

Engineering Notes: Trusses



MHP 23028



PLEASE READ PRIOR TO INSTALLATION OF THE COMPONENT

RESPONSIBILITIES

THE UNDERSIGNED ENGINEER IS ONLY RESPONSIBLE FOR THE STRUCTURAL INTEGRITY OF THIS BUILDING COMPONENT FOR THE CONDITIONS AND LOADS SHOWN ON CALCULATION PAGE. THE STRUCTURAL INTEGRITY OF THE BUILDING AND THE VERIFICATION OF THE DIMENSIONS AND THE DESIGN LOADS USED ARE THE RESPONSIBILITY OF THE BUILDING DESIGNER. THE UNDERSIGNED ENGINEER DISCLAIMS ANY RESPONSIBILITY FOR DAMAGES AS A RESULT OF FAULTY OR INCORRECT INFORMATION, SPECIFICATION AND/OR DESIGNS FURNISHED TO THE ENGINEER.

IT IS THE RESPONSIBILITY OF KOTT Inc. 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.

DESIGN INFORMATION

THIS DESIGN IS FOR AN INDIVIDUAL BUILDING COMPONENT AND HAS BEEN BASED ON INFORMATION PROVIDED BY KOTT DESIGN.

1. THE BUILDING USE AND OCCUPANCY TYPE IS AS INDICATED ON THE DRAWING.
2. GEOMETRY OF THE TRUSS AND DIMENSIONS INDICATED ON THE DRAWING ARE IDENTICAL TO THOSE OF THE INSTALLED TRUSS.
3. 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 METERS (16 FT) WHICHEVER IS GREATER, UNLESS THE DRAWING INDICATES THAT THE SNOW DRIFTING HAS BEEN TAKEN INTO ACCOUNT.
4. 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.

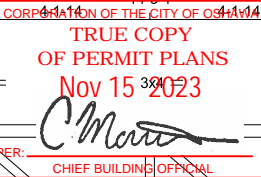
CODE

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, THE ONTARIO BUILDING CODE, TPIC AND CANADIAN STANDARDS ASSOCIATION GUIDELINES.

HANDLING, INSTALLATION AND BRACING

1. 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.
2. THE COMPRESSION CHORDS ARE Laterally Braced by Continuous Rigid Diaphragm Sheathing or as Specified on the Drawing.
3. 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.
4. IT IS RECOMMENDED THAT A PROFESSIONAL ENGINEER'S ADVICE BE OBTAINED FOR THE BRACING OF TRUSSES SPANNING MORE THAN 12.37M (40'-7").

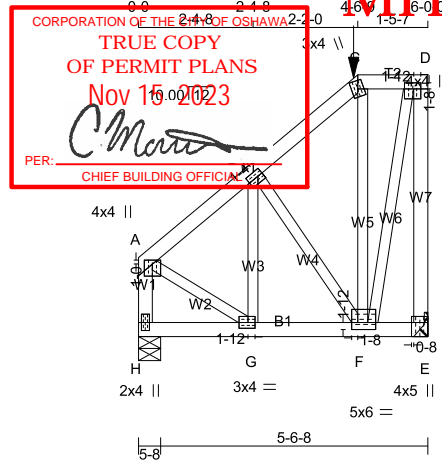
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**READ ALL NOTES ON THIS PAGE AND ON THE
ENGINEERING NOTES: TRUSSES. THE NOTE PAGE
IS AN INTEGRAL PART OF THIS DRAWING AS IT
CONTAINS SPECIFICATIONS AND CRITERIA USED
IN THE DESIGN OF THIS COMPONENT.**



JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
IM0723-065	G02	1	1	TRUSS DESC.	



Scale: 1/4"=1'

TOTAL WEIGHT = 38 lb

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

ALL WEBS 2x3 DRY No.2 SPF
EXCEPT

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
A	TMVW+p	MT20	4.0	4.0	1.00	2.00
B	TMVW-t	MT20	3.0	4.0	1.50	1.25
C	TTW+m	MT20	3.0	4.0		
D	TMVW+p	MT20	4.0	4.0	1.50	1.75
E	BMV1+t	MT20	4.0	5.0	Edge	0.50
F	BMVWW-t	MT20	5.0	6.0	1.75	1.50
G	BMVW-t	MT20	3.0	4.0	1.50	1.75
H	BMV1+p	MT20	2.0	4.0		

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

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

	FACTORED GROSS REACTION	MAXIMUM FACTORED GROSS REACTION	INPUT BRG	REQRD BRG
JT	VERT	HORZ	DOWN	UPLIFT
E	1515	0	1515	0
H	1252	0	1252	0

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

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	SNOW	MAX./MIN. LIVE	PERM. LIVE	WIND	DEAD	SOIL
E	1057	775 / 0	0 / 0	0 / 0	0 / 0	282 / 0	0 / 0
H	877	621 / 0	0 / 0	0 / 0	0 / 0	256 / 0	0 / 0

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

BRACING

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

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

LOADING

TOTAL LOAD CASES: (4)

C H O R D S				W E B S			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX LC1 (LC)	MAX UNBRACED LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
FR-TO		FROM	TO		FR-TO		
A-B	-815 / 0	-119.4	-119.4	0.11 (1)	6.25	G-B	0 / 385
B-C	-445 / 0	-119.4	-119.4	0.11 (1)	6.25	B-F	-555 / 0
C-D	-318 / 0	-201.5	-201.5	0.08 (1)	6.25	F-C	-311 / 0
E-D	-1352 / 0	0.0	0.0	0.72 (1)	6.85	F-D	0 / 1252
H-A	-998 / 0	0.0	0.0	0.12 (1)	7.71	A-G	0 / 731
H-G	0 / 0	-266.0	-266.0	0.22 (1)	10.00		
G-F	0 / 641	-266.0	-266.0	0.33 (1)	10.00		
F-E	0 / 0	-266.0	-266.0	0.07 (1)	10.00		

SPECIFIED CONCENTRATED LOADS (LBS)

JT	LOC.	LC1	MAX-	MAX+	FACE	DIR.	TYPE	HEEL	CONN.
C	4-6-9	-229	-229	---	FRONT	VERT	TOTAL	---	C1

CONNECTION REQUIREMENTS

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

DESIGN CRITERIA**SPECIFIED LOADS:**

TOP CH.	LL =	34.8	PSF
DL =	6.0	PSF	
BOT CH.	LL =	0.0	PSF
DL =	7.3	PSF	
TOTAL LOAD =	48.1	PSF	

SPACING = 24.0 IN. C/C

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

GIRDER TYPE: CStd Girder

START DISTANCE = 0-0
START SPAN CARRIED = 8-10-0
END DISTANCE = 6-0-0
END SPAN CARRIED = 8-10-0
END WALL WIDTH = 0-0
APPLIED TO FRONT SIDE OF BOTTOM CHORD.
- ADDTL LOADS BASED ON 55 % OF GSL.

GIRDER TYPE: CPrimeHip

LEFT SETBACK = 4-6-9
RIGHT SETBACK = 0-0
END SETBACK = 5-2-8
END WALL WIDTH = 5-8
CORNER FRAMING TYPE: CONVENTIONAL
END JACK TYPE: CONVENTIONAL
APPLIED TO FRONT SIDE
- ADDTL LOADS BASED ON 55 % OF GSL.

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

THIS DESIGN COMPLIES WITH:

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

(55 % OF 48.1 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 34.8 P.S.F. SPECIFIED ROOF LIVE LOAD

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

CSI: TC=0.72/0.97 (D-E:1), BC=0.33/0.97 (F-G:1), WB=0.31/0.97 (D-F:1), SSI=0.32/1.00 (G-H:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

NAIL VALUES

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

CONTINUED ON PAGE 2



JULY 12, 2023

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



JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
IM0723-065	G02	1	1	TRUSS DESC.	

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MHP 23028

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 OF PERMIT PLANS
 Nov 15 2023

 PER: _____
 CHIEF BUILDING OFFICIAL

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

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

JSI METAL= 0.30 (F) (INPUT = 1.00)

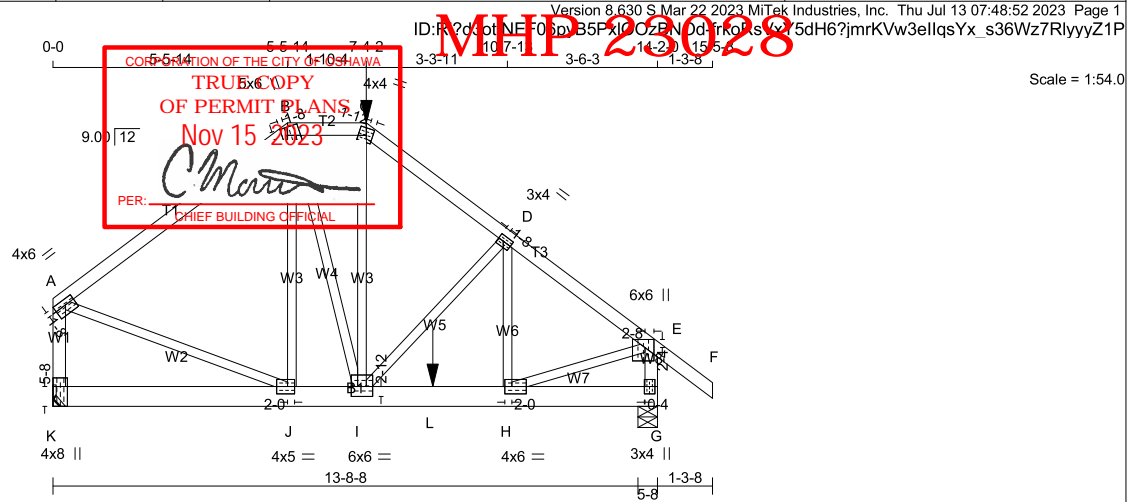


JULY 12, 2023

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JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
IM0723-065	G03	1	1	TRUSS DESC.	



TOTAL WEIGHT = 79 lb

LUMBER

N. L. G. A. RULES	CHORDS	SIZE	LUMBER	DESCR.
A - B	2x4	DRY	No.2	SPF
B - C	2x4	DRY	No.2	SPF
C - F	2x4	DRY	No.2	SPF
K - A	2x4	DRY	No.2	SPF
G - E	2x4	DRY	No.2	SPF
K - G	2x6	DRY	2100F 1.8E	SPF

ALL WEBS 2x3 DRY No.2 SPF
EXCEPT

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
A	TMVW-t	MT20	4.0	6.0	1.50	Edge
B	TTWW+m	MT20	5.0	6.0	2.25	1.50
C	TTW-m	MT20	4.0	4.0	2.00	1.75
D	TMVW-t	MT20	3.0	4.0	1.50	1.50
E	TMVW+p	MT20	6.0	6.0	2.25	2.50
G	BMV1+p	MT20	3.0	4.0	2.00	0.25
H	BMVW-t	MT20	4.0	6.0	2.00	2.00
I	BMVWW-t	MT20	6.0	6.0	2.75	3.00
J	BMVW-t	MT20	4.0	5.0	2.00	2.00
K	BMV1+t	MT20	4.0	8.0	5.50	

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

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

	FACTORED	MAXIMUM FACTORED	INPUT	REQD
GROSS REACTION	GROSS REACTION	BRG	BRG	
JT VERT HORZ	DOWN HORZ	UPLIFT	IN-SX	IN-SX
K 1860 0	1860 0	0	MECHANICAL	
G 2491 0	2491 0	0	5-8	3-2

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

UNFACTORED REACTIONS

JT	1ST LCASE	MAX./MIN.	COMPONENT REACTIONS				
	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
K	1298	949 / 0	0 / 0	0 / 0	0 / 0	349 / 0	0 / 0
G	1742	1254 / 0	0 / 0	0 / 0	0 / 0	488 / 0	0 / 0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.75 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. CSI (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. CSI (LC)	
FR-TO		FROM TO	LENGTH	FR-TO			
A-B	-1659 / 0	-119.4 -119.4	0.86 (1)	J-B	-575 / 0	0.40 (1)	
B-C	-1633 / 0	-119.4 -119.4	0.11 (1)	B-I	0 / 1179	0.29 (1)	
C-D	-2067 / 0	-119.4 -119.4	0.30 (1)	I-C	0 / 355	0.09 (1)	
D-E	-2525 / 0	-119.4 -119.4	0.34 (1)	I-D	-614 / 0	0.26 (1)	
E-F	0 / 49	-119.4 -119.4	0.18 (1)	H-D	0 / 260	0.07 (4)	
K-A	-1826 / 0	0.0 0.0	0.25 (1)	A-J	0 / 1416	0.35 (1)	
G-E	-2506 / 0	0.0 0.0	0.28 (1)	H-E	0 / 2140	0.53 (1)	
K-J	0 / 0	-18.2 -18.2	0.04 (4)				
J-I	0 / 1315	-18.2 -18.2	0.21 (1)				
I-L	0 / 2040	-34.4 -34.4	0.52 (1)				
L-H	0 / 2040	-34.4 -34.4	0.52 (1)				
H-G	0 / 0	-34.4 -34.4	0.11 (1)				

SPECIFIED CONCENTRATED LOADS (LBS)

JT	LOC.	LC1	MAX-	MAX+	FACE	DIR.	TYPE	HEEL	CONN.
C	7-4-2	-418	-418	---	FRONT	VERT	TOTAL	---	C1
L	8-10-12	-1057	-1057	---	FRONT	VERT	TOTAL	---	C1

CONNECTION REQUIREMENTS

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

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	=	34.8	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.3	PSF
TOTAL LOAD	=	48.1	PSF	

SPACING = 24.0 IN. C/C

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

GIRDER TYPE: CPrimeHip
LEFT SETBACK = 5-5-14
RIGHT SETBACK = 6-9-14
END SETBACK = 6-0-0
END WALL WIDTH = 5-8
CORNER FRAMING TYPE: CONVENTIONAL
END JACK TYPE: CONVENTIONAL
APPLIED TO FRONT SIDE
- ADDTL LOADS BASED ON 55 % OF GSL.
LOADS APPLIED TO FIRST 6-9-14 OF SPAN MEASURED FROM THE RIGHT.

***** NON STANDARD GIRDER *****

ADDTL USER-DEFINED LOADS APPLIED TO ALL LOAD CASES.

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

THIS DESIGN COMPLIES WITH:

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

(55 % OF 48.1 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 34.8 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.47")
CALCULATED VERT. DEFL.(LL) = L/999 (0.06")
ALLOWABLE DEFL.(TL)= L/360 (0.47")
CALCULATED VERT. DEFL.(TL) = L/999 (0.10")

CSI: TC=0.86/0.97 (A-B:1) , BC=0.52/0.97 (H-I:1) , WB=0.53/0.97 (E-H:1) , SSI=0.57/1.00 (H-I:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

CONTINUED ON PAGE 2



JULY 13, 2023

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JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
IM0723-065	G03	1	1	TRUSS DESC.	

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 OF PERMIT PLANS
 Nov 15 2023

 PER: _____
 CHIEF BUILDING OFFICIAL

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.87 (H) (INPUT = 0.90)
 JSI METAL= 0.46 (H) (INPUT = 1.00)

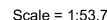


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TOTAL WEIGHT = 36 lb

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JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
IM0723-065	G04	1	1	TRUSS DESC.	

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 OF PERMIT PLANS
 Nov 15 2023

 PER: _____
 CHIEF BUILDING OFFICIAL

NAIL VALUES
 PLATE GRIP(DRY) SHEAR SECTION
 (PSI) (PLI) (PLI)
 MAX MIN MAX MIN MAX MIN
 MT20 650 371 1747 788 1987 1873
 PLATE PLACEMENT TOL. = 0.250 inches
 PLATE ROTATION TOL. = 5.0 Deg.
 JSI GRIP= 0.90 (F) (INPUT = 0.90)
 JSI METAL= 0.44 (A) (INPUT = 1.00)

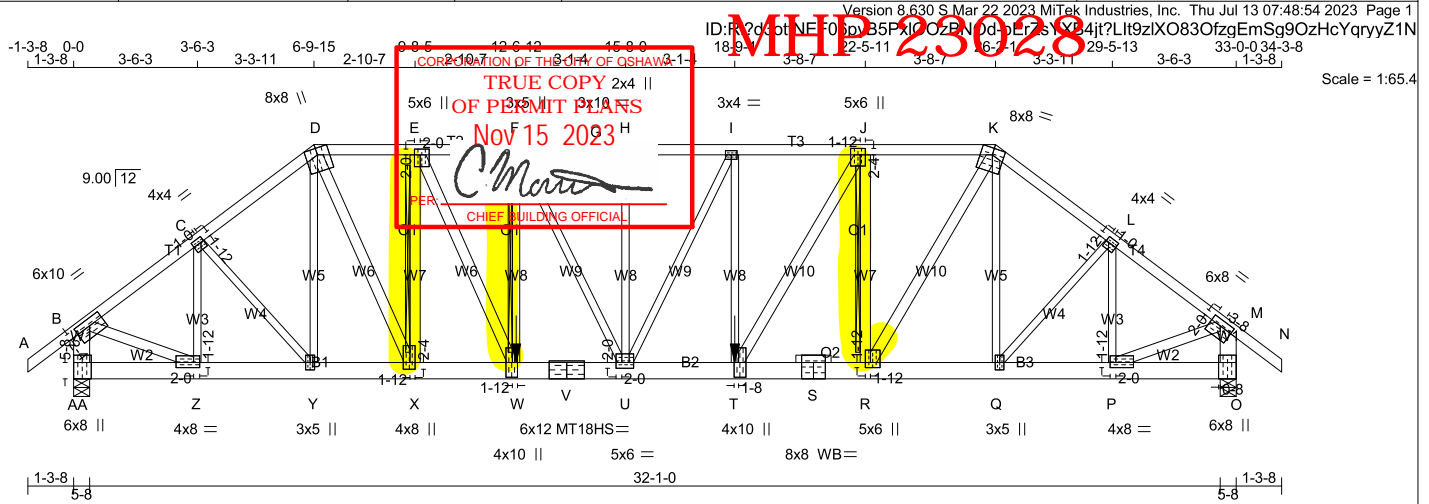


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JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
IM0723-065	G05	1	1	TRUSS DESC.	



LUMBER	CHORDS	SIZE	LUMBER	DESCR.
N. L. G. A. RULES				
A - D	2x4	DRY	No.2	SPF
D - G	2x4	DRY	2100F 1.8E	SPF
G - K	2x4	DRY	2100F 1.8E	SPF
K - N	2x4	DRY	No.2	SPF
AA- B	2x6	DRY	No.2	SPF
O - M	2x6	DRY	No.2	SPF
AA- V	2x6	DRY	2100F 1.8E	SPF
V - S	2x6	DRY	2100F 1.8E	SPF
S - O	2x6	DRY	2100F 1.8E	SPF

ALL WEBS EXCEPT	SIZE	LUMBER	DESCR.
D - X	2x4	DRY	No.2
X - E	2x4	DRY	No.2
E - W	2x4	DRY	No.2
T - J	2x4	DRY	No.2
R - J	2x4	DRY	No.2
R - K	2x4	DRY	No.2
B - Z	2x4	DRY	No.2
P - M	2x4	DRY	No.2

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMVW-t	MT20	6.0	10.0	2.25	5.00
C	TMVW-t	MT20	4.0	4.0	1.75	1.00
D	TTWW+m	MT20	8.0	8.0	Edge	
E	TMVW+t	MT20	5.0	6.0	2.00	2.00
F	TMVW+t	MT20	3.0	5.0	1.50	1.50
G	TS-t	MT20	3.0	10.0		
H	TMVW+w	MT20	2.0	4.0		
I	TMVW-t	MT20	3.0	4.0		
J	TMVW+t	MT20	5.0	6.0	2.25	1.75
K	TTWW-m	MT20	8.0	8.0	Edge	
L	TMVW-t	MT20	4.0	4.0	1.75	1.00
M	TMVW-t	MT20	6.0	8.0	2.00	3.50
O	BMV1+t	MT20	6.0	8.0	Edge	0.50
P	BMVW-t	MT20	4.0	8.0	1.75	2.00
Q	BMVW+t	MT20	3.0	5.0		
R	BMVW+t	MT20	5.0	6.0	1.75	1.75
S	BS-t	MT20	8.0	8.0		
T	BMVW+t	MT20	4.0	10.0	5.00	1.50
U	BMVW+t	MT20	5.0	6.0	2.00	2.00
V	BS-t	MT18HS	6.0	12.0		
W	BMVW+t	MT20	4.0	10.0	5.00	1.75
X	BMVW+t	MT20	4.0	8.0	2.25	1.75
Y	BMVW+t	MT20	3.0	5.0		
Z	BMVW-t	MT20	4.0	8.0	1.75	2.00

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

BEARINGS

	FACTORED GROSS REACTION	MAXIMUM FACTORED GROSS REACTION	INPUT BRG	REQD BRG
JT	VERT	HORZ	DOWN	HORZ
AA	5059	0	5059	0
O	4984	0	4984	0

UNFACTORED REACTIONS

JT	1ST CASE COMBINED	MAX./MIN. SNOW	MAX./MIN. LIVE	MAX./MIN. PERM. LIVE	WIND	DEAD	SOIL
AA	3533	2571 / 0	0 / 0	0 / 0	0 / 0	962 / 0	0 / 0
O	3480	2533 / 0	0 / 0	0 / 0	0 / 0	948 / 0	0 / 0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 2.04 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

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

2x4 DRY SPF No.2 T-BRACE AT E-X, F-W, J-R

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

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. UNBRACED LENGTH (LC1)	MAX. FACTORED FORCE (LBS)	MAX. UNBRACED LENGTH (LC1)
FR-TO		FROM TO		FR-TO	
A-B	0 / 49	-119.4 -119.4	0.18 (1)	10.00	Z-C -1431 / 0
B-C	-5432 / 0	-119.4 -119.4	0.71 (1)	2.36	C-Y 0 / 751
C-D	-6103 / 0	-119.4 -119.4	0.82 (1)	2.04	Y-D -423 / 0
D-E	-6559 / 0	-119.4 -119.4	0.30 (1)	3.22	D-X 0 / 4127
E-F	-8072 / 0	-119.4 -119.4	0.43 (1)	2.78	X-E -3641 / 0
F-G	-8673 / 0	-298.5 -298.5	0.60 (1)	2.47	E-W 0 / 3635
G-H	-8673 / 0	-298.5 -298.5	0.60 (1)	2.47	W-F -1838 / 0
H-I	-8673 / 0	-298.5 -298.5	0.60 (1)	2.47	F-U 0 / 1355
I-J	-8705 / 0	-119.4 -119.4	0.54 (1)	2.59	U-H -987 / 0
J-K	-6907 / 0	-119.4 -119.4	0.40 (1)	3.06	U-I -71 / 0
K-L	-5995 / 0	-119.4 -119.4	0.80 (1)	2.09	T-I -598 / 0
L-M	-5347 / 0	-119.4 -119.4	0.70 (1)	2.39	T-J 0 / 3535
M-N	0 / 49	-119.4 -119.4	0.18 (1)	10.00	R-J -3513 / 0
AA-B	-4984 / 0	0.0 0.0	0.36 (1)	4.70	R-K 0 / 4226
O-M	-4911 / 0	0.0 0.0	0.36 (1)	4.74	Q-K -411 / 0
AA-Z	0 / 0	-18.2 -18.2	0.06 (1)	10.00	Q-L 0 / 722
Z-Y	0 / 4365	-18.2 -18.2	0.29 (1)	10.00	P-L -1396 / 0
Y-X	0 / 4866	-18.2 -18.2	0.29 (1)	10.00	B-Z 0 / 4577
X-W	0 / 6559	-18.2 -18.2	0.41 (1)	10.00	P-M 0 / 4506
W-V	0 / 8072	-45.6 -45.6	0.51 (1)	10.00	
V-U	0 / 8072	-45.6 -45.6	0.51 (1)	10.00	
U-T	0 / 8705	-45.6 -45.6	0.56 (1)	10.00	
T-S	0 / 6907	-18.2 -18.2	0.45 (1)	10.00	
S-R	0 / 6907	-18.2 -18.2	0.45 (1)	10.00	
R-Q	0 / 4778	-18.2 -18.2	0.28 (1)	10.00	
Q-P	0 / 4297	-18.2 -18.2	0.28 (1)	10.00	
P-O	0 / 0	-18.2 -18.2	0.06 (1)	10.00	

SPECIFIED CONCENTRATED LOADS (LBS)

JT	LOC.	LC1	MAX-	MAX+	FACE	DIR.	TYPE	HEEL	CONN.
T	18-9.4	-1704	-1704	---	FRONT	VERT	TOTAL	---	C1
W	12-6-12	-1013	-1013	---	FRONT	VERT	TOTAL	---	C1

CONNECTION REQUIREMENTS

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

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	=	34.8	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.3	PSF
TOTAL LOAD	=	48.1	PSF	

SPACING = 24.0 IN./C

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

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

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

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

(55 % OF 48.1 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 34.8 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.10")
CALCULATED VERT. DEFL.(LL)= L/999 (0.32")
ALLOWABLE DEFL.(TL)= L/360 (1.10")
CALCULATED VERT. DEFL.(TL)= L/728 (0.54")

CSI: TC=0.82/0.97 (C-D:1), BC=0.56/0.97 (T-U:1),
WB=0.88/0.97 (E-X:1), SSI=0.43/1.00 (F-H:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

NAIL VALUES
PLATE GRIP(DRY) SHEAR SECTION
(PSI) (PLI) (PLI)
MAX MIN MAX MIN MAX MIN
MT20 650 371 1747 788 1987 1873
MT18HS 586 403 2455 1382 3163 3004

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (Z) (INPUT = 0.90)
JSI METAL= 0.99 (M) (INPUT = 1.00)

CONTINUED ON PAGE 2



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



JULY 13, 2023

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
IM0723-065	G05	1	1	TRUSS DESC.	

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PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
AA	BMV1+t	MT20	6.0	8.0	5.50	

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

WB - INDICATES BLOCKING REQUIRED



MIHP 23028



JULY 13, 2023

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Scale = 1:53.7



BEARINGS

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

UNFACTORED REACTIONS

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.23 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)

DESIGN CRITERIA

SPECIFIED LOADS:

SPACING = 24.0 IN. C/C

GIRDER TYPE: CStdGirder

START DISTANCE = 0-0

START SPAN CARRIED = 12-6-0

END DISTANCE = 6-0-0
END SPAN CARRIER =

END SPAN CARRIED = 12-6-0
END WALL WIDTH = 5.8

END WALL WIDTH = 5-8
APPLIED TO FRONT SIDE

- ADDT'L LOADS BASED ON 55 % OF GSL.

FREE DELIVERY ON ALL 30 TO 31.000

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

THIS DESIGN COMPLIES WITH:

- PART 9 OF BCBC 2018 , NBC-2019AE

- PART 9 OF OBC 2012 (2019 AMENDMENT)

- CSA 086-1
- TPIC 2014

(55 % OF 48.1 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 34.8 P.S.F. SPECIFIED ROOF LIVE LOAD

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

CSI: TC=0.20/0.97 (A-B:1), BC=0.30/0.97 (D-E:1), WB=0.40/0.97 (B-D:1), SSI=0.43/1.00 (E-F:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

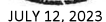
NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

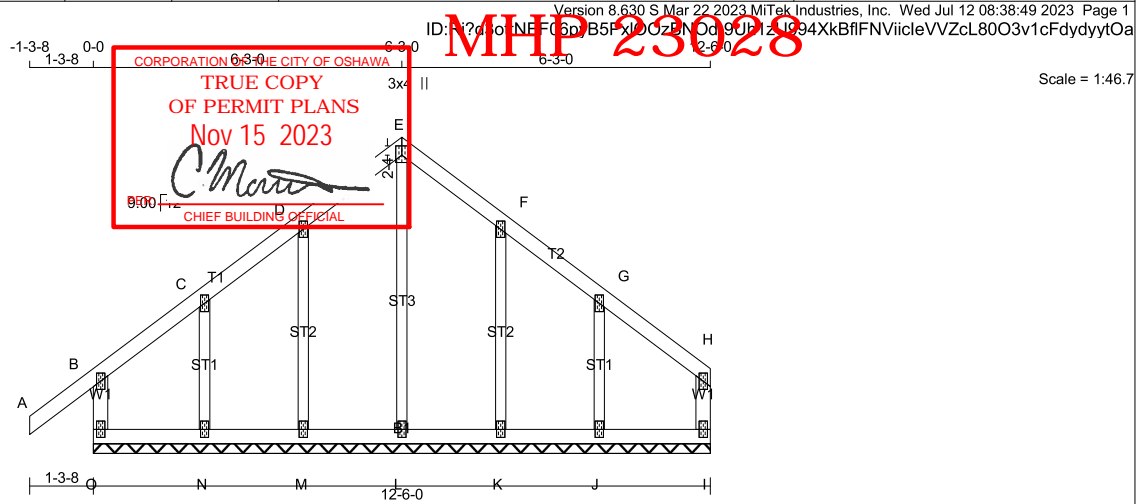
JSI GRIP= 0.89 (A) (INPUT = 0.90)
JSI METAL= 0.31 (E) (INPUT = 1.00)



**READ ALL NOTES ON THIS PAGE AND ON THE
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IN THE DESIGN OF THIS COMPONENT.**



JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
IM0723-065	GE01	1	1	TRUSS DESC.	



TOTAL WEIGHT = 52 lb

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

PLATES (table is in inches)

JT TYPE	PLATES	W	LEN	Y	X
B TMV+p	MT20	2.0	4.0		
C, D, F, G					
C TMW+w	MT20	2.0	4.0		
E TTW+p	MT20	3.0	4.0	2.25	1.50
H TMV+p	MT20	2.0	4.0		
I BMV1+p	MT20	2.0	4.0		
J, K, L, M, N					
J BMW1+w	MT20	2.0	4.0		
O BMV1+p	MT20	2.0	4.0		

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

THIS TRUSS DESIGNED FOR CONTINUOUS BEARINGS.

THIS TRUSS REQUIRES RIGID SHEATHING ON EXPOSED FACE.

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

BRACING

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

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

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 MAX (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. UNBRACED LENGTH (FT)	LC1 MAX (LC)
FR-TO		FROM	TO	FR-TO			
O-B	-326 / 0	0.0	0.0	L-E	-214 / 0	7.81	0.13 (1)
A-B	0 / 49	-119.4	-119.4	M-D	-238 / 0	10.00	0.08 (1)
B-C	-50 / 0	-119.4	-119.4	N-C	-240 / 0	6.25	0.05 (1)
C-D	-38 / 0	-119.4	-119.4	K-F	-236 / 0	6.25	0.08 (1)
D-E	-31 / 0	-119.4	-119.4	J-G	-251 / 0	6.25	0.05 (1)
E-F	-31 / 0	-119.4	-119.4				
F-G	-40 / 0	-119.4	-119.4				
G-H	-45 / 0	-119.4	-119.4				
I-H	-153 / 0	0.0	0.0				
O-N	0 / 38	-18.2	-18.2				
N-M	0 / 30	-18.2	-18.2				
M-L	0 / 26	-18.2	-18.2				
L-K	0 / 26	-18.2	-18.2				
K-J	0 / 30	-18.2	-18.2				
J-I	0 / 38	-18.2	-18.2				

DESIGN CRITERIA**SPECIFIED LOADS:**

TOP CH. LL = 34.8 PSF
DL = 6.0 PSF
BOT CH. LL = 0.0 PSF
DL = 7.3 PSF
TOTAL LOAD = 48.1 PSF

SPACING = 24.0 IN. C/C

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

THIS DESIGN COMPLIES WITH:

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

DESIGN ASSUMPTIONS

-OVERHANG NOT TO BE ALTERED OR CUT OFF.

(55 % OF 48.1 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 34.8 P.S.F. SPECIFIED ROOF LIVE LOAD

CSI: TC=0.16/0.97 (A-B:1) , BC=0.03/0.97 (N-O:1)
WB=0.13/0.97 (E-L:1) , SSI=0.10/1.00 (A-B:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.24 (B) (INPUT = 0.90)
JSI METAL= 0.20 (H) (INPUT = 1.00)



JULY 12, 2023

READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTES: TRUSSES. 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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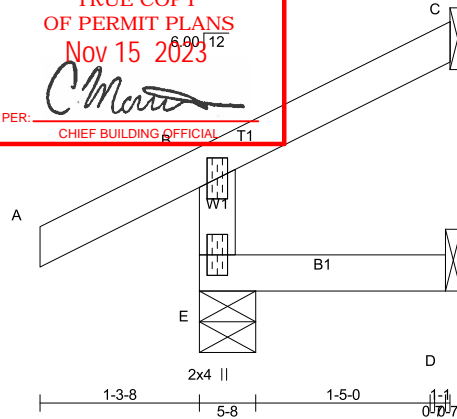
TOTAL WEIGHT = 2 X 10 = 20 lb



JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
IM0723-065	J02	2	1	TRUSS DESC.	

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ID: R174361N EE 64vB Pxl0z8ND-eIFPdq nqs2HuqZ3QDrqr2gQ?halsi3FG_BU3yytOZ



TOTAL WEIGHT = 2 X 7 = 15 lb

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

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMV+p	MT20	2.0	4.0		
E	BMV1+p	MT20	2.0	4.0		

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
E	334	0	334	0	0	5-8	1-8
C	92	0	92	0	0	1-8	1-8
D	16	0	18	0	0	1-8	1-8

SEE MITEK STANDARD DETAIL MSD2015-H FOR CONNECTION TO JOINT(S) C, D

UNFACTORED REACTIONS

1ST LCASE	MAX./MIN.	COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
E	230	183 / 0	0 / 0	0 / 0	0 / 0	48 / 0	0 / 0
C	63	54 / 0	0 / 0	0 / 0	0 / 0	9 / 0	0 / 0
D	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) E

BRACING

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

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

LOADING

TOTAL LOAD CASES: (5)

C H O R D S				W E B S			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 MAX	MAX. UNBRACED LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. FACTORED CSI (LC)
FR-TO		FROM TO			FR-TO		
E-B	-313 / 0	0.0	0.0	0.01 (4)	7.81		
A-B	0 / 36	-119.4	-119.4	0.16 (1)	10.00		
B-C	-13 / 0	-119.4	-119.4	0.08 (1)	6.25		
E-D	0 / 0	-18.2	-18.2	0.02 (4)	10.00		

CANTILEVER ANALYSIS HAS BEEN CONSIDERED IN THIS DESIGN

PATTERN-LOADING CHECK APPLIED TO THIS TRUSS.

DESIGN CRITERIA**SPECIFIED LOADS:**

TOP CH.	LL	=	34.8	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.3	PSF
TOTAL LOAD	=	48.1	PSF	

SPACING = 24.0 IN. C/C

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

THIS DESIGN COMPLIES WITH:

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

DESIGN ASSUMPTIONS

-OVERHANG NOT TO BE ALTERED OR CUT OFF.

(55 % OF 48.1 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 34.8 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=0.16/0.97 (A-B:1), BC=0.02/0.97 (D-E:4),
WB=0.00/0.97 (n/a:0), SSI=0.11/1.00 (A-B:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.18 (B) (INPUT = 0.90)
JSI METAL= 0.13 (B) (INPUT = 1.00)

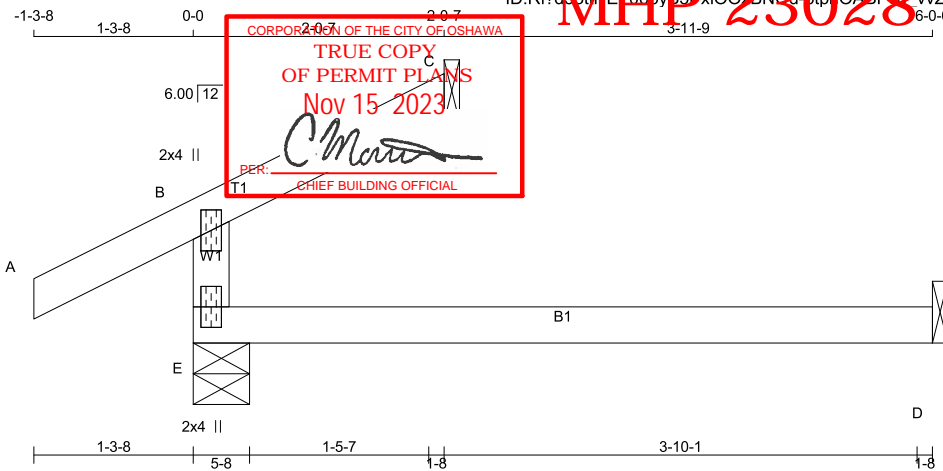


JULY 12, 2023

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JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
IM0723-065	J03	2	1	TRUSS DESC.	



TOTAL WEIGHT = 2 X 12 = 24 lb

LUMBER

N. L. G. A. RULES

CHORDS SIZE

E - B 2x4 DRY

A - C 2x4 DRY

E - D 2x4 DRY

LUMBER

No.2

No.2

No.2

DESCR.

SPF

SPF

SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMV+p	MT20	2.0	4.0		
E	BMV1+p	MT20	2.0	4.0		

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

	FACTORED GROSS REACTION	MAXIMUM FACTORED GROSS REACTION	INPUT BRG	REQD BRG
JT	VERT	HORZ	DOWN	HORZ
E	378	0	378	0
C	92	0	92	0
D	45	0	51	0

SEE MITEK STANDARD DETAIL MSD2015-H FOR CONNECTION TO JOINT(S) C, D

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. SNOW	LIVE	PERM. LIVE	WIND	DEAD	SOIL
E	266	183 / 0	0 / 0	0 / 0	0 / 0	83 / 0	0 / 0
C	63	54 / 0	0 / 0	0 / 0	0 / 0	9 / 0	0 / 0
D	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) E, C

BRACING

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

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

LOADING

TOTAL LOAD CASES: (4)

C H O R D S				W E B S			
MEMB.	MAX. FACTORED FORCE (LBS)	VERT. LOAD (PLF)	FACTORED VERT. LOAD (PLF)	MAX. UNBRACED LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. UNBRACED LENGTH
FR-TO					FR-TO		
E-B	-313 / 0	0.0	0.0	0.13 (4)	7.81		
A-B	0 / 36	-119.4	-119.4	0.16 (1)	10.00		
B-C	-13 / 0	-119.4	-119.4	0.08 (1)	6.25		
E-D	0 / 0	-18.2	-18.2	0.13 (4)	10.00		

DESIGN CRITERIA**SPECIFIED LOADS:**

TOP CH.	LL =	34.8	PSF
	DL =	6.0	PSF
BOT CH.	LL =	0.0	PSF
	DL =	7.3	PSF
TOTAL LOAD	=	48.1	PSF

SPACING = 24.0 IN. C/C

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

THIS DESIGN COMPLIES WITH:

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

DESIGN ASSUMPTIONS

-OVERHANG NOT TO BE ALTERED OR CUT OFF.

(55 % OF 48.1 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 34.8 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=0.16/0.97 (A-B:1), BC=0.13/0.97 (D-E:4),
 WB=0.00/0.97 (n/a:0), SSI=0.11/1.00 (A-B:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.18 (B) (INPUT = 0.90)
 JSI METAL= 0.13 (B) (INPUT = 1.00)

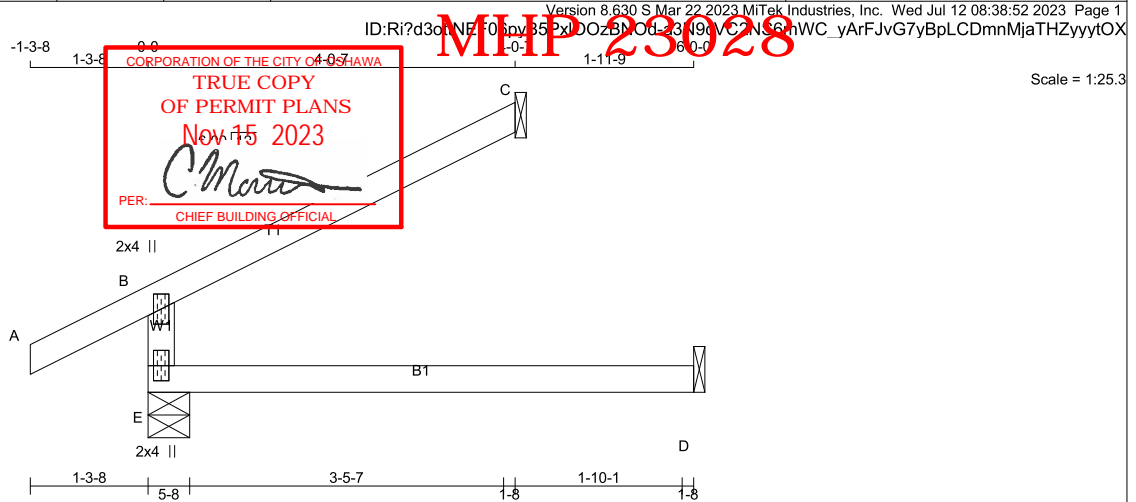


JULY 12, 2023

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JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
IM0723-065	J04	2	1	TRUSS DESC.	



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

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMV+p	MT20	2.0	4.0		
E	BMV1+p	MT20	2.0	4.0		

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

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG	REQD BRG
	VERT	HORZ	DOWN	HORZ	IN-SX	IN-SX
E	528	0	528	0	5-8	1-8
C	181	0	181	0	1-8	1-8
D	45	0	51	0	1-8	1-8

SEE MITEK STANDARD DETAIL MSD2015-H FOR CONNECTION TO JOINT(S) C, D

UNFACTORED REACTIONS

JT	COMBINED	MAX./MIN. COMPONENT REACTIONS					
		1ST LCASE	SNOW	LIVE	PERM.LIVE	WIND	DEAD
E	368	270 / 0	0 / 0	0 / 0	0 / 0	0 / 0	98 / 0
C	124	105 / 0	0 / 0	0 / 0	0 / 0	0 / 0	18 / 0
D	36	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	36 / 0

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

BRACING

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

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

LOADING

TOTAL LOAD CASES: (4)

C H O R D S				W E B S			
MEMB.	MAX. FACTORED FORCE (LBS)	VERT. LOAD (PLF)	MAX. FACTORED VERT. LOAD (LC1) (PLF)	MAX. UNBRACED LENGTH (LC1)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. FACTORED VERT. LOAD (LC1)
FR-TO		FROM	TO		FR-TO		
E-B	-463 / 0	0.0	0.0	0.13 (4)	7.81		
A-B	0 / 36	-119.4	-119.4	0.16 (1)	10.00		
B-C	-27 / 0	-119.4	-119.4	0.33 (1)	6.25		
E-D	0 / 0	-18.2	-18.2	0.13 (4)	10.00		

DESIGN CRITERIA**SPECIFIED LOADS:**

TOP CH.	LL	=	34.8	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.3	PSF
TOTAL LOAD	=	48.1	PSF	

SPACING = 24.0 IN. C/C

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

THIS DESIGN COMPLIES WITH:

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

DESIGN ASSUMPTIONS

-OVERHANG NOT TO BE ALTERED OR CUT OFF.

(55 % OF 48.1 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 34.8 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=0.33/0.97 (B-C:1), BC=0.13/0.97 (D-E:4),
 WB=0.00/0.97 (n/a:0), SSI=0.21/1.00 (B-C:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.26 (B) (INPUT = 0.90)
 JSI METAL= 0.19 (B) (INPUT = 1.00)

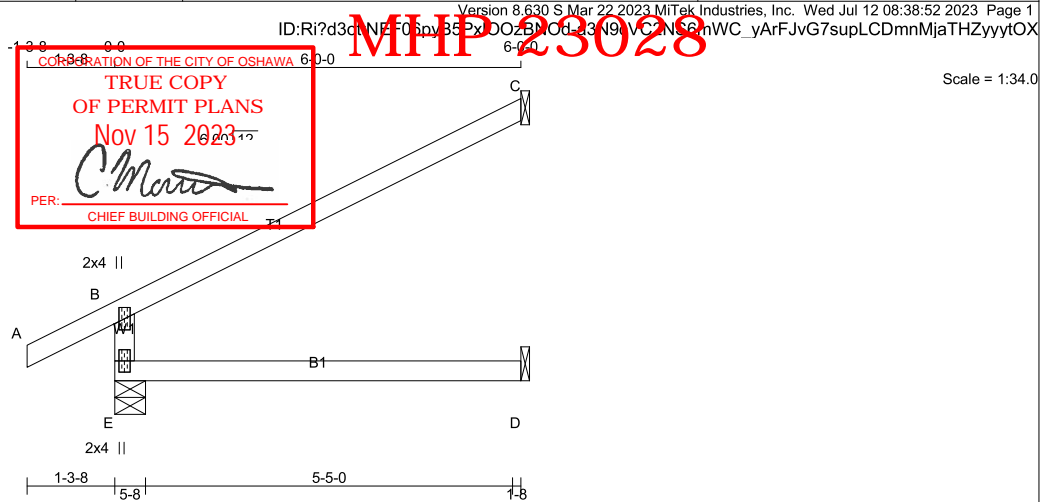


JULY 12, 2023

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JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
IM0723-065	J05	12	1	TRUSS DESC.	



TOTAL WEIGHT = 12 X 17 = 205 lb

LUMBER

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

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMV+p	MT20	2.0	4.0		
E	BMV1+p	MT20	2.0	4.0		

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
E	674	0	674	0	0	5-8	1-8
C	269	0	269	0	0	1-8	1-8
D	45	0	51	0	0	1-8	1-8

SEE MITEK STANDARD DETAIL MSD2015-H FOR CONNECTION TO JOINT(S) C, D

UNFACTORED REACTIONS

JT	1ST LCASE	MAX./MIN. COMPONENT REACTIONS	SNOW	LIVE	PERM. LIVE	WIND	DEAD	SOIL
E	468	355 / 0	0 / 0	0 / 0	0 / 0	0 / 0	113 / 0	0 / 0
C	184	157 / 0	0 / 0	0 / 0	0 / 0	0 / 0	27 / 0	0 / 0
D	36	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	36 / 0	0 / 0

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

BRACING

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

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

LOADING

TOTAL LOAD CASES: (4)

C H O R D S				W E B S			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 MAX	MAX. UNBRACED LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. FACTORED CSI (LC)
FR-TO		FROM TO			FR-TO		
E-B	-610 / 0	0.0	0.0	0.13 (4)	7.81		
A-B	0 / 36	-119.4	-119.4	0.16 (1)	10.00		
B-C	-40 / 0	-119.4	-119.4	0.73 (1)	6.25		
E-D	0 / 0	-18.2	-18.2	0.13 (4)	10.00		

DESIGN CRITERIA**SPECIFIED LOADS:**

TOP CH.	LL	=	34.8	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.3	PSF
TOTAL LOAD	=	48.1	PSF	

SPACING = 24.0 IN. C/C

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

THIS DESIGN COMPLIES WITH:

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

DESIGN ASSUMPTIONS

-OVERHANG NOT TO BE ALTERED OR CUT OFF.

(55 % OF 48.1 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 34.8 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=0.73/0.97 (B-C:1) , BC=0.13/0.97 (D-E:4) ,
WB=0.00/0.97 (n/a:0) , SSI=0.31/1.00 (B-C:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.34 (B) (INPUT = 0.90)
JSI METAL= 0.25 (B) (INPUT = 1.00)



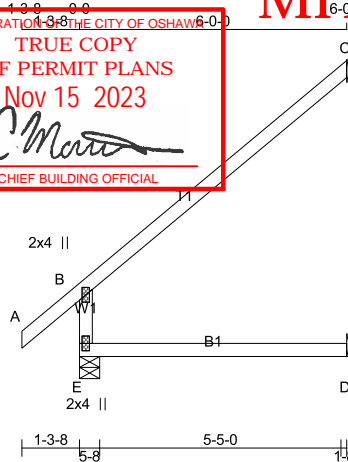
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JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
IM0723-065	J06	5	1	TRUSS DESC.	

Version 8.630 S Mar 22 2023 MiTek Industries, Inc. Wed Jul 12 08:38:53 2023 Page 1
ID:Ri7d34HMF16pB5P100zBN021xxpCg815d3MZ8kYmYSUg1cDgNyD1VxEDr5OyytOW



TOTAL WEIGHT = 5 X 19 = 97 lb

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

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMV+p	MT20	2.0	4.0		
E	BMV1+p	MT20	2.0	4.0		

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

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG		REQRD BRG	
	VERT	HORZ	DOWN	HORZ	IN-SX	IN-SX	IN-SX	IN-SX
E	676	0	676	0	5-8	1-8	1-8	1-8
C	269	0	269	0	1-8	1-8	1-8	1-8
D	46	0	52	0	1-8	1-8	1-8	1-8

SEE MITEK STANDARD DETAIL MSD2015-H FOR CONNECTION TO JOINT(S) C, D

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS					
		SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
E	469	357 / 0	0 / 0	0 / 0	0 / 0	112 / 0	0 / 0
C	184	157 / 0	0 / 0	0 / 0	0 / 0	27 / 0	0 / 0
D	37	0 / 0	0 / 0	0 / 0	0 / 0	37 / 0	0 / 0

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

BRACING

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

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

LOADING

TOTAL LOAD CASES: (4)

C H O R D S				W E B S			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 MAX CSI (LC)	MAX. UNBRACED LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. CSI (LC)
FR-TO		FROM	TO		FR-TO		
E-B	-613 / 0	0.0	0.0	0.12 (4)	7.81		
A-B	0 / 53	-119.4	-119.4	0.16 (1)	10.00		
B-C	-57 / 0	-119.4	-119.4	0.74 (1)	6.25		
E-D	0 / 0	-18.2	-18.2	0.14 (4)	10.00		

DESIGN CRITERIA**SPECIFIED LOADS:**

TOP CH.	LL =	34.8	PSF
	DL =	6.0	PSF
BOT CH.	LL =	0.0	PSF
	DL =	7.3	PSF
TOTAL LOAD	=	48.1	PSF

SPACING = 24.0 IN. C/C

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

THIS DESIGN COMPLIES WITH:

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

DESIGN ASSUMPTIONS

-OVERHANG NOT TO BE ALTERED OR CUT OFF.

(55 % OF 48.1 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 34.8 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=0.74/0.97 (B-C:1), BC=0.14/0.97 (D-E:4),
WB=0.00/0.97 (n/a:0), SSI=0.27/1.00 (B-C:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.42 (B) (INPUT = 0.90)
JSI METAL= 0.33 (B) (INPUT = 1.00)



JULY 12, 2023

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