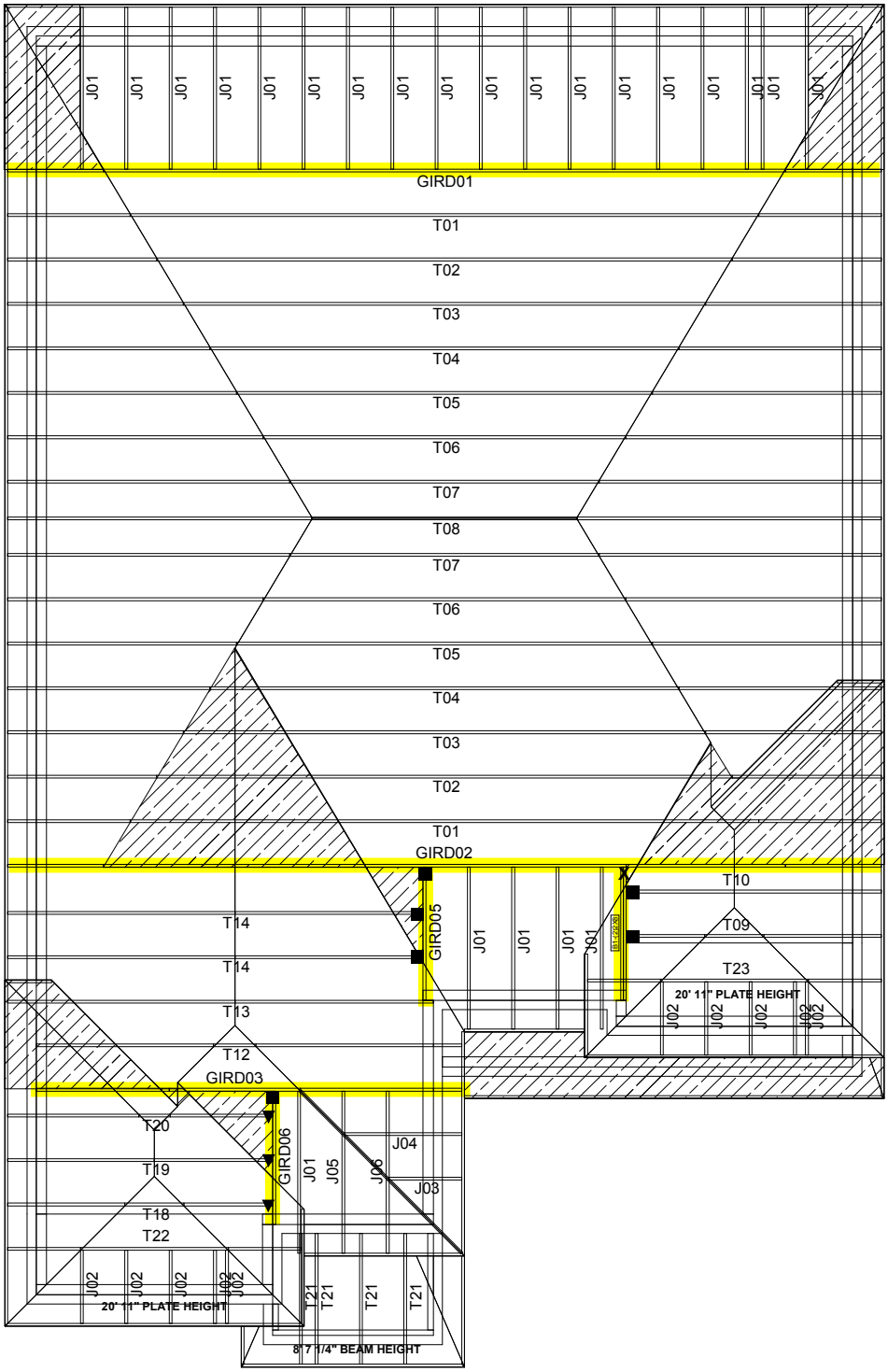
TRUSSES BY KOTT




RECEIVED
TOWN OF MILTON
MAR 29, 2017
JUNIPER 9
BUILDING DIVISION

TOWN OF MILTON
PLANNING AND DEVELOPMENT
JUNIPER 9 MODEL

BUILDING: REVIEWED
SCOTT SHERRIFFS — MAR 30, 2017
PLANS EXAMINER — DATE

Neither the issuance of a permit nor carrying out of inspections by the Town of Milton relives the owner from full responsibility for compliance with the provisions of the Ontario Building Code Act and the Ontario Building Code, both as amended, as well as other applicable statutes and regulations of the Province on Ontario, By-laws of the Region of Halton and Town of Milton

CONVENTIONAL FRAMING BY OTHERS

ALL CONVENTIONAL FRAMING TO CONFORM WITH PART 9 OF THE O.B.C
ROOF RAFTERS THAT CROSS MEET OVER TRUSSES TO BE 2x4 S.P.F. @ 24"O/C WITH A 2x4 VERTICAL POST TO THE TRUSS UNDERNEATH EACH CROSS POINT. VERTICAL POST LONGER THAN 6' TO HAVE LATERAL BRACING SO THAT THE DISTANCE BETWEEN END POINT AND BETWEEN ROWS OF BRACING DOES NOT EXCEED 6'.

HANGER LEGEND:

▼ LUS24 ■ LJS26DS
● HGUS26 ✕ HGUS26-2

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

Model: **JUNIPER 9 EL 1**
Customer: GREENPARK
Project: LECCO RIDGE
Location: MILTON
Date: 10/26/2016 Drawn by: BB

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

## *RESPONSIBILITIES*

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

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

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

### *USE AND OCCUPANCY*

- The building is of the type indicated on the drawing

### *LOADING*

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

### *HANDLING, INSTALLATION AND BRACING*

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

### *SUPPORTS*

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

### *DIMENSIONS*

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

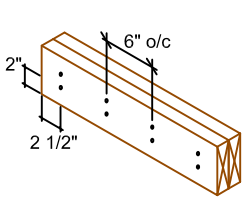
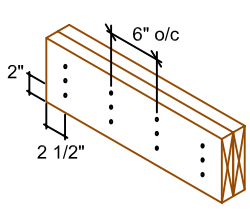
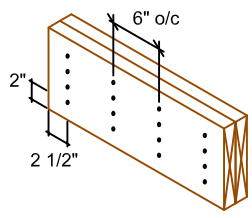
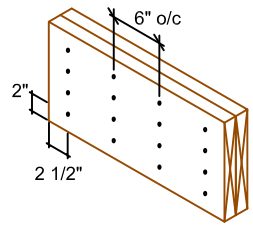
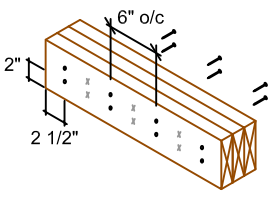
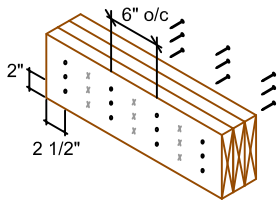
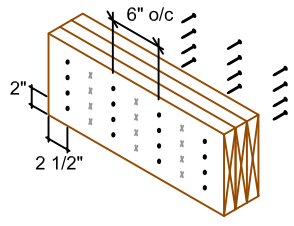
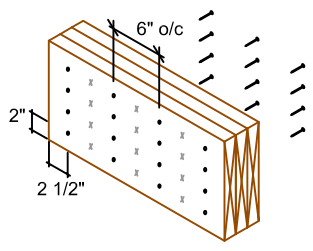
WHERE CONTINUOUS LATERAL BRACING IS REQUIRED FOR WEBS BUT CAN NOT BE PROVIDED SUBSTITUTE EACH WITH ONE SPF #2 2" X 4" T-BRACE COVERING 90% OF WEB LENGTH AND FASTENED TO EDGE OF WEB USING 3 1/4" SPIRAL NAILS @ 6" C/C



01/29/2013

# MULTIPLE MEMBER CONNECTIONS

## Conventional Connections (for uniform distributed loads)

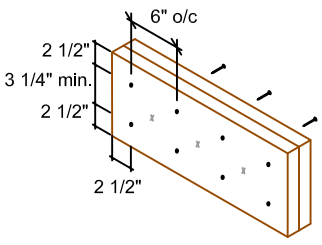
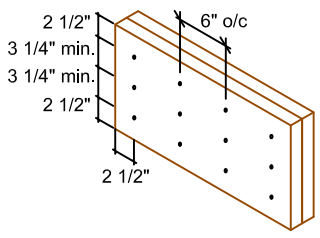
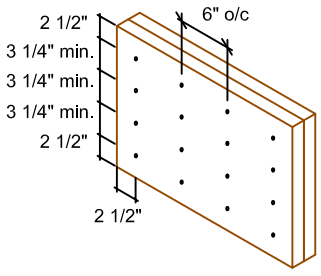
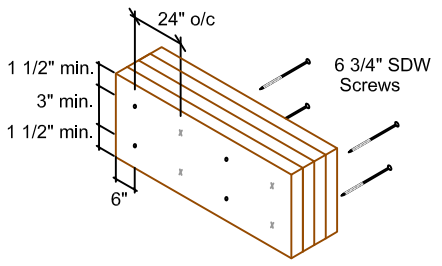
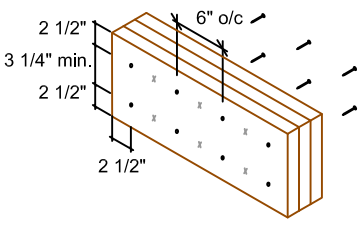
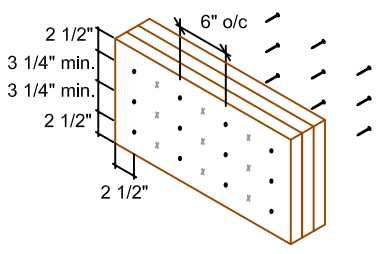
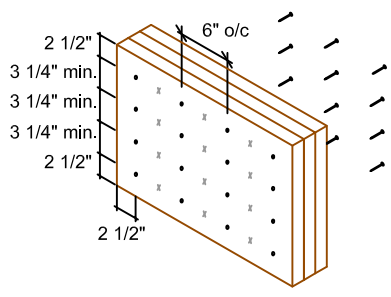
| | 2x6 | 2x8 | 2x10 | 2x12 |
|---|---|---|---|---|
| 2-ply |  |  |  |  |
| 3-ply |  |  |  |  |



**Conventional connection notes:**

-Nails to be 3" 10d spiral wire nails.
-Nails to be located a minimum of 2" from the top and bottom of the member. Start all nails a minimum of 2 1/2" in from ends.
-Number of rows and spacing as per details shown, unless noted otherwise.
- "X" represents nail driven from the opposite side.

## LVL Connections (for uniform distributed loads)

| | 9 1/2" LVL | 11 7/8" - 14" LVL | 16"-18" LVL | 4-ply (Top load only) |
|---|---|---|---|---|
| 2-ply |  |  |  |  |
| 3-ply |  |  |  | |

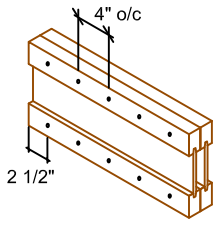
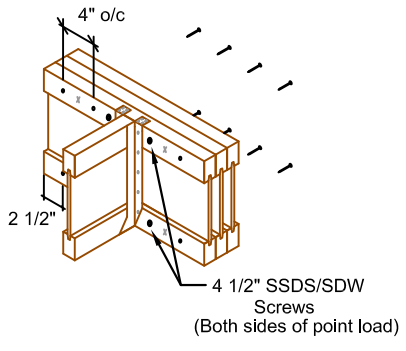
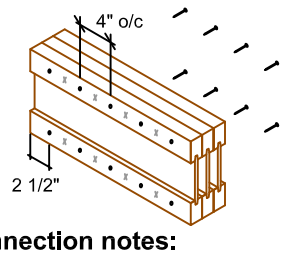


**For side-loaded 4-ply LVL Connections, please consult the engineering calculation page for the component and the Nascor layout**

**LVL connection notes:**

-Nails to be 3 1/2" spiral wire nails.
-Nails to be located a minimum of 2 1/2" from the top and bottom of the member. Start all nails a minimum of 2 1/2" in from ends.
-Minimum 3 1/4" spacing between rows.
-Number of rows and spacing as per details shown, unless noted otherwise.
- "X" represents nail or screw driven from the opposite side.

## Vertical I-Joist Connections (for uniform distributed loads)

| | 9 1/2" - 11 7/8" I-Joist | 3-ply I-Joist w/ point load (Joist Hanger) |
|---|---|---|
| 2-ply |  |  |
| 3-ply |  | |



**Vertical I-Joist connection notes:**

-Nails to be 3" spiral wire nails.
-Nails to be located at centre of top and bottom flanges. Start all nails a minimum of 2 1/2" in from ends.
-Number of rows and spacing as per details shown, unless noted otherwise.
- "X" represents nail driven from the opposite side.



**MULTI -PLY CONNECTION DETAILS**

*Date: November 30, 2016*

*Scale: NTS*

KOTT
3228 Moodie Drive
Ottawa, ON
K2H 7V1
Ph: 613-838-2775
Fx: 613-838-4751

CS Beam 4.11.26.1
kmBeamEngine 4.11.26.1
Materials Database 1516

## Member Data B1

**Description:**

Standard Load:
Snow Load: 30 PLF
Dead Load: 15 PLF

Building Type: Residential

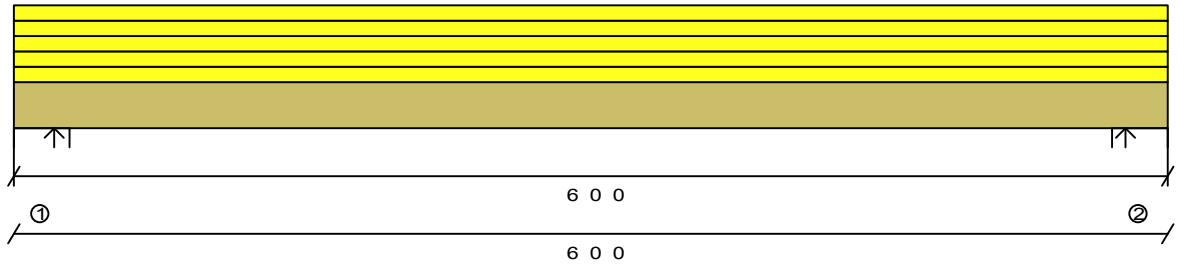
Member Type: Beam
Top Lateral Bracing: Continuous
Bottom Lateral Bracing: Continuous
Moisture Condition: Dry
Deflection Criteria: L/360 live, L/240 total 0.720" max. LL
Deck Connection: Nailed
Filename: Beam1
Importance Category: Normal (Part 9)

Application: Roof
Slope: 0.00 / 12

Building Code: OBC-2012
Member Weight: 3.9 PLF

## Other Loads

| Type (Description) | Side | Begin | End | Trib. Width | Other Start | Other End | Dead Start | Dead End | Category |
|---|---|---|---|---|---|---|---|---|---|
| Additional Uniform (PLF) | Top | 0' 0.00" | 6' 0.00" | | 0 | | 58 | | Live |
| Additional Uniform (PLF) | Top | 0' 0.00" | 6' 0.00" | | 157 | | 0 | | Snow |
| Additional Uniform (PLF) | Top | 0' 0.00" | 6' 0.00" | | 0 | | 10 | | Live |
| Additional Uniform (PLF) | Top | 0' 0.00" | 6' 0.00" | | 23 | | 0 | | Snow |
| Additional Uniform (PLF) | Top | 0' 0.00" | 6' 0.00" | | 0 | | 10 | | Live |




## Bearings and Factored Reactions

| | Location | Type | Material | Input Length | Min Required | Gravity Reaction | Gravity Uplift |
|---|---|---|---|---|---|---|---|
| 1 | 0' 0.000" | Wall | Steel | 3.500" | 1.500" | 1214# | -- |
| 2 | 6' 0.000" | Wall | Steel | 3.500" | 1.500" | 1214# | -- |

### Maximum Unfactored Load Case Reactions

Used for applying point loads (or line loads) to carrying members

| | Snow | Dead |
|---|---|---|
| 1 | 585# | 270# |
| 2 | 585# | 270# |

Design spans
5' 6.750"

LICENSED PROFESSIONAL ENGINEER
PM TREVISAN
100136551
March 23rd, 2017
PROVINCE OF ONTARIO

## Product: S-P-F No1/No2 2x8 2 ply

**PASSES DESIGN CHECKS**

**Design assumes continuous lateral bracing along the top chord.**
**Design assumes continuous lateral bracing along the bottom chord.**

## Limit States Design

| | Actual | Limit | Capacity | Location | Loading |
|---|---|---|---|---|---|
| Positive Moment | 1689.# | 4049.# | 41% | 3' | Total Load 1.25D+1.00*1.5S |
| Shear | 950.# | 2271.# | 41% | 5.22' | Total Load 1.25D+1.00*1.5S |
| Max. Reaction | 1214.# | 6457.# | 18% | 0' | Total Load 1.25D+1.00*1.5S |
| TL Deflection | 0.0496" | 0.2781" | L/999+ | 3' | Total Load D+S |
| LL Deflection | 0.0340" | 0.1854" | L/999+ | 3' | Total Load S |

(Actual is factored load effects, Limit is design resistance)
Bearing length from point load of top loads beams assumed to be 3.50"
Control: Shear
Manufacturer's installation guide MUST be consulted for multi-ply connection details and alternatives

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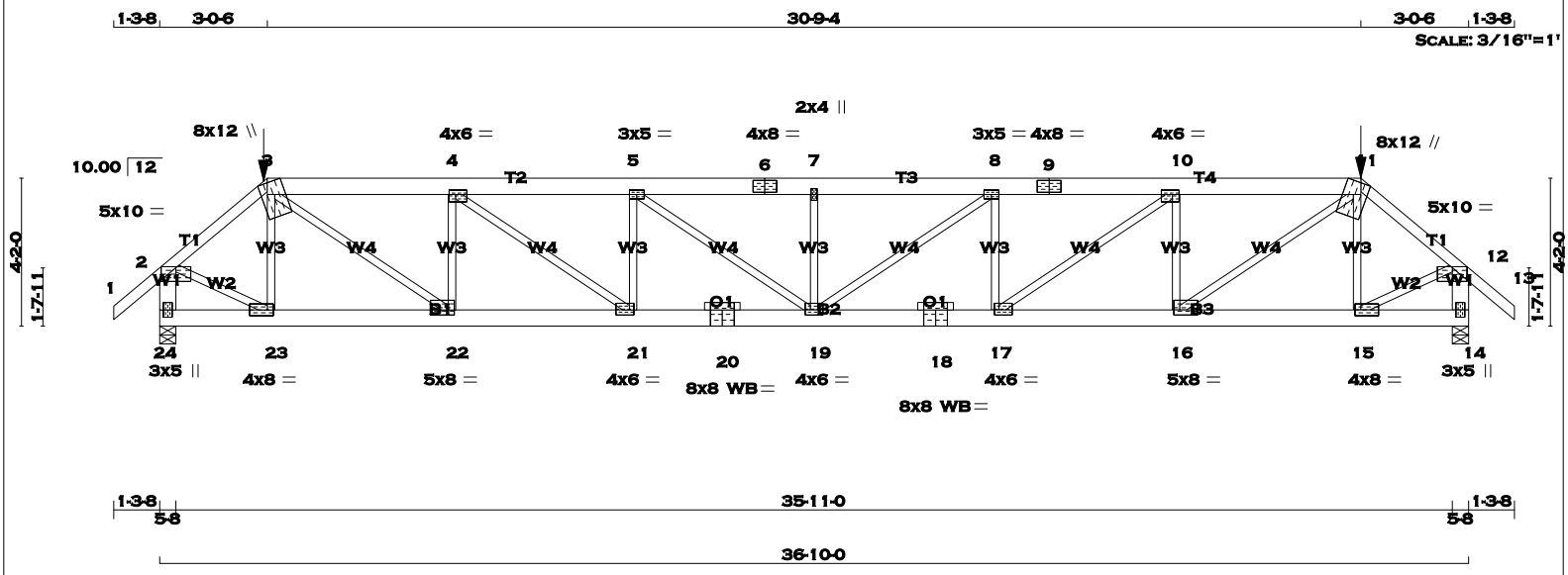
BUILDING DIVISION

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



KOTT




TOTAL WEIGHT = 192 lb [M]

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 3 | 2x4 | DRY | No.2 | SPF |
| 3 - 6 | 2x6 | DRY | No.2 | SPF |
| 6 - 9 | 2x6 | DRY | No.2 | SPF |
| 9 - 11 | 2x6 | DRY | No.2 | SPF |
| 11 - 13 | 2x4 | DRY | No.2 | SPF |
| 24 - 2 | 2x6 | DRY | No.2 | SPF |
| 14 - 12 | 2x6 | DRY | No.2 | SPF |
| 24 - 20 | 2x6 | DRY | 2100F 1.8E | SPF |
| 20 - 18 | 2x6 | DRY | 2100F 1.8E | SPF |
| 18 - 14 | 2x6 | DRY | 2100F 1.8E | SPF |
| ALL WEBS EXCEPT | 2x3 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 2 | TMVW-p | MT20 | 5.0 | 10.0 | Edge | |
| 3 | TTWW+m | MT20 | 8.0 | 12.0 | Edge | 3.50 |
| 4 | TMWW-t | MT20 | 4.0 | 6.0 | 1.50 | 2.25 |
| 5 | TMWW-t | MT20 | 3.0 | 5.0 | | |
| 6 | TS-t | MT20 | 4.0 | 8.0 | | |
| 7 | TMW+w | MT20 | 2.0 | 4.0 | | |
| 8 | TMWW-t | MT20 | 3.0 | 5.0 | | |
| 9 | TS-t | MT20 | 4.0 | 8.0 | | |
| 10 | TMWW-t | MT20 | 4.0 | 6.0 | 1.50 | 2.25 |
| 11 | TTWW+m | MT20 | 8.0 | 12.0 | Edge | 3.50 |
| 12 | TMVW-p | MT20 | 5.0 | 10.0 | Edge | |
| 14 | BMV1+p | MT20 | 3.0 | 5.0 | | |
| 15 | BMWW-t | MT20 | 4.0 | 8.0 | 2.00 | 2.00 |
| 16 | BMWW-t | MT20 | 5.0 | 8.0 | 1.75 | 2.00 |
| 17 | BMWW-t | MT20 | 4.0 | 6.0 | 1.75 | 1.50 |
| 18 | BS-t | MT20 | 8.0 | 8.0 | | |
| 19 | BMWWW-t | MT20 | 4.0 | 6.0 | 1.75 | 3.00 |
| 20 | BS-t | MT20 | 8.0 | 8.0 | | |
| 21 | BMWW-t | MT20 | 4.0 | 6.0 | 1.75 | 1.50 |
| 22 | BMWW-t | MT20 | 5.0 | 8.0 | 1.75 | 2.00 |
| 23 | BMWW-t | MT20 | 4.0 | 8.0 | 2.00 | 2.00 |
| 24 | BMV1+p | MT20 | 3.0 | 5.0 | | |

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

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

WB - INDICATES BLOCKING REQUIRED


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

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 24 | 3369 | 0 | 3369 | 0 | 0 | 5-8 | 5-8 |
| 14 | 3369 | 0 | 3369 | 0 | 0 | 5-8 | 5-8 |

**UNFACTORED REACTIONS**

| JT | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 24 | 2363 | 1662 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 700 / 0 | 0 / 0 |
| 14 | 2363 | 1662 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 700 / 0 | 0 / 0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 24, 14

**BRACING**

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 2.54 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT. OR RIGID CEILING DIRECTLY APPLIED.

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

**LOADING**

TOTAL LOAD CASES: (4)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD LC1 FROM | TO | MAX (PLF) CSI (LC) | MAX. UNBRAC LENGTH | WEBS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|
| 1- 2 | 0 / 34 | -77.3 | -77.3 | 0.12 (1) | 10.00 | 23- 3 | -787 / 0 | 0.19 (1) |
| 2- 3 | -3346 / 0 | -77.3 | -77.3 | 0.31 (1) | 3.56 | 3-22 | 0 / 3995 | 0.99 (1) |
| 3- 4 | -5803 / 0 | -145.8 | -145.8 | 0.53 (1) | 3.22 | 22- 4 | -2201 / 0 | 0.54 (1) |
| 4- 5 | -7657 / 0 | -145.8 | -145.8 | 0.68 (1) | 2.67 | 4-21 | 0 / 2293 | 0.57 (1) |
| 5- 6 | -8265 / 0 | -145.8 | -145.8 | 0.72 (1) | 2.54 | 21- 5 | -1167 / 0 | 0.29 (1) |
| 6- 7 | -8265 / 0 | -145.8 | -145.8 | 0.72 (1) | 2.54 | 5-19 | 0 / 752 | 0.19 (1) |
| 7- 8 | -8265 / 0 | -145.8 | -145.8 | 0.72 (1) | 2.54 | 19- 7 | -741 / 0 | 0.18 (1) |
| 8- 9 | -7657 / 0 | -145.8 | -145.8 | 0.68 (1) | 2.67 | 19- 8 | 0 / 752 | 0.19 (1) |
| 9-10 | -7657 / 0 | -145.8 | -145.8 | 0.68 (1) | 2.67 | 17- 8 | -1167 / 0 | 0.29 (1) |
| 10-11 | -5803 / 0 | -145.8 | -145.8 | 0.53 (1) | 3.22 | 17-10 | 0 / 2293 | 0.57 (1) |
| 11-12 | -3346 / 0 | -77.3 | -77.3 | 0.31 (1) | 3.56 | 16-10 | -2201 / 0 | 0.54 (1) |
| 12-13 | 0 / 34 | -77.3 | -77.3 | 0.12 (1) | 10.00 | 16-11 | 0 / 3995 | 0.99 (1) |
| 24- 2 | -3361 / 0 | 0.0 | 0.0 | 0.25 (1) | 5.74 | 15-11 | -787 / 0 | 0.19 (1) |
| 14-12 | -3361 / 0 | 0.0 | 0.0 | 0.25 (1) | 5.74 | 2-23 | 0 / 2767 | 0.69 (1) |
| | | | | | | 15-12 | 0 / 2767 | 0.69 (1) |
| 24-23 | 0 / 0 | -33.0 | -33.0 | 0.06 (1) | 10.00 | | | |
| 23-22 | 0 / 2557 | -33.0 | -33.0 | 0.19 (1) | 10.00 | | | |
| 22-21 | 0 / 5803 | -33.0 | -33.0 | 0.37 (1) | 10.00 | | | |
| 21-20 | 0 / 7657 | -33.0 | -33.0 | 0.47 (1) | 10.00 | | | |
| 20-19 | 0 / 7657 | -33.0 | -33.0 | 0.47 (1) | 10.00 | | | |
| 19-18 | 0 / 7657 | -33.0 | -33.0 | 0.47 (1) | 10.00 | | | |
| 18-17 | 0 / 7657 | -33.0 | -33.0 | 0.47 (1) | 10.00 | | | |
| 17-16 | 0 / 5803 | -33.0 | -33.0 | 0.37 (1) | 10.00 | | | |
| 16-15 | 0 / 2557 | -33.0 | -33.0 | 0.19 (1) | 10.00 | | | |
| 15-14 | 0 / 0 | -33.0 | -33.0 | 0.06 (1) | 10.00 | | | |

FACTORED CONCENTRATED LOADS (LBS)

| JT | LOC. | LC1 | MAX- | MAX+ | FACE | DIR. | TYPE |
|---|---|---|---|---|---|---|---|
| 3 | 3-0-6 | -176 | -176 | --- | FRONT | VERT | TOTAL |
| 11 | 33-9-10 | -176 | -176 | --- | FRONT | VERT | TOTAL |

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MAR 29, 2017
JUNIPER 9
BUILDING DIVISION

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

**DESIGN CRITERIA**

SPECIFIED LOADS:

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

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

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

GIRDER TYPE: CPrimeHip
SIDE SETBACK = 3-0-6
END SETBACK = 6-0-0
END WALL WIDTH = 5-8
CORNER FRAMING TYPE: CONVENTIONAL
END JACK TYPE: CONVENTIONAL
APPLIED TO FRONT SIDE
- ADDT'L LOADS BASED ON 55 % OF GSL.

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

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

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

ALLOWABLE DEFL.(LL)= L/360 (1.23")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.43")
ALLOWABLE DEFL.(TL)= L/360 (1.23")
CALCULATED VERT. DEFL.(TL) = L/ 586 (0.75")

CSI: TC=0.72 (5-7:1) , BC=0.47 (17-19:1) , WB=0.99 (3-22:1) , SSI=0.29 (3-4:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

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

NAIL VALUES

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

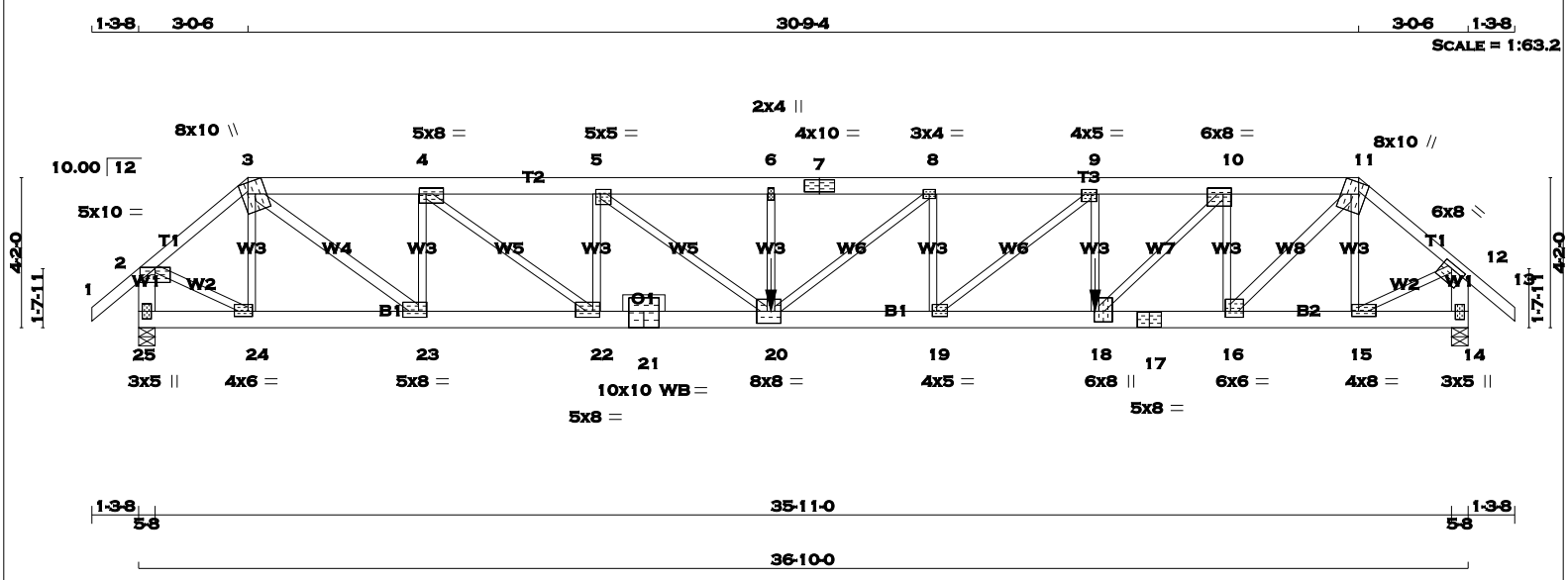
PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (22) (INPUT = 0.90 )
JSI METAL= 0.94 (20) (INPUT = 1.00 )

KOTT

CONTINUED ON PAGE 2




**LUMBER**
N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 3 | 2x4 | DRY | 1650F 1.5E | SPF |
| 3 - 7 | 2x6 | DRY | 2100F 1.8E | SPF |
| 7 - 11 | 2x6 | DRY | 2100F 1.8E | SPF |
| 11 - 13 | 2x4 | DRY | 1650F 1.5E | SPF |
| 25 - 2 | 2x6 | DRY | No.2 | SPF |
| 14 - 12 | 2x6 | DRY | No.2 | SPF |
| 25 - 21 | 2x6 | DRY | 2100F 1.8E | SPF |
| 21 - 17 | 2x6 | DRY | 2100F 1.8E | SPF |
| 17 - 14 | 2x6 | DRY | 2100F 1.8E | SPF |
| ALL WEBS EXCEPT | 2x3 | DRY | No.2 | SPF |
| 3 - 23 | 2x4 | DRY | No.2 | SPF |
| 16 - 11 | 2x4 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 2 | TMVW-p | MT20 | 5.0 | 10.0 | Edge | |
| 3 | TTWW+m | MT20 | 8.0 | 10.0 | 4.50 | 3.50 |
| 4 | TMWW-t | MT20 | 5.0 | 8.0 | 2.00 | 2.25 |
| 5 | TMWW-t | MT20 | 5.0 | 5.0 | 1.50 | 1.50 |
| 6 | TMW+w | MT20 | 2.0 | 4.0 | | |
| 7 | TS-t | MT20 | 4.0 | 10.0 | | |
| 8 | TMWW-t | MT20 | 3.0 | 4.0 | | |
| 9 | TMWW-t | MT20 | 4.0 | 5.0 | 1.50 | 1.75 |
| 10 | TMWW-t | MT20 | 6.0 | 8.0 | 2.00 | 2.75 |
| 11 | TTWW+m | MT20 | 8.0 | 10.0 | Edge | 4.75 |
| 12 | TMVW-t | MT20 | 6.0 | 8.0 | 1.50 | 3.25 |
| 14 | BMV1+p | MT20 | 3.0 | 5.0 | 2.75 | 1.50 |
| 15 | BMWW-t | MT20 | 4.0 | 8.0 | 1.75 | 2.25 |
| 16 | BMWW-t | MT20 | 6.0 | 6.0 | 2.00 | 1.75 |
| 17 | BS-t | MT20 | 5.0 | 8.0 | | |
| 18 | BMWW+t | MT20 | 6.0 | 8.0 | 3.50 | 1.50 |
| 19 | BMWW-t | MT20 | 4.0 | 5.0 | 1.75 | 1.50 |
| 20 | BMWWW-t | MT20 | 8.0 | 8.0 | 4.00 | 3.50 |
| 21 | BS-t | MT20 | 10.0 | 10.0 | | |
| 22 | BMWW-t | MT20 | 5.0 | 8.0 | 2.00 | 2.25 |
| 23 | BMWW-t | MT20 | 5.0 | 8.0 | 2.00 | 2.75 |
| 24 | BMWW-t | MT20 | 4.0 | 6.0 | 1.75 | 1.50 |
| 25 | BMV1+p | MT20 | 3.0 | 5.0 | | |

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

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


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

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 25 | 3214 | 0 | 3214 | 0 | 0 | 5-8 | 5-8 |
| 14 | 3830 | 0 | 3830 | 0 | 0 | 5-8 | 5-8 |

**UNFACTORED REACTIONS**

| JT | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 25 | 2253 | 1590 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 663 / 0 | 0 / 0 |
| 14 | 2685 | 1892 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 793 / 0 | 0 / 0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 25, 14

**BRACING**
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.19 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT. OR RIGID CEILING DIRECTLY APPLIED.

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

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

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD FROM | TO | LC1 (PLF) | MAX CSI (LC) | MAX. UNBRAC LENGTH | WEBS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|---|
| 1- 2 | 0 / 34 | -77.3 | -77.3 | 0.10 (1) | | 10.00 | 24- 3 | -856 / 0 | 0.21 (1) |
| 2- 3 | -3179 / 0 | -77.3 | -77.3 | 0.18 (1) | | 4.29 | 3-23 | 0 / 4304 | 0.76 (1) |
| 3- 4 | -5833 / 0 | -77.3 | -77.3 | 0.15 (1) | | 4.37 | 23- 4 | -2545 / 0 | 0.62 (1) |
| 4- 5 | -8567 / 0 | -77.3 | -77.3 | 0.24 (1) | | 3.65 | 4-22 | 0 / 3448 | 0.85 (1) |
| 5- 6 | -10695 / 0 | -77.3 | -77.3 | 0.38 (1) | | 3.19 | 22- 5 | -2011 / 0 | 0.49 (1) |
| 6- 7 | -10695 / 0 | -77.3 | -77.3 | 0.37 (1) | | 3.19 | 5-20 | 0 / 2683 | 0.66 (1) |
| 7- 8 | -10695 / 0 | -77.3 | -77.3 | 0.37 (1) | | 3.19 | 20- 6 | -316 / 0 | 0.08 (1) |
| 8- 9 | -10405 / 0 | -77.3 | -77.3 | 0.35 (1) | | 3.25 | 20- 8 | 0 / 377 | 0.09 (1) |
| 9-10 | -8953 / 0 | -77.3 | -77.3 | 0.25 (1) | | 3.56 | 19- 8 | -631 / 0 | 0.15 (1) |
| 10-11 | -6159 / 0 | -77.3 | -77.3 | 0.13 (1) | | 4.29 | 19- 9 | 0 / 1883 | 0.47 (1) |
| 11-12 | -3828 / 0 | -77.3 | -77.3 | 0.21 (1) | | 3.95 | 18- 9 | -1457 / 0 | 0.36 (1) |
| 12-13 | 0 / 34 | -77.3 | -77.3 | 0.10 (1) | | 10.00 | 18-10 | 0 / 3983 | 0.99 (1) |
| 25- 2 | -3204 / 0 | 0.0 | 0.0 | 0.24 (1) | | 5.87 | 16-10 | -3202 / 0 | 0.78 (1) |
| 14-12 | -3813 / 0 | 0.0 | 0.0 | 0.28 (1) | | 5.43 | 16-11 | 0 / 4629 | 0.82 (1) |
| | | | | | | | 15-11 | -1080 / 0 | 0.26 (1) |
| 25-24 | 0 / 0 | -17.5 | -17.5 | 0.02 (4) | | 10.00 | 2-24 | 0 / 2629 | 0.65 (1) |
| 24-23 | 0 / 2426 | -17.5 | -17.5 | 0.15 (1) | | 10.00 | 15-12 | 0 / 3166 | 0.78 (1) |
| 23-22 | 0 / 5833 | -17.5 | -17.5 | 0.34 (1) | | 10.00 | | | |
| 22-21 | 0 / 8567 | -17.5 | -17.5 | 0.52 (1) | | 10.00 | | | |
| 21-20 | 0 / 8567 | -17.5 | -17.5 | 0.52 (1) | | 10.00 | | | |
| 20-19 | 0 / 10405 | -101.5 | -101.5 | 0.66 (1) | | 10.00 | | | |
| 19-18 | 0 / 8953 | -101.5 | -101.5 | 0.58 (1) | | 10.00 | | | |
| 18-17 | 0 / 6159 | -17.5 | -17.5 | 0.37 (1) | | 10.00 | | | |
| 17-16 | 0 / 6159 | -17.5 | -17.5 | 0.37 (1) | | 10.00 | | | |
| 16-15 | 0 / 2920 | -17.5 | -17.5 | 0.17 (1) | | 10.00 | | | |
| 15-14 | 0 / 0 | -17.5 | -17.5 | 0.01 (4) | | 10.00 | | | |

FACTORED CONCENTRATED LOADS (LBS)

| JT | LOC. | LC1 | MAX- | MAX+ | FACE | DIR. | TYPE |
|---|---|---|---|---|---|---|---|
| 18 | 26-6-0 | -1218 | -1218 | --- | FRONT | VERT | TOTAL |
| 20 | 17-6-4 | -1364 | -1364 | --- | FRONT | VERT | TOTAL |



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

**DESIGN CRITERIA**

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

SPECIFIED LOADS:

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

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

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

GIRDER TYPE: CStdGirder
START DISTANCE = 17-6-4
START SPAN CARRIED = 6-0-0
END DISTANCE = 26-6-0
END SPAN CARRIED = 6-0-0
END WALL WIDTH = 5-8
APPLIED TO FRONT SIDE OF BOTTOM CHORD.
- ADDT'L LOADS BASED ON 55 % OF GSL.

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

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

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

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

ALLOWABLE DEFL.(LL)= L/360 (1.23")
CALCULATED VERT. DEFL.(LL) = L/ 968 (0.46")
ALLOWABLE DEFL.(TL)= L/360 (1.23")
CALCULATED VERT. DEFL.(TL) = L/ 550 (0.80")

CSI: TC=0.38 (5-6:1) , BC=0.66 (19-20:1) , WB=0.99 (10-18:1) , SSI=0.19 (19-20:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

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

NAIL VALUES

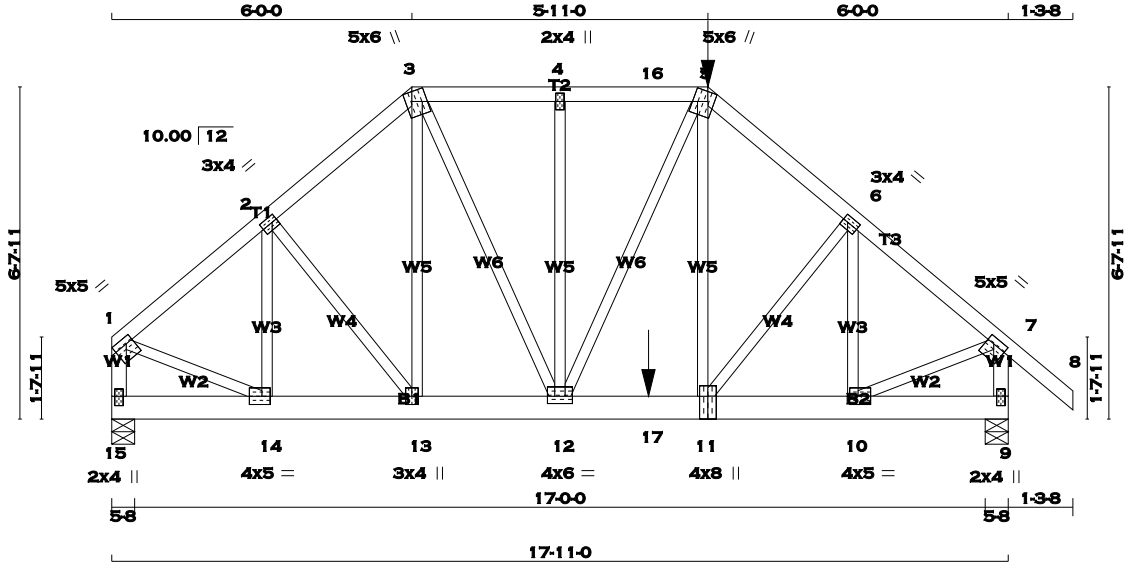
| PLATE | GRIP(DRY) (PSI) MAX | MIN | SHEAR (PLI) MAX | MIN | SECTION (PLI) MAX | MIN |
|---|---|---|---|---|---|---|
| MT20 | 618 | 354 | 1667 | 822 | 2284 | 1656 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (2) INPUT = 90
JSI METAL= 0.38 (2) (INPUT = 100)

CONTINUED ON PAGE 2




TOTAL WEIGHT = 104 lb [M]

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 3 | 2x4 | DRY | No.2 | SPF |
| 3 - 5 | 2x4 | DRY | No.2 | SPF |
| 5 - 8 | 2x4 | DRY | No.2 | SPF |
| 15 - 1 | 2x4 | DRY | No.2 | SPF |
| 9 - 7 | 2x4 | DRY | No.2 | SPF |
| 15 - 11 | 2x6 | DRY | No.2 | SPF |
| 11 - 9 | 2x6 | DRY | No.2 | SPF |
| ALL WEBS EXCEPT | 2x3 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 1 | TMVW-t | MT20 | 5.0 | 5.0 | 1.50 | 1.75 |
| 2 | TMWW-t | MT20 | 3.0 | 4.0 | 1.50 | 1.25 |
| 3 | TTWW+m | MT20 | 5.0 | 6.0 | 2.25 | 1.50 |
| 4 | TMW+w | MT20 | 2.0 | 4.0 | | |
| 5 | TTWW+m | MT20 | 5.0 | 6.0 | 2.25 | 1.50 |
| 6 | TMWW-t | MT20 | 3.0 | 4.0 | 1.50 | 1.25 |
| 7 | TMVW-t | MT20 | 5.0 | 5.0 | 1.50 | 1.75 |
| 9 | BMV1+p | MT20 | 2.0 | 4.0 | 2.25 | 1.00 |
| 10 | BMWW-t | MT20 | 4.0 | 5.0 | 2.00 | 2.00 |
| 11 | BSWW+l | MT20 | 4.0 | 8.0 | Edge | 2.00 |
| 12 | BMWWW-t | MT20 | 4.0 | 6.0 | 1.75 | 3.00 |
| 13 | BMWW+t | MT20 | 3.0 | 4.0 | | |
| 14 | BMWW-t | MT20 | 4.0 | 5.0 | 2.00 | 2.00 |
| 15 | BMV1+p | MT20 | 2.0 | 4.0 | 2.25 | 1.00 |

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

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

**HANGERS NOTES**

1) SPECIAL HANGER(S) OR CONNECTION(S) REQUIRED TO SUPPORT CONCENTRATED LOAD(S) 348.1 lbs FACTORED DOWN AT 11-11-0 ON TOP CHORD, AND 867.8 lbs FACTORED DOWN AT 10-8-12 ON BOTTOM CHORD. DESIGN FOR UNSPECIFIED CONNECTION(S) IS DELEGATED TO THE BUILDING DESIGNER.


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

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 15 | 1367 | 0 | 1367 | 0 | 0 | 5-8 | 5-8 |
| 9 | 1848 | 0 | 1848 | 0 | 0 | 5-8 | 5-8 |

**UNFACTORED REACTIONS**

| JT | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 15 | 958 | 676 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 282 / 0 | 0 / 0 |
| 9 | 1297 | 907 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 390 / 0 | 0 / 0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 15, 9

**BRACING**

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.80 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT. OR RIGID CEILING DIRECTLY APPLIED.

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

**LOADING**

TOTAL LOAD CASES: (4)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) FROM | TO | LC1 | MAX CSI (LC) | MAX. UNBRAC LENGTH | WEBS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|---|
| 1- 2 | -1297 / 0 | -77.3 | -77.3 | 0.14 (1) | 5.49 | | 14- 2 | -359 / 0 | 0.10 (1) |
| 2- 3 | -1377 / 0 | -77.3 | -77.3 | 0.15 (1) | 5.36 | | 2-13 | 0 / 52 | 0.01 (1) |
| 3- 4 | -1381 / 0 | -77.3 | -77.3 | 0.14 (1) | 5.36 | | 13- 3 | -30 / 27 | 0.02 (1) |
| 4-16 | -1382 / 0 | -77.3 | -77.3 | 0.15 (1) | 5.35 | | 3-12 | 0 / 798 | 0.20 (1) |
| 16- 5 | -1382 / 0 | -145.8 | -145.8 | 0.15 (1) | 5.35 | | 12- 4 | -275 / 0 | 0.19 (1) |
| 5- 6 | -1820 / 0 | -77.3 | -77.3 | 0.16 (1) | 4.80 | | 12- 5 | -21 / 0 | 0.02 (1) |
| 6- 7 | -1658 / 0 | -77.3 | -77.3 | 0.15 (1) | 4.99 | | 11- 5 | 0 / 581 | 0.14 (1) |
| 7- 8 | 0 / 34 | -77.3 | -77.3 | 0.12 (1) | 10.00 | | 11- 6 | 0 / 155 | 0.04 (1) |
| 15- 1 | -1333 / 0 | 0.0 | 0.0 | 0.15 (1) | 6.97 | | 10- 6 | -491 / 0 | 0.13 (1) |
| 9- 7 | -1781 / 0 | 0.0 | 0.0 | 0.20 (1) | 6.21 | | 1-14 | 0 / 1084 | 0.27 (1) |
| | | | | | | | 10- 7 | 0 / 1381 | 0.34 (1) |
| 15-14 | 0 / 0 | -17.5 | -17.5 | 0.02 (1) | 10.00 | | | | |
| 14-13 | 0 / 1009 | -17.5 | -17.5 | 0.15 (1) | 10.00 | | | | |
| 13-12 | 0 / 1040 | -17.5 | -17.5 | 0.24 (1) | 10.00 | | | | |
| 12-17 | 0 / 1391 | -17.5 | -17.5 | 0.51 (1) | 10.00 | | | | |
| 17-11 | 0 / 1391 | -33.0 | -33.0 | 0.51 (1) | 10.00 | | | | |
| 11-10 | 0 / 1285 | -33.0 | -33.0 | 0.29 (1) | 10.00 | | | | |
| 10- 9 | 0 / 0 | -33.0 | -33.0 | 0.05 (1) | 10.00 | | | | |

FACTORED CONCENTRATED LOADS (LBS)

| JT | LOC. | LC1 | MAX- | MAX+ | FACE | DIR. | TYPE |
|---|---|---|---|---|---|---|---|
| 5 | 11-11-0 | -348 | -348 | --- | FRONT | VERT | TOTAL |
| 17 | 10-8-12 | -868 | -868 | --- | FRONT | VERT | TOTAL |

RECEIVED
TOWN OF MILTON
MAR 29, 2017
JUNIPER 9
BUILDING DIVISION

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

**DESIGN CRITERIA**

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

SPECIFIED LOADS:

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

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

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

GIRDER TYPE: CPrimeHip
SIDE SETBACK = 6-0-0
END SETBACK = 6-0-0
END WALL WIDTH = 5-8
CORNER FRAMING TYPE: CONVENTIONAL
END JACK TYPE: CONVENTIONAL
APPLIED TO FRONT SIDE
- ADDT'L LOADS BASED ON 55 % OF GSL.
LOADS APPLIED TO FIRST 7-2-4 OF SPAN MEASURED FROM THE RIGHT.

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

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

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

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

ALLOWABLE DEFL.(LL)= L/360 (0.60")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.04")
ALLOWABLE DEFL.(TL)= L/360 (0.60")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.07")

CSI: TC=0.20 (7-9:1) , BC=0.51 (11-12:1) , WB=0.34 (7-10:1) , SSI=0.39 (11-12:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTAT[illegible] TOL. = [illegible] deg

CONTINUED ON PAGE 2

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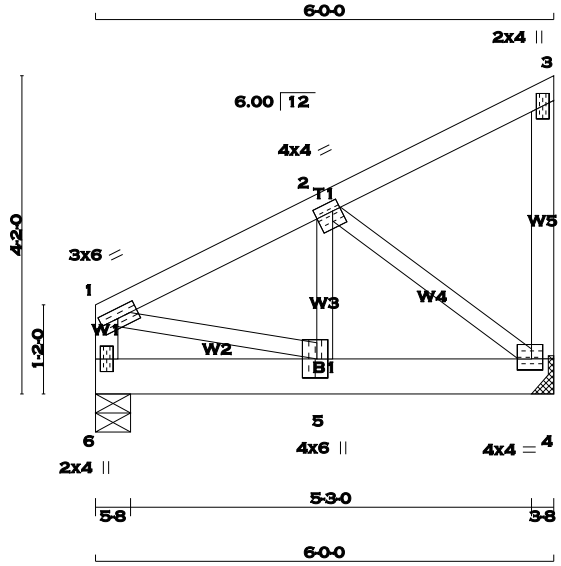



SCALE = 1:30.2

TOTAL WEIGHT = 29 lb [M]

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 3 | 2x4 | DRY | No.2 | SPF |
| 4 - 3 | 2x4 | DRY | No.2 | SPF |
| 6 - 1 | 2x4 | DRY | No.2 | SPF |
| 6 - 4 | 2x6 | DRY | No.2 | SPF |
| ALL WEBS EXCEPT | 2x3 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 1 | TMVW-t | MT20 | 3.0 | 6.0 | 1.50 | 2.75 |
| 2 | TMWW-t | MT20 | 4.0 | 4.0 | 1.50 | 1.25 |
| 3 | TMV+p | MT20 | 2.0 | 4.0 | | |
| 4 | BMVW1-t | MT20 | 4.0 | 4.0 | 1.75 | 1.75 |
| 5 | BMWW+t | MT20 | 4.0 | 6.0 | 3.00 | 1.75 |
| 6 | BMV1+p | MT20 | 2.0 | 4.0 | | |

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

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

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 4 | 1363 | 0 | 1363 | 0 | 0 | HANGER BY OTHERS MIN. SEAT SIZE: 3-8 | |
| 6 | 1363 | 0 | 1363 | 0 | 0 | 5-8 | 5-8 |

**UNFACTORED REACTIONS**

| JT | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 4 | 957 | 669 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 288 / 0 | 0 / 0 |
| 6 | 957 | 669 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 288 / 0 | 0 / 0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 6

**BRACING**

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.76 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT. OR RIGID CEILING DIRECTLY APPLIED.

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

**LOADING**

TOTAL LOAD CASES: (4)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) FROM | TO | LC1 MAX CSI (LC) | MAX. UNBRAC LENGTH | WEBS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|
| 1- 2 | -1162 / 0 | -77.3 | -77.3 | 0.11 (1) | 5.76 | 5- 2 | 0 / 1045 | 0.26 (1) |
| 2- 3 | -9 / 0 | -77.3 | -77.3 | 0.09 (1) | 10.00 | 2- 4 | -1315 / 0 | 0.32 (1) |
| 4- 3 | -95 / 0 | 0.0 | 0.0 | 0.02 (1) | 7.81 | 1- 5 | 0 / 1082 | 0.27 (1) |
| 6- 1 | -890 / 0 | 0.0 | 0.0 | 0.10 (1) | 7.81 | | | |
| 6- 5 | 0 / 0 | -377.1 | -377.1 | 0.22 (1) | 10.00 | | | |
| 5- 4 | 0 / 1048 | -377.1 | -377.1 | 0.36 (1) | 10.00 | | | |

**DESIGN CRITERIA**

SPECIFIED LOADS:

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

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

GIRDER TYPE: CStdGirder
START DISTANCE = 0-0
START SPAN CARRIED = 17-5-8
END DISTANCE = 6-0-0
END SPAN CARRIED = 17-5-8
END WALL WIDTH = 3-8
APPLIED TO FRONT SIDE OF BOTTOM CHORD.
- ADDT'L LOADS BASED ON 55 % OF GSL.

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

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

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

ALLOWABLE DEFL.(LL)= L/360 (0.20")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.01")
ALLOWABLE DEFL.(TL)= L/360 (0.20")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.03")

CSI: TC=0.11 (1-2:1) , BC=0.36 (4-5:1) , WB=0.32 (2-4:1) , SSI=0.44 (5-6:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

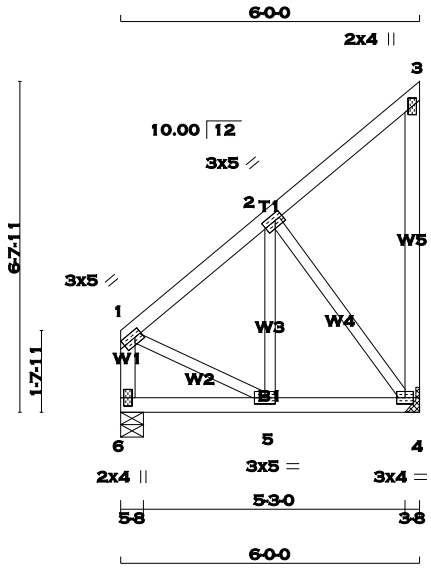
JSI GRIP= 0.87 (1) (INPUT = 0.90 )
JSI METAL= 0.39 (2) (INPUT = 1.00 )

LICENSED PROFESSIONAL ENGINEER
P.M. TREVISAN
100136551
March 23rd, 2017
PROVINCE OF ONTARIO

RECEIVED
TOWN OF MILTON
MAR 29, 2017
JUNIPER 9
BUILDING DIVISION

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

KOTT




SCALE = 1:46.2

TOTAL WEIGHT = 33 lb [M]

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 3 | 2x4 | DRY | No.2 | SPF |
| 4 - 3 | 2x4 | DRY | No.2 | SPF |
| 6 - 1 | 2x4 | DRY | No.2 | SPF |
| 6 - 4 | 2x4 | DRY | No.2 | SPF |
| ALL WEBS EXCEPT | 2x3 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 1 | TMVW-t | MT20 | 3.0 | 5.0 | 1.50 | 1.75 |
| 2 | TMWW-t | MT20 | 3.0 | 5.0 | 1.50 | 2.00 |
| 3 | TMV+p | MT20 | 2.0 | 4.0 | | |
| 4 | BMVW1-t | MT20 | 3.0 | 4.0 | | |
| 5 | BMWW-t | MT20 | 3.0 | 5.0 | | |
| 6 | BMV1+p | MT20 | 2.0 | 4.0 | | |

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

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

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 4 | 868 | 0 | 868 | 0 | 0 | HANGER BY OTHERS MIN. SEAT SIZE: 3-8 | |
| 6 | 868 | 0 | 868 | 0 | 0 | 5-8 | 5-8 |

**UNFACTORED REACTIONS**

| JT | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 4 | 609 | 426 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 183 / 0 | 0 / 0 |
| 6 | 609 | 426 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 183 / 0 | 0 / 0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 6

**BRACING**

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

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

**LOADING**

TOTAL LOAD CASES: (4)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD LC1 (PLF) FROM | TO | MAX CSI (LC) | MAX. UNBRAC LENGTH | WEBS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|
| 1- 2 | -531 / 0 | -77.3 | -77.3 | 0.13 (1) | 6.25 | 5- 2 | 0 / 599 | 0.15 (1) |
| 2- 3 | -17 / 0 | -77.3 | -77.3 | 0.12 (1) | 6.25 | 2- 4 | -680 / 0 | 0.26 (1) |
| 4- 3 | -89 / 0 | 0.0 | 0.0 | 0.08 (1) | 7.81 | 1- 5 | 0 / 459 | 0.11 (1) |
| 6- 1 | -623 / 0 | 0.0 | 0.0 | 0.07 (1) | 7.81 | | | |
| 6- 5 | 0 / 0 | -212.1 | -212.1 | 0.33 (1) | 10.00 | | | |
| 5- 4 | 0 / 421 | -212.1 | -212.1 | 0.40 (1) | 10.00 | | | |

**DESIGN CRITERIA**

SPECIFIED LOADS:

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

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

GIRDER TYPE: CStdGirder
START DISTANCE = 0-0
START SPAN CARRIED = 10-8-0
END DISTANCE = 6-0-0
END SPAN CARRIED = 10-8-0
END WALL WIDTH = 5-8
APPLIED TO FRONT SIDE OF BOTTOM CHORD.
- ADDT'L LOADS BASED ON 55 % OF GSL.

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

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

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

ALLOWABLE DEFL.(LL)= L/360 (0.20")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.01")
ALLOWABLE DEFL.(TL)= L/360 (0.20")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.03")

CSI: TC=0.13 (1-2:1) , BC=0.40 (4-5:1) , WB=0.26 (2-4:1) , SSI=0.34 (5-6:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.89 (5) (INPUT = 0.90 )
JSI METAL= 0.18 (1) (INPUT = 1.00 )

LICENSED PROFESSIONAL ENGINEER
P.M. TREVISAN
100136551
March 23rd, 2017
PROVINCE OF ONTARIO

RECEIVED
TOWN OF MILTON
MAR 29, 2017
JUNIPER 9
BUILDING DIVISION

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

KOTT

Version 8.100 S Feb 9 2017 MiTek Industries, Inc. Thu Mar 23 10:58:50 2017 Page 1
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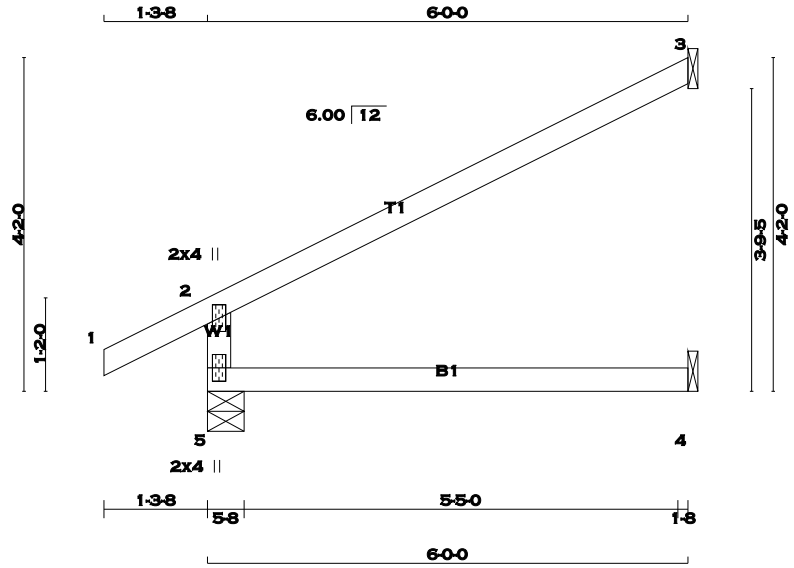



SCALE = 1:28.8

TOTAL WEIGHT = 23 X 17 = 393 lb [M]

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 5 - 2 | 2x4 | DRY | No.2 | SPF |
| 1 - 3 | 2x4 | DRY | No.2 | SPF |
| 5 - 4 | 2x4 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 2 | TMV+p | MT20 | 2.0 | 4.0 | | |
| 5 | BMV1+p | MT20 | 2.0 | 4.0 | | |

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

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

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 5 | 457 | 0 | 457 | 0 | 0 | 5-8 | 5-8 |
| 3 | 174 | 0 | 174 | 0 | 0 | 1-8 | 1-8 |
| 4 | 43 | 0 | 49 | 0 | 0 | 1-8 | 1-8 |

SEE MITEK STANDARD DETAIL B37579H FOR CONNECTION TO JOINT(S) 3 , 4

**UNFACTORED REACTIONS**

| JT | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 5 | 318 | 238 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 80 / 0 | 0 / 0 |
| 3 | 118 | 105 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 14 / 0 | 0 / 0 |
| 4 | 35 | 0 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 35 / 0 | 0 / 0 |

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

**BRACING**

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

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

**LOADING**

TOTAL LOAD CASES: (4)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) FROM | TO | LC1 MAX CSI (LC) | WEBS MAX. UNBRAC LENGTH | MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|
| 5- 2 | -395 / 0 | 0.0 | 0.0 | 0.13 (4) | 7.81 | | | |
| 1- 2 | 0 / 23 | -77.3 | -77.3 | 0.10 (1) | 10.00 | | | |
| 2- 3 | -26 / 0 | -77.3 | -77.3 | 0.47 (1) | 6.25 | | | |
| 5- 4 | 0 / 0 | -17.5 | -17.5 | 0.13 (4) | 10.00 | | | |

**DESIGN CRITERIA**

SPECIFIED LOADS:

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

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

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

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

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

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

ALLOWABLE DEFL.(LL)= L/360 (0.20")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")
ALLOWABLE DEFL.(TL)= L/360 (0.20")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.03")

CSI: TC=0.47 (2-3:1) , BC=0.13 (4-5:4) , WB=0.00 (n/a:0) , SSI=0.20 (2-3:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.23 (2) (INPUT = 0.90 )
JSI METAL= 0.09 (2) (INPUT = 1.00 )

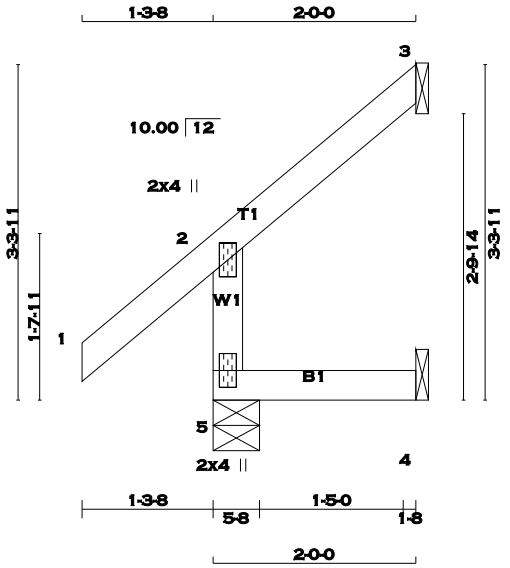
LICENSED PROFESSIONAL ENGINEER
P.M. TREVISAN
100136551
March 23rd, 2017
PROVINCE OF ONTARIO

RECEIVED
TOWN OF MILTON
MAR 29, 2017
JUNIPER 9
BUILDING DIVISION

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

KOTT

SCALE = 1:22.7




TOTAL WEIGHT = 10 X 9 = 88 lb [M]

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 5 - 2 | 2x4 | DRY | No.2 | SPF |
| 1 - 3 | 2x4 | DRY | No.2 | SPF |
| 5 - 4 | 2x4 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 2 | TMV+p | MT20 | 2.0 | 4.0 | | |
| 5 | BMV1+p | MT20 | 2.0 | 4.0 | | |

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

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

**BEARINGS**

| | FACTORED GROSS REACTION | | MAXIMUM FACTORED GROSS REACTION | | | INPUT BRG | REQRD BRG |
|---|---|---|---|---|---|---|---|
| JT | VERT | HORZ | DOWN | HORZ | UPLIFT | IN-SX | IN-SX |
| 5 | 222 | 0 | 222 | 0 | 0 | 5-8 | 5-8 |
| 3 | 59 | 0 | 59 | 0 | 0 | 1-8 | 1-8 |
| 4 | 16 | 0 | 18 | 0 | 0 | 1-8 | 1-8 |

SEE MITEK STANDARD DETAIL B37579H FOR CONNECTION TO JOINT(S) 3 , 4

**UNFACTORED REACTIONS**

| | 1ST LCASE | MAX./MIN. COMPONENT REACTIONS | | | | | |
|---|---|---|---|---|---|---|---|
| JT | COMBINED | SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
| 5 | 153 | 122 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 31 / 0 | 0 / 0 |
| 3 | 40 | 35 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 5 / 0 | 0 / 0 |
| 4 | 13 | 0 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 13 / 0 | 0 / 0 |

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

**BRACING**

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

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

**LOADING**

TOTAL LOAD CASES: (5)

| CHORDS | | | | | WEBS | | | |
|---|---|---|---|---|---|---|---|---|
| MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) FROM | TO | LC1 MAX CSI (LC) | MAX. UNBRAC LENGTH | MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
| 5- 2 | -203 / 0 | 0.0 | 0.0 | 0.01 (4) | 7.81 | | | |
| 1- 2 | 0 / 34 | -77.3 | -77.3 | 0.11 (1) | 10.00 | | | |
| 2- 3 | -12 / 0 | -77.3 | -77.3 | 0.05 (1) | 6.25 | | | |
| 5- 4 | 0 / 0 | -17.5 | -17.5 | 0.02 (4) | 10.00 | | | |

CANTILEVER ANALYSIS HAS BEEN CONSIDERED IN THIS DESIGN

**DESIGN CRITERIA**

SPECIFIED LOADS:

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

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

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

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

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

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

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

CSI: TC=0.11 (1-2:1) , BC=0.02 (4-5:4) , WB=0.00 (n/a:0) , SSI=0.06 (1-2:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.15 (2) (INPUT = 0.90 )
JSI METAL= 0.05 (2) (INPUT = 1.00 )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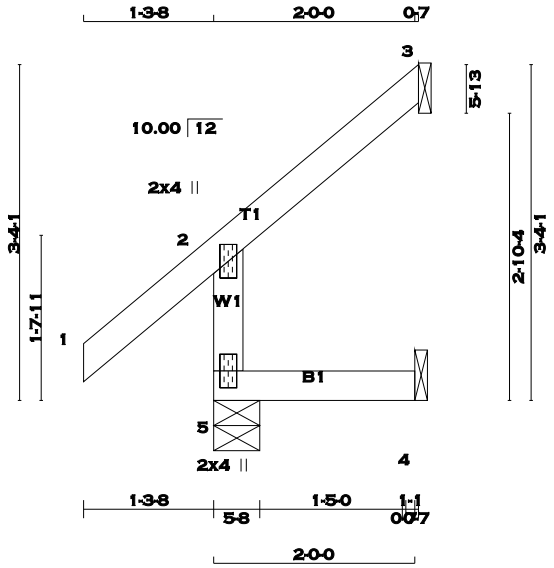
**READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTE PAGE ENP-1. THE NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.**

KOTT




SCALE = 1:22.9

TOTAL WEIGHT = 9 lb [M]

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 5 - 2 | 2x4 | DRY | No.2 | SPF |
| 1 - 3 | 2x4 | DRY | No.2 | SPF |
| 5 - 4 | 2x4 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 2 | TMV+p | MT20 | 2.0 | 4.0 | | |
| 5 | BMV1+p | MT20 | 2.0 | 4.0 | | |

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

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

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 5 | 224 | 0 | 224 | 0 | 0 | 5-8 | 5-8 |
| 3 | 60 | 0 | 60 | 0 | 0 | 1-8 | 1-8 |
| 4 | 16 | 0 | 18 | 0 | 0 | 1-8 | 1-8 |

SEE MITEK STANDARD DETAIL B37579H FOR CONNECTION TO JOINT(S) 3 , 4

**UNFACTORED REACTIONS**

| JT | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 5 | 155 | 123 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 31 / 0 | 0 / 0 |
| 3 | 41 | 36 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 5 / 0 | 0 / 0 |
| 4 | 13 | 0 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 13 / 0 | 0 / 0 |

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

**BRACING**

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

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

**LOADING**

TOTAL LOAD CASES: (5)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) FROM | TO | LC1 MAX CSI (LC) | WEBS MAX. UNBRAC LENGTH | MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|
| 5- 2 | -205 / 0 | 0.0 | 0.0 | 0.01 (4) | 7.81 | | | |
| 1- 2 | 0 / 34 | -77.3 | -77.3 | 0.11 (1) | 10.00 | | | |
| 2- 3 | -12 / 0 | -77.3 | -77.3 | 0.05 (1) | 6.25 | | | |
| 5- 4 | 0 / 0 | -17.5 | -17.5 | 0.02 (4) | 10.00 | | | |

CANTILEVER ANALYSIS HAS BEEN CONSIDERED IN THIS DESIGN

**DESIGN CRITERIA**

SPECIFIED LOADS:

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

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

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

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

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

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

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

CSI: TC=0.11 (1-2:1) , BC=0.02 (4-5:4) , WB=0.00 (n/a:0) , SSI=0.06 (1-2:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.15 (2) (INPUT = 0.90 )
JSI METAL= 0.06 (2) (INPUT = 1.00 )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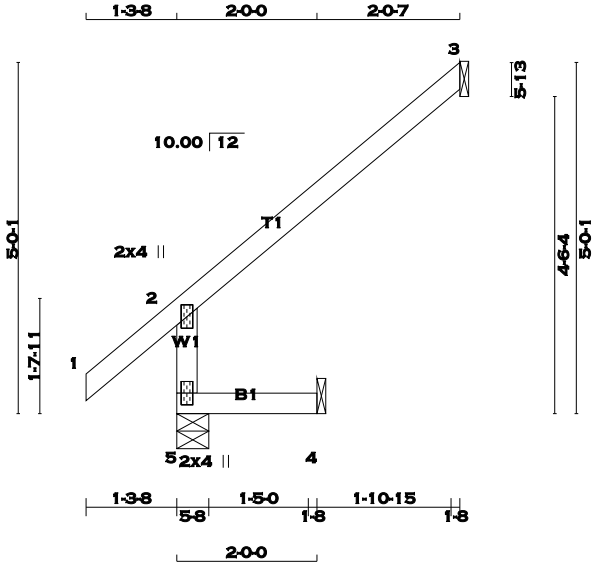
KOTT




SCALE = 1:32.8

TOTAL WEIGHT = 12 lb [M]

**LUMBER**
N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 5 - 2 | 2x4 | DRY | No.2 | SPF |
| 1 - 3 | 2x4 | DRY | No.2 | SPF |
| 5 - 4 | 2x4 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 2 | TMV+p | MT20 | 2.0 | 4.0 | | |
| 5 | BMV1+p | MT20 | 2.0 | 4.0 | | |

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

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

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 5 | 321 | 0 | 321 | 0 | 0 | 5-8 | 5-8 |
| 3 | 117 | 0 | 117 | 0 | 0 | 1-8 | 1-8 |
| 4 | 16 | 0 | 18 | 0 | 0 | 1-8 | 1-8 |

SEE MITEK STANDARD DETAIL B37579H FOR CONNECTION TO JOINT(S) 3 , 4

**UNFACTORED REACTIONS**

| JT | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 5 | 221 | 182 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 39 / 0 | 0 / 0 |
| 3 | 80 | 71 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 9 / 0 | 0 / 0 |
| 4 | 13 | 0 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 13 / 0 | 0 / 0 |

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

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

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

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

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) FROM | TO | LC1 MAX CSI (LC) | WEBS MAX. UNBRAC LENGTH | MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|
| 5- 2 | -302 / 0 | 0.0 | 0.0 | 0.01 (4) | 7.81 | | | |
| 1- 2 | 0 / 34 | -77.3 | -77.3 | 0.11 (1) | 10.00 | | | |
| 2- 3 | -25 / 0 | -77.3 | -77.3 | 0.21 (1) | 6.25 | | | |
| 5- 4 | 0 / 0 | -17.5 | -17.5 | 0.02 (4) | 10.00 | | | |

**DESIGN CRITERIA**

SPECIFIED LOADS:

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

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

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

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

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

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

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

CSI: TC=0.21 (2-3:1) , BC=0.02 (4-5:4) , WB=0.00 (n/a:0) , SSI=0.12 (2-3:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.22 (2) (INPUT = 0.90 )
JSI METAL= 0.08 (2) (INPUT = 1.00 )




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

KOTT

Version 8.100 S Feb 9 2017 MiTek Industries, Inc. Thu Mar 23 10:58:52 2017 Page 1
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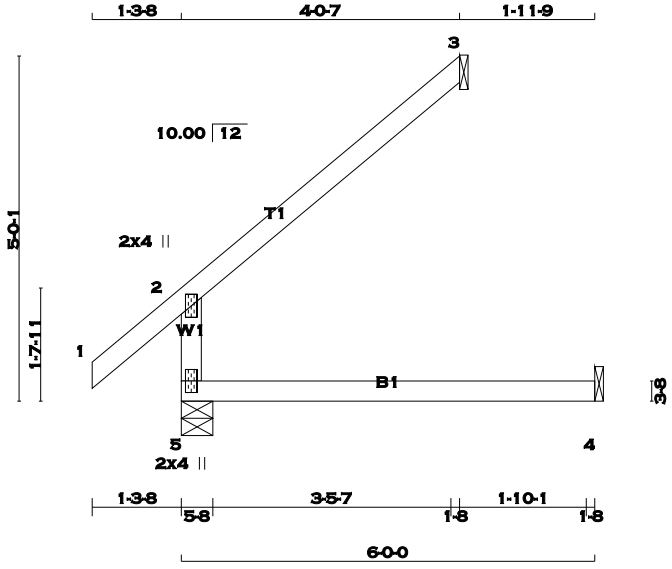



TOTAL WEIGHT = 16 lb [M]

**LUMBER**
N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 5 - 2 | 2x4 | DRY | No.2 | SPF |
| 1 - 3 | 2x4 | DRY | No.2 | SPF |
| 5 - 4 | 2x4 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 2 | TMV+p | MT20 | 2.0 | 4.0 | | |
| 5 | BMV1+p | MT20 | 2.0 | 4.0 | | |

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

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

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 5 | 363 | 0 | 363 | 0 | 0 | 5-8 | 5-8 |
| 3 | 117 | 0 | 117 | 0 | 0 | 1-8 | 1-8 |
| 4 | 45 | 0 | 50 | 0 | 0 | 1-8 | 1-8 |

SEE MITEK STANDARD DETAIL B37579H FOR CONNECTION TO JOINT(S) 3 , 4

**UNFACTORED REACTIONS**

| JT | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 5 | 254 | 182 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 72 / 0 | 0 / 0 |
| 3 | 80 | 71 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 9 / 0 | 0 / 0 |
| 4 | 36 | 0 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 36 / 0 | 0 / 0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 5, 3

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

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

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

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) FROM | TO | LC1 MAX CSI (LC) | UNBRAC LENGTH | WEBS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|
| 5- 2 | -302 / 0 | 0.0 | 0.0 | 0.11 (4) | 7.81 | | | |
| 1- 2 | 0 / 34 | -77.3 | -77.3 | 0.11 (1) | 10.00 | | | |
| 2- 3 | -25 / 0 | -77.3 | -77.3 | 0.21 (1) | 6.25 | | | |
| 5- 4 | 0 / 0 | -17.5 | -17.5 | 0.13 (4) | 10.00 | | | |

**DESIGN CRITERIA**

SPECIFIED LOADS:

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

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

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

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

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

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

ALLOWABLE DEFL.(TL)= L/360 (0.20")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.04")

CSI: TC=0.21 (2-3:1) , BC=0.13 (4-5:4) , WB=0.00 (n/a:0) , SSI=0.12 (2-3:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

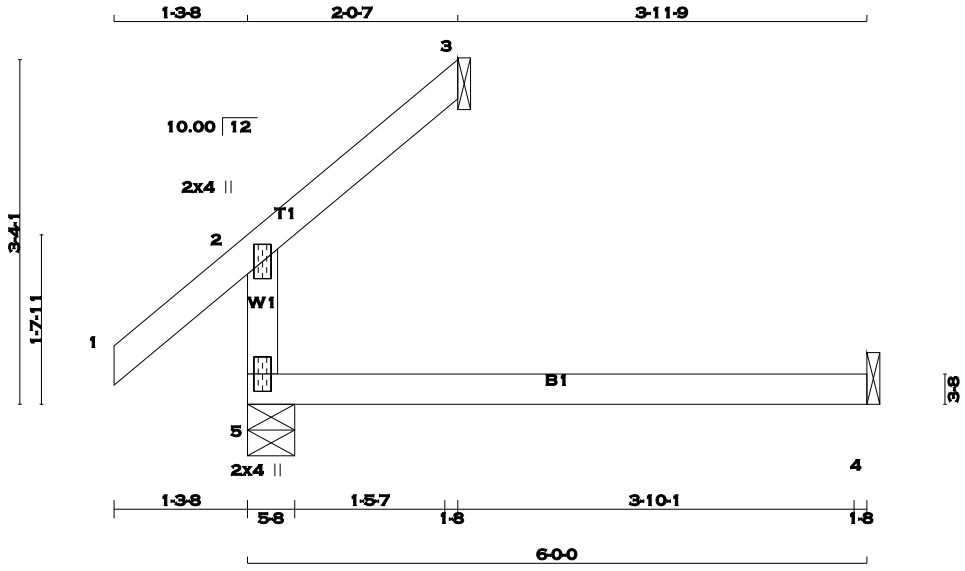
PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.22 (2) (INPUT = 0.90 )
JSI METAL= 0.08 (2) (INPUT = 1.00 )




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

KOTT




TOTAL WEIGHT = 13 lb [M]

**LUMBER**
N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 5 - 2 | 2x4 | DRY | No.2 | SPF |
| 1 - 3 | 2x4 | DRY | No.2 | SPF |
| 5 - 4 | 2x4 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 2 | TMV+p | MT20 | 2.0 | 4.0 | | |
| 5 | BMV1+p | MT20 | 2.0 | 4.0 | | |

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

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

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 5 | 265 | 0 | 265 | 0 | 0 | 5-8 | 5-8 |
| 3 | 60 | 0 | 60 | 0 | 0 | 1-8 | 1-8 |
| 4 | 45 | 0 | 50 | 0 | 0 | 1-8 | 1-8 |

SEE MITEK STANDARD DETAIL B37579H FOR CONNECTION TO JOINT(S) 3 , 4

**UNFACTORED REACTIONS**

| JT | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 5 | 188 | 123 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 64 / 0 | 0 / 0 |
| 3 | 41 | 36 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 5 / 0 | 0 / 0 |
| 4 | 36 | 0 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 36 / 0 | 0 / 0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 5, 3

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

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

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

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) FROM | TO | LC1 MAX CSI (LC) | WEBS MAX. UNBRAC LENGTH | MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|
| 5- 2 | -205 / 0 | 0.0 | 0.0 | 0.11 (4) | 7.81 | | | |
| 1- 2 | 0 / 34 | -77.3 | -77.3 | 0.11 (1) | 10.00 | | | |
| 2- 3 | -12 / 0 | -77.3 | -77.3 | 0.05 (1) | 6.25 | | | |
| 5- 4 | 0 / 0 | -17.5 | -17.5 | 0.13 (4) | 10.00 | | | |

**DESIGN CRITERIA**

SPECIFIED LOADS:

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

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

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

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

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

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

ALLOWABLE DEFL.(LL)= L/360 (0.20")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")
ALLOWABLE DEFL.(TL)= L/360 (0.20")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.04")

CSI: TC=0.11 (2-5:4) , BC=0.13 (4-5:4) , WB=0.00 (n/a:0) , SSI=0.08 (4-5:4)

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

COMPANION LIVE LOAD FACTOR = 0.50

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.15 (2) (INPUT = 0.90 )
JSI METAL= 0.06 (2) (INPUT = 1.00 )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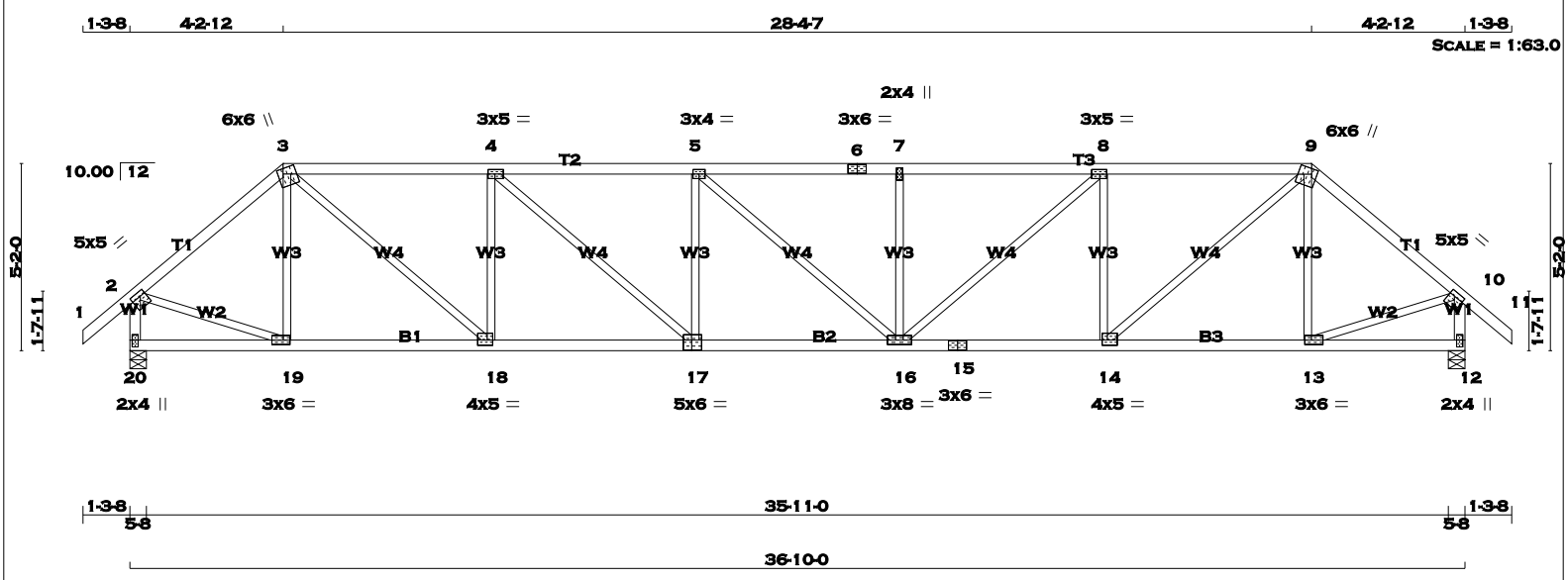
**READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTE PAGE ENP-1. THE NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.**

KOTT







TOTAL WEIGHT = 2 X 152 = 304 lb [M]

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 3 | 2x4 | DRY | No.2 | SPF |
| 3 - 6 | 2x4 | DRY | No.2 | SPF |
| 6 - 9 | 2x4 | DRY | No.2 | SPF |
| 9 - 11 | 2x4 | DRY | No.2 | SPF |
| 20 - 2 | 2x4 | DRY | No.2 | SPF |
| 12 - 10 | 2x4 | DRY | No.2 | SPF |
| 20 - 17 | 2x4 | DRY | No.2 | SPF |
| 17 - 15 | 2x4 | DRY | No.2 | SPF |
| 15 - 12 | 2x4 | DRY | No.2 | SPF |
| ALL WEBS EXCEPT | 2x3 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 2 | TMVW-t | MT20 | 5.0 | 5.0 | 1.50 | 1.75 |
| 3 | TTWW+m | MT20 | 6.0 | 6.0 | 1.75 | 1.75 |
| 4 | TMWW-t | MT20 | 3.0 | 5.0 | 1.50 | 2.25 |
| 5 | TMWW-t | MT20 | 3.0 | 4.0 | | |
| 6 | TS-t | MT20 | 3.0 | 6.0 | | |
| 7 | TMW+w | MT20 | 2.0 | 4.0 | | |
| 8 | TMWW-t | MT20 | 3.0 | 5.0 | 1.50 | 2.25 |
| 9 | TTWW+m | MT20 | 6.0 | 6.0 | 1.75 | 1.75 |
| 10 | TMVW-t | MT20 | 5.0 | 5.0 | 1.50 | 1.75 |
| 12 | BMV1+p | MT20 | 2.0 | 4.0 | 2.25 | 1.00 |
| 13 | BMWW-t | MT20 | 3.0 | 6.0 | 1.50 | 2.25 |
| 14 | BMWW-t | MT20 | 4.0 | 5.0 | 1.75 | 1.75 |
| 15 | BS-t | MT20 | 3.0 | 6.0 | | |
| 16 | BMWWW-t | MT20 | 3.0 | 8.0 | | |
| 17 | BSWW-l | MT20 | 5.0 | 6.0 | 3.25 | 2.75 |
| 18 | BMWW-t | MT20 | 4.0 | 5.0 | 1.75 | 1.75 |
| 19 | BMWW-t | MT20 | 3.0 | 6.0 | 1.50 | 2.25 |
| 20 | BMV1+p | MT20 | 2.0 | 4.0 | 2.25 | 1.00 |

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

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

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 20 | 1854 | 0 | 1854 | 0 | 0 | 5-8 | 5-8 |
| 12 | 1854 | 0 | 1854 | 0 | 0 | 5-8 | 5-8 |

**UNFACTORED REACTIONS**

| JT | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 20 | 1299 | 922 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 377 / 0 | 0 / 0 |
| 12 | 1299 | 922 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 377 / 0 | 0 / 0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 20, 12

**BRACING**

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.38 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT. OR RIGID CEILING DIRECTLY APPLIED.

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

**LOADING**

TOTAL LOAD CASES: (4)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) FROM | TO | LC1 MAX CSI (LC) | MAX. UNBRAC LENGTH |
|---|---|---|---|---|---|
| 1- 2 | 0 / 34 | -77.3 | -77.3 | 0.11 (1) | 10.00 |
| 2- 3 | -1782 / 0 | -77.3 | -77.3 | 0.31 (1) | 4.70 |
| 3- 4 | -2663 / 0 | -77.3 | -77.3 | 0.54 (1) | 3.77 |
| 4- 5 | -3257 / 0 | -77.3 | -77.3 | 0.62 (1) | 3.38 |
| 5- 6 | -3265 / 0 | -77.3 | -77.3 | 0.50 (1) | 3.52 |
| 6- 7 | -3265 / 0 | -77.3 | -77.3 | 0.50 (1) | 3.52 |
| 7- 8 | -3265 / 0 | -77.3 | -77.3 | 0.62 (1) | 3.38 |
| 8- 9 | -2664 / 0 | -77.3 | -77.3 | 0.54 (1) | 3.76 |
| 9-10 | -1782 / 0 | -77.3 | -77.3 | 0.31 (1) | 4.70 |
| 10-11 | 0 / 34 | -77.3 | -77.3 | 0.11 (1) | 10.00 |
| 20- 2 | -1826 / 0 | 0.0 | 0.0 | 0.19 (1) | 6.20 |
| 12-10 | -1826 / 0 | 0.0 | 0.0 | 0.19 (1) | 6.20 |
| 20-19 | 0 / 0 | -17.5 | -17.5 | 0.10 (4) | 10.00 |
| 19-18 | 0 / 1359 | -17.5 | -17.5 | 0.28 (1) | 10.00 |
| 18-17 | 0 / 2663 | -17.5 | -17.5 | 0.47 (1) | 10.00 |
| 17-16 | 0 / 3265 | -17.5 | -17.5 | 0.58 (1) | 10.00 |
| 16-15 | 0 / 2664 | -17.5 | -17.5 | 0.48 (1) | 10.00 |
| 15-14 | 0 / 2664 | -17.5 | -17.5 | 0.48 (1) | 10.00 |
| 14-13 | 0 / 1358 | -17.5 | -17.5 | 0.28 (1) | 10.00 |
| 13-12 | 0 / 0 | -17.5 | -17.5 | 0.10 (4) | 10.00 |

| WEBS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|
| 19- 3 | -311 / 0 | 0.12 (1) |
| 3-18 | 0 / 1709 | 0.38 (1) |
| 18- 4 | -1008 / 0 | 0.40 (1) |
| 4-17 | 0 / 791 | 0.18 (1) |
| 17- 5 | -424 / 0 | 0.17 (1) |
| 5-16 | 0 / 2 | 0.00 (4) |
| 16- 7 | -422 / 0 | 0.17 (1) |
| 16- 8 | 0 / 796 | 0.18 (1) |
| 14- 8 | -1007 / 0 | 0.40 (1) |
| 14- 9 | 0 / 1710 | 0.38 (1) |
| 13- 9 | -312 / 0 | 0.12 (1) |
| 2-19 | 0 / 1426 | 0.32 (1) |
| 13-10 | 0 / 1426 | 0.32 (1) |

**DESIGN CRITERIA**

SPECIFIED LOADS:

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

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

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

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

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

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

ALLOWABLE DEFL.(LL)= L/360 (1.23")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.22")
ALLOWABLE DEFL.(TL)= L/360 (1.23")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.39")

CSI: TC=0.62 (7-8:1) , BC=0.58 (16-17:1) , WB=0.40 (4-18:1) , SSI=0.21 (8-9:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.88 (19) (INPUT = 0.90 )
JSI METAL= 0.71 (15) (INPUT = 1.00 )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**READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTE PAGE ENP-1. THE NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.**

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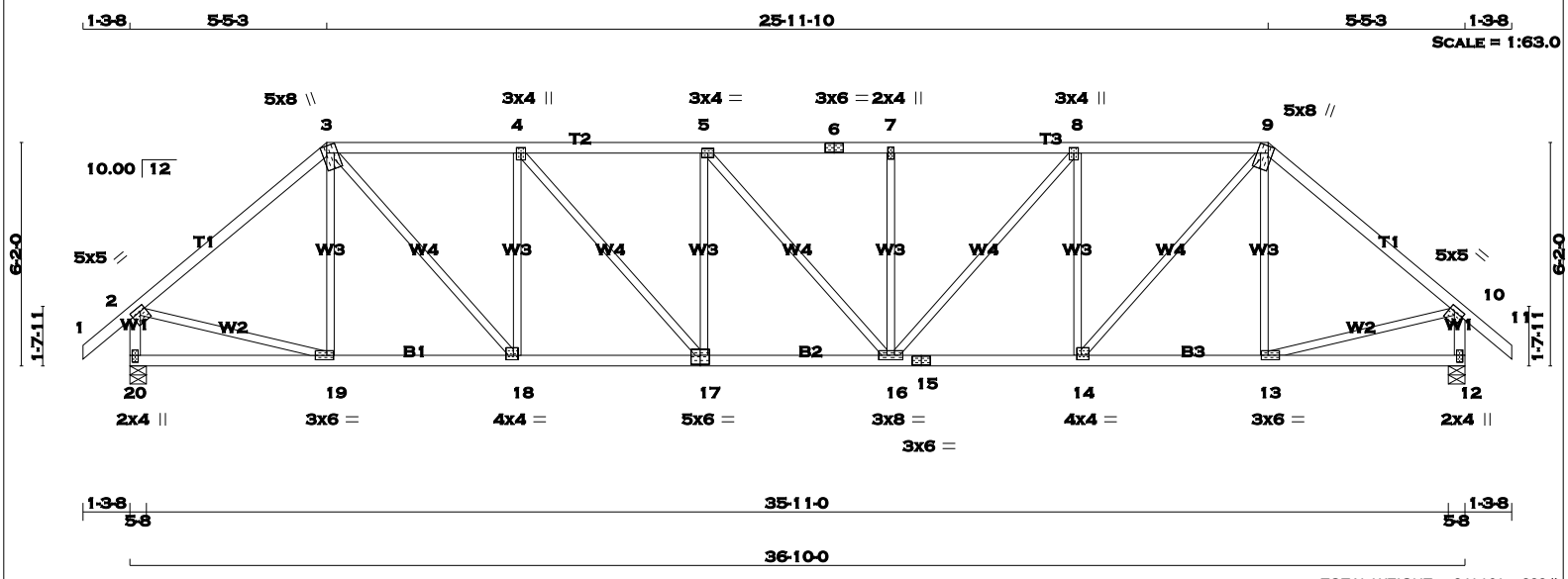


TOTAL WEIGHT = 2 X 161 = 322 lb [M]

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 3 | 2x4 | DRY | No.2 | SPF |
| 3 - 6 | 2x4 | DRY | No.2 | SPF |
| 6 - 9 | 2x4 | DRY | No.2 | SPF |
| 9 - 11 | 2x4 | DRY | No.2 | SPF |
| 20 - 2 | 2x4 | DRY | No.2 | SPF |
| 12 - 10 | 2x4 | DRY | No.2 | SPF |
| 20 - 17 | 2x4 | DRY | No.2 | SPF |
| 17 - 15 | 2x4 | DRY | No.2 | SPF |
| 15 - 12 | 2x4 | DRY | No.2 | SPF |
| ALL WEBS EXCEPT | 2x3 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 2 | TMVW-t | MT20 | 5.0 | 5.0 | 1.50 | 1.75 |
| 3 | TTWW+m | MT20 | 5.0 | 8.0 | 2.25 | 1.50 |
| 4 | TMWW+t | MT20 | 3.0 | 4.0 | 1.75 | 1.50 |
| 5 | TMWW-t | MT20 | 3.0 | 4.0 | | |
| 6 | TS-t | MT20 | 3.0 | 6.0 | | |
| 7 | TMW+w | MT20 | 2.0 | 4.0 | | |
| 8 | TMWW+t | MT20 | 3.0 | 4.0 | 1.75 | 1.50 |
| 9 | TTWW+m | MT20 | 5.0 | 8.0 | 2.25 | 1.50 |
| 10 | TMVW-t | MT20 | 5.0 | 5.0 | 1.50 | 1.75 |
| 12 | BMV1+p | MT20 | 2.0 | 4.0 | 2.25 | 1.00 |
| 13 | BMWW-t | MT20 | 3.0 | 6.0 | 1.50 | 2.25 |
| 14 | BMWW-t | MT20 | 4.0 | 4.0 | 1.50 | 1.50 |
| 15 | BS-t | MT20 | 3.0 | 6.0 | | |
| 16 | BMWWW-t | MT20 | 3.0 | 8.0 | | |
| 17 | BSWW-l | MT20 | 5.0 | 6.0 | 3.00 | 3.00 |
| 18 | BMWW-t | MT20 | 4.0 | 4.0 | 1.50 | 1.50 |
| 19 | BMWW-t | MT20 | 3.0 | 6.0 | 1.50 | 2.25 |
| 20 | BMV1+p | MT20 | 2.0 | 4.0 | 2.25 | 1.00 |

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

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

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 20 | 1854 | 0 | 1854 | 0 | 0 | 5-8 | 5-8 |
| 12 | 1854 | 0 | 1854 | 0 | 0 | 5-8 | 5-8 |

**UNFACTORED REACTIONS**

| JT | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 20 | 1299 | 922 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 377 / 0 | 0 / 0 |
| 12 | 1299 | 922 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 377 / 0 | 0 / 0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 20, 12

**BRACING**

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.81 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT. OR RIGID CEILING DIRECTLY APPLIED.

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

**LOADING**

TOTAL LOAD CASES: (4)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) FROM | TO | LC1 MAX CSI (LC) | MAX. UNBRAC LENGTH |
|---|---|---|---|---|---|
| 1- 2 | 0 / 34 | -77.3 | -77.3 | 0.11 (1) | 10.00 |
| 2- 3 | -1820 / 0 | -77.3 | -77.3 | 0.54 (1) | 4.41 |
| 3- 4 | -2296 / 0 | -77.3 | -77.3 | 0.41 (1) | 4.13 |
| 4- 5 | -2715 / 0 | -77.3 | -77.3 | 0.45 (1) | 3.81 |
| 5- 6 | -2714 / 0 | -77.3 | -77.3 | 0.36 (1) | 3.92 |
| 6- 7 | -2714 / 0 | -77.3 | -77.3 | 0.36 (1) | 3.92 |
| 7- 8 | -2714 / 0 | -77.3 | -77.3 | 0.45 (1) | 3.81 |
| 8- 9 | -2296 / 0 | -77.3 | -77.3 | 0.41 (1) | 4.13 |
| 9-10 | -1820 / 0 | -77.3 | -77.3 | 0.54 (1) | 4.41 |
| 10-11 | 0 / 34 | -77.3 | -77.3 | 0.11 (1) | 10.00 |
| 20- 2 | -1815 / 0 | 0.0 | 0.0 | 0.19 (1) | 6.21 |
| 12-10 | -1815 / 0 | 0.0 | 0.0 | 0.19 (1) | 6.21 |
| 20-19 | 0 / 0 | -17.5 | -17.5 | 0.12 (4) | 10.00 |
| 19-18 | 0 / 1392 | -17.5 | -17.5 | 0.29 (1) | 10.00 |
| 18-17 | 0 / 2296 | -17.5 | -17.5 | 0.41 (1) | 10.00 |
| 17-16 | 0 / 2715 | -17.5 | -17.5 | 0.48 (1) | 10.00 |
| 16-15 | 0 / 2296 | -17.5 | -17.5 | 0.41 (1) | 10.00 |
| 15-14 | 0 / 2296 | -17.5 | -17.5 | 0.41 (1) | 10.00 |
| 14-13 | 0 / 1392 | -17.5 | -17.5 | 0.29 (1) | 10.00 |
| 13-12 | 0 / 0 | -17.5 | -17.5 | 0.12 (4) | 10.00 |

| WEBS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|
| 19- 3 | -221 / 21 | 0.13 (1) |
| 3-18 | 0 / 1353 | 0.30 (1) |
| 18- 4 | -922 / 0 | 0.55 (1) |
| 4-17 | 0 / 636 | 0.14 (1) |
| 17- 5 | -387 / 0 | 0.23 (1) |
| 5-16 | -2 / 0 | 0.00 (1) |
| 16- 7 | -386 / 0 | 0.23 (1) |
| 16- 8 | 0 / 634 | 0.14 (1) |
| 14- 8 | -921 / 0 | 0.55 (1) |
| 14- 9 | 0 / 1354 | 0.30 (1) |
| 13- 9 | -222 / 21 | 0.13 (1) |
| 2-19 | 0 / 1434 | 0.32 (1) |
| 13-10 | 0 / 1434 | 0.32 (1) |

**DESIGN CRITERIA**

SPECIFIED LOADS:

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

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

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

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

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

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

ALLOWABLE DEFL.(LL)= L/360 (1.23")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.16")
ALLOWABLE DEFL.(TL)= L/360 (1.23")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.29")

CSI: TC=0.54 (2-3:1) , BC=0.48 (16-17:1) , WB=0.55 (4-18:1) , SSI=0.19 (8-9:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.89 (19) (INPUT = 0.90 )
JSI METAL= 0.61 (2) (INPUT = 1.00 )


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

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Version 8.100 S Feb 9 2017 MiTek Industries, Inc. Thu Mar 23 10:58:54 2017 Page 1
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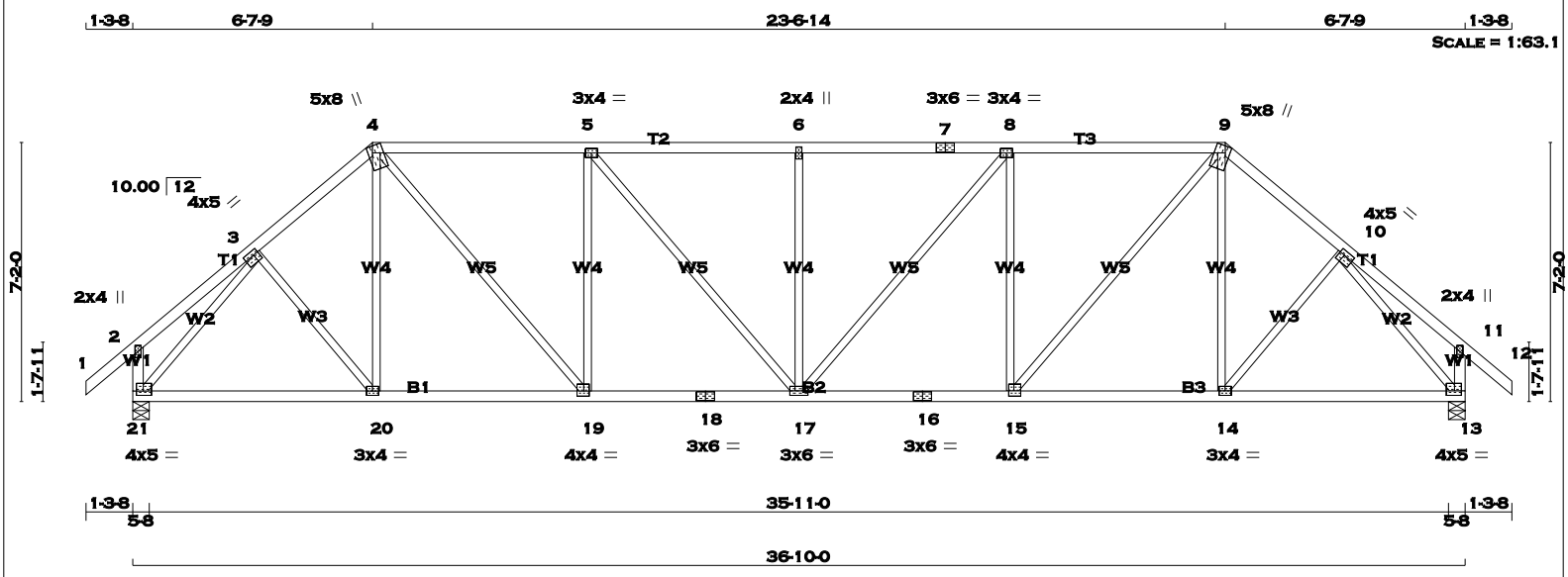



TOTAL WEIGHT = 2 X 167 = 334 lb [M]

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 4 | 2x4 | DRY | No.2 | SPF |
| 4 - 7 | 2x4 | DRY | No.2 | SPF |
| 7 - 9 | 2x4 | DRY | No.2 | SPF |
| 9 - 12 | 2x4 | DRY | No.2 | SPF |
| 21 - 2 | 2x4 | DRY | No.2 | SPF |
| 13 - 11 | 2x4 | DRY | No.2 | SPF |
| 21 - 18 | 2x4 | DRY | No.2 | SPF |
| 18 - 16 | 2x4 | DRY | No.2 | SPF |
| 16 - 13 | 2x4 | DRY | No.2 | SPF |
| ALL WEBS EXCEPT | 2x3 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 2 | TMV+p | MT20 | 2.0 | 4.0 | | |
| 3 | TMWW-t | MT20 | 4.0 | 5.0 | 1.50 | 1.75 |
| 4 | TTWW+m | MT20 | 5.0 | 8.0 | 2.25 | 1.50 |
| 5 | TMWW-t | MT20 | 3.0 | 4.0 | | |
| 6 | TMW+w | MT20 | 2.0 | 4.0 | | |
| 7 | TS-t | MT20 | 3.0 | 6.0 | | |
| 8 | TMWW-t | MT20 | 3.0 | 4.0 | | |
| 9 | TTWW+m | MT20 | 5.0 | 8.0 | 2.25 | 1.50 |
| 10 | TMWW-t | MT20 | 4.0 | 5.0 | 1.50 | 1.75 |
| 11 | TMV+p | MT20 | 2.0 | 4.0 | | |
| 13 | BMVW1-t | MT20 | 4.0 | 5.0 | 1.50 | 2.25 |
| 14 | BMWW-t | MT20 | 3.0 | 4.0 | | |
| 15 | BMWW-t | MT20 | 4.0 | 4.0 | 1.75 | 1.75 |
| 16 | BS-t | MT20 | 3.0 | 6.0 | | |
| 17 | BMWWW-t | MT20 | 3.0 | 6.0 | | |
| 18 | BS-t | MT20 | 3.0 | 6.0 | | |
| 19 | BMWW-t | MT20 | 4.0 | 4.0 | 1.75 | 1.75 |
| 20 | BMWW-t | MT20 | 3.0 | 4.0 | | |
| 21 | BMVW1-t | MT20 | 4.0 | 5.0 | 1.50 | 2.25 |

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

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

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 21 | 1854 | 0 | 1854 | 0 | 0 | 5-8 | 5-8 |
| 13 | 1854 | 0 | 1854 | 0 | 0 | 5-8 | 5-8 |

**UNFACTORED REACTIONS**

| JT | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 21 | 1299 | 922 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 377 / 0 | 0 / 0 |
| 13 | 1299 | 922 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 377 / 0 | 0 / 0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 21, 13

**BRACING**

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.91 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT. OR RIGID CEILING DIRECTLY APPLIED.

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

**LOADING**

TOTAL LOAD CASES: (4)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) FROM | TO | LC | MAX CSI (LC) | MAX. UNBRAC LENGTH | WEBS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|---|
| 1- 2 | 0 / 34 | -77.3 | -77.3 | 0.11 (1) | | 10.00 | 3-20 | 0 / 153 | 0.03 (1) |
| 2- 3 | 0 / 16 | -77.3 | -77.3 | 0.12 (1) | | 10.00 | 20- 4 | 0 / 78 | 0.03 (4) |
| 3- 4 | -1841 / 0 | -77.3 | -77.3 | 0.16 (1) | | 4.80 | 4-19 | 0 / 1149 | 0.26 (1) |
| 4- 5 | -2150 / 0 | -77.3 | -77.3 | 0.53 (1) | | 4.10 | 19- 5 | -772 / 0 | 0.69 (1) |
| 5- 6 | -2371 / 0 | -77.3 | -77.3 | 0.55 (1) | | 3.91 | 5-17 | 0 / 341 | 0.08 (1) |
| 6- 7 | -2371 / 0 | -77.3 | -77.3 | 0.55 (1) | | 3.91 | 17- 6 | -416 / 0 | 0.37 (1) |
| 7- 8 | -2371 / 0 | -77.3 | -77.3 | 0.55 (1) | | 3.91 | 17- 8 | 0 / 341 | 0.08 (1) |
| 8- 9 | -2150 / 0 | -77.3 | -77.3 | 0.53 (1) | | 4.10 | 15- 8 | -772 / 0 | 0.69 (1) |
| 9-10 | -1841 / 0 | -77.3 | -77.3 | 0.16 (1) | | 4.80 | 15- 9 | 0 / 1149 | 0.26 (1) |
| 10-11 | 0 / 16 | -77.3 | -77.3 | 0.12 (1) | | 10.00 | 14- 9 | 0 / 78 | 0.03 (4) |
| 11-12 | 0 / 34 | -77.3 | -77.3 | 0.11 (1) | | 10.00 | 14-10 | 0 / 153 | 0.03 (1) |
| 21- 2 | -209 / 0 | 0.0 | 0.0 | 0.02 (1) | | 7.81 | 21- 3 | -2058 / 0 | 0.90 (1) |
| 13-11 | -209 / 0 | 0.0 | 0.0 | 0.02 (1) | | 7.81 | 10-13 | -2058 / 0 | 0.90 (1) |
| 21-20 | 0 / 1298 | -17.5 | -17.5 | 0.31 (1) | | 10.00 | | | |
| 20-19 | 0 / 1398 | -17.5 | -17.5 | 0.32 (1) | | 10.00 | | | |
| 19-18 | 0 / 2151 | -17.5 | -17.5 | 0.40 (1) | | 10.00 | | | |
| 18-17 | 0 / 2151 | -17.5 | -17.5 | 0.40 (1) | | 10.00 | | | |
| 17-16 | 0 / 2151 | -17.5 | -17.5 | 0.40 (1) | | 10.00 | | | |
| 16-15 | 0 / 2151 | -17.5 | -17.5 | 0.40 (1) | | 10.00 | | | |
| 15-14 | 0 / 1398 | -17.5 | -17.5 | 0.32 (1) | | 10.00 | | | |
| 14-13 | 0 / 1298 | -17.5 | -17.5 | 0.31 (1) | | 10.00 | | | |

**DESIGN CRITERIA**

SPECIFIED LOADS:

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

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

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

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

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

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

ALLOWABLE DEFL.(LL)= L/360 (1.23")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.13")
ALLOWABLE DEFL.(TL)= L/360 (1.23")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.23")

CSI: TC=0.55 (6-8:1) , BC=0.40 (15-17:1) , WB=0.90 (3-21:1) , SSI=0.22 (8-9:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

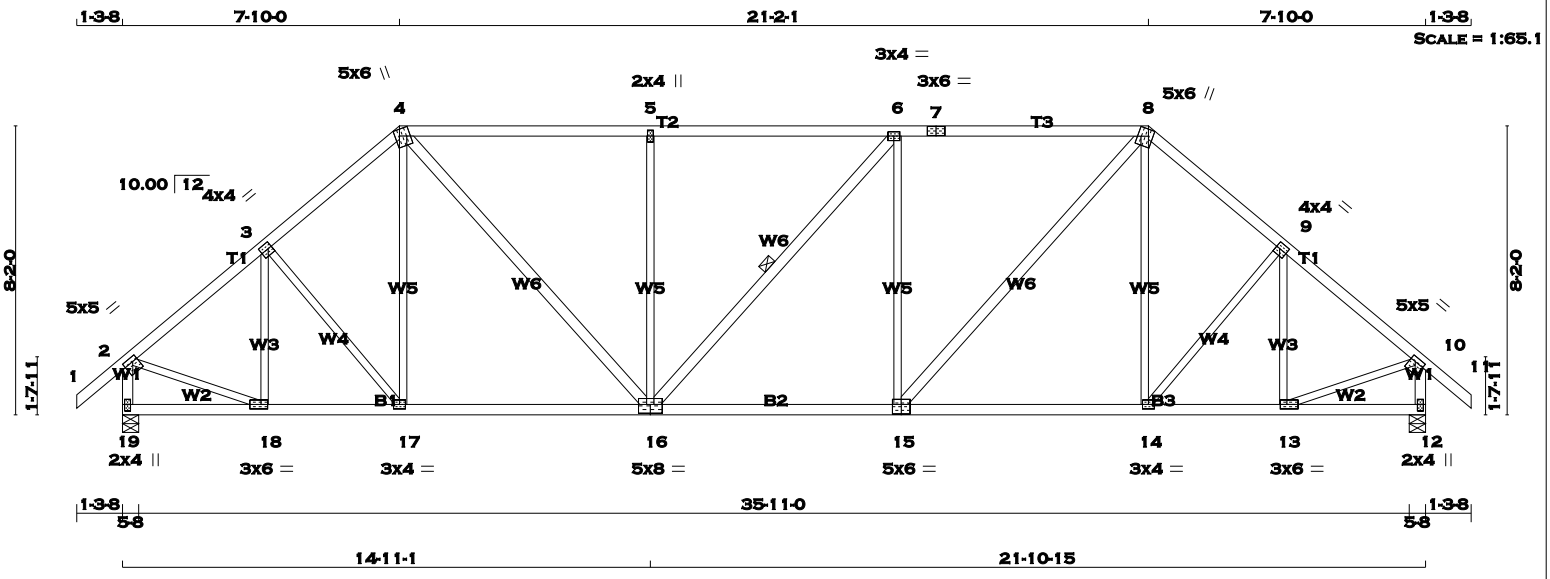
JSI GRIP= 0.89 (10) (INPUT = 0.90 )
JSI METAL= 0.61 (18) (INPUT = 1.00 )

LICENSED PROFESSIONAL ENGINEER
R.M. TREVISAN
100136551
March 23rd, 2017
PROVINCE OF ONTARIO

RECEIVED
TOWN OF MILTON
MAR 29, 2017
JUNIPER 9
BUILDING DIVISION

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

KOTT




**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 4 | 2x4 | DRY | No.2 | SPF |
| 4 - 7 | 2x4 | DRY | No.2 | SPF |
| 7 - 8 | 2x4 | DRY | No.2 | SPF |
| 8 - 11 | 2x4 | DRY | No.2 | SPF |
| 19 - 2 | 2x4 | DRY | No.2 | SPF |
| 12 - 10 | 2x4 | DRY | No.2 | SPF |
| 19 - 16 | 2x4 | DRY | No.2 | SPF |
| 16 - 15 | 2x4 | DRY | No.2 | SPF |
| 15 - 12 | 2x4 | DRY | No.2 | SPF |
| ALL WEBS EXCEPT | 2x3 | DRY | No.2 | SPF |
| 4 - 16 | 2x4 | DRY | No.2 | SPF |
| 16 - 6 | 2x4 | DRY | No.2 | SPF |
| 15 - 8 | 2x4 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 2 | TMVW-t | MT20 | 5.0 | 5.0 | 1.50 | 1.75 |
| 3 | TMWW-t | MT20 | 4.0 | 4.0 | 2.00 | 1.25 |
| 4 | TTWW+m | MT20 | 5.0 | 6.0 | 2.25 | 1.50 |
| 5 | TMW+w | MT20 | 2.0 | 4.0 | | |
| 6 | TMWW-t | MT20 | 3.0 | 4.0 | | |
| 7 | TS-t | MT20 | 3.0 | 6.0 | | |
| 8 | TTWW+m | MT20 | 5.0 | 6.0 | 2.25 | 1.50 |
| 9 | TMWW-t | MT20 | 4.0 | 4.0 | 2.00 | 1.25 |
| 10 | TMVW-t | MT20 | 5.0 | 5.0 | 1.50 | 1.75 |
| 12 | BMV1+p | MT20 | 2.0 | 4.0 | 2.25 | 1.00 |
| 13 | BMWW-t | MT20 | 3.0 | 6.0 | 1.50 | 2.25 |
| 14 | BMWW-t | MT20 | 3.0 | 4.0 | | |
| 15 | BSWW-l | MT20 | 5.0 | 6.0 | 3.25 | 3.00 |
| 16 | BSWWW-l | MT20 | 5.0 | 8.0 | 3.00 | 4.00 |
| 17 | BMWW-t | MT20 | 3.0 | 4.0 | | |
| 18 | BMWW-t | MT20 | 3.0 | 6.0 | 1.50 | 2.25 |
| 19 | BMV1+p | MT20 | 2.0 | 4.0 | 2.25 | 1.00 |

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

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

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 19 | 1854 | 0 | 1854 | 0 | 0 | 5-8 | 5-8 |
| 12 | 1854 | 0 | 1854 | 0 | 0 | 5-8 | 5-8 |

**UNFACTORED REACTIONS**

| JT | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 19 | 1299 | 922 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 377 / 0 | 0 / 0 |
| 12 | 1299 | 922 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 377 / 0 | 0 / 0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 19, 12

**BRACING**

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.96 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 - 2x3 SPF No.2 LATERAL BRACE(S) AT 1/ 2 LENGTH OF 6-16. DBS = 20-0-0 . CBF = 0 LBS.

DBS = DIAGONAL BRACE SPACING (MAX). CBF = CUMULATIVE BRACING FORCE. FASTEN LATERAL BRACE(S) USING (0.122"X3") SPIRAL NAILS : 1 NAIL FOR 2x3 BRACE(S), 2 FOR 1x4, 2x4, 2x5, 3 FOR 2x6, 4 FOR 2x8, 5 FOR 2x10, AND 6 FOR 2x12.

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

**LOADING**

TOTAL LOAD CASES: (4)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) FROM | TO | LC1 MAX CSI (LC) | MAX. UNBRAC LENGTH |
|---|---|---|---|---|---|
| 1- 2 | 0 / 34 | -77.3 | -77.3 | 0.11 (1) | 10.00 |
| 2- 3 | -1768 / 0 | -77.3 | -77.3 | 0.25 (1) | 4.79 |
| 3- 4 | -1822 / 0 | -77.3 | -77.3 | 0.25 (1) | 4.72 |
| 4- 5 | -2025 / 0 | -77.3 | -77.3 | 0.73 (1) | 3.96 |
| 5- 6 | -2025 / 0 | -77.3 | -77.3 | 0.72 (1) | 3.96 |
| 6- 7 | -2026 / 0 | -77.3 | -77.3 | 0.73 (1) | 3.96 |
| 7- 8 | -2026 / 0 | -77.3 | -77.3 | 0.73 (1) | 3.96 |
| 8- 9 | -1822 / 0 | -77.3 | -77.3 | 0.25 (1) | 4.73 |
| 9-10 | -1768 / 0 | -77.3 | -77.3 | 0.25 (1) | 4.79 |
| 10-11 | 0 / 34 | -77.3 | -77.3 | 0.11 (1) | 10.00 |
| 19- 2 | -1821 / 0 | 0.0 | 0.0 | 0.19 (1) | 6.20 |
| 12-10 | -1821 / 0 | 0.0 | 0.0 | 0.19 (1) | 6.20 |
| 19-18 | 0 / 0 | -17.5 | -17.5 | 0.06 (4) | 10.00 |
| 18-17 | 0 / 1375 | -17.5 | -17.5 | 0.30 (1) | 10.00 |
| 17-16 | 0 / 1379 | -17.5 | -17.5 | 0.31 (1) | 10.00 |
| 16-15 | 0 / 2026 | -17.5 | -17.5 | 0.42 (1) | 10.00 |
| 15-14 | 0 / 1379 | -17.5 | -17.5 | 0.32 (1) | 10.00 |
| 14-13 | 0 / 1375 | -17.5 | -17.5 | 0.29 (1) | 10.00 |
| 13-12 | 0 / 0 | -17.5 | -17.5 | 0.06 (4) | 10.00 |

| WEBS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|
| 18- 3 | -387 / 0 | 0.14 (1) |
| 3-17 | 0 / 13 | 0.00 (4) |
| 17- 4 | 0 / 104 | 0.04 (4) |
| 4-16 | 0 / 963 | 0.15 (1) |
| 16- 5 | -591 / 0 | 0.77 (1) |
| 16- 6 | 0 / 0 | 0.00 (1) |
| 15- 6 | -590 / 0 | 0.76 (1) |
| 15- 8 | 0 / 964 | 0.16 (1) |
| 14- 8 | 0 / 104 | 0.04 (4) |
| 14- 9 | 0 / 13 | 0.00 (4) |
| 13- 9 | -387 / 0 | 0.14 (1) |
| 2-18 | 0 / 1445 | 0.33 (1) |
| 13-10 | 0 / 1445 | 0.33 (1) |

**DESIGN CRITERIA**

SPECIFIED LOADS:

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

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

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

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

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

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

ALLOWABLE DEFL.(LL)= L/360 (1.23")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.10")
ALLOWABLE DEFL.(TL)= L/360 (1.23")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.19")

CSI: TC=0.73 (4-5:1) , BC=0.42 (15-16:1) , WB=0.77 (5-16:1) , SSI=0.26 (4-5:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (13) (INPUT = 0.90 )
JSI METAL= 0.58 (10) (INPUT = 1.00 )

LICENSED PROFESSIONAL ENGINEER
P.M. TREVISAN
100136551
March 23rd, 2017
PROVINCE OF ONTARIO

RECEIVED
TOWN OF MILTON
MAR 29, 2017
JUNIPER 9
BUILDING DIVISION

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

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Version 8.100 S Feb 9 2017 MiTek Industries, Inc. Thu Mar 23 10:58:55 2017 Page 1
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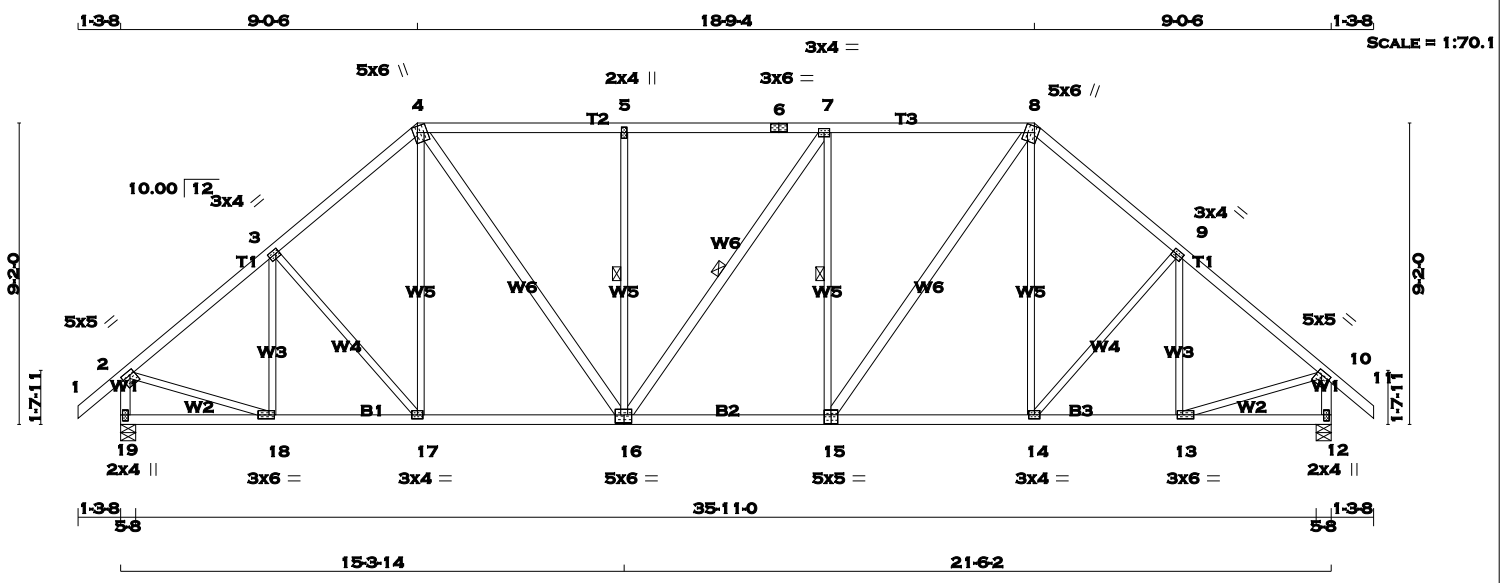


TOTAL WEIGHT = 2 X 187 = 374 lb [M]

## LUMBER

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 4 | 2x4 | DRY | No.2 | SPF |
| 4 - 6 | 2x4 | DRY | No.2 | SPF |
| 6 - 8 | 2x4 | DRY | No.2 | SPF |
| 8 - 11 | 2x4 | DRY | No.2 | SPF |
| 19 - 2 | 2x4 | DRY | No.2 | SPF |
| 12 - 10 | 2x4 | DRY | No.2 | SPF |
| 19 - 16 | 2x4 | DRY | No.2 | SPF |
| 16 - 15 | 2x4 | DRY | No.2 | SPF |
| 15 - 12 | 2x4 | DRY | No.2 | SPF |
| ALL WEBS EXCEPT | 2x3 | DRY | No.2 | SPF |
| 4 - 16 | 2x4 | DRY | No.2 | SPF |
| 16 - 7 | 2x4 | DRY | No.2 | SPF |
| 15 - 8 | 2x4 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

## PLATES (table is in inches)

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 2 | TMVW-t | MT20 | 5.0 | 5.0 | 1.50 | 1.75 |
| 3 | TMWW-t | MT20 | 3.0 | 4.0 | 1.50 | 1.25 |
| 4 | TTWW+m | MT20 | 5.0 | 6.0 | 2.25 | 1.50 |
| 5 | TMW+w | MT20 | 2.0 | 4.0 | | |
| 6 | TS-t | MT20 | 3.0 | 6.0 | | |
| 7 | TMWW-t | MT20 | 3.0 | 4.0 | | |
| 8 | TTWW+m | MT20 | 5.0 | 6.0 | 2.25 | 1.50 |
| 9 | TMWW-t | MT20 | 3.0 | 4.0 | 1.50 | 1.25 |
| 10 | TMVW-t | MT20 | 5.0 | 5.0 | 1.50 | 1.75 |
| 12 | BMV1+p | MT20 | 2.0 | 4.0 | 2.25 | 1.00 |
| 13 | BMWW-t | MT20 | 3.0 | 6.0 | 1.50 | 2.00 |
| 14 | BMWW-t | MT20 | 3.0 | 4.0 | | |
| 15 | BSWW-l | MT20 | 5.0 | 6.0 | 3.25 | 2.50 |
| 16 | BSWWW-l | MT20 | 5.0 | 6.0 | 3.00 | 2.75 |
| 17 | BMWW-t | MT20 | 3.0 | 4.0 | | |
| 18 | BMWW-t | MT20 | 3.0 | 6.0 | 1.50 | 2.00 |
| 19 | BMV1+p | MT20 | 2.0 | 4.0 | 2.25 | 1.00 |

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


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

### BEARINGS

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 19 | 1854 | 0 | 1854 | 0 | 0 | 5-8 | 5-8 |
| 12 | 1854 | 0 | 1854 | 0 | 0 | 5-8 | 5-8 |

### UNFACTORED REACTIONS

| JT | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 19 | 1299 | 922 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 377 / 0 | 0 / 0 |
| 12 | 1299 | 922 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 377 / 0 | 0 / 0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 19, 12

### BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.40 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 - 2x3 SPF No.2 LATERAL BRACE(S) AT 1/ 2 LENGTH OF 5-16, 7-16, 7-15. DBS = 20-0-0 . CBF = 65 LBS.

DBS = DIAGONAL BRACE SPACING (MAX). CBF = CUMULATIVE BRACING FORCE. FASTEN LATERAL BRACE(S) USING (0.122"X3") SPIRAL NAILS : 1 NAIL FOR 2x3 BRACE(S), 2 FOR 1x4, 2x4, 2x5, 3 FOR 2x6, 4 FOR 2x8, 5 FOR 2x10, AND 6 FOR 2x12.

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

### LOADING

TOTAL LOAD CASES: (4)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD LC1 FROM | TO | MAX (PLF) CSI (LC) | MAX. UNBRAC LENGTH |
|---|---|---|---|---|---|
| 1- 2 | 0 / 34 | -77.3 | -77.3 | 0.11 (1) | 10.00 |
| 2- 3 | -1809 / 0 | -77.3 | -77.3 | 0.34 (1) | 4.64 |
| 3- 4 | -1787 / 0 | -77.3 | -77.3 | 0.34 (1) | 4.67 |
| 4- 5 | -1800 / 0 | -77.3 | -77.3 | 0.52 (1) | 4.41 |
| 5- 6 | -1800 / 0 | -77.3 | -77.3 | 0.53 (1) | 4.40 |
| 6- 7 | -1800 / 0 | -77.3 | -77.3 | 0.53 (1) | 4.40 |
| 7- 8 | -1801 / 0 | -77.3 | -77.3 | 0.53 (1) | 4.40 |
| 8- 9 | -1787 / 0 | -77.3 | -77.3 | 0.34 (1) | 4.67 |
| 9-10 | -1809 / 0 | -77.3 | -77.3 | 0.34 (1) | 4.64 |
| 10-11 | 0 / 34 | -77.3 | -77.3 | 0.11 (1) | 10.00 |
| 19- 2 | -1818 / 0 | 0.0 | 0.0 | 0.19 (1) | 6.20 |
| 12-10 | -1818 / 0 | 0.0 | 0.0 | 0.19 (1) | 6.20 |
| 19-18 | 0 / 0 | -17.5 | -17.5 | 0.08 (4) | 10.00 |
| 18-17 | 0 / 1409 | -17.5 | -17.5 | 0.29 (1) | 10.00 |
| 17-16 | 0 / 1351 | -17.5 | -17.5 | 0.29 (1) | 10.00 |
| 16-15 | 0 / 1801 | -17.5 | -17.5 | 0.37 (1) | 10.00 |
| 15-14 | 0 / 1351 | -17.5 | -17.5 | 0.29 (1) | 10.00 |
| 14-13 | 0 / 1409 | -17.5 | -17.5 | 0.29 (1) | 10.00 |
| 13-12 | 0 / 0 | -17.5 | -17.5 | 0.08 (4) | 10.00 |

| WEBS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|
| 18- 3 | -319 / 0 | 0.14 (1) |
| 3-17 | -92 / 0 | 0.08 (1) |
| 17- 4 | 0 / 167 | 0.04 (4) |
| 4-16 | 0 / 775 | 0.12 (1) |
| 16- 5 | -522 / 0 | 0.29 (1) |
| 16- 7 | -2 / 0 | 0.00 (1) |
| 15- 7 | -523 / 0 | 0.29 (1) |
| 15- 8 | 0 / 778 | 0.12 (1) |
| 14- 8 | 0 / 166 | 0.04 (4) |
| 14- 9 | -92 / 0 | 0.08 (1) |
| 13- 9 | -318 / 0 | 0.14 (1) |
| 2-18 | 0 / 1464 | 0.33 (1) |
| 13-10 | 0 / 1464 | 0.33 (1) |

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

## DESIGN CRITERIA

SPECIFIED LOADS:

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

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

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

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

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

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

ALLOWABLE DEFL.(LL)= L/360 (1.23")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.09")
ALLOWABLE DEFL.(TL)= L/360 (1.23")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.16")

CSI: TC=0.53 (7-8:1) , BC=0.37 (15-16:1) , WB=0.33 (10-13:1) , SSI=0.23 (7-8:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

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

NAIL VALUES

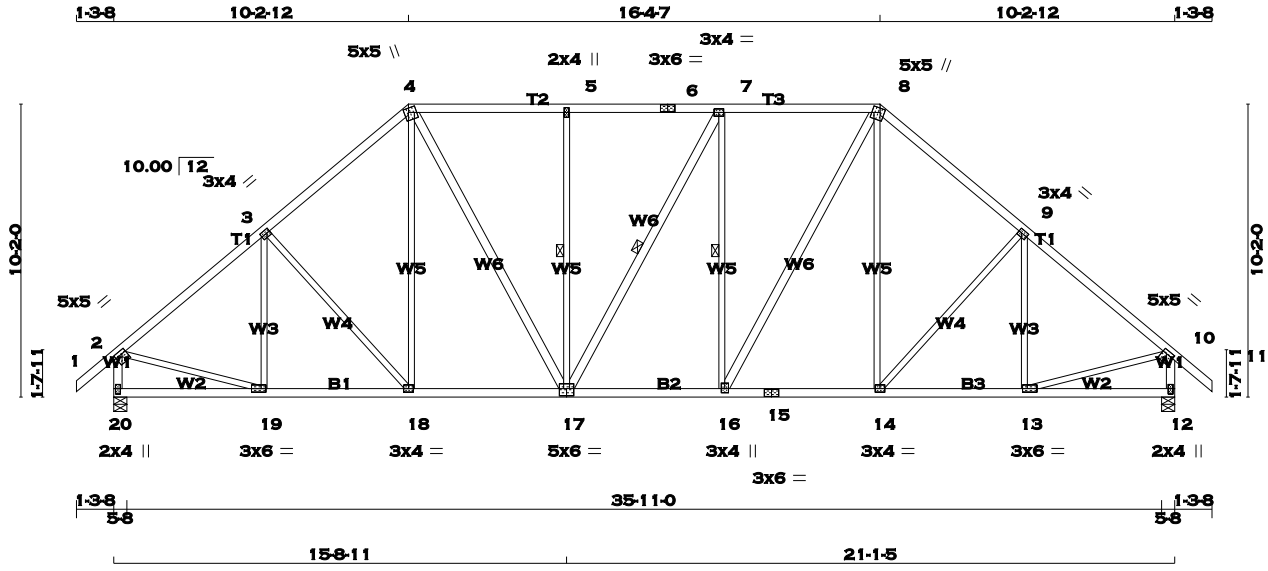
| PLATE | GRIP(DRY) (PSI) MAX | MIN | SHEAR (PLI) MAX | MIN | SECTION (PLI) MAX | MIN |
|---|---|---|---|---|---|---|
| MT20 | 618 | 354 | 1667 | 822 | 2284 | 1656 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.86 (15) (INPUT = 0.90 )
JSI METAL= 0.60 (10) (INPUT = 1.00 )

KOTT




TOTAL WEIGHT = 2 X 195 = 391 lb [M][F]

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 4 | 2x4 | DRY | No.2 | SPF |
| 4 - 6 | 2x4 | DRY | No.2 | SPF |
| 6 - 8 | 2x4 | DRY | No.2 | SPF |
| 8 - 11 | 2x4 | DRY | No.2 | SPF |
| 20 - 2 | 2x4 | DRY | No.2 | SPF |
| 12 - 10 | 2x4 | DRY | No.2 | SPF |
| 20 - 17 | 2x4 | DRY | No.2 | SPF |
| 17 - 15 | 2x4 | DRY | No.2 | SPF |
| 15 - 12 | 2x4 | DRY | No.2 | SPF |
| ALL WEBS EXCEPT | 2x3 | DRY | No.2 | SPF |
| 4 - 17 | 2x4 | DRY | No.2 | SPF |
| 17 - 7 | 2x4 | DRY | No.2 | SPF |
| 16 - 8 | 2x4 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 2 | TMVW-t | MT20 | 5.0 | 5.0 | 1.50 | 1.75 |
| 3 | TMWW-t | MT20 | 3.0 | 4.0 | 1.50 | 1.25 |
| 4 | TTWW+m | MT20 | 5.0 | 5.0 | 1.75 | 1.75 |
| 5 | TMW+w | MT20 | 2.0 | 4.0 | | |
| 6 | TS-t | MT20 | 3.0 | 6.0 | | |
| 7 | TMWW-t | MT20 | 3.0 | 4.0 | | |
| 8 | TTWW+m | MT20 | 5.0 | 5.0 | 1.75 | 1.75 |
| 9 | TMWW-t | MT20 | 3.0 | 4.0 | 1.50 | 1.25 |
| 10 | TMVW-t | MT20 | 5.0 | 5.0 | 1.50 | 1.75 |
| 12 | BMV1+p | MT20 | 2.0 | 4.0 | 2.25 | 1.00 |
| 13 | BMWW-t | MT20 | 3.0 | 6.0 | 1.50 | 2.00 |
| 14 | BMWW-t | MT20 | 3.0 | 4.0 | | |
| 15 | BS-t | MT20 | 3.0 | 6.0 | | |
| 16 | BMWW+t | MT20 | 3.0 | 4.0 | 1.75 | 1.50 |
| 17 | BSWWW-l | MT20 | 5.0 | 6.0 | 3.00 | 3.00 |
| 18 | BMWW-t | MT20 | 3.0 | 4.0 | | |
| 19 | BMWW-t | MT20 | 3.0 | 6.0 | 1.50 | 2.00 |
| 20 | BMV1+p | MT20 | 2.0 | 4.0 | 2.25 | 1.00 |

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

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

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 20 | 1854 | 0 | 1854 | 0 | 0 | 5-8 | 5-8 |
| 12 | 1854 | 0 | 1854 | 0 | 0 | 5-8 | 5-8 |

**UNFACTORED REACTIONS**

| JT | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 20 | 1299 | 922 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 377 / 0 | 0 / 0 |
| 12 | 1299 | 922 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 377 / 0 | 0 / 0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 20, 12

**BRACING**

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.65 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 - 2x3 SPF No.2 LATERAL BRACE(S) AT 1/ 2 LENGTH OF 5-17, 7-17, 7-16. DBS = 20-0-0 . CBF = 57 LBS.

DBS = DIAGONAL BRACE SPACING (MAX). CBF = CUMULATIVE BRACING FORCE. FASTEN LATERAL BRACE(S) USING (0.122"X3") SPIRAL NAILS : 1 NAIL FOR 2x3 BRACE(S), 2 FOR 1x4, 2x4, 2x5, 3 FOR 2x6, 4 FOR 2x8, 5 FOR 2x10, AND 6 FOR 2x12.

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

**LOADING**

TOTAL LOAD CASES: (4)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) FROM | TO | LC | MAX CSI (LC) | MAX. UNBRAC LENGTH |
|---|---|---|---|---|---|---|
| 1- 2 | 0 / 34 | -77.3 | -77.3 | 0.11 (1) | 10.00 | |
| 2- 3 | -1836 / 0 | -77.3 | -77.3 | 0.33 (1) | 4.65 | |
| 3- 4 | -1743 / 0 | -77.3 | -77.3 | 0.31 (1) | 4.76 | |
| 4- 5 | -1620 / 0 | -77.3 | -77.3 | 0.30 (1) | 4.90 | |
| 5- 6 | -1620 / 0 | -77.3 | -77.3 | 0.28 (1) | 4.93 | |
| 6- 7 | -1620 / 0 | -77.3 | -77.3 | 0.28 (1) | 4.93 | |
| 7- 8 | -1621 / 0 | -77.3 | -77.3 | 0.30 (1) | 4.90 | |
| 8- 9 | -1742 / 0 | -77.3 | -77.3 | 0.31 (1) | 4.76 | |
| 9-10 | -1836 / 0 | -77.3 | -77.3 | 0.33 (1) | 4.65 | |
| 10-11 | 0 / 34 | -77.3 | -77.3 | 0.11 (1) | 10.00 | |
| 20- 2 | -1815 / 0 | 0.0 | 0.0 | 0.19 (1) | 6.21 | |
| 12-10 | -1815 / 0 | 0.0 | 0.0 | 0.19 (1) | 6.21 | |
| 20-19 | 0 / 0 | -17.5 | -17.5 | 0.11 (4) | 10.00 | |
| 19-18 | 0 / 1433 | -17.5 | -17.5 | 0.28 (1) | 10.00 | |
| 18-17 | 0 / 1315 | -17.5 | -17.5 | 0.26 (1) | 10.00 | |
| 17-16 | 0 / 1621 | -17.5 | -17.5 | 0.32 (1) | 10.00 | |
| 16-15 | 0 / 1314 | -17.5 | -17.5 | 0.27 (1) | 10.00 | |
| 15-14 | 0 / 1314 | -17.5 | -17.5 | 0.27 (1) | 10.00 | |
| 14-13 | 0 / 1433 | -17.5 | -17.5 | 0.28 (1) | 10.00 | |
| 13-12 | 0 / 0 | -17.5 | -17.5 | 0.11 (4) | 10.00 | |

| WEBS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|
| 19- 3 | -262 / 7 | 0.15 (1) |
| 3-18 | -180 / 0 | 0.21 (1) |
| 18- 4 | 0 / 227 | 0.05 (1) |
| 4-17 | 0 / 627 | 0.10 (1) |
| 17- 5 | -453 / 0 | 0.32 (1) |
| 17- 7 | -3 / 0 | 0.00 (1) |
| 16- 7 | -454 / 0 | 0.32 (1) |
| 16- 8 | 0 / 630 | 0.10 (1) |
| 14- 8 | 0 / 225 | 0.05 (1) |
| 14- 9 | -180 / 0 | 0.21 (1) |
| 13- 9 | -261 / 7 | 0.15 (1) |
| 2-19 | 0 / 1477 | 0.33 (1) |
| 13-10 | 0 / 1477 | 0.33 (1) |

**DESIGN CRITERIA**

SPECIFIED LOADS:

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

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

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

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

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

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

ALLOWABLE DEFL.(LL)= L/360 (1.23")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.08")
ALLOWABLE DEFL.(TL)= L/360 (1.23")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.14")

CSI: TC=0.33 (9-10:1) , BC=0.32 (16-17:1) , WB=0.33 (10-13:1) , SSI=0.20 (7-8:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.86 (10) (INPUT = 0.90 )
JSI METAL= 0.61 (10) (INPUT = 1.00 )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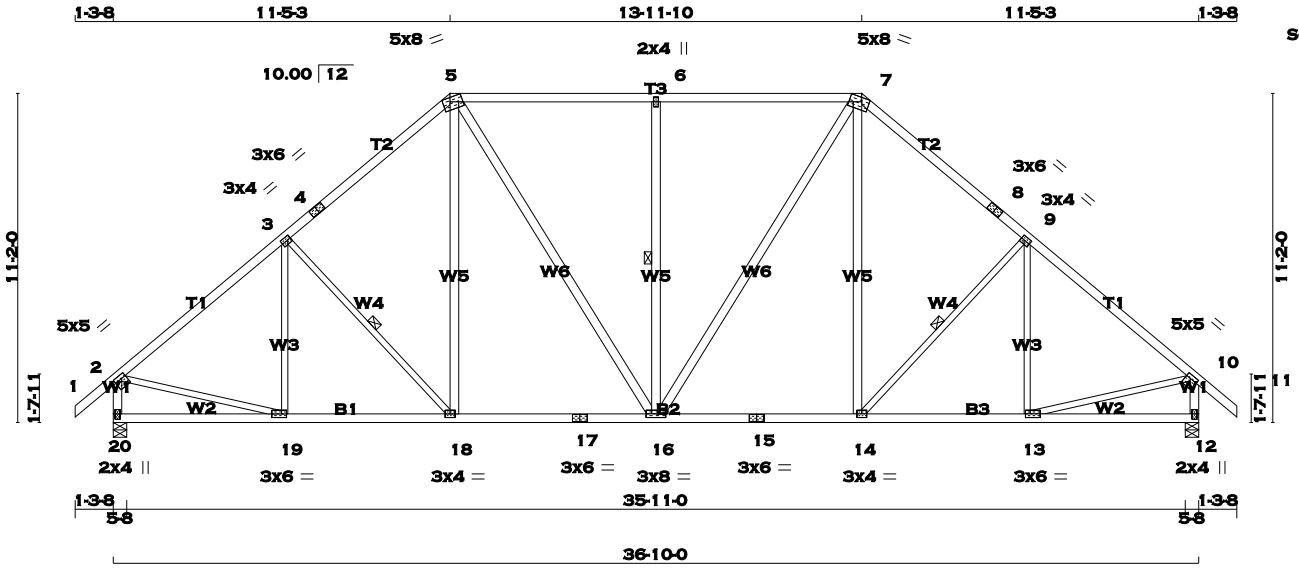


TOTAL WEIGHT = 2 X 195 = 391 lb

[M][F]

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 4 | 2x4 | DRY | No.2 | SPF |
| 4 - 5 | 2x4 | DRY | No.2 | SPF |
| 5 - 7 | 2x4 | DRY | No.2 | SPF |
| 7 - 8 | 2x4 | DRY | No.2 | SPF |
| 8 - 11 | 2x4 | DRY | No.2 | SPF |
| 20 - 2 | 2x4 | DRY | No.2 | SPF |
| 12 - 10 | 2x4 | DRY | No.2 | SPF |
| 20 - 17 | 2x4 | DRY | No.2 | SPF |
| 17 - 15 | 2x4 | DRY | No.2 | SPF |
| 15 - 12 | 2x4 | DRY | No.2 | SPF |
| ALL WEBS EXCEPT | 2x4 | DRY | No.2 | SPF |
| 19 - 3 | 2x3 | DRY | No.2 | SPF |
| 3 - 18 | 2x3 | DRY | No.2 | SPF |
| 14 - 9 | 2x3 | DRY | No.2 | SPF |
| 13 - 9 | 2x3 | DRY | No.2 | SPF |
| 2 - 19 | 2x3 | DRY | No.2 | SPF |
| 13 - 10 | 2x3 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 2 | TMVW-t | MT20 | 5.0 | 5.0 | 1.50 | 1.75 |
| 3 | TMWW-t | MT20 | 3.0 | 4.0 | 1.50 | 1.25 |
| 4 | TS-t | MT20 | 3.0 | 6.0 | | |
| 5 | TTWW-m | MT20 | 5.0 | 8.0 | Edge | 3.00 |
| 6 | TMW+w | MT20 | 2.0 | 4.0 | | |
| 7 | TTWW-m | MT20 | 5.0 | 8.0 | Edge | 3.00 |
| 8 | TS-t | MT20 | 3.0 | 6.0 | | |
| 9 | TMWW-t | MT20 | 3.0 | 4.0 | 1.50 | 1.25 |
| 10 | TMVW-t | MT20 | 5.0 | 5.0 | 1.50 | 1.75 |
| 12 | BMV1+p | MT20 | 2.0 | 4.0 | 2.25 | 1.00 |
| 13 | BMWW-t | MT20 | 3.0 | 6.0 | 1.50 | 2.00 |
| 14 | BMWW-t | MT20 | 3.0 | 4.0 | | |
| 15 | BS-t | MT20 | 3.0 | 6.0 | | |
| 16 | BMWWW-t | MT20 | 3.0 | 8.0 | | |
| 17 | BS-t | MT20 | 3.0 | 6.0 | | |
| 18 | BMWW-t | MT20 | 3.0 | 4.0 | | |
| 19 | BMWW-t | MT20 | 3.0 | 6.0 | 1.50 | 2.00 |
| 20 | BMV1+p | MT20 | 2.0 | 4.0 | 2.25 | 1.00 |

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

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


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

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 20 | 1854 | 0 | 1854 | 0 | 0 | 5-8 | 5-8 |
| 12 | 1854 | 0 | 1854 | 0 | 0 | 5-8 | 5-8 |

**UNFACTORED REACTIONS**

| JT | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 20 | 1299 | 922 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 377 / 0 | 0 / 0 |
| 12 | 1299 | 922 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 377 / 0 | 0 / 0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 20, 12

**BRACING**

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.53 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 - 2x3 SPF No.2 LATERAL BRACE(S) AT 1/ 2 LENGTH OF 3-18, 6-16, 9-14. DBS = 20-0-0 . CBF = 83 LBS.

DBS = DIAGONAL BRACE SPACING (MAX). CBF = CUMULATIVE BRACING FORCE. FASTEN LATERAL BRACE(S) USING (0.122"X3") SPIRAL NAILS : 1 NAIL FOR 2x3 BRACE(S), 2 FOR 1x4, 2x4, 2x5, 3 FOR 2x6, 4 FOR 2x8, 5 FOR 2x10, AND 6 FOR 2x12.

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

**LOADING**

TOTAL LOAD CASES: (4)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) FROM | TO | LC1 MAX CSI (LC) | MAX. UNBRAC LENGTH | WEBS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|
| 1- 2 | 0 / 34 | -77.3 | -77.3 | 0.11 (1) | 10.00 | 19- 3 | -217 / 29 | 0.15 (1) |
| 2- 3 | -1851 / 0 | -77.3 | -77.3 | 0.42 (1) | 4.53 | 3-18 | -260 / 0 | 0.12 (1) |
| 3- 4 | -1692 / 0 | -77.3 | -77.3 | 0.39 (1) | 4.72 | 18- 5 | 0 / 300 | 0.05 (1) |
| 4- 5 | -1692 / 0 | -77.3 | -77.3 | 0.39 (1) | 4.72 | 5-16 | 0 / 468 | 0.08 (1) |
| 5- 6 | -1528 / 0 | -77.3 | -77.3 | 0.54 (1) | 4.66 | 16- 6 | -663 / 0 | 0.43 (1) |
| 6- 7 | -1528 / 0 | -77.3 | -77.3 | 0.54 (1) | 4.66 | 16- 7 | 0 / 468 | 0.08 (1) |
| 7- 8 | -1692 / 0 | -77.3 | -77.3 | 0.39 (1) | 4.72 | 14- 7 | 0 / 300 | 0.05 (1) |
| 8- 9 | -1692 / 0 | -77.3 | -77.3 | 0.39 (1) | 4.72 | 14- 9 | -260 / 0 | 0.12 (1) |
| 9-10 | -1851 / 0 | -77.3 | -77.3 | 0.42 (1) | 4.53 | 13- 9 | -217 / 29 | 0.15 (1) |
| 10-11 | 0 / 34 | -77.3 | -77.3 | 0.11 (1) | 10.00 | 2-19 | 0 / 1484 | 0.33 (1) |
| 20- 2 | -1811 / 0 | 0.0 | 0.0 | 0.19 (1) | 6.21 | 13-10 | 0 / 1484 | 0.33 (1) |
| 12-10 | -1811 / 0 | 0.0 | 0.0 | 0.19 (1) | 6.21 | | | |
| 20-19 | 0 / 0 | -17.5 | -17.5 | 0.13 (4) | 10.00 | | | |
| 19-18 | 0 / 1448 | -17.5 | -17.5 | 0.31 (1) | 10.00 | | | |
| 18-17 | 0 / 1275 | -17.5 | -17.5 | 0.30 (1) | 10.00 | | | |
| 17-16 | 0 / 1275 | -17.5 | -17.5 | 0.30 (1) | 10.00 | | | |
| 16-15 | 0 / 1275 | -17.5 | -17.5 | 0.30 (1) | 10.00 | | | |
| 15-14 | 0 / 1275 | -17.5 | -17.5 | 0.30 (1) | 10.00 | | | |
| 14-13 | 0 / 1448 | -17.5 | -17.5 | 0.31 (1) | 10.00 | | | |
| 13-12 | 0 / 0 | -17.5 | -17.5 | 0.13 (4) | 10.00 | | | |

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**DESIGN CRITERIA**

SPECIFIED LOADS:

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

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

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

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

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

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

ALLOWABLE DEFL.(LL)= L/360 (1.23")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.07")
ALLOWABLE DEFL.(TL)= L/360 (1.23")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.15")

CSI: TC=0.54 (6-7:1) , BC=0.31 (13-14:1) , WB=0.43 (6-16:1) , SSI=0.26 (6-7:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

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

NAIL VALUES

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

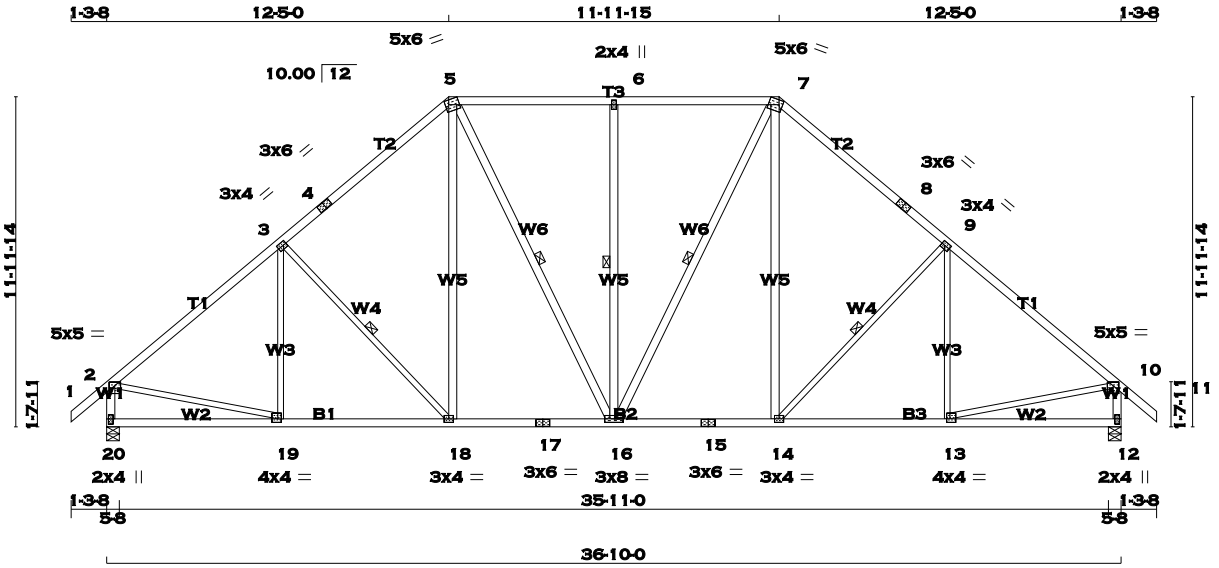
PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.89 (10) (INPUT = 0.90 )
JSI METAL= 0.62 (2) (INPUT = 1.00 )

KOTT

CONTINUED ON PAGE 2




TOTAL WEIGHT = 202 lb

[M][F]

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 4 | 2x4 | DRY | No.2 | SPF |
| 4 - 5 | 2x4 | DRY | No.2 | SPF |
| 5 - 7 | 2x4 | DRY | No.2 | SPF |
| 7 - 8 | 2x4 | DRY | No.2 | SPF |
| 8 - 11 | 2x4 | DRY | No.2 | SPF |
| 20 - 2 | 2x4 | DRY | No.2 | SPF |
| 12 - 10 | 2x4 | DRY | No.2 | SPF |
| 20 - 17 | 2x4 | DRY | No.2 | SPF |
| 17 - 15 | 2x4 | DRY | No.2 | SPF |
| 15 - 12 | 2x4 | DRY | No.2 | SPF |
| ALL WEBS EXCEPT | 2x4 | DRY | No.2 | SPF |
| 19 - 3 | 2x3 | DRY | No.2 | SPF |
| 3 - 18 | 2x3 | DRY | No.2 | SPF |
| 14 - 9 | 2x3 | DRY | No.2 | SPF |
| 13 - 9 | 2x3 | DRY | No.2 | SPF |
| 2 - 19 | 2x3 | DRY | No.2 | SPF |
| 13 - 10 | 2x3 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 2 | TMVW-p | MT20 | 5.0 | 5.0 | 1.50 | 2.50 |
| 3 | TMWW-t | MT20 | 3.0 | 4.0 | 1.50 | 1.25 |
| 4 | TS-t | MT20 | 3.0 | 6.0 | | |
| 5 | TTWW-m | MT20 | 5.0 | 6.0 | 2.00 | 1.50 |
| 6 | TMW+w | MT20 | 2.0 | 4.0 | | |
| 7 | TTWW-m | MT20 | 5.0 | 6.0 | 2.00 | 1.50 |
| 8 | TS-t | MT20 | 3.0 | 6.0 | | |
| 9 | TMWW-t | MT20 | 3.0 | 4.0 | 1.50 | 1.25 |
| 10 | TMVW-p | MT20 | 5.0 | 5.0 | 1.50 | 2.50 |
| 12 | BMV1+p | MT20 | 2.0 | 4.0 | 2.25 | 1.00 |
| 13 | BMWW-t | MT20 | 4.0 | 4.0 | 1.50 | 1.50 |
| 14 | BMWW-t | MT20 | 3.0 | 4.0 | | |
| 15 | BS-t | MT20 | 3.0 | 6.0 | | |
| 16 | BMWWW-t | MT20 | 3.0 | 8.0 | | |
| 17 | BS-t | MT20 | 3.0 | 6.0 | | |
| 18 | BMWW-t | MT20 | 3.0 | 4.0 | | |
| 19 | BMWW-t | MT20 | 4.0 | 4.0 | 1.50 | 1.50 |
| 20 | BMV1+p | MT20 | 2.0 | 4.0 | 2.25 | 1.00 |

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


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

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 20 | 1854 | 0 | 1854 | 0 | 0 | 5-8 | 5-8 |
| 12 | 1854 | 0 | 1854 | 0 | 0 | 5-8 | 5-8 |

**UNFACTORED REACTIONS**

| JT | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 20 | 1299 | 922 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 377 / 0 | 0 / 0 |
| 12 | 1299 | 922 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 377 / 0 | 0 / 0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 20, 12

**BRACING**

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.43 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 - 2x3 SPF No.2 LATERAL BRACE(S) AT 1/ 2 LENGTH OF 3-18, 5-16, 6-16, 7-16, 9-14. DBS = 20-0-0 . CBF = 71 LBS.

DBS = DIAGONAL BRACE SPACING (MAX). CBF = CUMULATIVE BRACING FORCE. FASTEN LATERAL BRACE(S) USING (0.122"X3") SPIRAL NAILS : 1 NAIL FOR 2x3 BRACE(S), 2 FOR 1x4, 2x4, 2x5, 3 FOR 2x6, 4 FOR 2x8, 5 FOR 2x10, AND 6 FOR 2x12.

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

**LOADING**

TOTAL LOAD CASES: (4)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) FROM | TO | LC | MAX CSI (LC) | MAX. UNBRAC LENGTH |
|---|---|---|---|---|---|---|
| 1- 2 | 0 / 34 | -77.3 | -77.3 | 0.11 (1) | 10.00 | |
| 2- 3 | -1859 / 0 | -77.3 | -77.3 | 0.51 (1) | 4.43 | |
| 3- 4 | -1645 / 0 | -77.3 | -77.3 | 0.47 (1) | 4.68 | |
| 4- 5 | -1645 / 0 | -77.3 | -77.3 | 0.47 (1) | 4.68 | |
| 5- 6 | -1408 / 0 | -77.3 | -77.3 | 0.39 (1) | 5.04 | |
| 6- 7 | -1408 / 0 | -77.3 | -77.3 | 0.39 (1) | 5.04 | |
| 7- 8 | -1645 / 0 | -77.3 | -77.3 | 0.47 (1) | 4.68 | |
| 8- 9 | -1645 / 0 | -77.3 | -77.3 | 0.47 (1) | 4.68 | |
| 9-10 | -1859 / 0 | -77.3 | -77.3 | 0.51 (1) | 4.43 | |
| 10-11 | 0 / 34 | -77.3 | -77.3 | 0.11 (1) | 10.00 | |
| 20- 2 | -1808 / 0 | 0.0 | 0.0 | 0.19 (1) | 6.22 | |
| 12-10 | -1808 / 0 | 0.0 | 0.0 | 0.19 (1) | 6.22 | |
| 20-19 | 0 / 0 | -17.5 | -17.5 | 0.17 (4) | 10.00 | |
| 19-18 | 0 / 1457 | -17.5 | -17.5 | 0.32 (1) | 10.00 | |
| 18-17 | 0 / 1236 | -17.5 | -17.5 | 0.27 (1) | 10.00 | |
| 17-16 | 0 / 1236 | -17.5 | -17.5 | 0.27 (1) | 10.00 | |
| 16-15 | 0 / 1236 | -17.5 | -17.5 | 0.27 (1) | 10.00 | |
| 15-14 | 0 / 1236 | -17.5 | -17.5 | 0.27 (1) | 10.00 | |
| 14-13 | 0 / 1457 | -17.5 | -17.5 | 0.32 (1) | 10.00 | |
| 13-12 | 0 / 0 | -17.5 | -17.5 | 0.17 (4) | 10.00 | |

| WEBS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|
| 19- 3 | -180 / 51 | 0.14 (1) |
| 3-18 | -326 / 0 | 0.18 (1) |
| 18- 5 | 0 / 341 | 0.05 (1) |
| 5-16 | 0 / 375 | 0.06 (1) |
| 16- 6 | -566 / 0 | 0.44 (1) |
| 16- 7 | 0 / 375 | 0.06 (1) |
| 14- 7 | 0 / 341 | 0.05 (1) |
| 14- 9 | -326 / 0 | 0.18 (1) |
| 13- 9 | -180 / 51 | 0.14 (1) |
| 2-19 | 0 / 1488 | 0.33 (1) |
| 13-10 | 0 / 1488 | 0.33 (1) |



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

**DESIGN CRITERIA**

SPECIFIED LOADS:

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

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

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

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

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

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

ALLOWABLE DEFL.(LL)= L/360 (1.23")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.07")
ALLOWABLE DEFL.(TL)= L/360 (1.23")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.13")

CSI: TC=0.51 (9-10:1) , BC=0.32 (13-14:1) , WB=0.44 (6-16:1) , SSI=0.22 (5-6:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (13) (INPUT = 0.90 )
JSI METAL= 0.55 (19) (INPUT = 1.00 )

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CONTINUED ON PAGE 2

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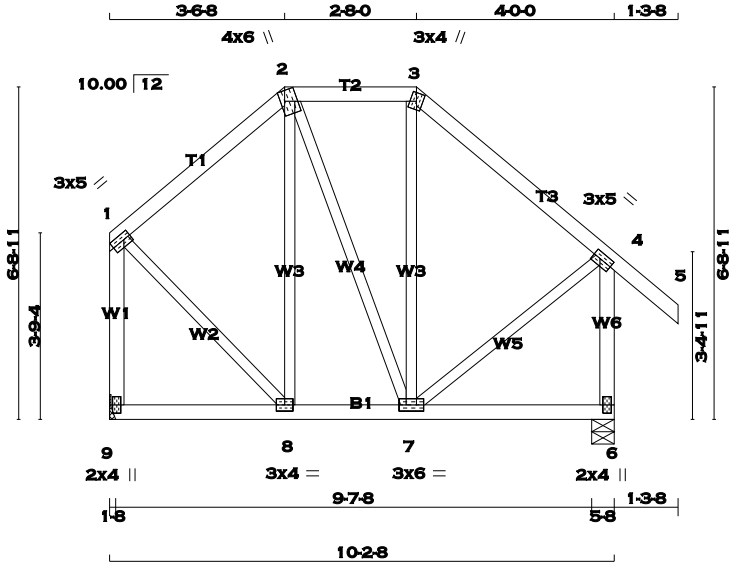



TOTAL WEIGHT = 59 lb
[M][F]

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 2 | 2x4 | DRY | No.2 | SPF |
| 2 - 3 | 2x4 | DRY | No.2 | SPF |
| 3 - 5 | 2x4 | DRY | No.2 | SPF |
| 9 - 1 | 2x4 | DRY | No.2 | SPF |
| 6 - 4 | 2x4 | DRY | No.2 | SPF |
| 9 - 6 | 2x4 | DRY | No.2 | SPF |
| ALL WEBS EXCEPT | 2x3 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 1 | TMVW-t | MT20 | 3.0 | 5.0 | 1.50 | 1.75 |
| 2 | TTWW+m | MT20 | 4.0 | 6.0 | Edge | 1.00 |
| 3 | TTW+m | MT20 | 3.0 | 4.0 | | |
| 4 | TMVW-t | MT20 | 3.0 | 5.0 | 1.50 | 1.75 |
| 6 | BMV1+p | MT20 | 2.0 | 4.0 | | |
| 7 | BMWWW-t | MT20 | 3.0 | 6.0 | | |
| 8 | BMWW-t | MT20 | 3.0 | 4.0 | | |
| 9 | BMV1+p | MT20 | 2.0 | 4.0 | | |

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

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

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

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 9 | 484 | 0 | 484 | 0 | 0 | HANGER BY OTHERS | |
| | | | | | | MIN. SEAT SIZE: 1-8 | |
| 6 | 591 | 0 | 591 | 0 | 0 | 5-8 | 5-8 |

**UNFACTORED REACTIONS**

| JT | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 9 | 340 | 238 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 102 / 0 | 0 / 0 |
| 6 | 413 | 302 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 110 / 0 | 0 / 0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 6

**BRACING**

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

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

**LOADING**

TOTAL LOAD CASES: (4)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD LC1 (PLF) FROM | TO | MAX CSI (LC) | MAX. UNBRAC LENGTH | WEBS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|
| 1- 2 | -234 / 0 | -77.3 | -77.3 | 0.12 (1) | 6.25 | 8- 2 | -112 / 10 | 0.08 (1) |
| 2- 3 | -187 / 0 | -77.3 | -77.3 | 0.07 (1) | 6.25 | 2- 7 | 0 / 25 | 0.01 (1) |
| 3- 4 | -246 / 0 | -77.3 | -77.3 | 0.16 (1) | 6.25 | 7- 3 | -100 / 21 | 0.08 (1) |
| 4- 5 | 0 / 34 | -77.3 | -77.3 | 0.11 (1) | 10.00 | 1- 8 | 0 / 247 | 0.06 (1) |
| 9- 1 | -457 / 0 | 0.0 | 0.0 | 0.11 (1) | 7.81 | 7- 4 | 0 / 235 | 0.05 (1) |
| 6- 4 | -560 / 0 | 0.0 | 0.0 | 0.11 (1) | 7.81 | | | |
| 9- 8 | 0 / 0 | -17.5 | -17.5 | 0.05 (4) | 10.00 | | | |
| 8- 7 | 0 / 178 | -17.5 | -17.5 | 0.07 (4) | 10.00 | | | |
| 7- 6 | 0 / 0 | -17.5 | -17.5 | 0.06 (4) | 10.00 | | | |

**DESIGN CRITERIA**

SPECIFIED LOADS:

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

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

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

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

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

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

ALLOWABLE DEFL.(LL)= L/360 (0.34")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")
ALLOWABLE DEFL.(TL)= L/360 (0.34")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.01")

CSI: TC=0.16 (3-4:1) , BC=0.07 (7-8:4) , WB=0.08 (2-8:1) , SSI=0.09 (3-4:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

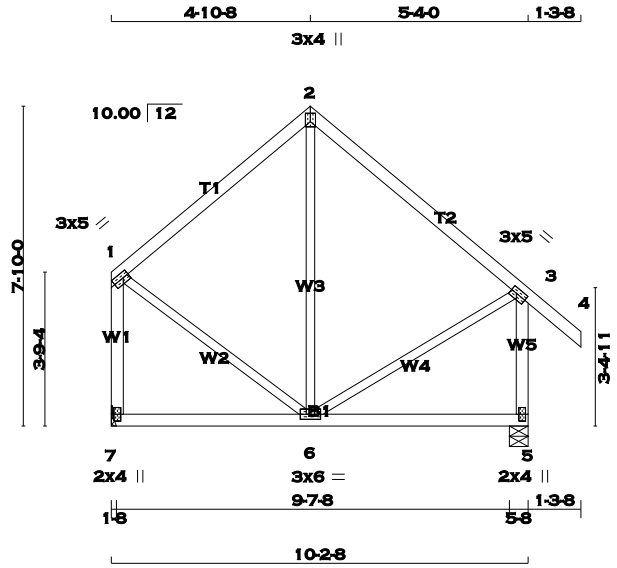
JSI GRIP= 0.54 (1) (INPUT = 0.90 )
JSI METAL= 0.12 (4) (INPUT = 1.00 )

LICENSED PROFESSIONAL ENGINEER
R.M. TREVISAN
100136551
March 23rd, 2017
PROVINCE OF ONTARIO

RECEIVED
TOWN OF MILTON
MAR 29, 2017
JUNIPER 9
BUILDING DIVISION

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

KOTT




TOTAL WEIGHT = 52 lb

[M][F]

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 2 | 2x4 | DRY | No.2 | SPF |
| 2 - 4 | 2x4 | DRY | No.2 | SPF |
| 7 - 1 | 2x4 | DRY | No.2 | SPF |
| 5 - 3 | 2x4 | DRY | No.2 | SPF |
| 7 - 5 | 2x4 | DRY | No.2 | SPF |
| ALL WEBS EXCEPT | 2x3 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 1 | TMVW-t | MT20 | 3.0 | 5.0 | 1.50 | 1.75 |
| 2 | TTW+p | MT20 | 3.0 | 4.0 | 2.50 | 1.50 |
| 3 | TMVW-t | MT20 | 3.0 | 5.0 | 1.50 | 1.75 |
| 5 | BMV1+p | MT20 | 2.0 | 4.0 | | |
| 6 | BMWWW-t | MT20 | 3.0 | 6.0 | | |
| 7 | BMV1+p | MT20 | 2.0 | 4.0 | | |

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

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

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 7 | 484 | 0 | 484 | 0 | 0 | HANGER BY OTHERS MIN. SEAT SIZE: 1-8 | |
| 5 | 591 | 0 | 591 | 0 | 0 | 5-8 | 5-8 |

**UNFACTORED REACTIONS**

| JT | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 7 | 340 | 238 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 102 / 0 | 0 / 0 |
| 5 | 413 | 302 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 110 / 0 | 0 / 0 |

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

**BRACING**

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

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

**LOADING**

TOTAL LOAD CASES: (4)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) FROM | TO | MAX CSI (LC) | MAX UNBRAC LENGTH | WEBS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|
| 1- 2 | -223 / 0 | -77.3 | -77.3 | 0.24 (1) | 6.25 | 6- 2 | -109 / 52 | 0.12 (1) |
| 2- 3 | -223 / 0 | -77.3 | -77.3 | 0.28 (1) | 6.25 | 1- 6 | 0 / 210 | 0.05 (1) |
| 3- 4 | 0 / 34 | -77.3 | -77.3 | 0.11 (1) | 10.00 | 6- 3 | 0 / 198 | 0.04 (1) |
| 7- 1 | -453 / 0 | 0.0 | 0.0 | 0.11 (1) | 7.81 | | | |
| 5- 3 | -555 / 0 | 0.0 | 0.0 | 0.11 (1) | 7.81 | | | |
| 7- 6 | 0 / 0 | -17.5 | -17.5 | 0.13 (4) | 10.00 | | | |
| 6- 5 | 0 / 0 | -17.5 | -17.5 | 0.13 (4) | 10.00 | | | |

**DESIGN CRITERIA**

SPECIFIED LOADS:

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

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

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

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

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

ALLOWABLE DEFL.(LL)= L/360 (0.34")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")
ALLOWABLE DEFL.(TL)= L/360 (0.34")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.02")

CSI: TC=0.28 (2-3:1) , BC=0.13 (6-7:4) , WB=0.12 (2-6:1) , SSI=0.12 (2-3:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.49 (3) (INPUT = 0.90 )
JSI METAL= 0.13 (3) (INPUT = 1.00 )


RECEIVED
TOWN OF MILTON
MAR 29, 2017
JUNIPER 9
BUILDING DIVISION

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

KOTT

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. / TRUSS DESC. | DRWG NO. |
|---|---|---|---|---|---|
| PT0317-178 | T12 | 1 | 1 | LECCO RIDGE-JUNIPER 9 EL 1 | Page 25 of 36 ENG JOB: PT0317-178 |

KOTT , Stouffville, ON, CGC

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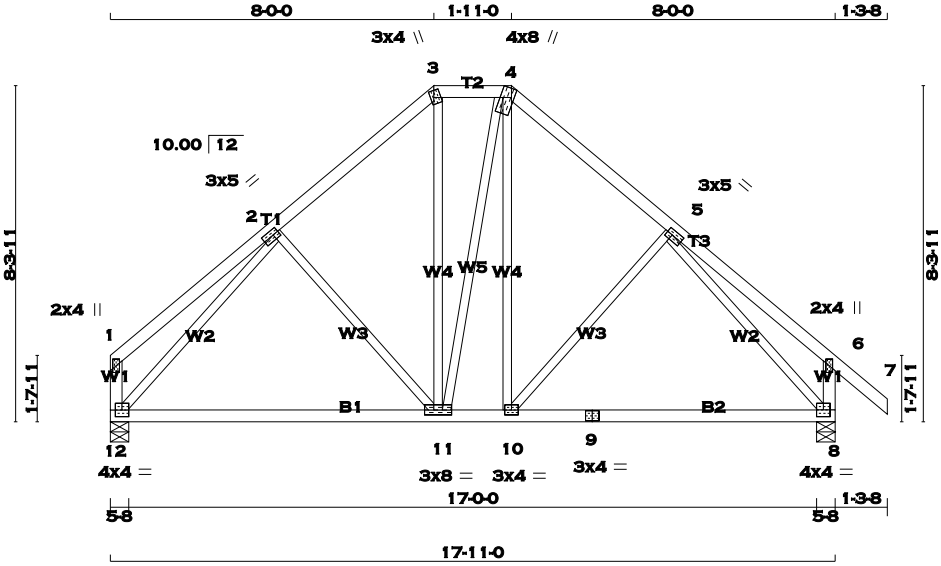


TOTAL WEIGHT = 89 lb [M][F]

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 3 | 2x4 | DRY | No.2 | SPF |
| 3 - 4 | 2x4 | DRY | No.2 | SPF |
| 4 - 7 | 2x4 | DRY | No.2 | SPF |
| 12 - 1 | 2x4 | DRY | No.2 | SPF |
| 8 - 6 | 2x4 | DRY | No.2 | SPF |
| 12 - 9 | 2x4 | DRY | No.2 | SPF |
| 9 - 8 | 2x4 | DRY | No.2 | SPF |
| ALL WEBS EXCEPT | 2x3 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 1 | TMV+p | MT20 | 2.0 | 4.0 | | |
| 2 | TMWW-t | MT20 | 3.0 | 5.0 | 1.50 | 1.75 |
| 3 | TTW+m | MT20 | 3.0 | 4.0 | 2.00 | 1.00 |
| 4 | TTWW+m | MT20 | 4.0 | 8.0 | Edge | 0.75 |
| 5 | TMWW-t | MT20 | 3.0 | 5.0 | 1.50 | 1.75 |
| 6 | TMV+p | MT20 | 2.0 | 4.0 | | |
| 8 | BMVW1-t | MT20 | 4.0 | 4.0 | | |
| 9 | BS-t | MT20 | 3.0 | 4.0 | | |
| 10 | BMWW-t | MT20 | 3.0 | 4.0 | | |
| 11 | BMWWW-t | MT20 | 3.0 | 8.0 | | |
| 12 | BMVW1-t | MT20 | 4.0 | 4.0 | | |

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

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

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

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 12 | 850 | 0 | 850 | 0 | 0 | 5-8 | 5-8 |
| 8 | 957 | 0 | 957 | 0 | 0 | 5-8 | 5-8 |

**UNFACTORED REACTIONS**

| JT | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 12 | 596 | 417 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 179 / 0 | 0 / 0 |
| 8 | 669 | 482 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 187 / 0 | 0 / 0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 12, 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)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) FROM | TO | LC1 MAX CSI (LC) | MAX. UNBRAC LENGTH |
|---|---|---|---|---|---|
| 1- 2 | 0 / 23 | -77.3 | -77.3 | 0.20 (1) | 10.00 |
| 2- 3 | -652 / 0 | -77.3 | -77.3 | 0.16 (1) | 6.25 |
| 3- 4 | -484 / 0 | -77.3 | -77.3 | 0.04 (1) | 6.25 |
| 4- 5 | -651 / 0 | -77.3 | -77.3 | 0.16 (1) | 6.25 |
| 5- 6 | 0 / 23 | -77.3 | -77.3 | 0.20 (1) | 10.00 |
| 6- 7 | 0 / 34 | -77.3 | -77.3 | 0.11 (1) | 10.00 |
| 12- 1 | -117 / 0 | 0.0 | 0.0 | 0.01 (1) | 7.81 |
| 8- 6 | -224 / 0 | 0.0 | 0.0 | 0.02 (1) | 7.81 |
| 12-11 | 0 / 581 | -17.5 | -17.5 | 0.30 (4) | 10.00 |
| 11-10 | 0 / 484 | -17.5 | -17.5 | 0.30 (4) | 10.00 |
| 10- 9 | 0 / 580 | -17.5 | -17.5 | 0.29 (4) | 10.00 |
| 9- 8 | 0 / 580 | -17.5 | -17.5 | 0.29 (4) | 10.00 |

| WEBS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|
| 2-11 | -149 / 6 | 0.10 (1) |
| 11- 3 | 0 / 210 | 0.05 (1) |
| 11- 4 | 0 / 4 | 0.00 (1) |
| 10- 4 | 0 / 206 | 0.05 (1) |
| 10- 5 | -149 / 6 | 0.10 (1) |
| 12- 2 | -890 / 0 | 0.56 (1) |
| 5- 8 | -889 / 0 | 0.56 (1) |

**DESIGN CRITERIA**

SPECIFIED LOADS:

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

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

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

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

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

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

ALLOWABLE DEFL.(LL)= L/360 (0.60")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.02")
ALLOWABLE DEFL.(TL)= L/360 (0.60")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.12")

CSI: TC=0.20 (5-6:1) , BC=0.30 (10-11:4) , WB=0.56 (2-12:1) , SSI=0.11 (4-5:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.86 (2) (INPUT = 0.90 )
JSI METAL= 0.26 (2) (INPUT = 1.00 )


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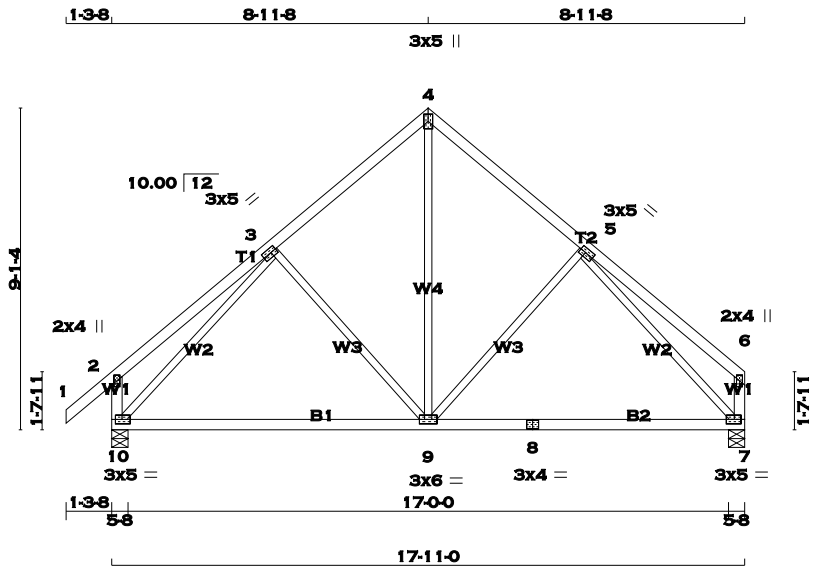
**READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTE PAGE ENP-1. THE NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.**

KOTT




TOTAL WEIGHT = 80 lb

[M][F]

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 4 | 2x4 | DRY | No.2 | SPF |
| 4 - 6 | 2x4 | DRY | No.2 | SPF |
| 10 - 2 | 2x4 | DRY | No.2 | SPF |
| 7 - 6 | 2x4 | DRY | No.2 | SPF |
| 10 - 8 | 2x4 | DRY | No.2 | SPF |
| 8 - 7 | 2x4 | DRY | No.2 | SPF |
| ALL WEBS EXCEPT | 2x3 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 2 | TMV+p | MT20 | 2.0 | 4.0 | | |
| 3 | TMWW-t | MT20 | 3.0 | 5.0 | 1.50 | 2.00 |
| 4 | TTW+p | MT20 | 3.0 | 5.0 | | |
| 5 | TMWW-t | MT20 | 3.0 | 5.0 | 1.50 | 2.00 |
| 6 | TMV+p | MT20 | 2.0 | 4.0 | | |
| 7 | BMVW1-t | MT20 | 3.0 | 5.0 | 1.50 | 2.25 |
| 8 | BS-t | MT20 | 3.0 | 4.0 | | |
| 9 | BMWWW-t | MT20 | 3.0 | 6.0 | | |
| 10 | BMVW1-t | MT20 | 3.0 | 5.0 | 1.50 | 2.25 |

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

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

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 10 | 957 | 0 | 957 | 0 | 0 | 5-8 | 5-8 |
| 7 | 850 | 0 | 850 | 0 | 0 | 5-8 | 5-8 |

**UNFACTORED REACTIONS**

| JT | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 10 | 669 | 482 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 187 / 0 | 0 / 0 |
| 7 | 596 | 417 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 179 / 0 | 0 / 0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 10, 7

**BRACING**

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

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

**LOADING**

TOTAL LOAD CASES: (4)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) FROM | TO | LC1 MAX CSI (LC) | MAX. UNBRAC LENGTH | WEBS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|
| 1- 2 | 0 / 34 | -77.3 | -77.3 | 0.11 (1) | 10.00 | 9- 4 | 0 / 488 | 0.11 (1) |
| 2- 3 | 0 / 26 | -77.3 | -77.3 | 0.25 (1) | 10.00 | 9- 5 | -197 / 0 | 0.17 (1) |
| 3- 4 | -616 / 0 | -77.3 | -77.3 | 0.20 (1) | 6.25 | 3- 9 | -197 / 0 | 0.17 (1) |
| 4- 5 | -616 / 0 | -77.3 | -77.3 | 0.20 (1) | 6.25 | 10- 3 | -881 / 0 | 0.71 (1) |
| 5- 6 | 0 / 26 | -77.3 | -77.3 | 0.25 (1) | 10.00 | 5- 7 | -881 / 0 | 0.71 (1) |
| 10- 2 | -238 / 0 | 0.0 | 0.0 | 0.03 (1) | 7.81 | | | |
| 7- 6 | -131 / 0 | 0.0 | 0.0 | 0.01 (1) | 7.81 | | | |
| 10- 9 | 0 / 585 | -17.5 | -17.5 | 0.44 (4) | 10.00 | | | |
| 9- 8 | 0 / 585 | -17.5 | -17.5 | 0.44 (4) | 10.00 | | | |
| 8- 7 | 0 / 585 | -17.5 | -17.5 | 0.44 (4) | 10.00 | | | |

**DESIGN CRITERIA**

SPECIFIED LOADS:

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

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

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

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

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

ALLOWABLE DEFL.(LL)= L/360 (0.60")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.02")
ALLOWABLE DEFL.(TL)= L/360 (0.60")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.14")

CSI: TC=0.25 (2-3:1) , BC=0.44 (9-10:4) , WB=0.71 (3-10:1) , SSI=0.13 (7-9:4)

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

COMPANION LIVE LOAD FACTOR = 0.50

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.89 (7) (INPUT = 0.90 )
JSI METAL= 0.26 (3) (INPUT = 1.00 )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**READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTE PAGE ENP-1. THE NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.**

KOTT

Version 8.100 S Feb 9 2017 MiTek Industries, Inc. Thu Mar 23 10:58:59 2017 Page 1
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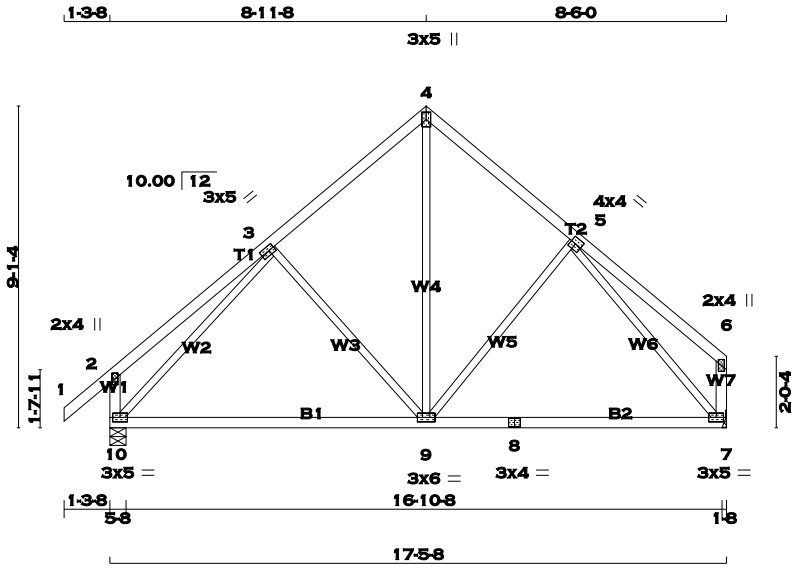


TOTAL WEIGHT = 2 X 79 = 158 lb [M][F]

**LUMBER**
N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 4 | 2x4 | DRY | No.2 | SPF |
| 4 - 6 | 2x4 | DRY | No.2 | SPF |
| 10 - 2 | 2x4 | DRY | No.2 | SPF |
| 7 - 6 | 2x4 | DRY | No.2 | SPF |
| 10 - 8 | 2x4 | DRY | No.2 | SPF |
| 8 - 7 | 2x4 | DRY | No.2 | SPF |
| ALL WEBS EXCEPT | 2x3 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 2 | TMV+p | MT20 | 2.0 | 4.0 | | |
| 3 | TMWW-t | MT20 | 3.0 | 5.0 | 1.50 | 2.00 |
| 4 | TTW+p | MT20 | 3.0 | 5.0 | | |
| 5 | TMWW-t | MT20 | 4.0 | 4.0 | 2.00 | 1.75 |
| 6 | TMV+p | MT20 | 2.0 | 4.0 | | |
| 7 | BMVW1-t | MT20 | 3.0 | 5.0 | | |
| 8 | BS-t | MT20 | 3.0 | 4.0 | | |
| 9 | BMWWW-t | MT20 | 3.0 | 6.0 | | |
| 10 | BMVW1-t | MT20 | 3.0 | 5.0 | | |

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

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

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 10 | 935 | 0 | 935 | 0 | 0 | 5-8 | 5-8 |
| 7 | 828 | 0 | 828 | 0 | 0 | HANGER BY OTHERS MIN. SEAT SIZE: 1-8 | |

**UNFACTORED REACTIONS**

| JT | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 10 | 654 | 471 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 183 / 0 | 0 / 0 |
| 7 | 581 | 406 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 175 / 0 | 0 / 0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 10

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

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

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

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) FROM | TO | LC1 MAX CSI (LC) | MAX UNBRAC LENGTH | WEBS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|
| 1- 2 | 0 / 34 | -77.3 | -77.3 | 0.11 (1) | 10.00 | 3- 9 | -202 / 0 | 0.17 (1) |
| 2- 3 | 0 / 26 | -77.3 | -77.3 | 0.25 (1) | 10.00 | 9- 4 | 0 / 456 | 0.10 (1) |
| 3- 4 | -586 / 0 | -77.3 | -77.3 | 0.20 (1) | 6.25 | 9- 5 | -150 / 9 | 0.13 (1) |
| 4- 5 | -584 / 0 | -77.3 | -77.3 | 0.18 (1) | 6.25 | 10- 3 | -851 / 0 | 0.69 (1) |
| 5- 6 | 0 / 25 | -77.3 | -77.3 | 0.23 (1) | 10.00 | 5- 7 | -835 / 0 | 0.68 (1) |
| 10- 2 | -238 / 0 | 0.0 | 0.0 | 0.03 (1) | 7.81 | | | |
| 7- 6 | -124 / 0 | 0.0 | 0.0 | 0.01 (1) | 7.81 | | | |
| 10- 9 | 0 / 565 | -17.5 | -17.5 | 0.42 (4) | 10.00 | | | |
| 9- 8 | 0 / 526 | -17.5 | -17.5 | 0.42 (4) | 10.00 | | | |
| 8- 7 | 0 / 526 | -17.5 | -17.5 | 0.42 (4) | 10.00 | | | |

**DESIGN CRITERIA**

SPECIFIED LOADS:

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

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

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

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

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

ALLOWABLE DEFL.(LL)= L/360 (0.58")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.02")
ALLOWABLE DEFL.(TL)= L/360 (0.58")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.14")

CSI: TC=0.25 (2-3:1) , BC=0.42 (9-10:4) , WB=0.69 (3-10:1) , SSI=0.13 (9-10:4)

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

COMPANION LIVE LOAD FACTOR = 0.50

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.89 (7) (INPUT = 0.90 )
JSI METAL= 0.31 (5) (INPUT = 1.00 )

LICENSED PROFESSIONAL ENGINEER
R.M. TREVISAN
100136551
March 23rd, 2017
PROVINCE OF ONTARIO

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TOWN OF MILTON
MAR 29, 2017
JUNIPER 9
BUILDING DIVISION

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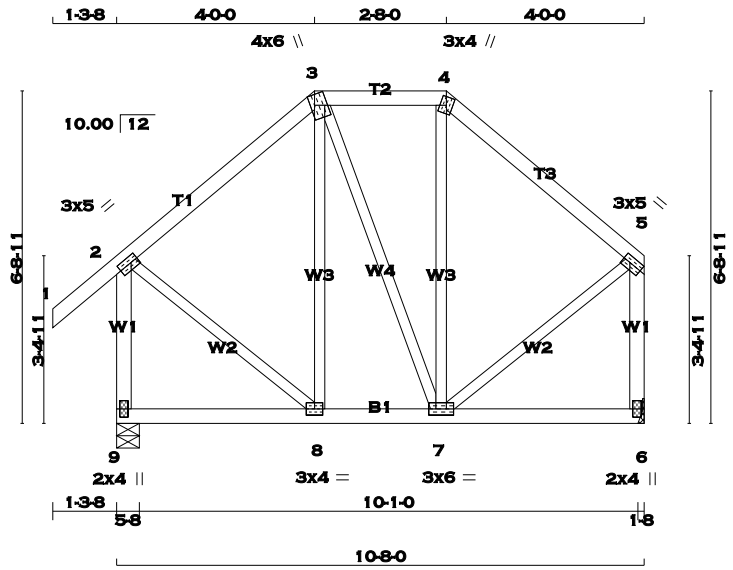
KOTT




SCALE = 1:46.6

TOTAL WEIGHT = 59 lb

[M][F]

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 3 | 2x4 | DRY | No.2 | SPF |
| 3 - 4 | 2x4 | DRY | No.2 | SPF |
| 4 - 5 | 2x4 | DRY | No.2 | SPF |
| 9 - 2 | 2x4 | DRY | No.2 | SPF |
| 6 - 5 | 2x4 | DRY | No.2 | SPF |
| 9 - 6 | 2x4 | DRY | No.2 | SPF |
| ALL WEBS EXCEPT | 2x3 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 2 | TMVW-t | MT20 | 3.0 | 5.0 | 1.50 | 1.75 |
| 3 | TTWW+m | MT20 | 4.0 | 6.0 | Edge | 1.00 |
| 4 | TTW+m | MT20 | 3.0 | 4.0 | | |
| 5 | TMVW-t | MT20 | 3.0 | 5.0 | 1.50 | 1.75 |
| 6 | BMV1+p | MT20 | 2.0 | 4.0 | | |
| 7 | BMWWW-t | MT20 | 3.0 | 6.0 | | |
| 8 | BMWW-t | MT20 | 3.0 | 4.0 | | |
| 9 | BMV1+p | MT20 | 2.0 | 4.0 | | |

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

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

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

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG | REQRD BRG |
|---|---|---|---|---|---|---|---|
| 9 | 613 | 0 | 613 | 0 | 0 | IN-SX | IN-SX |
| 6 | 506 | 0 | 506 | 0 | 0 | 5-8 | 5-8 |
| | | | | | | HANGER BY OTHERS | |
| | | | | | | MIN. SEAT SIZE: 1-8 | |

**UNFACTORED REACTIONS**

| JT | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 9 | 428 | 313 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 115 / 0 | 0 / 0 |
| 6 | 355 | 248 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 107 / 0 | 0 / 0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 9

**BRACING**

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

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

**LOADING**

TOTAL LOAD CASES: (4)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD LC1 FROM | TO | MAX CSI (LC) | MAX. UNBRAC LENGTH | WEBS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|
| 1- 2 | 0 / 34 | -77.3 | -77.3 | 0.11 (1) | 10.00 | 8- 3 | -87 / 24 | 0.07 (1) |
| 2- 3 | -264 / 0 | -77.3 | -77.3 | 0.16 (1) | 6.25 | 3- 7 | 0 / 0 | 0.00 (1) |
| 3- 4 | -201 / 0 | -77.3 | -77.3 | 0.07 (1) | 6.25 | 7- 4 | -88 / 24 | 0.07 (1) |
| 4- 5 | -264 / 0 | -77.3 | -77.3 | 0.16 (1) | 6.25 | 2- 8 | 0 / 252 | 0.06 (1) |
| 9- 2 | -582 / 0 | 0.0 | 0.0 | 0.11 (1) | 7.81 | 7- 5 | 0 / 252 | 0.06 (1) |
| 6- 5 | -475 / 0 | 0.0 | 0.0 | 0.09 (1) | 7.81 | | | |
| 9- 8 | 0 / 0 | -17.5 | -17.5 | 0.06 (4) | 10.00 | | | |
| 8- 7 | 0 / 201 | -17.5 | -17.5 | 0.07 (4) | 10.00 | | | |
| 7- 6 | 0 / 0 | -17.5 | -17.5 | 0.06 (4) | 10.00 | | | |

**DESIGN CRITERIA**

SPECIFIED LOADS:

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

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

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

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

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

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

ALLOWABLE DEFL.(LL)= L/360 (0.36")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")
ALLOWABLE DEFL.(TL)= L/360 (0.36")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.01")

CSI: TC=0.16 (2-3:1) , BC=0.07 (7-8:4) , WB=0.07 (4-7:1) , SSI=0.09 (2-3:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.52 (2) (INPUT = 0.90 )
JSI METAL= 0.13 (2) (INPUT = 1.00 )

LICENSED PROFESSIONAL ENGINEER
P.M. TREVISAN
100136551
March 23rd, 2017
PROVINCE OF ONTARIO

RECEIVED
TOWN OF MILTON
MAR 29, 2017
JUNIPER 9
BUILDING DIVISION

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

KOTT

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. | DRWG NO. |
|---|---|---|---|---|---|
| PT0317-178 | T19 | 1 | 1 | TRUSS DESC. LECCO RIDGE-JUNIPER 9 EL 1 | |


ENG JOB: PT0317-178

KOTT , Stouffville, ON, CGC

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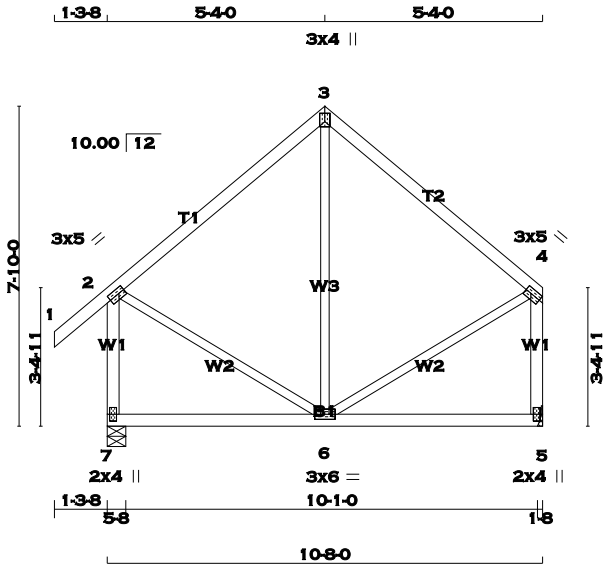


TOTAL WEIGHT = 52 lb

[M][F]

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 3 | 2x4 | DRY | No.2 | SPF |
| 3 - 4 | 2x4 | DRY | No.2 | SPF |
| 7 - 2 | 2x4 | DRY | No.2 | SPF |
| 5 - 4 | 2x4 | DRY | No.2 | SPF |
| 7 - 5 | 2x4 | DRY | No.2 | SPF |
| ALL WEBS EXCEPT | 2x3 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 2 | TMVW-t | MT20 | 3.0 | 5.0 | 1.50 | 1.75 |
| 3 | TTW+p | MT20 | 3.0 | 4.0 | 2.50 | 1.50 |
| 4 | TMVW-t | MT20 | 3.0 | 5.0 | 1.50 | 1.75 |
| 5 | BMV1+p | MT20 | 2.0 | 4.0 | | |
| 6 | BMWWW-t | MT20 | 3.0 | 6.0 | | |
| 7 | BMV1+p | MT20 | 2.0 | 4.0 | | |

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

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

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 7 | 613 | 0 | 613 | 0 | 0 | 5-8 | 5-8 |
| 5 | 506 | 0 | 506 | 0 | 0 | HANGER BY OTHERS MIN. SEAT SIZE: 1-8 | |

**UNFACTORED REACTIONS**

| JT | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 7 | 428 | 313 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 115 / 0 | 0 / 0 |
| 5 | 355 | 248 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 107 / 0 | 0 / 0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 7

**BRACING**

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

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

**LOADING**

TOTAL LOAD CASES: (4)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) FROM | TO | LC1 MAX CSI (LC) | MAX. UNBRAC LENGTH | WEBS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|
| 1- 2 | 0 / 34 | -77.3 | -77.3 | 0.11 (1) | 10.00 | 6- 3 | -100 / 59 | 0.11 (1) |
| 2- 3 | -244 / 0 | -77.3 | -77.3 | 0.28 (1) | 6.25 | 2- 6 | 0 / 216 | 0.05 (1) |
| 3- 4 | -244 / 0 | -77.3 | -77.3 | 0.28 (1) | 6.25 | 6- 4 | 0 / 216 | 0.05 (1) |
| 7- 2 | -577 / 0 | 0.0 | 0.0 | 0.11 (1) | 7.81 | | | |
| 5- 4 | -470 / 0 | 0.0 | 0.0 | 0.09 (1) | 7.81 | | | |
| 7- 6 | 0 / 0 | -17.5 | -17.5 | 0.14 (4) | 10.00 | | | |
| 6- 5 | 0 / 0 | -17.5 | -17.5 | 0.14 (4) | 10.00 | | | |

**DESIGN CRITERIA**

SPECIFIED LOADS:

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

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

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

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

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

ALLOWABLE DEFL.(LL)= L/360 (0.36")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")
ALLOWABLE DEFL.(TL)= L/360 (0.36")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.02")

CSI: TC=0.28 (2-3:1) , BC=0.14 (6-7:4) , WB=0.11 (3-6:1) , SSI=0.12 (2-3:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.51 (2) (INPUT = 0.90 )
JSI METAL= 0.13 (2) (INPUT = 1.00 )

LICENSED PROFESSIONAL ENGINEER
P.M. TREVISAN
100136551
March 23rd, 2017
PROVINCE OF ONTARIO

RECEIVED
TOWN OF MILTON
MAR 29, 2017
JUNIPER 9
BUILDING DIVISION

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

KOTT

Version 8.100 S Feb 9 2017 MiTek Industries, Inc. Thu Mar 23 10:59:00 2017 Page 1
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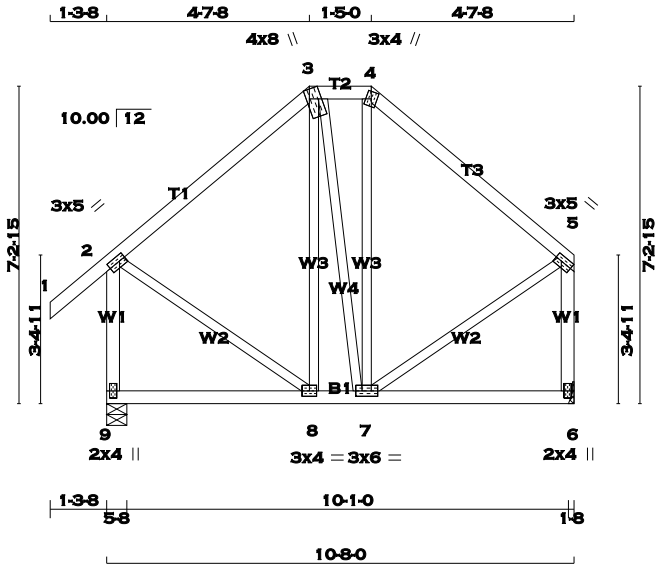


TOTAL WEIGHT = 62 lb
[M][F]

**LUMBER**
N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 3 | 2x4 | DRY | No.2 | SPF |
| 3 - 4 | 2x4 | DRY | No.2 | SPF |
| 4 - 5 | 2x4 | DRY | No.2 | SPF |
| 9 - 2 | 2x4 | DRY | No.2 | SPF |
| 6 - 5 | 2x4 | DRY | No.2 | SPF |
| 9 - 6 | 2x4 | DRY | No.2 | SPF |
| ALL WEBS EXCEPT | 2x3 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 2 | TMVW-t | MT20 | 3.0 | 5.0 | 1.50 | 1.75 |
| 3 | TTWW+m | MT20 | 4.0 | 8.0 | Edge | 0.75 |
| 4 | TTW+m | MT20 | 3.0 | 4.0 | | |
| 5 | TMVW-t | MT20 | 3.0 | 5.0 | 1.50 | 1.75 |
| 6 | BMV1+p | MT20 | 2.0 | 4.0 | | |
| 7 | BMWWW-t | MT20 | 3.0 | 6.0 | | |
| 8 | BMWW-t | MT20 | 3.0 | 4.0 | | |
| 9 | BMV1+p | MT20 | 2.0 | 4.0 | | |

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

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

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

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 9 | 613 | 0 | 613 | 0 | 0 | 5-8 | 5-8 |
| 6 | 506 | 0 | 506 | 0 | 0 | HANGER BY OTHERS MIN. SEAT SIZE: 1-8 | |

**UNFACTORED REACTIONS**

| JT | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 9 | 428 | 313 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 115 / 0 | 0 / 0 |
| 6 | 355 | 248 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 107 / 0 | 0 / 0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 9

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

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

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

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) FROM | TO | LC1 MAX CSI (LC) | MAX. UNBRAC LENGTH |
|---|---|---|---|---|---|
| 1- 2 | 0 / 34 | -77.3 | -77.3 | 0.11 (1) | 10.00 |
| 2- 3 | -258 / 0 | -77.3 | -77.3 | 0.21 (1) | 6.25 |
| 3- 4 | -196 / 0 | -77.3 | -77.3 | 0.02 (1) | 6.25 |
| 4- 5 | -257 / 0 | -77.3 | -77.3 | 0.21 (1) | 6.25 |
| 9- 2 | -579 / 0 | 0.0 | 0.0 | 0.11 (1) | 7.81 |
| 6- 5 | -471 / 0 | 0.0 | 0.0 | 0.09 (1) | 7.81 |
| 9- 8 | 0 / 0 | -17.5 | -17.5 | 0.08 (4) | 10.00 |
| 8- 7 | 0 / 196 | -17.5 | -17.5 | 0.10 (4) | 10.00 |
| 7- 6 | 0 / 0 | -17.5 | -17.5 | 0.08 (4) | 10.00 |

| WEBS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|
| 8- 3 | -65 / 25 | 0.06 (1) |
| 3- 7 | -3 / 1 | 0.00 (1) |
| 7- 4 | -69 / 27 | 0.06 (1) |
| 2- 8 | 0 / 235 | 0.05 (1) |
| 7- 5 | 0 / 234 | 0.05 (1) |

**DESIGN CRITERIA**

SPECIFIED LOADS:

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

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

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

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

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

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

ALLOWABLE DEFL.(LL)= L/360 (0.36")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")
ALLOWABLE DEFL.(TL)= L/360 (0.36")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.02")

CSI: TC=0.21 (2-3:1) , BC=0.10 (7-8:4) , WB=0.06 (4-7:1) , SSI=0.11 (2-3:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.51 (2) (INPUT = 0.90 )
JSI METAL= 0.13 (2) (INPUT = 1.00 )


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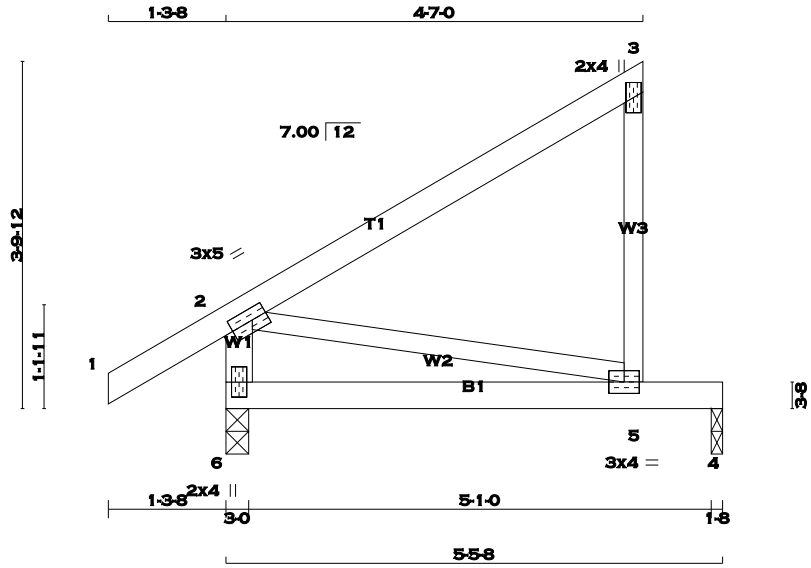
JUNIPER 9
BUILDING DIVISION

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

KOTT




TOTAL WEIGHT = 4 X 21 = 84 lb [M]

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 3 | 2x4 | DRY | No.2 | SPF |
| 5 - 3 | 2x3 | DRY | No.2 | SPF |
| 6 - 2 | 2x4 | DRY | No.2 | SPF |
| 6 - 4 | 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 |
|---|---|---|---|---|---|---|
| 2 | TMVW-t | MT20 | 3.0 | 5.0 | 1.50 | 2.00 |
| 3 | TMV+p | MT20 | 2.0 | 4.0 | | |
| 5 | BMVW-t | MT20 | 3.0 | 4.0 | | |
| 6 | BMV1+p | MT20 | 2.0 | 4.0 | | |

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

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

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 6 | 359 | 0 | 359 | 0 | 0 | 3-0 | 3-0 |
| 4 | 197 | 0 | 197 | 0 | 0 | 1-8 | 1-8 |

**UNFACTORED REACTIONS**

| JT | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 6 | 250 | 187 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 62 / 0 | 0 / 0 |
| 4 | 139 | 90 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 50 / 0 | 0 / 0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 6, 4

**BRACING**

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

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

**LOADING**

TOTAL LOAD CASES: (4)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) FROM | TO | LC1 MAX CSI (LC) | MAX. UNBRAC LENGTH | WEBS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|
| 1- 2 | 0 / 27 | -77.3 | -77.3 | 0.10 (1) | 10.00 | 2- 5 | 0 / 0 | 0.00 (1) |
| 2- 3 | 0 / 0 | -77.3 | -77.3 | 0.28 (1) | 10.00 | | | |
| 5- 3 | -177 / 0 | 0.0 | 0.0 | 0.05 (1) | 7.81 | | | |
| 6- 2 | -283 / 0 | 0.0 | 0.0 | 0.03 (1) | 7.81 | | | |
| 6- 5 | 0 / 0 | -17.5 | -17.5 | 0.23 (1) | 10.00 | | | |
| 5- 4 | 0 / 0 | -17.5 | -17.5 | 0.22 (1) | 10.00 | | | |

**DESIGN CRITERIA**

SPECIFIED LOADS:

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

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

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

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

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

ALLOWABLE DEFL.(LL)= L/360 (0.19")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.04")
ALLOWABLE DEFL.(TL)= L/360 (0.19")
CALCULATED VERT. DEFL.(TL) = L/ 682 (0.10")

CSI: TC=0.28 (2-3:1) , BC=0.23 (5-6:1) , WB=0.00 (2-5:1) , SSI=0.15 (4-5:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

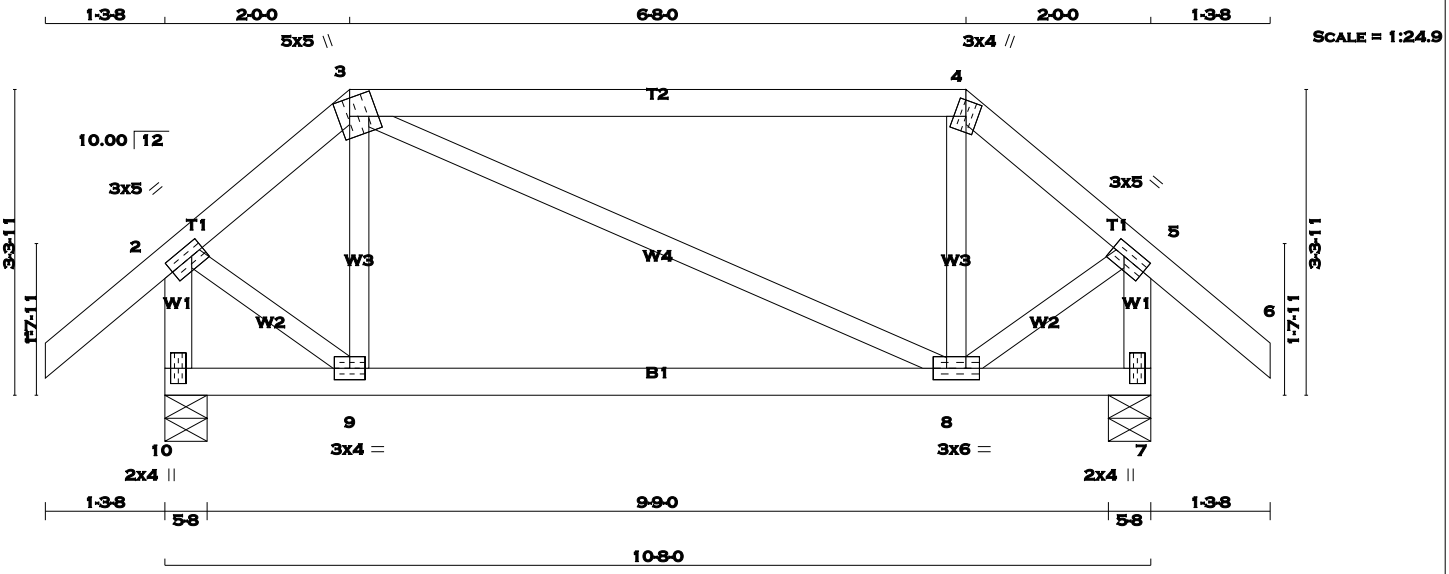
JSI GRIP= 0.24 (2) (INPUT = 0.90 )
JSI METAL= 0.05 (6) (INPUT = 1.00 )

LICENSED PROFESSIONAL ENGINEER
R.M. TREVISAN
100136551
March 23rd, 2017
PROVINCE OF ONTARIO

RECEIVED
TOWN OF MILTON
MAR 29, 2017
JUNIPER 9
BUILDING DIVISION

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

KOTT




TOTAL WEIGHT = 46 lb [M]

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 3 | 2x4 | DRY | No.2 | SPF |
| 3 - 4 | 2x4 | DRY | No.2 | SPF |
| 4 - 6 | 2x4 | DRY | No.2 | SPF |
| 10 - 2 | 2x4 | DRY | No.2 | SPF |
| 7 - 5 | 2x4 | DRY | No.2 | SPF |
| 10 - 7 | 2x4 | DRY | No.2 | SPF |
| ALL WEBS EXCEPT | 2x3 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 2 | TMVW-t | MT20 | 3.0 | 5.0 | 1.50 | 1.75 |
| 3 | TTWW+m | MT20 | 5.0 | 5.0 | 2.25 | 1.50 |
| 4 | TTW+m | MT20 | 3.0 | 4.0 | | |
| 5 | TMVW-t | MT20 | 3.0 | 5.0 | 1.50 | 1.75 |
| 7 | BMV1+p | MT20 | 2.0 | 4.0 | | |
| 8 | BMWWW-t | MT20 | 3.0 | 6.0 | | |
| 9 | BMWW-t | MT20 | 3.0 | 4.0 | | |
| 10 | BMV1+p | MT20 | 2.0 | 4.0 | | |

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

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

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 10 | 613 | 0 | 613 | 0 | 0 | 5-8 | 5-8 |
| 7 | 613 | 0 | 613 | 0 | 0 | 5-8 | 5-8 |

**UNFACTORED REACTIONS**

| JT | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 10 | 428 | 313 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 115 / 0 | 0 / 0 |
| 7 | 428 | 313 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 115 / 0 | 0 / 0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 10, 7

**BRACING**

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

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

**LOADING**

TOTAL LOAD CASES: (4)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) FROM | TO | LC1 MAX CSI (LC) | MAX. UNBRAC LENGTH | WEBS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|
| 1- 2 | 0 / 34 | -77.3 | -77.3 | 0.11 (1) | 10.00 | 9- 3 | -85 / 48 | 0.02 (4) |
| 2- 3 | -387 / 0 | -77.3 | -77.3 | 0.05 (1) | 6.25 | 3- 8 | 0 / 0 | 0.00 (1) |
| 3- 4 | -293 / 0 | -77.3 | -77.3 | 0.60 (1) | 6.25 | 8- 4 | -86 / 49 | 0.02 (4) |
| 4- 5 | -387 / 0 | -77.3 | -77.3 | 0.05 (1) | 6.25 | 2- 9 | 0 / 348 | 0.08 (1) |
| 5- 6 | 0 / 34 | -77.3 | -77.3 | 0.11 (1) | 10.00 | 8- 5 | 0 / 348 | 0.08 (1) |
| 10- 2 | -618 / 0 | 0.0 | 0.0 | 0.07 (1) | 7.81 | | | |
| 7- 5 | -617 / 0 | 0.0 | 0.0 | 0.07 (1) | 7.81 | | | |
| 10- 9 | 0 / 0 | -17.5 | -17.5 | 0.12 (4) | 10.00 | | | |
| 9- 8 | 0 / 293 | -17.5 | -17.5 | 0.14 (4) | 10.00 | | | |
| 8- 7 | 0 / 0 | -17.5 | -17.5 | 0.12 (4) | 10.00 | | | |

**DESIGN CRITERIA**

SPECIFIED LOADS:

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

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

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

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

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

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

ALLOWABLE DEFL.(LL)= L/360 (0.36")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")
ALLOWABLE DEFL.(TL)= L/360 (0.36")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.03")

CSI: TC=0.60 (3-4:1) , BC=0.14 (8-9:4) , WB=0.08 (2-9:1) , SSI=0.20 (3-4:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.74 (4) (INPUT = 0.90 )
JSI METAL= 0.15 (2) (INPUT = 1.00 )

LICENSED PROFESSIONAL ENGINEER
P.M. TREVISAN
100136551
March 23rd, 2017
PROVINCE OF ONTARIO

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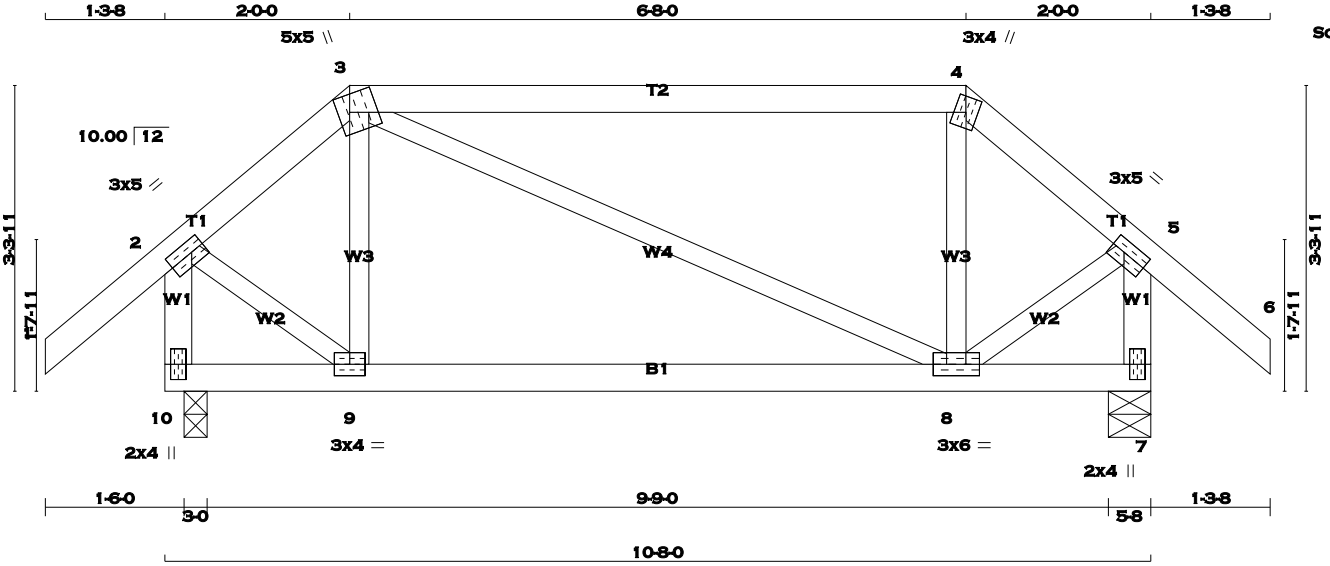
KOTT




TOTAL WEIGHT = 46 lb [M]

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| 1 - 3 | 2x4 | DRY | No.2 | SPF |
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| 4 - 6 | 2x4 | DRY | No.2 | SPF |
| 10 - 2 | 2x4 | DRY | No.2 | SPF |
| 7 - 5 | 2x4 | DRY | No.2 | SPF |
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| 4 | TTW+m | MT20 | 3.0 | 4.0 | | |
| 5 | TMVW-t | MT20 | 3.0 | 5.0 | 1.50 | 1.75 |
| 7 | BMV1+p | MT20 | 2.0 | 4.0 | | |
| 8 | BMWWW-t | MT20 | 3.0 | 6.0 | | |
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A SIZE FOR SIZE SUBSTITUTION OF MITEK MII20 WITH TEE-LOK TL20 PLATES IS ALLOWED.

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|---|---|---|---|---|---|---|---|
| 10 | 613 | 0 | 613 | 0 | 0 | 3-0 | 3-0 |
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|---|---|---|---|---|---|---|---|
| 10 | 428 | 313 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 115 / 0 | 0 / 0 |
| 7 | 428 | 313 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 115 / 0 | 0 / 0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 10, 7

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| WEBS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|
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| 3- 8 | 0 / 0 | 0.00 (1) |
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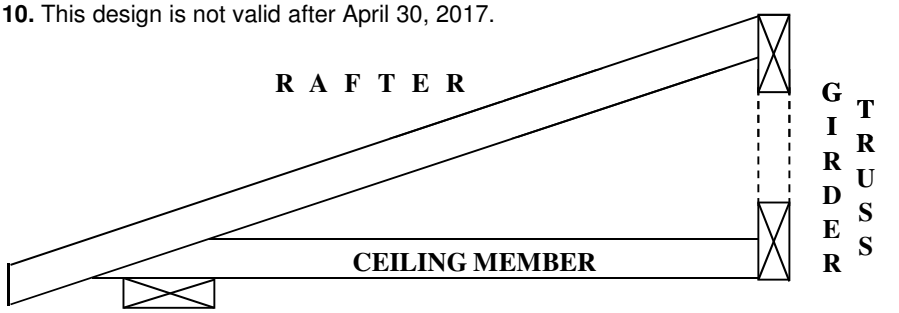
KOTT

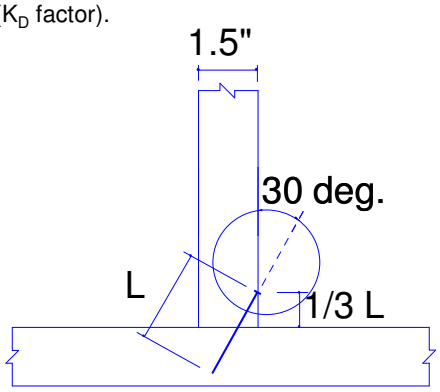
# BEARING ANCHORAGE BY TOE-NAILS FOR LATERAL CAPACITY B37579H1

| NAIL TYPE | LENGTH (IN) | DIAMETER (IN) | NAIL LATERAL CAPACITY (LB) | |
|---|---|---|---|---|
| | | | S-P-F | D. FIR |
| COMMON WIRE | 3.00 | 0.144 | 132 | 147 |
| | 3.25 | 0.144 | 132 | 147 |
| | 3.50 | 0.160 | 159 | 177 |
| COMMON SPIRAL | 3.00 | 0.122 | 97 | 108 |
| | 3.25 | 0.122 | 97 | 108 |
| | 3.50 | 0.152 | 145 | 162 |

**NOTES:**

1. Rafter and ceiling members may be anchored to top and bottom chords of girder truss by toe-nailing rafter and ceiling members to girder chords provided the reaction does not exceed the lateral capacities in the table. Hangers (specified by others) are required for reactions higher than the maximum toe-nail capacity. Reactions are based on factored loads.
2. Toe nail capacities shown in the table are for **one** toe-nail. For additional toe-nails multiply values in table by the number of toe-nails used. Toe-nail capacities take into account toe-nailing factor $J_A$ in CSA O86-09, section 10.9.4.1.
3. For 9- 3/4 gauge 3.25" common wire gun nails (diameter = 0.120") use 3" common spiral nail values.
4. Maximum number of toe-nails allowed depends on the lumber size & species to be toe-nailed to supporting member and nail diameter, as shown in tables below.
5. Nail values in table are based on the following relative lumber densities: G = 0.42 (SPF), G = 0.49 (D. Fir).
6. Toe-nails shall be driven at approximately 1/3 the nail length from the edge of the joist/truss chord and driven at an angle of 30º to the grain of the member (See next page for nailing on bearing plate).
7. For loads due to **wind** the nail lateral capacity in this table may be multiplied by 1.15 ($K_D$ factor).
8. Lumber must be dry ( < 19% moisture content ) at the time of nail installation.
9. Nail values in this table comply with CSA O86-09, section 10.9.4
10. This design is not valid after April 30, 2017.




**TOE-NAIL INSTALLATION**

| Nail type | Common wire | Common spiral | Common wire | Common spiral |
|---|---|---|---|---|
| Nail dia. (in) | 0.160 | 0.152 | 0.144 | 0.122 |
| | ( 3.5" nail ) | | ( 3" and 3.25" nail ) | |
| **LUMBER SIZE** | **MAXIMUM NUMBER OF TOE-NAILS** | | | |
| **2X4 SPF** | 2 | 2 | 3 | 3 |
| **2X4 D. Fir** | 2 | 2 | 2 | 2 |
| **2X6 SPF** | 4 | 4 | 4 | 5 |
| **2X6 D. Fir** | 3 | 3 | 3 | 4 |

MiTek Canada Inc
100 Industrial Rd.
Bradford, Ontario L3Z 3G7



PEO
Certificate No. 10889485


April 24, 2015

# BEARING ANCHORAGE BY TOE-NAILS FOR WIND LOADING B37579H2

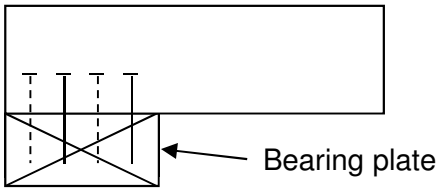
| NAIL TYPE | LENGTH (IN) | DIAMETER (IN) | NAIL WITHDRAWAL CAPACITY (LB) | |
|---|---|---|---|---|
| | | | S-P-F | D. FIR |
| COMMON WIRE | 3.00 | 0.144 | 30 | 42 |
| | 3.25 | 0.144 | 32 | 45 |
| | 3.50 | 0.160 | 38 | 52 |
| COMMON SPIRAL | 3.00 | 0.122 | 26 | 36 |
| | 3.25 | 0.122 | 28 | 40 |
| | 3.50 | 0.152 | 36 | 50 |

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

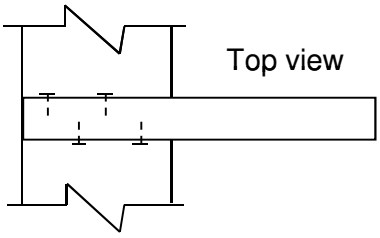
**NOTES:**

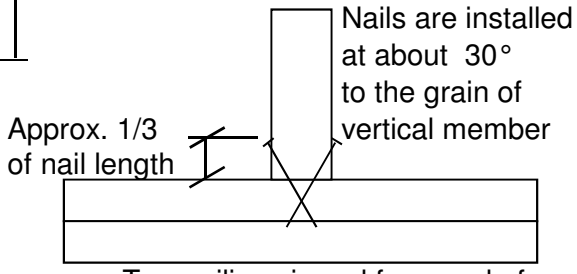
1. Truss chord, rafter, or ceiling members may be anchored to bearing plate by toe-nails, provided that the actual factored uplift force due to **wind** or **earthquake** load does not exceed the withdrawal capacities in the table. Hangers (specified by others) are required for uplift forces that are higher than the maximum toe-nail withdrawal capacity.
2. Toe nail capacities shown in the table are for **one** toe-nail. For additional toe-nails multiply values in table by the number of toe-nails used. Toe-nail capacities take into account toe-nailing factor $J_A$ in CSA O86-09, section 10.9.5.2.
3. For 9- 3/4 gauge 3.25" common wire gun nails (diameter = 0.120") use 3" common spiral nail values.
4. Maximum number of toe-nails allowed depends on the lumber size & species to be toe-nailed to supporting member and nail diameter, as shown in table above.
5. Nail values in table are based on the following relative lumber densities: G = 0.42(SPF), G = 0.49(D. Fir).
6. Toe-nails shall be driven at approximately 1/3 the nail length from the edge of the joist/truss chord and driven at an angle of 30° to the grain of the member (See drawing on detail B37579H1).
7. Lumber must be dry ( < 19% moisture content ) at the time of nail installation.
8. Nail values in this table comply with CSA O86-09, section 10.9.5
9. This design is not valid after April 30, 2017

## Toe-nailing on 2x6 Bearing Plate



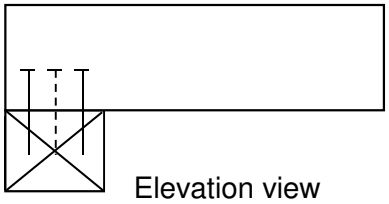

Elevation view



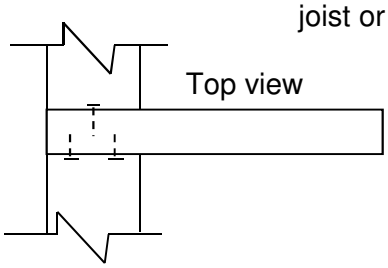




Toe-nailing viewed from end of joist or truss

## Toe-nailing on 2x4 Bearing Plate



Elevation view




MiTek Canada Inc
100 Industrial Rd.
Bradford, Ontario L3Z 3G7

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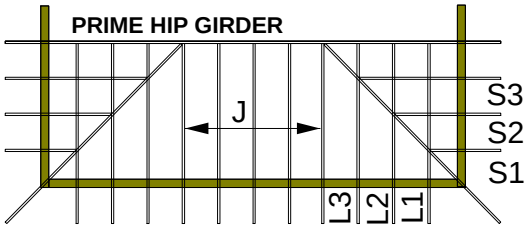
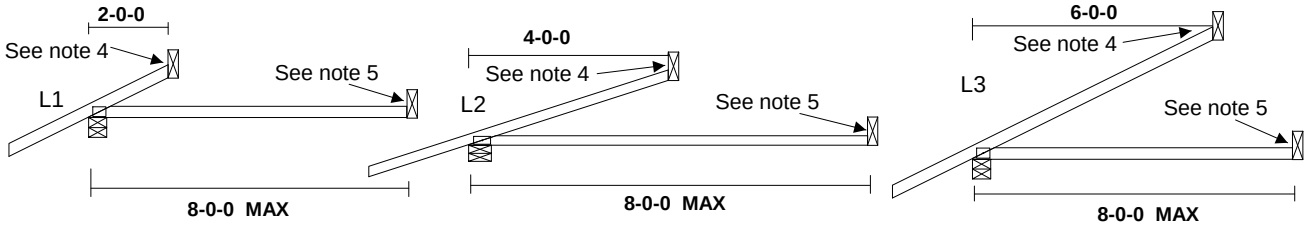
Certificate No. 10889485

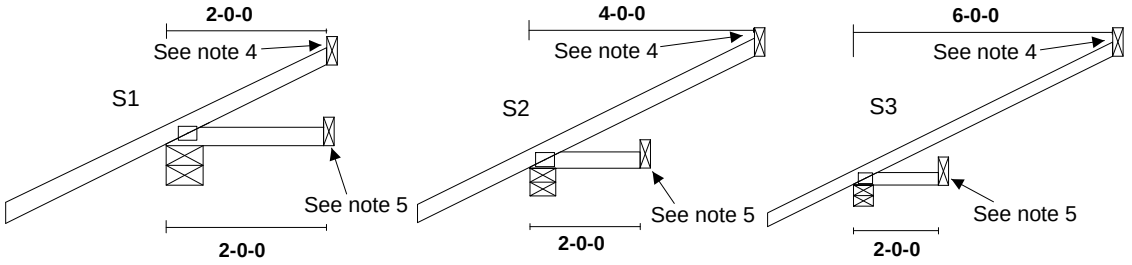

April 24, 2015

| JOB NAME | JOB DESC. | DRAWING NO. |
|---|---|---|
| DETAILS | HIP END FRAMING — LEGGO RIDGE-JUNIPER 9 EL 1 | B37579J |

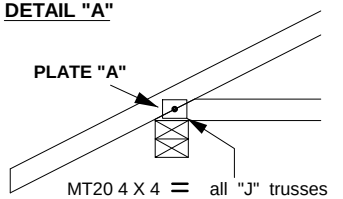




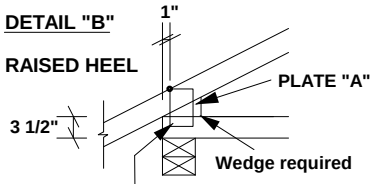




**DETAIL "A"**



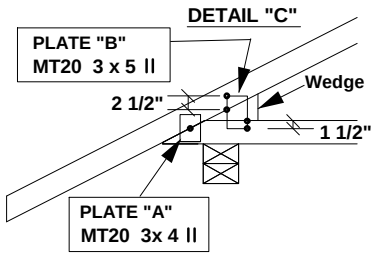

MT20 4 X 4 = all "J" trusses
MT20 3 X 4 = all other trusses

**DETAIL "B"**




MT20 4 X 8 II all 11/12 & 12/12 pitch trusses
MT20 4 X 7 II all other trusses

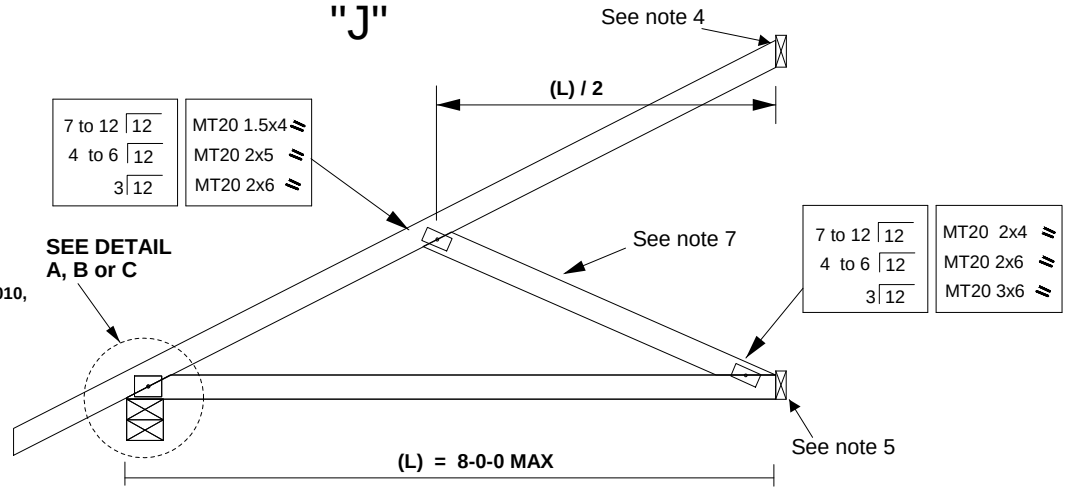
**DETAIL "C"**




**CANTILEVER DETAIL "C"**

| SLOPE | MAX CANTILEVER | PLATE "B" | WEDGE SIZE |
|---|---|---|---|
| 3/12 | 17" | 3 X 5 | 2 X 3 |
| 4/12 | 14" | 3 X 5 | 2 X 3 |
| 5/12 | 12" | 3 X 5 | 2 X 4 |
| 6/12 | 10" | 3 X 5 | 2 X 4 |
| 7/12 | 9" | 3 X 5 | 2 X 6 |
| 8/12 | 8.5" | 3 X 5 | 2 X 6 |
| 9/12 | 8" | 3 X 5 | 2 X 6 |
| 10/12 | 7.5" | 3 X 5 | 2 X 6 |

**"J"**




**NOTES:**

1. ALL LUMBER SHALL BE 2x4 SPF OR D. Fir No. 2 DRY OR BETTER.
2. THIS TRUSS IS DESIGNED FOR HOUSING AND SMALL BUILDING REQUIREMENTS OF PART 9 NBCC 2010, WHERE GROUND SNOW LOAD IS 60.0 PSF OR LESS AND RAIN LOAD DOES NOT EXCEED 12.53 PSF; TOP CHORD DEAD LOAD IS 6 PSF OR LESS; BC LIVE LOAD IS 0 PSF AND BC DEAD LOAD IS 7 PSF.
3. HIP RAFTER DESIGN SHALL CONFORM TO SECTION 9.23.14.6 OF NBCC 2010.
4. FASTEN HIGH END OF RAFTERS USING MITEK CANADA INC. "BEARING ANCHORAGE BY TOE-NAILS FOR LATERAL CAPACITY" STANDARD DETAIL B37579H1.
5. FASTEN RIGHT END OF CEILING USING MITEK CANADA INC. "BEARING ANCHORAGE BY TOE-NAILS FOR LATERAL CAPACITY" STANDARD DETAIL B37579H1.
6. OVERHANG LENGTH SHALL NOT EXCEED 2 FT.
7. WHEN SETBACK IS 6 FT OR LESS, DIAGONAL WEB MAY BE OMITTED AND HIGH END OF TOP CHORD SHALL BE CONNECTED AS PER NOTE 4.
8. ALL PLATES SPECIFIED ARE PRESSED INTO BOTH FACES OF THE TRUSS.
9. MITEK REFERENCE PAGE MII-7473C FORMS AN INTEGRAL PART OF THIS DETAIL.
10. THIS DETAIL IS NOT VALID AFTER APRIL 30, 2017

RECEIVED
TOWN OF MILTON
MAR 29, 2017
JUNIPER 9
BUILDING DIVISION

MiTek Canada, Inc.
100 Industrial Rd.
Bradford, Ontario, L3Z 3G7

PEO
Certificate No. 10889485

LICENSED PROFESSIONAL ENGINEER
C. Cordogiannis
90553736
PROVINCE OF ONTARIO

April 24, 2015