CW0yEg8 |                          |                      |                 |                                 |                             |
| Scale = 1/32                                                                                                                                                  |                          |                      |                 |                                 |                             |



|                                                                                                                                                                                                                                                                                                                                                                                                                        |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>LUMBER</b><br>ALL WEBS EXCEPT<br>DRY: SEASONED LUMBER                                                                                                                                                                                                                                                                                                                                                               |  | <b>DESIGN CRITERIA</b><br>SPECIFIED LOADS:<br>TOP CH. LL = 32.5 PSF<br>DL = 3.0 PSF<br>BOT CH. LL = 0.0 PSF<br>DL = 7.4 PSF<br>TOTAL LOAD = 42.9 PSF<br>SPACING = 24.0 IN. G/C<br>LOADING IN FLAT SECTION BASED ON A SLOPE OF 200/12 MINIMUM<br>GIRDER TYPE: CPrimeHip<br>SIDE SETBACK = 3-2-8<br>END SETBACK = 6-3-8<br>END WALL WIDTH = 0-0<br>CORNER FRAMING TYPE: CONVENTIONAL<br>END JACK TYPE: CONVENTIONAL<br>APPLIED TO FRONT SIDE<br>- ADDTL LOADS BASED ON 55 % OF GSL<br>LOADS APPLIED TO FIRST 8-2-8 OF SPAN MEASURED FROM THE RIGHT.<br>THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBC 2010<br>THIS DESIGN COMPLIES WITH:<br>- PART 9 OF OBC 2012, BCBC 2012, ABC 2014<br>- CSA 085-09<br>- TPIC 2011<br>(55 % OF 43.9 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 32.5 P.S.F. SPECIFIED ROOF LIVE LOAD<br>ALLOWABLE DEFL.(LL) = L/360 (0.73")<br>CALCULATED VERT. DEFL.(LL) = L/999 (0.06")<br>ALLOWABLE DEFL.(TL) = L/360 (0.73")<br>CALCULATED VERT. DEFL.(TL) = L/999 (0.22")<br>CSI: TC=0.95/1.00 (D-E-1), BC=0.50/1.00 (H-K-1), WB=0.45/1.00 (C-K-1), SSI=0.47/1.00 (D-E-1)<br>DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.00 COMP=1.00 SHEAR=1.00 TENS=1.00<br>COMPANION LIVE LOAD FACTOR = 0.50<br>TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT.<br>NAIL VALUES<br>PLATE GRIP(DRY) SHEAR SECTION (PSI) (PLI) (PLI)<br>MAX MIN MAX MIN MAX MIN<br>MT20 618 354 1687 822 2284 1656<br>PLATE PLACEMENT TOL. = 0.250 inches<br>PLATE ROTATION TOL. = 5.0 Deg.<br>JSI GRIP= 0.88 (L) (INPUT = 0.90)<br>JSI METAL= 0.52 (L) (INPUT = 1.00) |  |
| <b>PLATES</b> (Include in bracing)<br>JT TYPE PLATES W LEN Y X<br>B TMVW-H MT20 5.0 8.0 2.00 3.25<br>C TTWW-H-m MT20 5.0 6.0 2.25 2.25<br>D TMW-H-v MT20 2.0 4.0<br>E TTWW-H-m MT20 5.0 8.0 2.25 2.25<br>F TMVW-H MT20 5.0 8.0 2.00 3.25<br>H BMV1-H-p MT20 3.0 4.0<br>I TMVW-H MT20 4.0 5.0 2.00 2.75<br>J BS-H MT20 3.0 5.0<br>K BMVWW-H MT20 5.0 10.0<br>L TMVW-H MT20 4.0 5.0 2.00 2.75<br>M BMV1-H-p MT20 3.0 4.0 |  | <b>BEARINGS</b><br>FACTORED MAXIMUM FACTORED INPUT REQD<br>GROSS REACTION GROSS REACTION BRG BRG<br>JT VERT HORZ DOWN HORZ UPLIFT IN-SX IN-SX<br>M 1706 0 1706 0 0 5-8 1-14<br>H 2284 0 2284 0 0 MECHANICAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |
| <b>HANGERS NOTES</b><br>1) SPECIAL HANGER(S) OR CONNECTION(S) REQUIRED TO SUPPORT CONCENTRATED LOAD(S) 268.9 lbs FACTORED DOWN AT 18-6-8 ON TOP CHORD. DESIGN FOR UNSPECIFIED CONNECTION(S) IS DELEGATED TO THE BUILDING DESIGNER.                                                                                                                                                                                     |  | <b>LOADING</b><br>TOTAL LOAD CASES: (4)<br>CHORDS<br>MAX. FACTORED FORCE (LBS) FACTORED VERT. LOAD (PLF) LC1 MAX. FACTORED FORCE (LBS) LC1 MAX. FACTORED FORCE (LBS) LC1 MAX. FACTORED FORCE (LBS) LC1<br>FR-TO FROM TO LENGTH FR-TO<br>A-B 0/47 -104.9 -104.9 0.16 (1) 10.00 L-C -350/7 0.10 (1)<br>B-C -1441/0 -104.9 -104.9 0.24 (1) 5.15 C-K 0/1805 0.45 (1)<br>C-D -2724/0 -104.9 -104.9 0.81 (1) 3.80 K-D -1248/0 0.34 (1)<br>D-N -2724/0 -104.9 -104.9 0.85 (1) 3.86 K-E 0/1304 0.32 (1)<br>N-E -2724/0 -217.5 -217.5 0.85 (1) 3.86 L-E -400/113 0.11 (1)<br>E-F -2018/0 -104.9 -104.9 0.28 (1) 4.46 B-L 0/1205 0.30 (1)<br>F-G 0/147 -104.9 -104.9 0.16 (1) 10.00 J-F 0/1887 0.42 (1)<br>M-B -1699/0 0.0 0.0 0.13 (1) 7.56<br>H-F -2253/0 0.0 0.0 0.17 (1) 5.78<br>M-L 0/0 -18.5 -18.5 0.15 (4) 10.00<br>L-K 0/1120 -18.5 -18.5 0.42 (4) 10.00<br>K-J 0/1566 -18.5 -18.5 0.50 (1) 10.00<br>J-D 0/1566 -18.5 -18.5 0.50 (1) 10.00<br>O-I 0/1566 -38.3 -38.3 0.50 (1) 10.00<br>I-H 0/0 -38.3 -38.3 0.38 (4) 10.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |
| NOTE: Lateral brace(s) shown shall be 1x4 for Part 9 design as per OBC 9.23,13.11, and no less than 2x4 for Part 4 design.                                                                                                                                                                                                                                                                                             |  | <b>FACTORED CONCENTRATED LOADS (LBS)</b><br>JT LOC. LC1 MAX- MAX+ FACE D/R TYPE<br>E 18-6-8 -268 -269 -- FRONT VERT TOTAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |



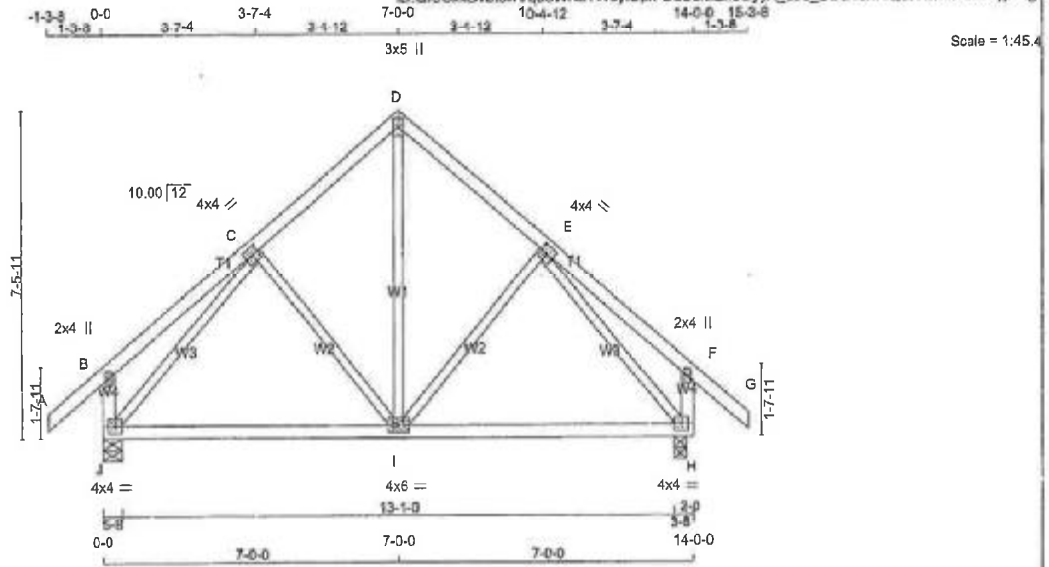
A18113062

Alpine Roof Truss, Maple

A18113063

|          |            |          |     |            |          |
|----------|------------|----------|-----|------------|----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.  | DRWG NO. |
| 304777   | H35        |          | 1   | TRUSS DESC | JT 38514 |

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 ID: G8C0x8v6t3wVqudWR27W8yCpx-OLCaMEF9CyyX\_5bd\_D2Gvrm4Q9rWwCvrm2jyEzga  
 Nipa Roof Truss, Maple



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

DRY: SEASONED LUMBER.

| PLATE (made in inches) | W    | LEN | Y   | X         |
|------------------------|------|-----|-----|-----------|
| JT TYPE                |      |     |     |           |
| A - THOMP              | MT20 | 2.0 | 4.0 |           |
| C - TMWWH              | MT20 | 4.0 | 4.0 | 2.00 1.75 |
| D - TTWAP              | MT20 | 3.0 | 5.0 |           |
| E - TMWWH              | MT20 | 4.0 | 4.0 | 2.00 1.75 |
| F - TMVAP              | MT20 | 2.0 | 4.0 |           |
| H - BMVW1-t            | MT20 | 4.0 | 4.0 |           |
| I - BMVWV-t            | MT20 | 4.0 | 6.0 |           |
| J - BMVW1-t            | MT20 | 4.0 | 4.0 |           |

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

| BEARINGS |      | FACTORED GROSS REACTION | MAXIMUM FACTORED GROSS REACTION | INPUT BRG | REQD BRG |
|----------|------|-------------------------|---------------------------------|-----------|----------|
| JT       | VERT | HORZ                    | DOWN                            | UPLIFT    | IN-SX    |
| J        | 1009 | 0                       | 1009                            | 0         | 5-8      |
| H        | 1009 | 0                       | 1009                            | 0         | 3-8      |

#### UNFACTORED REACTIONS

| JT | COMBINED | SNOW    | LIVE  | PERM. LIVE | WIND  | DEAD    | SOIL  |
|----|----------|---------|-------|------------|-------|---------|-------|
| J  | 699      | 545 / 0 | 0 / 0 | 0 / 0      | 0 / 0 | 154 / 0 | 0 / 0 |
| H  | 699      | 545 / 0 | 0 / 0 | 0 / 0      | 0 / 0 | 154 / 0 | 0 / 0 |

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

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

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

#### LOADING

TOTAL LOAD CASES: (4)

| CHORDS |                           | WEBS  |                           |
|--------|---------------------------|-------|---------------------------|
| MEMB.  | MAX. FACTORED FORCE (LBS) | MEMB. | MAX. FACTORED FORCE (LBS) |
| FR-TO  |                           | FR-TO |                           |
| A-B    | 0 / 47                    | I-D   | 0 / 444                   |
| B-C    | 0 / 27                    | I-E   | -185 / 6                  |
| C-D    | -598 / 0                  | C-I   | -185 / 6                  |
| D-E    | -598 / 0                  | J-C   | -875 / 0                  |
| E-F    | 0 / 27                    | E-H   | -875 / 0                  |
| F-G    | 0 / 47                    |       |                           |
| J-B    | -285 / 0                  |       |                           |
| H-F    | -285 / 0                  |       |                           |
| J-I    | 0 / 558                   |       |                           |
| I-H    | 0 / 558                   |       |                           |

NOTE: Lateral brace(s) shown shall be 1x4 for Part 9 design as per OBC 5.23.13.11, and no less than 2x4 for Part 4 design.



#### DESIGN CRITERIA

**SPECIFIED LOADS:**  
 TOP CH. LL = 32.5 PSF  
 DL = 3.0 PSF  
 BOT CH. LL = 0.0 PSF  
 DL = 7.4 PSF  
 TOTAL LOAD = 42.9 PSF

**SPACING = 24.0 IN. C/C**

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

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

(55 % OF 43.9 P.S.F. G.S.L. PLUS 5.4 P.S.F. RAIN LOAD) EQUALS 32.5 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL) = L/360 (0.47")  
 CALCULATED VERT. DEFL.(LL) = L/999 (0.02")  
 ALLOWABLE DEFL.(TL) = L/360 (0.47")  
 CALCULATED VERT. DEFL.(TL) = L/999 (0.06")

CSI: TC=0.21/1.00 (B-C:1), BC=0.28/1.00 (I-J:4), WB=0.42/1.00 (E-H:1), SSI=0.14/1.00 (D-E:1)

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

COMPANION LIVE LOAD FACTOR = 0.60

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

| PLATE | GRIP(DRY) | SHEAR    | SECTION   |
|-------|-----------|----------|-----------|
|       | (PSI)     | (PLI)    | (PLI)     |
|       | MAX MIN   | MAX MIN  | MAX MIN   |
| MT20  | 618 354   | 1637 822 | 2284 1656 |

PLATE PLACEMENT TOL. = 0.250 inches

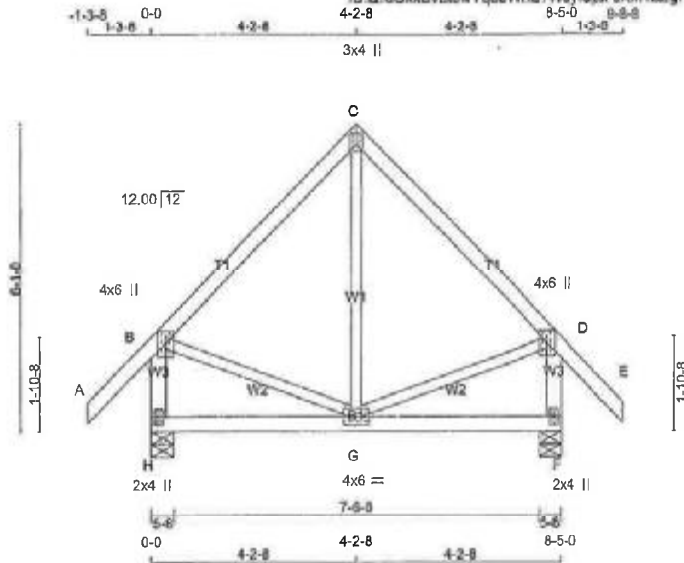
PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.83 (C) (INPUT = 0.80)  
 JSI METAL= 0.32 (E) (INPUT = 1.00)

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|                           |                          |                      |                 |                                 |                             |
|---------------------------|--------------------------|----------------------|-----------------|---------------------------------|-----------------------------|
| JOB NAME<br><b>304777</b> | TRUSS NAME<br><b>H36</b> | QUANTITY<br><b>1</b> | PLY<br><b>1</b> | JOB DESC.<br><b>TRUSS DESC.</b> | DRWS NO.<br><b>JT 38514</b> |
|---------------------------|--------------------------|----------------------|-----------------|---------------------------------|-----------------------------|

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

DRY: SEASONED LUMBER

PLATES (table is in inches)

| JT TYPE     | PLATES | W   | LEN | Y    | X    |
|-------------|--------|-----|-----|------|------|
| B - TMVW+p  | MT20   | 4.0 | 5.0 | 2.75 | 2.00 |
| C - TTW+p   | MT20   | 3.0 | 4.0 | Edge |      |
| D - TMVW+p  | MT20   | 4.0 | 5.0 | 2.75 | 2.00 |
| F - BMV1+p  | MT20   | 2.0 | 4.0 |      |      |
| G - BMVWW-l | MT20   | 4.0 | 5.0 |      |      |
| H - BMV1+p  | MT20   | 2.0 | 4.0 |      |      |

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

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

|    |      | FACTORED       |      | MAXIMUM FACTORED |        | INPUT |       | REORD |       |
|----|------|----------------|------|------------------|--------|-------|-------|-------|-------|
|    |      | GROSS REACTION |      | GROSS REACTION   |        | BRG   |       | BRG   |       |
| JT | VERT | HORZ           | DOWN | HORZ             | UPLIFT | IN-SX | IN-SX | IN-SX | IN-SX |
| H  | 668  | 0              | 668  | 0                | 0      | 5-8   | 1-8   | 1-8   | 1-8   |
| F  | 668  | 0              | 668  | 0                | 0      | 5-8   | 1-8   | 1-8   | 1-8   |

#### UNFACTORED REACTIONS

| JT | 1ST CASE | 2ND CASE | 3RD CASE | 4TH CASE | 5TH CASE | 6TH CASE | 7TH CASE | 8TH CASE |
|----|----------|----------|----------|----------|----------|----------|----------|----------|
| H  | 480      | 364/0    | 0/0      | 0/0      | 0/0      | 0/0      | 96/0     | 0/0      |
| F  | 480      | 364/0    | 0/0      | 0/0      | 0/0      | 0/0      | 96/0     | 0/0      |

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

#### BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 8.25 FT.  
 MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT. OR RIGID CEILING DIRECTLY APPLIED.

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

#### LOADING

TOTAL LOAD CASES: (4)

|       |             | CHORDS        |            | WEBS          |             |            |            |
|-------|-------------|---------------|------------|---------------|-------------|------------|------------|
|       |             | MAX. FACTORED |            | MAX. FACTORED |             |            |            |
| MEMB. | FORCE (LBS) | VERT. LOAD    | MAX. (PLF) | MEMB.         | FORCE (LBS) | MAX. (LBS) | MAX. (LBS) |
| FR-TO |             | FROM          | TO         | FR-TO         |             |            |            |
| A-B   | 0/52        | -104.9        | -104.9     | 0.15 (1)      | 10.00       | 0.03 (1)   | 0.03 (1)   |
| B-C   | -279/0      | -104.9        | -104.9     | 0.24 (1)      | 6.25        | 0/210      | 0.05 (1)   |
| C-D   | -279/0      | -104.9        | -104.9     | 0.24 (1)      | 6.25        | 0/210      | 0.05 (1)   |
| D-E   | 0/52        | -104.9        | -104.9     | 0.15 (1)      | 10.00       |            |            |
| H-B   | -636/0      | 0.0           | 0.0        | 0.07 (1)      | 7.81        |            |            |
| F-D   | -636/0      | 0.0           | 0.0        | 0.07 (1)      | 7.81        |            |            |
| H-G   | 0/0         | -18.5         | -18.5      | 0.09 (4)      | 10.00       |            |            |
| G-F   | 0/0         | -18.5         | -18.5      | 0.09 (4)      | 10.00       |            |            |

#### DESIGN CRITERIA

SPECIFIED LOADS:  
 TOP CH. LL = 32.5 PSF  
 DL = 3.0 PSF  
 BOT CH. LL = 0.0 PSF  
 DL = 7.4 PSF  
 TOTAL LOAD = 42.9 PSF

SPACING = 24.0 IN. C/C

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

THIS DESIGN COMPLIES WITH:

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

(55% OF 43.9 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 32.5 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL) = L/360 (0.28")  
 CALCULATED VERT. DEFL.(LL) = L/999 (0.00")  
 ALLOWABLE DEFL.(TL) = L/360 (0.28")  
 CALCULATED VERT. DEFL.(TL) = L/999 (0.01")

CSI: TC=0.24/1.00 (B-C:1), BC=0.05/1.00 (G-H:4),  
 WB=0.05/1.00 (D-G:1), SSI=0.12/1.00 (B-C:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

AUTOSOLVE HEELS OFF

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

#### NAIL VALUES

| PLATE | GRIP(DRY) | SHEAR | SECTION |
|-------|-----------|-------|---------|
| (PSI) | (PLI)     | (PLI) |         |
| MAX   | MIN       | MAX   | MIN     |
| MT20  | 618       | 354   | 1667    |
|       | 822       | 2284  | 1655    |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP=0.45 (B) (INPUT=0.90)  
 JSI METAL=0.12 (H) (INPUT=1.00)

NOTE: Lateral brace(s) shown shall be 1x4 for Part 9 design as per OBC 9.23.13.11, and no less than 2x4 for Part 4 design.



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|          |            |          |     |             |          |
|----------|------------|----------|-----|-------------|----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.   | DRWG NO. |
| 304777   | H36G       | 1        |     | TRUSS DESC. | JT 38514 |

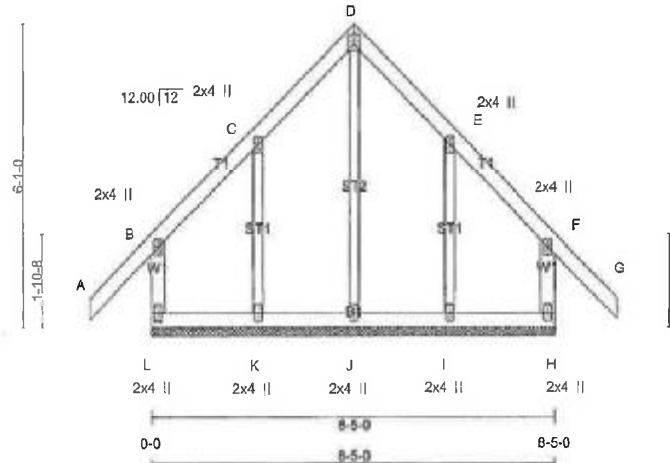
Alpine Roof Truss, Maple

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-1-3-8 0-0 4-2-8 4-2-8 8-5-0 9-8-8  
3x4 II

Scale = 1:39.5



TOTAL WEIGHT = 4110

#### LUMBER

| N. L. G. A. RULES     | CHORDS    | SIZE | DRY  | LUMBER | DESCR. |
|-----------------------|-----------|------|------|--------|--------|
| L - B                 | 2x4       | DRY  | No.2 | SPF    |        |
| A - D                 | 2x4       | DRY  | No.2 | SPF    |        |
| D - G                 | 2x4       | DRY  | No.2 | SPF    |        |
| H - F                 | 2x4       | DRY  | No.2 | SPF    |        |
| L - H                 | 2x4       | DRY  | No.2 | SPF    |        |
| ALL WEBS              | 2x3       | DRY  | No.2 | SPF    |        |
| ALL GABLE WEBS        | 2x3       | DRY  | No.2 | SPF    |        |
| DRY: SEASONED LUMBER  |           |      |      |        |        |
| GABLE STUDS SPACED AT | 2-0-0 OC. |      |      |        |        |

#### PLATES (table in inches)

| JT TYPE | PLATES | W    | LEN | Y   | X    |
|---------|--------|------|-----|-----|------|
| B       | TMV+p  | MT20 | 2.0 | 4.0 |      |
| C       | TMW+w  | MT20 | 2.0 | 4.0 |      |
| D       | TTW+p  | MT20 | 3.0 | 4.0 | Edge |
| E       | TMW+w  | MT20 | 2.0 | 4.0 |      |
| F       | TMV+p  | MT20 | 2.0 | 4.0 |      |
| H       | BMV1+p | MT20 | 2.0 | 4.0 |      |
| I, J, K |        |      |     |     |      |
| I       | BMW1+w | MT20 | 2.0 | 4.0 |      |
| L       | BMV1+p | MT20 | 2.0 | 4.0 |      |

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

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

BEARINGS  
THIS TRUSS DESIGNED FOR CONTINUOUS BEARINGS.  
THIS TRUSS REQUIRES RIGID SHEATHING ON EXPOSED FACE.  
BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S)

#### BRACING

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

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

#### LOADING

TOTAL LOAD CASES: (4)

| CHORDS |                           |                           |                             | WEBS  |                           |                           |                             |
|--------|---------------------------|---------------------------|-----------------------------|-------|---------------------------|---------------------------|-----------------------------|
| MEMB.  | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX. FACTORED LC1 MAX. (LC) | MEMB. | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX. FACTORED LC1 MAX. (LC) |
| FR-TO  |                           | FROM TO                   |                             | FR-TO |                           | FROM TO                   |                             |
| L-B    | -275 / 0                  | 0.0                       | 0.0 0.02 (1)                | 7.81  | J-D                       | -196 / 0                  | 0.11 (1)                    |
| A-B    | 0 / 52                    | -104.9                    | -104.9 0.15 (1)             | 10.00 | K-C                       | -214 / 0                  | 0.05 (1)                    |
| B-C    | -25 / 0                   | -104.9                    | -104.9 0.06 (1)             | 6.25  | I-E                       | -214 / 0                  | 0.05 (1)                    |
| C-D    | -16 / 0                   | -104.9                    | -104.9 0.05 (1)             | 6.25  |                           |                           |                             |
| D-E    | -16 / 0                   | -104.9                    | -104.9 0.05 (1)             | 6.25  |                           |                           |                             |
| E-F    | -25 / 0                   | -104.9                    | -104.9 0.06 (1)             | 6.25  |                           |                           |                             |
| F-G    | 0 / 52                    | -104.9                    | -104.9 0.15 (1)             | 10.00 |                           |                           |                             |
| H-F    | -275 / 0                  | 0.0                       | 0.0 0.02 (1)                | 7.81  |                           |                           |                             |
| L-K    | 0 / 17                    | -18.5                     | -18.5 0.02 (4)              | 10.00 |                           |                           |                             |
| K-J    | 0 / 11                    | -18.5                     | -18.5 0.02 (4)              | 10.00 |                           |                           |                             |
| J-I    | 0 / 11                    | -18.5                     | -18.5 0.02 (4)              | 10.00 |                           |                           |                             |
| I-H    | 0 / 17                    | -18.5                     | -18.5 0.02 (4)              | 10.00 |                           |                           |                             |

#### DESIGN CRITERIA

SPECIFIED LOADS:  
TOP CH. LL = 32.5 PSF  
DL = 3.0 PSF  
BOT CH. LL = 0.0 PSF  
DL = 7.4 PSF  
TOTAL LOAD = 42.9 PSF

SPACING = 24.0 IN. G/G

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

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

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

(55 % OF 43.9 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 32.5 P.S.F. SPECIFIED ROOF LIVE LOAD

CSI: TC=0.15/1.00 (F-G:1), BC=0.02/1.00 (K-L:4), WB=0.11/1.00 (D-J:1), SSI=0.09/1.00 (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 = 0.50

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

NAIL VALUES  
PLATE GRIP (DRY) SHEAR SECTION (PSI) (PLI) (PLI)  
MAX MIN MAX MIN MAX MIN  
MT20 618 354 1667 622 2284 1656

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.32 (D) (INPUT = 0.90)  
JSI METAL= 0.08 (F) (INPUT = 1.00)

NOTE: Lateral brace(s) shown shall be 1x4 for Part 9 design as per OBC 9.23.13.11, and no less than 2x4 for Part 4 design.



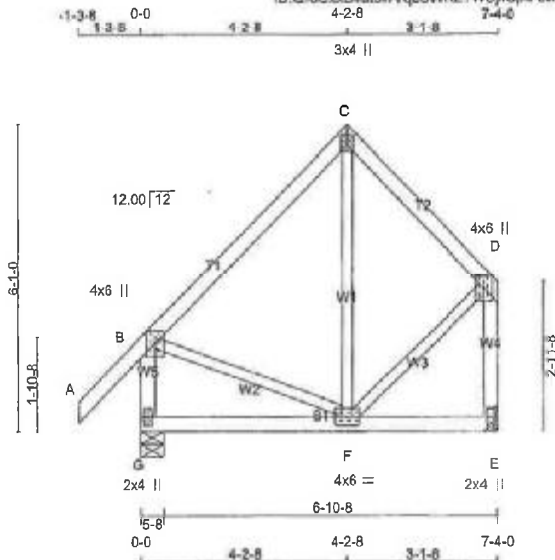
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|          |            |          |     |             |          |
|----------|------------|----------|-----|-------------|----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.   | DRWG NO. |
| 304777   | H37        | 1        |     | TRUSS DESC. | JT 38514 |

Alpa Roof Truss, Maple

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Scale = 1/32

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

ALL WEBS 2x3 DRY No.2 SPF

DRY: SEASONED LUMBER.

| PLATE TYPE | PLATES  | W    | LEN | Y   | X         |
|------------|---------|------|-----|-----|-----------|
| B          | TMVW+p  | MT20 | 4.0 | 6.0 | 2.75 2.00 |
| C          | TTVW+p  | MT20 | 3.0 | 4.0 | Edge      |
| D          | TMVW+p  | MT20 | 4.0 | 6.0 | 2.75 2.00 |
| E          | BMV1+p  | MT20 | 2.0 | 4.0 |           |
| F          | BMVWW+t | MT20 | 4.0 | 6.0 |           |
| G          | BMV1+p  | MT20 | 2.0 | 4.0 |           |

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

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

| FACTORED       | MAXIMUM FACTORED | INPUT  | REQD  |
|----------------|------------------|--------|-------|
| GROSS REACTION | GROSS REACTION   | BRG    | BRG   |
| JT VERT        | DOWN             | UPLIFT | IN-SX |
| G 599 0        | 599 0            | 0      | 5-8   |
| E 453 0        | 453 0            | 0      | 1-8   |

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

#### UNFACTORED REACTIONS

| 1ST CASE | MAX      | MIN  | COMPONENT REACTIONS |
|----------|----------|------|---------------------|
| JT       | COMBINED | SNOW | LIVE                |
| G 413    | 329/0    | 0/0  | 0/0                 |
| E 314    | 238/0    | 0/0  | 0/0                 |

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

#### BRACING

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

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

#### LOADING

TOTAL LOAD CASES: (4)

| CHORDS        |        |            |                 | WEBS          |       |                 |
|---------------|--------|------------|-----------------|---------------|-------|-----------------|
| MAX. FACTORED |        | FACTORED   |                 | MAX. FACTORED |       |                 |
| MEMB.         | FORCE  | VERT. LOAD | MAX             | MEMB.         | FORCE | MAX             |
|               | (LBS)  | (PLF)      | CS1 (LC)        |               | (LBS) | CS1 (LC)        |
| FR-TO         |        | FROM       | TO              | FR-TO         |       |                 |
| A-B           | 0/52   | -104.9     | -104.9 0.15 (1) | 10.00         | F-C   | -92/48 0.05 (1) |
| B-C           | -208/0 | -104.9     | -104.9 0.24 (1) | 6.25          | B-F   | 0/153 0.04 (1)  |
| C-D           | -208/0 | -104.9     | -104.9 0.13 (1) | 6.25          | F-D   | 0/192 0.04 (1)  |
| G-B           | -566/0 | 0.0        | 0.0 0.08 (1)    | 7.81          |       |                 |
| E-D           | -434/0 | 0.0        | 0.0 0.07 (1)    | 7.81          |       |                 |
| G-F           | 0/0    | -18.5      | -18.5 0.08 (4)  | 10.00         |       |                 |
| F-E           | 0/0    | -18.5      | -18.5 0.08 (4)  | 10.00         |       |                 |

NOTE: Lateral brace(s) shown shall be 1x4 for Part 9 design as per OBC 9.23.13.11, and no less than 2x4 for Part 4 design.



#### DESIGN CRITERIA

SPECIFIED LOADS:  
TOP CH. LL = 32.5 PSF  
DL = 3.0 PSF  
BOT CH. LL = 0.0 PSF  
DL = 7.4 PSF  
TOTAL LOAD = 42.9 PSF

SPACING = 24.0 IN. C/C

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

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

(55 % OF 43.9 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 32.5 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL) = L/360 (0.24")  
CALCULATED VERT. DEFL (LL) = L/999 (0.00")  
ALLOWABLE DEFL (TL) = L/360 (0.24")  
CALCULATED VERT. DEFL (TL) = L/999 (0.01")

CSI: TC=0.24/1.00 (B-C:1), BC=0.08/1.00 (E-F:4),  
WB=0.05/1.00 (C-F:1), SSI=0.12/1.00 (B-C:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

AUTOSOLVE RIGHT HEEL ONLY

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

NAIL VALUES  
PLATE GRIP(DRY) SHEAR SECTION  
(PSI) (PLI) (PLI)  
MAX MIN MAX MIN MAX MIN  
MT20 618 354 1687 822 2284 1656

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.40 (B) (INPUT = 0.50)  
JSI METAL= 0.10 (G) (INPUT = 1.00)

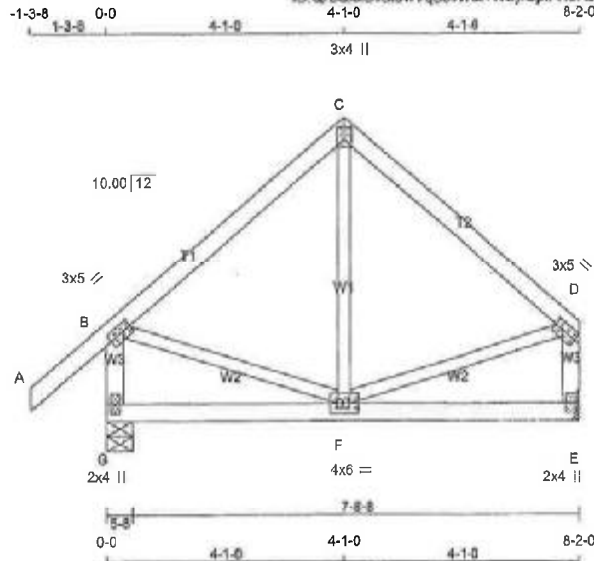
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|                           |                          |                      |                 |                                 |                             |
|---------------------------|--------------------------|----------------------|-----------------|---------------------------------|-----------------------------|
| JOB NAME<br><b>304777</b> | TRUSS NAME<br><b>H42</b> | QUANTITY<br><b>1</b> | PLY<br><b>1</b> | JOB DESC.<br><b>TRUSS DESC.</b> | DRWG NO.<br><b>JT 38514</b> |
|---------------------------|--------------------------|----------------------|-----------------|---------------------------------|-----------------------------|

Alpa Reef Truss, Maple

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Scale = 1/32.0

TOTAL WEIGHT = 2 X 37 = 73 lb

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

| PLATES (Stable in inches) |         |      |                   |
|---------------------------|---------|------|-------------------|
| JT TYPE                   | PLATES  | W    | LEN Y X           |
| B                         | TMVW-I  | MT20 | 3.0 5.0 1.60 1.75 |
| C                         | TTW+p   | MT20 | 3.0 4.0 2.60 1.60 |
| D                         | TMVW-I  | MT20 | 3.0 5.0 1.60 1.75 |
| E                         | BMV1+p  | MT20 | 2.0 4.0           |
| F                         | BMVWW-I | MT20 | 4.0 6.0           |
| G                         | BMV1+p  | MT20 | 2.0 4.0           |

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

| BEARINGS |      | FACTORED GROSS REACTION | MAXIMUM FACTORED GROSS REACTION | INPUT BRG | REORD BRG |
|----------|------|-------------------------|---------------------------------|-----------|-----------|
| JT       | VERT | HORZ                    | DOWN                            | HORZ      | UPLIFT    |
| G        | 549  | 0                       | 549                             | 0         | 0         |
| E        | 504  | 0                       | 504                             | 0         | 0         |

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

#### UNFACTORED REACTIONS

| JT | COMBINED | SNOW    | LIVE  | PERM.LIVE | WIND  | DEAD   | SOIL  |
|----|----------|---------|-------|-----------|-------|--------|-------|
| G  | 448      | 356 / 0 | 0 / 0 | 0 / 0     | 0 / 0 | 93 / 0 | 0 / 0 |
| E  | 350      | 265 / 0 | 0 / 0 | 0 / 0     | 0 / 0 | 85 / 0 | 0 / 0 |

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

#### BRACING

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

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

#### LOADING

TOTAL LOAD CASES: (4)

| CHORDS |                           | WEBS  |                           |
|--------|---------------------------|-------|---------------------------|
| MEMB.  | MAX. FACTORED FORCE (LBS) | MEMB. | MAX. FACTORED FORCE (LBS) |
| FR-TO  |                           | FR-TO |                           |
| A-B    | 0 / 47                    | A-B   | -52 / 66                  |
| B-C    | -294 / 0                  | B-C   | 0 / 237                   |
| C-D    | -294 / 0                  | C-D   | 0 / 237                   |
| G-B    | -620 / 0                  | G-B   | 0 / 237                   |
| E-D    | -475 / 0                  | E-D   | 0 / 237                   |
| G-F    | 0 / 0                     | G-F   | 0 / 0                     |
| F-E    | 0 / 0                     | F-E   | 0 / 0                     |

NOTE: Lateral brace(s) shown shall be 1x4 for Part 9 design as per OBC 9.23.13.11, and no less than 2x4 for Part 4 design.



#### DESIGN CRITERIA

| SPECIFIED LOADS: |            |
|------------------|------------|
| TOP CH. LL       | = 32.5 PSF |
| DL               | = 3.0 PSF  |
| BOT CH. LL       | = 0.0 PSF  |
| DL               | = 7.4 PSF  |
| TOTAL LOAD       | = 42.9 PSF |

SPACING = 24.0 IN./C

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

THIS DESIGN COMPLIES WITH:  
- PART 9 OF OBC 2012, CBC 2012, ABC 2014  
- CSA 085-09  
- TPIC 2011

(55 % OF 43.9 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 32.5 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL) =  $L/360$  (0.27")  
CALCULATED VERT. DEFL.(LL) =  $L/999$  (0.00")  
ALLOWABLE DEFL.(TL) =  $L/360$  (0.27")  
CALCULATED VERT. DEFL.(TL) =  $L/999$  (0.01")

CSI: TC=0.22/1.00 (B-C:1), BC=0.09/1.00 (F-G:4), WB=0.05/1.00 (B-F:1), SS=0.13/1.00 (B-C:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

AUTOSOLVE HEELS OFF

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

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL = 5.0 Deg.

JSI GRIP=0.55 (D) (INPUT = 0.90)  
JSI METAL=0.16 (B) (INPUT = 1.00)

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|                           |                           |                      |                 |                                |                             |
|---------------------------|---------------------------|----------------------|-----------------|--------------------------------|-----------------------------|
| JOB NAME<br><b>304777</b> | TRUSS NAME<br><b>H42G</b> | QUANTITY<br><b>1</b> | PLY<br><b>1</b> | JOB DESC<br><b>TRUSS DESC.</b> | DRWG NO.<br><b>JT 38514</b> |
|---------------------------|---------------------------|----------------------|-----------------|--------------------------------|-----------------------------|

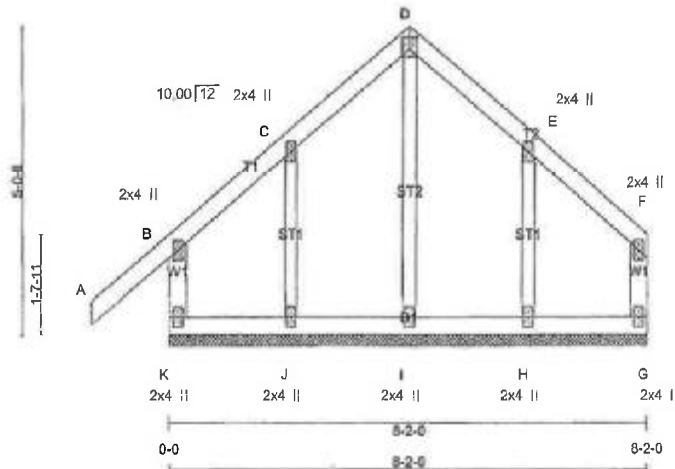
Alpe Roof Truss, Maple

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ID:Qr8CxxBvat3wVquoWRZ7W8ylCpx-II7XPxo\_laEdl\_YQXpDzyLIT5BUW/sfMCCxjwyEzgV

-1-3-8 0-0 4-1-0 4-1-0 8-2-0  
3x4 ||

Scale = 1:32.6



TOTAL WEIGHT = 35 lb

#### LUMBER

##### N.L.G.A. RULES

| CHORDS               | SIZE | LUMBER | DESCR. |
|----------------------|------|--------|--------|
| K - B                | 2x4  | DRY    | No.2   |
| A - D                | 2x4  | DRY    | No.2   |
| D - F                | 2x4  | DRY    | No.2   |
| G - F                | 2x4  | DRY    | No.2   |
| K - G                | 2x4  | DRY    | No.2   |
| ALL WEBS             | 2x3  | DRY    | No.2   |
| ALL GABLE WEBS       | 2x3  | DRY    | No.2   |
| DRY: SEASONED LUMBER |      |        |        |

GABLE STUDS SPACED AT 2-0-0 OC.

#### PLATES (Units in inches)

| JT TYPE | PLATES | W    | LEN | Y   | X         |
|---------|--------|------|-----|-----|-----------|
| B       | TMV+p  | MT20 | 2.0 | 4.0 |           |
| C       | TMW+w  | MT20 | 2.0 | 4.0 |           |
| D       | TTW+p  | MT20 | 3.0 | 4.0 | 2.50 1.50 |
| E       | TMW+w  | MT20 | 2.0 | 4.0 |           |
| F       | TMV+p  | MT20 | 2.0 | 4.0 |           |
| G       | BMV1+p | MT20 | 2.0 | 4.0 |           |
| H       | BMV1+w | MT20 | 2.0 | 4.0 |           |
| K       | BMV1+p | MT20 | 2.0 | 4.0 |           |

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

##### BEARINGS

THIS TRUSS DESIGNED FOR CONTINUOUS BEARINGS.

THIS TRUSS REQUIRES RIGID SHEATHING ON EXPOSED FACE.

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

##### BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 8.25 FT.

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

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

##### LOADING

TOTAL LOAD CASES: (4)

| CHORDS |                           |                           |                 | WEBS                 |       |                           |              |
|--------|---------------------------|---------------------------|-----------------|----------------------|-------|---------------------------|--------------|
| MEMB.  | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX LC1 (LC)    | MAX. UNBRACED LENGTH | MEMB. | MAX. FACTORED FORCE (LBS) | MAX LC1 (LC) |
| FR-TO  |                           | FROM TO                   |                 |                      | FR-TO |                           |              |
| K-B    | -272 / 0                  | 0.0                       | 0.0 0.03 (1)    | 7.81                 | I-D   | -188 / 0                  | 0.07 (1)     |
| A-B    | 0 / 47                    | -104.9                    | -104.9 0.14 (1) | 10.00                | J-C   | -208 / 0                  | 0.04 (1)     |
| B-C    | -34 / 0                   | -104.9                    | -104.9 0.05 (1) | 6.25                 | H-E   | -215 / 0                  | 0.04 (1)     |
| C-D    | -25 / 0                   | -104.9                    | -104.9 0.05 (1) | 6.25                 |       |                           |              |
| D-E    | -28 / 0                   | -104.9                    | -104.9 0.05 (1) | 6.25                 |       |                           |              |
| E-F    | -30 / 0                   | -104.9                    | -104.9 0.05 (1) | 6.25                 |       |                           |              |
| G-F    | -120 / 0                  | 0.0                       | 0.0 0.03 (1)    | 7.81                 |       |                           |              |
| K-J    | 0 / 26                    | -18.5                     | -18.5 0.02 (1)  | 10.00                |       |                           |              |
| J-I    | 0 / 20                    | -18.5                     | -18.5 0.02 (4)  | 10.00                |       |                           |              |
| I-H    | 0 / 20                    | -18.5                     | -18.5 0.02 (4)  | 10.00                |       |                           |              |
| H-G    | 0 / 26                    | -18.5                     | -18.5 0.02 (4)  | 10.00                |       |                           |              |

#### DESIGN CRITERIA

##### SPECIFIED LOADS:

|            |           |     |
|------------|-----------|-----|
| TOP CH.    | LL = 32.5 | PSF |
| DL = 3.0   | PSF       |     |
| BOT CH.    | LL = 0.0  | PSF |
| DL = 7.4   | PSF       |     |
| TOTAL LOAD | = 42.9    | PSF |

SPACING = 24.0 IN. OC

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

THIS DESIGN COMPLIES WITH:

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

##### DESIGN ASSUMPTIONS

- OVERHANG NOT TO BE ALTERED OR CUT OFF.

(55 % OF 43.9 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 32.5 P.S.F. SPECIFIED ROOF LIVE LOAD

CSI: TC=0.14/1.00 (A-B:1), BC=0.02/1.00 (J-K:1), WB=0.07/1.00 (D-I:1), SSI=0.09/1.00 (A-B:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

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

##### NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP = 0.25 (D) (INPUT = 0.90)  
JSI METAL = 0.08 (F) (INPUT = 1.00)

NOTE: Lateral brace(s) shown shall be 1x4 for Part 9 design as per OBC 9.23.13.11, and no less than 2x4 for Part 4 design.

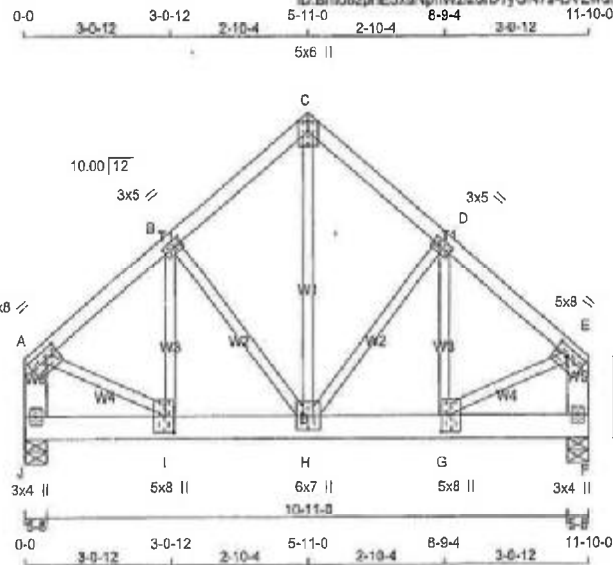


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|                           |                          |                      |                 |                                 |                             |
|---------------------------|--------------------------|----------------------|-----------------|---------------------------------|-----------------------------|
| JOB NAME<br><b>304777</b> | TRUSS NAME<br><b>H43</b> | QUANTITY<br><b>2</b> | PLY<br><b>2</b> | JOB DESC.<br><b>TRUSS DESC.</b> | DRWG NO.<br><b>JT 38514</b> |
|---------------------------|--------------------------|----------------------|-----------------|---------------------------------|-----------------------------|

Also Roof Truss, Maple

Version 8.210.6 Jun 13 2018 Mitek Industries, Inc. Tue Nov 27 14:07:11 2018 Page 1  
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Scale = 1/4" = 1'-0"

TOTAL WEIGHT = 2 X 65 = 131 LB

| LUMBER   | CHORDS | SIZE | LUMBER | DESCR |
|----------|--------|------|--------|-------|
| A - C    | 2x4    | DRY  | No.2   | SPF   |
| C - E    | 2x4    | DRY  | No.2   | SPF   |
| J - A    | 2x6    | DRY  | No.2   | SPF   |
| F - E    | 2x6    | DRY  | No.2   | SPF   |
| J - F    | 2x6    | DRY  | No.2   | SPF   |
| A-L WEBS | 2x3    | DRY  | No.2   | SPF   |

EXCEPT

DRY: SEASONED LUMBER.

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

| CHORDS #/ROWS                            | SURFACE SPACING (IN) | LOAD (PLF) |
|------------------------------------------|----------------------|------------|
| TOP CHORDS : (0.122"x3") SPIRAL NAILS    |                      |            |
| A - C                                    | 1                    | 12         |
| C - E                                    | 1                    | 12         |
| J - A                                    | 2                    | 12         |
| F - E                                    | 2                    | 12         |
| BOTTOM CHORDS : (0.122"x3") SPIRAL NAILS |                      |            |
| J - F                                    | 2                    | 6          |
| 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 | 8.0 | 2.00 | 3.25 |
| B                           | TMVW-t  | MT20   | 3.0 | 5.0 | 1.50 | 1.75 |
| C                           | TTW*P   | MT20   | 5.0 | 6.0 | Edge |      |

NOTE: Lateral brace(s) shown shall be 1x4 for Part 9 design as per OBC 9.23.13.11, and no less than 2x4 for Part 4 design.

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

| BEARINGS | FACTORED       | MAXIMUM FACTORED | INPUT | RECORD |
|----------|----------------|------------------|-------|--------|
|          | GROSS REACTION | GROSS REACTION   | BRG   | BRG    |
| JT       | VERT           | HORZ             | DOWN  | HORZ   |
| J        | 6010           | 0                | 6010  | 0      |
| F        | 6010           | 0                | 6010  | 0      |

#### UNFACTORED REACTIONS

| 1ST CASE - MAX. MIN. COMPONENT REACTIONS |          |        |      |            |      |        |      |
|------------------------------------------|----------|--------|------|------------|------|--------|------|
| JT                                       | COMBINED | SNOW   | LIVE | PERM. LIVE | WIND | DEAD   | SOIL |
| J                                        | 4175     | 3163/0 | 0/0  | 0/0        | 0/0  | 1013/0 | 0/0  |
| F                                        | 4175     | 3163/0 | 0/0  | 0/0        | 0/0  | 1013/0 | 0/0  |

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

#### BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.24 FT.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

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

#### LOADING

TOTAL LOAD CASES: (4)

| CHORDS        |             |                  |                  | WEBS          |             |              |          |
|---------------|-------------|------------------|------------------|---------------|-------------|--------------|----------|
| MAX. FACTORED |             | FACTORED         |                  | MAX. FACTORED |             |              |          |
| MEMB.         | FORCE (LBS) | VERT. LOAD (PLF) | LC1 MAX CSI (LC) | MEMB.         | FORCE (LBS) | MAX CSI (LC) |          |
| FR-TO         |             | FROM TO          |                  | LENGTH        | FR-TO       |              |          |
| A-B           | -4900 / 0   | -104.9 -104.9    | 0.17 (1)         | 4.24          | H-C         | 0 / 4689     | 0.58 (1) |
| B-C           | -3886 / 0   | -104.9 -104.9    | 0.12 (1)         | 4.71          | H-D         | -1309 / 0    | 0.24 (1) |
| C-D           | -3886 / 0   | -104.9 -104.9    | 0.12 (1)         | 4.71          | G-D         | 0 / 1370     | 0.24 (1) |
| D-E           | -4900 / 0   | -104.9 -104.9    | 0.17 (1)         | 4.24          | B-H         | -1309 / 0    | 0.24 (1) |
| J-A           | -4793 / 0   | 0.0              | 0.0 0.18 (1)     | 6.61          | I-B         | 0 / 1370     | 0.17 (1) |
| F-E           | -4793 / 0   | 0.0              | 0.0 0.18 (1)     | 6.61          | A-I         | 0 / 4058     | 0.50 (1) |
|               |             |                  |                  |               | G-E         | 0 / 4058     | 0.50 (1) |
| J-I           | 0 / 0       | -810.8           | -810.8 0.30 (1)  | 10.00         |             |              |          |
| I-II          | 0 / 3770    | -810.8           | -810.8 0.45 (1)  | 10.00         |             |              |          |
| H-G           | 0 / 3770    | -810.8           | -810.8 0.45 (1)  | 10.00         |             |              |          |
| G-F           | 0 / 0       | -810.8           | -810.8 0.30 (1)  | 10.00         |             |              |          |

#### DESIGN CRITERIA

SPECIFIED LOADS:  
TOP CH. LL = 32.5 PSF  
DL = 3.0 PSF  
BOT CH. LL = 0.0 PSF  
DL = 7.4 PSF  
TOTAL LOAD = 42.9 PSF

SPACING = 24.0 IN. C/C

GIRDER TYPE: CSW Girder  
START DISTANCE = 0-0  
START SPAN CARRIED = 30-11-0  
END DISTANCE = 11-10-0  
END SPAN CARRIED = 30-11-0  
END WALL WIDTH = 0-0  
APPLIED TO FRONT SIDE OF BOTTOM CHORD.  
- ADDTL LOADS BASED ON 55% OF GSL.

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

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

(55% OF 43.9 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 32.5 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL (LL) = L/360 (0.39")  
CALCULATED VERT. DEFL (LL) = L/959 (0.04")  
ALLOWABLE DEFL (TL) = L/960 (0.39")  
CALCULATED VERT. DEFL (TL) = L/959 (0.07")

CSI: TC=0.18/1.00 (A-I:1), BC=0.45/1.08 (G-H:1), WB=0.59/1.00 (C-H:1), SSI=0.52/1.00 (F-G:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

AUTOSOLVEHEELS OFF

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

NAIL VALUES  
PLATE GRIP(DRY) SHEAR SECTION (PSI) (PLI)  
MAX MIN MAX MIN MAX MIN  
MT20 618 354 1667 798 1987 1656

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (E) (INPUT = 0.90)  
JSI METAL= 0.68 (G) (INPUT = 1.00)



A18113070

CONTINUED ON PAGE 2

|          |            |          |     |             |          |
|----------|------------|----------|-----|-------------|----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | FOR DESC.   | DRWG NO. |
| 304777   | H43        |          | 2   | TRUSS DESC. | JT 38514 |

Alma Roof Truss, Maple

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PLATES (table is in inches)

| JT | TYPE   | PLATES | W   | LEN | Y    | X    |
|----|--------|--------|-----|-----|------|------|
| D  | TMWW-t | MT20   | 3.0 | 5.0 | 1.50 | 1.75 |
| E  | TMVV-t | MT20   | 5.0 | 8.0 | 2.00 | 3.25 |
| F  | BMV1+p | MT20   | 3.0 | 4.0 |      |      |
| G  | BMWW-t | MT20   | 5.0 | 3.0 | 4.00 | 2.00 |
| H  | BMWW-t | MT20   | 6.0 | 7.0 |      |      |
| I  | BMWW-t | MT20   | 5.0 | 8.0 | 4.00 | 2.00 |
| J  | BMV1+p | MT20   | 3.0 | 4.0 |      |      |

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

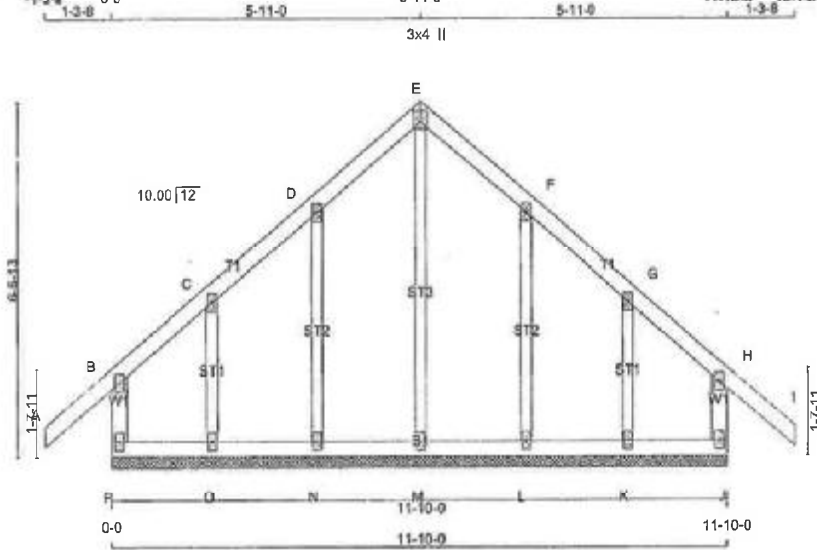
NOTE: Lateral brace(s) shown shall be 1x4 for Part 9 design as per OBC 9.23.13.11, and no less than 2x4 for Part 4 design.



A18113070(2)

|                           |                           |                      |                 |                                 |                             |
|---------------------------|---------------------------|----------------------|-----------------|---------------------------------|-----------------------------|
| JOB NAME<br><b>304777</b> | TRUSS NAME<br><b>H43G</b> | QUANTITY<br><b>1</b> | PLY<br><b>1</b> | JOB DESC.<br><b>TRUSS DESC.</b> | DRWG NO.<br><b>JT 38514</b> |
|---------------------------|---------------------------|----------------------|-----------------|---------------------------------|-----------------------------|

Alps Roof Truss, Single  
 ID: 8mo8zphE5xuNphWtZbrD7yGN7s-hh7lqdl2WMej37xYrh2NR2zv14\_IVypW5eopyEzgt  
 Version 6.210.8 Jun 15 2018 48764 Industries, Inc. Tue Nov 27 14:07:12 2018 Page 1  
 1-3-8 0-0 5-11-0 5-11-0 5-11-0 5-11-0 1-3-8  
 3x4 II  
 Scale = 1/32



**LUMBER**  
 N.L.G.A. RULES  
 CHORDS SIZE LUMBER  
 P-B 2x4 DRY No.2  
 A-E 2x4 DRY No.2  
 E-I 2x4 DRY No.2  
 J-H 2x4 DRY No.2  
 P-J 2x4 DRY No.2  
 ALL WEBS 2x3 DRY No.2  
 ALL GABLE WEBS 2x3 DRY No.2  
 DRY-SEASONED LUMBER.  
 GABLE STUDS SPACED AT 2'-0" OC

**PLATES (table is in inches)**

| JT TYPE   | PLATES | W   | LEN | Y    | X    |
|-----------|--------|-----|-----|------|------|
| B-TMV+p   | MT20   | 2.0 | 4.0 |      |      |
| C-D-F-G   |        |     |     |      |      |
| E-TTW+w   | MT20   | 2.0 | 4.0 |      |      |
| H-TTW+p   | MT20   | 3.0 | 4.0 | 2.50 | 1.50 |
| J-BMV1+p  | MT20   | 2.0 | 4.0 |      |      |
| K-L-M-N-O |        |     |     |      |      |
| K-BMW1+w  | MT20   | 2.0 | 4.0 |      |      |
| P-BMV1+p  | MT20   | 2.0 | 4.0 |      |      |

**DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER**  
**BRACING**  
 THIS TRUSS DESIGNED FOR CONTINUOUS BEARINGS.  
 THIS TRUSS REQUIRES RIGID SHEATHING ON EXPOSED FACE.  
 BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S)  
**BRACING**  
 TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 10.00 FT.  
 MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT. OR RIGID CEILING DIRECTLY APPLIED.  
 ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

| LOADING               |                           |                           |                  |                    |       |                           |               |  |  |
|-----------------------|---------------------------|---------------------------|------------------|--------------------|-------|---------------------------|---------------|--|--|
| TOTAL LOAD CASES: (4) |                           |                           |                  |                    |       |                           |               |  |  |
| CHORDS                |                           |                           |                  |                    | WEBS  |                           |               |  |  |
| MEMB.                 | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | LC1 MAX CSI (LC) | MAX. UNBRAC LENGTH | MEMB. | MAX. FACTORED FORCE (LBS) | MAX. CSI (LC) |  |  |
| FR-TO                 |                           | FROM TO                   |                  |                    | FR-TO |                           |               |  |  |
| P-B                   | -250 / 0                  | 0.0                       | 0.0 0.04 (1)     | 7.81               | M-E   | -251 / 0                  | 0.18 (1)      |  |  |
| A-B                   | 0 / 47                    | -104.9                    | -104.9 0.14 (1)  | 10.00              | N-D   | -224 / 0                  | 0.08 (1)      |  |  |
| B-C                   | -2 / 9                    | -104.9                    | -104.9 0.09 (1)  | 10.00              | O-C   | -151 / 0                  | 0.03 (1)      |  |  |
| C-D                   | 0 / 38                    | -104.9                    | -104.9 0.06 (1)  | 10.00              | L-F   | -224 / 0                  | 0.08 (1)      |  |  |
| D-E                   | 0 / 35                    | -104.9                    | -104.9 0.06 (1)  | 10.00              | K-G   | -151 / 0                  | 0.03 (1)      |  |  |
| E-F                   | 0 / 35                    | -104.9                    | -104.9 0.06 (1)  | 10.00              |       |                           |               |  |  |
| F-G                   | 0 / 38                    | -104.9                    | -104.9 0.06 (1)  | 10.00              |       |                           |               |  |  |
| G-H                   | -2 / 9                    | -104.9                    | -104.9 0.09 (1)  | 10.00              |       |                           |               |  |  |
| H-I                   | 0 / 47                    | -104.9                    | -104.9 0.14 (1)  | 10.00              |       |                           |               |  |  |
| J-H                   | -250 / 0                  | 0.0                       | 0.0 0.04 (1)     | 7.81               |       |                           |               |  |  |
|                       |                           |                           |                  |                    |       |                           |               |  |  |
| P-O                   | -19 / 0                   | -18.5                     | -18.5 0.02 (4)   | 6.25               |       |                           |               |  |  |
| O-N                   | -25 / 0                   | -18.5                     | -18.5 0.02 (4)   | 6.25               |       |                           |               |  |  |
| N-M                   | -29 / 0                   | -18.5                     | -18.5 0.01 (4)   | 6.25               |       |                           |               |  |  |
| M-L                   | -29 / 0                   | -18.5                     | -18.5 0.01 (4)   | 6.25               |       |                           |               |  |  |
| L-K                   | -25 / 0                   | -18.5                     | -18.5 0.02 (4)   | 6.25               |       |                           |               |  |  |
| K-J                   | -19 / 0                   | -18.5                     | -18.5 0.02 (4)   | 6.25               |       |                           |               |  |  |

**DESIGN CRITERIA**  
 SPECIFIED LOADS:  
 TOP CH. LL = 32.5 PSF  
 DL = 3.0 PSF  
 BOT CH. LL = 0.0 PSF  
 DL = 7.4 PSF  
 TOTAL LOAD = 42.9 PSF  
**SPACING = 24.0 IN. C/C**  
 THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBC 2010  
 THIS DESIGN COMPLIES WITH:  
 - PART 9 OF OBC 2012, CBC 2012, ABC 2014  
 - CSA 086-09  
 - TPIC 2011  
**DESIGN ASSUMPTIONS**  
 - OVERHANG NOT TO BE ALTERED OR CUT OFF.  
 (55% OF 43.9 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 32.5 P.S.F. SPECIFIED ROOF LIVE LOAD  
 CSI: TC=0.14/1.00 (H-I:1), BC=0.02/1.00 (K-L:4), WB=0.18/1.00 (E-M:1), SS=0.09/1.00 (J-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 = 0.50  
 TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT.

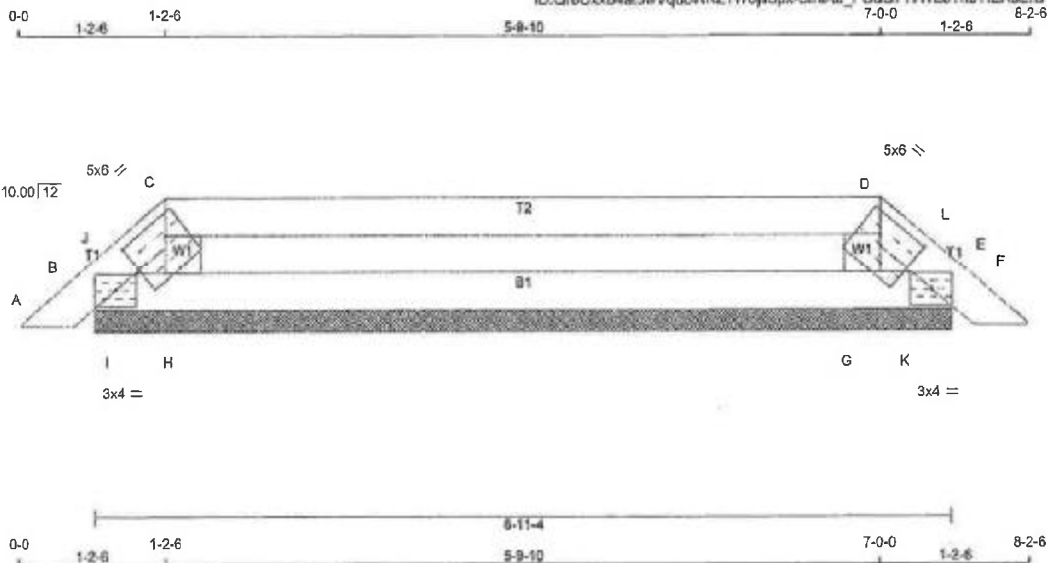
NOTE: Lateral brace(s) shown shall be 1x4 for Part 3 design as per OBC 9.23.13.11, and no less than 2x4 for Part 4 design.



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|          |            |          |     |             |          |
|----------|------------|----------|-----|-------------|----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.   | DRWG NO. |
| 304777   | P30A       |          | 1   | TRUSS DESC. | JT 38514 |

Alpine Roof Truss, Maple Version 8.210 8 Jun 13 2018 M/Yak Industries, Inc. Tue Nov 27 14:07:54 2018 Page 1  
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| LUMBER                | SIZE | LUMBER | DESCR |
|-----------------------|------|--------|-------|
| CHORDS                |      |        |       |
| A - C                 | 2x4  | DRY    | No.2  |
| C - D                 | 2x4  | DRY    | No.2  |
| D - F                 | 2x4  | DRY    | No.2  |
| B - E                 | 2x4  | DRY    | No.2  |
| ALL WEBS              | 2x4  | DRY    | No.2  |
| DRY: SEASONED LUMBER. |      |        |       |

| PLATES (Plate is in inches) |        |     |     |      |      |
|-----------------------------|--------|-----|-----|------|------|
| JT TYPE                     | PLATES | W   | LEN | Y    | X    |
| B TMB1-I                    | MT20   | 3.0 | 4.0 | 1.50 | 2.00 |
| C D, G, H                   |        |     |     |      |      |
| C                           |        |     |     |      |      |
| C ITBW1-I                   | MT20   | 5.0 | 6.0 | 1.75 | 4.00 |
| D ITBW1-I                   | MT20   | 5.0 | 6.0 | 1.75 | 4.00 |
| E TMB1-I                    | MT20   | 3.0 | 4.0 | 1.50 | 2.00 |

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

| JOINT | FACTORED GROSS REACTION |      | MAXIMUM FACTORED GROSS REACTION |      | INPUT BRG | REQD BRG |     |
|-------|-------------------------|------|---------------------------------|------|-----------|----------|-----|
|       | VERT                    | HORZ | DOWN                            | HORZ | IN-SX     | IN-SX    |     |
| JT    |                         |      |                                 |      |           |          |     |
| B     | 115                     | 0    | 115                             | 0    | -48       | 6-11-4   | 6-4 |
| E     | 115                     | 0    | 115                             | 0    | -48       | 6-11-4   | 6-4 |
| H     | 368                     | 0    | 368                             | 0    | 0         | 6-11-4   | 6-4 |
| G     | 368                     | 0    | 368                             | 0    | 0         | 6-11-4   | 6-4 |

PROVIDE ANCHORAGE AT BEARING JOINTS FOR 100 LBS FACTORED UPLIFT  
PROVIDE ANCHORAGE AT BEARING JOINTS FOR 100 LBS FACTORED UPLIFT

| UNFACTORED REACTIONS | 1ST CASE | 2ND CASE | 3RD CASE | 4TH CASE   | 5TH CASE | 6TH CASE | 7TH CASE | 8TH CASE | 9TH CASE | 10TH CASE |
|----------------------|----------|----------|----------|------------|----------|----------|----------|----------|----------|-----------|
| JT                   | COMBINED | SNOW     | WIND     | PERM. WIND | DEAD     | SOIL     |          |          |          |           |
| B                    | 71       | 105/0    | 0/0      | 0/0        | 0/0      | 0/34     | 0/0      |          |          |           |
| E                    | 71       | 105/0    | 0/0      | 0/0        | 0/0      | 0/34     | 0/0      |          |          |           |
| H                    | 264      | 154/0    | 0/0      | 0/0        | 0/0      | 110/0    | 0/0      |          |          |           |
| G                    | 264      | 154/0    | 0/0      | 0/0        | 0/0      | 110/0    | 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

| CHORDS | MEMB.  | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | LC1 MAX CS (LC) | UNBRACED LENGTH | FR-TO | WEBS   | MEMB.    | MAX. FACTORED FORCE (LBS) | MAX CS (LC) |
|--------|--------|---------------------------|---------------------------|-----------------|-----------------|-------|--------|----------|---------------------------|-------------|
| A-B    | 0/18   | -104.9                    | -104.9                    | 0.02 (1)        | 10.00           | H-C   | -225/8 | 0.02 (1) |                           |             |
| B-J    | -67/38 | -104.9                    | -104.9                    | 0.03 (4)        | 6.25            | G-D   | -225/8 | 0.02 (1) |                           |             |
| J-C    | -108/0 | -104.9                    | -104.9                    | 0.03 (4)        | 6.25            | I-J   | -90/0  | 0.00 (1) |                           |             |
| C-D    | 0/4    | -104.9                    | -104.9                    | 0.00 (1)        | 10.00           | K-L   | -90/0  | 0.00 (1) |                           |             |
| D-L    | -108/0 | -104.9                    | -104.9                    | 0.03 (4)        | 6.25            |       |        |          |                           |             |
| L-E    | -67/38 | -104.9                    | -104.9                    | 0.03 (4)        | 6.25            |       |        |          |                           |             |
| E-F    | 0/18   | -104.9                    | -104.9                    | 0.02 (1)        | 10.00           |       |        |          |                           |             |
| F-I    | -3/53  | -18.5                     | -18.5                     | 0.01 (1)        | 10.00           |       |        |          |                           |             |
| I-H    | -3/53  | -18.5                     | -18.5                     | 0.10 (4)        | 10.00           |       |        |          |                           |             |
| H-G    | -4/0   | -18.5                     | -18.5                     | 0.10 (4)        | 10.00           |       |        |          |                           |             |
| G-K    | -3/53  | -18.5                     | -18.5                     | 0.10 (4)        | 10.00           |       |        |          |                           |             |
| K-E    | -3/53  | -18.5                     | -18.5                     | 0.01 (1)        | 10.00           |       |        |          |                           |             |

NOTE: Lateral brace(s) shown shall be 1x4 for Part 9 design as per OBC 9.23.13.11, and no less than 2x4 for Part 4 design.



#### DESIGN CRITERIA

SPECIFIED LOADS:  
TOP CH. LL = 32.5 PSF  
DL = 3.0 PSF  
BUT CH. LL = 0.0 PSF  
DL = 7.4 PSF  
TOTAL LOAD = 42.9 PSF

SPACING = 24.0 IN. C/C

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

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

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

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

(55 % OF 43.9 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 32.5 P.S.F. SPECIFIED ROOF LIVE LOAD

CSI: TC=0.60/1.00 (C-D:1), BC=0.10/1.00 (G-H:4), WB=0.02/1.00 (C-H:1), SSI=0.24/1.00 (C-D:1)

DOL LUMBER=1.00 NAIL=1.00 L.S BEND=1.10 COMP=1.10 SHEAR=1.10 TENS=1.10

COMPANION LIVE LOAD FACTOR = 0.50

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

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

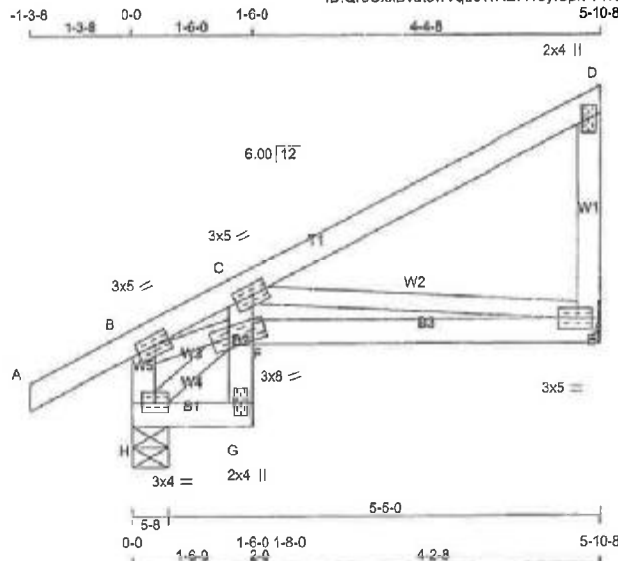
PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.34 (C) (INPUT = 0.90)  
JSI METAL= 0.16 (C) (INPUT = 1.00)

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|                                                                                      |                          |                      |                 |                                 |                             |
|--------------------------------------------------------------------------------------|--------------------------|----------------------|-----------------|---------------------------------|-----------------------------|
| JOB NAME<br><b>304778</b>                                                            | TRUSS NAME<br><b>H16</b> | QUANTITY<br><b>1</b> | PLY<br><b>1</b> | JOB DESC.<br><b>TRUSS DESC.</b> | DRWG NO.<br><b>JT 38514</b> |
| Version 8.2/16 15 Jun 15 2016 Mital Industries, Inc. Tue Nov 27 15:31:19 2016 Page 1 |                          |                      |                 |                                 |                             |



Scale: 1/2"=1'

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

| PLATES (Width in inches) |        |      |     |     |           |
|--------------------------|--------|------|-----|-----|-----------|
| JT TYPE                  | PLATES | W    | LEN | Y   | X         |
| B                        | TMVW-1 | MT20 | 3.0 | 5.0 | 1.50 2.25 |
| C                        | TMVW-1 | MT20 | 3.0 | 5.0 | 1.50 2.25 |
| D                        | TMV+p  | MT20 | 2.0 | 4.0 |           |
| E                        | BMVW-1 | MT20 | 3.0 | 5.0 | 1.50 2.25 |
| F                        | BMVW-1 | MT20 | 3.0 | 5.0 | 1.50 2.25 |
| G                        | BMV+p  | MT20 | 2.0 | 4.0 |           |
| H                        | BMVW-1 | MT20 | 3.0 | 4.0 |           |

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

| BEARINGS |      | FACTORED       | MAXIMUM FACTORED | INPUT | REQ'D |
|----------|------|----------------|------------------|-------|-------|
| JT       | VERT | GROSS REACTION | GROSS REACTION   | BRG   | BRG   |
| H        | 521  | 0              | 521              | 0     | 5-8   |
| E        | 346  | 0              | 346              | 0     | 1-8   |

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

| UNFACTORED REACTIONS |          | 1ST CASE | MAX./MIN. COMPONENT REACTIONS |
|----------------------|----------|----------|-------------------------------|
| JT                   | COMBINED | SNOW     | LIVE                          |
| H                    | 359      | 289 / 0  | 0 / 0                         |
| E                    | 241      | 181 / 0  | 0 / 0                         |

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

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

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

**LOADING**  
TOTAL LOAD CASES: (4)

| CHORDS |             | MAX. FACTORED | FACTORED   | WEBS  | MAX. FACTORED |
|--------|-------------|---------------|------------|-------|---------------|
| MEMB.  | FORCE (LBS) | VERT. LOAD    | VERT. LOAD | MEMB. | FORCE (LBS)   |
| FR-TO  |             | FROM          | TO         | FR-TO |               |
| H-B    | -446 / 0    | 0.0           | 0.0        | H-F   | -101 / 0      |
| A-B    | 0 / 32      | -104.9        | -104.9     | B-F   | 0 / 737       |
| B-C    | -809 / 0    | -104.9        | -104.9     | C-E   | -924 / 0      |
| C-D    | -11 / 0     | -104.9        | -104.9     |       |               |
| E-D    | -213 / 0    | 0.0           | 0.0        |       |               |
| H-G    | 0 / 79      | -18.5         | -18.5      |       |               |
| G-F    | 0 / 14      | 0.0           | 0.0        |       |               |
| F-C    | 0 / 130     | 0.0           | 0.0        |       |               |
| F-E    | 0 / 918     | -18.5         | -18.5      |       |               |

NOTE: Lateral brace(s) shown shall be 1x4 for Part 9 design as per OBC 9.23.13.11, and no less than 2x4 for Part 4 design.



#### DESIGN CRITERIA

**SPECIFIED LOADS:**  
TOP CH. LL = 32.5 PSF  
DL = 3.0 PSF  
BOT CH. LL = 0.0 PSF  
DL = 7.4 PSF  
TOTAL LOAD = 42.9 PSF

**SPACING = 24.0 IN. C/C**

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

THIS DESIGN COMPLIES WITH:  
- PART 9 OF OBC 2012, CBC 2012, ABC 2014  
- CSA 089-09  
- TPIC 2011

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

(55% OF 41.9 P.S.F. C.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 32.5 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL. (L) =  $L/360$  (0.20")  
CALCULATED VERT. DEFL. (LL) =  $L/999$  (0.03")  
ALLOWABLE DEFL. (TL) =  $L/360$  (0.20")  
CALCULATED VERT. DEFL. (TL) =  $L/999$  (0.05")

CSI: TC=0.29/1.00 (C-D:1), BC=0.21/1.00 (E-F:1),  
WB=0.30/1.00 (C-E:1), SS=0.18/1.00 (C-D:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

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

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (E) (INPUT = 0.90)  
JSI METAL= 0.27 (E) (INPUT = 1.00)

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|                          |                          |                      |                 |                                 |                             |
|--------------------------|--------------------------|----------------------|-----------------|---------------------------------|-----------------------------|
| OB NAME<br><b>304778</b> | TRUSS NAME<br><b>H1A</b> | QUANTITY<br><b>1</b> | PLY<br><b>1</b> | JOB DESC.<br><b>TRUSS DESC.</b> | DRWS NO.<br><b>JT 38514</b> |
|--------------------------|--------------------------|----------------------|-----------------|---------------------------------|-----------------------------|

Alpa Roof Truss, Maple

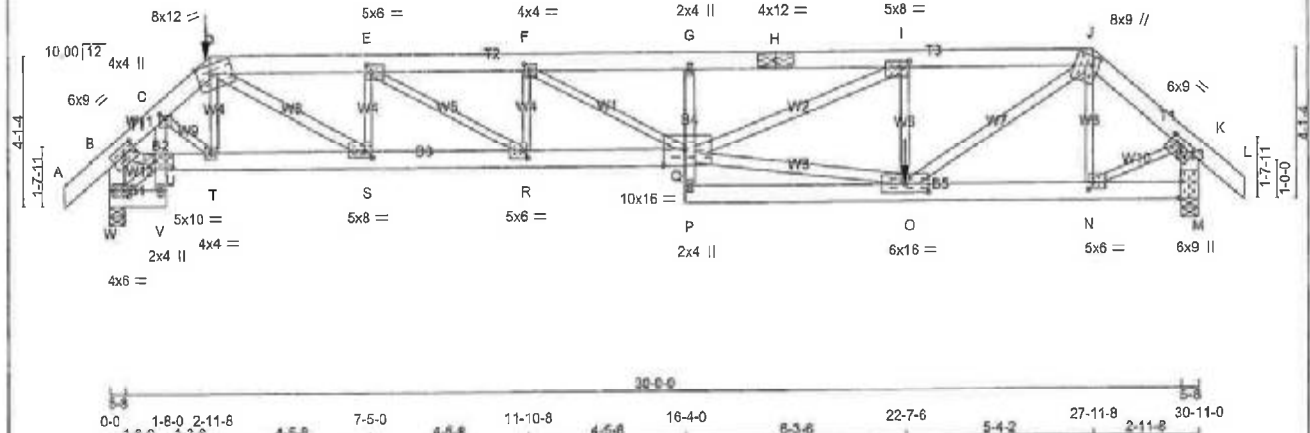
Version 6.210.5 Jun 15 2015 MTEK Industries, Inc. Tue Nov 27 15:31:12 2018 Page 1

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1-3-8 0-0 1-8-0 2-11-8 4-5-8 7-5-0 11-10-8 16-4-0 22-7-6 27-11-8 30-11-0 32-2-6

1-3-8 1-8-0 2-11-8 4-5-8 7-5-0 11-10-8 16-4-0 22-7-6 27-11-8 30-11-0 32-2-6

Scale = 1:54.3



| LUMBER   | N. L. G. A. RULES | CHORDS | SIZE       | LUMBER | DESCR. |
|----------|-------------------|--------|------------|--------|--------|
| A - D    | 2x6               | DRY    | No.2       | SPF    |        |
| D - H    | 2x6               | DRY    | 1650F 1.5E | SPF    |        |
| H - J    | 2x6               | DRY    | 1650F 1.5E | SPF    |        |
| J - L    | 2x6               | DRY    | No.2       | SPF    |        |
| W - B    | 2x6               | DRY    | No.2       | SPF    |        |
| M - K    | 2x6               | DRY    | No.2       | SPF    |        |
| W - V    | 2x6               | DRY    | No.2       | SPF    |        |
| V - C    | 2x4               | DRY    | No.2       | SPF    |        |
| U - Q    | 2x6               | DRY    | 2100F 1.8E | SPF    |        |
| P - G    | 2x4               | DRY    | No.2       | SPF    |        |
| P - M    | 2x6               | DRY    | No.2       | SPF    |        |
| ALL WEBS | 2x3               | DRY    | No.2       | SPF    |        |
| EXCEPT   |                   |        |            |        |        |
| B - U    | 2x4               | DRY    | No.2       | SPF    |        |
| D - S    | 2x4               | DRY    | No.2       | SPF    |        |
| Q - O    | 2x4               | DRY    | 1650F 1.5E | SPF    |        |
| Q - I    | 2x4               | DRY    | No.2       | SPF    |        |
| O - J    | 2x4               | DRY    | No.2       | SPF    |        |

DRY: SEASONED LUMBER.

| PLATE | TYPE   | W    | LEN  | Y    | X         |
|-------|--------|------|------|------|-----------|
| B     | TMVW-t | MT20 | 6.0  | 9.0  | 2.75      |
| C     | TMVW+p | MT20 | 4.0  | 4.0  | 1.00      |
| D     | TTWW-m | MT20 | 8.0  | 12.0 | Edge 4.75 |
| E     | TMVW-t | MT20 | 5.0  | 6.0  | 2.25      |
| F     | TMVW-t | MT20 | 4.0  | 4.0  | 2.00      |
| G     | TMVW+p | MT20 | 2.0  | 4.0  |           |
| H     | TS-t   | MT20 | 4.0  | 12.0 |           |
| I     | TMVW-t | MT20 | 5.0  | 6.0  | 2.00      |
| J     | TMVW+m | MT20 | 8.0  | 9.0  | 3.00      |
| K     | TMVW-t | MT20 | 6.0  | 9.0  | 2.00      |
| M     | BMV1+1 | MT20 | 6.0  | 9.0  | Edge 0.50 |
| N     | BMVW-t | MT20 | 5.0  | 6.0  | 2.25      |
| O     | BMVW-t | MT20 | 6.0  | 16.0 | 2.75      |
| P     | BMVW+p | MT20 | 2.0  | 4.0  |           |
| Q     | BMVW-t | MT20 | 10.0 | 16.0 | 5.25      |
| R     | BMVW-t | MT20 | 5.0  | 6.0  | 2.50      |
| S     | BMVW-t | MT20 | 5.0  | 6.0  | 2.00      |
| T     | BMVW-t | MT20 | 4.0  | 4.0  |           |

NOTE: Lateral brace(s) shown shall be 1x4 for Part 9 design as per CBC 9.23.13.11, and no less than 2x4 for Part 4 design.



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

| JT | FACTORED GROSS REACTION |      | MAXIMUM FACTORED GROSS REACTION |      | INPUT BRG | REQD BRG |
|----|-------------------------|------|---------------------------------|------|-----------|----------|
|    | VERT                    | HORZ | DOWN                            | HORZ |           |          |
| M  | 3730                    | 0    | 3730                            | 0    | 5-8       | 5-8      |
| W  | 3930                    | 0    | 3930                            | 0    | 5-8       | 5-3      |

ALLOW FOR 6.3" OF HORIZONTAL MOVEMENT DUE TO TOTAL LOAD.

| JT | UNFACTORED REACTIONS |          | MAXIMUM COMPONENT REACTIONS |      |       |      |
|----|----------------------|----------|-----------------------------|------|-------|------|
|    | 1ST CASE             | 2ND CASE | SNOW                        | WIND | DEAD  | SOIL |
| M  | 2158                 | 1878     | 8/0                         | 8/0  | 813/0 | 0/0  |
| W  | 2728                 | 2374     | 8/0                         | 8/0  | 856/0 | 0/0  |

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

BRACING  
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 2.44 FT.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.88 FT. OR RIGID CEILING DIRECTLY APPLIED.

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

#### LOADING

TOTAL LOAD CASES: (4)

| MEMB. | MAX. FACTORED<br>FORCE<br>(LBS) | FACTORED            |          | MAX.<br>UNBRAC | MEMB. | MAX. FACTORED  |                 |
|-------|---------------------------------|---------------------|----------|----------------|-------|----------------|-----------------|
|       |                                 | VERT. LOAD<br>(PLF) | CSI (LC) |                |       | FORCE<br>(LBS) | MAX<br>CSI (LC) |
| FR-TO |                                 | FROM TO             | LENGTH   | FR-TO          |       |                |                 |
| A-B   | 0/48                            | -104.9 -104.9       | 0.09 (1) | 10.00          | W-U   | -119/0         | 0.02 (1)        |
| B-C   | -5014/0                         | -104.9 -104.9       | 0.31 (1) | 3.80           | B-U   | 0/3745         | 0.66 (1)        |
| C-D   | -5307/0                         | -104.9 -104.9       | 0.32 (1) | 3.49           | C-T   | 0/411          | 0.10 (1)        |
| D-E   | -8401/0                         | -104.9 -104.9       | 0.31 (1) | 3.35           | T-D   | 0/271          | 0.07 (1)        |
| E-F   | -10884/0                        | -104.9 -104.9       | 0.46 (1) | 2.84           | D-S   | 0/4954         | 0.88 (1)        |
| F-G   | -11696/0                        | -104.9 -104.9       | 0.51 (1) | 2.71           | S-E   | -1932/0        | 0.35 (1)        |
| G-H   | -11541/0                        | -206.6 -206.6       | 0.80 (1) | 2.44           | E-R   | 0/2887         | 0.71 (1)        |
| H-I   | -11541/0                        | -206.6 -206.6       | 0.80 (1) | 2.44           | R-F   | -857/0         | 0.16 (1)        |
| I-J   | -7004/0                         | -104.9 -104.9       | 0.41 (1) | 3.52           | F-Q   | 0/937          | 0.23 (1)        |
| J-K   | -3708/0                         | -104.9 -104.9       | 0.16 (1) | 4.31           | Q-O   | 0/6789         | 0.87 (1)        |
| K-L   | 0/48                            | -104.9 -104.9       | 0.09 (1) | 10.00          | O-I   | 0/4822         | 0.85 (1)        |
| L-M   | -3637/0                         | 0.0 0.0             | 0.28 (1) | 5.42           | I-N   | -2922/0        | 0.70 (1)        |
| M-K   | -3727/0                         | 0.0 0.0             | 0.27 (1) | 5.49           | O-J   | 0/5109         | 0.90 (1)        |
|       |                                 |                     |          |                | N-J   | -809/0         | 0.22 (1)        |
|       |                                 |                     |          |                | N-K   | 0/3013         | 0.75 (1)        |
| W-V   | 0/69                            | -36.4 -36.4         | 0.02 (1) | 10.00          |       |                |                 |
| V-U   | 0/31                            | 0.0 0.0             | 0.15 (1) | 10.00          |       |                |                 |
| U-C   | -435/0                          | 0.0 0.0             | 0.15 (1) | 7.81           |       |                |                 |
| U-T   | 0/3806                          | -36.4 -36.4         | 0.31 (1) | 10.00          |       |                |                 |
| T-S   | 0/4126                          | -138.1 -138.1       | 0.33 (1) | 10.00          |       |                |                 |
| S-R   | 0/8401                          | -138.1 -138.1       | 0.56 (1) | 10.00          |       |                |                 |
| R-Q   | 0/10984                         | -138.1 -138.1       | 0.71 (1) | 10.00          |       |                |                 |
| P-Q   | 0/117                           | 0.0 0.0             | 0.63 (1) | 10.00          |       |                |                 |
| Q-G   | -878/0                          | 0.0 0.0             | 0.64 (1) | 6.68           |       |                |                 |
| P-O   | 0/409                           | -36.4 -36.4         | 0.19 (1) | 10.00          |       |                |                 |
| O-N   | 0/2806                          | -18.5 -18.5         | 0.42 (1) | 10.00          |       |                |                 |
| N-M   | 0/0                             | -18.5 -18.5         | 0.06 (1) | 10.00          |       |                |                 |

| JT | LOC.   | LC1  | MAX- | MAX+ | FACE  | DIR  | TYPE  |
|----|--------|------|------|------|-------|------|-------|
| D  | 2-11-8 | -226 | -226 | ---  | FRONT | VERT | TOTAL |
| O  | 22-7-6 | -921 | -921 | ---  | FRONT | VERT | TOTAL |

#### DESIGN CRITERIA

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

SPECIFIED LOADS:  
TOP CH. LL = 32.5 PSF  
DL = 3.0 PSF  
BOT CH. LL = 0.0 PSF  
DL = 7.4 PSF  
TOTAL LOAD = 42.9 PSF

SPACING = 24.0 IN./C

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

GIRDER TYPE: CTimeHp  
SIDE SETBACK = 2-11-8  
END SETBACK = 5-10-3  
END WALL WIDTH = 0-0  
CORNER FRAMING TYPE: CONVENTIONAL  
END JACK TYPE: CONVENTIONAL  
APPLIED TO FRONT SIDE  
- ADDTL LOADS BASED ON 55% OF GSL.  
LOADS APPLIED TO FIRST 2-11-8 OF SPAN MEASURED FROM THE LEFT.

GIRDER TYPE: CSdGlder  
START DISTANCE = 2-11-8  
END DISTANCE = 16-4-0  
END SPAN CARRIED = 5-10-8  
END SPAN CARRIED = 5-10-8  
END WALL WIDTH = 0-0  
APPLIED TO FRONT SIDE OF BOTTOM CHORD.  
- ADDTL LOADS BASED ON 55% OF GSL.

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

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

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

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

(55% OF 43.9 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 32.5 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL. (LL) = L/360 (1.03")  
CALCULATED VERT. DEFL. (LL) = U/559 (0.58")  
ALLOWABLE DEFL. (TL) = L/360 (1.03")  
CALCULATED VERT. DEFL. (TL) = U/399 (0.93")

CS: TC=0.80/1.00 (G-1:1), BC=0.71/1.00 (G-1:1), WB=0.85/1.00 (J-O:1), SS=0.85/1.00 (G-1:1)

|          |            |          |     |             |          |
|----------|------------|----------|-----|-------------|----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.   | DRWG NO. |
| 304778   | H1A        |          | 1   | TRUSS DESC. | JT 38514 |

Alpa Roof Truss, Maple

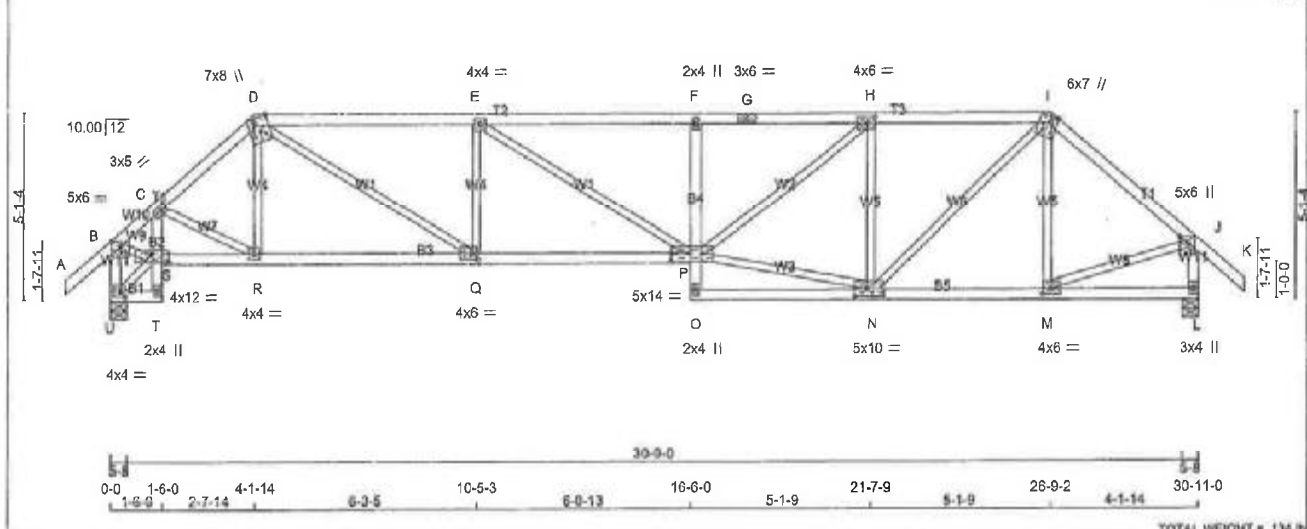
Version 8.310 © Jun 13 2018 M-Tek Industries, Inc. Tue Nov 27 15:31:12 2018 Page 2  
ID: Qr8CxxBvat3wVtqoWRZ7W8yICox-6lMcoxTbuq/XpQaoSGBJCABqZrHt?uome K9hhySyR

| <p><b>PLATES</b> <i>(Units in inches)</i></p> <table border="1"> <thead> <tr> <th>JT TYPE</th> <th>PLATES</th> <th>W</th> <th>LEN</th> <th>Y</th> <th>X</th> </tr> </thead> <tbody> <tr> <td>U 8VMWW-</td> <td>MT20</td> <td>5.0</td> <td>10.0</td> <td>2.50</td> <td>6.00</td> </tr> <tr> <td>V 8MV+p</td> <td>MT20</td> <td>2.0</td> <td>4.0</td> <td></td> <td></td> </tr> <tr> <td>W 8MVW1-t</td> <td>MT20</td> <td>4.0</td> <td>6.0</td> <td>2.00</td> <td>1.50</td> </tr> </tbody> </table> <p>Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.</p> <p><b>HANGER NOTES</b></p> <p>1) SPECIAL HANGER(S) OR CONNECTION(S) REQUIRED TO SUPPORT CONCENTRATED LOAD(S) 226.3 lbs FACTORED DOWN AT 2-11-8 ON TOP CHORD, AND 921.2 lbs FACTORED DOWN AT 22-7-6 ON BOTTOM CHORD. DESIGN FOR UNSPECIFIED CONNECTION(S) IS DELEGATED TO THE BUILDING DESIGNER.</p> <p>NOTE: Lateral brace(s) shown shall be 1x4 for Part 9 design as per OBC 9.23.13.11, and no less than 2x4 for Part 4 design.</p> <div style="text-align: center;">  </div> | JT TYPE    | PLATES      | W                  | LEN  | Y    | X | U 8VMWW- | MT20 | 5.0 | 10.0 | 2.50 | 6.00 | V 8MV+p | MT20 | 2.0 | 4.0 |  |  | W 8MVW1-t | MT20 | 4.0 | 6.0 | 2.00 | 1.50 | <p>DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.00<br/> COMP=1.00 SHEAR=1.00 TENS= 1.00</p> <p>COMPANION LIVE LOAD FACTOR = 0.50</p> <p>AUTOSOLVE RIGHT HEEL ONLY</p> <p>TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT.</p> <p><b>NAIL VALUES</b></p> <table border="1"> <thead> <tr> <th>PLATE</th> <th>GRIP (DRY)</th> <th>SHEAR (PSI)</th> <th>SECTION (PLI)</th> </tr> </thead> <tbody> <tr> <td>MT20</td> <td>618</td> <td>354</td> <td>1667 822 2284 1656</td> </tr> </tbody> </table> <p>PLATE PLACEMENT TOL. = 0.250 inches</p> <p>PLATE ROTATION TOL. = 5.0 Deg.</p> <p>JSI GRIP= 0.90 (I) (INPUT = 0.90 )<br/> JSI METAL= 0.97 (Q) (INPUT = 1.00 )</p> | PLATE | GRIP (DRY) | SHEAR (PSI) | SECTION (PLI) | MT20 | 618 | 354 | 1667 822 2284 1656 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-------------|--------------------|------|------|---|----------|------|-----|------|------|------|---------|------|-----|-----|--|--|-----------|------|-----|-----|------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|------------|-------------|---------------|------|-----|-----|--------------------|
| JT TYPE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | PLATES     | W           | LEN                | Y    | X    |   |          |      |     |      |      |      |         |      |     |     |  |  |           |      |     |     |      |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |       |            |             |               |      |     |     |                    |
| U 8VMWW-                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | MT20       | 5.0         | 10.0               | 2.50 | 6.00 |   |          |      |     |      |      |      |         |      |     |     |  |  |           |      |     |     |      |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |       |            |             |               |      |     |     |                    |
| V 8MV+p                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | MT20       | 2.0         | 4.0                |      |      |   |          |      |     |      |      |      |         |      |     |     |  |  |           |      |     |     |      |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |       |            |             |               |      |     |     |                    |
| W 8MVW1-t                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | MT20       | 4.0         | 6.0                | 2.00 | 1.50 |   |          |      |     |      |      |      |         |      |     |     |  |  |           |      |     |     |      |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |       |            |             |               |      |     |     |                    |
| PLATE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | GRIP (DRY) | SHEAR (PSI) | SECTION (PLI)      |      |      |   |          |      |     |      |      |      |         |      |     |     |  |  |           |      |     |     |      |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |       |            |             |               |      |     |     |                    |
| MT20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 618        | 354         | 1667 822 2284 1656 |      |      |   |          |      |     |      |      |      |         |      |     |     |  |  |           |      |     |     |      |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |       |            |             |               |      |     |     |                    |

A18113074(2)

|                           |                          |                      |                 |                                 |                             |
|---------------------------|--------------------------|----------------------|-----------------|---------------------------------|-----------------------------|
| JOB NAME<br><b>304778</b> | TRUSS NAME<br><b>H2A</b> | QUANTITY<br><b>1</b> | PLY<br><b>1</b> | JOB DESC.<br><b>TRUSS DESC.</b> | DRWG NO.<br><b>JT 38514</b> |
|---------------------------|--------------------------|----------------------|-----------------|---------------------------------|-----------------------------|

Alpa Roof Truss, Maple  
Version 8.216 5 Jun 13 2018 16:16k Industries, Inc. Tue Nov 27 15:31:13 2018 Page 1  
ID: Q:8C6x8vat3wVqutWRZ7WByCpx-bVD7qJSLCys7nLengsQJNEzCJcX8x7JluD7yEzRf  
1-3-8 0-0 1-6-0 4-1-14 6-3-5 10-5-3 6-0-13 16-6-0 5-1-9 21-7-9 5-1-9 26-9-2 4-1-14 30-11-0  
Scale = 1/64



| LUMBER          |       |        |            |
|-----------------|-------|--------|------------|
| N L G A         | RULES |        |            |
| CHORDS          | SIZE  | LUMBER | DESCR.     |
| A - D           | 2x4   | DRY    | No.2       |
| D - G           | 2x4   | DRY    | 1650F 1.5E |
| G - I           | 2x4   | DRY    | 1650F 1.5E |
| I - K           | 2x4   | DRY    | No.2       |
| U - B           | 2x4   | DRY    | No.2       |
| L - J           | 2x4   | DRY    | No.2       |
| U - T           | 2x4   | DRY    | No.2       |
| T - C           | 2x4   | DRY    | No.2       |
| S - P           | 2x4   | DRY    | No.2       |
| C - F           | 2x4   | DRY    | No.2       |
| O - L           | 2x4   | DRY    | No.2       |
| ALL WEBS EXCEPT | 2x3   | DRY    | No.2       |

DRY: SEASONED LUMBER.

| PLATES (width in inches) |        |     |                |
|--------------------------|--------|-----|----------------|
| JT TYPE                  | PLATES | W   | LEN Y X        |
| B TMVW-p                 | MT20   | 5.0 | 6.0 1.50 3.00  |
| C TMVW-l                 | MT20   | 3.0 | 5.0 1.50 1.75  |
| D TTVW+m                 | MT20   | 7.0 | 8.0 Edge 4.75  |
| E TMVW-l                 | MT20   | 4.0 | 4.0            |
| F TMV+p                  | MT20   | 2.0 | 4.0            |
| G TS-l                   | MT20   | 3.0 | 6.0            |
| H TMVW-t                 | MT20   | 4.0 | 6.0 2.00 2.75  |
| I TTVW+m                 | MT20   | 6.0 | 7.0 2.00 2.00  |
| J TMVW-p                 | MT20   | 5.0 | 6.0 1.75 2.75  |
| L BMV1+p                 | MT20   | 3.0 | 4.0            |
| M BMVW-l                 | MT20   | 4.0 | 6.0 1.75 2.75  |
| N BMVWV-t                | MT20   | 5.0 | 10.0 2.50 4.00 |
| O BMV+p                  | MT20   | 2.0 | 4.0            |
| P BMVWV-l                | MT20   | 5.0 | 14.0 3.00 6.50 |
| Q BMVW-t                 | MT20   | 4.0 | 6.0 2.00 1.75  |
| R BMVW-l                 | MT20   | 4.0 | 4.0            |
| S BMVWV-l                | MT20   | 4.0 | 12.0 2.75 6.00 |
| T BMV+p                  | MT20   | 2.0 | 4.0            |
| U BMVW-l                 | MT20   | 4.0 | 4.0 2.00 1.50  |

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

NOTE: Lateral brace(s) shown shall be 1x4 for Part 9 design as per OBC 9.23, 13.11, and no less than 2x4 for Part 4 design.



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

| FACTORED       |      | MAXIMUM FACTORED |      | INPUT  |       | REORD |  |
|----------------|------|------------------|------|--------|-------|-------|--|
| GROSS REACTION |      | GROSS REACTION   |      | BRG    |       | BRG   |  |
| JT VERT        | HORZ | DOWN             | HORZ | UPLIFT | IN-SX | IN-SX |  |
| L 2050         | 0    | 2050             | 0    | 5-8    | 3-3   |       |  |
| U 2057         | 0    | 2057             | 0    | 5-8    | 2-4   |       |  |

| UNFACTORED REACTIONS |          | MAXIMUM COMPONENT REACTIONS |           |
|----------------------|----------|-----------------------------|-----------|
| 1ST LCASE            |          |                             |           |
| JT COMBINED          | SNOW     | LIVE                        | PERM LIVE |
| L 1422               | 1092 / 0 | 0 / 0                       | 0 / 0     |
| U 1426               | 1095 / 0 | 0 / 0                       | 0 / 0     |

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

**BRACING**  
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.41 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 |                           |                           |                           | WEBS  |                           |                           |  |
|--------|---------------------------|---------------------------|---------------------------|-------|---------------------------|---------------------------|--|
| MEMB.  | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX. UNBRACED LENGTH (FT) | MEMB. | MAX. FACTORED FORCE (LBS) | MAX. UNBRACED LENGTH (FT) |  |
| FR-TO  |                           |                           |                           | FR-TO |                           |                           |  |
| A-B    | 0 / 47                    | -104.9 -104.9 0.14 (1)    | 10.00                     | C-R   | 0 / 140                   | 0.03 (1)                  |  |
| B-C    | -2161 / 0                 | -104.9 -104.9 0.19 (1)    | 4.46                      | R-D   | 0 / 65                    | 0.03 (4)                  |  |
| C-D    | -2361 / 0                 | -104.9 -104.9 0.19 (1)    | 4.30                      | D-Q   | 0 / 2080                  | 0.46 (1)                  |  |
| D-E    | -3567 / 0                 | -104.9 -104.9 0.73 (1)    | 3.56                      | Q-E   | -943 / 0                  | 0.24 (1)                  |  |
| E-F    | -3689 / 0                 | -104.9 -104.9 0.76 (1)    | 3.41                      | E-P   | 0 / 379                   | 0.09 (1)                  |  |
| F-G    | -3655 / 0                 | -104.9 -104.9 0.44 (1)    | 3.74                      | P-N   | 0 / 2558                  | 0.59 (1)                  |  |
| G-H    | -3655 / 0                 | -104.9 -104.9 0.44 (1)    | 3.74                      | P-H   | 0 / 1532                  | 0.34 (1)                  |  |
| H-I    | -2614 / 0                 | -104.9 -104.9 0.38 (1)    | 4.44                      | N-H   | -1511 / 0                 | 0.53 (1)                  |  |
| I-J    | -1888 / 0                 | -104.9 -104.9 0.40 (1)    | 4.47                      | N-I   | 0 / 1619                  | 0.36 (1)                  |  |
| J-K    | 0 / 47                    | -104.9 -104.9 0.14 (1)    | 10.00                     | M-I   | -349 / 0                  | 0.13 (1)                  |  |
| U-B    | -1998 / 0                 | 0.0 0.0 0.21 (1)          | 5.97                      | B-S   | 0 / 1674                  | 0.38 (1)                  |  |
| L-J    | -2019 / 0                 | 0.0 0.0 0.21 (1)          | 5.94                      | M-J   | 0 / 1513                  | 0.34 (1)                  |  |
| U-T    | 0 / 62                    | -18.5 -18.5 0.02 (1)      | 10.00                     | U-S   | -77 / 0                   | 0.01 (1)                  |  |
| T-S    | 0 / 14                    | 0.0 0.0 0.09 (1)          | 10.00                     |       |                           |                           |  |
| S-C    | -369 / 0                  | 0.0 0.0 0.09 (1)          | 7.81                      |       |                           |                           |  |
| S-R    | 0 / 1677                  | -18.5 -18.5 0.34 (1)      | 10.00                     |       |                           |                           |  |
| R-Q    | 0 / 1803                  | -18.5 -18.5 0.36 (1)      | 10.00                     |       |                           |                           |  |
| Q-P    | 0 / 3567                  | -18.5 -18.5 0.86 (1)      | 10.00                     |       |                           |                           |  |
| O-P    | 0 / 42                    | 0.0 0.0 0.18 (1)          | 10.00                     |       |                           |                           |  |
| P-F    | -544 / 0                  | 0.0 0.0 0.21 (1)          | 7.81                      |       |                           |                           |  |
| O-N    | 0 / 129                   | -18.5 -18.5 0.12 (1)      | 10.00                     |       |                           |                           |  |
| N-M    | 0 / 1439                  | -18.5 -18.5 0.26 (1)      | 10.00                     |       |                           |                           |  |
| M-L    | 0 / 0                     | -18.5 -18.5 0.09 (1)      | 10.00                     |       |                           |                           |  |

### DESIGN CRITERIA

**SPECIFIED LOADS:**  
TOP CH. LL = 32.5 PSF  
DL = 3.0 PSF  
BOT CH. LL = 0.0 PSF  
DL = 7.4 PSF  
TOTAL LOAD = 42.9 PSF

SPACING = 24.0 IN. C/C

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

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

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

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

(55% OF 43.9 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 32.5 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL. (LL) = L/360 (1.03")  
CALCULATED VERT. DEFL. (LL) = L/999 (0.23")  
ALLOWABLE DEFL. (TL) = L/360 (1.03")  
CALCULATED VERT. DEFL. (TL) = L/915 (0.41")

CSI: TC=0.76/1.00 (E-F:1), BC=0.66/1.00 (P-Q:1)  
WB=0.59/1.00 (H-N:1), SS=0.31/1.00 (D-E:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

AUTOSOLVE HEELS OFF

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

| NAIL VALUES |            |       |                    |
|-------------|------------|-------|--------------------|
| PLATE       | GRIP (DRY) | SHEAR | SECTION            |
| (PSI)       | (PLI)      | (PLI) |                    |
| MT20        | 618        | 354   | 1667 768 1587 1656 |

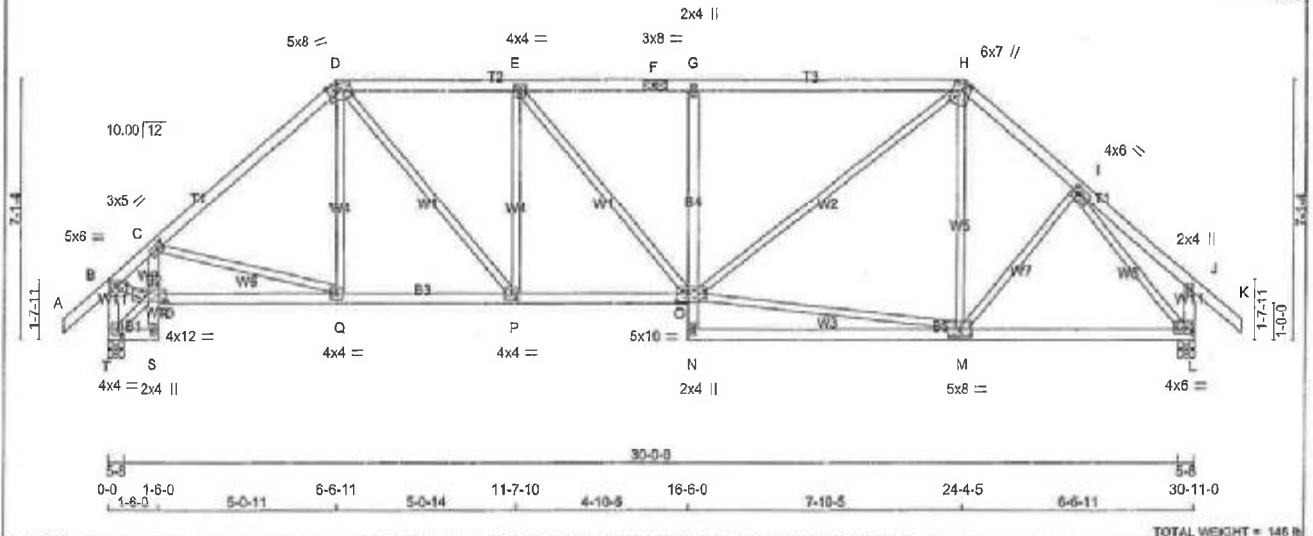
PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP=0.90 (M) (INPUT = 0.90)  
JSI METAL=0.66 (P) (INPUT = 1.00)



|                                                                                                                                                                                                                                                                                                                         |                          |                      |                 |                                 |                             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|----------------------|-----------------|---------------------------------|-----------------------------|
| JOB NAME<br><b>304778</b>                                                                                                                                                                                                                                                                                               | TRUSS NAME<br><b>H4A</b> | QUANTITY<br><b>1</b> | PLY<br><b>1</b> | JOB DESC.<br><b>TRUSS DESC.</b> | DRWG NO.<br><b>JT 38514</b> |
| Alpha Roof Truss, Maple<br>Version 8.210.5 Jun 13 2018 MITR Industries, Inc. Tue Nov 27 18:31:15 2018 Page 1<br>ID:Qr8CxcBvat3wVqudWRK27W8yCpx-XiLiP7nLipCPO359TApb3rokhBnm4LpESeC_17yEyRg<br>1-3-8 0-0 1-8-0 5-0-11 6-6-11 5-0-14 11-7-10 4-10-8 16-6-0 7-10-5 24-4-5 3-2-2 27-8-8 30-11-032-8 1-3-8<br>Scale = 1:54.0 |                          |                      |                 |                                 |                             |



| LUMBER          | SIZE    | LUMBER     | DESCR. |
|-----------------|---------|------------|--------|
| CHORDS          |         |            |        |
| A - D           | 2x4 DRY | No.2       | SPF    |
| D - F           | 2x4 DRY | 2100F 1.8E | SPF    |
| F - H           | 2x4 DRY | 2100F 1.8E | SPF    |
| H - K           | 2x4 DRY | No.2       | SPF    |
| T - B           | 2x4 DRY | No.2       | SPF    |
| L - J           | 2x4 DRY | No.2       | SPF    |
| T - S           | 2x4 DRY | No.2       | SPF    |
| S - C           | 2x4 DRY | No.2       | SPF    |
| R - O           | 2x4 DRY | No.2       | SPF    |
| N - G           | 2x4 DRY | No.2       | SPF    |
| N - L           | 2x4 DRY | No.2       | SPF    |
| ALL WEBS EXCEPT | 2x3 DRY | No.2       | SPF    |

DRY: SEASONED LUMBER.

| JT TYPE  | PLATES | W   | LEN  | Y    | X    |
|----------|--------|-----|------|------|------|
| B TMVW-p | MT20   | 5.0 | 6.0  | 1.50 | 3.00 |
| C TMVW-l | MT20   | 3.0 | 5.0  | 1.50 | 1.75 |
| D TMVW-m | MT20   | 5.0 | 6.0  | Edge | 3.00 |
| E TMVW-l | MT20   | 4.0 | 4.0  |      |      |
| F TS-t   | MT20   | 3.0 | 6.0  |      |      |
| G TMV+p  | MT20   | 2.0 | 4.0  |      |      |
| H TMVW+m | MT20   | 6.0 | 7.0  | 2.00 | 2.00 |
| I TMVW-l | MT20   | 4.0 | 6.0  | 1.75 | 1.75 |
| J TMV+p  | MT20   | 2.0 | 4.0  |      |      |
| L BMVW-l | MT20   | 4.0 | 6.0  | 1.50 | 2.75 |
| M BMVW-l | MT20   | 5.0 | 6.0  |      |      |
| N BMV+p  | MT20   | 2.0 | 4.0  |      |      |
| O BMVW+l | MT20   | 5.0 | 10.0 | 3.00 | 3.75 |
| P BMVW-l | MT20   | 4.0 | 4.0  | 2.00 | 1.50 |
| Q BMVW-l | MT20   | 4.0 | 4.0  |      |      |
| R BMVW-l | MT20   | 4.0 | 12.0 | 2.75 | 6.00 |
| S BMV+p  | MT20   | 2.0 | 4.0  |      |      |
| T BMVW-l | MT20   | 4.0 | 4.0  | 2.00 | 1.50 |

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

NOTE: Lateral brace(s) shown shall be 1x4 for Part 9 design as per OBC 9.23.13.11, and no less than 2x4 for Part 4 design.



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

|         | FACTORED GROSS REACTION | MAXIMUM FACTORED GROSS REACTION | INPUT BRG | REQD BRG |
|---------|-------------------------|---------------------------------|-----------|----------|
| JT VERT | 2050                    | 2050                            | 0         | 5-8      |
| L       | 2050                    | 0                               | 0         | 5-8      |
| T       | 2057                    | 0                               | 0         | 5-8      |

#### UNFACTORED REACTIONS

|             | 1ST LCASE | MAXIMUM COMPONENT REACTIONS |     |     |     |       |     |     |
|-------------|-----------|-----------------------------|-----|-----|-----|-------|-----|-----|
| JT COMBINED | 1422      | 1092/0                      | 0/0 | 0/0 | 0/0 | 330/0 | 0/0 | 0/0 |
| L           | 1422      | 1092/0                      | 0/0 | 0/0 | 0/0 | 330/0 | 0/0 | 0/0 |
| T           | 1426      | 1096/0                      | 0/0 | 0/0 | 0/0 | 330/0 | 0/0 | 0/0 |

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

#### BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.10 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 |                           |                           | WEBS                               |       |                           |
|--------|---------------------------|---------------------------|------------------------------------|-------|---------------------------|
| MEMB   | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX. FACTORED UNBRACED LENGTH (FT) | MEMB  | MAX. FACTORED FORCE (LBS) |
| FR-TO  |                           |                           |                                    | FR-TO |                           |
| A-B    | 0/47                      | -104.9 -104.9 0.14 (1)    | 10.00                              | C-Q   | -137/0                    |
| B-C    | -2253/0                   | -104.9 -104.9 0.38 (1)    | 4.10                               | Q-D   | 0/142                     |
| C-D    | -2242/0                   | -104.9 -104.9 0.52 (1)    | 4.10                               | D-P   | 0/1078                    |
| D-E    | -2408/0                   | -104.9 -104.9 0.28 (1)    | 5.04                               | P-E   | -714/0                    |
| E-F    | -2608/0                   | -104.9 -104.9 0.56 (1)    | 4.43                               | E-O   | 0/305                     |
| F-G    | -2608/0                   | -104.9 -104.9 0.56 (1)    | 4.43                               | O-M   | 0/1409                    |
| G-H    | -2596/0                   | -104.9 -104.9 0.67 (1)    | 4.44                               | H-O   | 0/1414                    |
| H-I    | -1937/0                   | -104.9 -104.9 0.22 (1)    | 4.64                               | M-H   | -98/85                    |
| I-J    | 0/23                      | -104.9 -104.9 0.16 (1)    | 10.00                              | M-I   | 0/104                     |
| J-K    | 0/47                      | -104.9 -104.9 0.14 (1)    | 10.00                              | I-R   | 0/1626                    |
| K-L    | -1996/0                   | 0.0 0.0 0.21 (1)          | 5.97                               | L-R   | -2222/0                   |
| L-J    | -280/0                    | 0.0 0.0 0.03 (1)          | 7.81                               | T-R   | -61/0                     |
| T-S    | 0/65                      | -18.5 -18.5 0.02 (1)      | 10.00                              |       |                           |
| S-R    | 0/14                      | 0.0 0.0 0.09 (1)          | 10.00                              |       |                           |
| R-C    | -394/0                    | 0.0 0.0 0.09 (1)          | 7.81                               |       |                           |
| R-Q    | 0/1827                    | -18.5 -18.5 0.36 (1)      | 10.00                              |       |                           |
| Q-P    | 0/1868                    | -18.5 -18.5 0.34 (1)      | 10.00                              |       |                           |
| P-O    | 0/2409                    | -18.5 -18.5 0.44 (1)      | 10.00                              |       |                           |
| N-C    | 0/62                      | 0.0 0.0 0.10 (1)          | 10.00                              |       |                           |
| O-G    | -803/0                    | 0.0 0.0 0.54 (1)          | 7.81                               |       |                           |
| N-M    | 0/68                      | -18.5 -18.5 0.28 (1)      | 10.00                              |       |                           |
| M-L    | 0/1369                    | -18.5 -18.5 0.38 (1)      | 10.00                              |       |                           |

#### DESIGN CRITERIA

SPECIFIED LOADS:  
TOP CH. LL = 32.5 PSF  
DL = 3.0 PSF  
BOT CH. LL = 0.0 PSF  
DL = 7.4 PSF  
TOTAL LOAD = 42.9 PSF

SPACING = 24.0 IN. C/C

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

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

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

DESIGN ASSUMPTIONS  
- OVERHANG NOT TO BE ALTERED OR CUT OFF

(65% OF 43.9 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 32.5 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL. (LL) = L/360 (1.03")  
CALCULATED VERT. DEFL. (LL) = L/999 (0.12")  
ALLOWABLE DEFL. (TL) = L/360 (1.03")  
CALCULATED VERT. DEFL. (TL) = L/999 (0.25")

CSI: TC=0.67/1.00 (G-H:1), BC=0.54/1.00 (G-O:1), WB=0.96/1.00 (L-L:1), SSI=0.37/1.00 (G-H:1)

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

COMPANION LIVE LOAD FACTOR = 0.60

AUTOSOLVE RIGHT HEEL ONLY

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

NAIL VALUES  
PLATE GRIP(DRY) SHEAR SECTION (PSI) (PLI) (PLI)  
MAX MIN MAX MIN MAX MIN  
MT20 618 354 1667 788 1987 1656

PLATE PLACEMENT TOL. = 0.250 inches

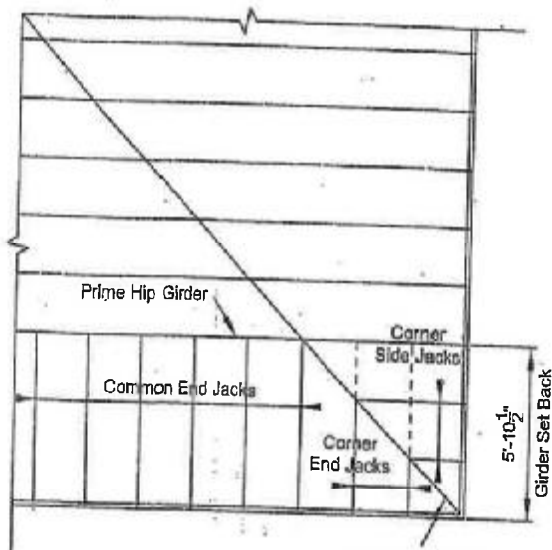
PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (O) (INPUT = 0.90)  
JSI METAL= 0.64 (I) (INPUT = 1.00)

A18113077

CONTINUED ON PAGE 2

# STRACON ENGINEERING INC.



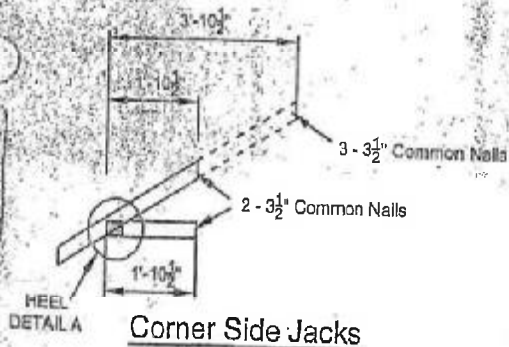
**45° Hip End**

## LUMBER SPECIFICATION

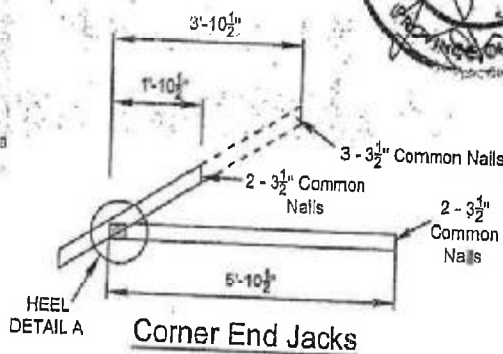
TOP CHORD : 2 x 4 SPF#2  
 BOTTOM CHORD : 2 x 4 SPF#2  
 WEBS : 2 x 3 SPF#2  
 UNLESS OTHERWISE SHOWN

## DESIGN LOAD

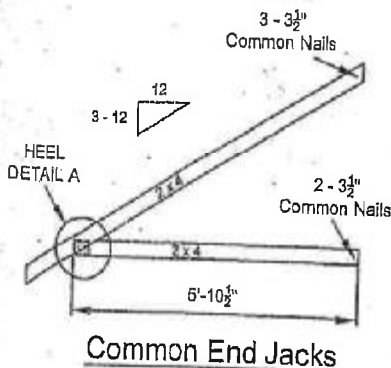
TOP CHORD SNOW LOAD : 40.5 P.S.F.  
 TOP CHORD DEAD LOAD : 3.0 P.S.F.  
 BOTTOM CHORD LIVE LOAD : 0.0 P.S.F.  
 BOTTOM CHORD DEAD LOAD : 7.0 P.S.F.  
 TOTAL LOAD : 50.5 P.S.F.



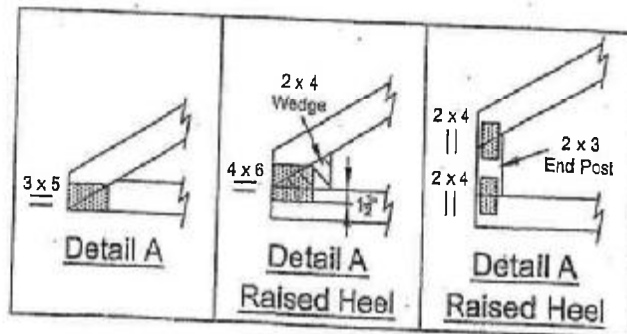
**Corner Side Jacks**



**Corner End Jacks**



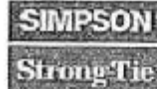
**Common End Jacks**



NOTE: DESIGN CONFORMS TO PART 9, O.B.C. 2012 (L.S.D. DESIGN)

CS-51008

# LUS – Double Shear Joist Hangers



All LUS hangers have double shear nailing. This patented innovation distributes the load through two points on each joist nail for greater strength. It also allows the use of fewer nails, faster installation and the use of common nails for all connections.

**Material:** 18 gauge

**Finish:** G90 galvanized

## Design:

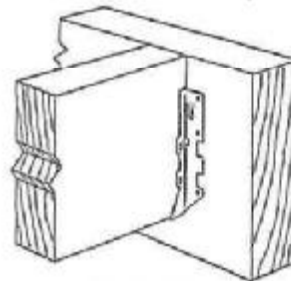
- Factored resistances are in accordance with CSA O86-14.
- Uplift resistances have been increased 15%. No further increase is permitted.
- Wood shear is not considered in the factored resistances given. The specifier must ensure that the joist and header capacities are capable of withstanding these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

## Installation:

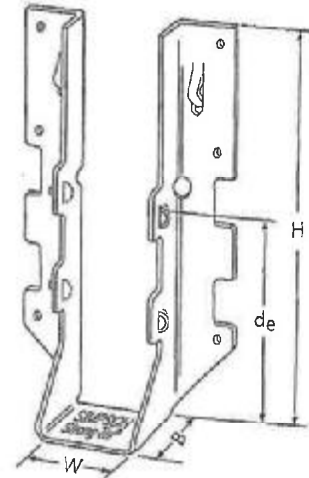
- Use all specified fasteners.
- Nails: 16d = 0.162" dia. x 3½" long common wire, 10d = 0.148" x 3" long common wire.
- Double shear nails must be driven at an angle through the joist or truss into the header to achieve the table loads.
- Not designed for welded or nailer applications.

## Options:

- These hangers cannot be modified



Typical LUS Installation



LUS28

| Model No. | Ga. | Dimensions (in.) |    |    |                             | Fasteners |         | Factored Resistance (lb.)        |                                  |                                  |                                  |
|-----------|-----|------------------|----|----|-----------------------------|-----------|---------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
|           |     | W                | H  | B  | d <sub>e</sub> <sup>1</sup> | Face      | Joist   | D-Fir-L                          |                                  | S-P-F                            |                                  |
|           |     |                  |    |    |                             |           |         | Uplift<br>(K <sub>o</sub> =1.15) | Normal<br>(K <sub>o</sub> =1.00) | Uplift<br>(K <sub>o</sub> =1.15) | Normal<br>(K <sub>o</sub> =1.00) |
| LUS24     | 18  | 1½               | 3½ | 1¼ | 1½                          | (4) 10d   | (2) 10d | 710                              | 1630                             | 645                              | 1155                             |
| LUS24-2   | 18  | 3½               | 3½ | 2  | 1½                          | (4) 16d   | (2) 16d | 835                              | 2020                             | 590                              | 1435                             |
| LUS26     | 18  | 1½               | 4¾ | 1¾ | 3½                          | (4) 10d   | (4) 10d | 1420                             | 2170                             | 1290                             | 1630                             |
| LUS26-2   | 18  | 3½               | 4¾ | 2  | 4                           | (4) 16d   | (4) 16d | 1720                             | 2595                             | 1545                             | 1920                             |
| LUS26-3   | 18  | 4¾               | 4¾ | 2  | 3¼                          | (4) 16d   | (4) 16d | 1720                             | 2595                             | 1545                             | 2340                             |
| LUS28     | 18  | 1½               | 6½ | 1¾ | 3¾                          | (6) 10d   | (6) 10d | 1420                             | 2520                             | 1290                             | 1790                             |
| LUS28-2   | 18  | 3½               | 7  | 2  | 4                           | (6) 16d   | (4) 16d | 1720                             | 3325                             | 1545                             | 2575                             |
| LUS28-3   | 18  | 4¾               | 6¼ | 2  | 3¼                          | (6) 16d   | (4) 16d | 1720                             | 3325                             | 1545                             | 2375                             |
| LUS210    | 18  | 1½               | 7½ | 1¾ | 3¾                          | (8) 10d   | (4) 10d | 1420                             | 2785                             | 1290                             | 2210                             |
| LUS210-2  | 18  | 3½               | 9  | 2  | 5                           | (8) 16d   | (6) 16d | 2580                             | 4500                             | 2320                             | 3195                             |
| LUS210-3  | 18  | 4¾               | 8¾ | 2  | 5¼                          | (8) 16d   | (6) 16d | 2580                             | 3345                             | 2320                             | 2375                             |

1. d<sub>e</sub> is the distance from the seat of the hanger to the highest joist nail.



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

U.S. Patent 5,603,580



Double Shear Nailing Top View.



LIMIT STATES DESIGN

This technical bulletin is effective until June 30, 2019, and reflects information available as of March 1, 2017. This information is updated periodically and should not be relied upon after June 30, 2019. Contact Simpson Strong-Tie for current information and product warranty at [sdsstrongtie.com](http://sdsstrongtie.com).

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TSPEC/LUS17-3/17 exp. 6/19

(800) 999-5099  
[strongtie.com](http://strongtie.com)

# HUS/LJS – Double Shear Joist Hangers



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

**Material:** See table

**Finish:** G90 galvanized

**Design:**

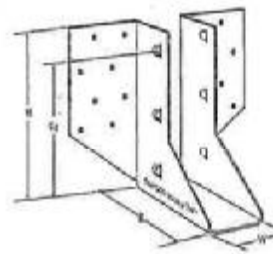
- Factored resistances are in accordance with CSA O86 -14.
- Uplift resistances have been increased 15%. No further increase is permitted.
- Wood shear is not considered in the factored resistances given. The specifier must ensure that the joist and header capacities are capable of withstanding these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

**Installation:**

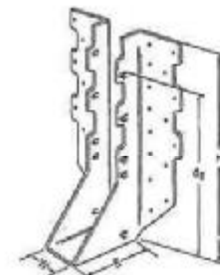
- Use all specified fasteners
- Nails: 16d = 0.162" dia. x 3½" long common wire
- Double shear nails must be driven at an angle through the joist or truss into the header to achieve the table loads
- Not designed for welded or nailer applications

**Options:**

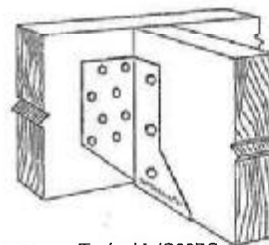
- See current catalogue for options



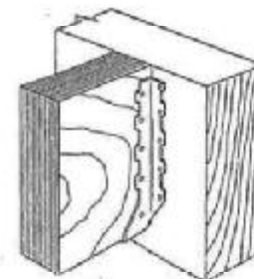
LJS26DS



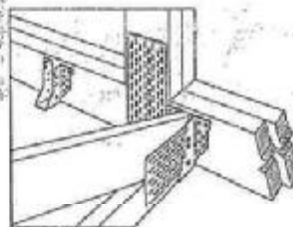
HUS210  
(HUS26, HUS28, similar)



Typical LJS26DS  
Installation



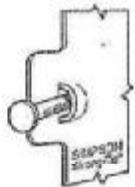
Typical HUS  
Installation



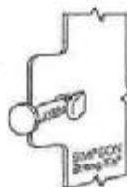
Typical HUS Installation  
(Truss Designer to provide fastener  
quantity for connecting multiple  
members together)

| Model No.  | Ga. | Dimensions (in.) |        |       |                | Fasteners |          | Factored Resistance (lb.)        |                                  |                                  |                                  |
|------------|-----|------------------|--------|-------|----------------|-----------|----------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
|            |     | W                | H      | B     | d <sub>1</sub> | Face      | Joist    | D Fir-L                          |                                  | S-P-F                            |                                  |
|            |     |                  |        |       |                |           |          | Uplift<br>(K <sub>0</sub> =1.15) | Normal<br>(K <sub>0</sub> =1.00) | Uplift<br>(K <sub>0</sub> =1.15) | Normal<br>(K <sub>0</sub> =1.00) |
| LJS26DS    | 18  | 1 13/16          | 5      | 3 1/2 | 4 5/8          | (16) 16d  | (6) 16d  | 2065                             | 4265                             | 1460                             | 4115                             |
| HUS26      | 16  | 1 5/8            | 5 3/8  | 3     | 3 15/16        | (14) 16d  | (6) 16d  | 2705                             | 4940                             | 2065                             | 3875                             |
| HUS28      | 16  | 1 5/8            | 7 3/32 | 3     | 6 1/2          | (22) 16d  | (8) 16d  | 3605                             | 5365                             | 2675                             | 4345                             |
| HUS210     | 16  | 1 5/8            | 9 1/2  | 3     | 7 3/32         | (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                             |

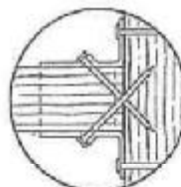
1. d<sub>2</sub> is the distance from the seat of the hanger to the highest joist nail.



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



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



Double Shear Nailing Top View.



LMV  
STATES  
DESIGN

1. SPEC HUS/LJS 2017 exp. 6/18

(800) 999-5099  
strongtie.com

# TC – Truss Connectors



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

**Material:** 16 gauge

**Finish:** G90 galvanized

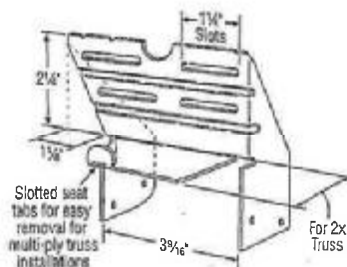
**Design:** Factored resistances are in accordance with CSA 086-14

## 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:

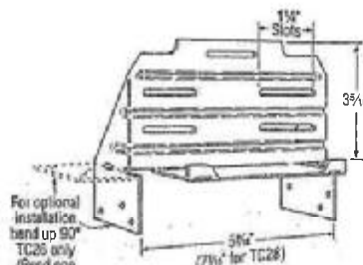
- Bend one flange up 90°. Drive specified nails into the top and face of the top plates or install Titen® screws into the top and face of masonry wall. See optional load tables and installation details.



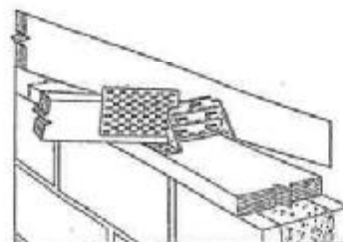
TC24  
U.S. Patent 4,932,173



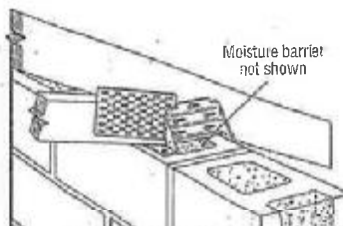
Typical TC24 Installation



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 <sub>o</sub> =1.15) | Uplift (K <sub>o</sub> =1.15) |
| TC24      | (4) 10d   | (4) 10d     | 605                           | 430                           |
| TC26      | (5) 10d   | (5) 10d     | 1015                          | 720                           |
| TC28      | (5) 10d   | (5) 10d     | 1015                          | 720                           |

## Optional TC Installation Table

| Model No. | Fasteners |               | Factored Resistance           |                               |
|-----------|-----------|---------------|-------------------------------|-------------------------------|
|           | Truss     | Wall Plates   | D.Fir-L                       | S-P-F                         |
|           |           |               | Uplift (K <sub>o</sub> =1.15) | Uplift (K <sub>o</sub> =1.15) |
| TC26      | (5) 10d   | (5) 10d x 1½" | 810                           | 660                           |
|           | (5) 10d   | (5) 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 (5) – ¾" x 2½" Titen screws has a factored uplift resistance of 275 lb.



UNITED STATES DESIGN

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T-SP-2010-17 3/12 and 6/10