

# EWP DESIGN INC.

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## RESPONSIBILITIES AND SPECIFICATIONS

### **RESPONSIBILITIES**

1. EWP DESIGN INC. is responsible for the design of trusses as individual components.
2. It is the responsibility of others to ascertain that the design loads utilized on each drawing meet or exceed the actual dead load imposed by the structure, the live load imposed by the intended use and the snow load imposed by local building code or authorities with jurisdictions.
3. All dimensions are to be verified by the owner, contractor, architect or other authorities with jurisdictions before truss fabrication.
4. EWP DESIGN INC. bears no responsibility for the erection of trusses. Persons erecting trusses are cautioned to seek professional advice regarding the temporary and permanent bracing for the system. Bracing shown on EWP DESIGN INC. drawing is specified for the truss as a component only and forms an integral part of the truss design.
5. It is the truss manufacturer's responsibility to ensure that trusses are manufactured in conformance with specifications of EWP DESIGN INC. as outlined below.

### **SPECIFICATIONS**

1. Trusses designed by EWP DESIGN INC. conform to the relevant section of the Ontario Building Code of Canada (Part 9 or Part 4) or to the Canadian code for farm buildings, whichever applies to the building type, as indicated on the EWP DESIGN INC. drawings, and conform to the design procedures established by the Truss Plate Institute of Canada. Unit stresses used for truss designs are as per the edition of CSA-O86 shown on EWP DESIGN INC. drawings.
2. Lumber is to be the size, species and grade as specified on EWP DESIGN INC. drawings.
3. Moisture content of lumber shall not exceed 19% in service unless specified otherwise.
4. Metal connector plates shall be applied to both faces of truss at each joint and shall be positioned as specified.
5. Top chords of trusses are assumed to be continuously braced laterally by roof sheathing or by purlins at intervals not exceeding 12.5 times the thickness of top chord member.
6. Bottom chords shall be laterally braced at intervals not exceeding 3M (10') o.c., where rigid ceiling is not applied directly to the underside of chords.

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

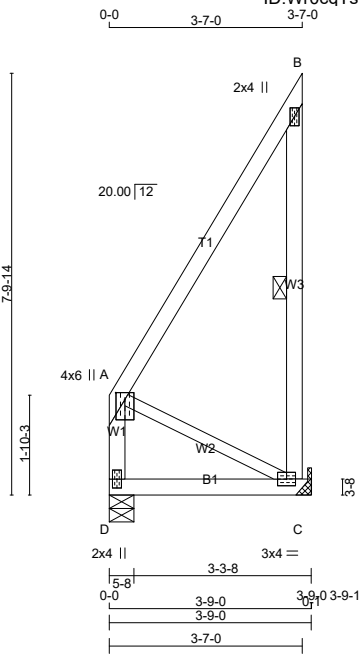
|          |            |          |     |                      |           |
|----------|------------|----------|-----|----------------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.  |
| 318797   | G1         | 4        | 1   | TRUSS DESC. JT 45147 | E20041031 |

Alpa Roof Truss, Maple

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ID:Wr0cqTsRngk4toJDtjrg3lyNILr-CplCf3vPOlaOk9LmSu5V0kXO7yPfn4IDH6DapRzR6mv

Scale = 1:42.7



TOTAL WEIGHT = 4 X 25 = 100 lb

|                       |      |     |        |        |
|-----------------------|------|-----|--------|--------|
| <b>LUMBER</b>         |      |     |        |        |
| N. L. G. A. RULES     |      |     |        |        |
| CHORDS                | SIZE |     | LUMBER | DESCR. |
| A - B                 | 2x4  | DRY | No.2   | SPF    |
| C - B                 | 2x4  | DRY | No.2   | SPF    |
| D - A                 | 2x4  | DRY | No.2   | SPF    |
| D - C                 | 2x4  | DRY | No.2   | SPF    |
| ALL WEBS              | 2x3  | DRY | No.2   | SPF    |
| DRY: SEASONED LUMBER. |      |     |        |        |

|                                    |         |        |     |     |           |
|------------------------------------|---------|--------|-----|-----|-----------|
| <b>PLATES (table is in inches)</b> |         |        |     |     |           |
| JT                                 | TYPE    | PLATES | W   | LEN | Y X       |
| A                                  | TMVW+p  | MT20   | 4.0 | 6.0 | 1.50 2.00 |
| B                                  | TMV+p   | MT20   | 2.0 | 4.0 |           |
| C                                  | BMVW1-t | MT20   | 3.0 | 4.0 |           |
| D                                  | BMV1+p  | MT20   | 2.0 | 4.0 |           |

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

|    | FACTORED |          | MAXIMUM FACTORED |          | INPUT  |            | REQD  |  |
|----|----------|----------|------------------|----------|--------|------------|-------|--|
|    | GROSS    | REACTION | GROSS            | REACTION | BRG    |            | BRG   |  |
| JT | VERT     | HORZ     | DOWN             | HORZ     | UPLIFT | IN-SX      | IN-SX |  |
| C  | 173      | 0        | 173              | 0        | 0      | MECHANICAL |       |  |
| D  | 173      | 0        | 173              | 0        | 0      | 5-8        | 1-8   |  |

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT C. MINIMUM BEARING LENGTH AT JOINT C = 1-9.

VALUE IN PARENTHESIS INDICATES EFFECTIVE BEARING LENGTH

**UNFACTORED REACTIONS**

| JT | 1ST LCASE | SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|----|-----------|------|------|-----------|------|------|------|
| C  | 123       | 75/0 | 0/0  | 0/0       | 0/0  | 48/0 | 0/0  |
| D  | 123       | 75/0 | 0/0  | 0/0       | 0/0  | 48/0 | 0/0  |

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

**BRACING**

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

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

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

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

**LOADING**

TOTAL LOAD CASES: (4)

| MEMB. | CHORDS                    |                           |                  | MAX. UNBRACED LENGTH | MEMB. | WEBS                      |              |  |
|-------|---------------------------|---------------------------|------------------|----------------------|-------|---------------------------|--------------|--|
|       | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | LC1 MAX CSI (LC) |                      |       | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |  |
| FR-TO |                           | FROM                      | TO               |                      | FR-TO |                           |              |  |
| A-B   | 0/0                       | -78.0                     | -78.0            | 0.17 (1)             | A-C   | 0/0                       | 0.00 (1)     |  |
| C-B   | -140/0                    | 0.0                       | 0.0              | 0.04 (1)             |       |                           |              |  |
| D-A   | -140/0                    | 0.0                       | 0.0              | 0.02 (1)             |       |                           |              |  |
| D-C   | 0/0                       | -18.5                     | -18.5            | 0.07 (4)             |       |                           |              |  |

**DESIGN CRITERIA**

SPECIFIED LOADS:

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

SPACING = 24.0 IN./C

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

THIS DESIGN COMPLIES WITH:

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

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

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

CSI: TC=0.17/1.00 (A-B:1) , BC=0.07/1.00 (C-D:4) ,  
WB=0.00/1.00 (A-C:1) , SSI=0.06/1.00 (A-B:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

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

PLATE PLACEMENT TOL. = 0.250 inches

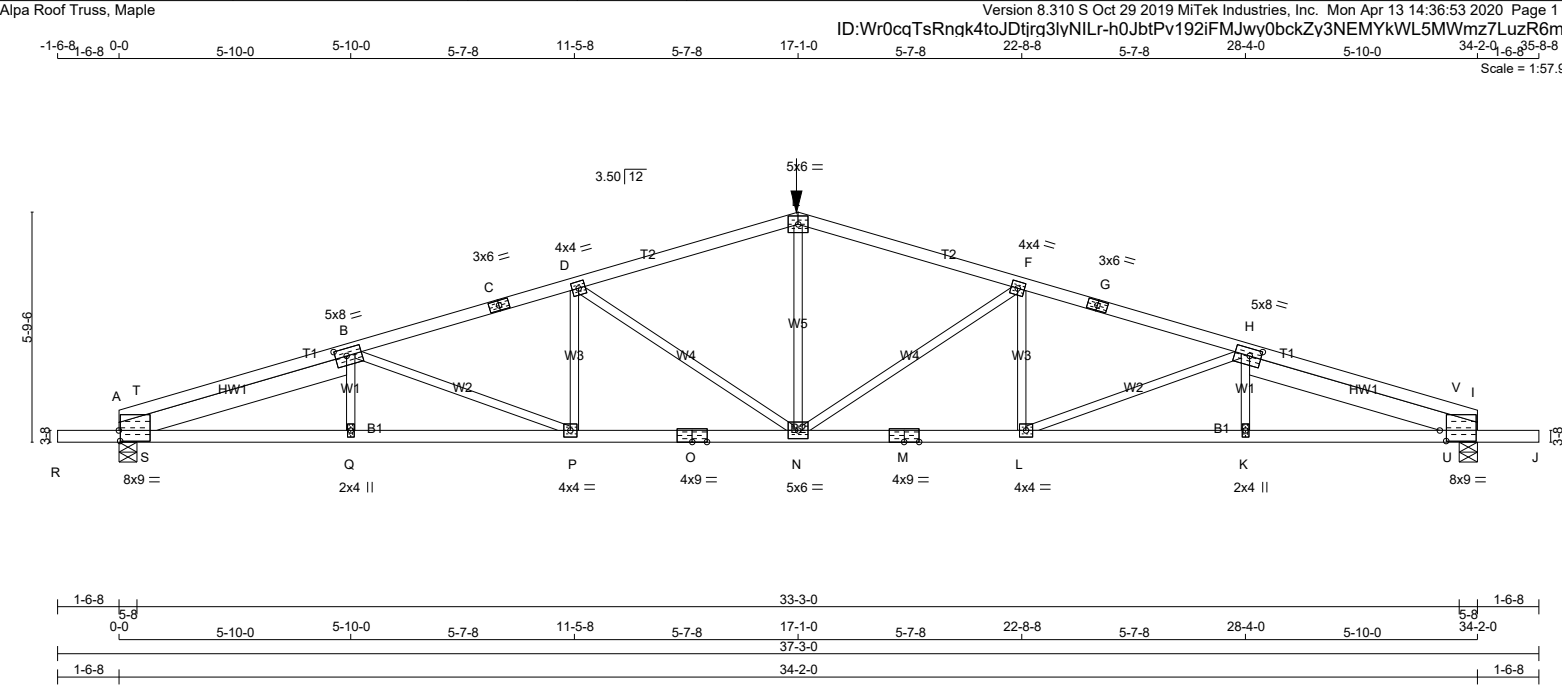
PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.13 (C) (INPUT = 0.90 )  
JSI METAL= 0.06 (B) (INPUT = 1.00 )

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



|          |            |          |     |                      |           |
|----------|------------|----------|-----|----------------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.  |
| 318797   | G02        | 5        | 1   | TRUSS DESC. JT 45147 | E20041032 |



|                           |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  |                                                    |  |  |  |  |  |  |  |  |  |
|---------------------------|--|--|--|--|--|--|--|--|--|-----------------------------------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|----------------------------------------------------|--|--|--|--|--|--|--|--|--|
| LUMBER                    |  |  |  |  |  |  |  |  |  | DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER |  |  |  |  |  |  |  |  |  | DESIGN CRITERIA                                    |  |  |  |  |  |  |  |  |  |
| N. L. G. A. RULES         |  |  |  |  |  |  |  |  |  | BEARINGS                                                                                      |  |  |  |  |  |  |  |  |  | SPECIFIED LOADS:                                   |  |  |  |  |  |  |  |  |  |
| CHORDS SIZE LUMBER DESCR. |  |  |  |  |  |  |  |  |  | FACTORED GROSS REACTION MAXIMUM FACTORED GROSS REACTION INPUT REQ'D                           |  |  |  |  |  |  |  |  |  | TOP CH. LL = 21.0 PSF                              |  |  |  |  |  |  |  |  |  |
| A - C 2x4 DRY No.2 SPF    |  |  |  |  |  |  |  |  |  | JT VERT HORZ DOWN HORZ UPLIFT IN-SX BRG IN-SX BRG                                             |  |  |  |  |  |  |  |  |  | DL = 6.0 PSF                                       |  |  |  |  |  |  |  |  |  |
| C - E 2x4 DRY No.2 SPF    |  |  |  |  |  |  |  |  |  | A 2160 0 2160 0 0 5-8 2-5                                                                     |  |  |  |  |  |  |  |  |  | BOT CH. LL = 0.0 PSF                               |  |  |  |  |  |  |  |  |  |
| E - G 2x4 DRY No.2 SPF    |  |  |  |  |  |  |  |  |  | I 2160 0 2160 0 0 5-8 2-5                                                                     |  |  |  |  |  |  |  |  |  | DL = 7.4 PSF                                       |  |  |  |  |  |  |  |  |  |
| G - I 2x4 DRY No.2 SPF    |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  | TOTAL LOAD = 34.4 PSF                              |  |  |  |  |  |  |  |  |  |
| R - O 2x4 DRY No.2 SPF    |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  |                                                    |  |  |  |  |  |  |  |  |  |
| O - M 2x4 DRY No.2 SPF    |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  |                                                    |  |  |  |  |  |  |  |  |  |
| M - J 2x4 DRY No.2 SPF    |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  |                                                    |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  |                                                    |  |  |  |  |  |  |  |  |  |
| REINFORCING MEMBERS       |  |  |  |  |  |  |  |  |  | UNFACTORED REACTIONS                                                                          |  |  |  |  |  |  |  |  |  | SPACING = 24.0 IN. C/C                             |  |  |  |  |  |  |  |  |  |
| HW1 2x6 DRY No.2 SPF      |  |  |  |  |  |  |  |  |  | 1ST LCASE MAX./MIN. COMPONENT REACTIONS                                                       |  |  |  |  |  |  |  |  |  | GIRDER TYPE: CPrimeHip                             |  |  |  |  |  |  |  |  |  |
| HW2 2x6 DRY No.2 SPF      |  |  |  |  |  |  |  |  |  | JT COMBINED SNOW LIVE PERM.LIVE WIND DEAD SOIL                                                |  |  |  |  |  |  |  |  |  | SIDE SETBACK = 17-1-0                              |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  | A 1540 942 / 0 0 / 0 0 / 0 598 / 0 0 / 0                                                      |  |  |  |  |  |  |  |  |  | END SETBACK = 2-10-1                               |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  | I 1540 942 / 0 0 / 0 0 / 0 598 / 0 0 / 0                                                      |  |  |  |  |  |  |  |  |  | END WALL WIDTH = 0-0                               |  |  |  |  |  |  |  |  |  |
| ALL WEBS 2x3 DRY No.2 SPF |  |  |  |  |  |  |  |  |  | BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) A, I                                    |  |  |  |  |  |  |  |  |  | CORNER FRAMING TYPE: CONVENTIONAL                  |  |  |  |  |  |  |  |  |  |
| DRY: SEASONED LUMBER.     |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  | END JACK TYPE: CONVENTIONAL                        |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  | APPLIED TO FRONT SIDE                              |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  | - ADDT'L LOADS BASED ON 55 % OF GSL.               |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  | THIS TRUSS IS DESIGNED FOR RESIDENTIAL             |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  | OR SMALL BUILDING REQUIREMENTS OF PART             |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  | 9, NBCC 2015                                       |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  | THIS DESIGN COMPLIES WITH:                         |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  | - PART 9 OF CBCS 2018 , ABC 2019                   |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  | - PART 9 OF OBC 2012 (2019 AMENDMENT)              |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  | - CSA 086-14                                       |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  | - TPIC 2014                                        |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  | (55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F.        |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  | RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED            |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  | ROOF LIVE LOAD                                     |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  | ALLOWABLE DEFL.(LL)= L/360 (1.14")                 |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  | CALCULATED VERT. DEFL.(LL) = L/ 999 (0.29")        |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  | ALLOWABLE DEFL.(TL)= L/360 (1.14")                 |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  | CALCULATED VERT. DEFL.(TL)= L/ 708 (0.58")         |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  | CANTILEVER DEFLECTION:                             |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  | ALLOWABLE DEFL.(LL)= L/120 (0.19")                 |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  | CALCULATED VERT. DEFL.(LL) = L/ 999 ( 0.01")       |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  | ALLOWABLE DEFL.(TL)= L/120 (0.19")                 |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  | CALCULATED VERT. DEFL.(TL)= L/ 999 ( 0.01")        |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  | CSI: TC=0.92/1.00 (F-H:1) , BC=0.91/1.00 (K-L:1) , |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  | WB=0.80/1.00 (F-N:1) , SSI=0.22/1.00 (E-F:1)       |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  | DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.00             |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  | COMP=1.00 SHEAR=1.00 TENS=1.00                     |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  | COMPANION LIVE LOAD FACTOR = 1.00                  |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  | TRUSS PLATE MANUFACTURER IS NOT                    |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  | RESPONSIBLE FOR QUALITY CONTROL IN THE             |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  | TRUSS MANUFACTURING PLANT .                        |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  | NAIL VALUES                                        |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  | PLATE GRIP(DRY) SHEAR SECTION                      |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  | (PSI) (PLI) (PLI)                                  |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  | MAX MIN MAX MIN MAX MIN                            |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  | MT20 650 371 1747 788 1987 1873                    |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  | PLATE PLACEMENT TOL. = 0.250 inches                |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  | PLATE ROTATION TOL. = 5.0 Deg.                     |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  | JSI GRIP= 0.89 (A) (INPUT = 0.90 )                 |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  | JSI METAL= 0.98 (O) (INPUT = 1.00 )                |  |  |  |  |  |  |  |  |  |

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

LICENSED PROFESSIONAL ENGINEER

Y. WIDYA

100225448

04/13/2020

PROVINCE OF ONTARIO

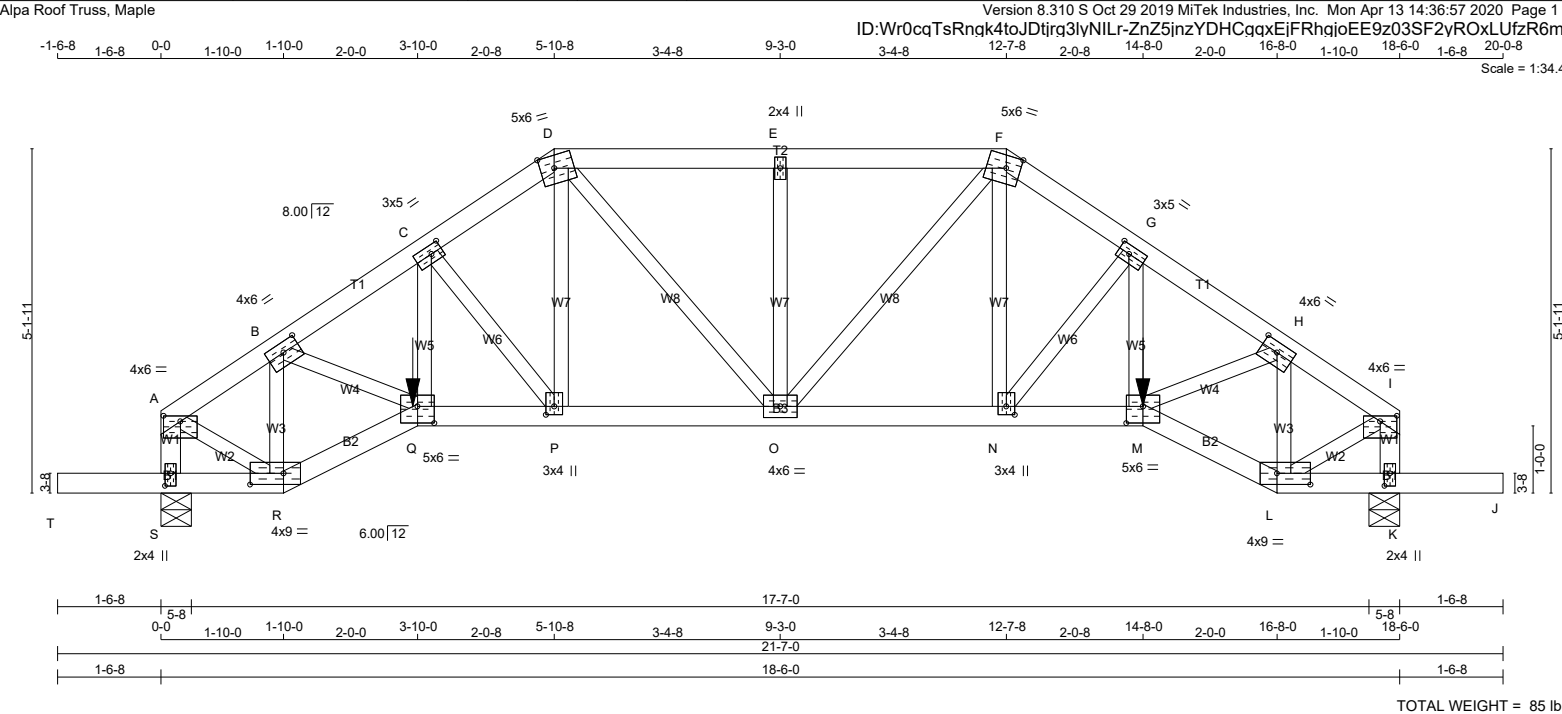
Version 8.310 S Oct 29 2019 MiTek Industries, Inc. Mon Apr 13 14:36:55 2020 Page 1



TOTAL WEIGHT =  $17 \times 13 = 215 \text{ lb}$

JSI GRIP= 0.10 (A) (INPUT = 0.90 )  
JSI METAL= 0.06 (A) (INPUT = 1.00 )

|          |            |          |     |                      |           |
|----------|------------|----------|-----|----------------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.  |
| 318797   | H1TA       | 1        | 1   | TRUSS DESC. JT 45147 | E20041034 |



| <b>LUMBER</b><br>N. L. G. A. RULES<br>CHORDS SIZE LUMBER DESCR.<br>A - D 2x4 DRY No.2 SPF<br>D - F 2x4 DRY No.2 SPF<br>F - I 2x4 DRY No.2 SPF<br>S - A 2x4 DRY No.2 SPF<br>K - I 2x4 DRY No.2 SPF<br>T - R 2x4 DRY No.2 SPF<br>R - Q 2x4 DRY No.2 SPF<br>Q - M 2x4 DRY No.2 SPF<br>M - L 2x4 DRY No.2 SPF<br>L - J 2x4 DRY No.2 SPF<br><br>ALL WEBS 2x3 DRY No.2 SPF<br>EXCEPT<br><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><tr><th></th><th>FACTORED GROSS REACTION</th><th>MAXIMUM FACTORED GROSS REACTION</th><th>INPUT BRG</th><th>REQRD BRG</th></tr><tr><td>JT</td><td>VERT</td><td>HORZ</td><td>DOWN</td><td>HORZ</td></tr><tr><td>S</td><td>2054</td><td>0</td><td>2054</td><td>0</td></tr><tr><td>K</td><td>2054</td><td>0</td><td>2054</td><td>0</td></tr></table><br><b>UNFACTORED REACTIONS</b><br><table><tr><th>1ST LCASE</th><th>MAX./MIN. COMPONENT REACTIONS</th><th></th><th></th><th></th><th></th><th></th></tr><tr><td>JT</td><td>COMBINED</td><td>SNOW</td><td>LIVE</td><td>PERM.LIVE</td><td>WIND</td><td>DEAD</td></tr><tr><td>S</td><td>1463</td><td>902 / 0</td><td>0 / 0</td><td>0 / 0</td><td>0 / 0</td><td>560 / 0</td></tr><tr><td>K</td><td>1463</td><td>902 / 0</td><td>0 / 0</td><td>0 / 0</td><td>0 / 0</td><td>560 / 0</td></tr></table><br>BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) S, K<br><br><b>BRACING</b><br>TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.78 FT.<br>MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT. OR RIGID CEILING DIRECTLY APPLIED.<br><br>ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.<br><br><b>LOADING</b><br>TOTAL LOAD CASES: (4)<br><table><tr><th>CHORDS</th><th>MAX. FACTORED</th><th>FACTORED</th><th>VERT. LOAD LC1</th><th>MAX</th><th>CS</th><th>MAX. FACTORED</th><th>WEBS</th><th>MAX. FACTORED</th></tr><tr><th>MEMB.</th><th>FORCE (LBS)</th><th>VERT. (PLF)</th><th>CS (LC)</th><th>UNBRAC</th><th>MEMB.</th><th>FORCE (LBS)</th><th>MAX</th><th>CS (LC)</th></tr><tr><td>FR-TO</td><td></td><td>FROM</td><td>TO</td><td>LENGTH</td><td>FR-TO</td><td></td><td></td><td></td></tr><tr><td>A-B</td><td>-1813 / 0</td><td>-78.0</td><td>-78.0</td><td>0.08 (1)</td><td>4.88</td><td>R-B</td><td>-1447 / 0</td><td>0.24 (1)</td></tr><tr><td>B-C</td><td>-3106 / 0</td><td>-78.0</td><td>-78.0</td><td>0.20 (1)</td><td>3.78</td><td>B-Q</td><td>0 / 1282</td><td>0.32 (1)</td></tr><tr><td>C-D</td><td>-2530 / 0</td><td>-78.0</td><td>-78.0</td><td>0.14 (1)</td><td>4.19</td><td>Q-C</td><td>0 / 714</td><td>0.18 (1)</td></tr><tr><td>D-E</td><td>-2420 / 0</td><td>-78.0</td><td>-78.0</td><td>0.22 (1)</td><td>4.20</td><td>C-P</td><td>-722 / 0</td><td>0.16 (1)</td></tr><tr><td>E-F</td><td>-2420 / 0</td><td>-78.0</td><td>-78.0</td><td>0.22 (1)</td><td>4.20</td><td>P-D</td><td>0 / 884</td><td>0.22 (1)</td></tr><tr><td>F-G</td><td>-2530 / 0</td><td>-78.0</td><td>-78.0</td><td>0.14 (1)</td><td>4.19</td><td>D-O</td><td>0 / 448</td><td>0.11 (1)</td></tr><tr><td>G-H</td><td>-3106 / 0</td><td>-78.0</td><td>-78.0</td><td>0.20 (1)</td><td>3.78</td><td>O-E</td><td>-293 / 0</td><td>0.08 (1)</td></tr><tr><td>H-I</td><td>-1813 / 0</td><td>-78.0</td><td>-78.0</td><td>0.08 (1)</td><td>4.88</td><td>O-F</td><td>0 / 448</td><td>0.11 (1)</td></tr><tr><td>S-A</td><td>-1808 / 0</td><td>0.0</td><td>0.0</td><td>0.20 (1)</td><td>6.17</td><td>N-F</td><td>0 / 884</td><td>0.22 (1)</td></tr><tr><td>K-I</td><td>-1808 / 0</td><td>0.0</td><td>0.0</td><td>0.20 (1)</td><td>6.17</td><td>N-G</td><td>-722 / 0</td><td>0.16 (1)</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td>M-G</td><td>0 / 714</td><td>0.18 (1)</td></tr><tr><td>T-S</td><td>0 / 0</td><td>-96.5</td><td>-96.5</td><td>0.17 (1)</td><td>10.00</td><td>M-H</td><td>0 / 1282</td><td>0.32 (1)</td></tr><tr><td>S-R</td><td>0 / 0</td><td>-37.2</td><td>-37.2</td><td>0.17 (1)</td><td>10.00</td><td>L-H</td><td>-1447 / 0</td><td>0.24 (1)</td></tr><tr><td>R-Q</td><td>0 / 1605</td><td>-37.2</td><td>-37.2</td><td>0.31 (1)</td><td>10.00</td><td>A-R</td><td>0 / 1679</td><td>0.42 (1)</td></tr><tr><td>Q-P</td><td>0 / 2553</td><td>-112.0</td><td>-112.0</td><td>0.57 (1)</td><td>10.00</td><td>L-I</td><td>0 / 1679</td><td>0.42 (1)</td></tr><tr><td>P-O</td><td>0 / 2124</td><td>-112.0</td><td>-112.0</td><td>0.52 (1)</td><td>10.00</td><td></td><td></td><td></td></tr><tr><td>O-N</td><td>0 / 2124</td><td>-112.0</td><td>-112.0</td><td>0.52 (1)</td><td>10.00</td><td></td><td></td><td></td></tr><tr><td>N-M</td><td>0 / 2553</td><td>-112.0</td><td>-112.0</td><td>0.57 (1)</td><td>10.00</td><td></td><td></td><td></td></tr><tr><td>M-L</td><td>0 / 1605</td><td>-37.2</td><td>-37.2</td><td>0.31 (1)</td><td>10.00</td><td></td><td></td><td></td></tr><tr><td>L-K</td><td>0 / 0</td><td>-37.2</td><td>-37.2</td><td>0.17 (1)</td><td>10.00</td><td></td><td></td><td></td></tr><tr><td>K-J</td><td>0 / 0</td><td>-96.5</td><td>-96.5</td><td>0.17 (1)</td><td>10.00</td><td></td><td></td><td></td></tr></table><br><b>FACTORED CONCENTRATED LOADS (LBS)</b><br><table><tr><th>JT</th><th>LOC.</th><th>LC1</th><th>MAX-</th><th>MAX+</th><th>FACE</th><th>DIR.</th><th>TYPE</th><th>HEEL</th><th>CONN.</th></tr><tr><td>M</td><td>14-8-0</td><td>-435</td><td>-435</td><td>---</td><td>FRONT</td><td>VERT</td><td>TOTAL</td><td>---</td><td>C1</td></tr><tr><td>Q</td><td>3-10-0</td><td>-435</td><td>-435</td><td>---</td><td>FRONT</td><td>VERT</td><td>TOTAL</td><td>---</td><td>C1</td></tr></table><br><b>CONNECTION REQUIREMENTS</b><br>1) C1: A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED. |       |               |           |               | FACTORED GROSS REACTION | MAXIMUM FACTORED GROSS REACTION | INPUT BRG | REQRD BRG | JT | VERT | HORZ | DOWN | HORZ | S | 2054 | 0 | 2054 | 0 | K | 2054 | 0 | 2054 | 0 | 1ST LCASE | MAX./MIN. COMPONENT REACTIONS |  |  |  |  |  | JT | COMBINED | SNOW | LIVE | PERM.LIVE | WIND | DEAD | S | 1463 | 902 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 560 / 0 | K | 1463 | 902 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 560 / 0 | CHORDS | MAX. FACTORED | FACTORED | VERT. LOAD LC1 | MAX | CS | MAX. FACTORED | WEBS | MAX. FACTORED | MEMB. | FORCE (LBS) | VERT. (PLF) | CS (LC) | UNBRAC | MEMB. | FORCE (LBS) | MAX | CS (LC) | FR-TO |  | FROM | TO | LENGTH | FR-TO |  |  |  | A-B | -1813 / 0 | -78.0 | -78.0 | 0.08 (1) | 4.88 | R-B | -1447 / 0 | 0.24 (1) | B-C | -3106 / 0 | -78.0 | -78.0 | 0.20 (1) | 3.78 | B-Q | 0 / 1282 | 0.32 (1) | C-D | -2530 / 0 | -78.0 | -78.0 | 0.14 (1) | 4.19 | Q-C | 0 / 714 | 0.18 (1) | D-E | -2420 / 0 | -78.0 | -78.0 | 0.22 (1) | 4.20 | C-P | -722 / 0 | 0.16 (1) | E-F | -2420 / 0 | -78.0 | -78.0 | 0.22 (1) | 4.20 | P-D | 0 / 884 | 0.22 (1) | F-G | -2530 / 0 | -78.0 | -78.0 | 0.14 (1) | 4.19 | D-O | 0 / 448 | 0.11 (1) | G-H | -3106 / 0 | -78.0 | -78.0 | 0.20 (1) | 3.78 | O-E | -293 / 0 | 0.08 (1) | H-I | -1813 / 0 | -78.0 | -78.0 | 0.08 (1) | 4.88 | O-F | 0 / 448 | 0.11 (1) | S-A | -1808 / 0 | 0.0 | 0.0 | 0.20 (1) | 6.17 | N-F | 0 / 884 | 0.22 (1) | K-I | -1808 / 0 | 0.0 | 0.0 | 0.20 (1) | 6.17 | N-G | -722 / 0 | 0.16 (1) |  |  |  |  |  |  | M-G | 0 / 714 | 0.18 (1) | T-S | 0 / 0 | -96.5 | -96.5 | 0.17 (1) | 10.00 | M-H | 0 / 1282 | 0.32 (1) | S-R | 0 / 0 | -37.2 | -37.2 | 0.17 (1) | 10.00 | L-H | -1447 / 0 | 0.24 (1) | R-Q | 0 / 1605 | -37.2 | -37.2 | 0.31 (1) | 10.00 | A-R | 0 / 1679 | 0.42 (1) | Q-P | 0 / 2553 | -112.0 | -112.0 | 0.57 (1) | 10.00 | L-I | 0 / 1679 | 0.42 (1) | P-O | 0 / 2124 | -112.0 | -112.0 | 0.52 (1) | 10.00 |  |  |  | O-N | 0 / 2124 | -112.0 | -112.0 | 0.52 (1) | 10.00 |  |  |  | N-M | 0 / 2553 | -112.0 | -112.0 | 0.57 (1) | 10.00 |  |  |  | M-L | 0 / 1605 | -37.2 | -37.2 | 0.31 (1) | 10.00 |  |  |  | L-K | 0 / 0 | -37.2 | -37.2 | 0.17 (1) | 10.00 |  |  |  | K-J | 0 / 0 | -96.5 | -96.5 | 0.17 (1) | 10.00 |  |  |  | JT | LOC. | LC1 | MAX- | MAX+ | FACE | DIR. | TYPE | HEEL | CONN. | M | 14-8-0 | -435 | -435 | --- | FRONT | VERT | TOTAL | --- | C1 | Q | 3-10-0 | -435 | -435 | --- | FRONT | VERT | TOTAL | --- | C1 | <b>DESIGN CRITERIA</b><br><br>*** SPECIAL LOADS ANALYSIS ***<br>GEOMETRY AND/OR BASIC LOADS CHANGED BY USER.<br>LOADS WERE DERIVED FROM USER INPUT<br>NO FURTHER MODIFICATIONS WERE MADE<br><br>SPECIFIED LOADS:<br>TOP CH. LL = 21.0 PSF<br>DL = 6.0 PSF<br>BOT CH. LL = 0.0 PSF<br>DL = 7.4 PSF<br>TOTAL LOAD = 34.4 PSF<br><br><b>SPACING = 24.0 IN./C</b><br><br>LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM<br><br>GIRDER TYPE: CStdGirder<br>START DISTANCE = 3-10-0<br>START SPAN CARRIED = 5-10-8<br>END DISTANCE = 14-8-0<br>END SPAN CARRIED = 5-10-8<br>END WALL WIDTH = 0-0<br>APPLIED TO FRONT SIDE OF BOTTOM CHORD.<br>- ADDTL LOADS BASED ON 55 % OF GSL.<br><br>*** NON STANDARD GIRDER ***<br>ADDTL USER-DEFINED LOADS APPLIED TO ALL LOAD CASES.<br><br>THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBC 2015<br><br>THIS DESIGN COMPLIES WITH:<br>- PART 9 OF BCBC 2018, ABC 2019<br>- PART 9 OF OBC 2012 (2019 AMENDMENT)<br>- CSA 086-14<br>- TPIC 2014<br><br>DESIGN ASSUMPTIONS<br>- OVERHANG NOT TO BE ALTERED OR CUT OFF.<br><br>(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD<br><br>ALLOWABLE DEFL.(LL)= L/360 (0.62")<br>CALCULATED VERT. DEFL.(LL)= L/ 999 (0.07")<br>ALLOWABLE DEFL.(TL)= L/360 (0.62")<br>CALCULATED VERT. DEFL.(TL)= L/ 999 (0.13")<br><br>CANTILEVER DEFLECTION:<br>ALLOWABLE DEFL.(LL)= L/120 (0.19")<br>CALCULATED VERT. DEFL.(LL)= L/ 999 (0.01")<br>ALLOWABLE DEFL.(TL)= L/120 (0.19")<br>CALCULATED VERT. DEFL.(TL)= L/ 999 (0.01")<br><br>CSI: TC=0.22/1.00 (D-E:1), BC=0.57/1.00 (P-Q:1), WB=0.42/1.00 (L-I:1), SSI=0.16/1.00 (N-O:1)<br><br>DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.00<br>COMP=1.00 SHEAR=1.00 TENS=1.00<br><br>COMPANION LIVE LOAD FACTOR = 1.00 |  |  |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------------------------|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------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|                                                                                                                                                                                                                                                                                                                                                                                                             | FACTORED GROSS REACTION       | MAXIMUM FACTORED GROSS REACTION | INPUT BRG      | REQRD BRG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      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|       |       |       |         |   |      |         |       |       |       |         |        |               |          |                |     |    |               |      |               |       |             |             |         |        |       |             |     |         |       |  |      |    |        |       |  |  |  |     |           |       |       |          |      |     |           |          |     |           |       |       |          |      |     |          |          |     |           |       |       |          |      |     |         |          |     |           |       |       |          |      |     |          |          |     |           |       |       |          |      |     |         |          |     |           |       |       |          |      |     |         |          |     |           |       |       |          |      |     |          |          |     |           |       |       |          |      |     |         |          |     |           |     |     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   |      |     |       |      |       |     |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |
| JT                                                                                                                                                                                                                                                                                                                                                                                                          | VERT                          | HORZ                            | DOWN           | HORZ                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           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| FR-TO                                                                                                                                                                                                                                                                                                                                                                                                       |                               | FROM                            | TO             | LENGTH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                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| A-B                                                                                                                                                                                                                                                                                                                                                                                                         | -1813 / 0                     | -78.0                           | -78.0          | 0.08 (1)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              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| B-C                                                                                                                                                                                                                                                                                                                                                                                                         | -3106 / 0                     | -78.0                           | -78.0          | 0.20 (1)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              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|       |       |       |         |   |      |         |       |       |       |         |        |               |          |                |     |    |               |      |               |       |             |             |         |        |       |             |     |         |       |  |      |    |        |       |  |  |  |     |           |       |       |          |      |     |           |          |     |           |       |       |          |      |     |          |          |     |           |       |       |          |      |     |         |          |     |           |       |       |          |      |     |          |          |     |           |       |       |          |      |     |         |          |     |           |       |       |          |      |     |         |          |     |           |       |       |          |      |     |          |          |     |           |       |       |          |      |     |         |          |     |           |     |     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| C-D                                                                                                                                                                                                                                                                                                                                                                                                         | -2530 / 0                     | -78.0                           | -78.0          | 0.14 (1)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              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| D-E                                                                                                                                                                                                                                                                                                                                                                                                         | -2420 / 0                     | -78.0                           | -78.0          | 0.22 (1)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 4.20  | C-P           | -722 / 0  | 0.16 (1)      |                         |                                 |           |           |    |      |      |      |      |   |      |   |      |   |   |      |   |      |   |           |                               |  |  |  |  |  |    |          |      |      |           |      |      |   |      |         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| E-F                                                                                                                                                                                                                                                                                                                                                                                                         | -2420 / 0                     | -78.0                           | -78.0          | 0.22 (1)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 4.20  | P-D           | 0 / 884   | 0.22 (1)      |                         |                                 |           |           |    |      |      |      |      |   |      |   |      |   |   |      |   |      |   |           |                               |  |  |  |  |  |    |          |      |      |           |      |      |   |      |         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| F-G                                                                                                                                                                                                                                                                                                                                                                                                         | -2530 / 0                     | -78.0                           | -78.0          | 0.14 (1)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              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| G-H                                                                                                                                                                                                                                                                                                                                                                                                         | -3106 / 0                     | -78.0                           | -78.0          | 0.20 (1)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              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| H-I                                                                                                                                                                                                                                                                                                                                                                                                         | -1813 / 0                     | -78.0                           | -78.0          | 0.08 (1)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              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| S-A                                                                                                                                                                                                                                                                                                                                                                                                         | -1808 / 0                     | 0.0                             | 0.0            | 0.20 (1)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              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| K-I                                                                                                                                                                                                                                                                                                                                                                                                         | -1808 / 0                     | 0.0                             | 0.0            | 0.20 (1)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |       | M-G           | 0 / 714   | 0.18 (1)      |                         |                                 |           |           |    |      |      |      |      |   |      |   |      |   |   |      |   |      |   |           |                               |  |  |  |  |  |    |          |      |      |           |      |      |   |      |         |       |       |       |         |   |      |         |       |       |       |         |        |               |          |                |     |    |               |      |               |       |             |             |         |        |       |             |     |         |       |  |      |    |        |       |  |  |  |     |           |       |       |          |      |     |           |          |     |           |       |       |          |      |     |          |          |     |           |       |       |          |      |     |         |          |     |           |       |       |          |      |     |          |          |     |           |       |       |          |      |     |         |          |     |           |       |       |          |      |     |         |          |     |           |       |       |          |      |     |          |          |     |           |       |       |          |      |     |         |          |     |           |     |     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| T-S                                                                                                                                                                                                                                                                                                                                                                                                         | 0 / 0                         | -96.5                           | -96.5          | 0.17 (1)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 10.00 | M-H           | 0 / 1282  | 0.32 (1)      |                         |                                 |           |           |    |      |      |      |      |   |      |   |      |   |   |      |   |      |   |           |                               |  |  |  |  |  |    |          |      |      |           |      |      |   |      |         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| S-R                                                                                                                                                                                                                                                                                                                                                                                                         | 0 / 0                         | -37.2                           | -37.2          | 0.17 (1)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              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|       |       |       |         |   |      |         |       |       |       |         |        |               |          |                |     |    |               |      |               |       |             |             |         |        |       |             |     |         |       |  |      |    |        |       |  |  |  |     |           |       |       |          |      |     |           |          |     |           |       |       |          |      |     |          |          |     |           |       |       |          |      |     |         |          |     |           |       |       |          |      |     |          |          |     |           |       |       |          |      |     |         |          |     |           |       |       |          |      |     |         |          |     |           |       |       |          |      |     |          |          |     |           |       |       |          |      |     |         |          |     |           |     |     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| R-Q                                                                                                                                                                                                                                                                                                                                                                                                         | 0 / 1605                      | -37.2                           | -37.2          | 0.31 (1)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 10.00 | A-R           | 0 / 1679  | 0.42 (1)      |                         |                                 |           |           |    |      |      |      |      |   |      |   |      |   |   |      |   |      |   |           |                               |  |  |  |  |  |    |          |      |      |           |      |      |   |      |         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| Q-P                                                                                                                                                                                                                                                                                                                                                                                                         | 0 / 2553                      | -112.0                          | -112.0         | 0.57 (1)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 10.00 | L-I           | 0 / 1679  | 0.42 (1)      |                         |                                 |           |           |    |      |      |      |      |   |      |   |      |   |   |      |   |      |   |           |                               |  |  |  |  |  |    |          |      |      |           |      |      |   |      |         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| P-O                                                                                                                                                                                                                                                                                                                                                                                                         | 0 / 2124                      | -112.0                          | -112.0         | 0.52 (1)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              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| O-N                                                                                                                                                                                                                                                                                                                                                                                                         | 0 / 2124                      | -112.0                          | -112.0         | 0.52 (1)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              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| N-M                                                                                                                                                                                                                                                                                                                                                                                                         | 0 / 2553                      | -112.0                          | -112.0         | 0.57 (1)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              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|       |       |       |         |   |      |         |       |       |       |         |        |               |          |                |     |    |               |      |               |       |             |             |         |        |       |             |     |         |       |  |      |    |        |       |  |  |  |     |           |       |       |          |      |     |           |          |     |           |       |       |          |      |     |          |          |     |           |       |       |          |      |     |         |          |     |           |       |       |          |      |     |          |          |     |           |       |       |          |      |     |         |          |     |           |       |       |          |      |     |         |          |     |           |       |       |          |      |     |          |          |     |           |       |       |          |      |     |         |          |     |           |     |     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| M-L                                                                                                                                                                                                                                                                                                                                                                                                         | 0 / 1605                      | -37.2                           | -37.2          | 0.31 (1)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              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| L-K                                                                                                                                                                                                                                                                                                                                                                                                         | 0 / 0                         | -37.2                           | -37.2          | 0.17 (1)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              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| K-J                                                                                                                                                                                                                                                                                                                                                                                                         | 0 / 0                         | -96.5                           | -96.5          | 0.17 (1)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              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| JT                                                                                                                                                                                                                                                                                                                                                                                                          | LOC.                          | LC1                             | MAX-           | MAX+                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  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| M                                                                                                                                                                                                                                                                                                                                                                                                           | 14-8-0                        | -435                            | -435           | ---                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | FRONT | VERT          | TOTAL     | ---           | C1                      |                                 |           |           |    |      |      |      |      |   |      |   |      |   |   |      |   |      |   |           |                               |  |  |  |  |  |    |          |      |      |           |      |      |   |      |         |       |       |       |         |   |      |         |       |       |       |         |        |               |          |                |     |    |               |      |               |       |             |             |         |        |       |             |     |         |       |  |      |    |        |       |  |  |  |     |           |       |       |          |      |     |           |          |     |           |       |       |          |      |     |          |          |     |           |       |       |          |      |     |         |          |     |           |       |       |          |      |     |          |          |     |           |       |       |          |      |     |         |          |     |           |       |       |          |      |     |         |          |     |           |       |       |          |      |     |          |          |     |           |       |       |          |      |     |         |          |     |           |     |     |          |      |     |         |          |     |           |     |     |          |      |     |          |          |  |  |  |  |  |  |     |         |          |     |       |       |       |          |       |     |          |          |     |       |       |       |          |       |     |           |          |     |          |       |       |          |       |     |          |          |     |          |        |        |          |       |     |          |          |     |          |        |        |          |       |  |  |  |     |          |        |        |          |       |  |  |  |     |          |        |        |          |       |  |  |  |     |          |       |       |          |       |  |  |  |     |       |       |       |          |       |  |  |  |     |       |       |       |          |       |  |  |  |    |      |     |      |      |      |      |      |      |       |   |        |      |      |     |       |      |       |     |    |   |        |      |      |     |       |      |       |     |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |
| Q                                                                                                                                                                                                                                                                                                                                                                                                           | 3-10-0                        | -435                            | -435           | ---                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | FRONT | VERT          | TOTAL     | ---           | C1                      |                                 |           |           |    |      |      |      |      |   |      |   |      |   |   |      |   |      |   |           |                               |  |  |  |  |  |    |          |      |      |           |      |      |   |      |         |       |       |       |         |   |      |         |       |       |       |         |        |               |          |                |     |    |               |      |               |       |             |             |         |        |       |             |     |         |       |  |      |    |        |       |  |  |  |     |           |       |       |          |      |     |           |          |     |           |       |       |          |      |     |          |          |     |           |       |       |          |      |     |         |          |     |           |       |       |          |      |     |          |          |     |           |       |       |          |      |     |         |          |     |           |       |       |          |      |     |         |          |     |           |       |       |          |      |     |          |          |     |           |       |       |          |      |     |         |          |     |           |     |     |          |      |     |         |          |     |           |     |     |          |      |     |          |          |  |  |  |  |  |  |     |         |          |     |       |       |       |          |       |     |          |          |     |       |       |       |          |       |     |           |          |     |          |       |       |          |       |     |          |          |     |          |        |        |          |       |     |          |          |     |          |        |        |          |       |  |  |  |     |          |        |        |          |       |  |  |  |     |          |        |        |          |       |  |  |  |     |          |       |       |          |       |  |  |  |     |       |       |       |          |       |  |  |  |     |       |       |       |          |       |  |  |  |    |      |     |      |      |      |      |      |      |       |   |        |      |      |     |       |      |       |     |    |   |        |      |      |     |       |      |       |     |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |

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



CONTINUED ON PAGE 2

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

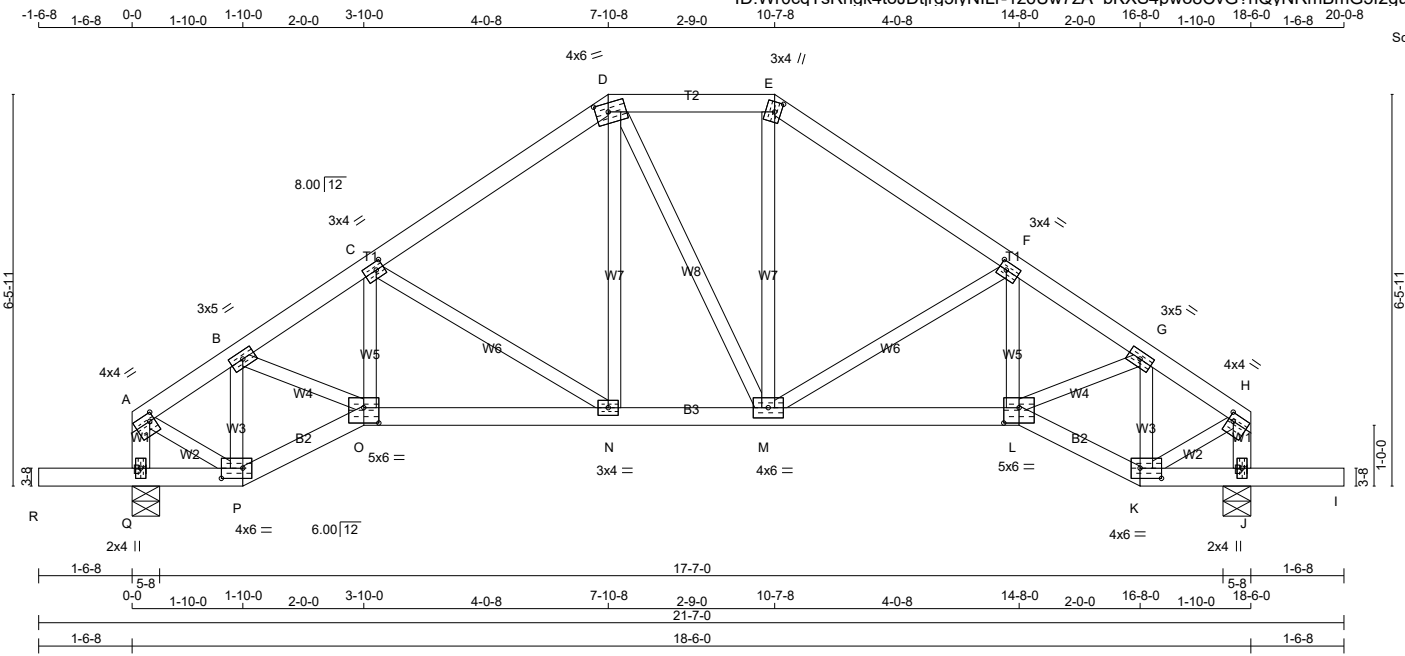


|          |            |          |     |                      |           |
|----------|------------|----------|-----|----------------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.  |
| 318797   | H2TA       | 1        | 1   | TRUSS DESC. JT 45147 | E20041035 |

Alpa Roof Truss, Maple

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TOTAL WEIGHT = 85 lb

| LUMBER                |      |        |        |
|-----------------------|------|--------|--------|
| N. L. G. A. RULES     |      |        |        |
| CHORDS                | SIZE | LUMBER | DESCR. |
| A - D                 | 2x4  | DRY    | No.2   |
| D - E                 | 2x4  | DRY    | No.2   |
| E - H                 | 2x4  | DRY    | No.2   |
| Q - A                 | 2x4  | DRY    | No.2   |
| J - H                 | 2x4  | DRY    | No.2   |
| R - P                 | 2x4  | DRY    | No.2   |
| P - O                 | 2x4  | DRY    | No.2   |
| O - L                 | 2x4  | DRY    | No.2   |
| L - K                 | 2x4  | DRY    | No.2   |
| K - I                 | 2x4  | DRY    | No.2   |
| ALL WEBS              | 2x3  | DRY    | No.2   |
| EXCEPT                |      |        | SPF    |
| DRY: SEASONED LUMBER. |      |        |        |

| PLATES (table is in inches) |         |        |     |     |           |
|-----------------------------|---------|--------|-----|-----|-----------|
| JT                          | TYPE    | PLATES | W   | LEN | Y X       |
| A                           | TMVW-t  | MT20   | 4.0 | 4.0 | 1.50 1.00 |
| B                           | TMWW-t  | MT20   | 3.0 | 5.0 |           |
| C                           | TMWW-t  | MT20   | 3.0 | 4.0 | 1.50 1.50 |
| D                           | TTWW-m  | MT20   | 4.0 | 6.0 | 1.75 2.50 |
| E                           | TTW+m   | MT20   | 3.0 | 4.0 | 2.00 1.25 |
| F                           | TMWW-t  | MT20   | 3.0 | 4.0 | 1.50 1.50 |
| G                           | TMWW-t  | MT20   | 3.0 | 5.0 |           |
| H                           | TMVW-t  | MT20   | 4.0 | 4.0 | 1.50 1.00 |
| J                           | BMV1+p  | MT20   | 2.0 | 4.0 |           |
| K                           | BBWW-l  | MT20   | 4.0 | 6.0 | 2.00 4.25 |
| L                           | BBWW-l  | MT20   | 5.0 | 6.0 | 3.00 3.00 |
| M                           | BMWWW-t | MT20   | 4.0 | 6.0 |           |
| N                           | BMWW-t  | MT20   | 3.0 | 4.0 |           |
| O                           | BBWW-l  | MT20   | 5.0 | 6.0 | 3.00 3.00 |
| P                           | BBWW-l  | MT20   | 4.0 | 6.0 | 2.00 4.25 |
| Q                           | BMV1+p  | MT20   | 2.0 | 4.0 |           |

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

| BEARINGS |      | FACTORED GROSS REACTION |      | MAXIMUM FACTORED GROSS REACTION |        | INPUT BRG |       | REQRD BRG |  |
|----------|------|-------------------------|------|---------------------------------|--------|-----------|-------|-----------|--|
| JT       | VERT | HORZ                    | DOWN | HORZ                            | UPLIFT | IN-SX     | IN-SX |           |  |
| Q        | 1041 | 0                       | 1041 | 0                               | 0      | 5-8       | 1-9   |           |  |
| J        | 1041 | 0                       | 1041 | 0                               | 0      | 5-8       | 1-9   |           |  |

| UNFACTORED REACTIONS |          | 1ST LCASE |       | MAX./MIN. COMPONENT REACTIONS |       |
|----------------------|----------|-----------|-------|-------------------------------|-------|
| JT                   | COMBINED | SNOW      | LIVE  | PERM.LIVE                     | WIND  |
| Q                    | 742      | 453 / 0   | 0 / 0 | 0 / 0                         | 0 / 0 |
| J                    | 742      | 453 / 0   | 0 / 0 | 0 / 0                         | 0 / 0 |

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

**BRACING**

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.57 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 CSI (LC) | MAX. UNBRACED LENGTH | MEMB. | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
| FR-TO  |                           | FROM                      | TO               | FR-TO                |       |                           |              |
| A-B    | -775 / 0                  | -78.0                     | -78.0 0.04 (1)   | 6.25                 | P-B   | -647 / 0                  | 0.10 (1)     |
| B-C    | -1290 / 0                 | -78.0                     | -78.0 0.12 (1)   | 5.57                 | B-O   | 0 / 541                   | 0.12 (1)     |
| C-D    | -926 / 0                  | -78.0                     | -78.0 0.15 (1)   | 6.25                 | O-C   | 0 / 119                   | 0.03 (4)     |
| D-E    | -764 / 0                  | -78.0                     | -78.0 0.08 (1)   | 6.25                 | C-N   | -392 / 0                  | 0.15 (1)     |
| E-F    | -927 / 0                  | -78.0                     | -78.0 0.15 (1)   | 6.25                 | N-D   | 0 / 270                   | 0.06 (1)     |
| F-G    | -1290 / 0                 | -78.0                     | -78.0 0.12 (1)   | 5.57                 | D-M   | 0 / 3                     | 0.00 (1)     |
| G-H    | -775 / 0                  | -78.0                     | -78.0 0.04 (1)   | 6.25                 | M-E   | 0 / 273                   | 0.06 (1)     |
| Q-A    | -813 / 0                  | 0.0                       | 0.0 0.08 (1)     | 7.81                 | M-F   | -391 / 0                  | 0.15 (1)     |
| J-H    | -813 / 0                  | 0.0                       | 0.0 0.08 (1)     | 7.81                 | L-F   | 0 / 117                   | 0.03 (4)     |
|        |                           |                           |                  |                      | L-G   | 0 / 541                   | 0.12 (1)     |
| R-Q    | 0 / 0                     | -96.5                     | -96.5 0.16 (1)   | 10.00                | K-G   | -647 / 0                  | 0.10 (1)     |
| Q-P    | 0 / 0                     | -18.5                     | -18.5 0.12 (1)   | 10.00                | A-P   | 0 / 716                   | 0.16 (1)     |
| P-O    | 0 / 683                   | -18.5                     | -18.5 0.12 (1)   | 10.00                | K-H   | 0 / 716                   | 0.16 (1)     |
| O-N    | 0 / 1090                  | -18.5                     | -18.5 0.22 (1)   | 10.00                |       |                           |              |
| N-M    | 0 / 763                   | -18.5                     | -18.5 0.16 (1)   | 10.00                |       |                           |              |
| M-L    | 0 / 1090                  | -18.5                     | -18.5 0.21 (1)   | 10.00                |       |                           |              |
| L-K    | 0 / 683                   | -18.5                     | -18.5 0.12 (1)   | 10.00                |       |                           |              |
| K-J    | 0 / 0                     | -18.5                     | -18.5 0.12 (1)   | 10.00                |       |                           |              |
| J-I    | 0 / 0                     | -96.5                     | -96.5 0.16 (1)   | 10.00                |       |                           |              |

**DESIGN CRITERIA**

**SPECIFIED LOADS:**

TOP CH. LL = 21.0 PSF

DL = 6.0 PSF

BOT CH. LL = 0.0 PSF

DL = 7.4 PSF

TOTAL LOAD = 34.4 PSF

**SPACING = 24.0 IN./C**

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

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

THIS DESIGN COMPLIES WITH:

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

**DESIGN ASSUMPTIONS**

-OVERHANG NOT TO BE ALTERED OR CUT OFF.

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

ALLOWABLE DEFL.(LL)= L/360 (0.62")

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

ALLOWABLE DEFL.(TL)= L/360 (0.62")

CALCULATED VERT. DEFL.(TL) = L/ 999 (0.06")

**CANTILEVER DEFLECTION:**

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

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

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

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

CSI: TC=0.15/1.00 (E-F:1) , BC=0.22/1.00 (N-O:1) , WB=0.16/1.00 (H-K:1) , SSI=0.12/1.00 (Q-R:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10

COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

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

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.87 (K) (INPUT = 0.90 )

JSI METAL= 0.28 (H) (INPUT = 1.00 )

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



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TOTAL WEIGHT = 4 X 75 = 299 lb

DRY: SEASONED LUMBER.

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

### UNFACTORED REACTIONS

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

## BRACING

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

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE LATERALLY RESTRAINED

## LOADING

**TOTAL LOAD CASES: (4)**

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



## DESIGN CRITERIA

SPECIFIED LOADS:

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

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

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

THIS DESIGN COMPLIES WITH:

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

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

ALLOWABLE DEFL.(LL)=  $L/360$  (0.60")  
 CALCULATED VERT. DEFL.(LL) =  $L/999$  (0.02")  
 ALLOWABLE DEFL.(TL)=  $L/360$  (0.60")  
 CALCULATED VERT. DEFL.(TL) =  $L/614$  (0.35")

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

CSI: TC=0.27/1.00 (A-B:1), BC=0.52/1.00 (G-H:4),  
WB=0.63/1.00 (B-H:1), SSI=0.14/1.00 (B-C:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

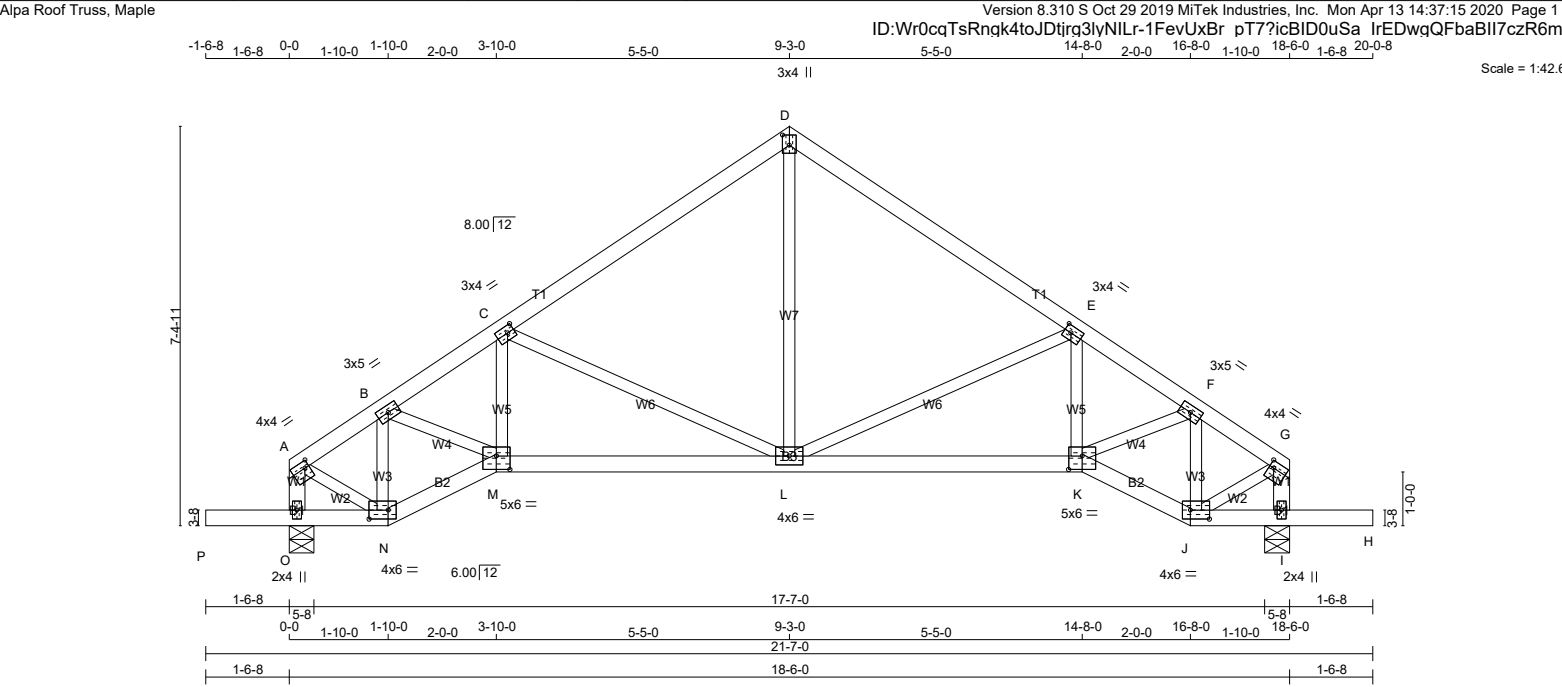
| NAIL VALUES |           |     |       |     |         |      |
|-------------|-----------|-----|-------|-----|---------|------|
| PLATE       | GRIP(DRY) |     | SHEAR |     | SECTION |      |
|             | (PSI)     |     | (PLI) |     | (PLI)   |      |
|             | MAX       | MIN | MAX   |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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (D) (INPUT = 0.90 )  
JSI METAL= 0.26 (B) (INPUT = 1.00 )

|          |            |          |     |                      |           |
|----------|------------|----------|-----|----------------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.  |
| 318797   | H3TA       | 1        | 1   | TRUSS DESC. JT 45147 | E20041037 |



|                       |      |        |        |
|-----------------------|------|--------|--------|
| <b>LUMBER</b>         |      |        |        |
| N. L. G. A. RULES     |      |        |        |
| CHORDS                | SIZE | LUMBER | DESCR. |
| A - D                 | 2x4  | DRY    | No.2   |
| D - G                 | 2x4  | DRY    | No.2   |
| O - A                 | 2x4  | DRY    | No.2   |
| I - G                 | 2x4  | DRY    | No.2   |
| P - N                 | 2x4  | DRY    | No.2   |
| N - M                 | 2x4  | DRY    | No.2   |
| M - K                 | 2x4  | DRY    | No.2   |
| K - J                 | 2x4  | DRY    | No.2   |
| J - H                 | 2x4  | DRY    | No.2   |
| ALL WEBS              | 2x3  | DRY    | No.2   |
| EXCEPT                |      |        | SPF    |
| DRY: SEASONED LUMBER. |      |        |        |

|                                    |         |        |     |     |           |
|------------------------------------|---------|--------|-----|-----|-----------|
| <b>PLATES (table is in inches)</b> |         |        |     |     |           |
| JT                                 | TYPE    | PLATES | W   | LEN | Y X       |
| A                                  | TMVW-t  | MT20   | 4.0 | 4.0 | 1.50 1.00 |
| B                                  | TMWW-t  | MT20   | 3.0 | 5.0 |           |
| C                                  | TMWW-t  | MT20   | 3.0 | 4.0 | 1.50 1.50 |
| D                                  | TTW+p   | MT20   | 3.0 | 4.0 | 2.25 1.50 |
| E                                  | TMWW-t  | MT20   | 3.0 | 4.0 | 1.50 1.50 |
| F                                  | TMWW-t  | MT20   | 3.0 | 5.0 |           |
| G                                  | TMVW-t  | MT20   | 4.0 | 4.0 | 1.50 1.00 |
| I                                  | BMV1+p  | MT20   | 2.0 | 4.0 |           |
| J                                  | BBWW-I  | MT20   | 4.0 | 6.0 | 2.00 4.25 |
| K                                  | BBWW-I  | MT20   | 5.0 | 6.0 | 3.00 3.00 |
| L                                  | BMWWW-t | MT20   | 4.0 | 6.0 |           |
| M                                  | BBWW-I  | MT20   | 5.0 | 6.0 | 3.00 3.00 |
| N                                  | BBWW-I  | MT20   | 4.0 | 6.0 | 2.00 4.25 |
| O                                  | BMV1+p  | MT20   | 2.0 | 4.0 |           |

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



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

|                 |      |                |                |          |        |       |
|-----------------|------|----------------|----------------|----------|--------|-------|
| <b>BEARINGS</b> |      | FACTORED       | MAXIMUM        | FACTORED | INPUT  | REQRD |
|                 |      | GROSS REACTION | GROSS REACTION | DOWN     | BRG    | BRG   |
| JT              | VERT | HORZ           | DOWN           | HORZ     | UPLIFT | IN-SX |
| O               | 1041 | 0              | 1041           | 0        | 0      | 5-8   |
| I               | 1041 | 0              | 1041           | 0        | 0      | 5-8   |

|                             |          |           |                               |           |       |         |       |  |
|-----------------------------|----------|-----------|-------------------------------|-----------|-------|---------|-------|--|
| <b>UNFACTORED REACTIONS</b> |          | 1ST LCASE | MAX /MIN. COMPONENT REACTIONS |           |       |         |       |  |
| JT                          | COMBINED | SNOW      | LIVE                          | PERM.LIVE | WIND  | DEAD    | SOIL  |  |
| O                           | 742      | 453 / 0   | 0 / 0                         | 0 / 0     | 0 / 0 | 289 / 0 | 0 / 0 |  |
| I                           | 742      | 453 / 0   | 0 / 0                         | 0 / 0     | 0 / 0 | 289 / 0 | 0 / 0 |  |

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

**BRACING**

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.41 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.

|                |  |                       |                           |                  |              |                      |             |                           |                        |  |  |
|----------------|--|-----------------------|---------------------------|------------------|--------------|----------------------|-------------|---------------------------|------------------------|--|--|
| <b>LOADING</b> |  | TOTAL LOAD CASES: (4) |                           |                  |              |                      |             |                           |                        |  |  |
|                |  | <b>CHORDS</b>         |                           |                  |              |                      | <b>WEBS</b> |                           |                        |  |  |
|                |  | MEMB.                 | MAX. FACTORED FORCE (LBS) | VERT. LOAD (PLF) | LC1 MAX (LC) | MAX. UNBRACED LENGTH | MEMB.       | MAX. FACTORED FORCE (LBS) | MAX. FACTORED CSI (LC) |  |  |
| FR-TO          |  |                       |                           | FROM             | TO           |                      | FR-TO       |                           |                        |  |  |
| A - B          |  | -767 / 0              | -78.0                     | -78.0            | 0.06 (1)     | 6.25                 | L - D       | 0 / 555                   | 0.12 (1)               |  |  |
| B - C          |  | -1304 / 0             | -78.0                     | -78.0            | 0.22 (1)     | 5.41                 | L - E       | -506 / 0                  | 0.30 (1)               |  |  |
| C - D          |  | -828 / 0              | -78.0                     | -78.0            | 0.26 (1)     | 6.25                 | K - E       | 0 / 92                    | 0.03 (4)               |  |  |
| D - E          |  | -828 / 0              | -78.0                     | -78.0            | 0.26 (1)     | 6.25                 | K - F       | 0 / 596                   | 0.13 (1)               |  |  |
| E - F          |  | -1304 / 0             | -78.0                     | -78.0            | 0.22 (1)     | 5.41                 | J - F       | -635 / 0                  | 0.10 (1)               |  |  |
| F - G          |  | -767 / 0              | -78.0                     | -78.0            | 0.06 (1)     | 6.25                 | C - L       | -506 / 0                  | 0.30 (1)               |  |  |
| O - A          |  | -813 / 0              | 0.0                       | 0.0              | 0.08 (1)     | 7.81                 | M - C       | 0 / 92                    | 0.03 (4)               |  |  |
| I - G          |  | -813 / 0              | 0.0                       | 0.0              | 0.08 (1)     | 7.81                 | B - M       | 0 / 596                   | 0.13 (1)               |  |  |
|                |  |                       |                           |                  |              |                      | N - B       | -635 / 0                  | 0.10 (1)               |  |  |
| P - O          |  | 0 / 0                 | -96.5                     | -96.5            | 0.16 (1)     | 10.00                | A - N       | 0 / 701                   | 0.16 (1)               |  |  |
| O - N          |  | 0 / 0                 | -18.5                     | -18.5            | 0.12 (1)     | 10.00                | J - G       | 0 / 701                   | 0.16 (1)               |  |  |
| N - M          |  | 0 / 669               | -18.5                     | -18.5            | 0.12 (1)     | 10.00                |             |                           |                        |  |  |
| M - L          |  | 0 / 1128              | -18.5                     | -18.5            | 0.27 (1)     | 10.00                |             |                           |                        |  |  |
| L - K          |  | 0 / 1128              | -18.5                     | -18.5            | 0.27 (1)     | 10.00                |             |                           |                        |  |  |
| K - J          |  | 0 / 669               | -18.5                     | -18.5            | 0.12 (1)     | 10.00                |             |                           |                        |  |  |
| J - I          |  | 0 / 0                 | -18.5                     | -18.5            | 0.12 (1)     | 10.00                |             |                           |                        |  |  |
| I - H          |  | 0 / 0                 | -96.5                     | -96.5            | 0.16 (1)     | 10.00                |             |                           |                        |  |  |

**DESIGN CRITERIA**

|                         |    |   |          |
|-------------------------|----|---|----------|
| <b>SPECIFIED LOADS:</b> |    |   |          |
| TOP CH.                 | LL | = | 21.0 PSF |
|                         | DL | = | 6.0 PSF  |
| BOT CH.                 | LL | = | 0.0 PSF  |
|                         | DL | = | 7.4 PSF  |
| TOTAL LOAD = 34.4 PSF   |    |   |          |

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

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

THIS DESIGN COMPLIES WITH:

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

**DESIGN ASSUMPTIONS**

-OVERHANG NOT TO BE ALTERED OR CUT OFF.

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

ALLOWABLE DEFL.(LL)= L/360 (0.62")

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

ALLOWABLE DEFL.(TL)= L/360 (0.62")

CALCULATED VERT. DEFL.(TL) = L/ 999 (0.07")

**CANTILEVER DEFLECTION:**

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

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

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

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

CSI: TC=0.26/1.00 (C-D:1), BC=0.27/1.00 (L-M:1), WB=0.30/1.00 (C-L:1), SSI=0.16/1.00 (C-D:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

|                    |            |               |           |
|--------------------|------------|---------------|-----------|
| <b>NAIL VALUES</b> |            |               |           |
| PLATE GRIP(DRY)    | SHEAR (PS) | SECTION (PLI) | (PLI)     |
|                    | MAX MIN    | MAX MIN       | MAX MIN   |
| MT20               | 650 371    | 1747 788      | 1987 1873 |

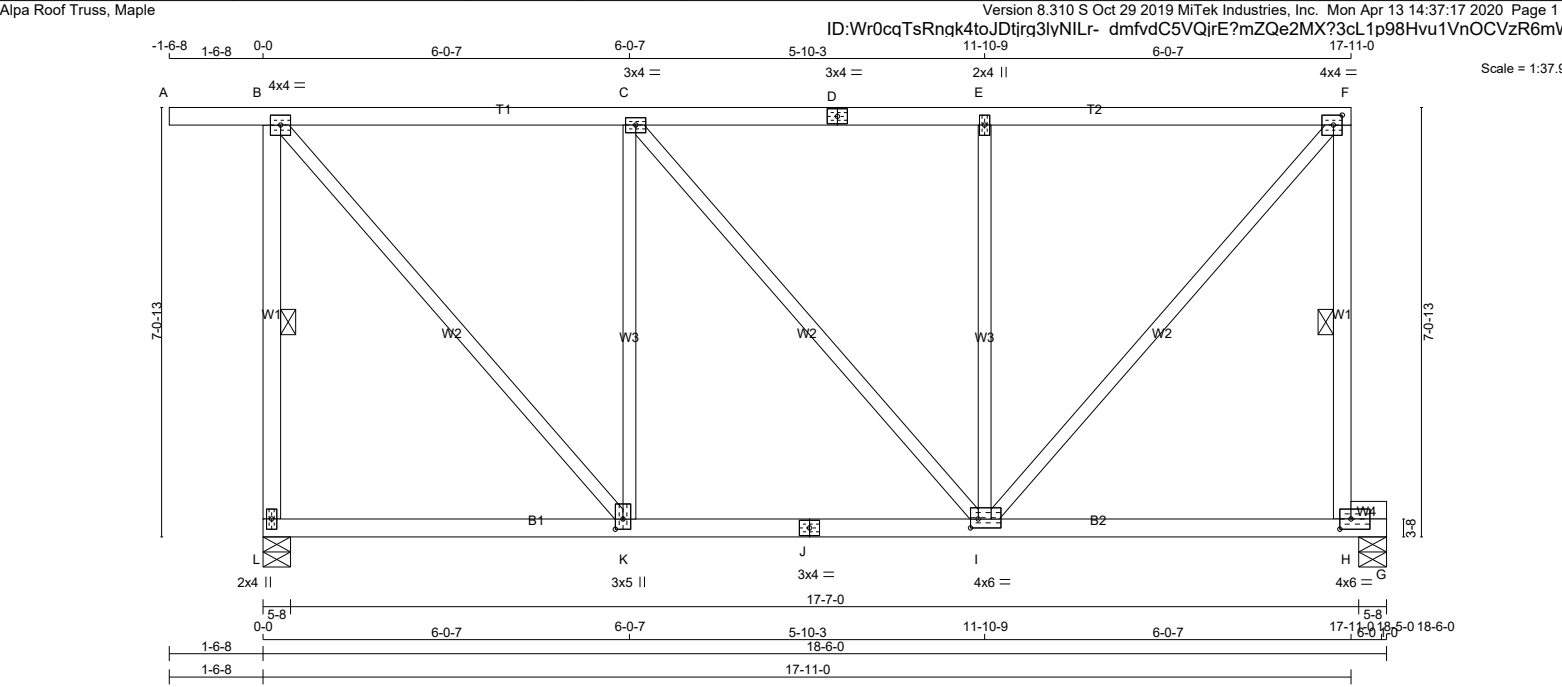
PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.86 (N) (INPUT = 0.90 )

JSI METAL= 0.27 (A) (INPUT = 1.00 )

|          |            |          |     |                      |           |
|----------|------------|----------|-----|----------------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.  |
| 318797   | H4         | 1        | 1   | TRUSS DESC. JT 45147 | E20041038 |



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

| PLATES (table is in inches) |         |        |     |     |      |      |
|-----------------------------|---------|--------|-----|-----|------|------|
| JT                          | TYPE    | PLATES | W   | LEN | Y    | X    |
| B                           | TMVW-t  | MT20   | 4.0 | 4.0 |      |      |
| C                           | TMWW-t  | MT20   | 3.0 | 4.0 |      |      |
| D                           | TS-t    | MT20   | 3.0 | 4.0 |      |      |
| E                           | TMW+w   | MT20   | 2.0 | 4.0 |      |      |
| F                           | TMVW-t  | MT20   | 4.0 | 4.0 | 2.00 | 1.75 |
| H                           | BMVW-t  | MT20   | 4.0 | 6.0 | 2.00 | 2.25 |
| I                           | BMWWW-t | MT20   | 4.0 | 6.0 | 1.75 | 1.50 |
| J                           | BS-t    | MT20   | 3.0 | 4.0 |      |      |
| K                           | BMWW+t  | MT20   | 3.0 | 5.0 | 2.00 | 1.50 |
| L                           | BMV1+p  | MT20   | 2.0 | 4.0 |      |      |

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



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

| BEARINGS |      | FACTORED GROSS REACTION | MAXIMUM FACTORED GROSS REACTION | INPUT BRG | REQRD BRG |
|----------|------|-------------------------|---------------------------------|-----------|-----------|
| JT       | VERT | HORZ                    | DOWN                            | HORZ      | UPLIFT    |
| L        | 1012 | 0                       | 1012                            | 0         | 0         |
| G        | 848  | 0                       | 848                             | 0         | 0         |

| UNFACTORED REACTIONS |          | 1ST LCASE | MAX /MIN. COMPONENT REACTIONS |
|----------------------|----------|-----------|-------------------------------|
| JT                   | COMBINED | SNOW      | LIVE                          |
| L                    | 719      | 453 / 0   | 0 / 0                         |
| G                    | 605      | 364 / 0   | 0 / 0                         |

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

#### BRACING

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

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

1 LATERAL BRACE(S) AT 1/2 LENGTH OF B-L, F-H.

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

#### LOADING

TOTAL LOAD CASES: (4)

| CHORDS |                           |                           |                        | WEBS  |                           |                        |  |
|--------|---------------------------|---------------------------|------------------------|-------|---------------------------|------------------------|--|
| MEMB.  | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX. FACTORED CSI (LC) | MEMB. | MAX. FACTORED FORCE (LBS) | MAX. FACTORED CSI (LC) |  |
| FR-TO  |                           | FROM TO                   |                        | FR-TO |                           |                        |  |
| L-B    | -961 / 0                  | 0.0 0.0 0.22 (1)          | 6.25                   | I-F   | 0 / 941                   | 0.21 (1)               |  |
| A-B    | 0 / 0                     | -78.0 -78.0 0.13 (1)      | 10.00                  | B-K   | 0 / 871                   | 0.20 (1)               |  |
| B-C    | -579 / 0                  | -78.0 -78.0 0.39 (1)      | 6.25                   | I-E   | -507 / 0                  | 0.44 (1)               |  |
| C-D    | -626 / 0                  | -78.0 -78.0 0.39 (1)      | 6.25                   | K-C   | -563 / 0                  | 0.49 (1)               |  |
| D-E    | -626 / 0                  | -78.0 -78.0 0.39 (1)      | 6.25                   | C-I   | 0 / 71                    | 0.02 (1)               |  |
| E-F    | -626 / 0                  | -78.0 -78.0 0.39 (1)      | 6.25                   |       |                           |                        |  |
| H-F    | -894 / 0                  | 0.0 0.0 0.20 (1)          | 6.25                   |       |                           |                        |  |
| L-K    | 0 / 0                     | -18.5 -18.5 0.14 (4)      | 10.00                  |       |                           |                        |  |
| K-J    | 0 / 579                   | -18.5 -18.5 0.35 (1)      | 10.00                  |       |                           |                        |  |
| J-I    | 0 / 579                   | -18.5 -18.5 0.35 (1)      | 10.00                  |       |                           |                        |  |
| I-H    | 0 / 0                     | -18.5 -18.5 0.67 (1)      | 10.00                  |       |                           |                        |  |
| H-G    | 0 / 0                     | -18.5 -18.5 0.28 (1)      | 10.00                  |       |                           |                        |  |

#### DESIGN CRITERIA

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

SPACING = 24.0 IN./C

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

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

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

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

ALLOWABLE DEFL.(LL)= L/360 (0.62")  
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.15")  
ALLOWABLE DEFL.(TL)= L/360 (0.62")  
CALCULATED VERT. DEFL.(TL) = L/ 676 (0.33")

CSI: TC=0.39/1.00 (C-E:1), BC=0.67/1.00 (H-I:1), WB=0.49/1.00 (C-K:1), SS=0.33/1.00 (G-H:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

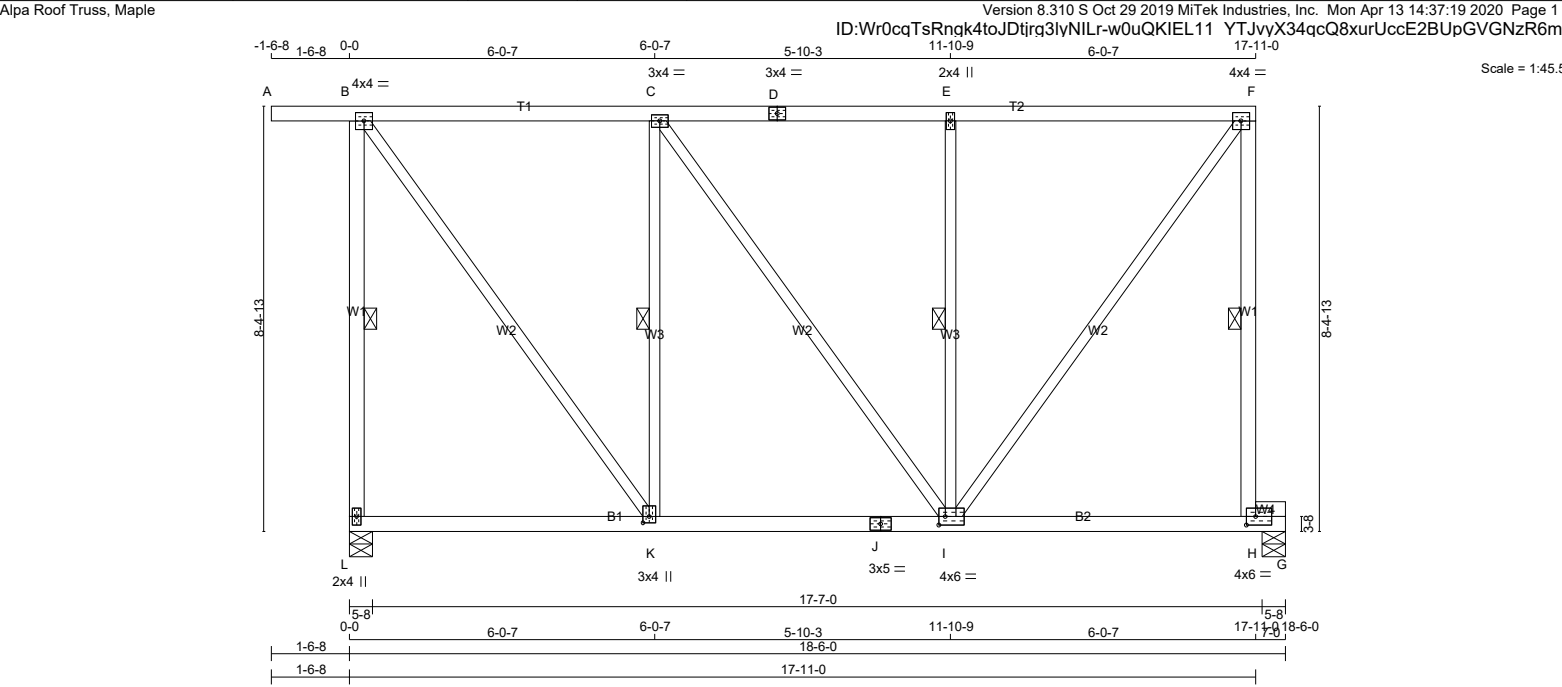
| NAIL VALUES |           |         |                    |
|-------------|-----------|---------|--------------------|
| PLATE       | GRIP(DRY) | SHEAR   | SECTION            |
| (PSI)       | (PLI)     | (PLI)   | (PLI)              |
| MAX MIN     | MAX MIN   | MAX MIN | MAX MIN            |
| MT20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

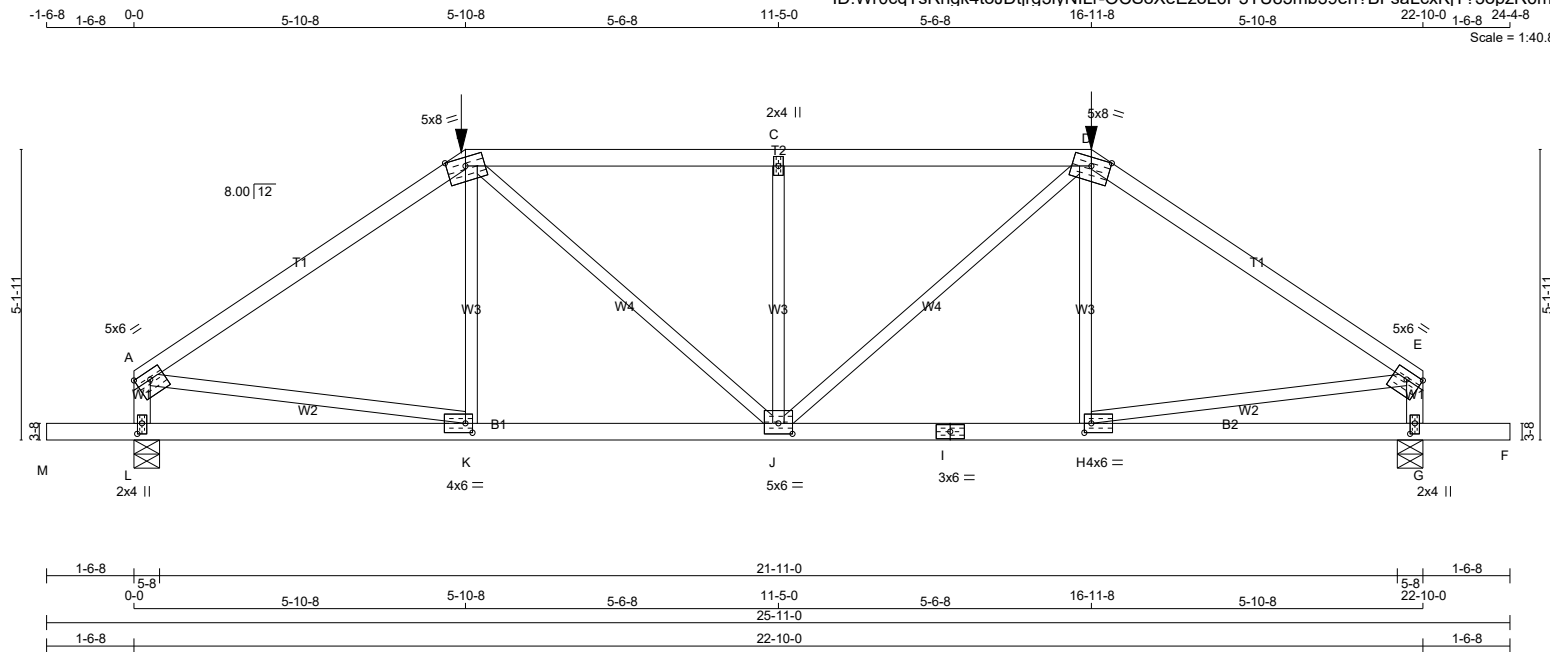
PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.86 (K) (INPUT = 0.90 )  
JSI METAL= 0.48 (H) (INPUT = 1.00 )

|          |            |          |     |                      |           |
|----------|------------|----------|-----|----------------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.  |
| 318797   | H5         | 2        | 1   | TRUSS DESC. JT 45147 | E20041039 |





TOTAL WEIGHT = 92 lb

| LUMBER             |      |     |            |       |
|--------------------|------|-----|------------|-------|
| N. L. G. A. RULES  |      |     |            |       |
| CHORDS             | SIZE |     | LUMBER     | DESCR |
| A - B              | 2x4  | DRY | No.2       | SPF   |
| B - D              | 2x4  | DRY | 1650F 1.5E | SPF   |
| D - E              | 2x4  | DRY | No.2       | SPF   |
| L - A              | 2x4  | DRY | No.2       | SPF   |
| G - E              | 2x4  | DRY | No.2       | SPF   |
| M - I              | 2x4  | DRY | No.2       | SPF   |
| I - F              | 2x4  | DRY | No.2       | SPF   |
| ALL WEBS<br>EXCEPT | 2x3  | DRY | No.2       | SPF   |

DRY: SEASONED LUMBER.

| PLATES (table is in inches) |          |        |     |     |      |      |
|-----------------------------|----------|--------|-----|-----|------|------|
| JT                          | TYPE     | PLATES | W   | LEN | Y    | X    |
| A                           | TMWw-t   | MT20   | 5.0 | 6.0 | 1.75 | Edge |
| B                           | TTWw-m   | MT20   | 5.0 | 8.0 | Edge |      |
| C                           | TMWw     | MT20   | 2.0 | 4.0 |      |      |
| D                           | TTWw-m   | MT20   | 5.0 | 8.0 | Edge |      |
| E                           | TMWw-t   | MT20   | 5.0 | 6.0 | 1.75 | Edge |
| G                           | BMV1+p   | MT20   | 2.0 | 4.0 | 2.25 | 1.00 |
| H                           | BMWw-t   | MT20   | 4.0 | 6.0 | 2.00 | 1.50 |
| I                           | BS-t     | MT20   | 3.0 | 6.0 |      |      |
| J                           | BMWw-w-t | MT20   | 5.0 | 6.0 | 2.25 | 3.00 |
| K                           | BMWw-t   | MT20   | 4.0 | 6.0 | 2.00 | 1.50 |
| L                           | BMV1+p   | MT20   | 2.0 | 4.0 | 2.25 | 1.00 |

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

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



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

|    | FACTORED<br>GROSS REACTION |      | MAXIMUM FACTORED<br>GROSS REACTION |      |        | INPUT<br>BRG | REQRD<br>BRG |
|----|----------------------------|------|------------------------------------|------|--------|--------------|--------------|
|    | VERT                       | HORZ | DOWN                               | HORZ | UPLIFT | IN-SX        | IN-SX        |
| JT | 2207                       | 0    | 2207                               | 0    | 0      | 5-8          | 3-8          |
| L  | 2207                       | 0    | 2207                               | 0    | 0      | 5-8          | 3-8          |
| G  | 2207                       | 0    | 2207                               | 0    | 0      | 5-8          | 3-8          |

## UNFACTORED REACTIONS

| 1ST LCASE |          | MAX./MIN. COMPONENT REACTIONS |       |           |       |         |       |
|-----------|----------|-------------------------------|-------|-----------|-------|---------|-------|
| JT        | COMBINED | SNOW                          | LIVE  | PERM.LIVE | WIND  | DEAD    | SOIL  |
| L         | 1576     | 949 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 627 / 0 | 0 / 0 |
| G         | 1576     | 949 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 627 / 0 | 0 / 0 |

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

## BRACING

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

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

## 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 |                           |                    |  |  |
| A - B  | -2554 / 0                 | -78.0                     | -78.0             | 0.83 (1)           | 3.47  | K - B                     | -79 / 146 0.06 (4) |  |  |
| B - C  | -2814 / 0                 | -153.5                    | -153.5            | 0.87 (1)           | 3.36  | B - J                     | 0 / 920 0.23 (1)   |  |  |
| C - D  | -2814 / 0                 | -153.5                    | -153.5            | 0.87 (1)           | 3.36  | J - C                     | -1038 / 0 0.42 (1) |  |  |
| D - E  | -2554 / 0                 | -78.0                     | -78.0             | 0.83 (1)           | 3.47  | J - D                     | 0 / 920 0.23 (1)   |  |  |
| L - A  | -1970 / 0                 | 0.0                       | 0.0               | 0.22 (1)           | 5.95  | H - D                     | -79 / 146 0.06 (4) |  |  |
| G - E  | -1970 / 0                 | 0.0                       | 0.0               | 0.22 (1)           | 5.95  | A - K                     | 0 / 2147 0.53 (1)  |  |  |
|        |                           |                           |                   |                    |       | H - E                     | 0 / 2147 0.53 (1)  |  |  |
| M - L  | 0 / 0                     | -96.5                     | -96.5             | 0.17 (1)           | 10.00 |                           |                    |  |  |
| L - K  | 0 / 0                     | -36.4                     | -36.4             | 0.33 (4)           | 10.00 |                           |                    |  |  |
| K - J  | 0 / 2121                  | -36.4                     | -36.4             | 0.56 (1)           | 10.00 |                           |                    |  |  |
| J - I  | 0 / 2121                  | -36.4                     | -36.4             | 0.56 (1)           | 10.00 |                           |                    |  |  |
| I - H  | 0 / 2121                  | -36.4                     | -36.4             | 0.56 (1)           | 10.00 |                           |                    |  |  |
| H - G  | 0 / 0                     | -36.4                     | -36.4             | 0.33 (4)           | 10.00 |                           |                    |  |  |
| G - F  | 0 / 0                     | -96.5                     | -96.5             | 0.17 (1)           | 10.00 |                           |                    |  |  |

## FACTORED CONCENTRATED LOADS (LBS)

| JT | LOC.    | LC1  | MAX- | MAX+ | FACE  | DIR. | TYPE  | HEEL | CONN. |
|----|---------|------|------|------|-------|------|-------|------|-------|
| B  | 5-10-8  | -334 | -334 | ---  | FRONT | VERT | TOTAL | ---  | C1    |
| D  | 16-11-8 | -334 | -334 | ---  | FRONT | VERT | TOTAL | ---  | C1    |

## CONNECTION REQUIREMENTS

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

## DESIGN CRITERIA

SPECIFIED LOADS:

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

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

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

GIRDER TYPE: CPrimeHip  
SIDE SETBACK = 5-10-8  
END SETBACK = 5-10-8  
END WALL WIDTH = 0-0  
CORNER FRAMING TYPE: CONVENTIONAL  
END JACK TYPE: CONVENTIONAL  
APPLIED TO FRONT SIDE  
- ADD'L LOADS BASED ON 55 % OF GSL.

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

THIS DESIGN COMPLIES WITH:

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

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

ALLOWABLE DEFL.(LL)= L/360 (0.76")  
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.08")  
ALLOWABLE DEFL.(TL)= L/360 (0.76")  
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.16")

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

CSI: TC=0.87/1.00 (C-D:1) , BC=0.56/1.00 (J-K:1) ,  
WB=0.53/1.00 (A-K:1) . SSI=0.45/1.00 (B-C:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

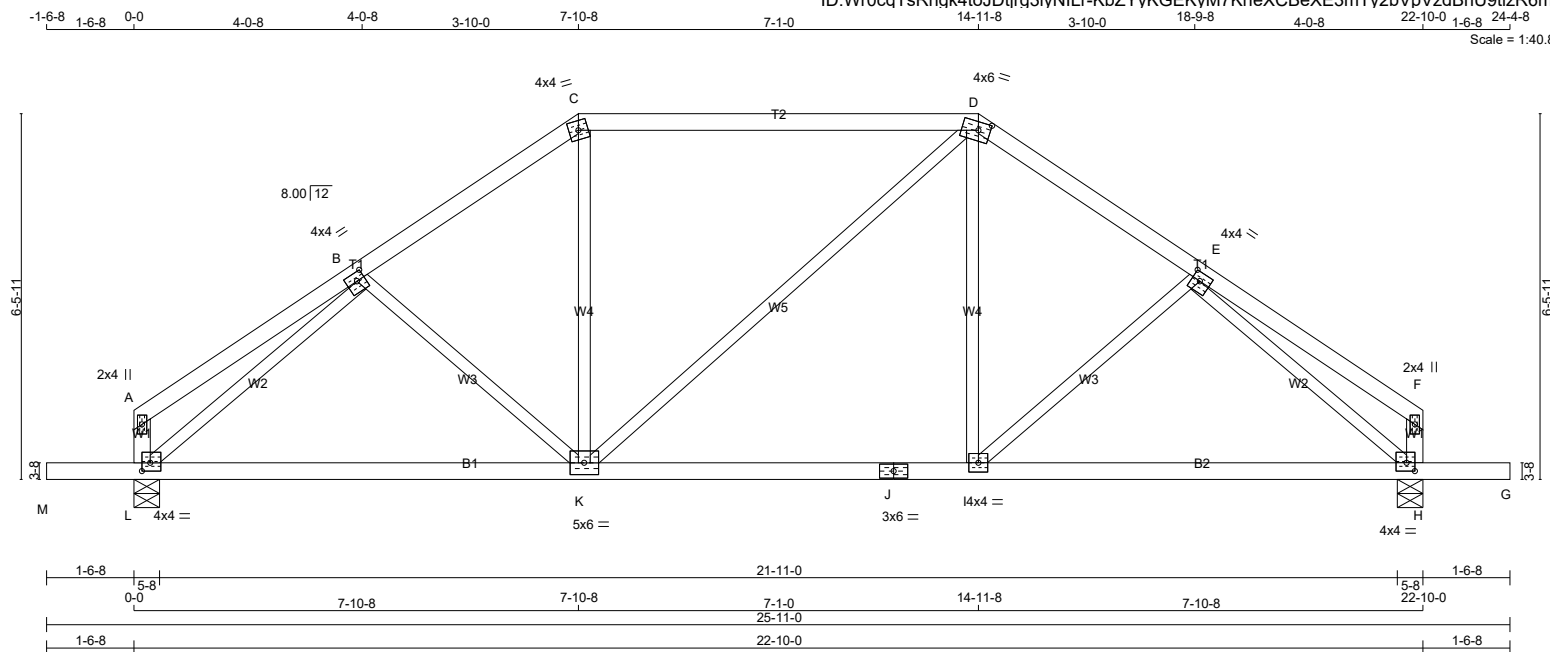
TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT.

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

CONTINUED ON PAGE 2



TOTAL WEIGHT = 95 lb

| LUMBER      |       |     |            |       |
|-------------|-------|-----|------------|-------|
| N. L. G. A. | RULES |     |            |       |
| CHORDS      | SIZE  |     | LUMBER     | DESCR |
| A - C       | 2x4   | DRY | No.2       | SPF   |
| C - D       | 2x4   | DRY | 2100F 1.8E | SPF   |
| D - F       | 2x4   | DRY | No.2       | SPF   |
| L - A       | 2x4   | DRY | No.2       | SPF   |
| H - F       | 2x4   | DRY | No.2       | SPF   |
| M - J       | 2x4   | DRY | No.2       | SPF   |
| J - G       | 2x4   | DRY | No.2       | SPF   |

|                    |     |     |      |     |
|--------------------|-----|-----|------|-----|
| ALL WEBS<br>EXCEPT | 2x3 | DRY | No.2 | SPF |
|--------------------|-----|-----|------|-----|

DRY: SEASONED LUMBER.

**PLATES** (table is in inches)

| JT | PLATES   | W    | LEN | Y   | X    |
|----|----------|------|-----|-----|------|
| A  | TMV+p    | MT20 | 2.0 | 4.0 |      |
| B  | TMWV-t   | MT20 | 4.0 | 4.0 | 1.75 |
| C  | TTW-m    | MT20 | 4.0 | 4.0 |      |
| D  | TTWV-m   | MT20 | 4.0 | 6.0 | 1.75 |
| E  | TMWV-t   | MT20 | 4.0 | 4.0 | 1.75 |
| F  | TMV+p    | MT20 | 2.0 | 4.0 |      |
| H  | BMWV1-t  | MT20 | 4.0 | 4.0 | 1.75 |
| I  | BMWV-t   | MT20 | 4.0 | 4.0 |      |
| J  | BS-t     | MT20 | 3.0 | 6.0 |      |
| K  | BMWVWV-t | MT20 | 5.0 | 6.0 |      |
| L  | BMWV1-t  | MT20 | 4.0 | 4.0 | 1.75 |

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

|    | FACTORED       |      | MAXIMUM FACTORED |      |        | INPUT | REQRD |
|----|----------------|------|------------------|------|--------|-------|-------|
|    | GROSS REACTION |      | GROSS REACTION   |      |        | BRG   | BRG   |
| JT | VERT           | HORZ | DOWN             | HORZ | UPLIFT | IN-SX | IN-SX |
| L  | 1250           | 0    | 1250             | 0    | 0      | 5-8   | 1-8   |
| H  | 1250           | 0    | 1250             | 0    | 0      | 5-8   | 1-8   |

## UNFACTORED REACTIONS

| 1ST LCASE |          | MAX./MIN. COMPONENT REACTIONS |       |           |       |         |       |
|-----------|----------|-------------------------------|-------|-----------|-------|---------|-------|
| JT        | COMBINED | SNOW                          | LIVE  | PERM.LIVE | WIND  | DEAD    | SOIL  |
| L         | 891      | 544 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 347 / 0 | 0 / 0 |
| H         | 891      | 544 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 347 / 0 | 0 / 0 |

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

## BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.78 FT.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

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

## LOADING

**TOTAL LOAD CASES: (4)**

| C H O R D S   |             |                  |                   | W E B S       |       |             |               |
|---------------|-------------|------------------|-------------------|---------------|-------|-------------|---------------|
| MAX. FACTORED |             | FACTORED         |                   | MAX. FACTORED |       |             |               |
| MEMB.         | FORCE (LBS) | VERT. LOAD (PLF) | LC1 MAX. CSI (LC) | MAX. UNBRAC.  | MEMB. | FORCE (LBS) | MAX. CSI (LC) |
| FR-TO         |             | FROM TO          | LENGTH            | FR-TO         |       |             |               |
| A-B           | 0 / 19      | -78.0            | -78.0 0.18 (1)    | 10.00         | B-K   | -123 / 4    | 0.06 (1)      |
| B-C           | -1144 / 0   | -78.0            | -78.0 0.16 (1)    | 5.78          | K-C   | 0 / 231     | 0.06 (4)      |
| C-D           | -939 / 0    | -78.0            | -78.0 0.34 (1)    | 6.25          | K-D   | 0 / 0       | 0.00 (1)      |
| D-E           | -1144 / 0   | -78.0            | -78.0 0.16 (1)    | 5.78          | I-D   | 0 / 230     | 0.06 (4)      |
| E-F           | 0 / 19      | -78.0            | -78.0 0.18 (1)    | 10.00         | I-E   | -123 / 4    | 0.06 (1)      |
| L-A           | -119 / 0    | 0.0              | 0.0 0.01 (1)      | 7.81          | L-B   | -1380 / 0   | 0.62 (1)      |
| H-F           | -119 / 0    | 0.0              | 0.0 0.01 (1)      | 7.81          | E-H   | -1379 / 0   | 0.62 (1)      |
| M-L           | 0 / 0       | -96.5            | -96.5 0.16 (1)    | 10.00         |       |             |               |
| L-K           | 0 / 1027    | -18.5            | -18.5 0.33 (4)    | 10.00         |       |             |               |
| K-J           | 0 / 938     | -18.5            | -18.5 0.34 (4)    | 10.00         |       |             |               |
| J-I           | 0 / 938     | -18.5            | -18.5 0.34 (4)    | 10.00         |       |             |               |
| I-H           | 0 / 1027    | -18.5            | -18.5 0.33 (4)    | 10.00         |       |             |               |
| H-G           | 0 / 0       | -96.5            | -96.5 0.16 (1)    | 10.00         |       |             |               |

## DESIGN CRITERIA

SPECIFIED LOADS:

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

SPACING = 24.0 IN. C/C

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

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

THIS DESIGN COMPLIES WITH:

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

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

ALLOWABLE DEFL.(LL)= L/360 (0.76")  
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.03")  
ALLOWABLE DEFL.(TL)= L/360 (0.76")  
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.14")

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

CSI: TC=0.34/1.00 (C-D:1) , BC=0.34/1.00 (I-K:4) ,  
WB=0.62/1.00 (B-L:1) , SSI=0.22/1.00 (C-D:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.84 (D) (INPUT = 0.90 )  
JSI METAL= 0.45 (B) (INPUT = 1.00 )

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

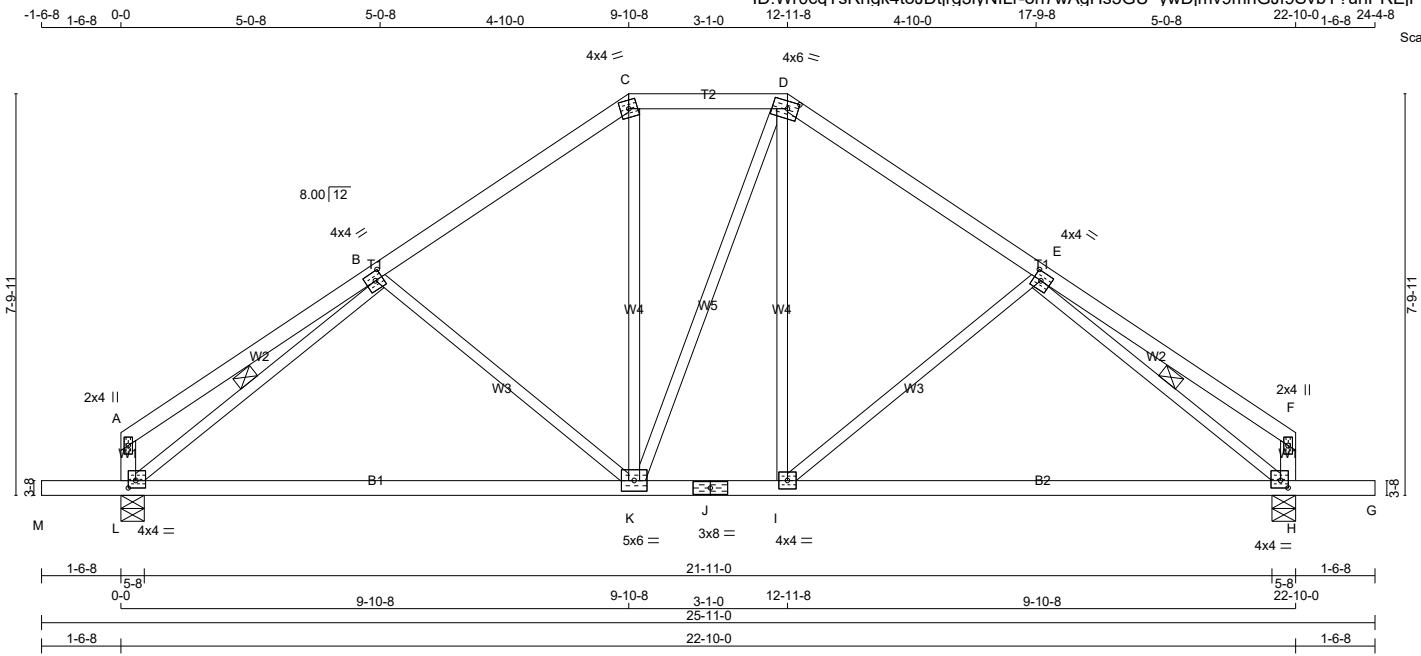


|          |            |          |     |                      |           |
|----------|------------|----------|-----|----------------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.  |
| 318797   | H8         | 1        | 1   | TRUSS DESC. JT 45147 | E20041042 |

Alpa Roof Truss, Maple

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|                       |      |        |        |
|-----------------------|------|--------|--------|
| <b>LUMBER</b>         |      |        |        |
| N. L. G. A. RULES     |      |        |        |
| CHORDS                | SIZE | LUMBER | DESCR. |
| A - C                 | 2x4  | DRY    | No.2   |
| C - D                 | 2x4  | DRY    | No.2   |
| D - F                 | 2x4  | DRY    | No.2   |
| L - A                 | 2x4  | DRY    | No.2   |
| H - F                 | 2x4  | DRY    | No.2   |
| M - J                 | 2x4  | DRY    | No.2   |
| J - G                 | 2x4  | DRY    | No.2   |
| ALL WEBS EXCEPT       | 2x3  | DRY    | No.2   |
| SPF                   |      |        |        |
| DRY: SEASONED LUMBER. |      |        |        |

|                                    |         |        |     |               |
|------------------------------------|---------|--------|-----|---------------|
| <b>PLATES (table is in inches)</b> |         |        |     |               |
| JT                                 | TYPE    | PLATES | W   | LEN Y X       |
| A                                  | TMV+p   | MT20   | 2.0 | 4.0           |
| B                                  | TMWW-t  | MT20   | 4.0 | 4.0 2.00 1.75 |
| C                                  | TTW-m   | MT20   | 4.0 | 4.0           |
| D                                  | TTWW-m  | MT20   | 4.0 | 6.0 1.75 2.50 |
| E                                  | TMWW-t  | MT20   | 4.0 | 4.0 2.00 1.75 |
| F                                  | TMV+p   | MT20   | 2.0 | 4.0           |
| H                                  | BMVW1-t | MT20   | 4.0 | 4.0 1.75 1.75 |
| I                                  | BMWW-t  | MT20   | 4.0 | 4.0           |
| J                                  | BS-t    | MT20   | 3.0 | 8.0           |
| K                                  | BMVWW-t | MT20   | 5.0 | 6.0           |
| L                                  | BMVW1-t | MT20   | 4.0 | 4.0 1.75 1.75 |

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

|                 |      |                         |                                 |           |           |
|-----------------|------|-------------------------|---------------------------------|-----------|-----------|
| <b>BEARINGS</b> |      | FACTORED GROSS REACTION | MAXIMUM FACTORED GROSS REACTION | INPUT BRG | REQRD BRG |
| JT              | VERT | HORZ                    | DOWN                            | HORZ      | UPLIFT    |
| L               | 1250 | 0                       | 1250                            | 0         | 0         |
| H               | 1250 | 0                       | 1250                            | 0         | 0         |

|                             |          |           |                                 |
|-----------------------------|----------|-----------|---------------------------------|
| <b>UNFACTORED REACTIONS</b> |          | 1ST LCASE | MAX./MIN. COMPONENT REACTIONS   |
| JT                          | COMBINED | SNOW      | LIVE PERM.LIVE WIND DEAD SOIL   |
| L                           | 891      | 544 / 0   | 0 / 0 0 / 0 0 / 0 347 / 0 0 / 0 |
| H                           | 891      | 544 / 0   | 0 / 0 0 / 0 0 / 0 347 / 0 0 / 0 |

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

**BRACING**  
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.87 FT.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT. OR RIGID CEILING DIRECTLY APPLIED.

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

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

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

**LOADING**

TOTAL LOAD CASES: (4)

|               |                           |                           |                  |             |                           |                        |          |
|---------------|---------------------------|---------------------------|------------------|-------------|---------------------------|------------------------|----------|
| <b>CHORDS</b> |                           |                           |                  | <b>WEBS</b> |                           |                        |          |
| MEMB.         | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | LC1 MAX CSI (LC) | MEMB.       | MAX. FACTORED FORCE (LBS) | MAX. FACTORED CSI (LC) |          |
| FR-TO         |                           | FROM TO                   |                  | FR-TO       |                           |                        |          |
| A-B           | 0 / 25                    | -78.0 -78.0               | 0.31 (1)         | 10.00       | B-K                       | -250 / 0               | 0.20 (1) |
| B-C           | -1037 / 0                 | -78.0 -78.0               | 0.25 (1)         | 5.87        | K-C                       | 0 / 295                | 0.07 (1) |
| C-D           | -845 / 0                  | -78.0 -78.0               | 0.10 (1)         | 6.25        | K-D                       | 0 / 1                  | 0.00 (1) |
| D-E           | -1036 / 0                 | -78.0 -78.0               | 0.25 (1)         | 5.88        | I-D                       | 0 / 293                | 0.07 (1) |
| E-F           | 0 / 25                    | -78.0 -78.0               | 0.31 (1)         | 10.00       | I-E                       | -251 / 0               | 0.20 (1) |
| L-A           | -147 / 0                  | 0.0 0.0                   | 0.01 (1)         | 7.81        | L-B                       | -1356 / 0              | 0.39 (1) |
| H-F           | -147 / 0                  | 0.0 0.0                   | 0.01 (1)         | 7.81        | E-H                       | -1355 / 0              | 0.39 (1) |
| M-L           | 0 / 0                     | -96.5 -96.5               | 0.16 (1)         | 10.00       |                           |                        |          |
| L-K           | 0 / 1033                  | -18.5 -18.5               | 0.47 (4)         | 10.00       |                           |                        |          |
| K-J           | 0 / 844                   | -18.5 -18.5               | 0.47 (4)         | 10.00       |                           |                        |          |
| J-I           | 0 / 844                   | -18.5 -18.5               | 0.47 (4)         | 10.00       |                           |                        |          |
| I-H           | 0 / 1033                  | -18.5 -18.5               | 0.47 (4)         | 10.00       |                           |                        |          |
| H-G           | 0 / 0                     | -96.5 -96.5               | 0.16 (1)         | 10.00       |                           |                        |          |

**DESIGN CRITERIA**

|                              |  |                       |
|------------------------------|--|-----------------------|
| <b>SPECIFIED LOADS:</b>      |  | TOP CH. LL = 21.0 PSF |
|                              |  | DL = 6.0 PSF          |
| <b>BOT CH. LL = 0.0 PSF</b>  |  | DL = 7.4 PSF          |
| <b>TOTAL LOAD = 34.4 PSF</b> |  |                       |

**SPACING = 24.0 IN./C**

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

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

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

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

ALLOWABLE DEFL.(LL)= L/360 (0.76")  
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.03")  
ALLOWABLE DEFL.(TL)= L/360 (0.76")  
CALCULATED VERT. DEFL.(TL) = L/ 910 (0.30")

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

CSI: TC=0.31/1.00 (E-F:1) , BC=0.47/1.00 (K-L:4) , WB=0.39/1.00 (B-L:1) , SSI=0.15/1.00 (D-E:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

|                    |             |               |                         |
|--------------------|-------------|---------------|-------------------------|
| <b>NAIL VALUES</b> |             |               |                         |
| PLATE GRIP(DRY)    | SHEAR (PSI) | SECTION (PLI) |                         |
|                    |             |               | MAX MIN MAX MIN MAX MIN |
| MT20               | 650         | 371           | 1747 788 1987 1873      |

PLATE PLACEMENT TOL. = 0.250 inches

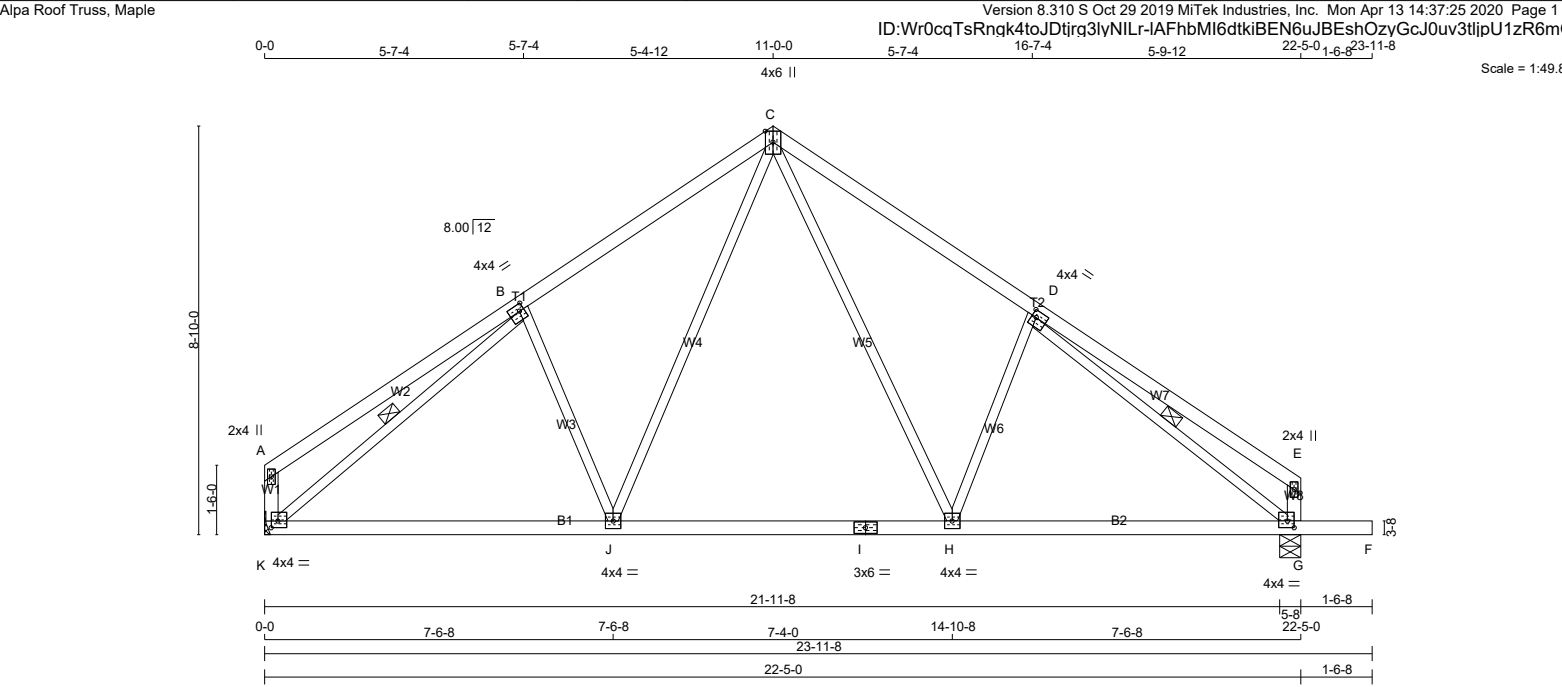
PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.85 (B) (INPUT = 0.90 )  
JSI METAL= 0.80 (J) (INPUT = 1.00 )

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



|          |            |          |     |                      |           |
|----------|------------|----------|-----|----------------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.  |
| 318797   | H9S        | 4        | 1   | TRUSS DESC. JT 45147 | E20041043 |



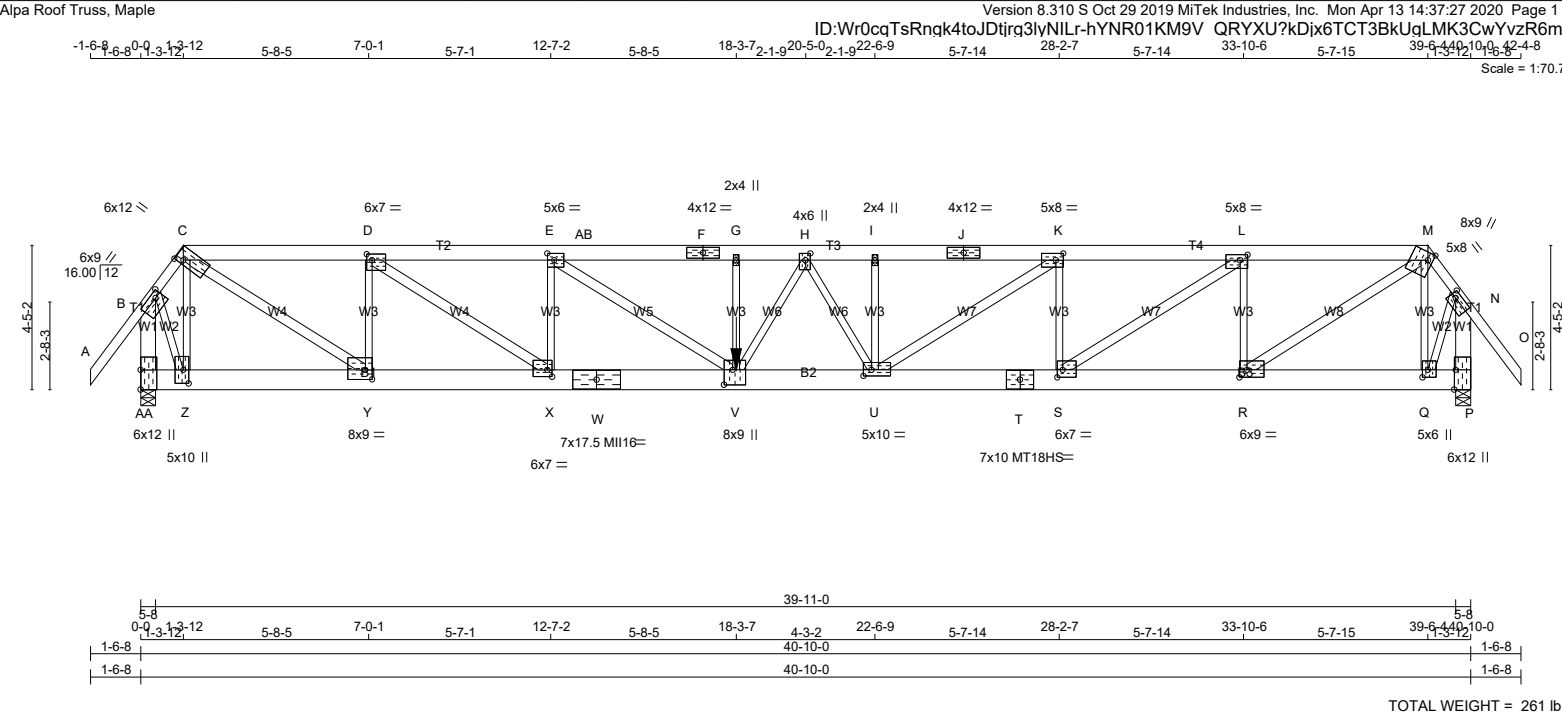
|                           |  |  |  |  |  |  |  |  |  |                                                                                                          |  |  |  |  |  |  |  |  |  |                                                                                                    |  |  |  |  |  |  |  |  |  |
|---------------------------|--|--|--|--|--|--|--|--|--|----------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|----------------------------------------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|
| LUMBER                    |  |  |  |  |  |  |  |  |  | DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER            |  |  |  |  |  |  |  |  |  | DESIGN CRITERIA                                                                                    |  |  |  |  |  |  |  |  |  |
| N. L. G. A. RULES         |  |  |  |  |  |  |  |  |  | BEARINGS                                                                                                 |  |  |  |  |  |  |  |  |  | SPECIFIED LOADS:                                                                                   |  |  |  |  |  |  |  |  |  |
| CHORDS SIZE LUMBER DESCR. |  |  |  |  |  |  |  |  |  | FACTORED GROSS REACTION MAXIMUM FACTORED GROSS REACTION INPUT REQD                                       |  |  |  |  |  |  |  |  |  | TOP CH. LL = 21.0 PSF                                                                              |  |  |  |  |  |  |  |  |  |
| A - C 2x4 DRY No.2 SPF    |  |  |  |  |  |  |  |  |  | JT VERT HORZ DOWN HORZ UPLIFT BRG BRG                                                                    |  |  |  |  |  |  |  |  |  | DL = 6.0 PSF                                                                                       |  |  |  |  |  |  |  |  |  |
| C - E 2x4 DRY No.2 SPF    |  |  |  |  |  |  |  |  |  | K 1081 0 1081 0 0 MECHANICAL                                                                             |  |  |  |  |  |  |  |  |  | BOT CH. LL = 0.0 PSF                                                                               |  |  |  |  |  |  |  |  |  |
| K - A 2x4 DRY No.2 SPF    |  |  |  |  |  |  |  |  |  | G 1230 0 1230 0 0 5-8 1-8                                                                                |  |  |  |  |  |  |  |  |  | DL = 7.4 PSF                                                                                       |  |  |  |  |  |  |  |  |  |
| G - E 2x4 DRY No.2 SPF    |  |  |  |  |  |  |  |  |  | A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT K. MINIMUM BEARING LENGTH AT JOINT K = 1-8. |  |  |  |  |  |  |  |  |  | TOTAL LOAD = 34.4 PSF                                                                              |  |  |  |  |  |  |  |  |  |
| K - I 2x4 DRY No.2 SPF    |  |  |  |  |  |  |  |  |  |                                                                                                          |  |  |  |  |  |  |  |  |  | SPACING = 24.0 IN./C                                                                               |  |  |  |  |  |  |  |  |  |
| I - F 2x4 DRY No.2 SPF    |  |  |  |  |  |  |  |  |  |                                                                                                          |  |  |  |  |  |  |  |  |  | THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015         |  |  |  |  |  |  |  |  |  |
| ALL WEBS 2x3 DRY No.2 SPF |  |  |  |  |  |  |  |  |  |                                                                                                          |  |  |  |  |  |  |  |  |  | THIS DESIGN COMPLIES WITH:                                                                         |  |  |  |  |  |  |  |  |  |
| EXCEPT                    |  |  |  |  |  |  |  |  |  |                                                                                                          |  |  |  |  |  |  |  |  |  | - PART 9 OF BCBC 2018 , ABC 2019                                                                   |  |  |  |  |  |  |  |  |  |
| DRY: SEASONED LUMBER.     |  |  |  |  |  |  |  |  |  |                                                                                                          |  |  |  |  |  |  |  |  |  | - PART 9 OF OBC 2012 (2019 AMENDMENT)                                                              |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                                          |  |  |  |  |  |  |  |  |  | - CSA 086-14                                                                                       |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                                          |  |  |  |  |  |  |  |  |  | - TPIC 2014                                                                                        |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                                          |  |  |  |  |  |  |  |  |  | (55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                                          |  |  |  |  |  |  |  |  |  | ALLOWABLE DEFL.(LL)= L/ 360 (0.75")                                                                |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                                          |  |  |  |  |  |  |  |  |  | CALCULATED VERT. DEFL.(LL) = L/ 999 (0.04")                                                        |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                                          |  |  |  |  |  |  |  |  |  | ALLOWABLE DEFL.(TL)= L/360 (0.75")                                                                 |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                                          |  |  |  |  |  |  |  |  |  | CALCULATED VERT. DEFL.(TL) = L/ 999 (0.12")                                                        |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                                          |  |  |  |  |  |  |  |  |  | CANTILEVER DEFLECTION:                                                                             |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                                          |  |  |  |  |  |  |  |  |  | ALLOWABLE DEFL.(LL)= L/120 (0.19")                                                                 |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                                          |  |  |  |  |  |  |  |  |  | CALCULATED VERT. DEFL.(LL) = L/ 999 ( 0.01")                                                       |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                                          |  |  |  |  |  |  |  |  |  | ALLOWABLE DEFL.(TL)= L/120 (0.19")                                                                 |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                                          |  |  |  |  |  |  |  |  |  | CALCULATED VERT. DEFL.(TL) = L/ 999 ( 0.01")                                                       |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                                          |  |  |  |  |  |  |  |  |  | CSI: TC=0.42/1.00 (D-E:1) , BC=0.33/1.00 (G-H:4) ,                                                 |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                                          |  |  |  |  |  |  |  |  |  | WB=0.48/1.00 (D-G:1) , SSI=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 = 1.00                                                                  |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                                          |  |  |  |  |  |  |  |  |  | TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT . |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                                          |  |  |  |  |  |  |  |  |  | NAIL VALUES                                                                                        |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                                          |  |  |  |  |  |  |  |  |  | PLATE GRIP(DRY) SHEAR SECTION                                                                      |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                                          |  |  |  |  |  |  |  |  |  | (PSI) (PLI) (PLI)                                                                                  |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                                          |  |  |  |  |  |  |  |  |  | MAX MIN MAX MIN MAX MIN                                                                            |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                                          |  |  |  |  |  |  |  |  |  | MT20 650 371 1747 788 1987 1873                                                                    |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                                          |  |  |  |  |  |  |  |  |  | PLATE PLACEMENT TOL. = 0.250 inches                                                                |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                                          |  |  |  |  |  |  |  |  |  | PLATE ROTATION TOL. = 5.0 Deg.                                                                     |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                                          |  |  |  |  |  |  |  |  |  | JSI GRIP= 0.83 (G) (INPUT = 0.90 )                                                                 |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                                          |  |  |  |  |  |  |  |  |  | JSI METAL= 0.48 (D) (INPUT = 1.00 )                                                                |  |  |  |  |  |  |  |  |  |

|                             |         |        |     |     |      |      |  |  |  |
|-----------------------------|---------|--------|-----|-----|------|------|--|--|--|
| PLATES (table is in inches) |         |        |     |     |      |      |  |  |  |
| JT                          | TYPE    | PLATES | W   | LEN | Y    | X    |  |  |  |
| A                           | TMV+p   | MT20   | 2.0 | 4.0 |      |      |  |  |  |
| B                           | TMWW-t  | MT20   | 4.0 | 4.0 | 1.75 | 1.25 |  |  |  |
| C                           | TTWW+p  | MT20   | 4.0 | 6.0 | Edge |      |  |  |  |
| D                           | TMWW-t  | MT20   | 4.0 | 4.0 | 1.75 | 1.25 |  |  |  |
| E                           | TMV+p   | MT20   | 2.0 | 4.0 |      |      |  |  |  |
| G                           | BMVW1-t | MT20   | 4.0 | 4.0 | 1.75 | 1.75 |  |  |  |
| H                           | BMWW-t  | MT20   | 4.0 | 4.0 |      |      |  |  |  |
| I                           | BS-t    | MT20   | 3.0 | 6.0 |      |      |  |  |  |
| J                           | BMWW-t  | MT20   | 4.0 | 4.0 |      |      |  |  |  |
| K                           | BMVW1-t | MT20   | 4.0 | 4.0 | 1.75 | 1.75 |  |  |  |

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

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

|          |            |          |     |                      |           |
|----------|------------|----------|-----|----------------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.  |
| 318797   | H10A       | 1        | 1   | TRUSS DESC. JT 45147 | E20041044 |



|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |
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| <b>LUMBER</b><br>N. L. G. A. RULES<br>CHORDS SIZE LUMBER DESCR.<br>A - C 2x4 DRY No.2 SPF<br>C - F 2x6 DRY 2100F 1.8E SPF<br>F - J 2x6 DRY 2100F 1.8E SPF<br>J - M 2x6 DRY 2100F 1.8E SPF<br>M - O 2x4 DRY No.2 SPF<br>AA- B 2x6 DRY No.2 SPF<br>P - N 2x6 DRY No.2 SPF<br>AA- W 2x8 DRY 1950F 1.7E SPF<br>W - T 2x8 DRY 1950F 1.7E SPF<br>T - P 2x8 DRY 1950F 1.7E SPF<br><br>ALL WEBS 2x3 DRY No.2 SPF<br>EXCEPT<br>C - Y 2x4 DRY 1650F 1.5E SPF<br>D - X 2x4 DRY 1650F 1.5E SPF<br>E - V 2x4 DRY No.2 SPF<br>U - K 2x4 DRY No.2 SPF<br>S - L 2x4 DRY No.2 SPF<br>R - M 2x4 DRY 1650F 1.5E SPF<br><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 REQD<br>GROSS REACTION GROSS REACTION BRG BRG<br>JT VERT HORZ DOWN HORZ UPLIFT IN-SX IN-SX<br>AA 5619 0 5619 0 0 5-8 5-8<br>P 3863 0 3863 0 0 5-8 5-8<br><br><b>UNFACTORED REACTIONS</b><br>1ST LCASE MAX./MIN. COMPONENT REACTIONS<br>JT COMBINED SNOW LIVE PERM.LIVE WIND DEAD SOIL<br>AA 3999 2482 / 0 0 / 0 0 / 0 1517 / 0 0 / 0<br>P 2749 1709 / 0 0 / 0 0 / 0 1039 / 0 0 / 0<br><br>BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) AA, P<br>BEARING SIZE FACTOR = 1.15 AT JNT(S) AA, P ( BASED ON SUPPORT DEPTH = 1-8 )<br><br><b>BRACING</b><br>TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 2.29 FT.<br>MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT. OR RIGID CEILING DIRECTLY APPLIED.<br><br>ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.<br><br><b>LOADING</b><br>TOTAL LOAD CASES: (4)<br><br><b>CHORDS</b><br>MAX. FACTORED FORCE VERT. LOAD LC1 MAX. UNBRAC LENGTH FR-TO<br>MEMB. (LBS) (PLF) CSI (LC) FR-TO<br>A- B 0 / 52 -78.0 -78.0 0.17 (1) 10.00 Z- C -1918 / 0 0.49 (1)<br>B- C -3403 / 0 -78.0 -78.0 0.31 (1) 3.49 C- Y 0 / 7812 1.00 (1)<br>C- D -8396 / 0 -78.0 -78.0 0.31 (1) 3.64 Y- D -3620 / 0 0.92 (1)<br>D- E -12974 / 0 -78.0 -78.0 0.54 (1) 2.81 D- X 0 / 5581 0.71 (1)<br>E- AB -15186 / 0 -78.0 -78.0 0.86 (1) 2.29 X- E -2168 / 0 0.55 (1)<br>AB- F -15186 / 0 -156.0 -156.0 0.86 (1) 2.29 E- V 0 / 2681 0.47 (1)<br>F- G -15186 / 0 -156.0 -156.0 0.86 (1) 2.29 V- G -513 / 0 0.13 (1)<br>G- H -15186 / 0 -78.0 -78.0 0.59 (1) 2.53 V- H 0 / 1929 0.48 (1)<br>H- I -13277 / 0 -78.0 -78.0 0.46 (1) 2.83 H- U -2052 / 0 0.65 (1)<br>I- J -13277 / 0 -78.0 -78.0 0.59 (1) 2.74 U- I -315 / 0 0.08 (1)<br>J- K -13277 / 0 -78.0 -78.0 0.59 (1) 2.74 U- K 0 / 3876 0.69 (1)<br>K- L -10085 / 0 -78.0 -78.0 0.36 (1) 3.31 S- K -2640 / 0 0.67 (1)<br>L- M -6068 / 0 -78.0 -78.0 0.19 (1) 4.27 S- L 0 / 4878 0.86 (1)<br>M- N -2292 / 0 -78.0 -78.0 0.23 (1) 4.26 R- L -3253 / 0 0.83 (1)<br>N- O 0 / 52 -78.0 -78.0 0.17 (1) 10.00 R- M 0 / 5801 0.74 (1)<br>AA- B -5954 / 0 0.0 0.0 0.57 (1) 4.34 Q- M -1666 / 0 0.42 (1)<br>P- N -4060 / 0 0.0 0.0 0.39 (1) 5.28 B- Z 0 / 3619 0.90 (1)<br>Q- N 0 / 2415 0.60 (1)<br><br>AA- Z 0 / 0 -160.2 -160.2 0.16 (1) 10.00<br>Z- Y 0 / 1946 -160.2 -160.2 0.25 (1) 10.00<br>Y- X 0 / 8396 -160.2 -160.2 0.50 (1) 10.00<br>X- W 0 / 12974 -160.2 -160.2 0.78 (1) 10.00<br>W- V 0 / 12974 -160.2 -160.2 0.78 (1) 10.00<br>V- U 0 / 14261 -18.5 -18.5 0.75 (1) 10.00<br>U- T 0 / 10085 -18.5 -18.5 0.54 (1) 10.00<br>T- S 0 / 10085 -18.5 -18.5 0.54 (1) 10.00<br>S- R 0 / 6068 -18.5 -18.5 0.33 (1) 10.00<br>R- Q 0 / 1288 -18.5 -18.5 0.13 (1) 10.00<br>Q- P 0 / 0 -18.5 -18.5 0.07 (1) 10.00<br><br>FACTORED CONCENTRATED LOADS (LBS)<br>JT LOC. LC1 MAX- FACE DIR. TYPE HEEL CONN.<br>V 18-3-7 -2320 -2320 --- FRONT VERT TOTAL --- C1<br><br><b>CONNECTION REQUIREMENTS</b><br>1) C1: A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED. |  |  |  | <b>DESIGN CRITERIA</b><br><br>*** SPECIAL LOADS ANALYSIS ***<br>GEOMETRY AND/OR BASIC LOADS CHANGED BY USER.<br>LOADS WERE DERIVED FROM USER INPUT<br>NO FURTHER MODIFICATIONS WERE MADE<br><br>SPECIFIED LOADS:<br>TOP CH. LL = 21.0 PSF<br>DL = 6.0 PSF<br>BOT CH. LL = 0.0 PSF<br>DL = 7.4 PSF<br>TOTAL LOAD = 34.4 PSF<br><br><b>SPACING = 24.0 IN. C/C</b><br><br>LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM<br><br>GIRDER TYPE: CStdGirder<br>START DISTANCE = 0-0<br>START SPAN CARRIED = 7-10-8<br>END DISTANCE = 18-3-7<br>END SPAN CARRIED = 7-10-8<br>END WALL WIDTH = 0-0<br>APPLIED TO FRONT SIDE OF BOTTOM CHORD.<br>- ADDTL LOADS BASED ON 55 % OF GSL.<br><br>*** NON STANDARD GIRDER ***<br>ADDTL USER-DEFINED LOADS APPLIED TO ALL LOAD CASES.<br><br>THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBC 2015<br><br>THIS DESIGN COMPLIES WITH:<br>- PART 9 OF CBC 2018 , ABC 2019<br>- PART 9 OF OBC 2012 (2019 AMENDMENT)<br>- CSA 086-14<br>- TPIC 2014<br><br>DESIGN ASSUMPTIONS<br>- OVERHANG NOT TO BE ALTERED OR CUT OFF.<br><br>(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD<br><br>ALLOWABLE DEFL.(LL)= L/360 (1.36")<br>CALCULATED VERT. DEFL.(LL) = L/ 825 (0.59")<br>ALLOWABLE DEFL.(TL)= L/360 (1.36")<br>CALCULATED VERT. DEFL.(TL) = L/ 424 (1.15")<br><br>CSI: TC=0.86/1.00 (E-G:1) , BC=0.78/1.00 (V-X:1) , WB=1.00/1.00 (C-Y:1) , SSI=0.33/1.00 (Z-AA:1)<br><br>DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.00 COMP=1.00 SHEAR=1.00 TENS=1.00<br><br>COMPANION LIVE LOAD FACTOR = 1.00<br><br>AUTOSOLVE HEELS OFF<br><br>TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT . |  |  |  |
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|          |            |          |     |                      |              |
|----------|------------|----------|-----|----------------------|--------------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.     |
| 318797   | H10A       | 1        | 1   | TRUSS DESC. JT 45147 | E20041044(2) |

**PLATES (table is in inches)**

| JT | TYPE    | PLATES | W   | LEN  | Y    | X    |
|----|---------|--------|-----|------|------|------|
| U  | BMWWW-t | MT20   | 5.0 | 10.0 | 2.25 | 3.00 |
| V  | BMWWW+t | MT20   | 8.0 | 9.0  | 5.50 | 3.25 |
| W  | BS-t    | MII16  | 7.0 | 17.5 |      |      |
| X  | BMWW-t  | MT20   | 6.0 | 7.0  | 2.50 | 1.75 |
| Y  | BMWW-t  | MT20   | 8.0 | 9.0  | 3.50 | 2.50 |
| Z  | BMWW+t  | MT20   | 5.0 | 10.0 | 5.00 | 2.00 |
| AA | BMV1+t  | MT20   | 6.0 | 12.0 | 7.25 |      |

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

**NAIL VALUES**

| PLATE  | GRIP(DRY) | SHEAR | SECTION             |
|--------|-----------|-------|---------------------|
|        | (PSI)     | (PLI) | (PLI)               |
|        | MAX       | MIN   | MAX MIN             |
| MT20   | 650       | 371   | 1747 788 1987 1873  |
| MII16  | 438       | 302   | 2547 1256 4283 1816 |
| MT18HS | 586       | 403   | 2455 1382 3163 3004 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.89 (L) (INPUT = 0.90 )

JSI METAL= 0.98 (Y) (INPUT = 1.00 )

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

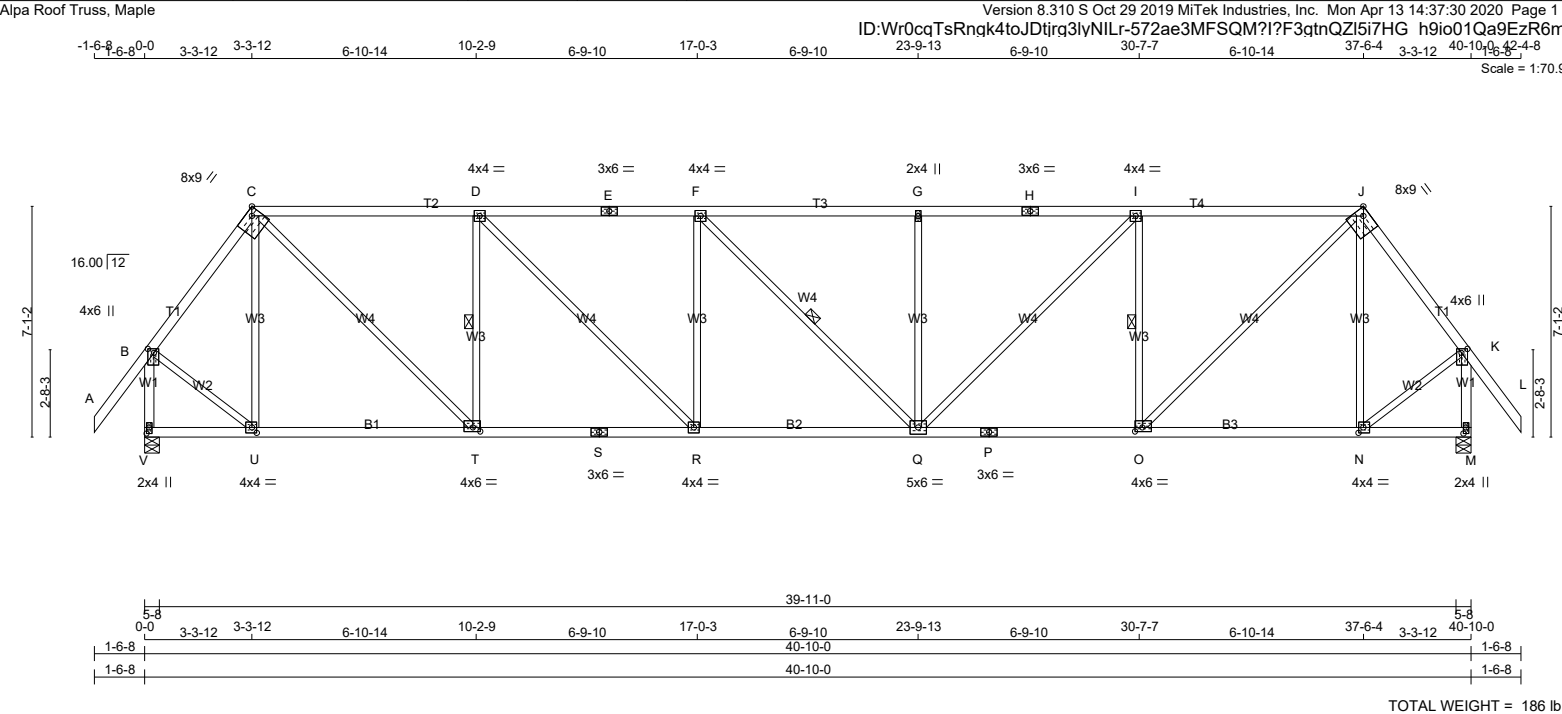


Scale = 1:70.9

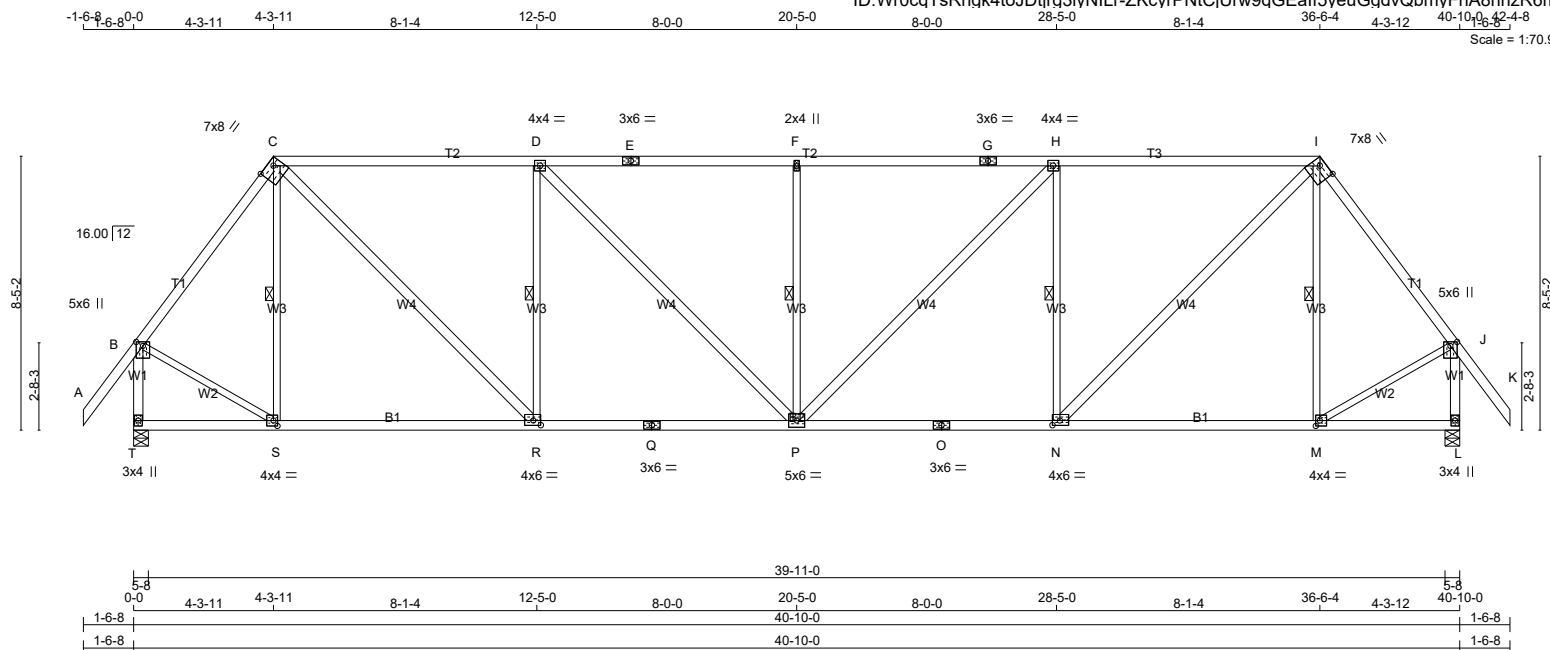


JSI GRIP= 0.90 (O) (INPUT = 0.90 )  
JSI METAL= 0.82 (P) (INPUT = 1.00 )

|          |            |          |     |                      |           |
|----------|------------|----------|-----|----------------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.  |
| 318797   | H12        | 1        | 1   | TRUSS DESC. JT 45147 | E20041046 |



|                                                                   |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  |                                                                                            |  |  |  |  |  |  |  |  |  |
|-------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|-----------------------------------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|--------------------------------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|
| N. L. G. A. RULES                                                 |  |  |  |  |  |  |  |  |  | DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER |  |  |  |  |  |  |  |  |  | DESIGN CRITERIA                                                                            |  |  |  |  |  |  |  |  |  |
| CHORDS SIZE LUMBER DESCR.                                         |  |  |  |  |  |  |  |  |  | BEARINGS                                                                                      |  |  |  |  |  |  |  |  |  | SPECIFIED LOADS:                                                                           |  |  |  |  |  |  |  |  |  |
| A - C 2x4 DRY No.2 SPF                                            |  |  |  |  |  |  |  |  |  | FACTORED MAXIMUM FACTORED INPUT REQ'D                                                         |  |  |  |  |  |  |  |  |  | TOP CH. LL = 21.0 PSF                                                                      |  |  |  |  |  |  |  |  |  |
| C - E 2x4 DRY No.2 SPF                                            |  |  |  |  |  |  |  |  |  | GROSS REACTION GROSS REACTION BRG BRG                                                         |  |  |  |  |  |  |  |  |  | DL = 6.0 PSF                                                                               |  |  |  |  |  |  |  |  |  |
| E - H 2x4 DRY No.2 SPF                                            |  |  |  |  |  |  |  |  |  | JT VERT HORZ DOWN HORZ UPLIFT IN-SX IN-SX                                                     |  |  |  |  |  |  |  |  |  | BOT CH. LL = 0.0 PSF                                                                       |  |  |  |  |  |  |  |  |  |
| H - J 2x4 DRY No.2 SPF                                            |  |  |  |  |  |  |  |  |  | V 2099 0 2099 0 0 5-8 3-5                                                                     |  |  |  |  |  |  |  |  |  | DL = 7.4 PSF                                                                               |  |  |  |  |  |  |  |  |  |
| J - L 2x4 DRY No.2 SPF                                            |  |  |  |  |  |  |  |  |  | M 2099 0 2099 0 0 5-8 3-5                                                                     |  |  |  |  |  |  |  |  |  | TOTAL LOAD = 34.4 PSF                                                                      |  |  |  |  |  |  |  |  |  |
| V - B 2x4 DRY No.2 SPF                                            |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  |                                                                                            |  |  |  |  |  |  |  |  |  |
| M - K 2x4 DRY No.2 SPF                                            |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  |                                                                                            |  |  |  |  |  |  |  |  |  |
| V - S 2x4 DRY No.2 SPF                                            |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  |                                                                                            |  |  |  |  |  |  |  |  |  |
| S - P 2x4 DRY No.2 SPF                                            |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  |                                                                                            |  |  |  |  |  |  |  |  |  |
| P - M 2x4 DRY No.2 SPF                                            |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  |                                                                                            |  |  |  |  |  |  |  |  |  |
| ALL WEBS 2x3 DRY No.2 SPF                                         |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  |                                                                                            |  |  |  |  |  |  |  |  |  |
| EXCEPT                                                            |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  |                                                                                            |  |  |  |  |  |  |  |  |  |
| DRY: SEASONED LUMBER.                                             |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  |                                                                                            |  |  |  |  |  |  |  |  |  |
|                                                                   |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  |                                                                                            |  |  |  |  |  |  |  |  |  |
| PLATES (table is in inches)                                       |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  | THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015 |  |  |  |  |  |  |  |  |  |
| JT TYPE PLATES W LEN Y X                                          |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  | THIS DESIGN COMPLIES WITH:                                                                 |  |  |  |  |  |  |  |  |  |
| B TMVW+p MT20 4.0 6.0 1.50 2.25                                   |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  | - PART 9 OF BCBC 2018 , ABC 2019                                                           |  |  |  |  |  |  |  |  |  |
| C TTWW-h MT20 8.0 9.0 Edge 2.75                                   |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  | - PART 9 OF OBC 2012 (2019 AMENDMENT)                                                      |  |  |  |  |  |  |  |  |  |
| D, F, I                                                           |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  | - CSA 086-14                                                                               |  |  |  |  |  |  |  |  |  |
| D TMWW-t MT20 4.0 4.0                                             |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  | - TPIC 2014                                                                                |  |  |  |  |  |  |  |  |  |
| E TS-t MT20 3.0 6.0                                               |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  |                                                                                            |  |  |  |  |  |  |  |  |  |
| G TMW+w MT20 2.0 4.0                                              |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  |                                                                                            |  |  |  |  |  |  |  |  |  |
| H TS-t MT20 3.0 6.0                                               |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  |                                                                                            |  |  |  |  |  |  |  |  |  |
| J TTWW-h MT20 8.0 9.0 Edge 2.75                                   |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  |                                                                                            |  |  |  |  |  |  |  |  |  |
| K TMVW+p MT20 4.0 6.0 1.50 2.25                                   |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  |                                                                                            |  |  |  |  |  |  |  |  |  |
| M BMV1+p MT20 2.0 4.0 2.25 1.00                                   |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  |                                                                                            |  |  |  |  |  |  |  |  |  |
| N BMWW-t MT20 4.0 4.0 2.00 1.75                                   |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  |                                                                                            |  |  |  |  |  |  |  |  |  |
| O BMWW-t MT20 4.0 6.0 1.50 2.75                                   |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  |                                                                                            |  |  |  |  |  |  |  |  |  |
| P BS-t MT20 3.0 6.0                                               |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  |                                                                                            |  |  |  |  |  |  |  |  |  |
| Q BMWWW-t MT20 5.0 6.0                                            |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  |                                                                                            |  |  |  |  |  |  |  |  |  |
| R BMWW-t MT20 4.0 4.0                                             |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  |                                                                                            |  |  |  |  |  |  |  |  |  |
| S BS-t MT20 3.0 6.0                                               |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  |                                                                                            |  |  |  |  |  |  |  |  |  |
| T BMWW-t MT20 4.0 6.0 1.50 2.75                                   |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  |                                                                                            |  |  |  |  |  |  |  |  |  |
| U BMWW-t MT20 4.0 4.0 2.00 1.75                                   |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  |                                                                                            |  |  |  |  |  |  |  |  |  |
| V BMV1+p MT20 2.0 4.0 2.25 1.00                                   |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  |                                                                                            |  |  |  |  |  |  |  |  |  |
| Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD. |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  |                                                                                            |  |  |  |  |  |  |  |  |  |
|                                                                   |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  |                                                                                            |  |  |  |  |  |  |  |  |  |
| LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2                         |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  |                                                                                            |  |  |  |  |  |  |  |  |  |
|                                                                   |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  |                                                                                            |  |  |  |  |  |  |  |  |  |
|                                                                   |  |  |  |  |  |  |  |  |  |                                                                                               |  |  |  |  |  |  |  |  |  |                                                                                            |  |  |  |  |  |  |  |  |  |



TOTAL WEIGHT = 7 X 202 = 1411 lb

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

DRY: SEASONED LUMBER.

**PLATES** (table is in inches)

| J | T | TYPE     | PLATES | W   | LEN | Y    | X    |
|---|---|----------|--------|-----|-----|------|------|
| B | T | TMWV+p   | MT20   | 5.0 | 6.0 | 1.50 | 2.50 |
| C | T | TTWW-h   | MT20   | 7.0 | 8.0 | 2.00 | 5.25 |
| D | T | DMWV-t   | MT20   | 4.0 | 4.0 |      |      |
| E | T | TS-t     | MT20   | 3.0 | 6.0 |      |      |
| F | T | TMW+w    | MT20   | 2.0 | 4.0 |      |      |
| G | T | TS-t     | MT20   | 3.0 | 6.0 |      |      |
| H | T | MMWV-t   | MT20   | 4.0 | 4.0 |      |      |
| I | T | TTWW-h   | MT20   | 7.0 | 8.0 | 2.00 | 5.25 |
| J | T | TMWV+p   | MT20   | 5.0 | 6.0 | 1.50 | 2.50 |
| L | B | BMV1+p   | MT20   | 3.0 | 4.0 |      |      |
| M | N | BMWV-t   | MT20   | 4.0 | 4.0 | 2.00 | 1.50 |
| N | M | BMWV-t   | MT20   | 4.0 | 6.0 | 1.75 | 2.75 |
| O | P | BS-t     | MT20   | 3.0 | 6.0 |      |      |
| P | M | BMWVWV-t | MT20   | 5.0 | 6.0 |      |      |
| Q | B | BS-t     | MT20   | 3.0 | 6.0 |      |      |
| R | M | BMWV-t   | MT20   | 4.0 | 6.0 | 1.75 | 2.75 |
| S | M | BMWV-t   | MT20   | 4.0 | 4.0 | 2.00 | 1.50 |
| T | B | BMV1+p   | MT20   | 3.0 | 4.0 |      |      |

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

|    | FACTORED<br>GROSS REACTION |      | MAXIMUM FACTORED<br>GROSS REACTION |      |        | INPUT<br>BRG | REQRD<br>BRG |
|----|----------------------------|------|------------------------------------|------|--------|--------------|--------------|
| JT | VERT                       | HORZ | DOWN                               | HORZ | UPLIFT | IN-SX        | IN-SX        |
| T  | 2220                       | 0    | 2220                               | 0    | 0      | 5-8          | 3-11         |
| L  | 2220                       | 0    | 2220                               | 0    | 0      | 5-8          | 3-11         |

### UNFACTORED REACTIONS

| 1ST LCASE |          | MAX./MIN. COMPONENT REACTIONS |       |           |       |         |       |
|-----------|----------|-------------------------------|-------|-----------|-------|---------|-------|
| JT        | COMBINED | SNOW                          | LIVE  | PERM.LIVE | WIND  | DEAD    | SOIL  |
| T         | 1590     | 927 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 664 / 0 | 0 / 0 |
| L         | 1590     | 927 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 664 / 0 | 0 / 0 |

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

## BRACING

FOR SECTION C-I, MAX. PURLIN SPACING = 2.00 FT.  
FOR OTHER SECTIONS, TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.89 FT.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT. OR RIGID CEILING DIRECTLY APPLIED.

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

1 LATERAL BRACE(S) AT 1/2 LENGTH OF C-S, D-R, F-P, H-N, I-M.

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

## LOADING

**TOTAL LOAD CASES: (4)**

| C H O R D S   |           |            |       |          | W E B S       |       |           |          |  |
|---------------|-----------|------------|-------|----------|---------------|-------|-----------|----------|--|
| MAX. FACTORED |           | FACTORED   |       |          | MAX. FACTORED |       |           |          |  |
| MEMB.         | FORCE     | VERT. LOAD | LC1   | MAX      | MAX.          | MEMB. | FORCE     | MAX      |  |
|               | (LBS)     | (PLF)      |       | CSI (LC) | UNBRAC        |       | (LBS)     | CSI (LC) |  |
| FR-TO         |           | FROM       | TO    | LENGTH   |               | FR-TO |           |          |  |
| A-B           | 0 / 52    | -78.0      | -78.0 | 0.15 (1) | 10.00         | S-C   | -399 / 0  | 0.18 (1) |  |
| B-C           | -1707 / 0 | -78.0      | -78.0 | 0.26 (1) | 4.89          | C-R   | 0 / 1860  | 0.30 (1) |  |
| C-D           | -2330 / 0 | -85.5      | -85.5 | 0.87 (1) | 2.00          | R-D   | -1161 / 0 | 0.52 (1) |  |
| D-E           | -2711 / 0 | -85.5      | -85.5 | 0.88 (1) | 2.00          | D-P   | 0 / 544   | 0.09 (1) |  |
| E-F           | -2711 / 0 | -85.5      | -85.5 | 0.88 (1) | 2.00          | P-F   | -631 / 0  | 0.29 (1) |  |
| F-G           | -2711 / 0 | -85.5      | -85.5 | 0.88 (1) | 2.00          | P-H   | 0 / 544   | 0.09 (1) |  |
| G-H           | -2711 / 0 | -85.5      | -85.5 | 0.88 (1) | 2.00          | N-H   | -1161 / 0 | 0.52 (1) |  |
| H-I           | -2330 / 0 | -85.5      | -85.5 | 0.87 (1) | 2.00          | N-I   | 0 / 1860  | 0.30 (1) |  |
| I-J           | -1707 / 0 | -78.0      | -78.0 | 0.26 (1) | 4.89          | M-I   | -399 / 0  | 0.18 (1) |  |
| J-K           | 0 / 52    | -78.0      | -78.0 | 0.15 (1) | 10.00         | B-S   | 0 / 1148  | 0.26 (1) |  |
| T-B           | -2197 / 0 | 0.0        | 0.0   | 0.32 (1) | 5.74          | M-J   | 0 / 1148  | 0.26 (1) |  |
| L-J           | -2197 / 0 | 0.0        | 0.0   | 0.32 (1) | 5.74          |       |           |          |  |

|      |          |       |       |          |       |
|------|----------|-------|-------|----------|-------|
| T- S | 0 / 0    | -18.5 | -18.5 | 0.18 (4) | 10.00 |
| S- R | 0 / 1014 | -18.5 | -18.5 | 0.35 (4) | 10.00 |
| R- Q | 0 / 2330 | -18.5 | -18.5 | 0.51 (1) | 10.00 |
| Q- P | 0 / 2330 | -18.5 | -18.5 | 0.51 (1) | 10.00 |
| P- O | 0 / 2330 | -18.5 | -18.5 | 0.51 (1) | 10.00 |
| O- N | 0 / 2330 | -18.5 | -18.5 | 0.51 (1) | 10.00 |
| N- M | 0 / 1014 | -18.5 | -18.5 | 0.35 (4) | 10.00 |
| M- L | 0 / 0    | -18.5 | -18.5 | 0.18 (4) | 10.00 |

## DESIGN CRITERIA

SPECIFIED LOADS:

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

SPACING = 24.0 IN. C/C

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

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

THIS DESIGN COMPLIES WITH:

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

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

ALLOWABLE DEFL.(LL)=  $L/360$  (1.36")  
 CALCULATED VERT. DEFL.(LL) =  $L/999$  (0.13")  
 ALLOWABLE DEFL.(TL)=  $L/360$  (1.36")  
 CALCULATED VERT. DEFL.(TL) =  $L/999$  (0.29")

CSI: TC=0.88/1.00 (F-H:1), BC=0.51/1.00 (N-P:1),  
WB=0.52/1.00 (D-R:1), SSI=0.33/1.00 (H-I:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

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

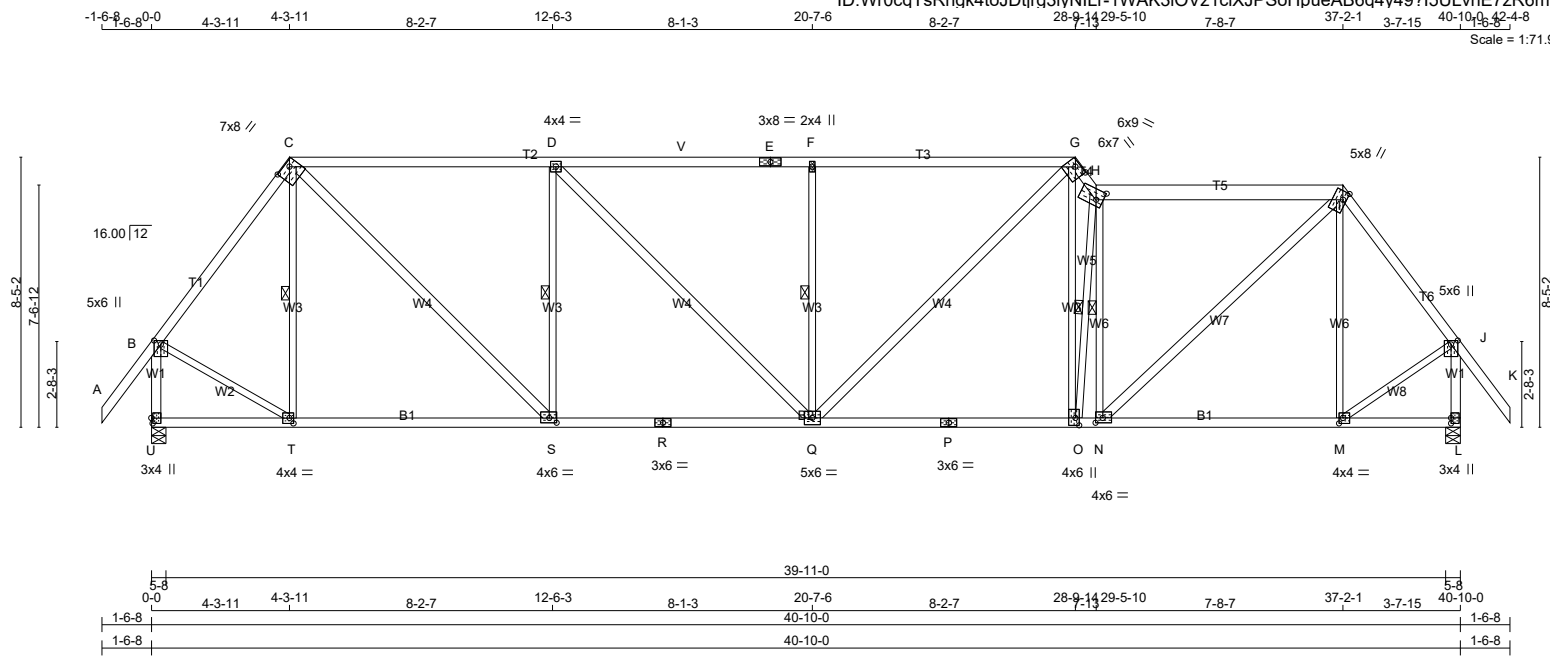
PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.88 (L) (INPUT = 0.90 )  
JSI METAL= 0.79 (Q) (INPUT = 1.00 )

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





TOTAL WEIGHT = 2 X 216 = 432 lb

| LUMBER             |      |     |            |       |
|--------------------|------|-----|------------|-------|
| N. L. G. A. RULES  |      |     |            |       |
| CHORDS             | SIZE |     | LUMBER     | DESCR |
| A - C              | 2x4  | DRY | No.2       | SPF   |
| C - E              | 2x4  | DRY | 1650F 1.5E | SPF   |
| E - G              | 2x4  | DRY | 1650F 1.5E | SPF   |
| G - H              | 2x4  | DRY | No.2       | SPF   |
| H - I              | 2x6  | DRY | No.2       | SPF   |
| I - K              | 2x4  | DRY | No.2       | SPF   |
| U - B              | 2x4  | DRY | No.2       | SPF   |
| L - J              | 2x4  | DRY | No.2       | SPF   |
| U - R              | 2x4  | DRY | No.2       | SPF   |
| R - P              | 2x4  | DRY | No.2       | SPF   |
| P - L              | 2x4  | DRY | No.2       | SPF   |
| ALL WEBS<br>EXCEPT | 2x3  | DRY | No.2       | SPF   |
| C - S              | 2x4  | DRY | No.2       | SPF   |
| D - Q              | 2x4  | DRY | No.2       | SPF   |
| Q - G              | 2x4  | DRY | No.2       | SPF   |
| N - I              | 2x4  | DRY | No.2       | SPF   |

DRY: SEASONED LUMBER.

| PLATES (table is in inches) |          |        |     |     |      |      |
|-----------------------------|----------|--------|-----|-----|------|------|
| JT                          | TYPE     | PLATES | W   | LEN | Y    | X    |
| B                           | TMWV+p   | MT20   | 5.0 | 6.0 | 1.50 | 2.50 |
| C                           | TTWW-h   | MT20   | 7.0 | 8.0 | 1.75 | 5.00 |
| D                           | TMWV-t   | MT20   | 4.0 | 4.0 |      |      |
| E                           | TS-t     | MT20   | 3.0 | 8.0 |      |      |
| F                           | TMW+w    | MT20   | 2.0 | 4.0 |      |      |
| G                           | TTWW-h   | MT20   | 6.0 | 7.0 | 1.75 | 4.00 |
| H                           | TTWW-m   | MT20   | 6.0 | 9.0 | 3.75 | 2.50 |
| I                           | TTWW+m   | MT20   | 5.0 | 8.0 | 3.00 | 1.25 |
| J                           | TMW+p    | MT20   | 5.0 | 6.0 | 1.50 | 2.50 |
| L                           | BMV1+p   | MT20   | 3.0 | 4.0 | 2.00 |      |
| M                           | BMWV-t   | MT20   | 4.0 | 4.0 | 2.00 | 1.50 |
| N                           | BMWV-t   | MT20   | 4.0 | 6.0 | 1.75 | 2.75 |
| O                           | BMWV+t   | MT20   | 4.0 | 6.0 | 2.75 | 1.50 |
| P                           | BS-t     | MT20   | 3.0 | 6.0 |      |      |
| Q                           | BMWVWV-t | MT20   | 5.0 | 6.0 |      |      |
| R                           | BS-t     | MT20   | 3.0 | 6.0 |      |      |
| S                           | BMWV-t   | MT20   | 4.0 | 6.0 | 1.75 | 2.75 |
| T                           | BMWV-t   | MT20   | 4.0 | 4.0 | 2.00 | 1.50 |
| U                           | BMV1+p   | MT20   | 3.0 | 4.0 | 2.00 | 0.50 |

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



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

|    | FACTORED<br>GROSS REACTION |      | MAXIMUM FACTORED<br>GROSS REACTION |      |        | INPUT<br>BRG | REQRD<br>BRG |
|----|----------------------------|------|------------------------------------|------|--------|--------------|--------------|
| JT | VERT                       | HORZ | DOWN                               | HORZ | UPLIFT | IN-SX        | IN-SX        |
| U  | 2208                       | 0    | 2208                               | 0    | 0      | 5-8          | 3-11         |
| L  | 2173                       | 0    | 2173                               | 0    | 0      | 5-8          | 3-9          |

## UNFACTORED REACTIONS

| 1ST LCASE |          | MAX./MIN. COMPONENT REACTIONS |       |           |       |         |       |
|-----------|----------|-------------------------------|-------|-----------|-------|---------|-------|
| JT        | COMBINED | SNOW                          | LIVE  | PERM.LIVE | WIND  | DEAD    | SOIL  |
| U         | 1581     | 927 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 654 / 0 | 0 / 0 |
| L         | 1553     | 927 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 627 / 0 | 0 / 0 |

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

## BRACING

FOR SECTION C-G, MAX. PURLIN SPACING = 2.00 FT.  
FOR OTHER SECTIONS, TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.53 FT.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT. OR RIGID CEILING DIRECTLY APPLIED.

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

1 LATERAL BRACE(S) AT 1/ 2 LENGTH OF C-T, D-S, F-Q, H-O, H-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)**

| C H O R D S   |             |                  |                  | W E B S       |       |             |              |
|---------------|-------------|------------------|------------------|---------------|-------|-------------|--------------|
| MAX. FACTORED |             | FACTORED         |                  | MAX. FACTORED |       |             |              |
| MEMB.         | FORCE (LBS) | VERT. LOAD (PLF) | LC1 MAX CSI (LC) | MAX. UNBRAC   | MEMB. | FORCE (LBS) | MAX CSI (LC) |
| FR-TO         |             | FROM TO          |                  | LENGTH        | FR-TO |             |              |
| A-B           | 0 / 52      | -78.0            | -78.0 0.15 (1)   | 10.00         | T-C   | -395 / 0    | 0.18 (1)     |
| B-C           | -1697 / 0   | -78.0            | -78.0 0.26 (1)   | 4.90          | C-S   | 0 / 1841    | 0.30 (1)     |
| C-D           | -2319 / 0   | -85.5            | -85.5 0.66 (1)   | 2.00          | S-D   | -1140 / 0   | 0.52 (1)     |
| D-V           | -2706 / 0   | -85.5            | -85.5 0.62 (1)   | 2.00          | D-Q   | 0 / 548     | 0.09 (1)     |
| V-E           | -2706 / 0   | -85.5            | -85.5 0.62 (1)   | 2.00          | Q-F   | -748 / 0    | 0.34 (1)     |
| E-F           | -2706 / 0   | -85.5            | -85.5 0.62 (1)   | 2.00          | Q-G   | 0 / 729     | 0.12 (1)     |
| F-G           | -2706 / 0   | -85.5            | -85.5 0.70 (1)   | 2.00          | O-G   | 0 / 2258    | 0.51 (1)     |
| G-H           | -3804 / 0   | -78.0            | -78.0 0.15 (1)   | 3.53          | O-H   | -2079 / 0   | 0.76 (1)     |
| H-I           | -2354 / 0   | -78.0            | -78.0 0.33 (1)   | 5.01          | N-H   | -1347 / 0   | 0.46 (1)     |
| I-J           | -1621 / 0   | -78.0            | -78.0 0.18 (1)   | 5.05          | N-I   | 0 / 1910    | 0.31 (1)     |
| J-K           | 0 / 52      | -78.0            | -78.0 0.15 (1)   | 10.00         | M-I   | -457 / 0    | 0.45 (1)     |
| U-B           | -2186 / 0   | 0.0              | 0.0 0.32 (1)     | 5.74          | B-T   | 0 / 1142    | 0.26 (1)     |
| L-J           | -2162 / 0   | 0.0              | 0.0 0.31 (1)     | 5.78          | M-J   | 0 / 1138    | 0.26 (1)     |

|     |        |       |       |          |       |
|-----|--------|-------|-------|----------|-------|
| U-T | 0/0    | -18.5 | -18.5 | 0.19 (4) | 10.00 |
| T-S | 0/1008 | -18.5 | -18.5 | 0.35 (4) | 10.00 |
| S-R | 0/2319 | -18.5 | -18.5 | 0.51 (1) | 10.00 |
| R-Q | 0/2319 | -18.5 | -18.5 | 0.51 (1) | 10.00 |
| Q-P | 0/2187 | -18.5 | -18.5 | 0.49 (1) | 10.00 |
| P-O | 0/2187 | -18.5 | -18.5 | 0.49 (1) | 10.00 |
| O-N | 0/2373 | -18.5 | -18.5 | 0.51 (1) | 10.00 |
| N-M | 0/965  | -18.5 | -18.5 | 0.28 (4) | 10.00 |
| M-L | 0/0    | -18.5 | -18.5 | 0.18 (4) | 10.00 |

## DESIGN CRITERIA

SPECIFIED LOADS:

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

SPACING = 24.0 IN. C/C

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

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

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

THIS DESIGN COMPLIES WITH:

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

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

ALLOWABLE DEFL.(LL)=  $L/360$  (1.36")  
 CALCULATED VERT. DEFL.(LL) =  $L/999$  (0.15")  
 ALLOWABLE DEFL.(TL)=  $L/360$  (1.36")  
 CALCULATED VERT. DEFL.(TL) =  $L/999$  (0.36")

CSI: TC=0.70/1.00 (F-G:1) , BC=0.51/1.00 (N-O:1) ,  
WB=0.76/1.00 (H-O:1) , SSI=0.33/1.00 (C-D:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

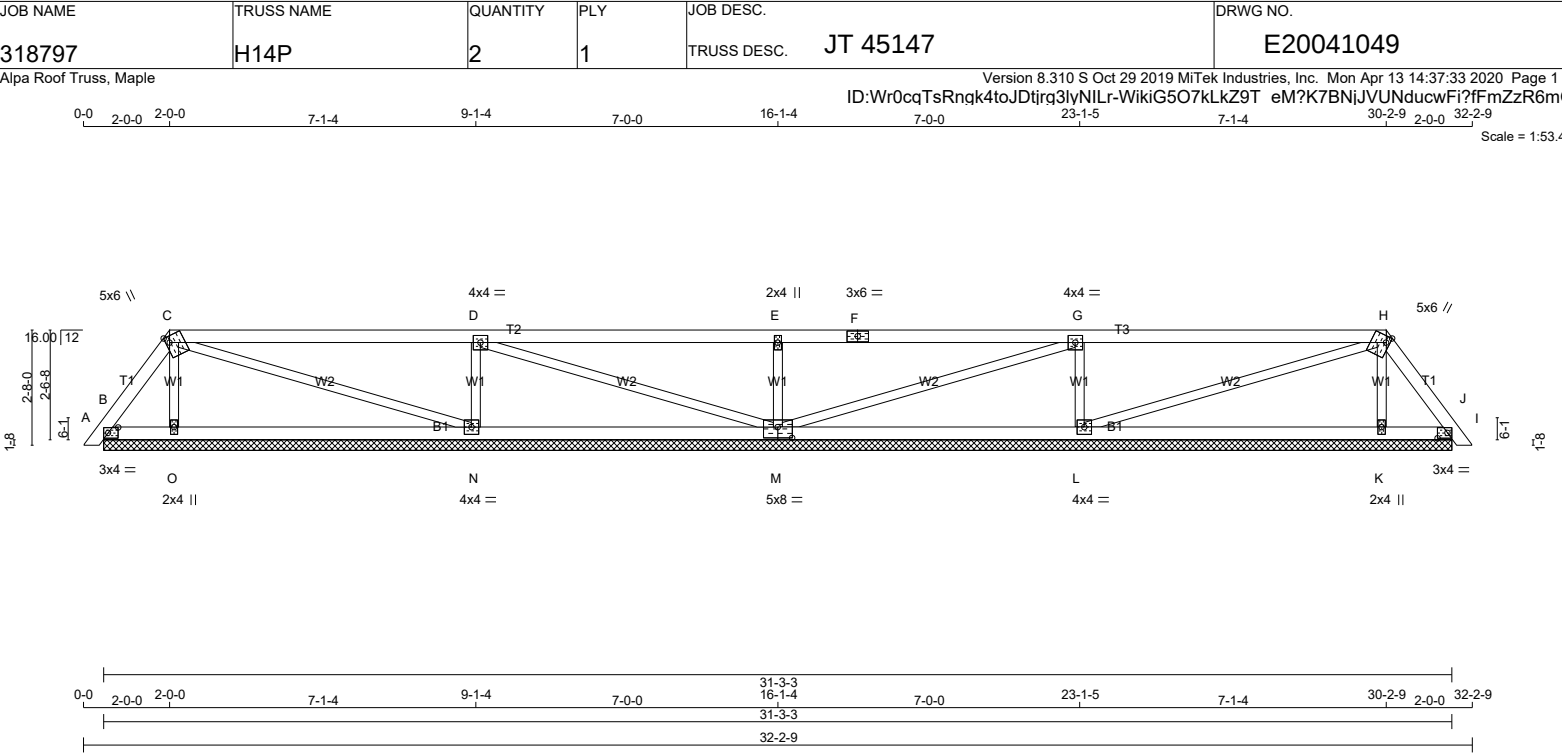
TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.85 (H) (INPUT = 0.90 )  
JSI METAL= 0.78 (R) (INPUT = 1.00 )



| LUMBER                |      |        |        |     |
|-----------------------|------|--------|--------|-----|
| N. L. G. A. RULES     |      |        |        |     |
| CHORDS                | SIZE | LUMBER | DESCR. |     |
| A - C                 | 2x4  | DRY    | No.2   | SPF |
| C - F                 | 2x4  | DRY    | No.2   | SPF |
| F - H                 | 2x4  | DRY    | No.2   | SPF |
| H - J                 | 2x4  | DRY    | No.2   | SPF |
| B - M                 | 2x4  | DRY    | No.2   | SPF |
| M - I                 | 2x4  | DRY    | No.2   | SPF |
| ALL WEBS              | 2x3  | DRY    | No.2   | SPF |
| DRY: SEASONED LUMBER. |      |        |        |     |

| PLATES (table is in inches) |         |        |     |     |           |
|-----------------------------|---------|--------|-----|-----|-----------|
| JT                          | TYPE    | PLATES | W   | LEN | Y X       |
| B                           | TMB1-I  | MT20   | 3.0 | 4.0 | 1.50 2.75 |
| C                           | TTWW+m  | MT20   | 5.0 | 6.0 | 1.75 1.00 |
| D                           | TMWW-t  | MT20   | 4.0 | 4.0 |           |
| E                           | TMWW+w  | MT20   | 2.0 | 4.0 |           |
| F                           | TS-t    | MT20   | 3.0 | 6.0 |           |
| G                           | TMWW-t  | MT20   | 4.0 | 4.0 |           |
| H                           | TTWW+m  | MT20   | 5.0 | 6.0 | 1.75 1.00 |
| I                           | TMB1-I  | MT20   | 3.0 | 4.0 | 1.50 2.75 |
| K                           | BMW1+w  | MT20   | 2.0 | 4.0 |           |
| L                           | BMW1-t  | MT20   | 4.0 | 4.0 |           |
| M                           | BSWW1-I | MT20   | 5.0 | 8.0 | 3.00 4.00 |
| N                           | BMW1-t  | MT20   | 4.0 | 4.0 |           |
| O                           | BMW1+w  | MT20   | 2.0 | 4.0 |           |

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



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

|    |     | FACTORED GROSS REACTION |      | MAXIMUM FACTORED GROSS REACTION |      | INPUT BRG |                    | REQRD BRG |  |
|----|-----|-------------------------|------|---------------------------------|------|-----------|--------------------|-----------|--|
|    |     | VERT                    | HORZ | DOWN                            | HORZ | UPLIFT    | IN-SX              | IN-SX     |  |
| JT |     |                         |      |                                 |      |           |                    |           |  |
| B  | 142 | 0                       | 142  | 0                               | 0    | 0         | 31-3-3 (15-7-109-7 |           |  |
| O  | 303 | 0                       | 303  | 0                               | 0    | 0         | 31-3-3 (15-7-109-7 |           |  |
| N  | 775 | 0                       | 775  | 0                               | 0    | 0         | 31-3-3 (15-7-109-7 |           |  |
| M  | 630 | 0                       | 630  | 0                               | 0    | 0         | 31-3-3 (15-7-109-7 |           |  |
| L  | 775 | 0                       | 775  | 0                               | 0    | 0         | 31-3-3 (15-7-109-7 |           |  |
| K  | 303 | 0                       | 303  | 0                               | 0    | 0         | 31-3-3 (15-7-109-7 |           |  |
| I  | 142 | 0                       | 142  | 0                               | 0    | 0         | 31-3-3 (15-7-109-7 |           |  |

VALUE IN PARENTHESIS INDICATES EFFECTIVE BEARING LENGTH

**UNFACTORED REACTIONS**

|    |     | 1ST LCASE |       | MAX./MIN. COMPONENT REACTIONS |       |           |       |         |       |
|----|-----|-----------|-------|-------------------------------|-------|-----------|-------|---------|-------|
|    |     | COMBINED  |       | SNOW                          | LIVE  | PERM.LIVE | WIND  | DEAD    | SOIL  |
| JT |     |           |       |                               |       |           |       |         |       |
| B  | 97  | 86 / 0    | 0 / 0 | 0 / 0                         | 0 / 0 | 0 / 0     | 0 / 0 | 11 / 0  | 0 / 0 |
| O  | 221 | 107 / 0   | 0 / 0 | 0 / 0                         | 0 / 0 | 0 / 0     | 0 / 0 | 115 / 0 | 0 / 0 |
| N  | 552 | 336 / 0   | 0 / 0 | 0 / 0                         | 0 / 0 | 0 / 0     | 0 / 0 | 217 / 0 | 0 / 0 |
| M  | 447 | 285 / 0   | 0 / 0 | 0 / 0                         | 0 / 0 | 0 / 0     | 0 / 0 | 162 / 0 | 0 / 0 |
| L  | 552 | 336 / 0   | 0 / 0 | 0 / 0                         | 0 / 0 | 0 / 0     | 0 / 0 | 217 / 0 | 0 / 0 |
| K  | 221 | 107 / 0   | 0 / 0 | 0 / 0                         | 0 / 0 | 0 / 0     | 0 / 0 | 115 / 0 | 0 / 0 |
| I  | 97  | 86 / 0    | 0 / 0 | 0 / 0                         | 0 / 0 | 0 / 0     | 0 / 0 | 11 / 0  | 0 / 0 |

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

**BRACING**

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

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

**LOADING**

TOTAL LOAD CASES: (4)

| CHORDS |         |                           |                           | WEBS                       |                       |     |                           |
|--------|---------|---------------------------|---------------------------|----------------------------|-----------------------|-----|---------------------------|
| MEMB.  |         | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX. FACTORED LC1 MAX (LC) | MEMB.                 |     | MAX. FACTORED FORCE (LBS) |
| FR-TO  |         |                           | FROM TO                   | CSI (LC)                   | UNBRACED LENGTH FR-TO |     | MAX. FACTORED FORCE (LBS) |
| A-B    | 0 / 10  |                           | -78.0                     | -78.0 0.01 (1)             | 10.00                 | O-C | -199 / 0                  |
| B-C    | -88 / 0 |                           | -78.0                     | -78.0 0.03 (1)             | 6.25                  | C-N | -24 / 0                   |
| C-D    | -17 / 0 |                           | -78.0                     | -78.0 0.57 (1)             | 6.25                  | N-D | -617 / 0                  |
| D-E    | 0 / 23  |                           | -78.0                     | -78.0 0.57 (1)             | 10.00                 | D-M | -43 / 0                   |
| E-F    | 0 / 23  |                           | -78.0                     | -78.0 0.57 (1)             | 10.00                 | M-E | -503 / 0                  |
| F-G    | 0 / 23  |                           | -78.0                     | -78.0 0.57 (1)             | 10.00                 | M-G | -43 / 0                   |
| G-H    | -17 / 0 |                           | -78.0                     | -78.0 0.57 (1)             | 6.25                  | L-G | -617 / 0                  |
| H-I    | -88 / 0 |                           | -78.0                     | -78.0 0.03 (1)             | 6.25                  | L-H | -24 / 0                   |
| I-J    | 0 / 10  |                           | -78.0                     | -78.0 0.01 (1)             | 10.00                 | K-H | -199 / 0                  |
| B-O    | 0 / 50  |                           | -18.5                     | -18.5 0.13 (4)             | 10.00                 |     |                           |
| O-N    | 0 / 41  |                           | -18.5                     | -18.5 0.24 (4)             | 10.00                 |     |                           |
| N-M    | 0 / 18  |                           | -18.5                     | -18.5 0.24 (4)             | 10.00                 |     |                           |
| M-L    | 0 / 18  |                           | -18.5                     | -18.5 0.24 (4)             | 10.00                 |     |                           |
| L-K    | 0 / 41  |                           | -18.5                     | -18.5 0.24 (4)             | 10.00                 |     |                           |
| K-I    | 0 / 50  |                           | -18.5                     | -18.5 0.13 (4)             | 10.00                 |     |                           |

**DESIGN CRITERIA**

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

SPACING = 24.0 IN./C

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

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

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

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

CSI: TC=0.57/1.00 (E-G:1), BC=0.24/1.00 (N-O:4), WB=0.10/1.00 (D-N:1), SSI=0.26/1.00 (G-H:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

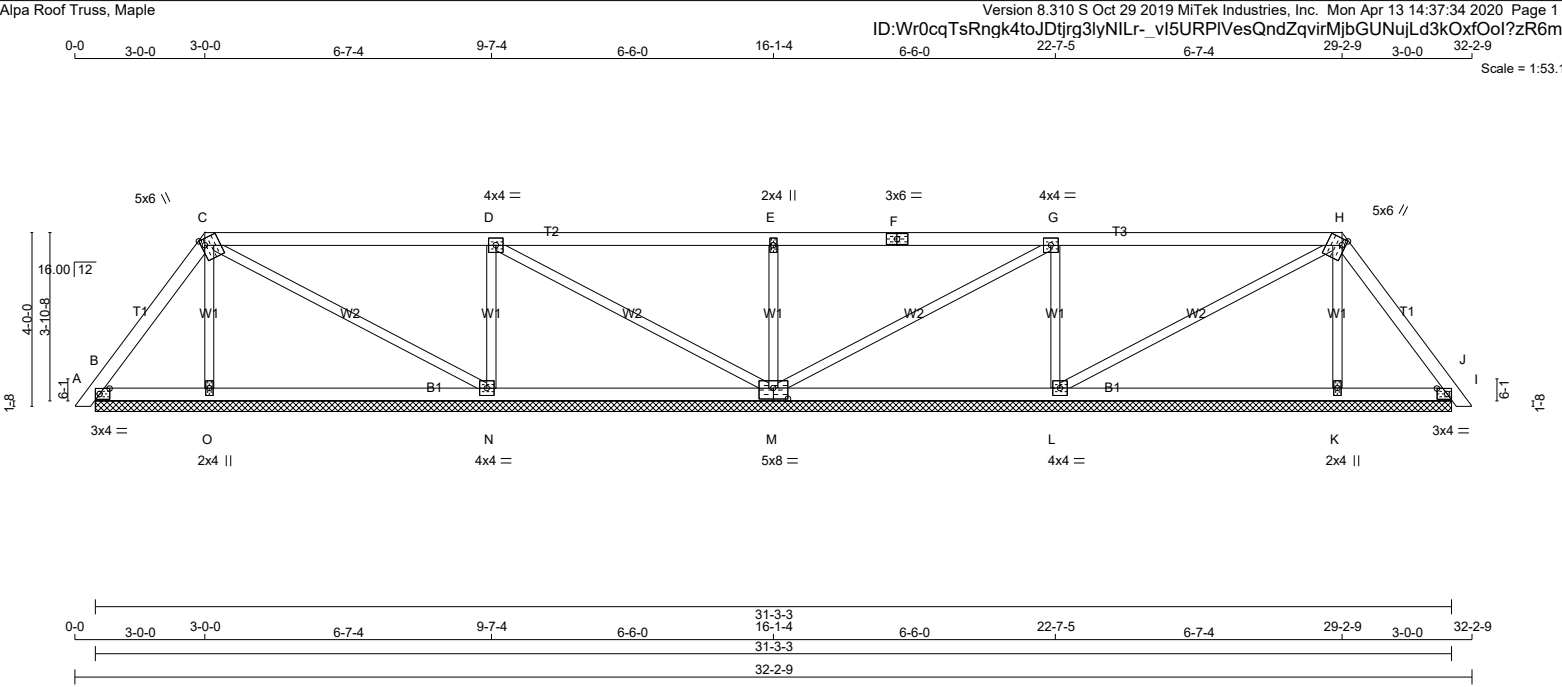
NAIL VALUES  
PLATE GRIP(DRY) SHEAR SECTION (PSI) (PLI) (PLI)  
MAX MIN MAX MIN MAX MIN  
MT20 650 371 1747 788 1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.74 (L) (INPUT = 0.90 )  
JSI METAL= 0.27 (M) (INPUT = 1.00 )

|          |            |          |     |                      |           |
|----------|------------|----------|-----|----------------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.  |
| 318797   | H15P       | 3        | 1   | TRUSS DESC. JT 45147 | E20041050 |



| <b>LUMBER</b><br>N. L. G. A. RULES<br>CHORDS SIZE LUMBER DESCR.<br>A - C 2x4 DRY No.2 SPF<br>C - F 2x4 DRY No.2 SPF<br>F - H 2x4 DRY No.2 SPF<br>H - J 2x4 DRY No.2 SPF<br>B - M 2x4 DRY No.2 SPF<br>M - I 2x4 DRY No.2 SPF<br><br>ALL WEBS 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> <table><tr><th></th><th>FACTORED GROSS REACTION</th><th>MAXIMUM FACTORED GROSS REACTION</th><th>INPUT BRG</th><th>REQRD BRG</th></tr><tr><th>JT</th><th>VERT</th><th>HORZ</th><th>DOWN</th><th>HORZ</th><th>UPLIFT</th><th>IN-SX</th><th>IN-SX</th></tr><tr><td>B</td><td>224</td><td>0</td><td>224</td><td>0</td><td>0</td><td>31-3-3 (15-7-<del>10</del>3)</td><td></td></tr><tr><td>O</td><td>287</td><td>0</td><td>287</td><td>0</td><td>0</td><td>31-3-3 (15-7-<del>10</del>3)</td><td></td></tr><tr><td>N</td><td>698</td><td>0</td><td>698</td><td>0</td><td>0</td><td>31-3-3 (15-7-<del>10</del>3)</td><td></td></tr><tr><td>M</td><td>652</td><td>0</td><td>652</td><td>0</td><td>0</td><td>31-3-3 (15-7-<del>10</del>3)</td><td></td></tr><tr><td>L</td><td>698</td><td>0</td><td>698</td><td>0</td><td>0</td><td>31-3-3 (15-7-<del>10</del>3)</td><td></td></tr><tr><td>K</td><td>288</td><td>0</td><td>288</td><td>0</td><td>0</td><td>31-3-3 (15-7-<del>10</del>3)</td><td></td></tr><tr><td>I</td><td>224</td><td>0</td><td>224</td><td>0</td><td>0</td><td>31-3-3 (15-7-<del>10</del>3)</td><td></td></tr></table><br>VALUE IN PARENTHESIS INDICATES EFFECTIVE BEARING LENGTH<br><b>UNFACTORED REACTIONS</b> <table><tr><th>JT</th><th>1ST LCASE</th><th>SNOW</th><th>LIVE</th><th>PERM.LIVE</th><th>WIND</th><th>DEAD</th><th>SOIL</th></tr><tr><td>B</td><td>156</td><td>116 / 0</td><td>0 / 0</td><td>0 / 0</td><td>0 / 0</td><td>40 / 0</td><td>0 / 0</td></tr><tr><td>O</td><td>209</td><td>104 / 0</td><td>0 / 0</td><td>0 / 0</td><td>0 / 0</td><td>105 / 0</td><td>0 / 0</td></tr><tr><td>N</td><td>498</td><td>300 / 0</td><td>0 / 0</td><td>0 / 0</td><td>0 / 0</td><td>198 / 0</td><td>0 / 0</td></tr><tr><td>M</td><td>461</td><td>301 / 0</td><td>0 / 0</td><td>0 / 0</td><td>0 / 0</td><td>161 / 0</td><td>0 / 0</td></tr><tr><td>L</td><td>498</td><td>300 / 0</td><td>0 / 0</td><td>0 / 0</td><td>0 / 0</td><td>198 / 0</td><td>0 / 0</td></tr><tr><td>K</td><td>209</td><td>104 / 0</td><td>0 / 0</td><td>0 / 0</td><td>0 / 0</td><td>105 / 0</td><td>0 / 0</td></tr><tr><td>I</td><td>156</td><td>116 / 0</td><td>0 / 0</td><td>0 / 0</td><td>0 / 0</td><td>40 / 0</td><td>0 / 0</td></tr></table><br>BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) B, O, N, M, L, K, I<br><b>BRACING</b><br>TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.<br>MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.<br><br>ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.<br><b>LOADING</b><br>TOTAL LOAD CASES: (4) <table><tr><th colspan="4">CHORDS</th><th colspan="4">WEBS</th></tr><tr><th>MEMB.</th><th>MAX. FACTORED FORCE (LBS)</th><th>FACTORED VERT. LOAD (PLF)</th><th>MAX LC1 CSI (LC)</th><th>MAX. UNBRAC LENGTH</th><th>MEMB.</th><th>MAX. FACTORED FORCE (LBS)</th><th>MAX LC1 CSI (LC)</th></tr><tr><td>FR-TO</td><td></td><td>FROM TO</td><td></td><td></td><td>FR-TO</td><td></td><td></td></tr><tr><td>A-B</td><td>0 / 10</td><td>-78.0 -78.0</td><td>0.01 (1)</td><td>10.00</td><td>O-C</td><td>-193 / 0</td><td>0.05 (1)</td></tr><tr><td>B-C</td><td>-111 / 0</td><td>-78.0 -78.0</td><td>0.09 (1)</td><td>6.25</td><td>C-N</td><td>-38 / 0</td><td>0.04 (1)</td></tr><tr><td>C-D</td><td>-25 / 0</td><td>-78.0 -78.0</td><td>0.49 (1)</td><td>6.25</td><td>N-D</td><td>-540 / 0</td><td>0.13 (1)</td></tr><tr><td>D-E</td><td>0 / 57</td><td>-78.0 -78.0</td><td>0.50 (1)</td><td>10.00</td><td>D-M</td><td>-94 / 0</td><td>0.10 (1)</td></tr><tr><td>E-F</td><td>0 / 57</td><td>-78.0 -78.0</td><td>0.50 (1)</td><td>10.00</td><td>M-E</td><td>-467 / 0</td><td>0.11 (1)</td></tr><tr><td>F-G</td><td>0 / 57</td><td>-78.0 -78.0</td><td>0.50 (1)</td><td>10.00</td><td>M-G</td><td>-94 / 0</td><td>0.10 (1)</td></tr><tr><td>G-H</td><td>-25 / 0</td><td>-78.0 -78.0</td><td>0.49 (1)</td><td>6.25</td><td>L-G</td><td>-540 / 0</td><td>0.13 (1)</td></tr><tr><td>H-I</td><td>-111 / 0</td><td>-78.0 -78.0</td><td>0.09 (1)</td><td>6.25</td><td>L-H</td><td>-38 / 0</td><td>0.04 (1)</td></tr><tr><td>I-J</td><td>0 / 10</td><td>-78.0 -78.0</td><td>0.01 (1)</td><td>10.00</td><td>K-H</td><td>-193 / 0</td><td>0.05 (1)</td></tr><tr><td>B-O</td><td>0 / 65</td><td>-18.5 -18.5</td><td>0.10 (4)</td><td>10.00</td><td></td><td></td><td></td></tr><tr><td>O-N</td><td>0 / 59</td><td>-18.5 -18.5</td><td>0.21 (4)</td><td>10.00</td><td></td><td></td><td></td></tr><tr><td>N-M</td><td>0 / 25</td><td>-18.5 -18.5</td><td>0.21 (4)</td><td>10.00</td><td></td><td></td><td></td></tr><tr><td>M-L</td><td>0 / 25</td><td>-18.5 -18.5</td><td>0.21 (4)</td><td>10.00</td><td></td><td></td><td></td></tr><tr><td>L-K</td><td>0 / 59</td><td>-18.5 -18.5</td><td>0.21 (4)</td><td>10.00</td><td></td><td></td><td></td></tr><tr><td>K-I</td><td>0 / 65</td><td>-18.5 -18.5</td><td>0.10 (4)</td><td>10.00</td><td></td><td></td><td></td></tr></table> |                                |                  |  |  |  |  |  |  |  |  | FACTORED GROSS REACTION | MAXIMUM FACTORED GROSS REACTION | INPUT BRG | REQRD BRG | JT | VERT | HORZ | DOWN | HORZ | UPLIFT | IN-SX | IN-SX | B | 224 | 0 | 224 | 0 | 0 | 31-3-3 (15-7- <del>10</del> 3) |  | O | 287 | 0 | 287 | 0 | 0 | 31-3-3 (15-7- <del>10</del> 3) |  | N | 698 | 0 | 698 | 0 | 0 | 31-3-3 (15-7- <del>10</del> 3) |  | M | 652 | 0 | 652 | 0 | 0 | 31-3-3 (15-7- <del>10</del> 3) |  | L | 698 | 0 | 698 | 0 | 0 | 31-3-3 (15-7- <del>10</del> 3) |  | K | 288 | 0 | 288 | 0 | 0 | 31-3-3 (15-7- <del>10</del> 3) |  | I | 224 | 0 | 224 | 0 | 0 | 31-3-3 (15-7- <del>10</del> 3) |  | JT | 1ST LCASE | SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL | B | 156 | 116 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 40 / 0 | 0 / 0 | O | 209 | 104 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 105 / 0 | 0 / 0 | N | 498 | 300 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 198 / 0 | 0 / 0 | M | 461 | 301 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 161 / 0 | 0 / 0 | L | 498 | 300 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 198 / 0 | 0 / 0 | K | 209 | 104 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 105 / 0 | 0 / 0 | I | 156 | 116 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 40 / 0 | 0 / 0 | CHORDS |  |  |  | WEBS |  |  |  | MEMB. | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX LC1 CSI (LC) | MAX. UNBRAC LENGTH | MEMB. | MAX. FACTORED FORCE (LBS) | MAX LC1 CSI (LC) | FR-TO |  | FROM TO |  |  | FR-TO |  |  | A-B | 0 / 10 | -78.0 -78.0 | 0.01 (1) | 10.00 | O-C | -193 / 0 | 0.05 (1) | B-C | -111 / 0 | -78.0 -78.0 | 0.09 (1) | 6.25 | C-N | -38 / 0 | 0.04 (1) | C-D | -25 / 0 | -78.0 -78.0 | 0.49 (1) | 6.25 | N-D | -540 / 0 | 0.13 (1) | D-E | 0 / 57 | -78.0 -78.0 | 0.50 (1) | 10.00 | D-M | -94 / 0 | 0.10 (1) | E-F | 0 / 57 | -78.0 -78.0 | 0.50 (1) | 10.00 | M-E | -467 / 0 | 0.11 (1) | F-G | 0 / 57 | -78.0 -78.0 | 0.50 (1) | 10.00 | M-G | -94 / 0 | 0.10 (1) | G-H | -25 / 0 | -78.0 -78.0 | 0.49 (1) | 6.25 | L-G | -540 / 0 | 0.13 (1) | H-I | -111 / 0 | -78.0 -78.0 | 0.09 (1) | 6.25 | L-H | -38 / 0 | 0.04 (1) | I-J | 0 / 10 | -78.0 -78.0 | 0.01 (1) | 10.00 | K-H | -193 / 0 | 0.05 (1) | B-O | 0 / 65 | -18.5 -18.5 | 0.10 (4) | 10.00 |  |  |  | O-N | 0 / 59 | -18.5 -18.5 | 0.21 (4) | 10.00 |  |  |  | N-M | 0 / 25 | -18.5 -18.5 | 0.21 (4) | 10.00 |  |  |  | M-L | 0 / 25 | -18.5 -18.5 | 0.21 (4) | 10.00 |  |  |  | L-K | 0 / 59 | -18.5 -18.5 | 0.21 (4) | 10.00 |  |  |  | K-I | 0 / 65 | -18.5 -18.5 | 0.10 (4) | 10.00 |  |  |  | <b>DESIGN CRITERIA</b><br><br>SPECIFIED LOADS:<br>TOP CH. LL = 21.0 PSF<br>DL = 6.0 PSF<br>BOT CH. LL = 0.0 PSF<br>DL = 7.4 PSF<br>TOTAL LOAD = 34.4 PSF<br><br><b>SPACING = 24.0 IN. C/C</b><br><br>LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM<br><br>THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBC 2015<br><br>THIS DESIGN COMPLIES WITH:<br>- PART 9 OF BCBC 2018, ABC 2019<br>- PART 9 OF OBC 2012 (2019 AMENDMENT)<br>- CSA 086-14<br>- TPIC 2014<br><br>(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD<br><br>CSI: TC=0.50/1.00 (D-E:1), BC=0.21/1.00 (N-O:4), WB=0.13/1.00 (G-L:1), SSI=0.24/1.00 (G-H:1)<br><br>DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10 COMP=1.10 SHEAR=1.10 TENS= 1.10<br><br>COMPANION LIVE LOAD FACTOR = 1.00<br><br>TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT.<br><br>NAIL VALUES<br>PLATE GRIP(DRY) SHEAR SECTION (PSI) (PLI) (PLI)<br>MAX MIN MAX MIN MAX MIN<br>MT20 650 371 1747 788 1987 1873<br><br>PLATE PLACEMENT TOL. = 0.250 inches<br><br>PLATE ROTATION TOL. = 5.0 Deg.<br><br>JSI GRIP= 0.62 (C) (INPUT = 0.90 )<br>JSI METAL= 0.33 (F) (INPUT = 1.00 ) |  |  |  |  |
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|                                                                                                                                                                                                                                                                                       | FACTORED GROSS REACTION   | MAXIMUM FACTORED GROSS REACTION | INPUT BRG        | REQRD BRG          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          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| JT                                                                                                                                                                                                                                                                                    | VERT                      | HORZ                            | DOWN             | HORZ               | UPLIFT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   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| B                                                                                                                                                                                                                                                                                     | 224                       | 0                               | 224              | 0                  | 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        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| O                                                                                                                                                                                                                                                                                     | 287                       | 0                               | 287              | 0                  | 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        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| B-C                                                                                                                                                                                                                                                                                   | -111 / 0                  | -78.0 -78.0                     | 0.09 (1)         | 6.25               | C-N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      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| C-D                                                                                                                                                                                                                                                                                   | -25 / 0                   | -78.0 -78.0                     | 0.49 (1)         | 6.25               | N-D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      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| D-E                                                                                                                                                                                                                                                                                   | 0 / 57                    | -78.0 -78.0                     | 0.50 (1)         | 10.00              | D-M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | -94 / 0                        | 0.10 (1)         |  |  |  |  |  |  |  |  |                         |                                 |           |           |    |      |      |      |      |        |       |       |   |     |   |     |   |   |                                |  |   |     |   |     |   |   |                                |  |   |     |   |     |   |   |                                |  |   |     |   |     |   |   |                                |  |   |     |   |     |   |   |                                |  |   |     |   |     |   |   |                                |  |   |     |   |     |   |   |                                |  |    |           |      |      |           |      |  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| E-F                                                                                                                                                                                                                                                                                   | 0 / 57                    | -78.0 -78.0                     | 0.50 (1)         | 10.00              | M-E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | -467 / 0                       | 0.11 (1)         |  |  |  |  |  |  |  |  |                         |                                 |           |           |    |      |      |      |      |        |       |       |   |     |   |     |   |   |                                |  |   |     |   |     |   |   |                                |  |   |     |   |     |   |   |                                |  |   |     |   |     |   |   |                                |  |   |     |   |     |   |   |                                |  |   |     |   |     |   |   |                                |  |   |     |   |     |   |   |                                |  |    |           |      |      |           |      |  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| F-G                                                                                                                                                                                                                                                                                   | 0 / 57                    | -78.0 -78.0                     | 0.50 (1)         | 10.00              | M-G                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | -94 / 0                        | 0.10 (1)         |  |  |  |  |  |  |  |  |                         |                                 |           |           |    |      |      |      |      |        |       |       |   |     |   |     |   |   |                                |  |   |     |   |     |   |   |                                |  |   |     |   |     |   |   |                                |  |   |     |   |     |   |   |                                |  |   |     |   |     |   |   |                                |  |   |     |   |     |   |   |                                |  |   |     |   |     |   |   |                                |  |    |           |      |      |           |      |  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| G-H                                                                                                                                                                                                                                                                                   | -25 / 0                   | -78.0 -78.0                     | 0.49 (1)         | 6.25               | L-G                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | -540 / 0                       | 0.13 (1)         |  |  |  |  |  |  |  |  |                         |                                 |           |           |    |      |      |      |      |        |       |       |   |     |   |     |   |   |                                |  |   |     |   |     |   |   |                                |  |   |     |   |     |   |   |                                |  |   |     |   |     |   |   |                                |  |   |     |   |     |   |   |                                |  |   |     |   |     |   |   |                                |  |   |     |   |     |   |   |                                |  |    |           |      |      |           |      |  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| H-I                                                                                                                                                                                                                                                                                   | -111 / 0                  | -78.0 -78.0                     | 0.09 (1)         | 6.25               | L-H                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      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| I-J                                                                                                                                                                                                                                                                                   | 0 / 10                    | -78.0 -78.0                     | 0.01 (1)         | 10.00              | K-H                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      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| B-O                                                                                                                                                                                                                                                                                   | 0 / 65                    | -18.5 -18.5                     | 0.10 (4)         | 10.00              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          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    |      |   |     |         |       |       |       |        |       |   |     |         |       |       |       |         |       |   |     |         |       |       |       |         |       |   |     |         |       |       |       |         |       |   |     |         |       |       |       |         |       |   |     |         |       |       |       |         |       |   |     |         |       |       |       |        |       |        |  |  |  |      |  |  |  |       |                           |                           |                  |                    |       |                           |                  |       |  |         |  |  |       |  |  |     |        |             |          |       |     |          |          |     |          |             |          |      |     |         |          |     |         |             |          |      |     |          |          |     |        |             |          |       |     |         |          |     |        |             |          |       |     |          |          |     |        |             |          |       |     |         |          |     |         |             |          |      |     |          |          |     |          |             |          |      |     |         |          |     |        |             |          |       |     |          |          |     |        |             |          |       |  |  |  |     |        |             |          |       |  |  |  |     |        |             |          |       |  |  |  |     |        |             |          |       |  |  |  |     |        |             |          |       |  |  |  |     |        |             |          |       |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |
| O-N                                                                                                                                                                                                                                                                                   | 0 / 59                    | -18.5 -18.5                     | 0.21 (4)         | 10.00              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          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    |      |   |     |         |       |       |       |        |       |   |     |         |       |       |       |         |       |   |     |         |       |       |       |         |       |   |     |         |       |       |       |         |       |   |     |         |       |       |       |         |       |   |     |         |       |       |       |         |       |   |     |         |       |       |       |        |       |        |  |  |  |      |  |  |  |       |                           |                           |                  |                    |       |                           |                  |       |  |         |  |  |       |  |  |     |        |             |          |       |     |          |          |     |          |             |          |      |     |         |          |     |         |             |          |      |     |          |          |     |        |             |          |       |     |         |          |     |        |             |          |       |     |          |          |     |        |             |          |       |     |         |          |     |         |             |          |      |     |          |          |     |          |             |          |      |     |         |          |     |        |             |          |       |     |          |          |     |        |             |          |       |  |  |  |     |        |             |          |       |  |  |  |     |        |             |          |       |  |  |  |     |        |             |          |       |  |  |  |     |        |             |          |       |  |  |  |     |        |             |          |       |  |  |  |                                                                                                                                                                                                                                                                                                            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| N-M                                                                                                                                                                                                                                                                                   | 0 / 25                    | -18.5 -18.5                     | 0.21 (4)         | 10.00              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          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    |      |   |     |         |       |       |       |        |       |   |     |         |       |       |       |         |       |   |     |         |       |       |       |         |       |   |     |         |       |       |       |         |       |   |     |         |       |       |       |         |       |   |     |         |       |       |       |         |       |   |     |         |       |       |       |        |       |        |  |  |  |      |  |  |  |       |                           |                           |                  |                    |       |                           |                  |       |  |         |  |  |       |  |  |     |        |             |          |       |     |          |          |     |          |             |          |      |     |         |          |     |         |             |          |      |     |          |          |     |        |             |          |       |     |         |          |     |        |             |          |       |     |          |          |     |        |             |          |       |     |         |          |     |         |             |          |      |     |          |          |     |          |             |          |      |     |         |          |     |        |             |          |       |     |          |          |     |        |             |          |       |  |  |  |     |        |             |          |       |  |  |  |     |        |             |          |       |  |  |  |     |        |             |          |       |  |  |  |     |        |             |          |       |  |  |  |     |        |             |          |       |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |
| M-L                                                                                                                                                                                                                                                                                   | 0 / 25                    | -18.5 -18.5                     | 0.21 (4)         | 10.00              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   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    |      |   |     |         |       |       |       |        |       |   |     |         |       |       |       |         |       |   |     |         |       |       |       |         |       |   |     |         |       |       |       |         |       |   |     |         |       |       |       |         |       |   |     |         |       |       |       |         |       |   |     |         |       |       |       |        |       |        |  |  |  |      |  |  |  |       |                           |                           |                  |                    |       |                           |                  |       |  |         |  |  |       |  |  |     |        |             |          |       |     |          |          |     |          |             |          |      |     |         |          |     |         |             |          |      |     |          |          |     |        |             |          |       |     |         |          |     |        |             |          |       |     |          |          |     |        |             |          |       |     |         |          |     |         |             |          |      |     |          |          |     |          |             |          |      |     |         |          |     |        |             |          |       |     |          |          |     |        |             |          |       |  |  |  |     |        |             |          |       |  |  |  |     |        |             |          |       |  |  |  |     |        |             |          |       |  |  |  |     |        |             |          |       |  |  |  |     |        |             |          |       |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |
| L-K                                                                                                                                                                                                                                                                                   | 0 / 59                    | -18.5 -18.5                     | 0.21 (4)         | 10.00              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   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    |      |   |     |         |       |       |       |        |       |   |     |         |       |       |       |         |       |   |     |         |       |       |       |         |       |   |     |         |       |       |       |         |       |   |     |         |       |       |       |         |       |   |     |         |       |       |       |         |       |   |     |         |       |       |       |        |       |        |  |  |  |      |  |  |  |       |                           |                           |                  |                    |       |                           |                  |       |  |         |  |  |       |  |  |     |        |             |          |       |     |          |          |     |          |             |          |      |     |         |          |     |         |             |          |      |     |          |          |     |        |             |          |       |     |         |          |     |        |             |          |       |     |          |          |     |        |             |          |       |     |         |          |     |         |             |          |      |     |          |          |     |          |             |          |      |     |         |          |     |        |             |          |       |     |          |          |     |        |             |          |       |  |  |  |     |        |             |          |       |  |  |  |     |        |             |          |       |  |  |  |     |        |             |          |       |  |  |  |     |        |             |          |       |  |  |  |     |        |             |          |       |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |
| K-I                                                                                                                                                                                                                                                                                   | 0 / 65                    | -18.5 -18.5                     | 0.10 (4)         | 10.00              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   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    |      |   |     |         |       |       |       |        |       |   |     |         |       |       |       |         |       |   |     |         |       |       |       |         |       |   |     |         |       |       |       |         |       |   |     |         |       |       |       |         |       |   |     |         |       |       |       |         |       |   |     |         |       |       |       |        |       |        |  |  |  |      |  |  |  |       |                           |                           |                  |                    |       |                           |                  |       |  |         |  |  |       |  |  |     |        |             |          |       |     |          |          |     |          |             |          |      |     |         |          |     |         |             |          |      |     |          |          |     |        |             |          |       |     |         |          |     |        |             |          |       |     |          |          |     |        |             |          |       |     |         |          |     |         |             |          |      |     |          |          |     |          |             |          |      |     |         |          |     |        |             |          |       |     |          |          |     |        |             |          |       |  |  |  |     |        |             |          |       |  |  |  |     |        |             |          |       |  |  |  |     |        |             |          |       |  |  |  |     |        |             |          |       |  |  |  |     |        |             |          |       |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |

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



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



Scale = 1:71.2



|      |        |        |        |          |       |     |         |          |
|------|--------|--------|--------|----------|-------|-----|---------|----------|
| Z-Y  | 0/0    | -96.5  | -96.5  | 0.06 (1) | 10.00 | O-J | -2533/0 | 0.47 (1) |
| Y-X  | 0/0    | -192.2 | -192.2 | 0.20 (1) | 10.00 | O-K | 0/4107  | 0.73 (1) |
| X-W  | 0/2036 | -192.2 | -192.2 | 0.37 (1) | 10.00 | N-K | -2617/0 | 0.49 (1) |
| W-V  | 0/3346 | -18.5  | -18.5  | 0.38 (1) | 10.00 | N-L | 0/5632  | 1.00 (1) |
| V-U  | 0/4815 | -18.5  | -18.5  | 0.48 (1) | 10.00 | A-X | 0/2787  | 0.69 (1) |
| U-T  | 0/3894 | -18.5  | -18.5  | 0.36 (1) | 10.00 |     |         |          |
| T-S  | 0/3894 | -18.5  | -18.5  | 0.36 (1) | 10.00 |     |         |          |
| S-R  | 0/4540 | -18.5  | -18.5  | 0.44 (1) | 10.00 |     |         |          |
| R-Q  | 0/4159 | -18.5  | -18.5  | 0.50 (1) | 10.00 |     |         |          |
| Q-AA | 0/4159 | -18.5  | -18.5  | 0.50 (1) | 10.00 |     |         |          |
| AA-P | 0/4159 | -71.6  | -71.6  | 0.50 (1) | 10.00 |     |         |          |
| P-O  | 0/8123 | -71.6  | -71.6  | 0.86 (1) | 10.00 |     |         |          |
| O-N  | 0/4722 | -71.6  | -71.6  | 0.59 (1) | 10.00 |     |         |          |
| N-M  | 0/0    | -71.6  | -71.6  | 0.06 (1) | 10.00 |     |         |          |

## CONTINUED ON PAGE 2

|          |            |          |     |                      |              |
|----------|------------|----------|-----|----------------------|--------------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.     |
| 318797   | H32B       | 1        | 1   | TRUSS DESC. JT 45147 | E20041051(2) |

| PLATES (table is in inches)                                       |         |        |     |      |      |      | FACTORED CONCENTRATED LOADS (LBS)                           |         |       |       |      |       |      |       |      |       | DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.00<br>COMP=1.00 SHEAR=1.00 TENS= 1.00                          |  |  |  |
|-------------------------------------------------------------------|---------|--------|-----|------|------|------|-------------------------------------------------------------|---------|-------|-------|------|-------|------|-------|------|-------|----------------------------------------------------------------------------------------------------|--|--|--|
| JT                                                                | TYPE    | PLATES | W   | LEN  | Y    | X    | JT                                                          | LOC.    | LC1   | MAX-  | MAX+ | FACE  | DIR. | TYPE  | HEEL | CONN. | COMPANION LIVE LOAD FACTOR = 1.00                                                                  |  |  |  |
| O                                                                 | BMWW-t  | MT20   | 5.0 | 8.0  | 2.25 | 3.00 | W                                                           | 4-3-6   | -1946 | -1946 | ---  | FRONT | VERT | TOTAL | ---  | C1    |                                                                                                    |  |  |  |
| P                                                                 | BMWW+t  | MT20   | 8.0 | 9.0  | 4.50 | 3.75 | AA                                                          | 28-7-12 | -838  | -838  | ---  | FRONT | VERT | TOTAL | ---  | C1    |                                                                                                    |  |  |  |
| Q                                                                 | BS-t    | MT20   | 4.0 | 6.0  |      |      | CONNECTION REQUIREMENTS                                     |         |       |       |      |       |      |       |      |       | AUTOSOLVE HEELS OFF                                                                                |  |  |  |
| R                                                                 | BMWWW-t | MT20   | 5.0 | 8.0  |      |      | 1) C1: A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED. |         |       |       |      |       |      |       |      |       | TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT . |  |  |  |
| S                                                                 | BMWW-t  | MT20   | 4.0 | 4.0  | 2.00 | 1.75 |                                                             |         |       |       |      |       |      |       |      |       | NAIL VALUES                                                                                        |  |  |  |
| T                                                                 | BS-t    | MT20   | 4.0 | 6.0  |      |      |                                                             |         |       |       |      |       |      |       |      |       | PLATE GRIP(DRY) SHEAR SECTION                                                                      |  |  |  |
| U                                                                 | BMWW+t  | MT20   | 5.0 | 8.0  | 3.75 | 2.25 |                                                             |         |       |       |      |       |      |       |      |       | (PSI) (PLI) (PLI)                                                                                  |  |  |  |
| V                                                                 | BMWW-t  | MT20   | 5.0 | 6.0  | 2.50 | 2.75 |                                                             |         |       |       |      |       |      |       |      |       | MAX MIN MAX MIN MAX MIN                                                                            |  |  |  |
| W                                                                 | BMWW+t  | MT20   | 5.0 | 10.0 | 5.00 | 1.75 |                                                             |         |       |       |      |       |      |       |      |       | MT20 650 371 1747 788 1987 1873                                                                    |  |  |  |
| X                                                                 | BMWW+t  | MT20   | 5.0 | 8.0  | 4.00 | 2.00 |                                                             |         |       |       |      |       |      |       |      |       | PLATE PLACEMENT TOL. = 0.250 inches                                                                |  |  |  |
| Y                                                                 | BMV1+t  | MT20   | 6.0 | 9.0  | Edge |      |                                                             |         |       |       |      |       |      |       |      |       | PLATE ROTATION TOL. = 5.0 Deg.                                                                     |  |  |  |
| Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD. |         |        |     |      |      |      |                                                             |         |       |       |      |       |      |       |      |       | JSI GRIP= 0.90 (P) (INPUT = 0.90 )                                                                 |  |  |  |
|                                                                   |         |        |     |      |      |      |                                                             |         |       |       |      |       |      |       |      |       | JSI METAL= 0.97 (J) (INPUT = 1.00 )                                                                |  |  |  |

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



Scale = 1:71.9



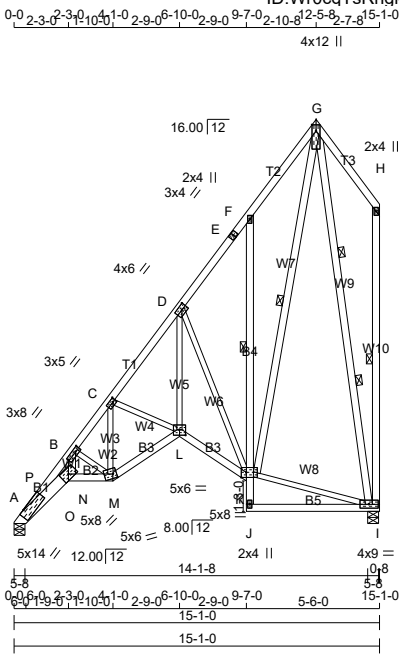
CONTINUED ON PAGE 2

|          |            |          |     |                      |           |
|----------|------------|----------|-----|----------------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.  |
| 318797   | H34T       | 3        | 1   | TRUSS DESC. JT 45147 | E20041053 |

Alpa Roof Truss, Maple

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ID:Wr0cqTsRngk4toJDtjrg3lyNlR-sqXbJoSGZiNsFEsc8YwluRRE0V40Zfc sGM0RnzR6mB



TOTAL WEIGHT = 3 X 133 = 399 lb

|                   |      |        |                                                                                                      |                         |                                 |           |                                                                                                    |  |
|-------------------|------|--------|------------------------------------------------------------------------------------------------------|-------------------------|---------------------------------|-----------|----------------------------------------------------------------------------------------------------|--|
| <b>LUMBER</b>     |      |        | <b>DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER</b> |                         |                                 |           | <b>DESIGN CRITERIA</b>                                                                             |  |
| N. L. G. A. RULES |      |        | <b>BEARINGS</b>                                                                                      |                         |                                 |           | SPECIFIED LOADS:                                                                                   |  |
| CHORDS            | SIZE | LUMBER | DESCR.                                                                                               | FACTORED GROSS REACTION | MAXIMUM FACTORED GROSS REACTION | INPUT BRG | TOP CH. LL = 21.0 PSF                                                                              |  |
| A - E             | 2x4  | DRY    | No.2                                                                                                 | SPF                     | DOWN                            | IN-SX     | DL = 6.0 PSF                                                                                       |  |
| E - G             | 2x4  | DRY    | No.2                                                                                                 | SPF                     | UP                              | IN-SX     | BOT CH. LL = 0.0 PSF                                                                               |  |
| G - H             | 2x4  | DRY    | No.2                                                                                                 | SPF                     | DOWN                            | IN-SX     | DL = 7.4 PSF                                                                                       |  |
| I - H             | 2x4  | DRY    | No.2                                                                                                 | SPF                     | UP                              | IN-SX     | TOTAL LOAD = 34.4 PSF                                                                              |  |
| A - N             | 2x6  | DRY    | 2100F 1.8E                                                                                           | SPF                     | DOWN                            | IN-SX     | <b>SPACING = 24.0 IN. C/C</b>                                                                      |  |
| N - M             | 2x4  | DRY    | No.2                                                                                                 | SPF                     | UP                              | IN-SX     | THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015         |  |
| M - L             | 2x4  | DRY    | No.2                                                                                                 | SPF                     | DOWN                            | IN-SX     | THIS DESIGN COMPLIES WITH:                                                                         |  |
| L - K             | 2x4  | DRY    | No.2                                                                                                 | SPF                     | UP                              | IN-SX     | - PART 9 OF CBC 2018 , ABC 2019                                                                    |  |
| J - F             | 2x4  | DRY    | No.2                                                                                                 | SPF                     | DOWN                            | IN-SX     | - PART 9 OF OBC 2012 (2019 AMENDMENT)                                                              |  |
| J - I             | 2x4  | DRY    | No.2                                                                                                 | SPF                     | UP                              | IN-SX     | - CSA 086-14                                                                                       |  |
| ALL WEBS          | 2x3  | DRY    | No.2                                                                                                 | SPF                     | DOWN                            | IN-SX     | - TPIC 2014                                                                                        |  |
| EXCEPT            |      |        |                                                                                                      |                         |                                 |           | (55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD |  |
| N - B             | 2x4  | DRY    | No.2                                                                                                 | SPF                     | DOWN                            | IN-SX     | ALLOWABLE DEFL.(LL)= L/360 (0.50")                                                                 |  |
| K - G             | 2x4  | DRY    | No.2                                                                                                 | SPF                     | UP                              | IN-SX     | CALCULATED VERT. DEFL.(LL) = L/ 999 (0.07")                                                        |  |
| G - I             | 2x4  | DRY    | No.2                                                                                                 | SPF                     | DOWN                            | IN-SX     | ALLOWABLE DEFL.(TL)= L/360 (0.50")                                                                 |  |
|                   |      |        |                                                                                                      |                         |                                 |           | CALCULATED VERT. DEFL.(TL) = L/ 999 (0.13")                                                        |  |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE     | PLATES | W   | LEN  | Y    | X     |
|----|----------|--------|-----|------|------|-------|
| A  | TBM1-h   | MT20   | 5.0 | 14.0 |      | 11.25 |
| B  | TMWW-t   | MT20   | 3.0 | 8.0  | 1.50 | 2.50  |
| C  | TMWW-t   | MT20   | 3.0 | 5.0  | 1.50 | 1.50  |
| D  | TMWW-t   | MT20   | 4.0 | 6.0  | 2.00 | 2.50  |
| E  | TS-t     | MT20   | 3.0 | 4.0  |      |       |
| F  | TMV+p    | MT20   | 2.0 | 4.0  |      |       |
| G  | TTWW+p   | MT20   | 4.0 | 12.0 | 3.25 | Edge  |
| H  | TMV+p    | MT20   | 2.0 | 4.0  |      |       |
| I  | BMVWW1-t | MT20   | 4.0 | 9.0  |      |       |
| J  | BMV+p    | MT20   | 2.0 | 4.0  |      |       |
| K  | BVMWWV-p | MT20   | 5.0 | 8.0  | Edge | 2.50  |
| L  | BBWW-p   | MT20   | 5.0 | 6.0  | 2.75 | 3.00  |
| M  | BBWW-m   | MT20   | 5.0 | 6.0  | 2.25 | 1.75  |
| N  | BBW-h    | MT20   | 5.0 | 8.0  |      |       |

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

- 1 LATERAL BRACE(S) AT 1/2 LENGTH OF F-K, H-I, G-K.  
2 LATERAL BRACE(S) AT 1/3 LENGTH OF G-I.

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

**LOADING**

TOTAL LOAD CASES: (4)

| CHORDS |                           |                           |               | WEBS  |                           |               |  |
|--------|---------------------------|---------------------------|---------------|-------|---------------------------|---------------|--|
| MEMB.  | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX. CSI (LC) | MEMB. | MAX. FACTORED FORCE (LBS) | MAX. CSI (LC) |  |
| FR-TO  |                           | FROM TO                   |               | FR-TO |                           |               |  |
| A - P  | -2627 / 0                 | -78.0 -78.0               | 0.12 (1)      | N - B | 0 / 1728                  | 0.28 (1)      |  |
| P - B  | -2683 / 0                 | -78.0 -78.0               | 0.20 (1)      | B - M | -777 / 0                  | 0.12 (1)      |  |
| B - C  | -1033 / 0                 | -78.0 -78.0               | 0.13 (1)      | M - C | -39 / 17                  | 0.01 (1)      |  |
| C - D  | -896 / 0                  | -78.0 -78.0               | 0.07 (1)      | C - L | -149 / 0                  | 0.03 (1)      |  |
| D - E  | -392 / 0                  | -78.0 -78.0               | 0.06 (1)      | L - D | 0 / 904                   | 0.20 (1)      |  |
| E - F  | -392 / 0                  | -78.0 -78.0               | 0.06 (1)      | D - K | -776 / 0                  | 0.90 (1)      |  |
| F - G  | -406 / 0                  | -78.0 -78.0               | 0.07 (1)      | K - I | 0 / 93                    | 0.02 (1)      |  |
| G - H  | 0 / 0                     | -78.0 -78.0               | 0.09 (1)      | K - G | 0 / 728                   | 0.12 (1)      |  |
| H - I  | -102 / 0                  | 0.0 0.0                   | 0.10 (1)      | G - I | -605 / 0                  | 0.40 (1)      |  |
|        |                           |                           |               | O - P | -164 / 0                  | 0.00 (1)      |  |
| A - O  | 0 / 2132                  | -18.5 -18.5               | 0.17 (1)      |       |                           |               |  |
| O - N  | 0 / 2257                  | -18.5 -18.5               | 0.18 (1)      |       |                           |               |  |
| N - M  | 0 / 1324                  | -18.5 -18.5               | 0.22 (1)      |       |                           |               |  |
| M - L  | 0 / 806                   | -18.5 -18.5               | 0.15 (1)      |       |                           |               |  |
| L - K  | 0 / 633                   | -18.5 -18.5               | 0.13 (1)      |       |                           |               |  |
| K - J  | 0 / 55                    | 0.0 0.0                   | 0.02 (1)      |       |                           |               |  |
| J - F  | -239 / 0                  | 0.0 0.0                   | 0.04 (1)      |       |                           |               |  |
| J - I  | 0 / 9                     | -18.5 -18.5               | 0.16 (4)      |       |                           |               |  |

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



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

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

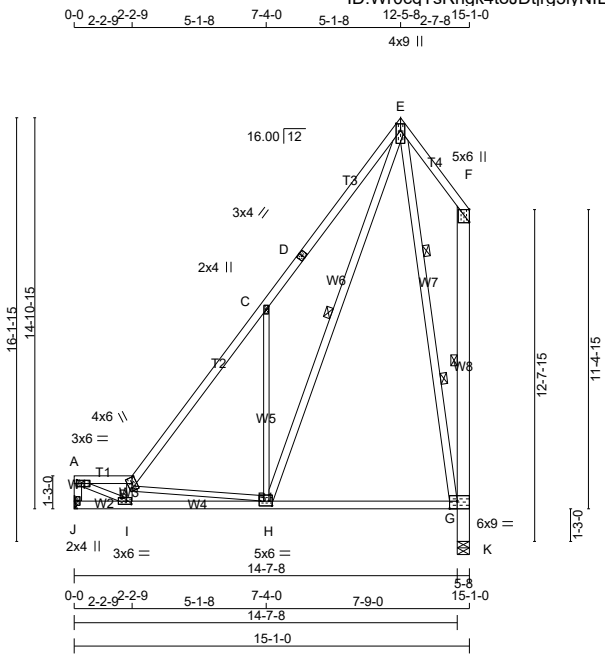
JSI GRIP= 0.89 (B) (INPUT = 0.90 )  
JSI METAL= 0.35 (A) (INPUT = 1.00 )

|          |            |          |     |                      |           |
|----------|------------|----------|-----|----------------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.  |
| 318797   | H35        | 3        | 1   | TRUSS DESC. JT 45147 | E20041054 |

Alpa Roof Truss, Maple

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TOTAL WEIGHT = 3 X 114 = 341 lb

|                       |      |        |        |     |
|-----------------------|------|--------|--------|-----|
| <b>LUMBER</b>         |      |        |        |     |
| N. L. G. A. RULES     |      |        |        |     |
| CHORDS                | SIZE | LUMBER | DESCR. |     |
| J - A                 | 2x4  | DRY    | No.2   | SPF |
| A - B                 | 2x4  | DRY    | No.2   | SPF |
| B - D                 | 2x4  | DRY    | No.2   | SPF |
| D - E                 | 2x4  | DRY    | No.2   | SPF |
| E - F                 | 2x4  | DRY    | No.2   | SPF |
| K - F                 | 2x6  | DRY    | No.2   | SPF |
| J - G                 | 2x4  | DRY    | No.2   | SPF |
| ALL WEBS EXCEPT       | 2x3  | DRY    | No.2   | SPF |
| H - E                 | 2x4  | DRY    | No.2   | SPF |
| E - G                 | 2x4  | DRY    | No.2   | SPF |
| DRY: SEASONED LUMBER. |      |        |        |     |

|                                    |         |        |     |     |           |
|------------------------------------|---------|--------|-----|-----|-----------|
| <b>PLATES (table is in inches)</b> |         |        |     |     |           |
| JT                                 | TYPE    | PLATES | W   | LEN | Y X       |
| A                                  | TMVW-t  | MT20   | 3.0 | 6.0 | 1.50 2.25 |
| B                                  | TTWW+m  | MT20   | 4.0 | 6.0 | 2.75 2.00 |
| C                                  | TMW+w   | MT20   | 2.0 | 4.0 |           |
| D                                  | TS-t    | MT20   | 3.0 | 4.0 |           |
| E                                  | TTWW+p  | MT20   | 4.0 | 9.0 | 3.25 Edge |
| F                                  | TMV+p   | MT20   | 5.0 | 6.0 | 5.75      |
| G                                  | BVMW-l  | MT20   | 6.0 | 9.0 | Edge 3.50 |
| H                                  | BMWWW-t | MT20   | 5.0 | 6.0 | 2.25 1.50 |
| I                                  | BMWW-t  | MT20   | 3.0 | 6.0 | 1.50 2.25 |
| J                                  | 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 |        |
|----------------|------|------------------|------|-------|--------|
| GROSS REACTION |      | GROSS REACTION   |      | BRG   | REQRD  |
| JT             | VERT | HORZ             | DOWN | HORZ  | UPLIFT |
| J              | 728  | 0                | 728  | 0     | 0      |
| K              | 728  | 0                | 728  | 0     | 0      |

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

**UNFACTORED REACTIONS**

| JT | COMBINED | SNOW    | LIVE  | PERM.LIVE | WIND  | DEAD    | SOIL  |
|----|----------|---------|-------|-----------|-------|---------|-------|
| J  | 519      | 317 / 0 | 0 / 0 | 0 / 0     | 0 / 0 | 202 / 0 | 0 / 0 |
| K  | 519      | 317 / 0 | 0 / 0 | 0 / 0     | 0 / 0 | 202 / 0 | 0 / 0 |

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

**BRACING**

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.47 FT.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

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

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

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

**LOADING**

TOTAL LOAD CASES: (4)

| CHORDS |                           |                           |                  | WEBS                 |       |                           |              |
|--------|---------------------------|---------------------------|------------------|----------------------|-------|---------------------------|--------------|
| MEMB.  | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX LC1 CSI (LC) | MAX. UNBRACED LENGTH | MEMB. | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
| FR-TO  |                           | FROM                      | TO               |                      | FR-TO |                           |              |
| J-A    | -678 / 0                  | 0.0                       | 0.0 0.07 (1)     | 7.81                 | A-I   | 0 / 1501                  | 0.34 (1)     |
| A-B    | -1367 / 0                 | -78.0                     | -78.0 0.08 (1)   | 5.47                 | I-B   | -620 / 0                  | 0.09 (1)     |
| B-C    | -630 / 0                  | -78.0                     | -78.0 0.38 (1)   | 6.25                 | B-H   | -1049 / 0                 | 0.50 (1)     |
| C-D    | -689 / 0                  | -78.0                     | -78.0 0.39 (1)   | 6.25                 | H-C   | -483 / 0                  | 0.59 (1)     |
| D-E    | -689 / 0                  | -78.0                     | -78.0 0.39 (1)   | 6.25                 | H-E   | 0 / 879                   | 0.14 (1)     |
| E-F    | 0 / 0                     | -78.0                     | -78.0 0.09 (1)   | 10.00                | E-G   | -578 / 0                  | 0.31 (1)     |
| K-G    | -728 / 0                  | 0.0                       | 0.0 0.05 (1)     | 7.81                 |       |                           |              |
| G-F    | -102 / 0                  | 0.0                       | 0.0 0.05 (1)     | 6.25                 |       |                           |              |
| J-I    | 0 / 0                     | -18.5                     | -18.5 0.09 (1)   | 10.00                |       |                           |              |
| I-H    | 0 / 1437                  | -18.5                     | -18.5 0.39 (4)   | 10.00                |       |                           |              |
| H-G    | 0 / 103                   | -18.5                     | -18.5 0.26 (4)   | 10.00                |       |                           |              |

**DESIGN CRITERIA**

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

**SPACING = 24.0 IN./C**

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

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

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

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

ALLOWABLE DEFL.(LL)= L/360 (0.50")  
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.05")  
ALLOWABLE DEFL.(TL)= L/360 (0.50")  
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.12")

CSI: TC=0.39/1.00 (C-E:1), BC=0.39/1.00 (H-I:4), WB=0.59/1.00 (C-H:1), SSI=0.12/1.00 (C-E:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

AUTOSOLVE LEFT HEEL ONLY

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

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

PLATE PLACEMENT TOL. = 0.250 inches

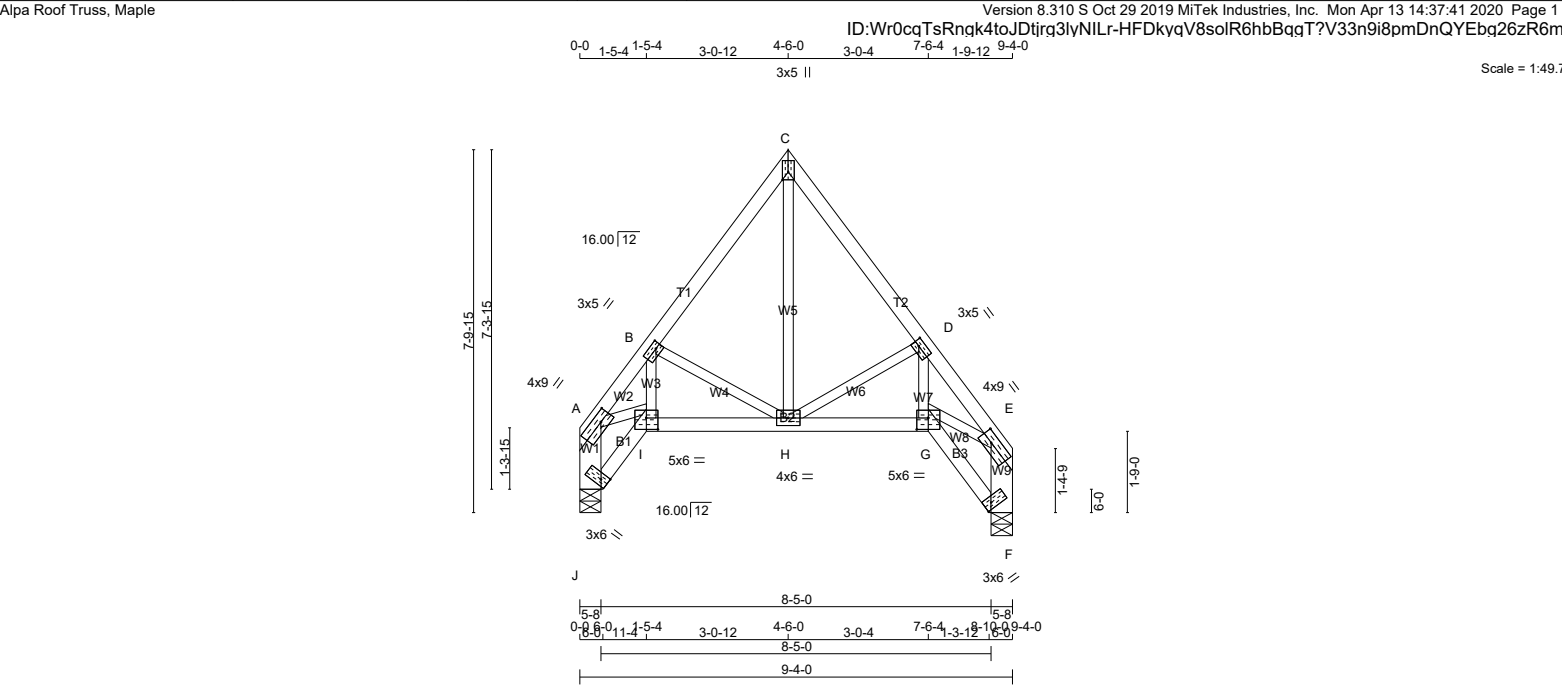
PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.89 (I) (INPUT = 0.90 )  
JSI METAL= 0.44 (B) (INPUT = 1.00 )

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



|          |            |          |     |                      |           |
|----------|------------|----------|-----|----------------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.  |
| 318797   | H36T       | 1        | 1   | TRUSS DESC. JT 45147 | E20041055 |



|                                                                 |     |     |      |                                                                                                                         |                                                                                                                                                                  |                                 |                           |                        |                  |         |                           |                                                                                                                                                                        |                                                                                                    |  |  |  |  |
|-----------------------------------------------------------------|-----|-----|------|-------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|---------------------------|------------------------|------------------|---------|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|--|--|--|--|
| <b>LUMBER</b><br>N. L. G. A. RULES<br>CHORDS SIZE LUMBER DESCR. |     |     |      | <b>DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER</b><br><b>BEARINGS</b> |                                                                                                                                                                  |                                 |                           | <b>DESIGN CRITERIA</b> |                  |         |                           |                                                                                                                                                                        |                                                                                                    |  |  |  |  |
| A - C                                                           | 2x4 | DRY | No.2 | SPF                                                                                                                     | FACTORED GROSS REACTION                                                                                                                                          | MAXIMUM FACTORED GROSS REACTION | INPUT BRG                 | REQRD BRG              | SPECIFIED LOADS: |         |                           |                                                                                                                                                                        |                                                                                                    |  |  |  |  |
| C - E                                                           | 2x4 | DRY | No.2 | SPF                                                                                                                     | JT VERT                                                                                                                                                          | DOWN                            | HORZ                      | UPLIFT                 | IN-SX            | IN-SX   | TOP CH. LL = 21.0 PSF     |                                                                                                                                                                        |                                                                                                    |  |  |  |  |
| J - A                                                           | 2x6 | DRY | No.2 | SPF                                                                                                                     | J 450                                                                                                                                                            | 0                               | 450                       | 0                      | 0                | 5-8     | 5-8                       | DL = 6.0 PSF                                                                                                                                                           |                                                                                                    |  |  |  |  |
| F - E                                                           | 2x6 | DRY | No.2 | SPF                                                                                                                     | F 450                                                                                                                                                            | 0                               | 450                       | 0                      | 0                | 5-8     | 5-8                       | BOT CH. LL = 0.0 PSF                                                                                                                                                   |                                                                                                    |  |  |  |  |
| J - I                                                           | 2x4 | DRY | No.2 | SPF                                                                                                                     |                                                                                                                                                                  |                                 |                           |                        |                  |         |                           | DL = 7.4 PSF                                                                                                                                                           |                                                                                                    |  |  |  |  |
| I - G                                                           | 2x4 | DRY | No.2 | SPF                                                                                                                     |                                                                                                                                                                  |                                 |                           |                        |                  |         |                           | TOTAL LOAD = 34.4 PSF                                                                                                                                                  |                                                                                                    |  |  |  |  |
| G - F                                                           | 2x4 | DRY | No.2 | SPF                                                                                                                     |                                                                                                                                                                  |                                 |                           |                        |                  |         |                           | <b>SPACING = 24.0 IN. C/C</b>                                                                                                                                          |                                                                                                    |  |  |  |  |
| ALL WEBS 2x3 DRY No.2 EXCEPT                                    |     |     |      | SPF                                                                                                                     | <b>UNFACTORED REACTIONS</b>                                                                                                                                      |                                 |                           |                        |                  |         |                           | THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015                                                                             |                                                                                                    |  |  |  |  |
| DRY: SEASONED LUMBER.                                           |     |     |      |                                                                                                                         | 1ST LCASE MAX./MIN. COMPONENT REACTIONS                                                                                                                          |                                 |                           |                        |                  |         |                           | THIS DESIGN COMPLIES WITH:<br>- PART 9 OF BCBC 2018 , ABC 2019<br>- PART 9 OF OBC 2012 (2019 AMENDMENT)<br>- CSA 086-14<br>- TPIC 2014                                 |                                                                                                    |  |  |  |  |
|                                                                 |     |     |      |                                                                                                                         | JT COMBINED                                                                                                                                                      | SNOW                            | LIVE                      | PERM.LIVE              | WIND             | DEAD    | SOIL                      | T                                                                                                                                                                      |                                                                                                    |  |  |  |  |
|                                                                 |     |     |      |                                                                                                                         | J 321                                                                                                                                                            | 196 / 0                         | 0 / 0                     | 0 / 0                  | 0 / 0            | 125 / 0 | 0 / 0                     | 55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD                                                                      |                                                                                                    |  |  |  |  |
|                                                                 |     |     |      |                                                                                                                         | F 321                                                                                                                                                            | 196 / 0                         | 0 / 0                     | 0 / 0                  | 0 / 0            | 125 / 0 | 0 / 0                     | ALLOWABLE DEFL.(LL)= L/360 (0.31")<br>CALCULATED VERT. DEFL.(LL) = L/ 999 (0.01")<br>ALLOWABLE DEFL.(TL)= L/360 (0.31")<br>CALCULATED VERT. DEFL.(TL) = L/ 999 (0.02") |                                                                                                    |  |  |  |  |
|                                                                 |     |     |      |                                                                                                                         | BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) J, F<br>BEARING SIZE FACTOR = 1.15 AT JNT(S) J, F ( BASED ON SUPPORT DEPTH = 1-8 )                         |                                 |                           |                        |                  |         |                           | CSI: TC=0.08/1.00 (B-C:1) , BC=0.09/1.00 (G-H:1) , WB=0.11/1.00 (E-G:1) , SSI=0.06/1.00 (B-C:1)                                                                        |                                                                                                    |  |  |  |  |
|                                                                 |     |     |      |                                                                                                                         | <b>BRACING</b><br>TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.<br>MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT. OR RIGID CEILING DIRECTLY APPLIED. |                                 |                           |                        |                  |         |                           | DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10<br>COMP=1.10 SHEAR=1.10 TENS= 1.10                                                                                              |                                                                                                    |  |  |  |  |
|                                                                 |     |     |      |                                                                                                                         | ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.                                                                                       |                                 |                           |                        |                  |         |                           | COMPANION LIVE LOAD FACTOR = 1.00                                                                                                                                      |                                                                                                    |  |  |  |  |
|                                                                 |     |     |      |                                                                                                                         | <b>LOADING</b><br>TOTAL LOAD CASES: (4)                                                                                                                          |                                 |                           |                        |                  |         |                           | AUTOSOLVE HEELS OFF                                                                                                                                                    |                                                                                                    |  |  |  |  |
|                                                                 |     |     |      |                                                                                                                         | CHORDS                                                                                                                                                           |                                 |                           |                        | WEBS             |         |                           |                                                                                                                                                                        | TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT . |  |  |  |  |
|                                                                 |     |     |      |                                                                                                                         | MEMB.                                                                                                                                                            | MAX. FACTORED FORCE (LBS)       | FACTORED VERT. LOAD (PLF) | MAX. CSI (LC)          | UNBRAC LENGTH    | MEMB.   | MAX. FACTORED FORCE (LBS) | MAX. CSI (LC)                                                                                                                                                          | NAIL VALUES                                                                                        |  |  |  |  |
|                                                                 |     |     |      |                                                                                                                         | FR-TO                                                                                                                                                            |                                 | FROM TO                   |                        |                  | FR-TO   |                           |                                                                                                                                                                        | PLATE GRIP(DRY) SHEAR SECTION                                                                      |  |  |  |  |
|                                                                 |     |     |      |                                                                                                                         | A- B                                                                                                                                                             | -605 / 0                        | -78.0 -78.0               | 0.06 (1)               | 6.25             | I- B    | 0 / 137                   | 0.03 (1)                                                                                                                                                               | (PSI) (PLI) (PLI)                                                                                  |  |  |  |  |
|                                                                 |     |     |      |                                                                                                                         | B- C                                                                                                                                                             | -326 / 0                        | -78.0 -78.0               | 0.08 (1)               | 6.25             | G- D    | 0 / 238                   | 0.05 (1)                                                                                                                                                               | MAX MIN MAX MIN MAX MIN                                                                            |  |  |  |  |
|                                                                 |     |     |      |                                                                                                                         | C- D                                                                                                                                                             | -326 / 0                        | -78.0 -78.0               | 0.08 (1)               | 6.25             | A- I    | 0 / 391                   | 0.09 (1)                                                                                                                                                               | MT20 650 371 1747 788 1987 1873                                                                    |  |  |  |  |
|                                                                 |     |     |      |                                                                                                                         | D- E                                                                                                                                                             | -700 / 0                        | -78.0 -78.0               | 0.06 (1)               | 6.25             | G- E    | 0 / 473                   | 0.11 (1)                                                                                                                                                               | PLATE PLACEMENT TOL. = 0.250 inches                                                                |  |  |  |  |
|                                                                 |     |     |      |                                                                                                                         | J- A                                                                                                                                                             | -437 / 0                        | 0.0 0.0                   | 0.03 (1)               | 7.81             | B- H    | -213 / 0                  | 0.05 (1)                                                                                                                                                               | PLATE ROTATION TOL. = 5.0 Deg.                                                                     |  |  |  |  |
|                                                                 |     |     |      |                                                                                                                         | F- E                                                                                                                                                             | -433 / 0                        | 0.0 0.0                   | 0.03 (1)               | 7.81             | H- C    | 0 / 306                   | 0.07 (1)                                                                                                                                                               | JSI GRIP= 0.45 (C) (INPUT = 0.90 )                                                                 |  |  |  |  |
|                                                                 |     |     |      |                                                                                                                         |                                                                                                                                                                  |                                 |                           |                        |                  | H- D    | -272 / 0                  | 0.06 (1)                                                                                                                                                               | JSI METAL= 0.19 (G) (INPUT = 1.00 )                                                                |  |  |  |  |
|                                                                 |     |     |      |                                                                                                                         | J- I                                                                                                                                                             | 0 / 0                           | -18.5 -18.5               | 0.01 (4)               | 10.00            |         |                           |                                                                                                                                                                        |                                                                                                    |  |  |  |  |
|                                                                 |     |     |      |                                                                                                                         | I- H                                                                                                                                                             | 0 / 371                         | -18.5 -18.5               | 0.08 (1)               | 10.00            |         |                           |                                                                                                                                                                        |                                                                                                    |  |  |  |  |
|                                                                 |     |     |      |                                                                                                                         | H- G                                                                                                                                                             | 0 / 419                         | -18.5 -18.5               | 0.09 (1)               | 10.00            |         |                           |                                                                                                                                                                        |                                                                                                    |  |  |  |  |
|                                                                 |     |     |      |                                                                                                                         | G- F                                                                                                                                                             | 0 / 0                           | -18.5 -18.5               | 0.02 (4)               | 10.00            |         |                           |                                                                                                                                                                        |                                                                                                    |  |  |  |  |
| LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2                       |     |     |      |                                                                                                                         |                                                                                                                                                                  |                                 |                           |                        |                  |         |                           |                                                                                                                                                                        |                                                                                                    |  |  |  |  |
|                                                                 |     |     |      |                                                                                                                         |                                                                                                                                                                  |                                 |                           |                        |                  |         |                           |                                                                                                                                                                        |                                                                                                    |  |  |  |  |

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TOTAL WEIGHT = 5 X 79 = 394 lb

| PLATES (table is in inches) |          |        |     |     |           |
|-----------------------------|----------|--------|-----|-----|-----------|
| JT                          | TYPE     | PLATES | W   | LEN | Y X       |
| A                           | TMVW-t   | MT20   | 3.0 | 8.0 | 1.50 3.25 |
| B                           | TMVW+w   | MT20   | 2.0 | 4.0 |           |
| C                           | TMVW-t   | MT20   | 3.0 | 5.0 | 1.50 1.50 |
| D                           | TMVW+p   | MT20   | 4.0 | 6.0 | 2.00 2.00 |
| E                           | BMV1+p   | MT20   | 2.0 | 4.0 |           |
| F                           | BBWW-l   | MT20   | 6.0 | 7.0 | 3.00 2.50 |
| G                           | BBWWWW+m | MT20   | 6.0 | 9.0 | Edge 1.25 |
| H                           | BMV1+p   | MT20   | 2.0 | 4.0 |           |

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

**TOTAL LOAD CASES: (4)**

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



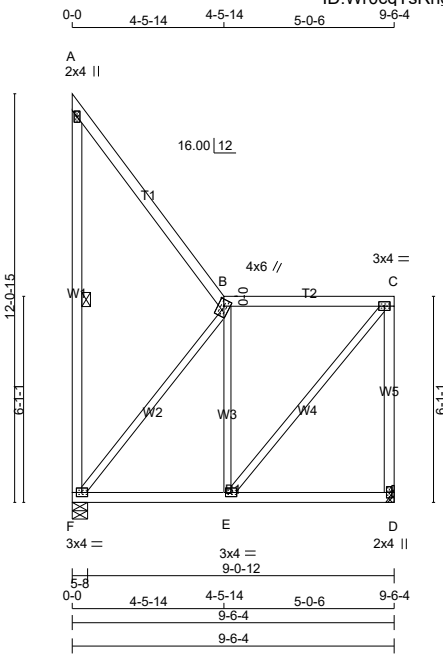
JSI GRIP= 0.81 (F) (INPUT = 0.90 )  
JSI METAL= 0.35 (F) (INPUT = 1.00 )

|          |            |          |     |                      |           |
|----------|------------|----------|-----|----------------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.  |
| 318797   | H38        | 1        | 1   | TRUSS DESC. JT 45147 | E20041057 |

Alpa Roof Truss, Maple

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ID:Wr0cqTsRngk4toJDtjrg3lyNlLr-hqutarX19j7?z9KlVp1f7iqC2w7pzVmsECpKfQzR6m5



Scale = 1:68.1

TOTAL WEIGHT = 61 lb

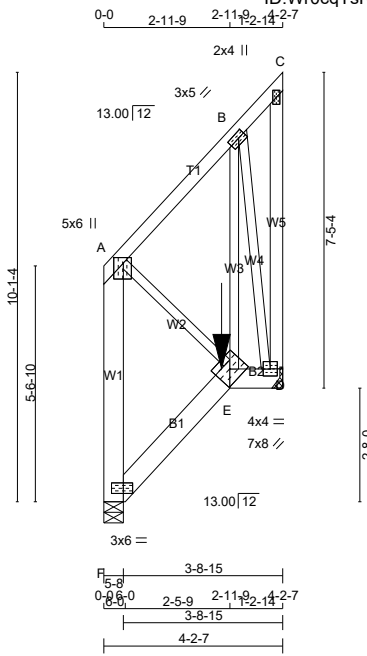
| <b>LUMBER</b><br>N. L. G. A. RULES<br>CHORDS SIZE LUMBER<br>F - A 2x4 DRY No.2<br>A - B 2x4 DRY No.2<br>B - C 2x4 DRY No.2<br>D - C 2x4 DRY No.2<br>F - D 2x4 DRY No.2<br><br>ALL WEBS 2x3 DRY No.2<br>DRY: SEASONED LUMBER.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                               |                                 |                  |                      |       |                           | <b>DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER</b><br><b>BEARINGS</b><br><table><tr><th></th><th>FACTORED GROSS REACTION</th><th>MAXIMUM FACTORED GROSS REACTION</th><th>INPUT BRG</th><th>REQRD BRG</th></tr><tr><th>JT</th><th>VERT</th><th>HORZ</th><th>DOWN</th><th>HORZ</th></tr><tr><td>F</td><td>598</td><td>0</td><td>598</td><td>0</td></tr><tr><td>D</td><td>598</td><td>0</td><td>598</td><td>0</td></tr></table><br>A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT D. MINIMUM BEARING LENGTH AT JOINT D = 1-8. |      |        |   |     |   |   |   | FACTORED GROSS REACTION | MAXIMUM FACTORED GROSS REACTION | INPUT BRG | REQRD BRG | JT | VERT | HORZ | DOWN   | HORZ | F   | 598 | 0    | 598  | 0 | D      | 598  | 0   | 598 | 0 | <b>DESIGN CRITERIA</b><br><br>SPECIFIED LOADS:<br>TOP CH. LL = 21.0 PSF<br>DL = 6.0 PSF<br>BOT CH. LL = 0.0 PSF<br>DL = 7.4 PSF<br>TOTAL LOAD = 34.4 PSF<br><br><b>SPACING = 24.0 IN./C</b><br><br>LOADING IN ALL FLAT SECTIONS BASED ON A SLOPE OF 2.00/12 MINIMUM<br><br>GIRDER TYPE: CPrimeHip<br>SIDE SETBACK = 0-0<br>END SETBACK = 3-2-8<br>END WALL WIDTH = 0-0<br>CORNER FRAMING TYPE: CONVENTIONAL<br>END JACK TYPE: CONVENTIONAL<br>APPLIED TO FRONT SIDE<br>- ADDT'L LOADS BASED ON 55 % OF GSL.<br><br>THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015<br><br>THIS DESIGN COMPLIES WITH:<br>- PART 9 OF BCBC 2018 , ABC 2019<br>- PART 9 OF OBC 2012 (2019 AMENDMENT)<br>- CSA 086-14<br>- TPIC 2014<br><br>(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD<br><br>ALLOWABLE DEFL.(LL)= L/360 (0.32")<br>CALCULATED VERT. DEFL.(LL)= L/ 999 (0.00")<br>ALLOWABLE DEFL.(TL)= L/360 (0.32")<br>CALCULATED VERT. DEFL.(TL)= L/ 999 (0.02")<br><br>CSI: TC=0.49/1.00 (B-C:1) , BC=0.20/1.00 (E-F:4) , WB=0.41/1.00 (B-F:1) , SSI=0.22/1.00 (B-C:1)<br><br>DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.00 COMP=1.00 SHEAR=1.00 TENS= 1.00<br><br>COMPANION LIVE LOAD FACTOR = 1.00<br><br>TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .<br><br>NAIL VALUES<br>PLATE GRIP(DRY) SHEAR SECTION<br>(PSI) (PLI) (PLI)<br>MAX MIN MAX MIN MAX MIN<br>MT20 650 371 1747 788 1987 1873<br><br>PLATE PLACEMENT TOL. = 0.250 inches<br><br>PLATE ROTATION TOL. = 5.0 Deg.<br><br>JSI GRIP= 0.61 (C) (INPUT = 0.90 )<br>JSI METAL= 0.17 (B) (INPUT = 1.00 ) |   |        |      |     |     |  |  |   |        |      |     |     |  |  |   |         |      |     |     |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |  |  |  |  |           |                               |  |  |  |  |  |  |    |          |      |      |           |      |      |      |   |     |         |       |       |       |         |       |   |     |         |       |       |       |         |       |        |  |  |  |      |  |  |  |       |                           |                           |                  |                      |       |                           |              |       |  |         |  |  |       |  |  |      |          |         |          |      |      |          |          |      |       |               |          |       |      |           |          |      |          |               |          |      |      |         |          |      |          |         |          |      |  |  |  |      |         |             |          |       |  |  |  |      |       |             |          |       |  |  |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------------------------|------------------|----------------------|-------|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|--------|---|-----|---|---|---|-------------------------|---------------------------------|-----------|-----------|----|------|------|--------|------|-----|-----|------|------|---|--------|------|-----|-----|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|--------|------|-----|-----|--|--|---|--------|------|-----|-----|--|--|---|---------|------|-----|-----|--|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|-----------|-------------------------------|--|--|--|--|--|--|----|----------|------|------|-----------|------|------|------|---|-----|---------|-------|-------|-------|---------|-------|---|-----|---------|-------|-------|-------|---------|-------|--------|--|--|--|------|--|--|--|-------|---------------------------|---------------------------|------------------|----------------------|-------|---------------------------|--------------|-------|--|---------|--|--|-------|--|--|------|----------|---------|----------|------|------|----------|----------|------|-------|---------------|----------|-------|------|-----------|----------|------|----------|---------------|----------|------|------|---------|----------|------|----------|---------|----------|------|--|--|--|------|---------|-------------|----------|-------|--|--|--|------|-------|-------------|----------|-------|--|--|--|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | FACTORED GROSS REACTION       | MAXIMUM FACTORED GROSS REACTION | INPUT BRG        | REQRD BRG            |       |                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |      |        |   |     |   |   |   |                         |                                 |           |           |    |      |      |        |      |     |     |      |      |   |        |      |     |     |   |                                                                                                                                                                                                                                                                                                                                                                                         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    |              |       |  |         |  |  |       |  |  |      |          |         |          |      |      |          |          |      |       |               |          |       |      |           |          |      |          |               |          |      |      |         |          |      |          |         |          |      |  |  |  |      |         |             |          |       |  |  |  |      |       |             |          |       |  |  |  |
| JT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | VERT                          | HORZ                            | DOWN             | HORZ                 |       |                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |      |        |   |     |   |   |   |                         |                                 |           |           |    |      |      |        |      |     |     |      |      |   |        |      |     |     |   |                                                                                                                                                                                                                                                                                                                                                                                         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    |              |       |  |         |  |  |       |  |  |      |          |         |          |      |      |          |          |      |       |               |          |       |      |           |          |      |          |               |          |      |      |         |          |      |          |         |          |      |  |  |  |      |         |             |          |       |  |  |  |      |       |             |          |       |  |  |  |
| F                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 598                           | 0                               | 598              | 0                    |       |                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |      |        |   |     |   |   |   |                         |                                 |           |           |    |      |      |        |      |     |     |      |      |   |        |      |     |     |   |                                                                                                                                                                                                                                                                                                                                                                                         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    |              |       |  |         |  |  |       |  |  |      |          |         |          |      |      |          |          |      |       |               |          |       |      |           |          |      |          |               |          |      |      |         |          |      |          |         |          |      |  |  |  |      |         |             |          |       |  |  |  |      |       |             |          |       |  |  |  |
| D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 598                           | 0                               | 598              | 0                    |       |                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |      |        |   |     |   |   |   |                         |                                 |           |           |    |      |      |        |      |     |     |      |      |   |        |      |     |     |   |                                                                                                                                                                                                                                                                                                                                                                                         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| <b>PLATES (table is in inches)</b><br><table><tr><th>JT</th><th>TYPE</th><th>PLATES</th><th>W</th><th>LEN</th><th>Y</th><th>X</th></tr><tr><td>A</td><td>TMV+p</td><td>MT20</td><td>2.0</td><td>4.0</td><td></td><td></td></tr><tr><td>B</td><td>TTWW+m</td><td>MT20</td><td>4.0</td><td>6.0</td><td>2.25</td><td>2.00</td></tr><tr><td>C</td><td>TMVW-t</td><td>MT20</td><td>3.0</td><td>4.0</td><td></td><td></td></tr><tr><td>D</td><td>BMV1+p</td><td>MT20</td><td>2.0</td><td>4.0</td><td></td><td></td></tr><tr><td>E</td><td>BMWW-t</td><td>MT20</td><td>3.0</td><td>4.0</td><td></td><td></td></tr><tr><td>F</td><td>BMVW1-t</td><td>MT20</td><td>3.0</td><td>4.0</td><td></td><td></td></tr></table> |                               |                                 |                  |                      |       |                           | JT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | TYPE | PLATES | W | LEN | Y | X | A | TMV+p                   | MT20                            | 2.0       | 4.0       |    |      | B    | TTWW+m | MT20 | 4.0 | 6.0 | 2.25 | 2.00 | C | TMVW-t | MT20 | 3.0 | 4.0 |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | D | BMV1+p | MT20 | 2.0 | 4.0 |  |  | E | BMWW-t | MT20 | 3.0 | 4.0 |  |  | F | BMVW1-t | MT20 | 3.0 | 4.0 |  |  | <b>UNFACTORED REACTIONS</b><br><table><tr><th>1ST LCASE</th><th>MAX./MIN. COMPONENT REACTIONS</th><th></th><th></th><th></th><th></th><th></th><th></th></tr><tr><th>JT</th><th>COMBINED</th><th>SNOW</th><th>LIVE</th><th>PERM.LIVE</th><th>WIND</th><th>DEAD</th><th>SOIL</th></tr><tr><td>F</td><td>426</td><td>260 / 0</td><td>0 / 0</td><td>0 / 0</td><td>0 / 0</td><td>166 / 0</td><td>0 / 0</td></tr><tr><td>D</td><td>426</td><td>260 / 0</td><td>0 / 0</td><td>0 / 0</td><td>0 / 0</td><td>166 / 0</td><td>0 / 0</td></tr></table><br>BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) F<br><br><b>BRACING</b><br>TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.<br>MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.<br><br>ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.<br><br>1 LATERAL BRACE(S) AT 1/2 LENGTH OF A-F.<br><br>END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW<br><br><b>LOADING</b><br>TOTAL LOAD CASES: (4)<br><table><tr><th colspan="4">CHORDS</th><th colspan="4">WEBS</th></tr><tr><th>MEMB.</th><th>MAX. FACTORED FORCE (LBS)</th><th>FACTORED VERT. LOAD (PLF)</th><th>MAX LC1 CSI (LC)</th><th>MAX. UNBRACED LENGTH</th><th>MEMB.</th><th>MAX. FACTORED FORCE (LBS)</th><th>MAX CSI (LC)</th></tr><tr><td>FR-TO</td><td></td><td>FROM TO</td><td></td><td></td><td>FR-TO</td><td></td><td></td></tr><tr><td>F- A</td><td>-228 / 0</td><td>0.0 0.0</td><td>0.18 (1)</td><td>6.25</td><td>F- B</td><td>-416 / 0</td><td>0.41 (1)</td></tr><tr><td>A- B</td><td>0 / 0</td><td>-101.5 -101.5</td><td>0.38 (1)</td><td>10.00</td><td>E- B</td><td>-158 / 32</td><td>0.09 (1)</td></tr><tr><td>B- C</td><td>-253 / 0</td><td>-101.5 -101.5</td><td>0.49 (1)</td><td>6.25</td><td>E- C</td><td>0 / 391</td><td>0.10 (1)</td></tr><tr><td>D- C</td><td>-551 / 0</td><td>0.0 0.0</td><td>0.40 (1)</td><td>7.81</td><td></td><td></td><td></td></tr><tr><td>F- E</td><td>0 / 256</td><td>-24.1 -24.1</td><td>0.20 (4)</td><td>10.00</td><td></td><td></td><td></td></tr><tr><td>E- D</td><td>0 / 0</td><td>-24.1 -24.1</td><td>0.17 (4)</td><td>10.00</td><td></td><td></td><td></td></tr></table> |  |  |  |  |  |  | 1ST LCASE | MAX./MIN. COMPONENT REACTIONS |  |  |  |  |  |  | JT | COMBINED | SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL | F | 426 | 260 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 166 / 0 | 0 / 0 | D | 426 | 260 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 166 / 0 | 0 / 0 | CHORDS |  |  |  | WEBS |  |  |  | MEMB. | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX LC1 CSI (LC) | MAX. UNBRACED LENGTH | MEMB. | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) | FR-TO |  | FROM TO |  |  | FR-TO |  |  | F- A | -228 / 0 | 0.0 0.0 | 0.18 (1) | 6.25 | F- B | -416 / 0 | 0.41 (1) | A- B | 0 / 0 | -101.5 -101.5 | 0.38 (1) | 10.00 | E- B | -158 / 32 | 0.09 (1) | B- C | -253 / 0 | -101.5 -101.5 | 0.49 (1) | 6.25 | E- C | 0 / 391 | 0.10 (1) | D- C | -551 / 0 | 0.0 0.0 | 0.40 (1) | 7.81 |  |  |  | F- E | 0 / 256 | -24.1 -24.1 | 0.20 (4) | 10.00 |  |  |  | E- D | 0 / 0 | -24.1 -24.1 | 0.17 (4) | 10.00 |  |  |  |
| JT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | TYPE                          | PLATES                          | W                | LEN                  | Y     | X                         |                                                                                                                                                                        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| A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | TMV+p                         | MT20                            | 2.0              | 4.0                  |       |                           |                                                                                                                                                                        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| B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | TTWW+m                        | MT20                            | 4.0              | 6.0                  | 2.25  | 2.00                      |                                                                                                                                                                        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| C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | TMVW-t                        | MT20                            | 3.0              | 4.0                  |       |                           |                                                                                                                                                                        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| E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | BMWW-t                        | MT20                            | 3.0              | 4.0                  |       |                           |                                                                                                                                                                        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| F                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | BMVW1-t                       | MT20                            | 3.0              | 4.0                  |       |                           |                                                                                                                                                                        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| 1ST LCASE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | MAX./MIN. COMPONENT REACTIONS |                                 |                  |                      |       |                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |      |        |   |     |   |   |   |                         |                                 |           |           |    |      |      |        |      |     |     |      |      |   |        |      |     |     |   |                                                                            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| JT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | COMBINED                      | SNOW                            | LIVE             | PERM.LIVE            | WIND  | DEAD                      | SOIL                                                                                                                                                                   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| F                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 426                           | 260 / 0                         | 0 / 0            | 0 / 0                | 0 / 0 | 166 / 0                   | 0 / 0                                                                                                                                                                  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| D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 426                           | 260 / 0                         | 0 / 0            | 0 / 0                | 0 / 0 | 166 / 0                   | 0 / 0                                                                                                                                                                  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| CHORDS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                               |                                 |                  | WEBS                 |       |                           |                                                                                                                                                                        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| MEMB.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | MAX. FACTORED FORCE (LBS)     | FACTORED VERT. LOAD (PLF)       | MAX LC1 CSI (LC) | MAX. UNBRACED LENGTH | MEMB. | MAX. FACTORED FORCE (LBS) | MAX CSI (LC)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |      |        |   |     |   |   |   |                         |                                 |           |           |    |      |      |        |      |     |     |      |      |   |        |      |     |     |   |                                                                                                                                                                                           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| FR-TO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                               | FROM TO                         |                  |                      | FR-TO |                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |      |        |   |     |   |   |   |                         |                                 |           |           |    |      |      |        |      |     |     |      |      |   |        |      |     |     |   |                                                                                                                                                                                                                                                                                                                                                                                         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| F- A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | -228 / 0                      | 0.0 0.0                         | 0.18 (1)         | 6.25                 | F- B  | -416 / 0                  | 0.41 (1)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      |        |   |     |   |   |   |                         |                                 |           |           |    |      |      |        |      |     |     |      |      |   |        |      |     |     |   |                                                                                                                                                                                                                                                                                                                                                                                         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    |              |       |  |         |  |  |       |  |  |      |          |         |          |      |      |          |          |      |       |               |          |       |      |           |          |      |          |               |          |      |      |         |          |      |          |         |          |      |  |  |  |      |         |             |          |       |  |  |  |      |       |             |          |       |  |  |  |
| A- B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 0 / 0                         | -101.5 -101.5                   | 0.38 (1)         | 10.00                | E- B  | -158 / 32                 | 0.09 (1)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      |        |   |     |   |   |   |                         |                                 |           |           |    |      |      |        |      |     |     |      |      |   |        |      |     |     |   |                                                                                                                                                                                                                                                                                                                                                                                         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    |              |       |  |         |  |  |       |  |  |      |          |         |          |      |      |          |          |      |       |               |          |       |      |           |          |      |          |               |          |      |      |         |          |      |          |         |          |      |  |  |  |      |         |             |          |       |  |  |  |      |       |             |          |       |  |  |  |
| B- C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | -253 / 0                      | -101.5 -101.5                   | 0.49 (1)         | 6.25                 | E- C  | 0 / 391                   | 0.10 (1)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      |        |   |     |   |   |   |                         |                                 |           |           |    |      |      |        |      |     |     |      |      |   |        |      |     |     |   |                                                                                                                                                                                                                                                                                                                                                                                         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    |              |       |  |         |  |  |       |  |  |      |          |         |          |      |      |          |          |      |       |               |          |       |      |           |          |      |          |               |          |      |      |         |          |      |          |         |          |      |  |  |  |      |         |             |          |       |  |  |  |      |       |             |          |       |  |  |  |
| D- C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | -551 / 0                      | 0.0 0.0                         | 0.40 (1)         | 7.81                 |       |                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |      |        |   |     |   |   |   |                         |                                 |           |           |    |      |      |        |      |     |     |      |      |   |        |      |     |     |   |                                                                                                                                                                                                                                                                                                                                                                                         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| F- E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 0 / 256                       | -24.1 -24.1                     | 0.20 (4)         | 10.00                |       |                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |      |        |   |     |   |   |   |                         |                                 |           |           |    |      |      |        |      |     |     |      |      |   |        |      |     |     |   |                                                                                                                                                                                                                                                                                                                                                                                         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    |              |       |  |         |  |  |       |  |  |      |          |         |          |      |      |          |          |      |       |               |          |       |      |           |          |      |          |               |          |      |      |         |          |      |          |         |          |      |  |  |  |      |         |             |          |       |  |  |  |      |       |             |          |       |  |  |  |
| E- D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 0 / 0                         | -24.1 -24.1                     | 0.17 (4)         | 10.00                |       |                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |      |        |   |     |   |   |   |                         |                                 |           |           |    |      |      |        |      |     |     |      |      |   |        |      |     |     |   |                                                                                                                                                                                                                                                                                                                                                                                         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| LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                               |                                 |                  |                      |       |                           |                                                                                                                                                                        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|          |            |          |     |                      |           |
|----------|------------|----------|-----|----------------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.  |
| 318797   | H39        | 1        | 2   | TRUSS DESC. JT 45147 | E20041058 |

Alpa Roof Truss, Maple

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TOTAL WEIGHT = 2 X 46 = 93 lb [M]

|                                                                                                                                                                                                      |                      |           |            |     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-----------|------------|-----|
| <b>LUMBER</b>                                                                                                                                                                                        |                      |           |            |     |
| N. L. G. A. RULES                                                                                                                                                                                    |                      |           |            |     |
| CHORDS                                                                                                                                                                                               | SIZE                 | LUMBER    | DESCR.     |     |
| F - A                                                                                                                                                                                                | 2x6                  | DRY       | No.2       | SPF |
| A - C                                                                                                                                                                                                | 2x4                  | DRY       | No.2       | SPF |
| D - C                                                                                                                                                                                                | 2x4                  | DRY       | No.2       | SPF |
| F - E                                                                                                                                                                                                | 2x6                  | DRY       | No.2       | SPF |
| E - D                                                                                                                                                                                                | 2x6                  | DRY       | No.2       | SPF |
| ALL WEBS                                                                                                                                                                                             | 2x3                  | DRY       | No.2       | SPF |
| DRY: SEASONED LUMBER.                                                                                                                                                                                |                      |           |            |     |
| DESIGN CONSISTS OF <u>2</u> TRUSSES BUILT SEPARATELY THEN FASTENED TOGETHER AS FOLLOWS:                                                                                                              |                      |           |            |     |
| CHORDS #ROWS                                                                                                                                                                                         | SURFACE SPACING (IN) | LOAD(PLF) |            |     |
| TOP CHORDS : (0.122"x3") SPIRAL NAILS                                                                                                                                                                |                      |           |            |     |
| F- A                                                                                                                                                                                                 | 2                    | 12        | TOP        |     |
| A- C                                                                                                                                                                                                 | 1                    | 12        | TOP        |     |
| C- D                                                                                                                                                                                                 | 1                    | 12        | TOP        |     |
| BOTTOM CHORDS : (0.122"x3") SPIRAL NAILS                                                                                                                                                             |                      |           |            |     |
| F- E                                                                                                                                                                                                 | 2                    | 12        | SIDE(61.0) |     |
| E- D                                                                                                                                                                                                 | 2                    | 12        | SIDE(90.6) |     |
| WEBS : (0.122"x3") SPIRAL NAILS                                                                                                                                                                      |                      |           |            |     |
| E- B                                                                                                                                                                                                 | 1                    | 6         | SIDE(31.8) |     |
| D- B                                                                                                                                                                                                 | 1                    | 6         | SIDE(33.5) |     |
| 2x3                                                                                                                                                                                                  | 1                    | 6         |            |     |
| NAILS TO BE DRIVEN FROM ONE SIDE ONLY.                                                                                                                                                               |                      |           |            |     |
| GIRDER NAILING ASSUMES NAILED HANGERS ARE FASTENED WITH MIN. 3-0 INCH NAILS.                                                                                                                         |                      |           |            |     |
| TOP - COMPONENTS ARE LOADED FROM THE TOP AND MUST BE PLACED ON TOP EDGE OF ALL PLIES FOR THE LOAD TO BE TRANSFERRED TO EACH PLY.                                                                     |                      |           |            |     |
| SIDE - PLF SHOWN IS THE EQUIVALENT UDL APPLIED TO ONE SIDE THAT THE CORRESPONDING NAILING PATTERN SHALL BE CAPABLE OF TRANSFERING. REMAINING PLF MUST BE APPLIED ON THE OPPOSITE SIDE OR ON THE TOP. |                      |           |            |     |

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



|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                           |                               |          |               |         |                           |               |          |       |             |  |  |  |  |         |  |  |  |  |       |                           |                           |     |               |       |                           |               |  |  |       |  |      |    |  |       |  |  |  |  |      |          |     |     |          |      |      |         |          |  |      |          |       |       |          |      |      |         |          |  |      |         |       |       |          |      |      |          |          |  |      |        |     |     |          |       |  |  |  |  |      |       |       |       |          |       |  |  |  |  |      |         |        |        |          |       |  |  |  |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-------------------------------|----------|---------------|---------|---------------------------|---------------|----------|-------|-------------|--|--|--|--|---------|--|--|--|--|-------|---------------------------|---------------------------|-----|---------------|-------|---------------------------|---------------|--|--|-------|--|------|----|--|-------|--|--|--|--|------|----------|-----|-----|----------|------|------|---------|----------|--|------|----------|-------|-------|----------|------|------|---------|----------|--|------|---------|-------|-------|----------|------|------|----------|----------|--|------|--------|-----|-----|----------|-------|--|--|--|--|------|-------|-------|-------|----------|-------|--|--|--|--|------|---------|--------|--------|----------|-------|--|--|--|--|
| <b>DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                           |                               |          |               |         |                           |               |          |       |             |  |  |  |  |         |  |  |  |  |       |                           |                           |     |               |       |                           |               |  |  |       |  |      |    |  |       |  |  |  |  |      |          |     |     |          |      |      |         |          |  |      |          |       |       |          |      |      |         |          |  |      |         |       |       |          |      |      |          |          |  |      |        |     |     |          |       |  |  |  |  |      |       |       |       |          |       |  |  |  |  |      |         |        |        |          |       |  |  |  |  |
| <b>BEARINGS</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                           |                               |          |               |         |                           |               |          |       |             |  |  |  |  |         |  |  |  |  |       |                           |                           |     |               |       |                           |               |  |  |       |  |      |    |  |       |  |  |  |  |      |          |     |     |          |      |      |         |          |  |      |          |       |       |          |      |      |         |          |  |      |         |       |       |          |      |      |          |          |  |      |        |     |     |          |       |  |  |  |  |      |       |       |       |          |       |  |  |  |  |      |         |        |        |          |       |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | FACTORED                  | MAXIMUM                       | FACTORED | INPUT         | REQRD   |                           |               |          |       |             |  |  |  |  |         |  |  |  |  |       |                           |                           |     |               |       |                           |               |  |  |       |  |      |    |  |       |  |  |  |  |      |          |     |     |          |      |      |         |          |  |      |          |       |       |          |      |      |         |          |  |      |         |       |       |          |      |      |          |          |  |      |        |     |     |          |       |  |  |  |  |      |       |       |       |          |       |  |  |  |  |      |         |        |        |          |       |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | GROSS REACTION            | GROSS REACTION                | DOWN     | BRG           | BRG     |                           |               |          |       |             |  |  |  |  |         |  |  |  |  |       |                           |                           |     |               |       |                           |               |  |  |       |  |      |    |  |       |  |  |  |  |      |          |     |     |          |      |      |         |          |  |      |          |       |       |          |      |      |         |          |  |      |         |       |       |          |      |      |          |          |  |      |        |     |     |          |       |  |  |  |  |      |       |       |       |          |       |  |  |  |  |      |         |        |        |          |       |  |  |  |  |
| JT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | VERT                      | HORZ                          | DOWN     | HORZ          | UPLIFT  | IN-SX                     | IN-SX         |          |       |             |  |  |  |  |         |  |  |  |  |       |                           |                           |     |               |       |                           |               |  |  |       |  |      |    |  |       |  |  |  |  |      |          |     |     |          |      |      |         |          |  |      |          |       |       |          |      |      |         |          |  |      |         |       |       |          |      |      |          |          |  |      |        |     |     |          |       |  |  |  |  |      |       |       |       |          |       |  |  |  |  |      |         |        |        |          |       |  |  |  |  |
| F                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 413                       | 0                             | 413      | 0             | 0       | 5-8                       | 5-8           |          |       |             |  |  |  |  |         |  |  |  |  |       |                           |                           |     |               |       |                           |               |  |  |       |  |      |    |  |       |  |  |  |  |      |          |     |     |          |      |      |         |          |  |      |          |       |       |          |      |      |         |          |  |      |         |       |       |          |      |      |          |          |  |      |        |     |     |          |       |  |  |  |  |      |       |       |       |          |       |  |  |  |  |      |         |        |        |          |       |  |  |  |  |
| D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 816                       | 0                             | 816      | 0             | 0       | MECHANICAL                |               |          |       |             |  |  |  |  |         |  |  |  |  |       |                           |                           |     |               |       |                           |               |  |  |       |  |      |    |  |       |  |  |  |  |      |          |     |     |          |      |      |         |          |  |      |          |       |       |          |      |      |         |          |  |      |         |       |       |          |      |      |          |          |  |      |        |     |     |          |       |  |  |  |  |      |       |       |       |          |       |  |  |  |  |      |         |        |        |          |       |  |  |  |  |
| A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT D. MINIMUM BEARING LENGTH AT JOINT D = 1-8.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                           |                               |          |               |         |                           |               |          |       |             |  |  |  |  |         |  |  |  |  |       |                           |                           |     |               |       |                           |               |  |  |       |  |      |    |  |       |  |  |  |  |      |          |     |     |          |      |      |         |          |  |      |          |       |       |          |      |      |         |          |  |      |         |       |       |          |      |      |          |          |  |      |        |     |     |          |       |  |  |  |  |      |       |       |       |          |       |  |  |  |  |      |         |        |        |          |       |  |  |  |  |
| <b>UNFACTORED REACTIONS</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                           |                               |          |               |         |                           |               |          |       |             |  |  |  |  |         |  |  |  |  |       |                           |                           |     |               |       |                           |               |  |  |       |  |      |    |  |       |  |  |  |  |      |          |     |     |          |      |      |         |          |  |      |          |       |       |          |      |      |         |          |  |      |         |       |       |          |      |      |          |          |  |      |        |     |     |          |       |  |  |  |  |      |       |       |       |          |       |  |  |  |  |      |         |        |        |          |       |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 1ST LCASE                 | MAX./MIN. COMPONENT REACTIONS |          |               |         |                           |               |          |       |             |  |  |  |  |         |  |  |  |  |       |                           |                           |     |               |       |                           |               |  |  |       |  |      |    |  |       |  |  |  |  |      |          |     |     |          |      |      |         |          |  |      |          |       |       |          |      |      |         |          |  |      |         |       |       |          |      |      |          |          |  |      |        |     |     |          |       |  |  |  |  |      |       |       |       |          |       |  |  |  |  |      |         |        |        |          |       |  |  |  |  |
| JT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | COMBINED                  | SNOW                          | LIVE     | PERM.LIVE     | WIND    | DEAD                      | SOIL          |          |       |             |  |  |  |  |         |  |  |  |  |       |                           |                           |     |               |       |                           |               |  |  |       |  |      |    |  |       |  |  |  |  |      |          |     |     |          |      |      |         |          |  |      |          |       |       |          |      |      |         |          |  |      |         |       |       |          |      |      |          |          |  |      |        |     |     |          |       |  |  |  |  |      |       |       |       |          |       |  |  |  |  |      |         |        |        |          |       |  |  |  |  |
| F                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 294                       | 180 / 0                       | 0 / 0    | 0 / 0         | 0 / 0   | 115 / 0                   | 0 / 0         |          |       |             |  |  |  |  |         |  |  |  |  |       |                           |                           |     |               |       |                           |               |  |  |       |  |      |    |  |       |  |  |  |  |      |          |     |     |          |      |      |         |          |  |      |          |       |       |          |      |      |         |          |  |      |         |       |       |          |      |      |          |          |  |      |        |     |     |          |       |  |  |  |  |      |       |       |       |          |       |  |  |  |  |      |         |        |        |          |       |  |  |  |  |
| D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 582                       | 355 / 0                       | 0 / 0    | 0 / 0         | 0 / 0   | 227 / 0                   | 0 / 0         |          |       |             |  |  |  |  |         |  |  |  |  |       |                           |                           |     |               |       |                           |               |  |  |       |  |      |    |  |       |  |  |  |  |      |          |     |     |          |      |      |         |          |  |      |          |       |       |          |      |      |         |          |  |      |         |       |       |          |      |      |          |          |  |      |        |     |     |          |       |  |  |  |  |      |       |       |       |          |       |  |  |  |  |      |         |        |        |          |       |  |  |  |  |
| BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) F                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                           |                               |          |               |         |                           |               |          |       |             |  |  |  |  |         |  |  |  |  |       |                           |                           |     |               |       |                           |               |  |  |       |  |      |    |  |       |  |  |  |  |      |          |     |     |          |      |      |         |          |  |      |          |       |       |          |      |      |         |          |  |      |         |       |       |          |      |      |          |          |  |      |        |     |     |          |       |  |  |  |  |      |       |       |       |          |       |  |  |  |  |      |         |        |        |          |       |  |  |  |  |
| BEARING SIZE FACTOR = 1.15 AT JNT(S) F ( BASED ON SUPPORT DEPTH = 1-8 )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                           |                               |          |               |         |                           |               |          |       |             |  |  |  |  |         |  |  |  |  |       |                           |                           |     |               |       |                           |               |  |  |       |  |      |    |  |       |  |  |  |  |      |          |     |     |          |      |      |         |          |  |      |          |       |       |          |      |      |         |          |  |      |         |       |       |          |      |      |          |          |  |      |        |     |     |          |       |  |  |  |  |      |       |       |       |          |       |  |  |  |  |      |         |        |        |          |       |  |  |  |  |
| <b>BRACING</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                           |                               |          |               |         |                           |               |          |       |             |  |  |  |  |         |  |  |  |  |       |                           |                           |     |               |       |                           |               |  |  |       |  |      |    |  |       |  |  |  |  |      |          |     |     |          |      |      |         |          |  |      |          |       |       |          |      |      |         |          |  |      |         |       |       |          |      |      |          |          |  |      |        |     |     |          |       |  |  |  |  |      |       |       |       |          |       |  |  |  |  |      |         |        |        |          |       |  |  |  |  |
| 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.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                           |                               |          |               |         |                           |               |          |       |             |  |  |  |  |         |  |  |  |  |       |                           |                           |     |               |       |                           |               |  |  |       |  |      |    |  |       |  |  |  |  |      |          |     |     |          |      |      |         |          |  |      |          |       |       |          |      |      |         |          |  |      |         |       |       |          |      |      |          |          |  |      |        |     |     |          |       |  |  |  |  |      |       |       |       |          |       |  |  |  |  |      |         |        |        |          |       |  |  |  |  |
| <b>LOADING</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                           |                               |          |               |         |                           |               |          |       |             |  |  |  |  |         |  |  |  |  |       |                           |                           |     |               |       |                           |               |  |  |       |  |      |    |  |       |  |  |  |  |      |          |     |     |          |      |      |         |          |  |      |          |       |       |          |      |      |         |          |  |      |         |       |       |          |      |      |          |          |  |      |        |     |     |          |       |  |  |  |  |      |       |       |       |          |       |  |  |  |  |      |         |        |        |          |       |  |  |  |  |
| TOTAL LOAD CASES: (4)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                           |                               |          |               |         |                           |               |          |       |             |  |  |  |  |         |  |  |  |  |       |                           |                           |     |               |       |                           |               |  |  |       |  |      |    |  |       |  |  |  |  |      |          |     |     |          |      |      |         |          |  |      |          |       |       |          |      |      |         |          |  |      |         |       |       |          |      |      |          |          |  |      |        |     |     |          |       |  |  |  |  |      |       |       |       |          |       |  |  |  |  |      |         |        |        |          |       |  |  |  |  |
| <table><tr><td colspan="5">C H O R D S</td><td colspan="5">W E B S</td></tr><tr><td>MEMB.</td><td>MAX. FACTORED FORCE (LBS)</td><td>FACTORED VERT. LOAD (PLF)</td><td>LC1</td><td>MAX. CSI (LC)</td><td>MEMB.</td><td>MAX. FACTORED FORCE (LBS)</td><td>MAX. CSI (LC)</td><td></td><td></td></tr><tr><td>FR-TO</td><td></td><td>FROM</td><td>TO</td><td></td><td>FR-TO</td><td></td><td></td><td></td><td></td></tr><tr><td>F- A</td><td>-385 / 0</td><td>0.0</td><td>0.0</td><td>0.09 (1)</td><td>7.81</td><td>A- E</td><td>0 / 188</td><td>0.02 (1)</td><td></td></tr><tr><td>A- B</td><td>-203 / 0</td><td>-78.0</td><td>-78.0</td><td>0.06 (1)</td><td>6.25</td><td>E- B</td><td>0 / 637</td><td>0.08 (1)</td><td></td></tr><tr><td>B- C</td><td>-46 / 0</td><td>-78.0</td><td>-78.0</td><td>0.04 (1)</td><td>6.25</td><td>B- D</td><td>-731 / 0</td><td>0.23 (1)</td><td></td></tr><tr><td>D- C</td><td>0 / 25</td><td>0.0</td><td>0.0</td><td>0.00 (1)</td><td>10.00</td><td></td><td></td><td></td><td></td></tr><tr><td>F- E</td><td>0 / 0</td><td>-18.5</td><td>-18.5</td><td>0.01 (4)</td><td>10.00</td><td></td><td></td><td></td><td></td></tr><tr><td>E- D</td><td>0 / 116</td><td>-199.9</td><td>-199.9</td><td>0.02 (1)</td><td>10.00</td><td></td><td></td><td></td><td></td></tr></table> |                           |                               |          |               |         |                           |               |          |       | C H O R D S |  |  |  |  | W E B S |  |  |  |  | MEMB. | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | LC1 | MAX. CSI (LC) | MEMB. | MAX. FACTORED FORCE (LBS) | MAX. CSI (LC) |  |  | FR-TO |  | FROM | TO |  | FR-TO |  |  |  |  | F- A | -385 / 0 | 0.0 | 0.0 | 0.09 (1) | 7.81 | A- E | 0 / 188 | 0.02 (1) |  | A- B | -203 / 0 | -78.0 | -78.0 | 0.06 (1) | 6.25 | E- B | 0 / 637 | 0.08 (1) |  | B- C | -46 / 0 | -78.0 | -78.0 | 0.04 (1) | 6.25 | B- D | -731 / 0 | 0.23 (1) |  | D- C | 0 / 25 | 0.0 | 0.0 | 0.00 (1) | 10.00 |  |  |  |  | F- E | 0 / 0 | -18.5 | -18.5 | 0.01 (4) | 10.00 |  |  |  |  | E- D | 0 / 116 | -199.9 | -199.9 | 0.02 (1) | 10.00 |  |  |  |  |
| C H O R D S                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                           |                               |          |               | W E B S |                           |               |          |       |             |  |  |  |  |         |  |  |  |  |       |                           |                           |     |               |       |                           |               |  |  |       |  |      |    |  |       |  |  |  |  |      |          |     |     |          |      |      |         |          |  |      |          |       |       |          |      |      |         |          |  |      |         |       |       |          |      |      |          |          |  |      |        |     |     |          |       |  |  |  |  |      |       |       |       |          |       |  |  |  |  |      |         |        |        |          |       |  |  |  |  |
| MEMB.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF)     | LC1      | MAX. CSI (LC) | MEMB.   | MAX. FACTORED FORCE (LBS) | MAX. CSI (LC) |          |       |             |  |  |  |  |         |  |  |  |  |       |                           |                           |     |               |       |                           |               |  |  |       |  |      |    |  |       |  |  |  |  |      |          |     |     |          |      |      |         |          |  |      |          |       |       |          |      |      |         |          |  |      |         |       |       |          |      |      |          |          |  |      |        |     |     |          |       |  |  |  |  |      |       |       |       |          |       |  |  |  |  |      |         |        |        |          |       |  |  |  |  |
| FR-TO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                           | FROM                          | TO       |               | FR-TO   |                           |               |          |       |             |  |  |  |  |         |  |  |  |  |       |                           |                           |     |               |       |                           |               |  |  |       |  |      |    |  |       |  |  |  |  |      |          |     |     |          |      |      |         |          |  |      |          |       |       |          |      |      |         |          |  |      |         |       |       |          |      |      |          |          |  |      |        |     |     |          |       |  |  |  |  |      |       |       |       |          |       |  |  |  |  |      |         |        |        |          |       |  |  |  |  |
| F- A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | -385 / 0                  | 0.0                           | 0.0      | 0.09 (1)      | 7.81    | A- E                      | 0 / 188       | 0.02 (1) |       |             |  |  |  |  |         |  |  |  |  |       |                           |                           |     |               |       |                           |               |  |  |       |  |      |    |  |       |  |  |  |  |      |          |     |     |          |      |      |         |          |  |      |          |       |       |          |      |      |         |          |  |      |         |       |       |          |      |      |          |          |  |      |        |     |     |          |       |  |  |  |  |      |       |       |       |          |       |  |  |  |  |      |         |        |        |          |       |  |  |  |  |
| A- B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | -203 / 0                  | -78.0                         | -78.0    | 0.06 (1)      | 6.25    | E- B                      | 0 / 637       | 0.08 (1) |       |             |  |  |  |  |         |  |  |  |  |       |                           |                           |     |               |       |                           |               |  |  |       |  |      |    |  |       |  |  |  |  |      |          |     |     |          |      |      |         |          |  |      |          |       |       |          |      |      |         |          |  |      |         |       |       |          |      |      |          |          |  |      |        |     |     |          |       |  |  |  |  |      |       |       |       |          |       |  |  |  |  |      |         |        |        |          |       |  |  |  |  |
| B- C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | -46 / 0                   | -78.0                         | -78.0    | 0.04 (1)      | 6.25    | B- D                      | -731 / 0      | 0.23 (1) |       |             |  |  |  |  |         |  |  |  |  |       |                           |                           |     |               |       |                           |               |  |  |       |  |      |    |  |       |  |  |  |  |      |          |     |     |          |      |      |         |          |  |      |          |       |       |          |      |      |         |          |  |      |         |       |       |          |      |      |          |          |  |      |        |     |     |          |       |  |  |  |  |      |       |       |       |          |       |  |  |  |  |      |         |        |        |          |       |  |  |  |  |
| D- C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 0 / 25                    | 0.0                           | 0.0      | 0.00 (1)      | 10.00   |                           |               |          |       |             |  |  |  |  |         |  |  |  |  |       |                           |                           |     |               |       |                           |               |  |  |       |  |      |    |  |       |  |  |  |  |      |          |     |     |          |      |      |         |          |  |      |          |       |       |          |      |      |         |          |  |      |         |       |       |          |      |      |          |          |  |      |        |     |     |          |       |  |  |  |  |      |       |       |       |          |       |  |  |  |  |      |         |        |        |          |       |  |  |  |  |
| F- E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 0 / 0                     | -18.5                         | -18.5    | 0.01 (4)      | 10.00   |                           |               |          |       |             |  |  |  |  |         |  |  |  |  |       |                           |                           |     |               |       |                           |               |  |  |       |  |      |    |  |       |  |  |  |  |      |          |     |     |          |      |      |         |          |  |      |          |       |       |          |      |      |         |          |  |      |         |       |       |          |      |      |          |          |  |      |        |     |     |          |       |  |  |  |  |      |       |       |       |          |       |  |  |  |  |      |         |        |        |          |       |  |  |  |  |
| E- D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 0 / 116                   | -199.9                        | -199.9   | 0.02 (1)      | 10.00   |                           |               |          |       |             |  |  |  |  |         |  |  |  |  |       |                           |                           |     |               |       |                           |               |  |  |       |  |      |    |  |       |  |  |  |  |      |          |     |     |          |      |      |         |          |  |      |          |       |       |          |      |      |         |          |  |      |         |       |       |          |      |      |          |          |  |      |        |     |     |          |       |  |  |  |  |      |       |       |       |          |       |  |  |  |  |      |         |        |        |          |       |  |  |  |  |
| FACTORED CONCENTRATED LOADS (LBS)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                           |                               |          |               |         |                           |               |          |       |             |  |  |  |  |         |  |  |  |  |       |                           |                           |     |               |       |                           |               |  |  |       |  |      |    |  |       |  |  |  |  |      |          |     |     |          |      |      |         |          |  |      |          |       |       |          |      |      |         |          |  |      |         |       |       |          |      |      |          |          |  |      |        |     |     |          |       |  |  |  |  |      |       |       |       |          |       |  |  |  |  |      |         |        |        |          |       |  |  |  |  |
| JT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | LOC.                      | LC1                           | MAX-     | MAX+          | FACE    | DIR.                      | TYPE          | HEEL     | CONN. |             |  |  |  |  |         |  |  |  |  |       |                           |                           |     |               |       |                           |               |  |  |       |  |      |    |  |       |  |  |  |  |      |          |     |     |          |      |      |         |          |  |      |          |       |       |          |      |      |         |          |  |      |         |       |       |          |      |      |          |          |  |      |        |     |     |          |       |  |  |  |  |      |       |       |       |          |       |  |  |  |  |      |         |        |        |          |       |  |  |  |  |
| E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 2-11-9                    | -598                          | -598     | ---           | FRONT   | VERT                      | TOTAL         | ---      | C1    |             |  |  |  |  |         |  |  |  |  |       |                           |                           |     |               |       |                           |               |  |  |       |  |      |    |  |       |  |  |  |  |      |          |     |     |          |      |      |         |          |  |      |          |       |       |          |      |      |         |          |  |      |         |       |       |          |      |      |          |          |  |      |        |     |     |          |       |  |  |  |  |      |       |       |       |          |       |  |  |  |  |      |         |        |        |          |       |  |  |  |  |

CONNECTION REQUIREMENTS

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

|                                                                                                    |
|----------------------------------------------------------------------------------------------------|
| <b>DESIGN CRITERIA</b>                                                                             |
| *** SPECIAL LOADS ANALYSIS ***                                                                     |
| GEOMETRY AND/OR BASIC LOADS CHANGED BY USER.                                                       |
| LOADS WERE DERIVED FROM USER INPUT                                                                 |
| NO FURTHER MODIFICATIONS WERE MADE                                                                 |
| SPECIFIED LOADS:                                                                                   |
| TOP CH. LL = 21.0 PSF                                                                              |
| DL = 6.0 PSF                                                                                       |
| BOT CH. LL = 0.0 PSF                                                                               |
| DL = 7.4 PSF                                                                                       |
| TOTAL LOAD = 34.4 PSF                                                                              |
| <b>SPACING = 24.0 IN. C/C</b>                                                                      |
| GIRDER TYPE: CStdGirder                                                                            |
| START DISTANCE = 3-1-0                                                                             |
| START SPAN CARRIED = 9-6-4                                                                         |
| END DISTANCE = 4-2-7                                                                               |
| END SPAN CARRIED = 9-6-4                                                                           |
| 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, NBC2015           |
| THIS DESIGN COMPLIES WITH:                                                                         |
| - PART 9 OF BCBC 2018 , ABC 2019                                                                   |
| - PART 9 OF OBC 2012 (2019 AMENDMENT)                                                              |
| - CSA 086-14                                                                                       |
| - TPIC 2014                                                                                        |
| (55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD |
| ALLOWABLE DEFL.(LL)= L/360 (0.19")                                                                 |
| CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")                                                        |
| ALLOWABLE DEFL.(TL)= L/360 (0.19")                                                                 |
| CALCULATED VERT. DEFL.(TL) = L/ 999 (0.01")                                                        |
| CSI: TC=0.09/1.00 (A-F:1) , BC=0.02/1.00 (D-E:1) , WB=0.23/1.00 (B-D:1) , SSI=0.04/1.00 (A-B:1)    |
| DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.00                                                             |
| COMP=1.00 SHEAR=1.00 TENS= 1.00                                                                    |
| COMPANION LIVE LOAD FACTOR = 1.00                                                                  |
| TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT . |
| NAIL VALUES                                                                                        |
| PLATE GRIP(DRY) SHEAR SECTION                                                                      |
| (PSI) (PLI) (PLI)                                                                                  |
| MAX MIN MAX MIN MAX MIN                                                                            |
| MT20 650 371 1747 788 1987 1873                                                                    |
| PLATE PLACEMENT TOL. = 0.250 inches                                                                |
| PLATE ROTATION TOL. = 5.0 Deg.                                                                     |

|          |            |          |     |                      |              |
|----------|------------|----------|-----|----------------------|--------------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.     |
| 318797   | H39        | 1        | 2   | TRUSS DESC. JT 45147 | E20041058(2) |

**PLATES (table is in inches)**

| JT | TYPE    | PLATES | W   | LEN | Y    | X    |
|----|---------|--------|-----|-----|------|------|
| A  | TMVW+p  | MT20   | 5.0 | 6.0 | 1.50 | 2.75 |
| B  | TMWW-t  | MT20   | 3.0 | 5.0 | 1.50 | 2.00 |
| C  | TMV+p   | MT20   | 2.0 | 4.0 |      |      |
| D  | BMVW1-t | MT20   | 4.0 | 4.0 |      |      |
| E  | BBWW-h  | MT20   | 7.0 | 8.0 |      |      |
| F  | BVM1-p  | MT20   | 3.0 | 6.0 |      | Edge |

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

JSI GRIP= 0.43 (B) (INPUT = 0.90 )  
JSI METAL= 0.10 (B) (INPUT = 1.00 )

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

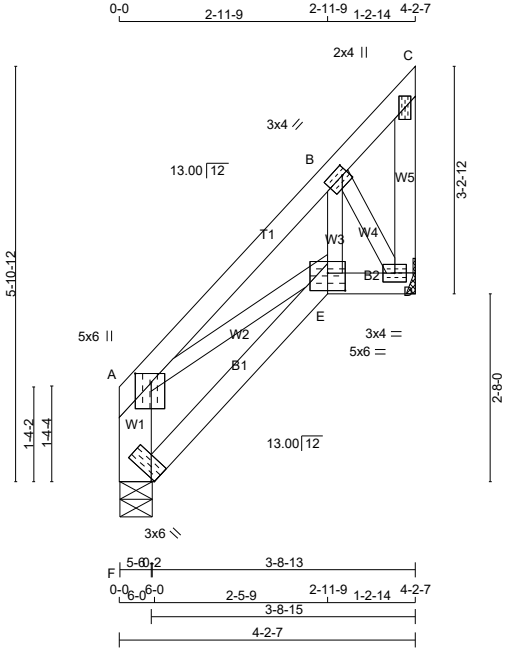


|          |            |          |     |                      |           |
|----------|------------|----------|-----|----------------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.  |
| 318797   | H40T       | 3        | 1   | TRUSS DESC. JT 45147 | E20041059 |

Alpa Roof Truss, Maple

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TOTAL WEIGHT = 3 X 24 = 71 lb

[M][F]

| LUMBER                |        |      |        |
|-----------------------|--------|------|--------|
| N. L. G. A. RULES     | CHORDS | SIZE | LUMBER |
| F - A                 | 2x6    | DRY  | No.2   |
| A - C                 | 2x4    | DRY  | No.2   |
| D - C                 | 2x4    | DRY  | No.2   |
| F - E                 | 2x4    | DRY  | No.2   |
| E - D                 | 2x4    | DRY  | No.2   |
| ALL WEBS              | 2x3    | DRY  | No.2   |
| DRY: SEASONED LUMBER. |        |      |        |

| PLATES (table is in inches) |         |        |     |     |      |      |
|-----------------------------|---------|--------|-----|-----|------|------|
| JT                          | TYPE    | PLATES | W   | LEN | Y    | X    |
| A                           | TMVW+p  | MT20   | 5.0 | 6.0 | 1.50 | 2.75 |
| B                           | TMWW-t  | MT20   | 3.0 | 4.0 | 1.50 | 1.00 |
| C                           | TMV+p   | MT20   | 2.0 | 4.0 |      |      |
| D                           | BMVW1-t | MT20   | 3.0 | 4.0 |      |      |
| E                           | BBWW-t  | MT20   | 5.0 | 6.0 | 3.00 | 3.00 |
| F                           | BVM1+t  | MT20   | 3.0 | 6.0 | 0.25 | Edge |

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

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

| BEARINGS |      | FACTORED GROSS REACTION | MAXIMUM FACTORED GROSS REACTION | INPUT BRG | REQRD BRG |
|----------|------|-------------------------|---------------------------------|-----------|-----------|
| JT       | VERT | HORZ                    | DOWN                            | HORZ      | UPLIFT    |
| F        | 203  | 0                       | 203                             | 0         | 0         |
| D        | 203  | 0                       | 203                             | 0         | 0         |

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

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

| UNFACTORED REACTIONS |           |        |       |           |       |        |
|----------------------|-----------|--------|-------|-----------|-------|--------|
| JT                   | 1ST LCASE | SNOW   | LIVE  | PERM.LIVE | WIND  | DEAD   |
| F                    | 145       | 88 / 0 | 0 / 0 | 0 / 0     | 0 / 0 | 56 / 0 |
| D                    | 145       | 88 / 0 | 0 / 0 | 0 / 0     | 0 / 0 | 56 / 0 |

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

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

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

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

| CHORDS |                           |                           |                | WEBS  |                           |               |  |
|--------|---------------------------|---------------------------|----------------|-------|---------------------------|---------------|--|
| MEMB.  | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX. CSI (LC)  | MEMB. | MAX. FACTORED FORCE (LBS) | MAX. CSI (LC) |  |
| FR-TO  |                           | FROM TO                   |                | FR-TO |                           |               |  |
| F-A    | -175 / 0                  | 0.0                       | 0.0 0.01 (1)   | A-E   | 0 / 175                   | 0.04 (1)      |  |
| A-B    | -208 / 0                  | -78.0                     | -78.0 0.08 (1) | E-B   | 0 / 131                   | 0.03 (1)      |  |
| B-C    | -40 / 0                   | -78.0                     | -78.0 0.07 (1) | B-D   | -250 / 0                  | 0.04 (1)      |  |
| D-C    | 0 / 10                    | 0.0                       | 0.0 0.00 (1)   |       |                           |               |  |
| F-E    | 0 / 0                     | -18.5                     | -18.5 0.05 (4) |       |                           |               |  |
| E-D    | 0 / 143                   | -18.5                     | -18.5 0.03 (1) |       |                           |               |  |

DESIGN CRITERIA

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

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

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

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

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

CSI: TC=0.08/1.00 (A-B:1) , BC=0.05/1.00 (E-F:4) ,  
WB=0.04/1.00 (A-E:1) , SSI=0.07/1.00 (A-B:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

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

PLATE PLACEMENT TOL. = 0.250 inches

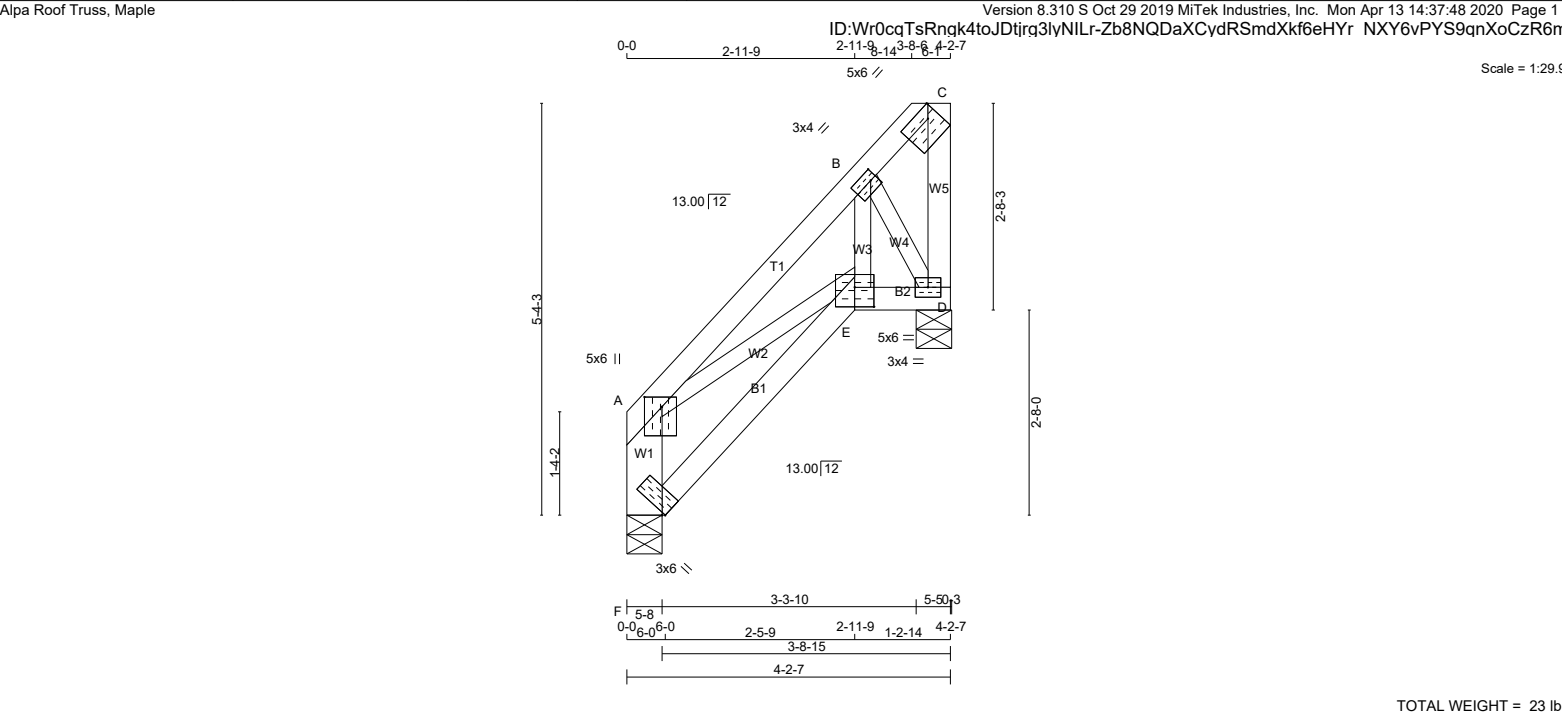
PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.34 (B) (INPUT = 0.90 )  
JSI METAL= 0.09 (A) (INPUT = 1.00 )

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



|          |            |          |     |                      |           |
|----------|------------|----------|-----|----------------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.  |
| 318797   | H40TA      | 1        | 1   | TRUSS DESC. JT 45147 | E20041060 |



|                                                                                                                                                                                                                                                             |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|
| <b>LUMBER</b><br>N. L. G. A. RULES<br>CHORDS SIZE LUMBER DESCR.<br>A - C 2x4 DRY No.2 SPF<br>D - C 2x4 DRY No.2 SPF<br>F - A 2x6 DRY No.2 SPF<br>E - E 2x4 DRY No.2 SPF<br>E - D 2x4 DRY No.2 SPF<br><br>ALL WEBS 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 GROSS REACTION MAXIMUM FACTORED GROSS REACTION INPUT BRG REQRD BRG<br>JT VERT HORZ DOWN HORZ UPLIFT IN-SX IN-SX<br>D 203 0 203 0 0 5-8 (5-5) 1-8<br>F 203 0 203 0 0 5-8 5-8<br><br>VALUE IN PARENTHESIS INDICATES EFFECTIVE BEARING LENGTH |  |  |  | <b>DESIGN CRITERIA</b><br><br>SPECIFIED LOADS:<br>TOP CH. LL = 21.0 PSF<br>DL = 6.0 PSF<br>BOT CH. LL = 0.0 PSF<br>DL = 7.4 PSF<br>TOTAL LOAD = 34.4 PSF<br><br>SPACING = 24.0 IN. C/C<br><br>THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015<br><br>THIS DESIGN COMPLIES WITH:<br>- PART 9 OF BCBC 2018 , ABC 2019<br>- PART 9 OF OBC 2012 (2019 AMENDMENT)<br>- CSA 086-14<br>- TPIC 2014<br><br>(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD<br><br>ALLOWABLE DEFL.(LL)= L/360 (0.19")<br>CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")<br>ALLOWABLE DEFL.(TL)= L/360 (0.19")<br>CALCULATED VERT. DEFL.(TL) = L/ 999 (0.01")<br><br>CSI: TC=0.08/1.00 (A-B:1) , BC=0.05/1.00 (E-F:4) , WB=0.04/1.00 (A-E:1) , SSI=0.07/1.00 (A-B:1)<br><br>DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10<br>COMP=1.10 SHEAR=1.10 TENS= 1.10<br><br>COMPANION LIVE LOAD FACTOR = 1.00<br><br>AUTOSOLVE RIGHT HEEL ONLY<br><br>TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .<br><br>NAIL VALUES<br>PLATE GRIP(DRY) SHEAR SECTION<br>(PSI) (PLI) (PLI)<br>MAX MIN MAX MIN MAX MIN<br>MT20 650 371 1747 788 1987 1873<br><br>PLATE PLACEMENT TOL. = 0.250 inches<br><br>PLATE ROTATION TOL. = 5.0 Deg.<br><br>JSI GRIP= 0.34 (B) (INPUT = 0.90 )<br>JSI METAL= 0.09 (A) (INPUT = 1.00 ) |  |  |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|

|                                    |        |        |     |     |      |      |
|------------------------------------|--------|--------|-----|-----|------|------|
| <b>PLATES (table is in inches)</b> |        |        |     |     |      |      |
| JT                                 | TYPE   | PLATES | W   | LEN | Y    | X    |
| A                                  | TMVW+p | MT20   | 5.0 | 6.0 | 1.50 | 2.75 |
| B                                  | TMWW-l | MT20   | 3.0 | 4.0 | 1.50 | 1.00 |
| C                                  | TMVM-l | MT20   | 5.0 | 6.0 | 1.75 | Edge |
| D                                  | BMVW-l | MT20   | 3.0 | 4.0 |      |      |
| E                                  | BBWW-l | MT20   | 5.0 | 6.0 | 3.00 | 3.00 |
| F                                  | BVM1+l | MT20   | 3.0 | 6.0 | 0.25 | Edge |

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

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

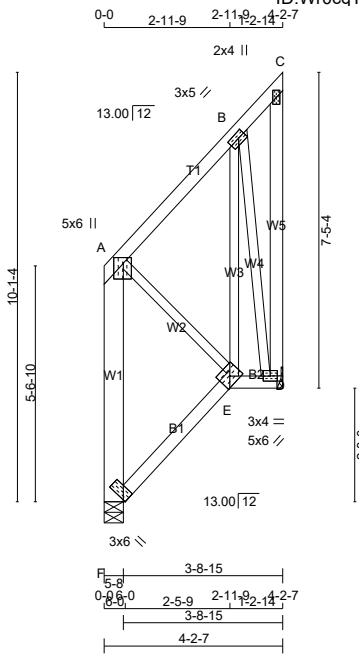


|          |            |          |     |                      |           |
|----------|------------|----------|-----|----------------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.  |
| 318797   | H41T       | 1        | 1   | TRUSS DESC. JT 45147 | E20041061 |

Alpa Roof Truss, Maple

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ID:Wf0cqTsRngk4toJDtqr3lyNlR-2nimdZbAzFI4wCjIMdtqIO9?xuLeq bOUX5KezR6m0



Scale = 1:54.2

TOTAL WEIGHT = 43 lb

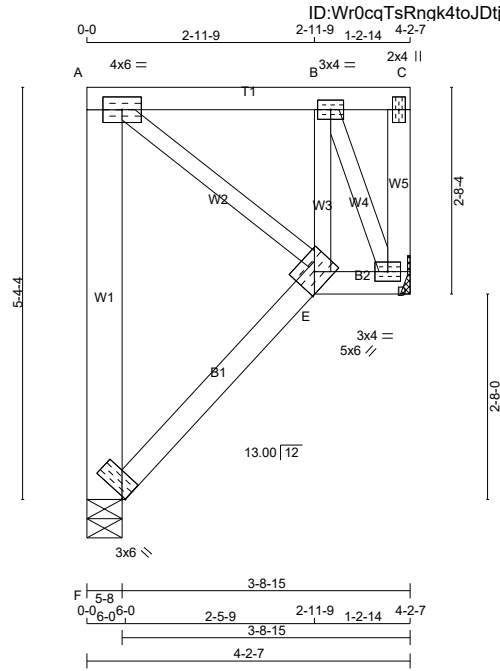
| <b>LUMBER</b><br>N. L. G. A. RULES<br>CHORDS SIZE LUMBER<br>F - A 2x6 DRY No.2<br>A - C 2x4 DRY No.2<br>D - C 2x4 DRY No.2<br>F - E 2x4 DRY No.2<br>E - D 2x4 DRY No.2<br><br>ALL WEBS 2x3 DRY No.2<br>DRY: SEASONED LUMBER. |                           |                           |                   |       | <b>DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER</b><br><b>BEARINGS</b><br>FACTORED GROSS REACTION MAXIMUM FACTORED GROSS REACTION INPUT REQD<br>JT VERT HORZ DOWN HORZ UPLIFT IN-SX IN-SX<br>F 203 0 203 0 0 5-8 5-8<br>D 203 0 203 0 0 MECHANICAL<br><br>A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT D. MINIMUM BEARING LENGTH AT JOINT D = 1-8.<br><br><b>UNFACTORED REACTIONS</b><br>1ST LCASE MAX./MIN. COMPONENT REACTIONS<br>JT COMBINED SNOW LIVE PERM.LIVE WIND DEAD SOIL<br>F 145 88 / 0 0 / 0 0 / 0 0 / 0 56 / 0 0 / 0<br>D 145 88 / 0 0 / 0 0 / 0 0 / 0 56 / 0 0 / 0<br><br>BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) F<br>BEARING SIZE FACTOR = 1.15 AT JNT(S) F ( BASED ON SUPPORT DEPTH = 1-8 )<br><br><b>BRACING</b><br>TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.<br>MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.<br><br>ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.<br><br><b>LOADING</b><br>TOTAL LOAD CASES: (4)<br><table><tr><th colspan="4">CHORDS</th><th colspan="4">WEBS</th></tr><tr><th>MEMB.</th><th>MAX. FACTORED FORCE (LBS)</th><th>FACTORED VERT. LOAD (PLF)</th><th>LC1 MAX. CSI (LC)</th><th>MEMB.</th><th>MAX. FACTORED FORCE (LBS)</th><th>MAX. UNBRACED LENGTH</th><th>MEMB. MAX. FACTORED FORCE (LBS) MAX. CSI (LC)</th></tr><tr><td>FR-TO</td><td></td><td>FROM TO</td><td></td><td>FR-TO</td><td></td><td></td><td></td></tr><tr><td>F-A</td><td>-175 / 0</td><td>0.0 0.0</td><td>0.08 (1)</td><td>A-E</td><td>0 / 48</td><td>7.81</td><td>0.01 (1)</td></tr><tr><td>A-B</td><td>-38 / 0</td><td>-78.0 -78.0</td><td>0.09 (1)</td><td>E-B</td><td>0 / 33</td><td>6.25</td><td>0.01 (4)</td></tr><tr><td>B-C</td><td>-56 / 0</td><td>-78.0 -78.0</td><td>0.08 (1)</td><td>B-D</td><td>-234 / 0</td><td>6.25</td><td>0.16 (1)</td></tr><tr><td>D-C</td><td>0 / 39</td><td>0.0 0.0</td><td>0.01 (1)</td><td></td><td></td><td>10.00</td><td></td></tr><tr><td>F-E</td><td>0 / 0</td><td>-18.5 -18.5</td><td>0.05 (4)</td><td></td><td></td><td>10.00</td><td></td></tr><tr><td>E-D</td><td>0 / 37</td><td>-18.5 -18.5</td><td>0.01 (4)</td><td></td><td></td><td>10.00</td><td></td></tr></table> |                      |                                               |  |  | CHORDS |  |  |  | WEBS |  |  |  | MEMB. | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | LC1 MAX. CSI (LC) | MEMB. | MAX. FACTORED FORCE (LBS) | MAX. UNBRACED LENGTH | MEMB. MAX. FACTORED FORCE (LBS) MAX. CSI (LC) | FR-TO |  | FROM TO |  | FR-TO |  |  |  | F-A | -175 / 0 | 0.0 0.0 | 0.08 (1) | A-E | 0 / 48 | 7.81 | 0.01 (1) | A-B | -38 / 0 | -78.0 -78.0 | 0.09 (1) | E-B | 0 / 33 | 6.25 | 0.01 (4) | B-C | -56 / 0 | -78.0 -78.0 | 0.08 (1) | B-D | -234 / 0 | 6.25 | 0.16 (1) | D-C | 0 / 39 | 0.0 0.0 | 0.01 (1) |  |  | 10.00 |  | F-E | 0 / 0 | -18.5 -18.5 | 0.05 (4) |  |  | 10.00 |  | E-D | 0 / 37 | -18.5 -18.5 | 0.01 (4) |  |  | 10.00 |  | <b>DESIGN CRITERIA</b><br><br>SPECIFIED LOADS:<br>TOP CH. LL = 21.0 PSF<br>DL = 6.0 PSF<br>BOT CH. LL = 0.0 PSF<br>DL = 7.4 PSF<br>TOTAL LOAD = 34.4 PSF<br><br><b>SPACING = 24.0 IN. C/C</b><br><br>THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015<br><br>THIS DESIGN COMPLIES WITH:<br>- PART 9 OF BCBC 2018 , ABC 2019<br>- PART 9 OF OBC 2012 (2019 AMENDMENT)<br>- CSA 086-14<br>- TPIC 2014<br><br>(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD<br><br>ALLOWABLE DEFL.(LL)= L/360 (0.19")<br>CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")<br>ALLOWABLE DEFL.(TL)= L/360 (0.19")<br>CALCULATED VERT. DEFL.(TL) = L/ 999 (0.01")<br><br>CSI: TC=0.09/1.00 (A-B:1) , BC=0.05/1.00 (E-F:4) , WB=0.16/1.00 (B-D:1) , SSI=0.08/1.00 (A-B:1)<br><br>DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10<br>COMP=1.10 SHEAR=1.10 TENS= 1.10<br><br>COMPANION LIVE LOAD FACTOR = 1.00<br><br>TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .<br><br>NAIL VALUES<br>PLATE GRIP(DRY) SHEAR SECTION (PSI) (PLI) (PLI)<br>MAX MIN MAX MIN MAX MIN<br>MT20 650 371 1747 788 1987 1873 |  |  |  |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|---------------------------|-------------------|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-----------------------------------------------|--|--|--------|--|--|--|------|--|--|--|-------|---------------------------|---------------------------|-------------------|-------|---------------------------|----------------------|-----------------------------------------------|-------|--|---------|--|-------|--|--|--|-----|----------|---------|----------|-----|--------|------|----------|-----|---------|-------------|----------|-----|--------|------|----------|-----|---------|-------------|----------|-----|----------|------|----------|-----|--------|---------|----------|--|--|-------|--|-----|-------|-------------|----------|--|--|-------|--|-----|--------|-------------|----------|--|--|-------|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
| CHORDS                                                                                                                                                                                                                       |                           |                           |                   | WEBS  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                      |                                               |  |  |        |  |  |  |      |  |  |  |       |                           |                           |                   |       |                           |                      |                                               |       |  |         |  |       |  |  |  |     |          |         |          |     |        |      |          |     |         |             |          |     |        |      |          |     |         |             |          |     |          |      |          |     |        |         |          |  |  |       |  |     |       |             |          |  |  |       |  |     |        |             |          |  |  |       |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |  |  |  |
| MEMB.                                                                                                                                                                                                                        | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | LC1 MAX. CSI (LC) | MEMB. | MAX. FACTORED FORCE (LBS)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | MAX. UNBRACED LENGTH | MEMB. MAX. FACTORED FORCE (LBS) MAX. CSI (LC) |  |  |        |  |  |  |      |  |  |  |       |                           |                           |                   |       |                           |                      |                                               |       |  |         |  |       |  |  |  |     |          |         |          |     |        |      |          |     |         |             |          |     |        |      |          |     |         |             |          |     |          |      |          |     |        |         |          |  |  |       |  |     |       |             |          |  |  |       |  |     |        |             |          |  |  |       |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |  |  |  |
| FR-TO                                                                                                                                                                                                                        |                           | FROM TO                   |                   | FR-TO |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                      |                                               |  |  |        |  |  |  |      |  |  |  |       |                           |                           |                   |       |                           |                      |                                               |       |  |         |  |       |  |  |  |     |          |         |          |     |        |      |          |     |         |             |          |     |        |      |          |     |         |             |          |     |          |      |          |     |        |         |          |  |  |       |  |     |       |             |          |  |  |       |  |     |        |             |          |  |  |       |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |  |  |  |
| F-A                                                                                                                                                                                                                          | -175 / 0                  | 0.0 0.0                   | 0.08 (1)          | A-E   | 0 / 48                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 7.81                 | 0.01 (1)                                      |  |  |        |  |  |  |      |  |  |  |       |                           |                           |                   |       |                           |                      |                                               |       |  |         |  |       |  |  |  |     |          |         |          |     |        |      |          |     |         |             |          |     |        |      |          |     |         |             |          |     |          |      |          |     |        |         |          |  |  |       |  |     |       |             |          |  |  |       |  |     |        |             |          |  |  |       |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |  |  |  |
| A-B                                                                                                                                                                                                                          | -38 / 0                   | -78.0 -78.0               | 0.09 (1)          | E-B   | 0 / 33                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 6.25                 | 0.01 (4)                                      |  |  |        |  |  |  |      |  |  |  |       |                           |                           |                   |       |                           |                      |                                               |       |  |         |  |       |  |  |  |     |          |         |          |     |        |      |          |     |         |             |          |     |        |      |          |     |         |             |          |     |          |      |          |     |        |         |          |  |  |       |  |     |       |             |          |  |  |       |  |     |        |             |          |  |  |       |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |  |  |  |
| B-C                                                                                                                                                                                                                          | -56 / 0                   | -78.0 -78.0               | 0.08 (1)          | B-D   | -234 / 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 6.25                 | 0.16 (1)                                      |  |  |        |  |  |  |      |  |  |  |       |                           |                           |                   |       |                           |                      |                                               |       |  |         |  |       |  |  |  |     |          |         |          |     |        |      |          |     |         |             |          |     |        |      |          |     |         |             |          |     |          |      |          |     |        |         |          |  |  |       |  |     |       |             |          |  |  |       |  |     |        |             |          |  |  |       |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |  |  |  |
| D-C                                                                                                                                                                                                                          | 0 / 39                    | 0.0 0.0                   | 0.01 (1)          |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 10.00                |                                               |  |  |        |  |  |  |      |  |  |  |       |                           |                           |                   |       |                           |                      |                                               |       |  |         |  |       |  |  |  |     |          |         |          |     |        |      |          |     |         |             |          |     |        |      |          |     |         |             |          |     |          |      |          |     |        |         |          |  |  |       |  |     |       |             |          |  |  |       |  |     |        |             |          |  |  |       |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |  |  |  |
| F-E                                                                                                                                                                                                                          | 0 / 0                     | -18.5 -18.5               | 0.05 (4)          |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 10.00                |                                               |  |  |        |  |  |  |      |  |  |  |       |                           |                           |                   |       |                           |                      |                                               |       |  |         |  |       |  |  |  |     |          |         |          |     |        |      |          |     |         |             |          |     |        |      |          |     |         |             |          |     |          |      |          |     |        |         |          |  |  |       |  |     |       |             |          |  |  |       |  |     |        |             |          |  |  |       |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |  |  |  |
| E-D                                                                                                                                                                                                                          | 0 / 37                    | -18.5 -18.5               | 0.01 (4)          |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 10.00                |                                               |  |  |        |  |  |  |      |  |  |  |       |                           |                           |                   |       |                           |                      |                                               |       |  |         |  |       |  |  |  |     |          |         |          |     |        |      |          |     |         |             |          |     |        |      |          |     |         |             |          |     |          |      |          |     |        |         |          |  |  |       |  |     |       |             |          |  |  |       |  |     |        |             |          |  |  |       |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |  |  |  |

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

|          |            |          |     |                      |           |
|----------|------------|----------|-----|----------------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.  |
| 318797   | H41TA      | 1        | 1   | TRUSS DESC. JT 45147 | E20041062 |

Alpa Roof Truss, Maple

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Scale = 1:29.9

TOTAL WEIGHT = 28 lb

|                                                      |  |  |  |  |  |  |
|------------------------------------------------------|--|--|--|--|--|--|
| <b>LUMBER</b><br>N. L. G. A. RULES<br>CHORDS    SIZE |  |  |  |  |  |  |
|------------------------------------------------------|--|--|--|--|--|--|

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TOTAL WEIGHT = 39 lb

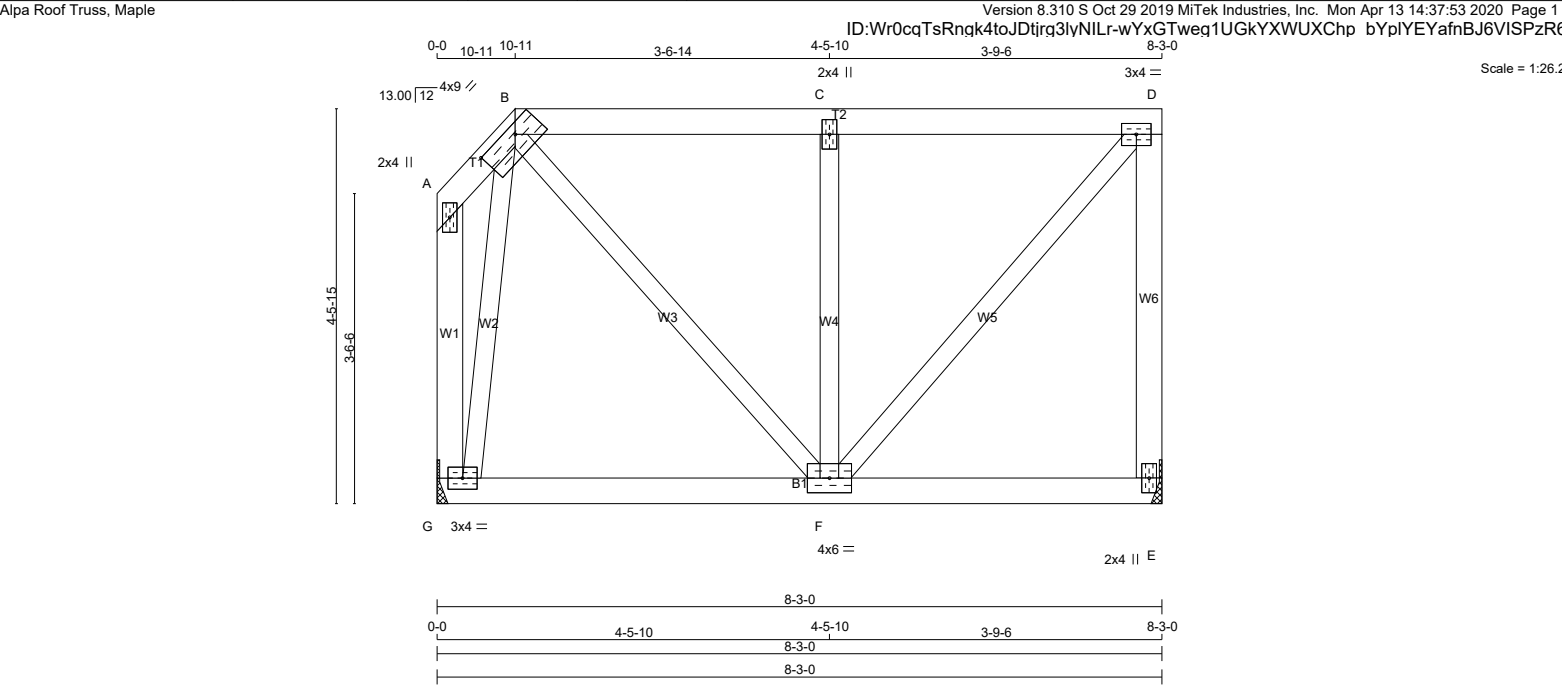
Edge - INDICATES REFERENCE CORNER OF PLATE  
TOUCHES EDGE OF CHORD.

**TOTAL LOAD CASES: (4)**

| CHORDS |                           |                           |       |               | WEBS        |       |                           |               |
|--------|---------------------------|---------------------------|-------|---------------|-------------|-------|---------------------------|---------------|
| MEMB.  | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | LC1   | MAX. CSI (LC) | MAX. UNBRAC | MEMB. | MAX. FACTORED FORCE (LBS) | MAX. CSI (LC) |
| FR-TO  |                           | FROM                      | TO    | LENGTH        | FR-TO       |       |                           |               |
| A-B    | -66 / 0                   | -78.0                     | -78.0 | 0.05 (1)      | 6.25        | B-E   | -116 / 0                  | 0.05 (1)      |
| B-C    | -29 / 0                   | -78.0                     | -78.0 | 0.04 (1)      | 6.25        | E-C   | 0 / 120                   | 0.03 (1)      |
| D-C    | -191 / 0                  | 0.0                       | 0.0   | 0.10 (1)      | 7.81        | A-E   | 0 / 58                    | 0.01 (1)      |
| F-A    | -175 / 0                  | 0.0                       | 0.0   | 0.08 (1)      | 7.81        |       |                           |               |
| F-E    | 0 / 0                     | -18.5                     | -18.5 | 0.05 (4)      | 10.00       |       |                           |               |
| E-D    | 0 / 0                     | -18.5                     | -18.5 | 0.01 (4)      | 10.00       |       |                           |               |

JSI GRIP= 0.24 (C) (INPUT = 0.90 )  
JSI METAL= 0.04 (D) (INPUT = 1.00 )

|          |            |          |     |                      |           |
|----------|------------|----------|-----|----------------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.  |
| 318797   | H42        | 1        | 1   | TRUSS DESC. JT 45147 | E20041064 |



|                   |      |        |        |                                                                                                      |                  |      |       |                                                                                                                            |      |        |            |                        |                  |  |                   |                               |     |  |
|-------------------|------|--------|--------|------------------------------------------------------------------------------------------------------|------------------|------|-------|----------------------------------------------------------------------------------------------------------------------------|------|--------|------------|------------------------|------------------|--|-------------------|-------------------------------|-----|--|
| <b>LUMBER</b>     |      |        |        | <b>DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER</b> |                  |      |       |                                                                                                                            |      |        |            | <b>DESIGN CRITERIA</b> |                  |  |                   | [M]                           |     |  |
| N. L. G. A. RULES |      |        |        | <b>BEARINGS</b>                                                                                      |                  |      |       |                                                                                                                            |      |        |            | SPECIFIED LOADS:       |                  |  |                   |                               |     |  |
| CHORDS            | SIZE | LUMBER | DESCR. | FACTORED                                                                                             | MAXIMUM FACTORED |      | INPUT | REQRD                                                                                                                      |      | TOP    | CH.        | LL                     |                  |  |                   |                               |     |  |
| A - B             | 2x4  | DRY    | No.2   | SPF                                                                                                  | GROSS REACTION   |      | BRG   | BRG                                                                                                                        |      |        |            |                        | DL = 21.0        |  | PSF               |                               |     |  |
| B - D             | 2x4  | DRY    | No.2   | SPF                                                                                                  | JT               | VERT | HORZ  | DOWN                                                                                                                       | HORZ | UPLIFT | IN-SX      | IN-SX                  | DL = 6.0         |  | PSF               |                               |     |  |
| E - D             | 2x4  | DRY    | No.2   | SPF                                                                                                  | E                | 398  | 0     | 398                                                                                                                        | 0    | 0      | MECHANICAL |                        | BOT CH. LL = 0.0 |  | PSF               |                               |     |  |
| G - A             | 2x4  | DRY    | No.2   | SPF                                                                                                  | G                | 398  | 0     | 398                                                                                                                        | 0    | 0      | MECHANICAL |                        | DL = 7.4         |  | PSF               |                               |     |  |
| G - E             | 2x4  | DRY    | No.2   | SPF                                                                                                  |                  |      |       |                                                                                                                            |      |        |            |                        |                  |  | TOTAL LOAD = 34.4 |                               | PSF |  |
| ALL WEBS EXCEPT   |      |        |        | 2x3                                                                                                  | DRY              | No.2 | SPF   | A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT E, G. MINIMUM BEARING LENGTH AT JOINT E = 1-8, JOINT G = 1-8. |      |        |            |                        |                  |  |                   | <b>SPACING = 24.0 IN. C/C</b> |     |  |

**PLATES (table is in inches)**

| JT | TYPE    | PLATES | W   | LEN | Y    | X    |
|----|---------|--------|-----|-----|------|------|
| A  | TMV+p   | MT20   | 2.0 | 4.0 |      |      |
| B  | TTWW-h  | MT20   | 4.0 | 9.0 | 1.25 | 5.50 |
| C  | TMW+w   | MT20   | 2.0 | 4.0 |      |      |
| D  | TMVW-t  | MT20   | 3.0 | 4.0 |      |      |
| E  | BMV1+p  | MT20   | 2.0 | 4.0 |      |      |
| F  | BMWWW-t | MT20   | 4.0 | 6.0 |      |      |
| G  | BMVW1-t | MT20   | 3.0 | 4.0 |      |      |

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

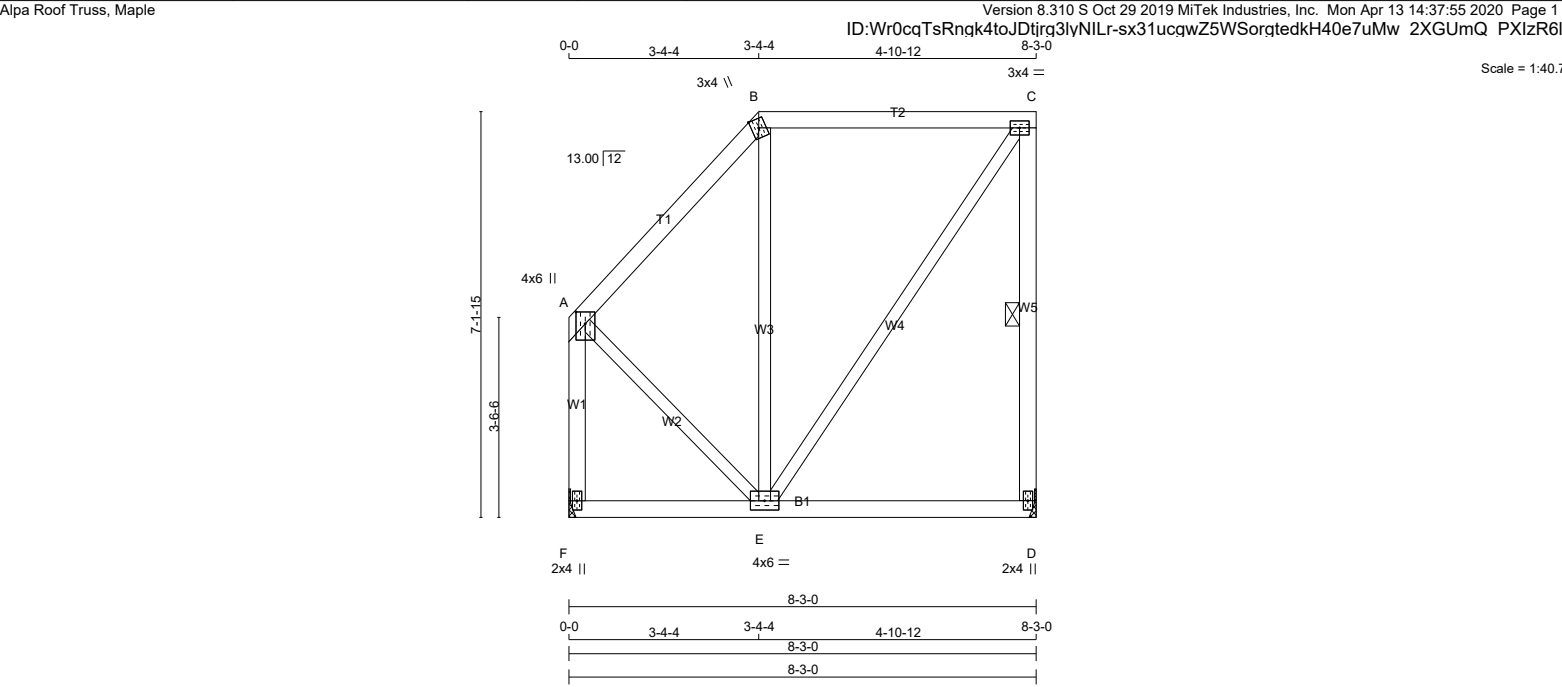


|                           |  |  |  |  |  |  |  |  |  |                                                                                                                            |  |  |  |  |  |  |  |  |  |                                                                                                    |  |  |  |  |  |  |  |  |  |
|---------------------------|--|--|--|--|--|--|--|--|--|----------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|----------------------------------------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|
| N. L. G. A. RULES         |  |  |  |  |  |  |  |  |  | DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER                              |  |  |  |  |  |  |  |  |  | DESIGN NOTES                                                                                       |  |  |  |  |  |  |  |  |  |
| CHORDS SIZE LUMBER DESCR. |  |  |  |  |  |  |  |  |  | BEARINGS                                                                                                                   |  |  |  |  |  |  |  |  |  | SPECIFIED LOADS:                                                                                   |  |  |  |  |  |  |  |  |  |
| A - B 2x4 DRY No.2 SPF    |  |  |  |  |  |  |  |  |  | FACTORED MAXIMUM FACTORED INPUT REQD                                                                                       |  |  |  |  |  |  |  |  |  | TOP CH. LL = 21.0 PSF                                                                              |  |  |  |  |  |  |  |  |  |
| B - D 2x4 DRY No.2 SPF    |  |  |  |  |  |  |  |  |  | GROSS REACTION GROSS REACTION BRG BRG                                                                                      |  |  |  |  |  |  |  |  |  | DL = 6.0 PSF                                                                                       |  |  |  |  |  |  |  |  |  |
| E - D 2x4 DRY No.2 SPF    |  |  |  |  |  |  |  |  |  | JT VERT HORZ DOWN HORZ UPLIFT IN-SX IN-SX                                                                                  |  |  |  |  |  |  |  |  |  | BOT CH. LL = 0.0 PSF                                                                               |  |  |  |  |  |  |  |  |  |
| G - A 2x4 DRY No.2 SPF    |  |  |  |  |  |  |  |  |  | E 398 0 398 0 0 MECHANICAL                                                                                                 |  |  |  |  |  |  |  |  |  | DL = 7.4 PSF                                                                                       |  |  |  |  |  |  |  |  |  |
| G - E 2x4 DRY No.2 SPF    |  |  |  |  |  |  |  |  |  | G 398 0 398 0 0 MECHANICAL                                                                                                 |  |  |  |  |  |  |  |  |  | TOTAL LOAD = 34.4 PSF                                                                              |  |  |  |  |  |  |  |  |  |
| ALL WEBS 2x3 DRY No.2 SPF |  |  |  |  |  |  |  |  |  | A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT E, G. MINIMUM BEARING LENGTH AT JOINT E = 1-8, JOINT G = 1-8. |  |  |  |  |  |  |  |  |  | SPACING = 24.0 IN. C/C                                                                             |  |  |  |  |  |  |  |  |  |
| EXCEPT                    |  |  |  |  |  |  |  |  |  |                                                                                                                            |  |  |  |  |  |  |  |  |  |                                                                                                    |  |  |  |  |  |  |  |  |  |
| DRY: SEASONED LUMBER.     |  |  |  |  |  |  |  |  |  |                                                                                                                            |  |  |  |  |  |  |  |  |  | LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM                                        |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                                                            |  |  |  |  |  |  |  |  |  | THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015         |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                                                            |  |  |  |  |  |  |  |  |  | THIS DESIGN COMPLIES WITH:                                                                         |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                                                            |  |  |  |  |  |  |  |  |  | - PART 9 OF BCBC 2018 , ABC 2019                                                                   |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                                                            |  |  |  |  |  |  |  |  |  | - PART 9 OF OBC 2012 (2019 AMENDMENT)                                                              |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                                                            |  |  |  |  |  |  |  |  |  | - CSA 086-14                                                                                       |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                                                            |  |  |  |  |  |  |  |  |  | - TPIC 2014                                                                                        |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                                                            |  |  |  |  |  |  |  |  |  | (55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                                                            |  |  |  |  |  |  |  |  |  | ALLOWABLE DEFL.(LL)= L/360 (0.27")                                                                 |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                                                            |  |  |  |  |  |  |  |  |  | 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=0.17/1.00 (C-D:1) , BC=0.09/1.00 (F-G:4) ,                                                 |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                                                            |  |  |  |  |  |  |  |  |  | WB=0.10/1.00 (C-F:1) , SSI=0.14/1.00 (C-D:1)                                                       |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                                                            |  |  |  |  |  |  |  |  |  | DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10                                                             |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                                                            |  |  |  |  |  |  |  |  |  | COMP=1.10 SHEAR=1.10 TENS= 1.10                                                                    |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                                                            |  |  |  |  |  |  |  |  |  | COMPANION LIVE LOAD FACTOR = 1.00                                                                  |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                                                            |  |  |  |  |  |  |  |  |  | AUTOSOLVE RIGHT HEEL ONLY                                                                          |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                                                            |  |  |  |  |  |  |  |  |  | TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT . |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                                                            |  |  |  |  |  |  |  |  |  | NAIL VALUES                                                                                        |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                                                            |  |  |  |  |  |  |  |  |  | PLATE GRIP(DRY) SHEAR SECTION                                                                      |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                                                            |  |  |  |  |  |  |  |  |  | (PSI) (PLI) (PLI)                                                                                  |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                                                            |  |  |  |  |  |  |  |  |  | MAX MIN MAX MIN MAX MIN                                                                            |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                                                            |  |  |  |  |  |  |  |  |  | MT20 650 371 1747 788 1987 1873                                                                    |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                                                            |  |  |  |  |  |  |  |  |  | PLATE PLACEMENT TOL. = 0.250 inches                                                                |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                                                            |  |  |  |  |  |  |  |  |  | PLATE ROTATION TOL. = 5.0 Deg.                                                                     |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                                                            |  |  |  |  |  |  |  |  |  | JSI GRIP= 0.54 (D) (INPUT = 0.90 )                                                                 |  |  |  |  |  |  |  |  |  |
|                           |  |  |  |  |  |  |  |  |  |                                                                                                                            |  |  |  |  |  |  |  |  |  | JSI METAL= 0.11 (D) (INPUT = 1.00 )                                                                |  |  |  |  |  |  |  |  |  |

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



|          |            |          |     |                      |           |
|----------|------------|----------|-----|----------------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.  |
| 318797   | H43        | 1        | 1   | TRUSS DESC. JT 45147 | E20041065 |



|                       |      |     |        |                                                                                                      |                                                                                                                            |                |          |                        |                       |     |     |
|-----------------------|------|-----|--------|------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|----------------|----------|------------------------|-----------------------|-----|-----|
| <b>LUMBER</b>         |      |     |        | <b>DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER</b> |                                                                                                                            |                |          | <b>DESIGN CRITERIA</b> |                       |     |     |
| N. L. G. A. RULES     |      |     |        | <b>BEARINGS</b>                                                                                      |                                                                                                                            |                |          | SPECIFIED LOADS:       |                       |     |     |
| CHORDS                | SIZE | DRY | LUMBER | DESCR.                                                                                               | FACTORED                                                                                                                   | MAXIMUM        | FACTORED | INPUT                  | REQD                  | TOP | CH. |
| A - B                 | 2x4  | DRY | No.2   | SPF                                                                                                  | GROSS REACTION                                                                                                             | GROSS REACTION | BRG      | BRG                    | BRG                   | LL  | LL  |
| B - C                 | 2x4  | DRY | No.2   | SPF                                                                                                  | VERT                                                                                                                       | HORZ           | DOWN     | HORZ                   | UPLIFT                | DL  | DL  |
| D - C                 | 2x4  | DRY | No.2   | SPF                                                                                                  | JT                                                                                                                         | 398            | 0        | 398                    | 0                     | 0   | 0   |
| F - A                 | 2x4  | DRY | No.2   | SPF                                                                                                  | D                                                                                                                          | 398            | 0        | 398                    | 0                     | 0   | 0   |
| F - D                 | 2x4  | DRY | No.2   | SPF                                                                                                  | F                                                                                                                          | 398            | 0        | 398                    | 0                     | 0   | 0   |
| ALL WEBS 2x3 DRY No.2 |      |     |        | SPF                                                                                                  | A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT D, F. MINIMUM BEARING LENGTH AT JOINT D = 1-8, JOINT F = 1-8. |                |          |                        | TOTAL LOAD = 34.4 PSF |     |     |
| EXCEPT                |      |     |        |                                                                                                      |                                                                                                                            |                |          |                        | TOTAL WEIGHT = 47 lb  |     |     |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE   | PLATES | W   | LEN | Y    | X    |
|----|--------|--------|-----|-----|------|------|
| A  | TMVW+p | MT20   | 4.0 | 6.0 | 2.50 | 2.00 |
| B  | TTW+m  | MT20   | 3.0 | 4.0 | Edge |      |
| C  | TMVW-t | MT20   | 3.0 | 4.0 |      |      |
| D  | BMV1+p | MT20   | 2.0 | 4.0 |      |      |
| E  | BMWW-t | MT20   | 4.0 | 6.0 |      |      |
| F  | BMV1+p | MT20   | 2.0 | 4.0 |      |      |

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

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



**UNFACTORED REACTIONS**

| JT | 1ST LCASE | MAX./MIN. COMPONENT REACTIONS | SNOW  | LIVE  | PERM.LIVE | WIND  | DEAD    | SOIL  |
|----|-----------|-------------------------------|-------|-------|-----------|-------|---------|-------|
| D  | 284       | 173 / 0                       | 0 / 0 | 0 / 0 | 0 / 0     | 0 / 0 | 111 / 0 | 0 / 0 |
| F  | 284       | 173 / 0                       | 0 / 0 | 0 / 0 | 0 / 0     | 0 / 0 | 111 / 0 | 0 / 0 |

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

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

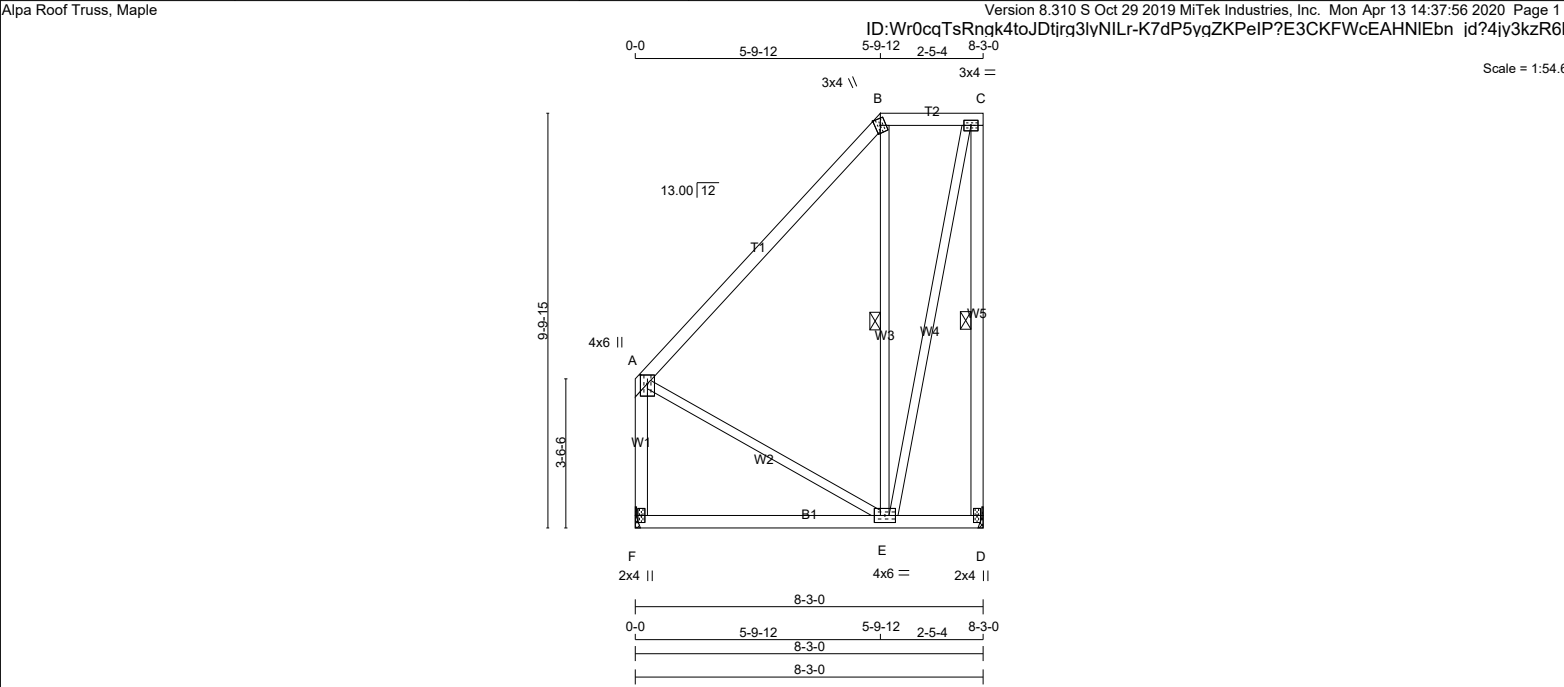
1 LATERAL BRACE(S) AT 1/2 LENGTH OF C-D.

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

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

| CHORDS |                           |                           |               | WEBS  |                           |               |  |
|--------|---------------------------|---------------------------|---------------|-------|---------------------------|---------------|--|
| MEMB.  | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX. CSI (LC) | MEMB. | MAX. FACTORED FORCE (LBS) | MAX. CSI (LC) |  |
| FR-TO  |                           | FROM TO                   |               | FR-TO |                           |               |  |
| A-B    | -182 / 0                  | -78.0 -78.0               | 0.15 (1)      | E-B   | -189 / 0                  | 0.17 (1)      |  |
| B-C    | -120 / 0                  | -78.0 -78.0               | 0.32 (1)      | E-C   | 0 / 209                   | 0.05 (1)      |  |
| D-C    | -362 / 0                  | 0.0 0.0                   | 0.08 (1)      | A-E   | 0 / 166                   | 0.04 (1)      |  |
| F-A    | -377 / 0                  | 0.0 0.0                   | 0.08 (1)      |       |                           |               |  |
| F-E    | 0 / 0                     | -18.5 -18.5               | 0.10 (4)      |       |                           |               |  |
| E-D    | 0 / 0                     | -18.5 -18.5               | 0.10 (4)      |       |                           |               |  |

|          |            |          |     |                      |           |
|----------|------------|----------|-----|----------------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.  |
| 318797   | H44        | 1        | 1   | TRUSS DESC. JT 45147 | E20041066 |



| <div>LUMBER</div> <div>N. L. G. A. RULES</div> <table><tr><th>CHORDS</th><th>SIZE</th><th colspan="3">LUMBER</th><th>DESCR.</th></tr><tr><td>A - B</td><td>2x4</td><td>DRY</td><td>No.2</td><td>SPF</td></tr><tr><td>B - C</td><td>2x4</td><td>DRY</td><td>No.2</td><td>SPF</td></tr><tr><td>D - C</td><td>2x4</td><td>DRY</td><td>No.2</td><td>SPF</td></tr><tr><td>F - A</td><td>2x4</td><td>DRY</td><td>No.2</td><td>SPF</td></tr><tr><td>F - D</td><td>2x4</td><td>DRY</td><td>No.2</td><td>SPF</td></tr></table> <div>ALL WEBS 2x3 DRY No.2<br/>EXCEPT</div> <div>DRY: SEASONED LUMBER.</div> <div>PLATES (table is in inches)</div> <table><tr><th>JT</th><th>TYPE</th><th>PLATES</th><th>W</th><th>LEN</th><th>Y</th><th>X</th></tr><tr><td>A</td><td>TMVW+p</td><td>MT20</td><td>4.0</td><td>6.0</td><td>2.50</td><td>2.00</td></tr><tr><td>B</td><td>TTW+m</td><td>MT20</td><td>3.0</td><td>4.0</td><td>Edge</td><td></td></tr><tr><td>C</td><td>TMVW-t</td><td>MT20</td><td>3.0</td><td>4.0</td><td></td><td></td></tr><tr><td>D</td><td>BMV1+p</td><td>MT20</td><td>2.0</td><td>4.0</td><td></td><td></td></tr><tr><td>E</td><td>BMWWW-t</td><td>MT20</td><td>4.0</td><td>6.0</td><td></td><td></td></tr><tr><td>F</td><td>BMV1+p</td><td>MT20</td><td>2.0</td><td>4.0</td><td></td><td></td></tr></table> <div>Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.</div> |                           |                               |                   |                    |        |                           |               |  |  | CHORDS | SIZE | LUMBER |  |  | DESCR. | A - B | 2x4 | DRY | No.2 | SPF | B - C | 2x4 | DRY | No.2 | SPF | D - C | 2x4 | DRY | No.2 | SPF | F - A | 2x4 | DRY | No.2 | SPF | F - D | 2x4 | DRY | No.2 | SPF | JT | TYPE | PLATES | W | LEN | Y | X | A | TMVW+p | MT20 | 4.0 | 6.0 | 2.50 | 2.00 | B | TTW+m | MT20 | 3.0 | 4.0 | Edge |  | C | TMVW-t | MT20 | 3.0 | 4.0 |  |  | D | BMV1+p | MT20 | 2.0 | 4.0 |  |  | E | BMWWW-t | MT20 | 4.0 | 6.0 |  |  | F | BMV1+p | MT20 | 2.0 | 4.0 |  |  | <div>DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER</div> <div>BEARINGS</div> <table><tr><th></th><th colspan="2">FACTORED</th><th colspan="2">MAXIMUM FACTORED</th><th>INPUT</th><th>REQRD</th></tr><tr><th></th><th colspan="2">GROSS REACTION</th><th colspan="2">GROSS REACTION</th><th>BRG</th><th>BRG</th></tr><tr><th>JT</th><th>VERT</th><th>HORZ</th><th>DOWN</th><th>HORZ</th><th>UPLIFT</th><th>IN-SX</th></tr><tr><td>D</td><td>398</td><td>0</td><td>398</td><td>0</td><td>0</td><td>MECHANICAL</td></tr><tr><td>F</td><td>398</td><td>0</td><td>398</td><td>0</td><td>0</td><td>MECHANICAL</td></tr></table> <div>A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT D, F. MINIMUM BEARING LENGTH AT JOINT D = 1-8, JOINT F = 1-8.</div> <div>UNFACTORED REACTIONS</div> <table><tr><th colspan="2">1ST LCASE</th><th colspan="6">MAX./MIN. COMPONENT REACTIONS</th></tr><tr><th>JT</th><th>COMBINED</th><th>SNOW</th><th>LIVE</th><th>PERM.LIVE</th><th>WIND</th><th>DEAD</th><th>SOIL</th></tr><tr><td>D</td><td>284</td><td>173 / 0</td><td>0 / 0</td><td>0 / 0</td><td>0 / 0</td><td>111 / 0</td><td>0 / 0</td></tr><tr><td>F</td><td>284</td><td>173 / 0</td><td>0 / 0</td><td>0 / 0</td><td>0 / 0</td><td>111 / 0</td><td>0 / 0</td></tr></table> <div>BRACING</div> <div>TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.</div> <div>MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.</div> <div>ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.</div> <div>1 LATERAL BRACE(S) AT 1/2 LENGTH OF C-D, B-E.</div> <div>END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW</div> <div>LOADING</div> <div>TOTAL LOAD CASES: (4)</div> <table><tr><th colspan="5">CHORDS</th><th colspan="5">WEBS</th></tr><tr><th>MEMB.</th><th>MAX. FACTORED FORCE (LBS)</th><th>FACTORED VERT. LOAD (PLF)</th><th>LC1 MAX. CSI (LC)</th><th>MAX. UNBRAC LENGTH</th><th>MEMB.</th><th>MAX. FACTORED FORCE (LBS)</th><th>MAX. CSI (LC)</th><th></th></tr><tr><td>FR-TO</td><td></td><td>FROM TO</td><td></td><td></td><td>FR-TO</td><td></td><td></td><td></td></tr><tr><td>A- B</td><td>-114 / 0</td><td>-78.0 -78.0</td><td>0.34 (1)</td><td>6.25</td><td>E- B</td><td>-239 / 0</td><td>0.16 (1)</td><td></td></tr><tr><td>B- C</td><td>-75 / 0</td><td>-78.0 -78.0</td><td>0.06 (1)</td><td>6.25</td><td>E- C</td><td>0 / 314</td><td>0.07 (1)</td><td></td></tr><tr><td>D- C</td><td>-399 / 0</td><td>0.0 0.0</td><td>0.19 (1)</td><td>6.25</td><td>A- E</td><td>0 / 88</td><td>0.02 (1)</td><td></td></tr><tr><td>F- A</td><td>-352 / 0</td><td>0.0 0.0</td><td>0.07 (1)</td><td>7.81</td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>F- E</td><td>0 / 0</td><td>-18.5 -18.5</td><td>0.14 (4)</td><td>10.00</td><td></td><td></td><td></td><td></td></tr><tr><td>E- D</td><td>0 / 0</td><td>-18.5 -18.5</td><td>0.14 (4)</td><td>10.00</td><td></td><td></td><td></td><td></td></tr></table> |  |  |  |  |  |  |  |  |  |  | FACTORED |  | MAXIMUM FACTORED |  | INPUT | REQRD |  | GROSS REACTION |  | GROSS REACTION |  | BRG | BRG | JT | VERT | HORZ | DOWN | HORZ | UPLIFT | IN-SX | D | 398 | 0 | 398 | 0 | 0 | MECHANICAL | F | 398 | 0 | 398 | 0 | 0 | MECHANICAL | 1ST LCASE |  | MAX./MIN. COMPONENT REACTIONS |  |  |  |  |  | JT | COMBINED | SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL | D | 284 | 173 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 111 / 0 | 0 / 0 | F | 284 | 173 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 111 / 0 | 0 / 0 | 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 |  |  |  | A- B | -114 / 0 | -78.0 -78.0 | 0.34 (1) | 6.25 | E- B | -239 / 0 | 0.16 (1) |  | B- C | -75 / 0 | -78.0 -78.0 | 0.06 (1) | 6.25 | E- C | 0 / 314 | 0.07 (1) |  | D- C | -399 / 0 | 0.0 0.0 | 0.19 (1) | 6.25 | A- E | 0 / 88 | 0.02 (1) |  | F- A | -352 / 0 | 0.0 0.0 | 0.07 (1) | 7.81 |  |  |  |  |  |  |  |  |  |  |  |  |  | F- E | 0 / 0 | -18.5 -18.5 | 0.14 (4) | 10.00 |  |  |  |  | E- D | 0 / 0 | -18.5 -18.5 | 0.14 (4) | 10.00 |  |  |  |  | <div>DESIGN CRITERIA</div> <div>SPECIFIED LOADS:</div> <table><tr><td>TOP CH.</td><td>LL =</td><td>21.0</td><td>PSF</td></tr><tr><td></td><td>DL =</td><td>6.0</td><td>PSF</td></tr><tr><td>BOT CH.</td><td>LL =</td><td>0.0</td><td>PSF</td></tr><tr><td></td><td>DL =</td><td>7.4</td><td>PSF</td></tr><tr><td>TOTAL LOAD</td><td>=</td><td>34.4</td><td>PSF</td></tr></table> <div>SPACING = 24.0 IN./C</div> <div>LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM</div> <div>THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015</div> <div>THIS DESIGN COMPLIES WITH:</div> <div>- PART 9 OF BCBC 2018 , ABC 2019</div> <div>- PART 9 OF OBC 2012 (2019 AMENDMENT)</div> <div>- CSA 086-14</div> <div>- TPIC 2014</div> <div>(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD</div> <div>ALLOWABLE DEFL.(LL)= L/360 (0.27")</div> <div>CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")</div> <div>ALLOWABLE DEFL.(TL)= L/360 (0.27")</div> <div>CALCULATED VERT. DEFL.(TL) = L/ 999 (0.04")</div> <div>CSI: TC=0.34/1.00 (A-B:1) , BC=0.14/1.00 (E-F:4) , WB=0.16/1.00 (B-E:1) , SSI=0.12/1.00 (A-B:1)</div> <div>DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10</div> <div>COMP=1.10 SHEAR=1.10 TENS= 1.10</div> <div>COMPANION LIVE LOAD FACTOR = 1.00</div> <div>TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .</div> <div>NAIL VALUES</div> <table><tr><th>PLATE</th><th>GRIP(DRY)</th><th>SHEAR</th><th>SECTION</th></tr><tr><td></td><td>(PSI)</td><td>(PLI)</td><td>(PLI)</td></tr><tr><td></td><td>MAX MIN</td><td>MAX MIN</td><td>MAX MIN</td></tr><tr><td>MT20</td><td>650 371</td><td>1747 788</td><td>1987 1873</td></tr></table> <div>PLATE PLACEMENT TOL. = 0.250 inches</div> <div>PLATE ROTATION TOL. = 5.0 Deg.</div> <div>JSI GRIP= 0.64 (C) (INPUT = 0.90 )</div> <div>JSI METAL= 0.10 (C) (INPUT = 1.00 )</div> |  |  |  |  |  |  |  |  |  | TOP CH. | LL = | 21.0 | PSF |  | DL = | 6.0 | PSF | BOT CH. | LL = | 0.0 | PSF |  | DL = | 7.4 | PSF | TOTAL LOAD | = | 34.4 | PSF | PLATE | GRIP(DRY) | SHEAR | SECTION |  | (PSI) | (PLI) | (PLI) |  | MAX MIN | MAX MIN | MAX MIN | MT20 | 650 371 | 1747 788 | 1987 1873 |
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| CHORDS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | SIZE                      | LUMBER                        |                   |                    | DESCR. |                           |               |  |  |        |      |        |  |  |        |       |     |     |      |     |       |     |     |      |     |       |     |     |      |     |       |     |     |      |     |       |     |     |      |     |    |      |        |   |     |   |   |   |        |      |     |     |      |      |   |       |      |     |     |      |  |   |        |      |     |     |  |  |   |        |      |     |     |  |  |   |         |      |     |     |  |  |   |        |      |     |     |  |  |        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| A - B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  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| B - C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  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| D - C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  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| F - A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  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| F - D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  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| A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | TMVW+p                    | MT20                          | 4.0               | 6.0                | 2.50   | 2.00                      |               |  |  |        |      |        |  |  |        |       |     |     |      |     |       |     |     |      |     |       |     |     |      |     |       |     |     |      |     |       |     |     |      |     |    |      |        |   |     |   |   |   |        |      |     |     |      |      |   |       |      |     |     |      |  |   |        |      |     |     |  |  |   |        |      |     |     |  |  |   |         |      |     |     |  |  |   |        |      |     |     |  |  |        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| D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | BMV1+p                    | MT20                          | 2.0               | 4.0                |        |                           |               |  |  |        |      |        |  |  |        |       |     |     |      |     |       |     |     |      |     |       |     |     |      |     |       |     |     |      |     |       |     |     |      |     |    |      |        |   |     |   |   |   |        |      |     |     |      |      |   |       |      |     |     |      |  |   |        |      |     |     |  |  |   |        |      |     |     |  |  |   |         |      |     |     |  |  |   |        |      |     |     |  |  |        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| F                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | BMV1+p                    | MT20                          | 2.0               | 4.0                |        |                           |               |  |  |        |      |        |  |  |        |       |     |     |      |     |       |     |     |      |     |       |     |     |      |     |       |     |     |      |     |       |     |     |      |     |    |      |        |   |     |   |   |   |        |      |     |     |      |      |   |       |      |     |     |      |  |   |        |      |     |     |  |  |   |        |      |     |     |  |  |   |         |      |     |     |  |  |   |        |      |     |     |  |  |        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| CHORDS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 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| MEMB.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF)     | LC1 MAX. CSI (LC) | MAX. UNBRAC LENGTH | MEMB.  | MAX. FACTORED FORCE (LBS) | MAX. CSI (LC) |  |  |        |      |        |  |  |        |       |     |     |      |     |       |     |     |      |     |       |     |     |      |     |       |     |     |      |     |       |     |     |      |     |    |      |        |   |     |   |   |   |        |      |     |     |      |      |   |       |      |     |     |      |  |   |        |      |     |     |  |  |   |        |      |     |     |  |  |   |         |      |     |     |  |  |   |        |      |     |     |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     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      |         |       |   |     |         |       |       |       |         |       |        |  |  |  |  |      |  |  |  |  |       |                           |                           |                   |                    |       |                           |               |  |       |  |         |  |  |       |  |  |  |      |          |             |          |      |      |          |          |  |      |         |             |          |      |      |         |          |  |      |          |         |          |      |      |        |          |  |      |          |         |          |      |  |  |  |  |  |  |  |  |  |  |  |  |  |      |       |             |          |       |  |  |  |  |      |       |             |          |       |  |  |  |  |                                                                                                                                                                                                                                   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| FR-TO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  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| A- B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | -114 / 0                  | -78.0 -78.0                   | 0.34 (1)          | 6.25               | E- B   | -239 / 0                  | 0.16 (1)      |  |  |        |      |        |  |  |        |       |     |     |      |     |       |     |     |      |     |       |     |     |      |     |       |     |     |      |     |       |     |     |      |     |    |      |        |   |     |   |   |   |        |      |     |     |      |      |   |       |      |     |     |      |  |   |        |      |     |     |  |  |   |        |      |     |     |  |  |   |         |      |     |     |  |  |   |        |      |     |     |  |  |        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| B- C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | -75 / 0                   | -78.0 -78.0                   | 0.06 (1)          | 6.25               | E- C   | 0 / 314                   | 0.07 (1)      |  |  |        |      |        |  |  |        |       |     |     |      |     |       |     |     |      |     |       |     |     |      |     |       |     |     |      |     |       |     |     |      |     |    |      |        |   |     |   |   |   |        |      |     |     |      |      |   |       |      |     |     |      |  |   |        |      |     |     |  |  |   |        |      |     |     |  |  |   |         |      |     |     |  |  |   |        |      |     |     |  |  |        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| D- C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | -399 / 0                  | 0.0 0.0                       | 0.19 (1)          | 6.25               | A- E   | 0 / 88                    | 0.02 (1)      |  |  |        |      |        |  |  |        |       |     |     |      |     |       |     |     |      |     |       |     |     |      |     |       |     |     |      |     |       |     |     |      |     |    |      |        |   |     |   |   |   |        |      |     |     |      |      |   |       |      |     |     |      |  |   |        |      |     |     |  |  |   |        |      |     |     |  |  |   |         |      |     |     |  |  |   |        |      |     |     |  |  |        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| F- A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | -352 / 0                  | 0.0 0.0                       | 0.07 (1)          | 7.81               |        |                           |               |  |  |        |      |        |  |  |        |       |     |     |      |     |       |     |     |      |     |       |     |     |      |     |       |     |     |      |     |       |     |     |      |     |    |      |        |   |     |   |   |   |        |      |     |     |      |      |   |       |      |     |     |      |  |   |        |      |     |     |  |  |   |        |      |     |     |  |  |   |         |      |     |     |  |  |   |        |      |     |     |  |  |        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| F- E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0 / 0                     | -18.5 -18.5                   | 0.14 (4)          | 10.00              |        |                           |               |  |  |        |      |        |  |  |        |       |     |     |      |     |       |     |     |      |     |       |     |     |      |     |       |     |     |      |     |       |     |     |      |     |    |      |        |   |     |   |   |   |        |      |     |     |      |      |   |       |      |     |     |      |  |   |        |      |     |     |  |  |   |        |      |     |     |  |  |   |         |      |     |     |  |  |   |        |      |     |     |  |  |        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| E- D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0 / 0                     | -18.5 -18.5                   | 0.14 (4)          | 10.00              |        |                           |               |  |  |        |      |        |  |  |        |       |     |     |      |     |       |     |     |      |     |       |     |     |      |     |       |     |     |      |     |       |     |     |      |     |    |      |        |   |     |   |   |   |        |      |     |     |      |      |   |       |      |     |     |      |  |   |        |      |     |     |  |  |   |        |      |     |     |  |  |   |         |      |     |     |  |  |   |        |      |     |     |  |  |        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| TOP CH.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                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| BOT CH.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                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| TOTAL LOAD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             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| MT20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 650 371                   | 1747 788                      | 1987 1873         |                    |        |                           |               |  |  |        |      |        |  |  |        |       |     |     |      |     |       |     |     |      |     |       |     |     |      |     |       |     |     |      |     |       |     |     |      |     |    |      |        |   |     |   |   |   |        |      |     |     |      |      |   |       |      |     |     |      |  |   |        |      |     |     |  |  |   |        |      |     |     |  |  |   |         |      |     |     |  |  |   |        |      |     |     |  |  |        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| <div>LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2</div> <div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                           |                               |                   |                    |        |                           |               |  |  |        |      |        |  |  |        |       |     |     |      |     |       |     |     |      |     |       |     |     |      |     |       |     |     |      |     |       |     |     |      |     |    |      |        |   |     |   |   |   |        |      |     |     |      |      |   |       |      |     |     |      |  |   |        |      |     |     |  |  |   |        |      |     |     |  |  |   |         |      |     |     |  |  |   |        |      |     |     |  |  |        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  |         |          |      |      |        |          |  |      |          |         |          |      |  |  |  |  |  |  |  |  |  |  |  |  |  |      |       |             |          |       |  |  |  |  |      |       |             |          |       |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               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Alpa Roof Truss, Maple

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TOTAL WEIGHT = 4 X 54 = 216 lb

| PLATES (table is in inches) |         |        |     |     |      |      |
|-----------------------------|---------|--------|-----|-----|------|------|
| JT                          | TYPE    | PLATES | W   | LEN | Y    | X    |
| A                           | TMV+p   | MT20   | 2.0 | 4.0 |      |      |
| B                           | TMVW-t  | MT20   | 3.0 | 4.0 | 1.50 | 1.75 |
| C                           | TMV+p   | MT20   | 2.0 | 4.0 |      |      |
| D                           | BMVW1-t | MT20   | 3.0 | 4.0 |      |      |
| E                           | BMVW1-t | MT20   | 3.0 | 4.0 |      |      |

|    | FACTORED<br>GROSS REACTION |      |      | MAXIMUM FACTORED<br>GROSS REACTION |        |            | INPUT<br>BRG | REQRD<br>BRG |
|----|----------------------------|------|------|------------------------------------|--------|------------|--------------|--------------|
| JT | VERT                       | HORZ | DOWN | HORZ                               | UPLIFT | IN-SX      | IN-SX        |              |
| E  | 398                        | 0    | 398  | 0                                  | 0      | MECHANICAL |              |              |
| D  | 398                        | 0    | 398  | 0                                  | 0      | MECHANICAL |              |              |

### UNFACTORED REACTIONS

| 1ST LCASE |          | MAX./MIN. COMPONENT REACTIONS |       |           |       |         |       |
|-----------|----------|-------------------------------|-------|-----------|-------|---------|-------|
| JT        | COMBINED | SNOW                          | LIVE  | PERM.LIVE | WIND  | DEAD    | SOIL  |
| E         | 284      | 173 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 111 / 0 | 0 / 0 |
| D         | 284      | 173 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 111 / 0 | 0 / 0 |

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

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

TOTAL LOAD CASES: (4)

| C H O R D S |               |                  |       |               | W E B S     |       |               |              |  |
|-------------|---------------|------------------|-------|---------------|-------------|-------|---------------|--------------|--|
| MEMB.       | MAX. FACTORED | FACTORED         |       |               | MAX. UNBRAC | MEMB. | MAX. FACTORED | MAX CSI (LC) |  |
|             | FORCE (LBS)   | VERT. LOAD (PLF) | LC1   | MAX. CSI (LC) |             |       | FORCE (LBS)   |              |  |
| FR-TO       |               | FROM             | TO    |               | LENGTH      | FR-TO |               |              |  |
| E-A         | -121 / 0      | 0.0              | 0.0   | 0.03 (1)      | 7.81        | E-B   | -228 / 0      | 0.11 (1)     |  |
| A-B         | 0 / 29        | -78.0            | -78.0 | 0.23 (1)      | 10.00       | B-D   | -228 / 0      | 0.11 (1)     |  |
| B-C         | -29 / 0       | -78.0            | -78.0 | 0.17 (1)      | 6.25        |       |               |              |  |
| D-C         | -121 / 0      | 0.0              | 0.0   | 0.10 (1)      | 6.25        |       |               |              |  |
| E-D         | 0 / 108       | -18.5            | -18.5 | 0.37 (4)      | 10.00       |       |               |              |  |

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

THIS DESIGN COMPLIES WITH:

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

ALLOWABLE DEFL.(TL)= L/360 (0.27")  
CALCULATED VERT. DEFL.(TL) = L/474 (0.21")

CSI: TC=0.23/1.00 (A-B:1), BC=0.37/1.00 (D-E:4),  
WB=0.11/1.00 (B-D:1), SSI=0.11/1.00 (B-C:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

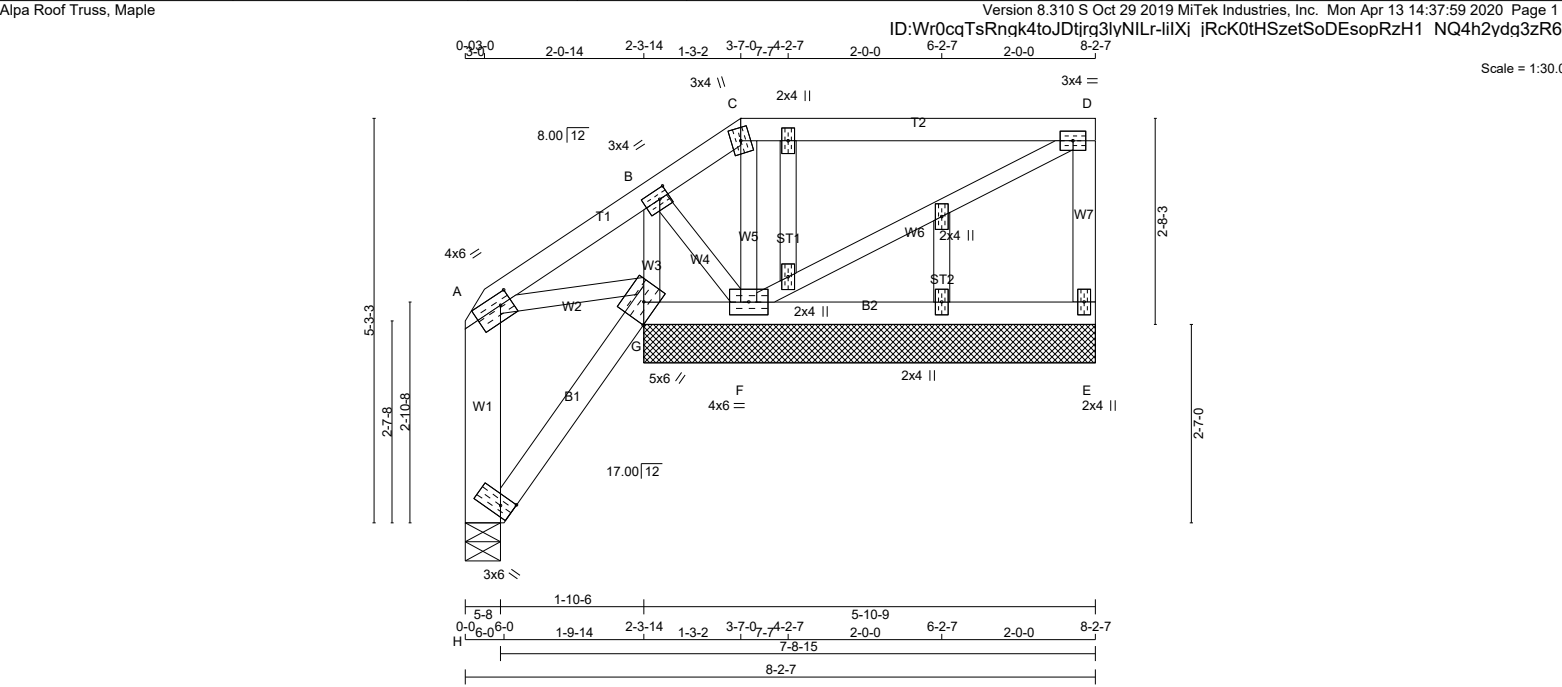
| PLATE | GRIP(DRY)<br>(PSI) |     | SHEAR<br>(PLI) |     | SECTION<br>(PLI) |      |
|-------|--------------------|-----|----------------|-----|------------------|------|
|       | MAX                | MIN | MAX            | MIN | MAX              | MIN  |
| MT20  | 650                | 371 | 1747           | 788 | 1987             | 1873 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.48 (B) (INPUT = 0.90 )  
JSI METAL= 0.10 (B) (INPUT = 1.00 )

|          |            |          |     |                      |           |
|----------|------------|----------|-----|----------------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.  |
| 318797   | H50A       | 1        | 1   | TRUSS DESC. JT 45147 | E20041068 |



| LUMBER            |   |        |     |      | DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER |        |          |      |      |                         |      |        |                                 |       | DESIGN CRITERIA |           |                                                            |                                                            | [M]                                               |                  |     |  |  |
|-------------------|---|--------|-----|------|-----------------------------------------------------------------------------------------------|--------|----------|------|------|-------------------------|------|--------|---------------------------------|-------|-----------------|-----------|------------------------------------------------------------|------------------------------------------------------------|---------------------------------------------------|------------------|-----|--|--|
| N. L. G. A. RULES |   | CHORDS |     | SIZE | LUMBER                                                                                        | DESCR. | BEARINGS |      |      | FACTORED GROSS REACTION |      |        | MAXIMUM FACTORED GROSS REACTION |       |                 | INPUT BRG |                                                            | REQRD BRG                                                  |                                                   | SPECIFIED LOADS: |     |  |  |
| A                 | - | C      | 2x4 | DRY  | No.2                                                                                          | SPF    | JT       | VERT | HORZ | DOWN                    | HORZ | UPLIFT | IN-SX                           | IN-SX | TOP             | CH.       | LL                                                         | =                                                          | 21.0                                              | PSF              |     |  |  |
| C                 | - | D      | 2x4 | DRY  | No.2                                                                                          | SPF    | E        | 208  | 0    | 208                     | 0    | 0      | 5-10-9                          | 3-15  | BOT             | CH.       | LL <td>=<td>0.0</td><td>PSF</td><td colspan="2"></td></td> | = <td>0.0</td> <td>PSF</td> <td colspan="2"></td>          | 0.0                                               | PSF              |     |  |  |
| E                 | - | D      | 2x4 | DRY  | No.2                                                                                          | SPF    | H        | 113  | 0    | 113                     | 0    | 0      | 5-8                             | 3-15  |                 |           |                                                            | DL <td>=<td>6.0</td><td>PSF</td><td colspan="2"></td></td> | = <td>6.0</td> <td>PSF</td> <td colspan="2"></td> | 6.0              | PSF |  |  |
| H                 | - | A      | 2x6 | DRY  | No.2                                                                                          | SPF    | G        | 145  | 0    | 145                     | 0    | 0      | 5-10-9                          | 3-15  |                 |           |                                                            | DL <td>=<td>7.4</td><td>PSF</td><td colspan="2"></td></td> | = <td>7.4</td> <td>PSF</td> <td colspan="2"></td> | 7.4              | PSF |  |  |
| H                 | - | G      | 2x4 | DRY  | No.2                                                                                          | SPF    | F        | 325  | 0    | 325                     | 0    | 0      | 5-10-9                          | 3-15  | TOTAL           | LOAD      | =                                                          | 34.4                                                       | PSF                                               |                  |     |  |  |
| G                 | - | E      | 2x4 | DRY  | No.2                                                                                          | SPF    |          |      |      |                         |      |        |                                 |       |                 |           |                                                            |                                                            |                                                   |                  |     |  |  |

|                                                                                                       |  |  |  |  |                      |          |         |       |                               |       |         |       |                                                                                                                                                              |
|-------------------------------------------------------------------------------------------------------|--|--|--|--|----------------------|----------|---------|-------|-------------------------------|-------|---------|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ALL GABLE WEBS<br>2x3 DRY No.2<br>SPF<br>DRY: SEASONED LUMBER.<br><br>GABLE STUDS SPACED AT 2-0-0 OC. |  |  |  |  | UNFACTORED REACTIONS |          |         |       |                               |       |         |       | LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM<br><br>THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBC 2015 |
|                                                                                                       |  |  |  |  | 1ST LCASE            |          |         |       | MAX./MIN. COMPONENT REACTIONS |       |         |       |                                                                                                                                                              |
|                                                                                                       |  |  |  |  | JT                   | COMBINED | SNOW    | LIVE  | PERM.LIVE                     | WIND  | DEAD    | SOIL  |                                                                                                                                                              |
|                                                                                                       |  |  |  |  | E                    | 148      | 94 / 0  | 0 / 0 | 0 / 0                         | 0 / 0 | 54 / 0  | 0 / 0 |                                                                                                                                                              |
|                                                                                                       |  |  |  |  | H                    | 80       | 49 / 0  | 0 / 0 | 0 / 0                         | 0 / 0 | 31 / 0  | 0 / 0 |                                                                                                                                                              |
|                                                                                                       |  |  |  |  | G                    | 101      | 74 / 0  | 0 / 0 | 0 / 0                         | 0 / 0 | 27 / 0  | 0 / 0 |                                                                                                                                                              |
|                                                                                                       |  |  |  |  | F                    | 235      | 127 / 0 | 0 / 0 | 0 / 0                         | 0 / 0 | 108 / 0 | 0 / 0 |                                                                                                                                                              |

| PLATES (table is in inches)                                       |          |        |     |     |      |      |
|-------------------------------------------------------------------|----------|--------|-----|-----|------|------|
| JT                                                                | TYPE     | PLATES | W   | LEN | Y    | X    |
| A                                                                 | TMVW-t   | MT20   | 4.0 | 6.0 | 1.75 | 1.75 |
| B                                                                 | TMWW-t   | MT20   | 3.0 | 4.0 | 1.50 | 1.50 |
| C                                                                 | TTW+m    | MT20   | 3.0 | 4.0 |      |      |
| D                                                                 | TMVW-t   | MT20   | 3.0 | 4.0 |      |      |
| E                                                                 | BMV1+p   | MT20   | 2.0 | 4.0 |      |      |
| F                                                                 | BMWWW1-t | MT20   | 4.0 | 6.0 |      |      |
| G                                                                 | BBWW1-h  | MT20   | 5.0 | 6.0 | Edge |      |
| H                                                                 | BVM1+l   | MT20   | 3.0 | 6.0 | Edge |      |
| I, J, K, L                                                        |          |        |     |     |      |      |
| I                                                                 | NP+w     | MT20   | 2.0 | 4.0 |      |      |
| Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD. |          |        |     |     |      |      |

| BRACING                                                                          |                           |                           |                                   |
|----------------------------------------------------------------------------------|---------------------------|---------------------------|-----------------------------------|
| TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.                       |                           |                           |                                   |
| MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT. OR RIGID CEILING DIRECTLY APPLIED. |                           |                           |                                   |
| ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.       |                           |                           |                                   |
| LOADING                                                                          |                           |                           |                                   |
| TOTAL LOAD CASES: (4)                                                            |                           |                           |                                   |
| CHORDS                                                                           |                           |                           |                                   |
| MEMB.                                                                            | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX. FACTORED VERT. LOAD LC1 (LC) |
| FR-TO                                                                            |                           | FROM                      | TO                                |
| A-B                                                                              | -18 / 0                   | -78.0                     | -78.0 0.06 (1)                    |
| B-C                                                                              | -19 / 0                   | -78.0                     | -78.0 0.06 (1)                    |
| C-D                                                                              | 0 / 10                    | -78.0                     | -78.0 0.28 (1)                    |
| E-D                                                                              | -175 / 0                  | 0.0                       | 0.0 0.02 (1)                      |
| H-A                                                                              | -91 / 0                   | 0.0                       | 0.0 0.01 (1)                      |
|                                                                                  |                           |                           |                                   |
| H-G                                                                              | 0 / 0                     | -18.5                     | -18.5 0.03 (4)                    |
| G-F                                                                              | 0 / 32                    | -18.5                     | -18.5 0.09 (4)                    |
| F-E                                                                              | 0 / 0                     | -18.5                     | -18.5 0.09 (4)                    |

| WEBS                                               |                           |                                   |               |
|----------------------------------------------------|---------------------------|-----------------------------------|---------------|
| MEMB.                                              | MAX. FACTORED FORCE (LBS) | MAX. FACTORED VERT. LOAD LC1 (LC) | UNBRAC LENGTH |
| FR-TO                                              |                           |                                   |               |
| A-G                                                | 0 / 24                    | 0.01 (1)                          |               |
| G-B                                                | -136 / 0                  | 0.02 (1)                          |               |
| B-F                                                | -56 / 0                   | 0.01 (1)                          |               |
| F-C                                                | -188 / 0                  | 0.03 (1)                          |               |
| F-D                                                | -11 / 0                   | 0.00 (1)                          |               |
|                                                    |                           |                                   |               |
| CSI: TC=0.28/1.00 (C-D:1) , BC=0.09/1.00 (F-G:4) , |                           |                                   |               |
| WB=0.03/1.00 (C-F:1) , SSI=0.14/1.00 (C-D:1)       |                           |                                   |               |
| DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10             |                           |                                   |               |
| COMP=1.10 SHEAR=1.10 TENS= 1.10                    |                           |                                   |               |
| COMPANION LIVE LOAD FACTOR = 1.00                  |                           |                                   |               |
| AUTOSOLVE RIGHT HEEL ONLY                          |                           |                                   |               |
| TRUSS PLATE MANUFACTURER IS NOT                    |                           |                                   |               |

- PART 9 OF OBC 2012 (2019 AMENDMENT)

- CSA 086-14

- TPIC 2014

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

ALLOWABLE DEFL.(LL)= L/360 (0.19")

CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")

ALLOWABLE DEFL.(TL)= L/360 (0.19")

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

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

Y. WIDYA  
100225448  
04/13/2020  
PROVINCE OF ONTARIO

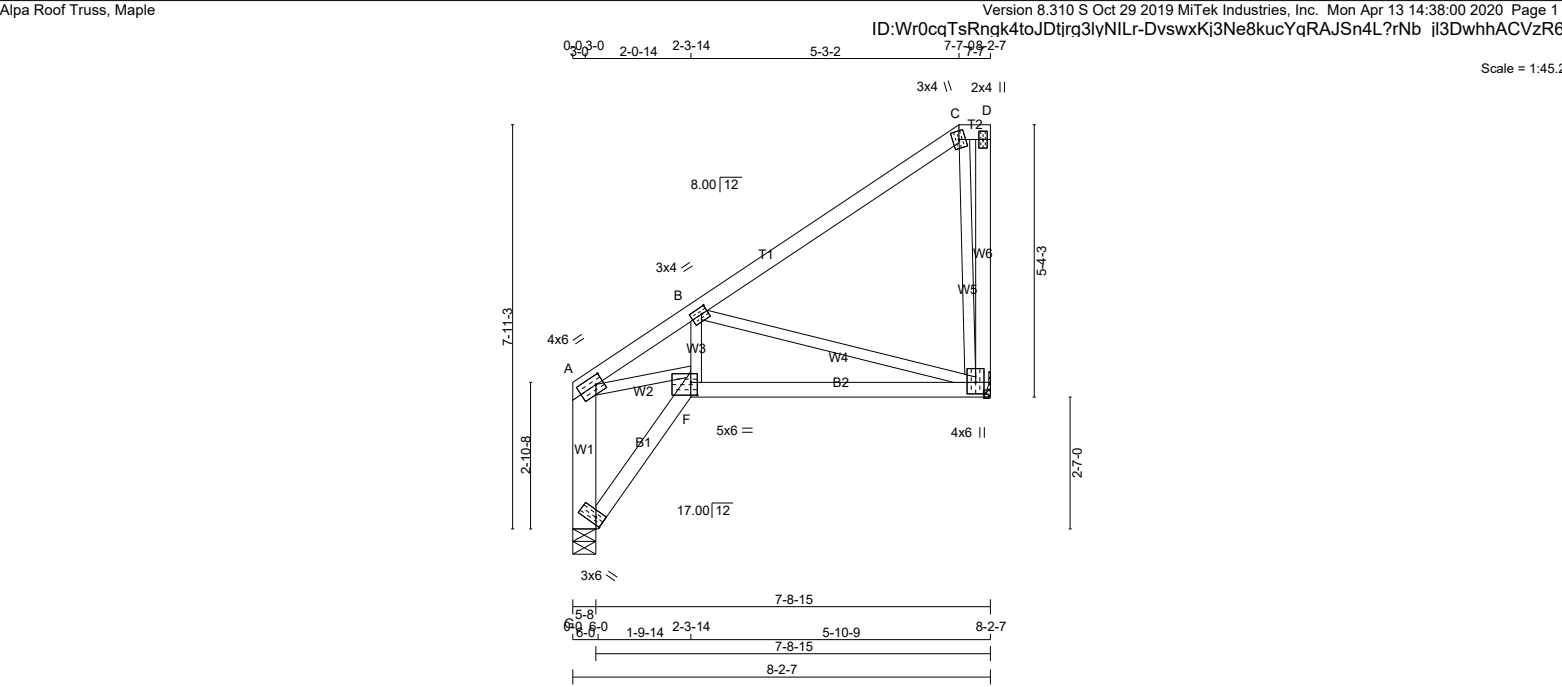
NAIL VALUES  
PLATE GRIP(DRY) SHEAR SECTION  
(PSI) (PLI) (PLI)  
MAX MIN MAX MIN MAX MIN  
MT20 650 371 1747 788 1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.33 (C) (INPUT = 0.90 )  
JSI METAL= 0.09 (C) (INPUT = 1.00 )

|          |            |          |     |                      |           |
|----------|------------|----------|-----|----------------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.  |
| 318797   | H50B       | 1        | 1   | TRUSS DESC. JT 45147 | E20041069 |



|                   |      |     |        |        |
|-------------------|------|-----|--------|--------|
| <b>LUMBER</b>     |      |     |        |        |
| N. L. G. A. RULES |      |     |        |        |
| CHORDS            | SIZE |     | LUMBER | DESCR. |
| A - C             | 2x4  | DRY | No.2   | SPF    |
| C - D             | 2x4  | DRY | No.2   | SPF    |
| E - D             | 2x4  | DRY | No.2   | SPF    |
| G - A             | 2x6  | DRY | No.2   | SPF    |
| G - F             | 2x4  | DRY | No.2   | SPF    |
| F - E             | 2x4  | DRY | No.2   | SPF    |
| ALL WEBS          | 2x3  | DRY | No.2   | SPF    |
| EXCEPT            |      |     |        |        |

DRY: SEASONED LUMBER.

|                                    |          |      |     |               |
|------------------------------------|----------|------|-----|---------------|
| <b>PLATES (table is in inches)</b> |          |      |     |               |
| JT TYPE                            | PLATES   | W    | LEN | Y X           |
| A                                  | TMVW-t   | MT20 | 4.0 | 6.0 2.00 1.75 |
| B                                  | TMWW-t   | MT20 | 3.0 | 4.0 1.50 1.50 |
| C                                  | TTW+m    | MT20 | 3.0 | 4.0           |
| D                                  | TMV+p    | MT20 | 2.0 | 4.0           |
| E                                  | BMVWW1+p | MT20 | 4.0 | 6.0 2.75 2.00 |
| F                                  | BBWW-l   | MT20 | 5.0 | 6.0 3.00 1.50 |
| G                                  | BVM1+l   | MT20 | 3.0 | 6.0 Edge      |

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

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



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

|                 |                |                |         |          |        |            |
|-----------------|----------------|----------------|---------|----------|--------|------------|
| <b>BEARINGS</b> |                | FACTORED       | MAXIMUM | FACTORED | INPUT  | REQRD      |
|                 | GROSS REACTION | GROSS REACTION | DOWN    | HORZ     | UPLIFT | IN-SX      |
| JT              | VERT           | HORZ           | DOWN    | HORZ     | UPLIFT | IN-SX      |
| E               | 396            | 0              | 396     | 0        | 0      | MECHANICAL |
| G               | 396            | 0              | 396     | 0        | 0      | 5-8        |

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

**UNFACTORED REACTIONS**

|           |          |                               |       |           |       |         |       |
|-----------|----------|-------------------------------|-------|-----------|-------|---------|-------|
| 1ST LCASE |          | MAX./MIN. COMPONENT REACTIONS |       |           |       |         |       |
| JT        | COMBINED | SNOW                          | LIVE  | PERM.LIVE | WIND  | DEAD    | SOIL  |
| E         | 282      | 172 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 110 / 0 | 0 / 0 |
| G         | 282      | 172 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 110 / 0 | 0 / 0 |

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

**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)

|               |                           |                           |                  |             |                           |              |          |
|---------------|---------------------------|---------------------------|------------------|-------------|---------------------------|--------------|----------|
| <b>CHORDS</b> |                           |                           |                  | <b>WEBS</b> |                           |              |          |
| MEMB.         | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | LC1 MAX CSI (LC) | MEMB.       | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |          |
| FR-TO         |                           | FROM TO                   |                  | FR-TO       |                           |              |          |
| A-B           | -631 / 0                  | -78.0                     | -78.0 0.19 (1)   | 6.25        | A-F                       | 0 / 559      | 0.13 (1) |
| B-C           | -45 / 0                   | -78.0                     | -78.0 0.24 (1)   | 6.25        | F-B                       | 0 / 101      | 0.03 (4) |
| C-D           | 0 / 0                     | -78.0                     | -78.0 0.01 (1)   | 10.00       | B-E                       | -550 / 0     | 0.33 (1) |
| E-D           | -24 / 0                   | 0.0                       | 0.0 0.01 (1)     | 7.81        | C-E                       | -178 / 0     | 0.07 (1) |
| G-A           | -374 / 0                  | 0.0                       | 0.0 0.04 (1)     | 7.81        |                           |              |          |
| G-F           | 0 / 0                     | -18.5                     | -18.5 0.03 (4)   | 10.00       |                           |              |          |
| F-E           | 0 / 552                   | -18.5                     | -18.5 0.23 (4)   | 10.00       |                           |              |          |

**DESIGN CRITERIA**

**SPECIFIED LOADS:**

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

**SPACING = 24.0 IN./C**

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

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

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

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

ALLOWABLE DEFL.(LL)= L/360 (0.27")  
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.01")  
ALLOWABLE DEFL.(TL)= L/360 (0.27")  
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.06")

CSI: TC=0.24/1.00 (B-C:1) , BC=0.23/1.00 (E-F:4) , WB=0.33/1.00 (B-E:1) , SSI=0.15/1.00 (B-C:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

AUTOSOLVE RIGHT HEEL ONLY

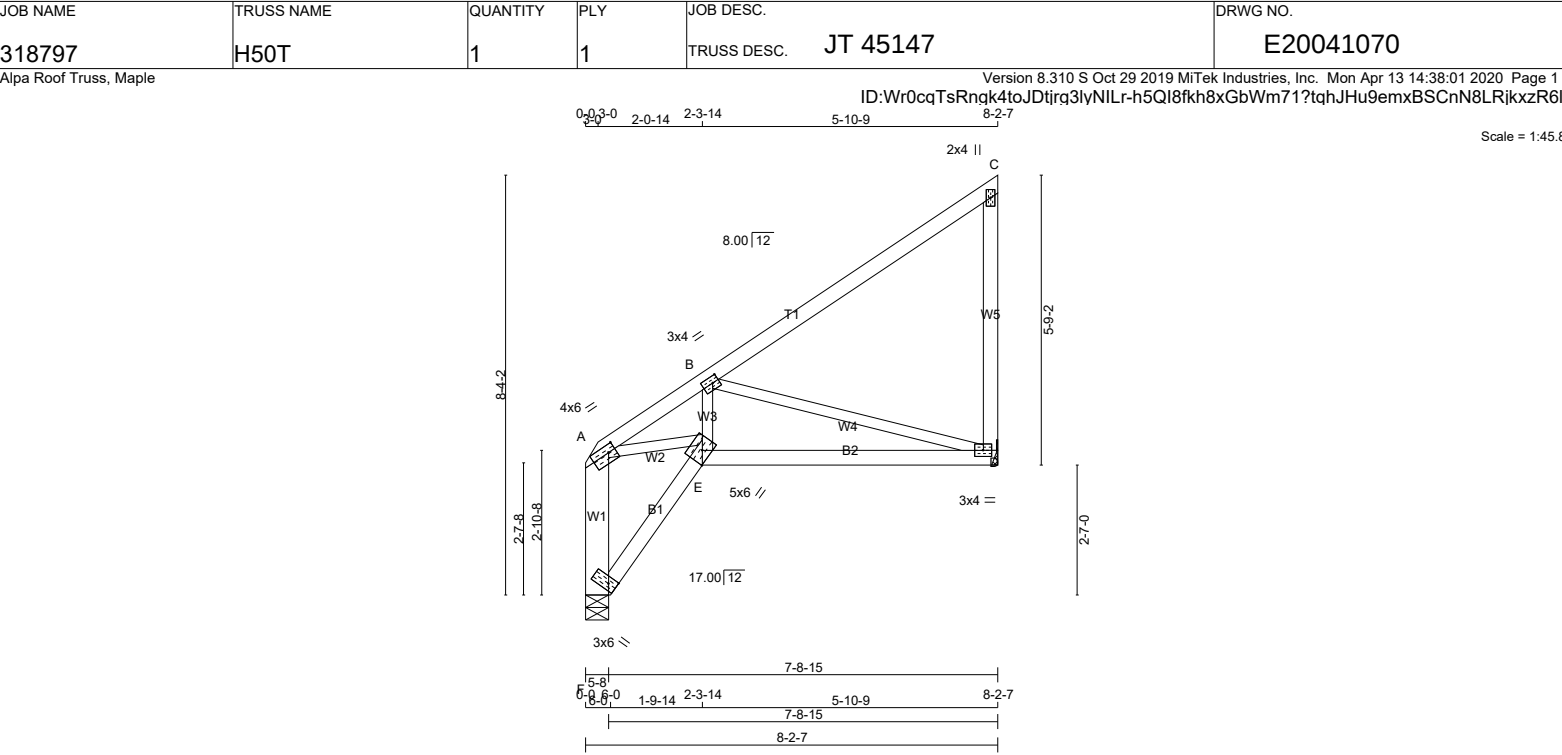
TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.84 (E) (INPUT = 0.90 )  
JSI METAL= 0.30 (F) (INPUT = 1.00 )



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

| PLATES (table is in inches) |         |        |     |     |      |      |
|-----------------------------|---------|--------|-----|-----|------|------|
| JT                          | TYPE    | PLATES | W   | LEN | Y    | X    |
| A                           | TMVW-t  | MT20   | 4.0 | 6.0 | 1.75 | 1.75 |
| B                           | TMWW-t  | MT20   | 3.0 | 4.0 | 1.50 | 1.50 |
| C                           | TMV+p   | MT20   | 2.0 | 4.0 |      |      |
| D                           | BMVW1-t | MT20   | 3.0 | 4.0 |      |      |
| E                           | BBWW-h  | MT20   | 5.0 | 6.0 | Edge |      |
| F                           | BVM1+I  | MT20   | 3.0 | 6.0 | Edge |      |

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

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

| BEARINGS |      | FACTORED GROSS REACTION |      | MAXIMUM FACTORED GROSS REACTION |        | INPUT BRG  |       | REQRD BRG |  |
|----------|------|-------------------------|------|---------------------------------|--------|------------|-------|-----------|--|
| JT       | VERT | HORZ                    | DOWN | HORZ                            | UPLIFT | IN-SX      | IN-SX |           |  |
| F        | 396  | 0                       | 396  | 0                               | 0      | 5-8        | 5-8   |           |  |
| D        | 396  | 0                       | 396  | 0                               | 0      | MECHANICAL |       |           |  |

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

UNFACTORED REACTIONS

| 1ST LCASE |          | MAX./MIN. COMPONENT REACTIONS |       |           |       |         |       |  |
|-----------|----------|-------------------------------|-------|-----------|-------|---------|-------|--|
| JT        | COMBINED | SNOW                          | LIVE  | PERM.LIVE | WIND  | DEAD    | SOIL  |  |
| F         | 282      | 172 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 110 / 0 | 0 / 0 |  |
| D         | 282      | 172 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 110 / 0 | 0 / 0 |  |

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

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)

| C H O R D S |                           |                           |                  |                    | W E B S |                           |              |          |
|-------------|---------------------------|---------------------------|------------------|--------------------|---------|---------------------------|--------------|----------|
| MEMB.       | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | LC1 MAX CSI (LC) | MAX. UNBRAC LENGTH | MEMB.   | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |          |
| FR-TO       |                           | FROM                      | TO               |                    | FR-TO   |                           |              |          |
| F-A         | -374 / 0                  | 0.0                       | 0.0              | 0.04 (1)           | 7.81    | A-E                       | 0 / 593      | 0.13 (1) |
| A-B         | -660 / 0                  | -78.0                     | -78.0            | 0.24 (1)           | 6.25    | E-B                       | 0 / 103      | 0.03 (4) |
| B-C         | -22 / 0                   | -78.0                     | -78.0            | 0.30 (1)           | 6.25    | B-D                       | -607 / 0     | 0.36 (1) |
| D-C         | -186 / 0                  | 0.0                       | 0.0              | 0.11 (1)           | 7.81    |                           |              |          |
| F-E         | 0 / 0                     | -18.5                     | -18.5            | 0.03 (4)           | 10.00   |                           |              |          |
| E-D         | 0 / 586                   | -18.5                     | -18.5            | 0.24 (4)           | 10.00   |                           |              |          |

DESIGN CRITERIA

SPECIFIED LOADS:

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

SPACING = 24.0 IN./C

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

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

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

ALLOWABLE DEFL.(LL)= L/360 (0.27")  
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.01")  
ALLOWABLE DEFL.(TL)= L/360 (0.27")  
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.06")

CSI: TC=0.30/1.00 (B-C:1) , BC=0.24/1.00 (D-E:4) , WB=0.36/1.00 (B-D:1) , SSI=0.17/1.00 (B-C:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

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

PLATE PLACEMENT TOL. = 0.250 inches

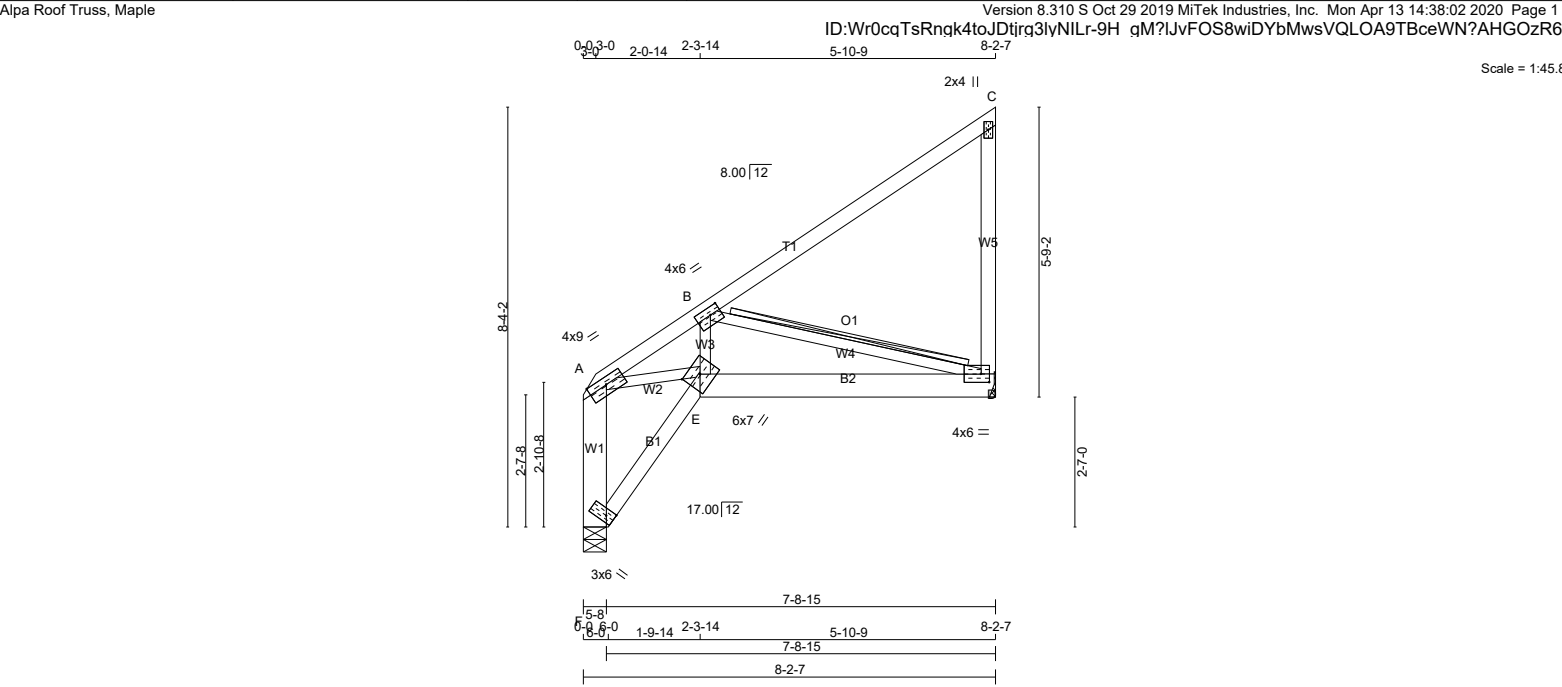
PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.84 (D) (INPUT = 0.90 )  
JSI METAL= 0.29 (E) (INPUT = 1.00 )

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



|          |            |          |     |                      |           |
|----------|------------|----------|-----|----------------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.  |
| 318797   | H51A       | 1        | 1   | TRUSS DESC. JT 45147 | E20041071 |



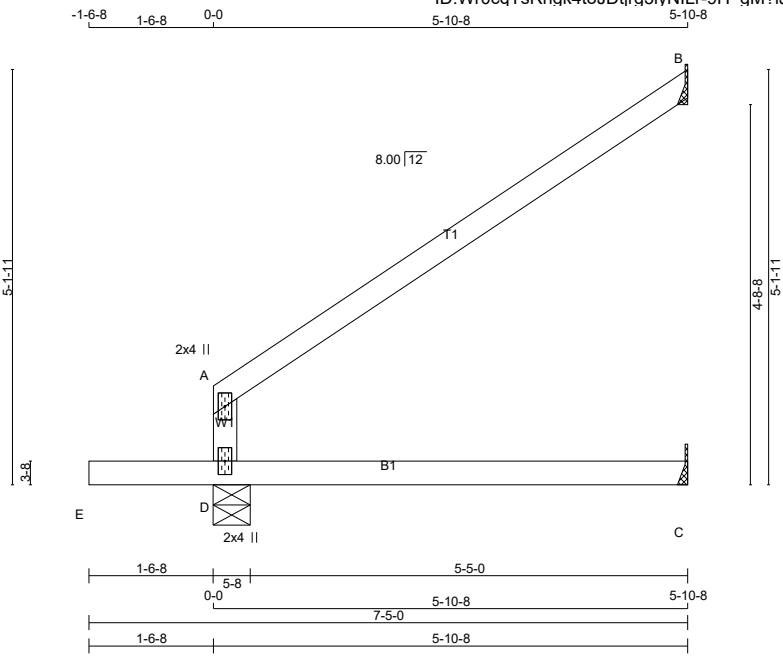
|                                                                                                                                                                                                                                                                                                                                            |  |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |  |  |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|
| <b>LUMBER</b><br>N. L. G. A. RULES<br>CHORDS SIZE LUMBER DESCR.<br>F - A 2x6 DRY No.2 SPF<br>A - C 2x4 DRY 2100F 1.8E SPF<br>D - C 2x4 DRY No.2 SPF<br>F - E 2x4 DRY 1650F 1.5E SPF<br>E - D 2x6 DRY 2100F 1.8E SPF<br><br>ALL WEBS 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 REQD<br>GROSS REACTION GROSS REACTION BRG BRG<br>JT VERT HORZ DOWN HORZ UPLIFT IN-SX IN-SX<br>F 1690 0 1690 0 0 5-8 5-8<br>D 1690 0 1690 0 0 MECHANICAL<br><br>A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT D. MINIMUM BEARING LENGTH AT JOINT D = 1-8.<br><br><b>UNFACTORED REACTIONS</b><br>1ST LCASE MAX./MIN. COMPONENT REACTIONS<br>JT COMBINED SNOW LIVE PERM.LIVE WIND DEAD SOIL<br>F 1205 735 / 0 0 / 0 0 / 0 0 / 0 469 / 0 0 / 0<br>D 1205 735 / 0 0 / 0 0 / 0 0 / 0 469 / 0 0 / 0<br><br>BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) F<br>BEARING SIZE FACTOR = 1.15 AT JNT(S) F ( BASED ON SUPPORT DEPTH = 1-8 )<br><br><b>BRACING</b><br>TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.02 FT.<br>MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.<br><br>ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.<br><br>2x4 DRY SPF No.2 T-BRACE AT B-D<br><br>FASTEN T AND I-BRACES TO NARROW EDGE OF WEB WITH ONE ROW PER PLY OF 3" COMMON WIRE NAILS @ 6" O.C. WITH 3" MINIMUM END DISTANCE. BRACE MUST COVER 90% OF WEB LENGTH.<br><br>END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW<br><br><b>LOADING</b><br>TOTAL LOAD CASES: (4)<br><br>CHORDS WEBS<br>MAX. FACTORED MAX. FACTORED<br>MEMB. FORCE VERT. LOAD LC1 MAX. MAX. MEMB. FORCE MAX.<br>(LBS) (PLF) CSI (LC) UNBRAC LENGTH FR-TO (LBS) CSI (LC)<br>FR-TO FROM TO<br>F- A -1302 / 0 0.0 0.0 0.16 (1) 7.81 A- E 0 / 2093 0.52 (1)<br>A- B -2471 / 0 -78.0 -78.0 0.21 (1) 5.02 E- B 0 / 1490 0.37 (1)<br>B- C -17 / 0 -78.0 -78.0 0.24 (1) 6.25 B- D -2053 / 0 0.58 (1)<br>D- C -194 / 0 0.0 0.0 0.11 (1) 7.81<br><br>F- E 0 / 0 -334.0 -334.0 0.28 (1) 10.00<br>E- D 0 / 1986 -334.0 -334.0 0.68 (1) 10.00 |  |  |  |  |  | <b>DESIGN CRITERIA</b><br><br>SPECIFIED LOADS:<br>TOP CH. LL = 21.0 PSF<br>DL = 6.0 PSF<br>BOT CH. LL = 0.0 PSF<br>DL = 7.4 PSF<br>TOTAL LOAD = 34.4 PSF<br><br><b>SPACING = 24.0 IN. C/C</b><br><br>GIRDER TYPE: CStdGirder<br>START DISTANCE = 0-0<br>START SPAN CARRIED = 15-1-0<br>END DISTANCE = 8-2-7<br>END SPAN CARRIED = 15-1-0<br>END WALL WIDTH = 0-0<br>APPLIED TO FRONT SIDE OF BOTTOM CHORD.<br>- ADDTL LOADS BASED ON 55 % OF GSL.<br><br>THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015<br><br>THIS DESIGN COMPLIES WITH:<br>- PART 9 OF CBC 2018 , ABC 2019<br>- PART 9 OF OBC 2012 (2019 AMENDMENT)<br>- CSA 086-14<br>- TPIC 2014<br><br>(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD<br><br>ALLOWABLE DEFL.(LL)= L/360 (0.27")<br>CALCULATED VERT. DEFL.(LL) = L/ 846 (0.12")<br>ALLOWABLE DEFL.(TL)= L/360 (0.27")<br>CALCULATED VERT. DEFL.(TL) = L/ 411 (0.24")<br><br>CSI: TC=0.24/1.00 (B-C:1) , BC=0.68/1.00 (D-E:1) , WB=0.58/1.00 (B-D:1) , SSI=0.65/1.00 (D-E:1)<br><br>DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.00 COMP=1.00 SHEAR=1.00 TENS= 1.00<br><br>COMPANION LIVE LOAD FACTOR = 1.00<br><br>TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .<br><br>NAIL VALUES<br>PLATE GRIP(DRY) SHEAR SECTION<br>(PSI) (PLI) (PLI)<br>MAX MIN MAX MIN MAX MIN<br>MT20 650 371 1747 788 1987 1873<br><br>PLATE PLACEMENT TOL. = 0.250 inches<br><br>PLATE ROTATION TOL. = 5.0 Deg.<br><br>JSI GRIP= 0.88 (E) (INPUT = 0.90 )<br>JSI METAL= 0.54 (B) (INPUT = 1.00 ) |  |  |  |  |  |
| <b>PLATES (table is in inches)</b><br>JT TYPE PLATES W LEN Y X<br>A TMVW-t MT20 4.0 9.0 Edge 2.50<br>B TMWW-t MT20 4.0 6.0 1.75 2.50<br>C TMV+p MT20 2.0 4.0<br>D BMVW1-t MT20 4.0 6.0 2.00 2.00<br>E BBWW-h MT20 6.0 7.0 2.75 3.50<br>F BVM1+I MT20 3.0 6.0 Edge<br><br>Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD. |  |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |  |  |  |
| LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2                                                                                                                                                                                                                                                                                                  |  |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |  |  |  |

|          |            |          |     |                      |           |
|----------|------------|----------|-----|----------------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.  |
| 318797   | J1         | 2        | 1   | TRUSS DESC. JT 45147 | E20041072 |

Alpa Roof Truss, Maple

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TOTAL WEIGHT = 2 X 18 = 35 lb

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

DRY: SEASONED LUMBER.

|                                    |        |        |     |         |
|------------------------------------|--------|--------|-----|---------|
| <b>PLATES (table is in inches)</b> |        |        |     |         |
| JT                                 | TYPE   | PLATES | W   | LEN Y X |
| A                                  | TMV+p  | MT20   | 2.0 | 4.0     |
| D                                  | BMV1+p | MT20   | 2.0 | 4.0     |

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

| FACTORED GROSS REACTION |      | MAXIMUM FACTORED GROSS REACTION |      | INPUT BRG |        | REQRD BRG  |       |
|-------------------------|------|---------------------------------|------|-----------|--------|------------|-------|
| JT                      | VERT | HORZ                            | DOWN | HORZ      | UPLIFT | IN-SX      | IN-SX |
| D                       | 487  | 0                               | 487  | 0         | 0      | 5-8        | 1-8   |
| B                       | 188  | 0                               | 188  | 0         | 0      | MECHANICAL |       |
| C                       | 41   | 0                               | 46   | 0         | 0      | MECHANICAL |       |

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

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

| UNFACTORED REACTIONS |          | MAX./MIN. COMPONENT REACTIONS |       |       |           |       |         |
|----------------------|----------|-------------------------------|-------|-------|-----------|-------|---------|
| JT                   | COMBINED | 1ST LCASE                     | SNOW  | LIVE  | PERM.LIVE | WIND  | DEAD    |
| D                    | 348      | 210 / 0                       | 0 / 0 | 0 / 0 | 0 / 0     | 0 / 0 | 137 / 0 |
| B                    | 130      | 101 / 0                       | 0 / 0 | 0 / 0 | 0 / 0     | 0 / 0 | 29 / 0  |
| C                    | 33       | 0 / 0                         | 0 / 0 | 0 / 0 | 0 / 0     | 0 / 0 | 33 / 0  |

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

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

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

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

| CHORDS |                           |                           |                  | WEBS  |                           |                      |       |
|--------|---------------------------|---------------------------|------------------|-------|---------------------------|----------------------|-------|
| MEMB.  | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | LC1 MAX CSI (LC) | MEMB. | MAX. FACTORED FORCE (LBS) | MAX. UNBRACED LENGTH | FR-TO |
| D-A    | -270 / 0                  | 0.0                       | 0.0 0.33 (1)     |       |                           |                      |       |
| A-B    | -23 / 0                   | -78.0                     | -78.0 0.33 (1)   |       |                           |                      |       |
| E-D    | 0 / 0                     | -96.5                     | -96.5 0.16 (1)   |       |                           |                      |       |
| D-C    | 0 / 0                     | -18.5                     | -18.5 0.19 (4)   |       |                           |                      |       |

**DESIGN CRITERIA**

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

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

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

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

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

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

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

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

CSI: TC=0.33/1.00 (A-D:1) , BC=0.19/1.00 (C-D:4) , WB=0.00/1.00 (n/a:0) , SSI=0.18/1.00 (A-B:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

AUTOSOLVE RIGHT HEEL ONLY

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

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.17 (A) (INPUT = 0.90 )  
JSI METAL= 0.14 (A) (INPUT = 1.00 )

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

Alpa Roof Truss, Maple



| DESCR. | DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER            |      |      |                                 |      |        |            |           |
|--------|----------------------------------------------------------------------------------------------------------|------|------|---------------------------------|------|--------|------------|-----------|
|        | FACTORED GROSS REACTION                                                                                  |      |      | MAXIMUM FACTORED GROSS REACTION |      |        | INPUT BRG  | REQRD BRG |
|        | JT                                                                                                       | VERT | HORZ | DOWN                            | HORZ | UPLIFT | IN-SX      | IN-SX     |
| SPF    | E                                                                                                        | 425  | 0    | 425                             | 0    | 0      | MECHANICAL |           |
| SPF    | H                                                                                                        | 530  | 0    | 530                             | 0    | 0      | 5-8        | 1-8       |
| SPF    | A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT E. MINIMUM BEARING LENGTH AT JOINT F = 1-8. |      |      |                                 |      |        |            |           |

| <b>UNFACTORED REACTIONS</b> |           |                               |       |           |       |
|-----------------------------|-----------|-------------------------------|-------|-----------|-------|
|                             | 1ST LCASE | MAX./MIN. COMPONENT REACTIONS |       |           |       |
| JT                          | COMBINED  | SNOW                          | LIVE  | PERM.LIVE | WIND  |
| E                           | 302       | 188 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 |
| H                           | 379       | 225 / 0                       | 0 / 0 | 0 / 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        |             |                  |                   | WEBS               |       |             |               |
|---------------|-------------|------------------|-------------------|--------------------|-------|-------------|---------------|
| MAX. FACTORED |             | FACTORED         |                   | MAX. FACTORED      |       |             |               |
| MEMB.         | FORCE (LBS) | VERT. LOAD (PLF) | LC1 MAX. CSI (LC) | MAX. UNBRAC LENGTH | MEMB. | FORCE (LBS) | MAX. CSI (LC) |
| FR-TO         |             | FROM TO          |                   |                    | FR-TO |             |               |
| A-B           | -245 / 0    | -78.0            | -78.0 0.05 (1)    | 6.25               | G-B   | -215 / 0    | 0.04 (1)      |
| B-C           | -290 / 0    | -78.0            | -78.0 0.05 (1)    | 6.25               | B-F   | 0 / 35      | 0.01 (1)      |
| C-D           | -233 / 0    | -113.7           | -113.7 0.09 (1)   | 6.25               | F-C   | -144 / 0    | 0.03 (1)      |
| E-D           | -397 / 0    | 0.0              | 0.0 0.06 (1)      | 7.81               | F-D   | 0 / 367     | 0.09 (1)      |
| H-A           | -294 / 0    | 0.0              | 0.0 0.03 (1)      | 7.81               | A-G   | 0 / 236     | 0.06 (1)      |
| I-H           | 0 / 0       | -96.5            | -96.5 0.17 (1)    | 10.00              |       |             |               |
| H-G           | 0 / 0       | -27.0            | -27.0 0.17 (1)    | 10.00              |       |             |               |
| G-F           | 0 / 225     | -27.0            | -27.0 0.06 (1)    | 10.00              |       |             |               |
| F-E           | 0 / 0       | -27.0            | -27.0 0.04 (4)    | 10.00              |       |             |               |

FACTORED CONCENTRATED LOADS (LBS)

|    |        |      |      |      |       |      |       |      |       |
|----|--------|------|------|------|-------|------|-------|------|-------|
| JT | LOC.   | LC1  | MAX- | MAX+ | FACE  | DIR. | TYPE  | HEEL | CONN. |
| C  | 3-10-0 | -116 | -116 | ---  | FRONT | VERT | TOTAL | ---  | C1    |

## CONNECTION REQUIREMENTS

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

## DESIGN CRITERIA

SPECIFIED LOADS:

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

SPACING = 24.0 IN. C/C

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

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

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

THIS DESIGN COMPLIES WITH:

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

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

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

ALLOWABLE DEFL.(LL)= L/360 (0.20")  
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")  
ALLOWABLE DEFL.(TL)= L/360 (0.20")  
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.01")

CANTILEVER DEFLECTION:  
ALLOWABLE DEFL.(LL)=  $L/120$  (0.19")  
CALCULATED VERT. DEFL.(LL) =  $L/999$  ( 0.02")  
ALLOWABLE DEFL.(TL)=  $L/120$  (0.19")  
CALCULATED VERT. DEFL.(TL) =  $L/604$  ( 0.03")

CSI: TC=0.09/1.00 (C-D:1) , BC=0.17/1.00 (G-H:1) ,  
WB=0.09/1.00 (D-F:1) , SSI=0.13/1.00 (H-I:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

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

Alpa Roof Truss, Maple

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TOTAL WEIGHT = 2 X 31 = 61 lb

| PLATES (table is in inches) |        |        |     |     |      |      |
|-----------------------------|--------|--------|-----|-----|------|------|
| JT                          | TYPE   | PLATES | W   | LEN | Y    | X    |
| A                           | TMVW-t | MT20   | 3.0 | 4.0 | 1.50 | 1.00 |
| B                           | TMWW-t | MT20   | 3.0 | 4.0 | 1.50 | 1.50 |
| C                           | TMWW-t | MT20   | 3.0 | 4.0 | 1.50 | 1.50 |
| D                           | TMV+p  | MT20   | 2.0 | 4.0 |      |      |
| E                           | BMVW-t | MT20   | 3.0 | 4.0 |      |      |
| F                           | BBWW-l | MT20   | 5.0 | 6.0 | 3.00 | 3.00 |
| G                           | BBWW-l | MT20   | 4.0 | 6.0 | 2.00 | 4.00 |
| H                           | BMV+p  | MT20   | 2.0 | 4.0 |      |      |

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

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

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.

**TOTAL LOAD CASES: (4)**

| CHORDS        |             |                  |                   | WEBS               |       |             |               |
|---------------|-------------|------------------|-------------------|--------------------|-------|-------------|---------------|
| MAX. FACTORED |             | FACTORED         |                   | MAX. FACTORED      |       |             |               |
| MEMB.         | FORCE (LBS) | VERT. LOAD (PLF) | LC1 MAX. CSI (LC) | MAX. UNBRAC LENGTH | MEMB. | FORCE (LBS) | MAX. CSI (LC) |
| FR-TO         |             | FROM TO          |                   |                    | FR-TO |             |               |
| H-A           | -223 / 0    | 0.0              | 0.0 0.02 (1)      | 7.81               | A-G   | 0 / 165     | 0.04 (1)      |
| A-B           | -170 / 0    | -78.0            | -78.0 0.04 (1)    | 6.25               | G-B   | -169 / 0    | 0.03 (1)      |
| B-C           | -175 / 0    | -78.0            | -78.0 0.04 (1)    | 6.25               | B-F   | 0 / 9       | 0.00 (1)      |
| C-D           | -9 / 0      | -78.0            | -78.0 0.04 (1)    | 10.00              | F-C   | 0 / 104     | 0.02 (1)      |
| E-D           | -59 / 0     | 0.0              | 0.0 0.02 (1)      | 7.81               | C-E   | -235 / 0    | 0.05 (1)      |
| I-H           | 0 / 0       | -96.5            | -96.5 0.16 (1)    | 10.00              |       |             |               |
| H-G           | 0 / 0       | -18.5            | -18.5 0.16 (1)    | 10.00              |       |             |               |
| G-F           | 0 / 156     | -18.5            | -18.5 0.04 (1)    | 10.00              |       |             |               |
| F-E           | 0 / 143     | -18.5            | -18.5 0.04 (1)    | 10.00              |       |             |               |

SPECIFIED LOADS:

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

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

THIS DESIGN COMPLIES WITH:

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

-OVERHANG NOT TO BE ALTERED OR CUT OFF.

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

ALLOWABLE DEFL.(LL)= L/360 (0.20")  
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")  
ALLOWABLE DEFL.(TL)= L/360 (0.20")  
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.00")

CANTILEVER DEFLECTION:  
ALLOWABLE DEFL.(LL)=  $L/120$  (0.19")  
CALCULATED VERT. DEFL.(LL) =  $L/999$  ( 0.02")  
ALLOWABLE DEFL.(TL)=  $L/120$  (0.19")  
CALCULATED VERT. DEFL. (TL) =  $L/576$  ( 0.03")

CSI: TC=0.04/1.00 (B-C:1), BC=0.16/1.00 (G-H:1),  
WB=0.05/1.00 (C-E:1), SSI=0.12/1.00 (H-I:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

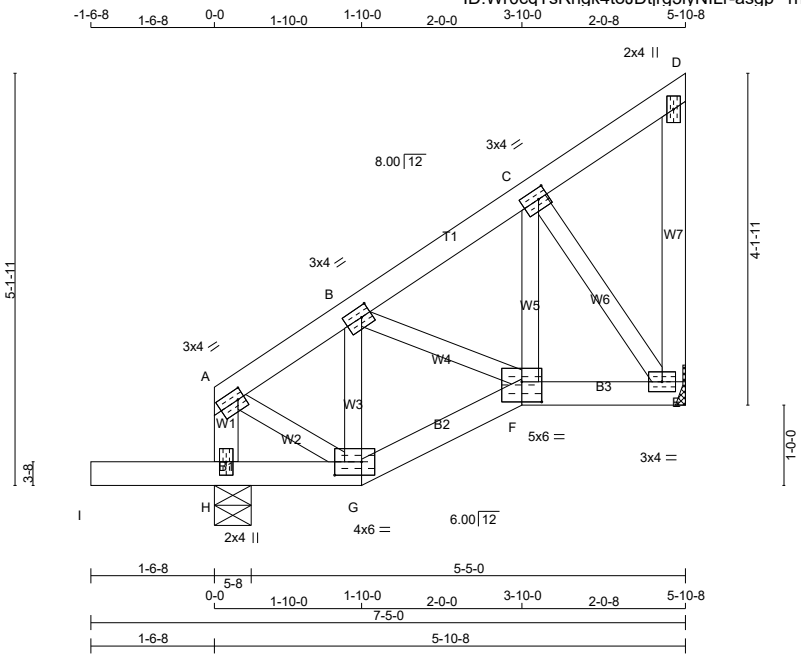
JSI GRIP= 0.51 (A) (INPUT = 0.90 )  
JSI METAL= 0.07 (A) (INPUT = 1.00 )

|          |            |          |     |                      |           |
|----------|------------|----------|-----|----------------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.  |
| 318797   | J1TE       | 3        | 1   | TRUSS DESC. JT 45147 | E20041076 |

Alpa Roof Truss, Maple

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TOTAL WEIGHT = 3 X 31 = 92 lb [M]

|                           |      |        |        |     |
|---------------------------|------|--------|--------|-----|
| <b>LUMBER</b>             |      |        |        |     |
| N. L. G. A. RULES         |      |        |        |     |
| CHORDS                    | SIZE | LUMBER | DESCR. |     |
| H - A                     | 2x4  | DRY    | No.2   | SPF |
| A - D                     | 2x4  | DRY    | No.2   | SPF |
| E - D                     | 2x4  | DRY    | No.2   | SPF |
| I - G                     | 2x4  | DRY    | No.2   | SPF |
| G - F                     | 2x4  | DRY    | No.2   | SPF |
| F - E                     | 2x4  | DRY    | No.2   | SPF |
| ALL WEBS 2x3 DRY No.2 SPF |      |        |        |     |
| DRY: SEASONED LUMBER.     |      |        |        |     |

|                                    |         |        |     |     |           |
|------------------------------------|---------|--------|-----|-----|-----------|
| <b>PLATES (table is in inches)</b> |         |        |     |     |           |
| JT                                 | TYPE    | PLATES | W   | LEN | Y X       |
| A                                  | TMVW-t  | MT20   | 3.0 | 4.0 | 1.50 1.00 |
| B                                  | TMWW-t  | MT20   | 3.0 | 4.0 | 1.50 1.50 |
| C                                  | TMWW-t  | MT20   | 3.0 | 4.0 | 1.50 1.50 |
| D                                  | TMV+p   | MT20   | 2.0 | 4.0 |           |
| E                                  | BMVW1-t | MT20   | 3.0 | 4.0 |           |
| F                                  | BBWW-I  | MT20   | 5.0 | 6.0 | 3.00 3.00 |
| G                                  | BBWW-I  | MT20   | 4.0 | 6.0 | 2.00 4.00 |
| H                                  | BMV1+p  | MT20   | 2.0 | 4.0 |           |

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

|                 |      |                |                  |       |        |
|-----------------|------|----------------|------------------|-------|--------|
| <b>BEARINGS</b> |      | FACTORED       | MAXIMUM FACTORED | INPUT | REQRD  |
|                 |      | GROSS REACTION | GROSS REACTION   | BRG   | BRG    |
| JT              | VERT | HORZ           | DOWN             | HORZ  | UPLIFT |
| H               | 452  | 0              | 452              | 0     | 0      |
| E               | 264  | 0              | 264              | 0     | 0      |

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

**UNFACTORED REACTIONS**

|           |          |                               |       |           |       |         |       |
|-----------|----------|-------------------------------|-------|-----------|-------|---------|-------|
| 1ST LCASE |          | MAX./MIN. COMPONENT REACTIONS |       |           |       |         |       |
| JT        | COMBINED | SNOW                          | LIVE  | PERM.LIVE | WIND  | DEAD    | SOIL  |
| H         | 322      | 197 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 125 / 0 | 0 / 0 |
| E         | 188      | 115 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 73 / 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 |          | WEBS          |                                   |       |                          |
| MEMB.  |          | MAX. FACTORED | FACTORED                          | MEMB. | MAX. FACTORED            |
|        |          | FORCE (LBS)   | VERT. LOAD LC1 MAX (PLF) CSI (LC) |       | FORCE (LBS) MAX CSI (LC) |
| FR-TO  |          |               | FROM TO                           | FR-TO |                          |
| H-A    | -223 / 0 |               | 0.0 0.0 0.02 (1)                  | 7.81  | A-G 0 / 165 0.04 (1)     |
| A-B    | -170 / 0 |               | -78.0 -78.0 0.04 (1)              | 6.25  | G-B -169 / 0 0.03 (1)    |
| B-C    | -175 / 0 |               | -78.0 -78.0 0.04 (1)              | 6.25  | B-F 0 / 9 0.00 (1)       |
| C-D    | -9 / 0   |               | -78.0 -78.0 0.04 (1)              | 10.00 | F-C 0 / 104 0.02 (1)     |
| E-D    | -59 / 0  |               | 0.0 0.0 0.02 (1)                  | 7.81  | C-E -235 / 0 0.05 (1)    |
| I-H    | 0 / 0    |               | -96.5 -96.5 0.16 (1)              | 10.00 |                          |
| H-G    | 0 / 0    |               | -18.5 -18.5 0.16 (1)              | 10.00 |                          |
| G-F    | 0 / 156  |               | -18.5 -18.5 0.04 (1)              | 10.00 |                          |
| F-E    | 0 / 143  |               | -18.5 -18.5 0.04 (1)              | 10.00 |                          |

**DESIGN CRITERIA**

**SPECIFIED LOADS:**

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

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

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

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

**DESIGN ASSUMPTIONS**

-OVERHANG NOT TO BE ALTERED OR CUT OFF.

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

ALLOWABLE DEFL.(LL)= L/360 (0.20")  
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")  
ALLOWABLE DEFL.(TL)= L/360 (0.20")  
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.00")

CANTILEVER DEFLECTION:  
ALLOWABLE DEFL.(LL)= L/120 (0.19")  
CALCULATED VERT. DEFL.(LL) = L/ 999 ( 0.02")  
ALLOWABLE DEFL.(TL)= L/120 (0.19")  
CALCULATED VERT. DEFL.(TL) = L/ 576 ( 0.03")

CSI: TC=0.04/1.00 (B-C:1) , BC=0.16/1.00 (G-H:1) , WB=0.05/1.00 (C-E:1) , SSI=0.12/1.00 (H-I:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.51 (A) (INPUT = 0.90 )  
JSI METAL= 0.07 (A) (INPUT = 1.00 )

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



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TOTAL WEIGHT =  $7 \times 18 = 123 \text{ lb}$

| PLATES (table is in inches) |        |        |     |     |     |
|-----------------------------|--------|--------|-----|-----|-----|
| JT                          | TYPE   | PLATES | W   | LEN | Y X |
| A                           | TMV+p  | MT20   | 2.0 | 4.0 |     |
| D                           | BMV1+p | MT20   | 2.0 | 4.0 |     |

|    | FACTORED |          | MAXIMUM FACTORED |          | INPUT  | REQD       |
|----|----------|----------|------------------|----------|--------|------------|
|    | GROSS    | REACTION | GROSS            | REACTION | BRG    | BRG        |
| JT | VERT     | HORZ     | DOWN             | HORZ     | UPLIFT | IN-SX      |
| D  | 487      | 0        | 487              | 0        | 0      | 5-8        |
| B  | 188      | 0        | 188              | 0        | 0      | MECHANICAL |
| C  | 41       | 0        | 46               | 0        | 0      | MECHANICAL |

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

| 1ST LCASE |          | MAX./MIN. COMPONENT REACTIONS |       |           |       |         |       |
|-----------|----------|-------------------------------|-------|-----------|-------|---------|-------|
| JT        | COMBINED | SNOW                          | LIVE  | PERM.LIVE | WIND  | DEAD    | SOIL  |
| D         | 348      | 210 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 137 / 0 | 0 / 0 |
| B         | 130      | 101 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 29 / 0  | 0 / 0 |
| C         | 33       | 0 / 0                         | 0 / 0 | 0 / 0     | 0 / 0 | 33 / 0  | 0 / 0 |

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

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.

**TOTAL LOAD CASES: (4)**

| CHORDS |                           |                           |                         | WEBS                |       |                           |                         |
|--------|---------------------------|---------------------------|-------------------------|---------------------|-------|---------------------------|-------------------------|
| MEMB.  | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX. FACTORED LOAD (LC) | MAX. UNBRAC. LENGTH | MEMB. | MAX. FACTORED FORCE (LBS) | MAX. FACTORED LOAD (LC) |
| FR-TO  |                           | FROM                      | TO                      | FR-TO               |       |                           |                         |
| D- A   | -270 / 0                  | 0.0                       | 0.33 (1)                | 7.81                |       |                           |                         |
| A- B   | -23 / 0                   | -78.0                     | -78.0 0.33 (1)          | 6.25                |       |                           |                         |
| E- D   | 0 / 0                     | -96.5                     | -96.5 0.16 (1)          | 10.00               |       |                           |                         |
| D- C   | 0 / 0                     | -18.5                     | -18.5 0.19 (4)          | 10.00               |       |                           |                         |

SPECIFIED LOADS:

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

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

THIS DESIGN COMPLIES WITH:

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

-OVERHANG NOT TO BE ALTERED OR CUT OFF.

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

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

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

CSI: TC=0.33/1.00 (A-D:1), BC=0.19/1.00 (C-D:4),  
WB=0.00/1.00 (n/a:0), SSI=0.18/1.00 (A-B:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

AUTOSOLVE RIGHT HEEL ONLY

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

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.17 (A) (INPUT = 0.90 )  
JSI METAL= 0.14 (A) (INPUT = 1.00 )

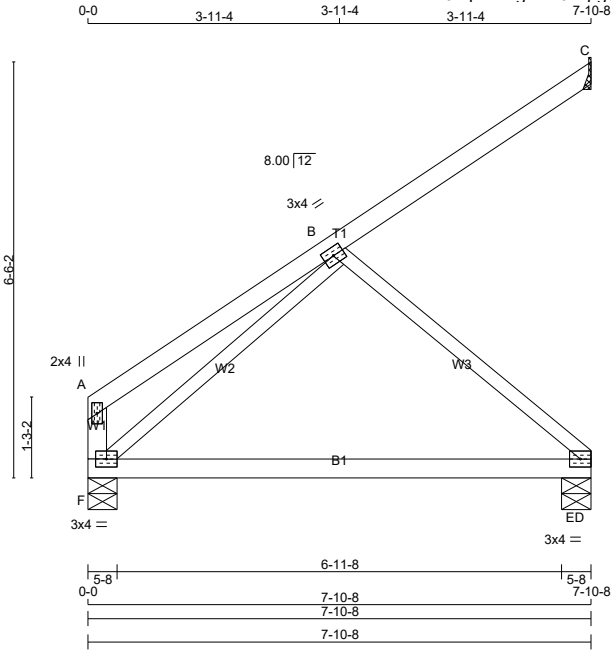
|          |            |          |     |                      |           |
|----------|------------|----------|-----|----------------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.  |
| 318797   | J3         | 3        | 1   | TRUSS DESC. JT 45147 | E20041078 |

Alpa Roof Truss, Maple

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ID:Wr0cqTsRngk4toJDtjrq3lyNILr- RLxc3q4V59bsr9NvrSK5mgMMbIVaQvOmxdbU1zR6j

Scale = 1:36.1



TOTAL WEIGHT = 3 X 29 = 87 lb [M]

|                           |      |        |        |     |
|---------------------------|------|--------|--------|-----|
| <b>LUMBER</b>             |      |        |        |     |
| N. L. G. A. RULES         |      |        |        |     |
| CHORDS                    | SIZE | LUMBER | DESCR. |     |
| F - A                     | 2x4  | DRY    | No.2   | SPF |
| A - C                     | 2x4  | DRY    | No.2   | SPF |
| F - D                     | 2x4  | DRY    | No.2   | SPF |
| ALL WEBS 2x3 DRY No.2 SPF |      |        |        |     |
| DRY: SEASONED LUMBER.     |      |        |        |     |

|                                    |         |        |     |     |     |
|------------------------------------|---------|--------|-----|-----|-----|
| <b>PLATES (table is in inches)</b> |         |        |     |     |     |
| JT                                 | TYPE    | PLATES | W   | LEN | Y X |
| A                                  | TMV+p   | MT20   | 2.0 | 4.0 |     |
| B                                  | TMWW-t  | MT20   | 3.0 | 4.0 |     |
| D                                  | BMW-t   | MT20   | 3.0 | 4.0 |     |
| F                                  | BMVW1-t | MT20   | 3.0 | 4.0 |     |

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

| JT | FACTORED GROSS REACTION |      | MAXIMUM FACTORED GROSS REACTION |      | INPUT BRG  | REQRD BRG |
|----|-------------------------|------|---------------------------------|------|------------|-----------|
|    | VERT                    | HORZ | DOWN                            | HORZ | IN-SX      | IN-SX     |
| F  | 372                     | 0    | 372                             | 0    | 5-8        | 1-8       |
| C  | 121                     | 0    | 121                             | 0    | MECHANICAL |           |
| E  | 266                     | 0    | 266                             | 0    | 5-8        | 1-8       |

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

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

**UNFACTORED REACTIONS**

| JT | 1ST LCASE |         | MAX./MIN. COMPONENT REACTIONS |       | WIND      | DEAD    | SOIL  |
|----|-----------|---------|-------------------------------|-------|-----------|---------|-------|
|    | COMBINED  |         | SNOW                          | LIVE  | PERM.LIVE |         |       |
| F  | 265       | 162 / 0 | 0 / 0                         | 0 / 0 | 0 / 0     | 103 / 0 | 0 / 0 |
| C  | 83        | 66 / 0  | 0 / 0                         | 0 / 0 | 0 / 0     | 18 / 0  | 0 / 0 |
| E  | 192       | 103 / 0 | 0 / 0                         | 0 / 0 | 0 / 0     | 89 / 0  | 0 / 0 |

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

**BRACING**

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

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

**LOADING**

TOTAL LOAD CASES: (4)

| CHORDS |                           |                           |                  | WEBS                 |       |                           |              |
|--------|---------------------------|---------------------------|------------------|----------------------|-------|---------------------------|--------------|
| MEMB.  | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | LC1 MAX CSI (LC) | MAX. UNBRACED LENGTH | MEMB. | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|        |                           |                           |                  |                      |       |                           |              |
| FR-TO  |                           | FROM TO                   |                  |                      | FR-TO |                           |              |
| F-A    | -110 / 0                  | 0.0 0.0 0.01 (1)          | 7.81             |                      | F-B   | -290 / 0                  | 0.13 (1)     |
| A-B    | 0 / 22                    | -78.0 -78.0 0.21 (1)      | 10.00            |                      | B-D   | -285 / 0                  | 0.14 (1)     |
| B-C    | -21 / 0                   | -78.0 -78.0 0.20 (1)      | 6.25             |                      |       |                           |              |
| F-E    | 0 / 214                   | -18.5 -18.5 0.32 (4)      | 10.00            |                      |       |                           |              |
| E-D    | 0 / 214                   | -18.5 -18.5 0.08 (1)      | 10.00            |                      |       |                           |              |

**DESIGN CRITERIA**

**SPECIFIED LOADS:**

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

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

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

**THIS DESIGN COMPLIES WITH:**

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

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

ALLOWABLE DEFL.(LL)= L/360 (0.25")  
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.01")  
ALLOWABLE DEFL.(TL)= L/360 (0.25")  
CALCULATED VERT. DEFL.(TL) = L/ 613 (0.15")

CSI: TC=0.21/1.00 (A-B:1), BC=0.32/1.00 (E-F:4),  
WB=0.14/1.00 (B-D:1), SSI=0.15/1.00 (D-E:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

**NAIL VALUES**

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

PLATE PLACEMENT TOL. = 0.250 inches

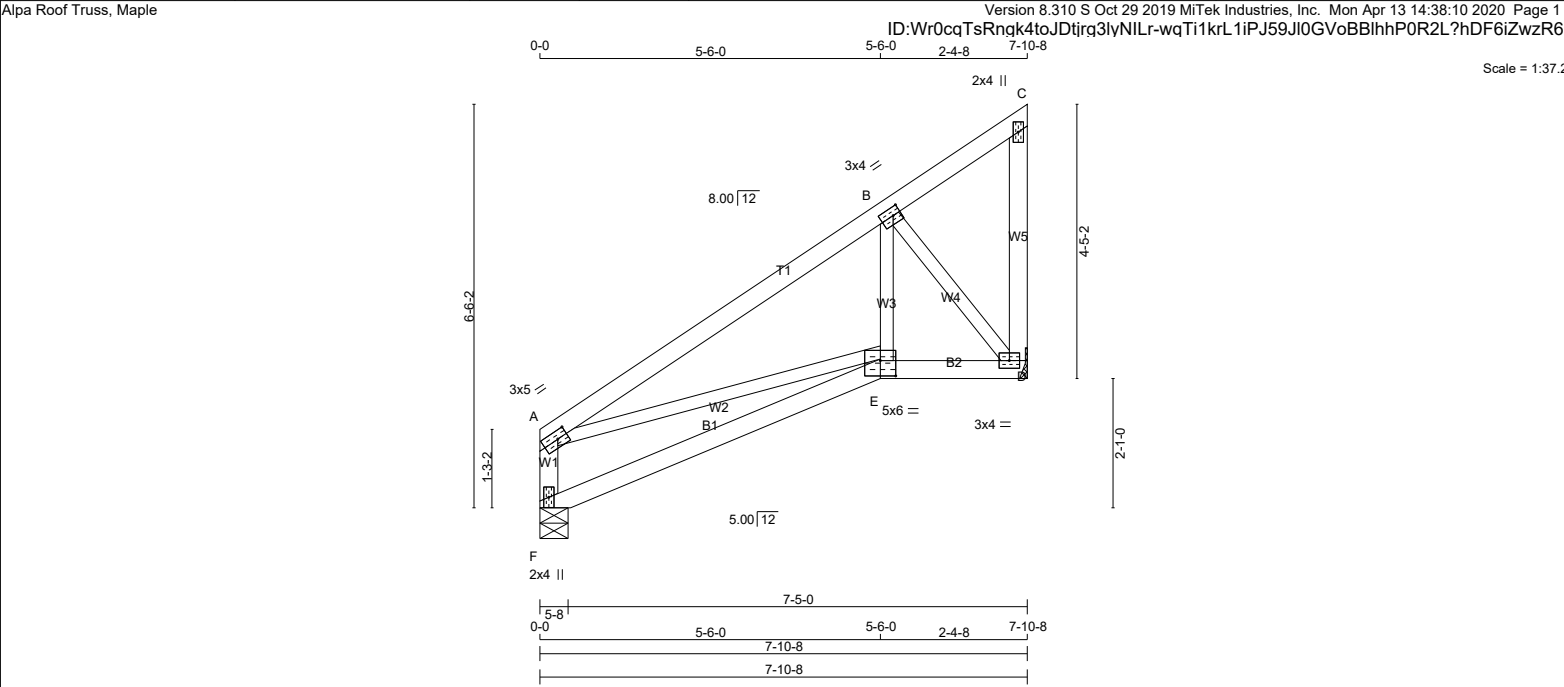
PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.36 (F) (INPUT = 0.90 )  
JSI METAL= 0.08 (F) (INPUT = 1.00 )

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



|          |            |          |     |                      |           |
|----------|------------|----------|-----|----------------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.  |
| 318797   | J3T        | 6        | 1   | TRUSS DESC. JT 45147 | E20041079 |



TOTAL WEIGHT = 6 X 35 = 209 lb

[M][F]

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

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

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

| BEARINGS |      | FACTORED GROSS REACTION | MAXIMUM FACTORED GROSS REACTION | INPUT BRG | REQRD BRG |
|----------|------|-------------------------|---------------------------------|-----------|-----------|
| JT       | VERT | HORZ                    | DOWN                            | HORZ      | UPLIFT    |
| F        | 380  | 0                       | 380                             | 0         | 0         |
| D        | 380  | 0                       | 380                             | 0         | 0         |

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

UNFACTORED REACTIONS

| 1ST LCASE | MAX./MIN. COMPONENT REACTIONS |         |       |           |       |         |       |
|-----------|-------------------------------|---------|-------|-----------|-------|---------|-------|
| JT        | COMBINED                      | SNOW    | LIVE  | PERM.LIVE | WIND  | DEAD    | SOIL  |
| F         | 271                           | 165 / 0 | 0 / 0 | 0 / 0     | 0 / 0 | 106 / 0 | 0 / 0 |
| D         | 271                           | 165 / 0 | 0 / 0 | 0 / 0     | 0 / 0 | 106 / 0 | 0 / 0 |

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

BRACING

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

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

LOADING

TOTAL LOAD CASES: (4)

| CHORDS |                           | WEBS  |                           |
|--------|---------------------------|-------|---------------------------|
| MEMB.  | MAX. FACTORED FORCE (LBS) | MEMB. | MAX. FACTORED FORCE (LBS) |
| FR-TO  |                           | FR-TO |                           |
| F-A    | -329 / 0                  | A-E   | 0 / 336                   |
| A-B    | -373 / 0                  | E-B   | 0 / 142                   |
| B-C    | -55 / 0                   | B-D   | -490 / 0                  |
| D-C    | 0 / 10                    |       |                           |
| F-E    | 0 / 0                     |       |                           |
| E-D    | 0 / 323                   |       |                           |

DESIGN CRITERIA

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

SPACING = 24.0 IN. C/C

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

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

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

ALLOWABLE DEFL.(LL)= L/360 (0.26")  
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.01")  
ALLOWABLE DEFL.(TL)= L/360 (0.26")  
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.05")

CSI: TC=0.28/1.00 (A-B:1) , BC=0.16/1.00 (E-F:4) ,  
WB=0.10/1.00 (B-D:1) , SSI=0.17/1.00 (A-B:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.60 (B) (INPUT = 0.90 )  
JSI METAL= 0.14 (A) (INPUT = 1.00 )

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



# LUS – Double Shear Joist Hangers



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

**Material:** 18 gauge

**Finish:** G90 galvanized

**Design:**

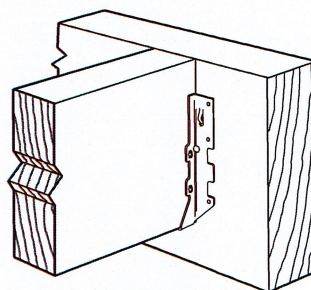
- Factored resistances are in accordance with CSA O86-14.
- Uplift resistances have been increased 15%. No further increase is permitted.
- Wood shear is not considered in the factored resistances given. The specifier must ensure that the joist and header capacities are capable of withstanding these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

**Installation:**

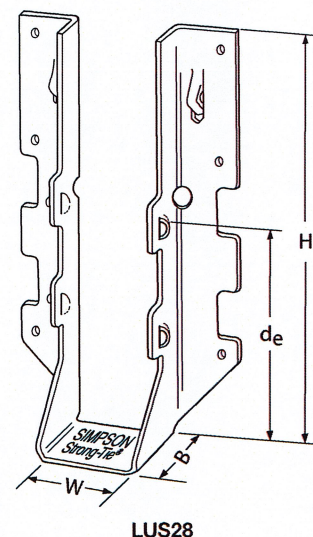
- Use all specified fasteners.
- Nails: 16d = 0.162" dia. x 3½" long common wire, 10d = 0.148" x 3" long common wire.
- Double shear nails must be driven at an angle through the joist or truss into the header to achieve the table loads.
- Not designed for welded or nailer applications.

**Options:**

- These hangers cannot be modified



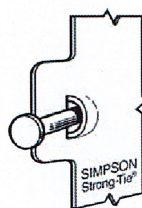
Typical LUS Installation



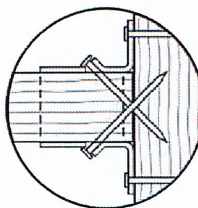
LUS28

| 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>p</sub> =1.15) | Normal<br>(K <sub>p</sub> =1.00) | Uplift<br>(K <sub>p</sub> =1.15) | Normal<br>(K <sub>p</sub> =1.00) |
| LUS24     | 18  | 1½               | 3½      | 1¾ | 1 15/16                     | (4) 10d   | (2) 10d | 710                              | 1630                             | 645                              | 1155                             |
| LUS24-2   | 18  | 3½               | 3½      | 2  | 1 13/16                     | (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  | 4½               | 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  | 4½               | 6¼      | 2  | 3¼                          | (6) 16d   | (4) 16d | 1720                             | 3325                             | 1545                             | 2375                             |
| LUS210    | 18  | 1½               | 7 15/16 | 1¾ | 3¾                          | (8) 10d   | (4) 10d | 1420                             | 2785                             | 1290                             | 2210                             |
| LUS210-2  | 18  | 3½               | 9       | 2  | 6                           | (8) 16d   | (6) 16d | 2580                             | 4500                             | 2320                             | 3195                             |
| LUS210-3  | 18  | 4½               | 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, 2022, and reflects information available as of April 1, 2020. This information is updated periodically and should not be relied upon after June 30, 2022. Contact Simpson Strong-Tie for current information and limited warranty or see [strongtie.com](http://strongtie.com).

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T-SPECLUS20 3/20 exp. 6/22

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# HHUS – Double Shear Joist Hangers

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

**Material:** 14 gauge

**Finish:** G90 galvanized

**Design:**

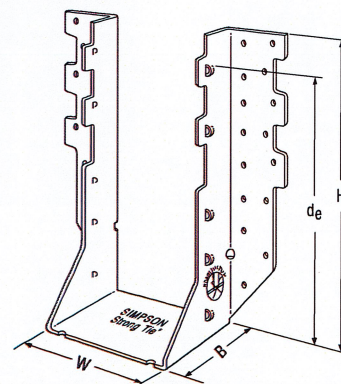
- Factored resistances are in accordance with CSA O86-14.
- Uplift resistances have been increased 15%. No further increase is permitted.
- Wood shear is not considered in the factored resistances given. The specifier must ensure that the joist and header capacities are capable of withstanding these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

**Installation:**

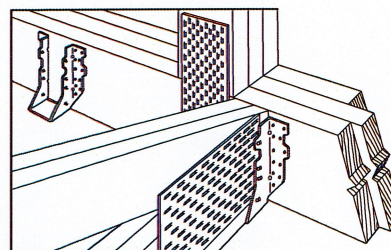
- Use all specified fasteners
- Nails: 16d = 0.162" dia. x 3 1/2" long common wire
- Double shear nails must be driven at an angle through the joist or truss into the header to achieve the table loads
- Not designed for welded or nailer applications

**Options:**

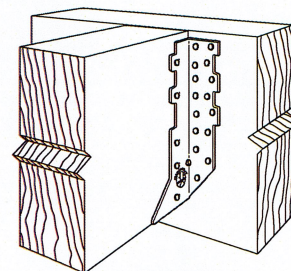
- See current catalogue for options



HHUS410



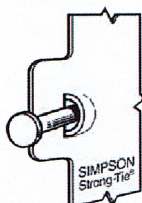
Typical HHUS Installation  
(Truss Designer to provide fastener quantity for connecting multiple members together)



Typical HHUS Installation

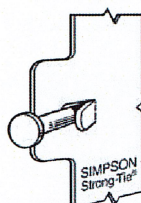
| Model No.   | Ga. | Dimensions (in.) |         |       |                             | Fasteners |          | Factored Resistance (lb.)        |                                  |                                  |                                  |
|-------------|-----|------------------|---------|-------|-----------------------------|-----------|----------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
|             |     | W                | H       | B     | d <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) |
| HHUS26-2    | 14  | 3 5/16           | 5 13/16 | 3     | 3 15/16                     | (14) 16d  | (6) 16d  | 2850                             | 7335                             | 2065                             | 5205                             |
| HHUS28-2    | 14  | 3 5/16           | 7 1/2   | 3     | 6 5/32                      | (22) 16d  | (8) 16d  | 3765                             | 8940                             | 2675                             | 6345                             |
| HHUS210-2   | 14  | 3 5/16           | 9 3/32  | 3     | 8                           | (30) 16d  | (10) 16d | 4670                             | 9660                             | 4235                             | 7000                             |
| HHUS210-3   | 14  | 4 11/16          | 9       | 3     | 7 15/16                     | (30) 16d  | (10) 16d | 4670                             | 9670                             | 4235                             | 6865                             |
| HHUS210-4   | 14  | 6 1/8            | 8 29/32 | 3     | 7 27/32                     | (30) 16d  | (10) 16d | 4670                             | 10155                            | 4235                             | 7210                             |
| HHUS46      | 14  | 3 3/8            | 5 13/32 | 3     | 3 15/16                     | (14) 16d  | (6) 16d  | 2540                             | 7335                             | 2065                             | 5205                             |
| HHUS48      | 14  | 3 3/8            | 7 1/8   | 3     | 6 1/8                       | (22) 16d  | (8) 16d  | 3765                             | 8940                             | 2675                             | 6345                             |
| HHUS410     | 14  | 3 3/8            | 9       | 3     | 8                           | (30) 16d  | (10) 16d | 4670                             | 9855                             | 4235                             | 7000                             |
| HHUS5.50/10 | 14  | 5 1/2            | 9       | 3     | 8                           | (30) 16d  | (10) 16d | 4670                             | 10155                            | 4235                             | 7210                             |
| HHUS7.25/10 | 14  | 7 1/4            | 9       | 3 3/8 | 7 29/32                     | (30) 16d  | (10) 16d | 4670                             | 10155                            | 3370                             | 7210                             |

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

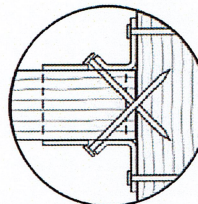


Dome Double Shear Nailing prevents tabs breaking off (available on some models).

U.S. Patent  
5,603,580



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



Double Shear Nailing Top View.



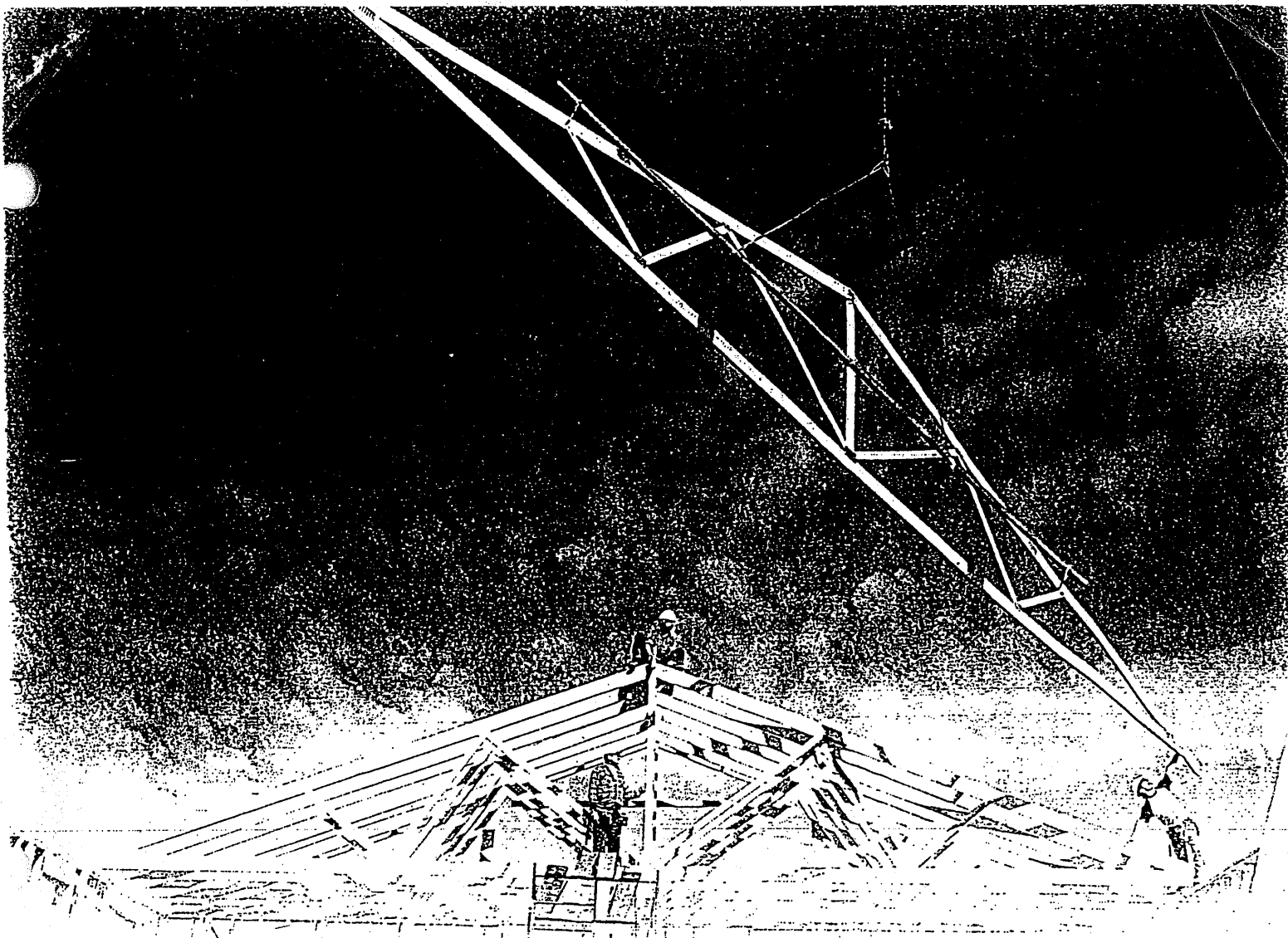
LIMIT  
STATES  
DESIGN

This technical bulletin is effective until June 30, 2022, and reflects information available as of April 1, 2020. This information is updated periodically and should not be relied upon after June 30, 2022. Contact Simpson Strong-Tie for current information and limited warranty or see [strongtie.com](http://strongtie.com).

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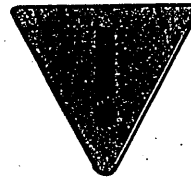
# **Wood Truss Installation**

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

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# Warning



## General

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

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

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

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

## Temporary Erection Bracing

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

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

## Permanent Truss Bracing

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

## Special Design Requirements

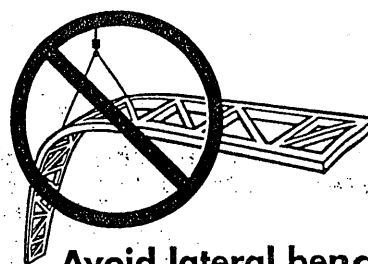
Special design requirements, such as wind bracing, portal bracing, seismic bracing, diaphragms, shear walls, or other load transfer elements and their connections to wood trusses must be considered separately by the building designer, who shall determine size, location, and method of connections for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

# 1

## Unloading & Lifting

### Never handle trusses flat

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

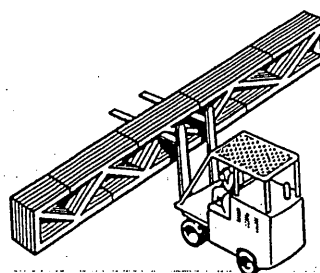
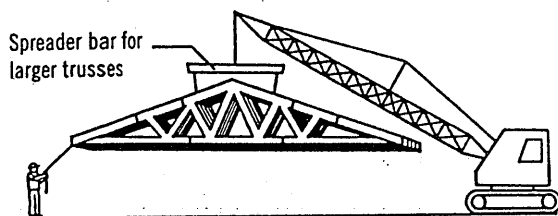


**Avoid lateral bending**

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

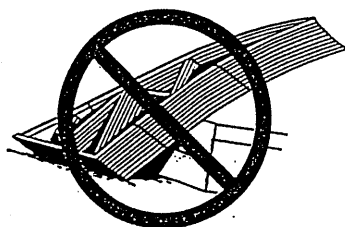
# 2

## Job Site Handling



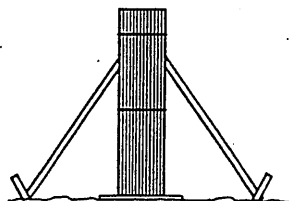
### All trusses should be picked up at the top chords in a vertical position only

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



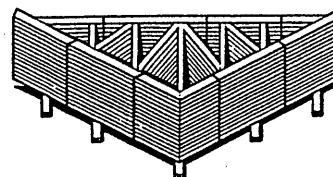
### Do not store unbraced bundles upright

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



### Do not store on uneven ground

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

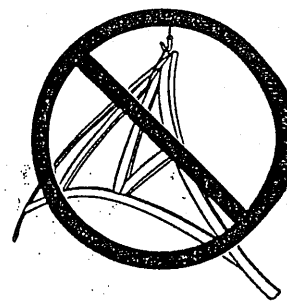


### Care should be exercised when removing banding to avoid damaging trusses.

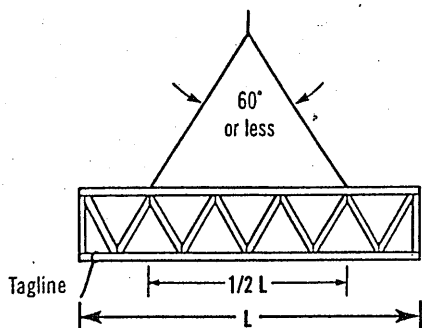
During long term storage, trusses shall be protected from the environment in a manner that provides for adequate ventilation of the trusses. If tarpaulins or other material is used, the ends shall be left open for ventilation. Plastic is not recommended, since it can trap moisture.

### 3 Hoisting

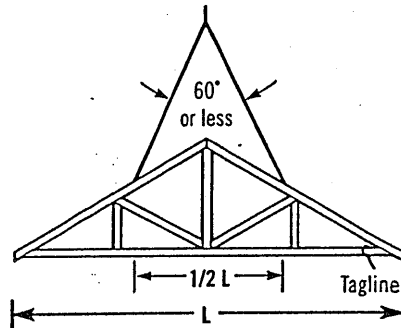
All trusses that are erected one at a time shall be held safely in position by the erection equipment until such time as all necessary bracing has been installed and the ends of the trusses are securely fastened to the building.



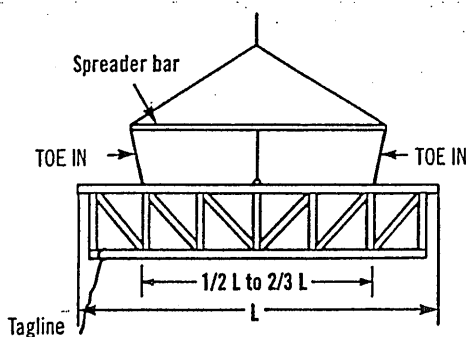
**Avoid lateral bending**



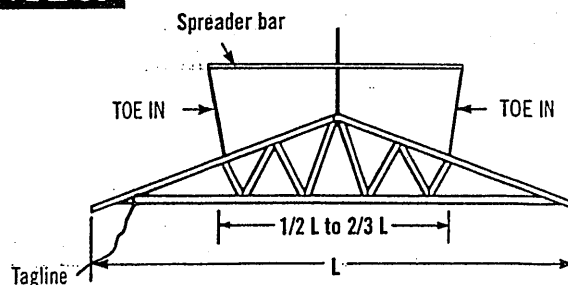
$L \leq 30'$



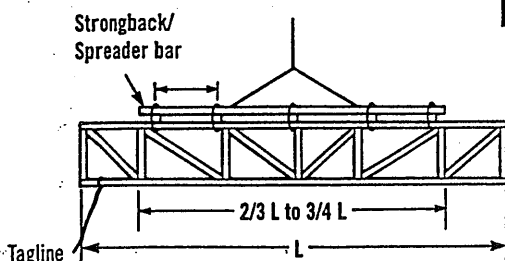
Truss sling is acceptable where these criteria are met.



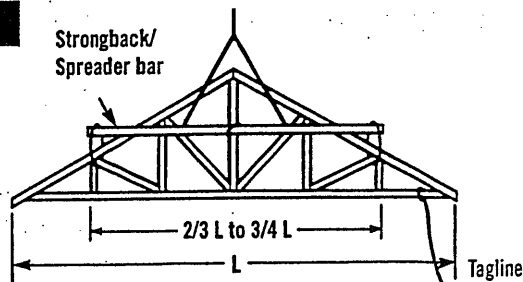
$30' < L \leq 60'$



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



$L > 60'$



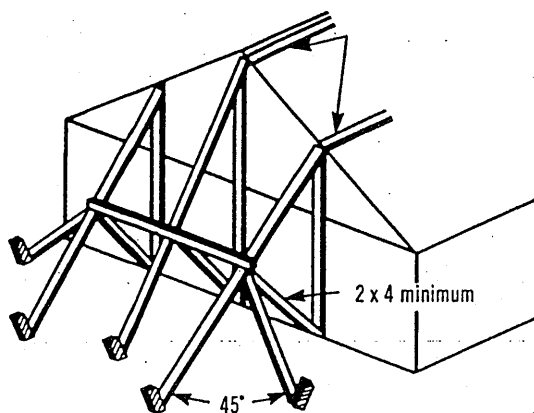
For lifting trusses with spans in excess of 60 feet, it is recommended that a strongback/spreader bar be used as illustrated. The strongback/spreader bar should be attached to the top chord and web members at intervals of approximately 10 feet. Further, the strongback/spreader bar should be at or above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

# 4 Beginning the Erection Process

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

## Ground Brace - Exterior

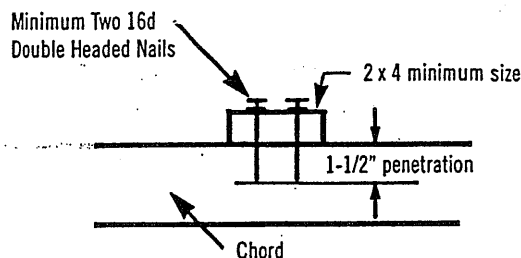
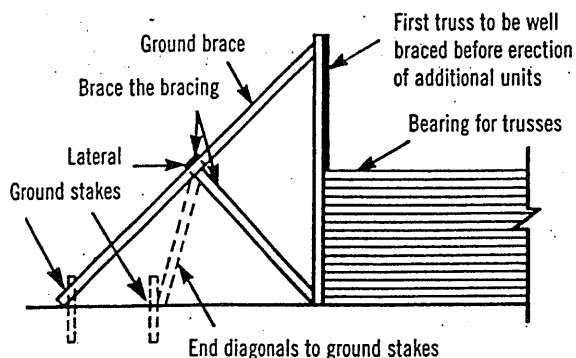
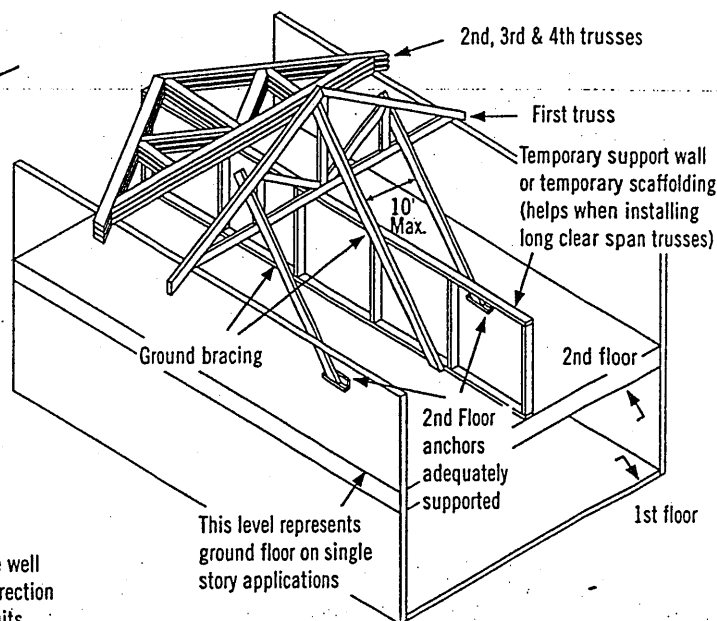
One satisfactory method ties the first unit of trusses off to a series of braces that are attached to a stake driven into the ground and securely anchored. The ground brace itself should be supported as shown below or it is apt to buckle. Additional ground braces in the opposite direction, inside the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



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

## Ground Brace - Interior

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

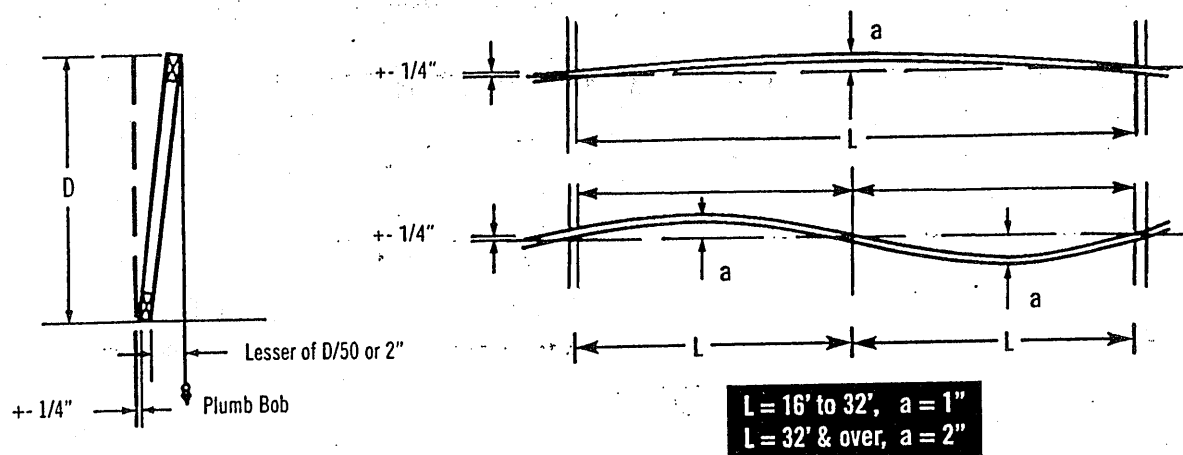


**Inadequate size of bracing material or inadequate fastening is a major cause of erection dominoing.**

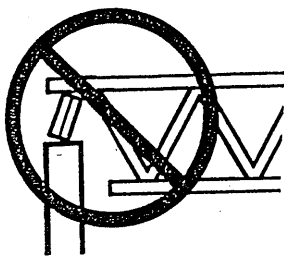
## 5 Erection Tolerance

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

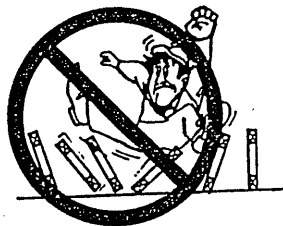
**When sheathing, make sure nails are driven into the top chord of the trusses.**



## 6 Bracing



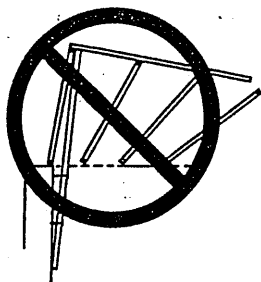
**Do not install trusses on temporarily connected supports**



**Do not walk on unbraced trusses**



**Do not walk on trusses or gable ends lying flat**

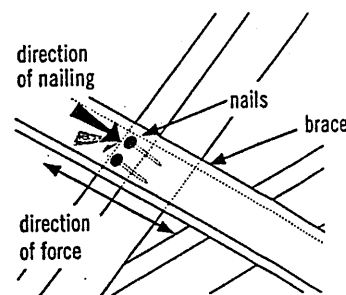


**Nails in withdrawal (parallel to force)**

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

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

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



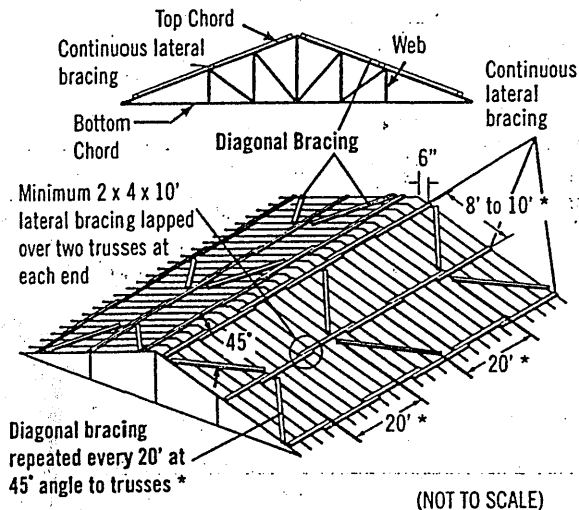
**Well nailed (perpendicular to force)**

# 7 Bracing Requirements for 3 Planes of Roof

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

## 1) Top Chord Plane

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

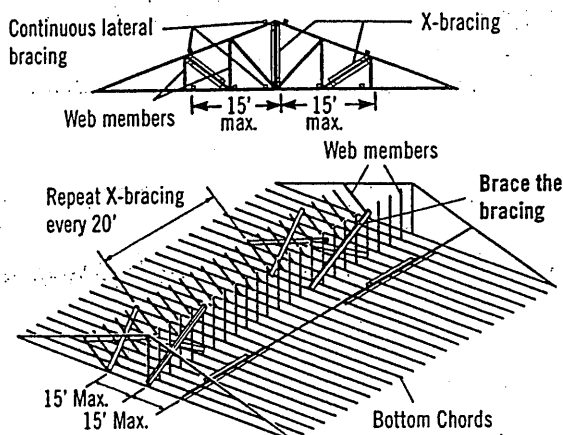


Exact spacing between trusses should be maintained as bracing is installed to avoid the hazardous practice of removing bracing to adjust spacing. This act of "adjusting spacing" can cause trusses to topple if connections are removed at the wrong time.

## 3) Web Member Plane

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

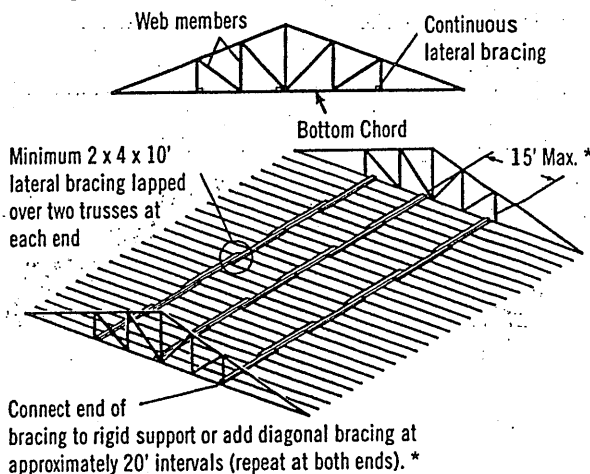
X-bracing should be installed on vertical web members wherever possible, at or near lateral bracing. Plywood or OSB may be substituted for X-bracing.



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

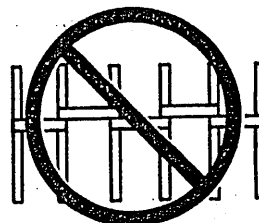
## 2) Bottom Chord Plane

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

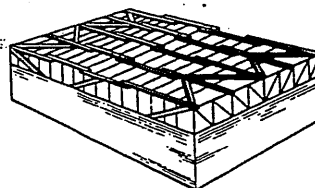


\* Long spans, heavy loads or other spacing configurations may require closer spacing between lateral bracing and closer intervals between diagonals. Consult the building designer or HIB and DSB (Recommended Design Specification for Temporary Bracing of Metal-Plate Connected Wood Trusses) for details.

**Diagonal or cross-bracing is very important!**



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

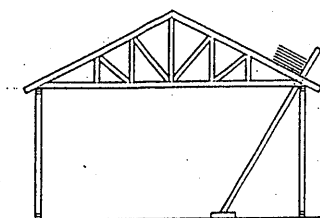
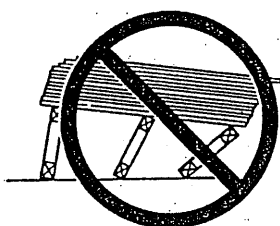


**Bracing requirements using the same principles apply to parallel chord trusses**

# 8 Stacking Materials

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

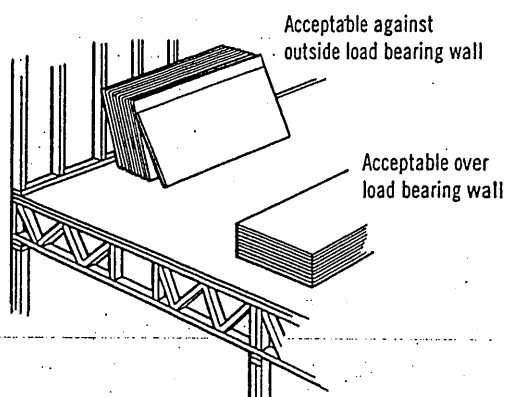
**Never stack materials on unbraced or inadequately braced trusses**



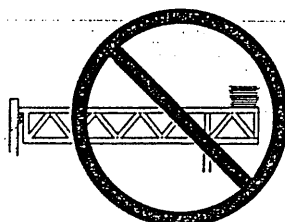
Platform must be rigidly braced

Proper distribution of construction materials is a must during construction.

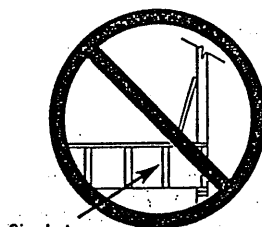
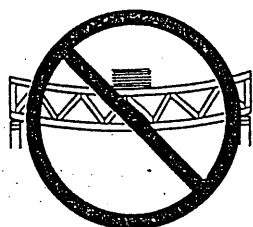
**Never stack materials near a peak**



**Never stack materials on the cantilever of a truss**

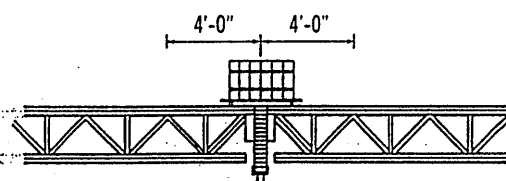


Always stack materials over two or more trusses.



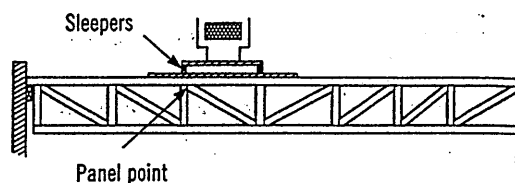
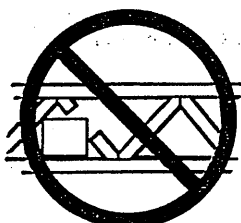
Single truss

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



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

**Never cut any structural member of a truss.**



Sleepers for mechanical equipment should be located at panel points (joints) or over main supporting members, and only on trusses that have been designed for such loads.

## Caution Notes

Errors in building lines and/or dimensions, or errors by others shall be corrected by the contractor or responsible construction trade subcontractor or supplier before erection of trusses begins.

Cutting of nonstructural overhangs is considered a part of normal erection and shall be done by the builder or erection contractor.

Any field modification that involves the cutting, drilling, or relocation of any structural truss member or connector plate shall not be done without the approval of the truss manufacturer or a licensed design professional.

The methods and procedures outlined are intended to ensure that the overall construction techniques employed will put floor and roof trusses safely in place in a completed structure. These recommendations for bracing wood trusses originate from the collective experience of leading technical personnel in the wood truss industry, but must, due to the nature of responsibilities involved, be presented only as a guide for use by a qualified building designer, builder, or erection contractor. Thus, the Wood Truss Council of America expressly disclaims any responsibility for damages arising from the use, application, or reliance on the recommendations and information contained herein.

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