

REVIEWED
 NOT REVIEWED
 REVIEWED AS NOTED JV
 REVISE/RESUBMIT
 DATE: March 13, 2020

THIS IS A REVIEW ONLY OF CONFORMANCE WITH THE GENERAL DESIGN CONCEPT AND NOT A CHECK ON QUANTITIES, DETAILS, OR DIMENSIONS WHICH ARE THE CONTRACTOR'S SOLE RESPONSIBILITY IN ORDER TO MEET ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS.



Dimensions to be confirmed by contractor and/or architect.
 Confirm snow drifting has been accounted for in roof trusses C01 and B01.

LEGEND

- ◄ Left end truss/post
- ▬ RIM/Beam/Blocking
- ▬ Girder
- ▬ Cable/Valley
- ▬ Ceiling Line
- ▬ Roof Line
- ▬ Post
- ▬ Site framing

All dimensions in feet-inches-sixteenth of an inch

2602 Perth Road, Box 178
 Glenburnie, ON K0H 1S0
 Telephone: 613-646-8880

3009 CR-29
 Brockville, ON, K6V 5T7
 Telephone: 613-342-2388

www.terranovatruss.com

Floor and roof trusses, engineered wood products.
 Residential, Commercial, and Agricultural

Design Criteria

Specified Loads - Kanata, ON

This design complies with:
 -CBC 2012
 -CSA 086.1
 -OH regulation 350/06 as amended
 -TPC 2014
 -Limited States Design (wood)

Bottom Chord Live Load - 0.90 psf
 Top Chord Live Load - 45.10 psf
 Bottom Chord Dead Load - 15.50 psf
 Top Chord Dead Load - 15.50 psf

OBC Part 9 House/Small Building
 X OBC Part 4 Commercial
 Agricultural

All roof trusses maximum 24" spacing unless noted on drawing. Total load deflection L/360

Refer to MiTek Engineering Reference Sheet: MIH-7473C
 It is the responsibility of the owner, builder, contractor, or architect to verify all design criteria, dimensions and roof styles prior to production.

Client: Talco Building Innovation
 Job Name: Enterprise Rent-A-Car
 Model:
 Address: 228 Huntman Road
 Kanata, ON

Type: Roof
 Date: 2020-03-11
 Designer: MRF

Job: 1912-1701A

This drawing is not to scale

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WHICH ARE THE CONTRACTOR'S SOLE
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VRIEND
ENGINEERING

MiTek
MiTek

MiTek Canada, Inc.

100 Industrial Road
Bradford, ON, Canada L3Z 3G7
Phone (905) 952-2900
Toll Free (800) 268-3434
Fax (905) 952-2901

March 12, 2020

Re: 1912-1701

Tal-Co Building Innovations Ltd.

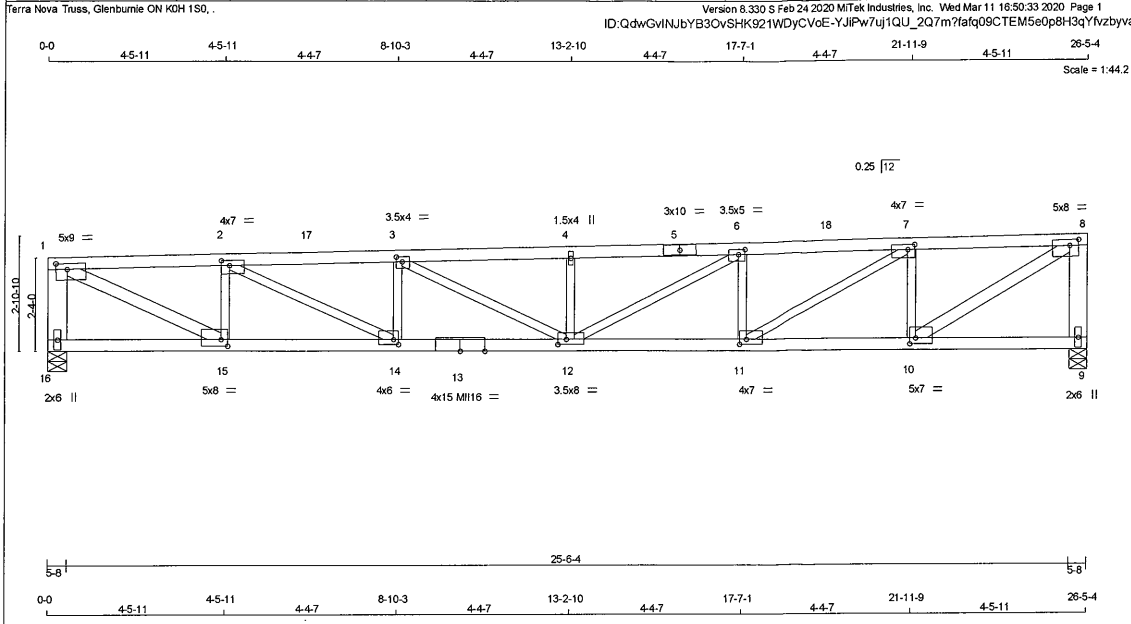
The truss drawing(s) referenced below have been prepared by or for MiTek Canada, Inc. under my direct supervision based on the parameters provided by Terra Nova Truss (CA).

Pages or sheets covered by this seal: P6113007 thru P6113013

PEO
Certificate No. 10889485



The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with TPIC. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which were given to MiTek. Any project specific information included is for MiTek's customer's file reference purpose only, and was not taken into account in the preparation of these designs. MiTek has not independently verified the applicability of the design parameters or the designs for any particular building. Before use, the building designer should verify applicability of design parameters and properly incorporate these designs into the overall building design. Engineering Services provided by



TOTAL WEIGHT = 18 X 101 = 1818 lb

LUMBER
 N. L. G. A. RULES

CHORDS	SIZE	LUMBER	DESCR
16 - 1	2x6	No.2	SPF
9 - 8	2x6	No.2	SPF
1 - 5	2x4	2100F 1.8E	SPF
5 - 8	2x4	2100F 1.8E	SPF
16 - 13	2x4	2100F 1.8E	SPF
13 - 9	2x4	2100F 1.8E	SPF

ALL WEBS 2x3 DRY No.2 SPF
 EXCEPT
 1 - 15 2x4 DRY No.2 SPF
 10 - 8 2x4 DRY No.2 SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
1	TMWWH	MT20	5.0	9.0	1.75	3.25
2	TMWWH	MT20	4.0	7.0	1.50	2.50
3	TMWWH	MT20	3.5	4.0	1.50	1.75
4	TMW+W	MT20	1.5	4.0		
5	TS4	MT20	3.0	10.0		
6	TMWWH	MT20	3.5	5.0	1.50	2.00
7	TMWWH	MT20	4.0	7.0	1.50	2.25
8	TMWWH	MT20	5.0	8.0	1.75	2.75
9	BMV1+p	MT20	2.0	6.0		
10	BMWWH	MT20	5.0	7.0	1.75	1.75
11	BMWWH	MT20	4.0	7.0	1.50	2.00
12	BMWWH	MT20	3.5	8.0	1.50	2.50
13	BS4	MI16	4.0	15.0		
14	BMWWH	MT20	4.0	6.0	1.50	1.50
15	BMWWH	MT20	5.0	8.0	2.00	2.00
16	BMV1+p	MT20	2.0	6.0		

DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER
 PROVIDE ADEQUATE DRAINAGE TO PREVENT PONDING

BEARINGS

FACTORED	MAXIMUM FACTORED	INPUT	REORD				
GROSS REACTION	GROSS REACTION	BRG	BRG				
JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX
16	2814	0	2814	129	-622	5-8	5-8
9	2814	0	2814	0	-621	5-8	5-8

PROVIDE ANCHORAGE AT BEARING JOINT 16 FOR 622 LBS FACTORED UPLIFT
 PROVIDE ANCHORAGE AT BEARING JOINT 9 FOR 621 LBS FACTORED UPLIFT
 PROVIDE FOR 129 LBS FACTORED HORIZONTAL REACTION AT JOINT 16

UNFACTORED REACTIONS

1ST LCASE	MAX	MIN	COMPONENT	REACTIONS				
JT	COMBINED	SNOW	LIVE	PERM	LIVE	WIND	DEAD	SOIL
16	2012	1193	0	0/0	0/0	0/-614	820/0	0/0
9	2012	1193	0	0/0	0/0	0/-613	820/0	0/0

HORIZONTAL REACTIONS

JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX
16	0/0	0/0	0/0	92/-59	0/0	0/0	0/0

BEARING MATERIAL TO BE SPF NO 2 OR BETTER AT JOINT(S) 16, 9

BRACING
 MAX. UNBRACED TOP CHORD LENGTH = 2.79 FT.
 MAX. UNBRACED BOTTOM CHORD LENGTH = 6.19 FT OR RIGID CEILING DIRECTLY APPLIED.

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

LOADING
 TOTAL LOAD CASES: (32)

MEMB.	CHORDS			WEBS		
	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. CSI (LC)	MAX. MEMB. FORCE (LBS)	MAX. UNBRACED LENGTH	MAX. FACTORED FORCE (LBS)
16-1	-2735 / 636	0.0	0.0 0.21 (1)	6.32	15-2 -2120 / 557	0.33 (1)
9-8	-2739 / 635	0.0	0.0 0.25 (1)	6.31	14-3 -1998 / 305	0.17 (32)
1-2	-5063 / 1151	-174.1	-174.1 0.45 (1)	3.55	12-4 -776 / 248	0.13 (24)
2-17	-7522 / 1695	-174.1	-174.1 0.62 (1)	2.81	11-6 -1379 / 370	0.23 (25)
17-3	-7522 / 1695	-174.1	-174.1 0.62 (1)	2.81	10-7 -2317 / 601	0.39 (1)
3-4	-8120 / 1827	-174.1	-174.1 0.57 (1)	2.79	1-15 -1232 / 5565	0.89 (1)
4-5	-8119 / 1833	-174.1	-174.1 0.57 (1)	2.79	2-14 -607 / 2857	0.64 (32)
5-6	-8119 / 1833	-174.1	-174.1 0.57 (1)	2.79	3-12 -152 / 922	0.21 (30)
6-18	-6959 / 1580	-174.1	-174.1 0.59 (1)	2.94	12-6 -295 / 1448	0.33 (21)
18-7	-6959 / 1580	-174.1	-174.1 0.59 (1)	2.94	11-7 -669 / 3093	0.70 (25)
7-8	-4344 / 1006	-174.1	-174.1 0.43 (1)	3.81	10-8 -1109 / 5015	0.81 (1)
16-15	-83 / 69	-38.8	-38.8 0.10 (19)	6.25		
15-14	-1087 / 5063	-38.8	-38.8 0.46 (1)	6.25		
14-13	-1624 / 7520	-38.8	-38.8 0.65 (1)	6.19		
13-12	-1624 / 7520	-38.8	-38.8 0.65 (1)	6.19		
12-11	-1492 / 6959	-38.8	-38.8 0.61 (1)	6.25		
11-10	-911 / 4340	-38.8	-38.8 0.39 (1)	6.25		
10-9	-19 / 49	-38.8	-38.8 0.11 (19)	6.25		

DESIGN CRITERIA

SPECIFIED LOADS:
 TOP CH. LL = 45.1 PSF
 DL = 15.5 PSF
 BOT CH. LL = 0.0 PSF (*)
 DL = 15.5 PSF
 TOTAL LOAD = 76.1 PSF

SPACING = 24.0 IN. C/C

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBC 2010

THIS DESIGN COMPLIES WITH:
 - PART 4 OF CBC 2012, BCBC 2012, ABC 2014
 - CSA 088-09
 - TPIC 2011
 (*) - BC LL SPECIFIED BY FABRICATOR, DOES NOT COMPLY WITH NBC TABLE 4.1.5.3.
 LOADING TO BE VERIFIED BY BUILDING DESIGNER

DESIGN ASSUMPTIONS
 - SLOPE REDUCTION FACTOR USED
 (80% OF 46.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 45.1 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL) = L/360 (0.88")
CALCULATED VERT. DEFL.(LL) = L/934 (0.34")
ALLOWABLE DEFL.(TL) = L/180 (1.76")
CALCULATED VERT. DEFL.(TL) = L/530 (0.60")

CSI: TC=0.62/1.0 (2-31), BC=0.65/1.0 (12-14-1), WB=0.89/1.0 (1-15-1), SS=0.37/1.0 (7-8-20)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
 WIND LOAD IMPORTANCE FACTOR = 1.00
 COMPANION LIVE LOAD FACTOR = 0.50

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

NAIL VALUES

PLATE	GRIP(DRY)	SHEAR	SECTION
(PSI)	(PLI)	(PLI)	
	MAX	MIN	MAX
MT20	618	354	1687
MI16	473	276	2341

PLATE PLACEMENT TOL. = 0.250 inches
 PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (10) (INPUT = 0.90)
 JSI METAL= 0.95 (15) (INPUT = 1.00)

PEO Certificate No. 10889485

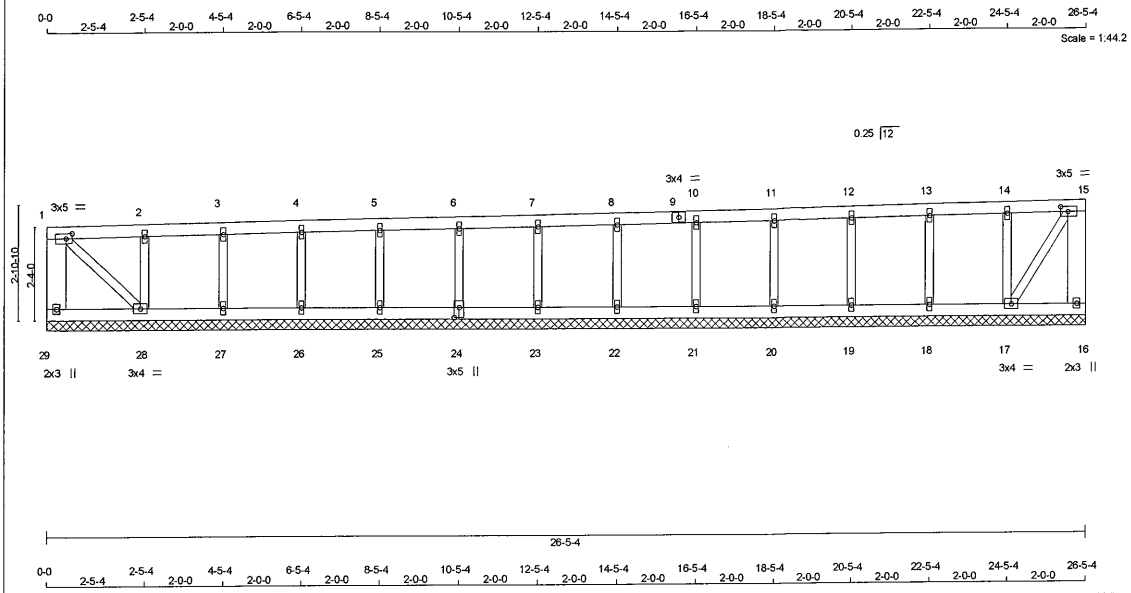
March 12, 2020

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

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF (8.6) PSF AT (40-0) FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE (MAIN WIND FORCE RESISTING SYSTEM). INTERNAL WIND PRESSURE IS BASED ON DESIGN (CATEGORY 2). BUILDING MAY BE LOCATED ON (OPEN TERRAIN), AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST (0-0) FT-IN-SX AWAY FROM EAVE. TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 5.0 PSF RESPECTIVELY.

FULL AND PARTIAL LOADING CHECK APPLIED TO THIS TRUSS.

Terra Nova Truss (CA), Glenburnie, ON - K0H 1S0, Version 8.330 S Feb 24 2020 MiTek Industries, Inc. Wed Mar 11 08:16:16 2020 Page 1
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LUMBER

N. L. G. A. RULES

CHORDS	SIZE	DRY	LUMBER	DESCR.
29 - 1	2x6	DRY	No.2	SPF
16 - 15	2x6	DRY	No.2	SPF
1 - 9	2x4	DRY	No.2	SPF
9 - 15	2x4	DRY	No.2	SPF
29 - 24	2x4	DRY	No.2	SPF
24 - 16	2x4	DRY	No.2	SPF

ALL WEBS 2x3 DRY No.2 SPF

ALL GABLE WEBS 2x3 DRY No.2 SPF

DRY: SEASONED LUMBER.

GABLE STUDS SPACED AT 2-0-0 OC.

PLATES (table is in inches)

JT TYPE	PLATES	W	LEN	Y	X
1	TMVW4	MT20	3.0	5.0	1.50 2.00
2, 3, 4, 5, 6, 7, 8, 10, 11, 12, 13, 14	TMVWw	MT20	1.5	4.0	
9	TS4	MT20	3.0	4.0	
15	TMVW4	MT20	3.0	5.0	1.50 2.25
16	BMV1+p	MT20	2.0	3.0	
17	BMVW1-l	MT20	3.0	4.0	
18, 19, 20, 21, 22, 23, 25, 26, 27	BMVW1-l	MT20	3.0	4.0	
18	BMV1+hw	MT20	1.5	4.0	
24	BSW1+l	MT20	3.0	5.0	3.00 1.50
26	BMVW1-l	MT20	3.0	4.0	
29	BMV1+p	MT20	2.0	3.0	

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

PROVIDE ADEQUATE DRAINAGE TO PREVENT PONDING

BEARINGS

THIS TRUSS DESIGNED FOR CONTINUOUS BEARINGS.

THIS TRUSS REQUIRES RIGID SHEATHING ON EXPOSED FACE.

PROVIDE ANCHORAGE AT ALL BEARING JOINTS FOR 150 LBS FACTORED UPLIFT.

PROVIDE FOR 127 LBS FACTORED HORIZONTAL REACTION AT JOINT 29

HORIZONTAL REACTIONS

1ST CASE	MAX. COMBINED	MIN. SNOW	MAX. LIVE	MIN. PERM. LIVE	WIND	DEAD	SOIL
29	0/0	0/0	0/0	0/0	91 / -58	0/0	0/0

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

BRACING

MAX. UNBRACED TOP CHORD LENGTH = 6.25 FT.

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

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

LOADING

TOTAL LOAD CASES: (18)

MEMB.	FORCE (LBS)	CHORDS		WEBS	
		MAX. FACTORED	FACTORED	MAX. FACTORED	MAX. FACTORED
FR-TO			FROM	TO	FR-TO
29-1	-230 / 74	0.0	0.0	0.02 (1)	7.81 17-14 -503 / 123 0.09 (1)
16-15	-165 / 48	0.0	0.0	0.02 (13)	7.81 18-13 -438 / 107 0.07 (1)
1-2	-25 / 29	-224.3	-224.3	0.17 (1)	6.25 19-12 -451 / 111 0.06 (1)
2-3	-23 / 31	-224.3	-224.3	0.17 (1)	6.25 20-11 -448 / 110 0.07 (1)
3-4	-22 / 32	-224.3	-224.3	0.11 (1)	6.25 21-10 -448 / 110 0.07 (1)
4-5	-20 / 34	-224.3	-224.3	0.11 (1)	6.25 22-8 -448 / 110 0.07 (1)
5-6	-19 / 35	-224.3	-224.3	0.10 (1)	6.25 23-7 -448 / 110 0.07 (1)
6-7	-17 / 37	-224.3	-224.3	0.10 (1)	6.25 24-6 -448 / 110 0.07 (1)
7-8	-15 / 38	-224.3	-224.3	0.10 (1)	6.25 25-5 -447 / 110 0.07 (1)
8-9	-14 / 40	-224.3	-224.3	0.10 (1)	6.25 26-4 -457 / 112 0.07 (1)
9-10	-14 / 40	-224.3	-224.3	0.10 (1)	6.25 27-3 -412 / 101 0.06 (1)
10-11	-14 / 41	-224.3	-224.3	0.10 (1)	6.25 28-2 -578 / 142 0.09 (1)
11-12	-14 / 43	-224.3	-224.3	0.10 (1)	6.25 1-28 -30 / 80 0.02 (12)
12-13	-14 / 45	-224.3	-224.3	0.10 (1)	6.25 17-15 -25 / 3 0.00 (9)
13-14	-13 / 47	-224.3	-224.3	0.12 (1)	6.25
14-15	-13 / 50	-224.3	-224.3	0.12 (1)	6.25
29-28	-92 / 68	-38.1	-38.1	0.05 (18)	6.25
28-27	-31 / 46	-38.1	-38.1	0.05 (18)	6.25
27-26	-31 / 46	-38.1	-38.1	0.03 (18)	6.25
26-25	-30 / 46	-38.1	-38.1	0.03 (18)	6.25
25-24	-30 / 46	-38.1	-38.1	0.03 (18)	6.25
24-23	-30 / 46	-38.1	-38.1	0.03 (18)	6.25
23-22	-31 / 46	-38.1	-38.1	0.03 (18)	6.25
22-21	-31 / 47	-38.1	-38.1	0.03 (18)	6.25
21-20	-32 / 47	-38.1	-38.1	0.03 (18)	6.25
20-19	-32 / 47	-38.1	-38.1	0.03 (18)	6.25
19-18	-33 / 47	-38.1	-38.1	0.03 (18)	6.25
18-17	-33 / 47	-38.1	-38.1	0.04 (18)	6.25
17-16	-19 / 48	-38.1	-38.1	0.04 (18)	6.25

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH. LL = 63.1 PSF

DL = 15.5 PSF

BOT CH. LL = 0.0 PSF (*)

DL = 15.5 PSF

TOTAL LOAD = 94.0 PSF

SPACING = 23.6 IN. C/C

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBC 2010

THIS DESIGN COMPLIES WITH:

- PART 4 OF OBC 2012, BCBC 2012, ABC 2014
- CSA 086-09
- TPIC 2011

(*) - BC LL SPECIFIED BY FABRICATOR. DOES NOT COMPLY WITH NBC TABLE 4.1.5.3. LOADINGS TO BE VERIFIED BY BUILDING DESIGNER

DESIGN ASSUMPTIONS

- SLOPE REDUCTION FACTOR USED

(80 % OF 68.4 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 63.1 P.S.F. SPECIFIED ROOF LIVE LOAD

CS1: TC=0.17/1.00 (1-2:1), BC=0.05/1.00 (27-28:1), WB=0.09/1.00 (2-28:1), SS1=0.25/1.00 (1-2:1)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00

WIND LOAD IMPORTANCE FACTOR = 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)	SHEAR (PSF)	SECTION (PLI)			
MAX	MIN	MAX	MIN			
MT20	618	354	1687	822	2284	1656

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg

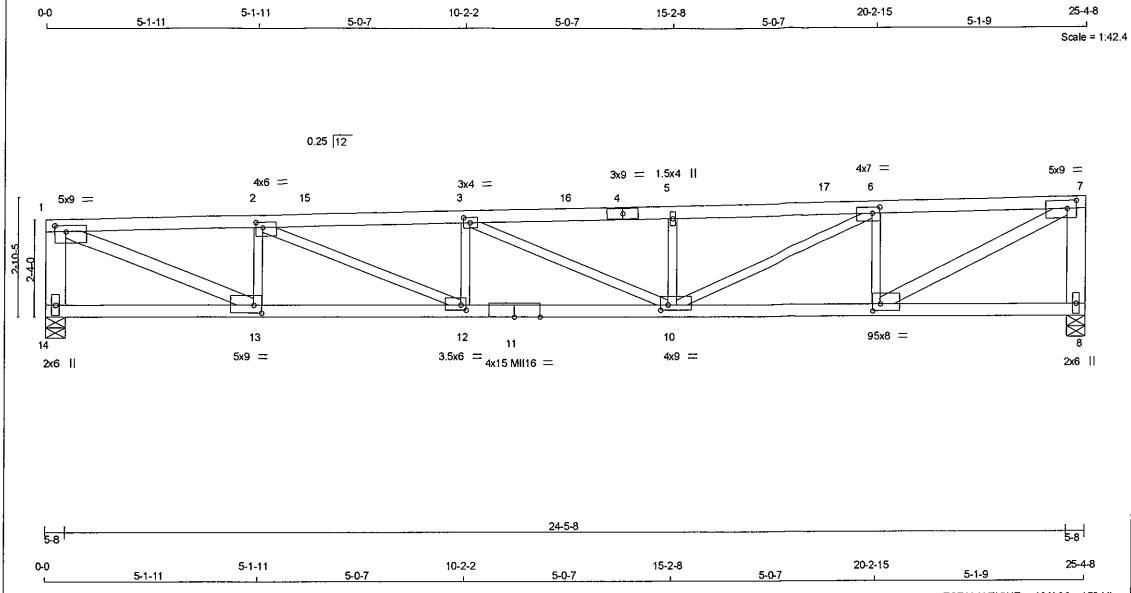
JSI GRIP= 0.82 (24) (INPUT = 0.90)

JSI METAL= 0.18 (24) (INPUT = 1.00)

PEO Certificate No. 10889485

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

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF (8.6) PSF AT (40-0-0) FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE (MAIN WIND FORCE RESISTING SYSTEM). INTERNAL WIND PRESSURE IS BASED ON DESIGN (CATEGORY 2). BUILDING MAY BE LOCATED ON (OPEN TERRAIN), AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST (8-0) FT-IN-SX AWAY FROM EAVE. TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 5.0 PSF RESPECTIVELY.



TOTAL WEIGHT = 16 X 96 = 1534 lb

LUMBER

N. L. G. A. RULES	CHORDS	SIZE	LUMBER	DESCR.
14 - 1	2x6	DRY	No.2	SPF
1 - 4	2x4	DRY	2100F 1.8E	SPF
4 - 7	2x4	DRY	2100F 1.8E	SPF
8 - 7	2x6	DRY	No.2	SPF
14 - 11	2x4	DRY	2100F 1.8E	SPF
11 - 8	2x4	DRY	2100F 1.8E	SPF

ALL WEBS 2x3 DRY No.2 SPF

EXCEPT

1 - 13	2x4	DRY	No.2	SPF
9 - 7	2x4	DRY	No.2	SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
1	TMWW4	MT20	5.0	9.0	1.75	3.00
2	TMWW4	MT20	4.0	6.0	1.50	2.00
3	TMWW4	MT20	3.0	4.0	1.50	1.75
4	TS-t	MT20	3.0	9.0		
5	TMWW-w	MT20	1.5	4.0		
6	TMWW4	MT20	4.0	7.0	1.75	2.25
7	TMWW4	MT20	5.0	9.0	2.25	2.75
8	BMV1-p	MT20	2.0	6.0		
9	BMWW4	MT20	5.0	8.0	2.00	2.25
10	BMWW4	MT20	4.0	9.0	1.50	2.25
11	BS-t	MII16	4.0	15.0		
12	BMWW4	MT20	3.5	6.0	1.50	1.50
13	BMWW4	MT20	5.0	9.0	2.25	2.25
14	BMV1-p	MT20	2.0	6.0		

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

PROVIDE ADEQUATE DRAINAGE TO PREVENT PONDING

BEARINGS

FACTORED	MAXIMUM FACTORED	INPUT	REQRD				
GROSS REACTION	GROSS REACTION	BRG	BRG				
JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX
14	2700	0	2700	131	-617	5-8	5-8
8	2700	0	2700	0	-616	5-8	5-8

PROVIDE ANCHORAGE AT BEARING JOINT 14 FOR 617 LBS FACTORED UPLIFT

PROVIDE ANCHORAGE AT BEARING JOINT 8 FOR 616 LBS FACTORED UPLIFT

PROVIDE FOR 131 LBS FACTORED HORIZONTAL REACTION AT JOINT 14

UNFACTORED REACTIONS

JT	COMBINED	SNOW	MAX/LIVE	MIN	PERM	WIND	DEAD	SOIL
14	1931	1145 / 0	0 / 0	0 / 0	0 / 0	0 / -604	787 / 0	0 / 0
8	1931	1145 / 0	0 / 0	0 / 0	0 / 0	0 / -603	787 / 0	0 / 0

HORIZONTAL REACTIONS

14	0 / 0	0 / 0	93 / -61	0 / 0	0 / 0
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BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 14, 8

BRACING

MAX UNBRACED TOP CHORD LENGTH = 2.88 FT.

MAX UNBRACED BOTTOM CHORD LENGTH = 6.14 FT OR RIGID CEILING DIRECTLY APPLIED.

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

LOADING

TOTAL LOAD CASES: (32)

MEMB.	C H O R D S		W E B S					
	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. UNBRAC LENGTH FR-TO	MAX. FACTORED FORCE (LBS)				
14-1	-2611 / 633	0.0	0.0	0.20 (1)	6.43	1-13	-1323 / 5778	0.93 (1)
1-2	-5370 / 1259	-174.1	-174.1	0.62 (1)	3.30	13-2	-1918 / 542	0.30 (1)
2-15	-7434 / 1731	-174.1	-174.1	0.79 (1)	2.68	2-12	-516 / 2441	0.55 (32)
15-3	-7434 / 1731	-174.1	-174.1	0.79 (1)	2.68	12-3	-774 / 247	0.12 (32)
3-16	-7102 / 1657	-174.1	-174.1	0.60 (32)	2.97	3-10	-753 / 142	0.39 (21)
16-4	-7102 / 1657	-174.1	-174.1	0.60 (32)	2.97	10-5	-871 / 279	0.14 (25)
4-5	-7102 / 1657	-174.1	-174.1	0.60 (32)	2.97	10-6	-814 / 2626	0.64 (25)
5-17	-7100 / 1663	-174.1	-174.1	0.78 (1)	2.74	9-8	-2128 / 569	0.38 (1)
17-6	-7100 / 1663	-174.1	-174.1	0.78 (1)	2.74	9-7	-1200 / 5250	0.84 (1)
6-7	-4696 / 1120	-174.1	-174.1	0.59 (1)	3.52			
8-7	-2615 / 633	0.0	0.0	0.24 (1)	6.43			
14-13	-94 / 71	-38.8	-38.8	0.14 (18)	6.25			
13-12	-1193 / 5370	-38.8	-38.8	0.49 (1)	6.25			
12-11	-1657 / 7432	-38.8	-38.8	0.66 (1)	6.14			
11-10	-1657 / 7432	-38.8	-38.8	0.66 (1)	6.14			
10-9	-1024 / 4693	-38.8	-38.8	0.43 (1)	6.25			
9-8	-19 / 49	-38.8	-38.8	0.14 (18)	6.25			

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

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF (8.8) PSF AT (40-0) FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCp, BASED ON THE (MAIN WIND FORCE RESISTING SYSTEM). INTERNAL WIND PRESSURE IS BASED ON DESIGN (CATEGORY 2). BUILDING MAY BE LOCATED ON (OPEN TERRAIN) AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST (0-0) FT-IN-SX AWAY FROM EAVE TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 5.0 PSF RESPECTIVELY.

FULL AND PARTIAL LOADING CHECK APPLIED TO THIS TRUSS.

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH. LL = 45.1 PSF
DL = 15.5 PSF

BOT CH. LL = 0.0 PSF (*)
DL = 15.5 PSF

TOTAL LOAD = 76.1 PSF

SPACING = 24.0 IN. C/C

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 4 OF CBC 2012, CBC 2012, ABC 2014
- CSA 086-09
- TPC 2011

(*) - BC LL SPECIFIED BY FABRICATOR, DOES NOT COMPLY WITH NBC TABLE 4.1.5.3. LOADING TO BE VERIFIED BY BUILDING DESIGNER

DESIGN ASSUMPTIONS

- SLOPE REDUCTION FACTOR USED

(80% OF 46.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 45.1 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL. (LL) = L/360 (0.85")
CALCULATED VERT. DEFL. (LL) = L/976 (0.31")
ALLOWABLE DEFL. (TL) = L/180 (1.69")
CALCULATED VERT. DEFL. (TL) = L/543 (0.56")

CSI: TC=0.79/1.00 (2-3-1), BC=0.66/1.00 (10-12-1), WB=0.93/1.00 (1-13-1), SS=0.42/1.00 (8-7-26)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 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)	SHEAR (PSI)	SECTION (PL)
MT20	618	354	1657
MII16	473	276	2341

PLATE PLACEMENT TOL. = 0.250 inches

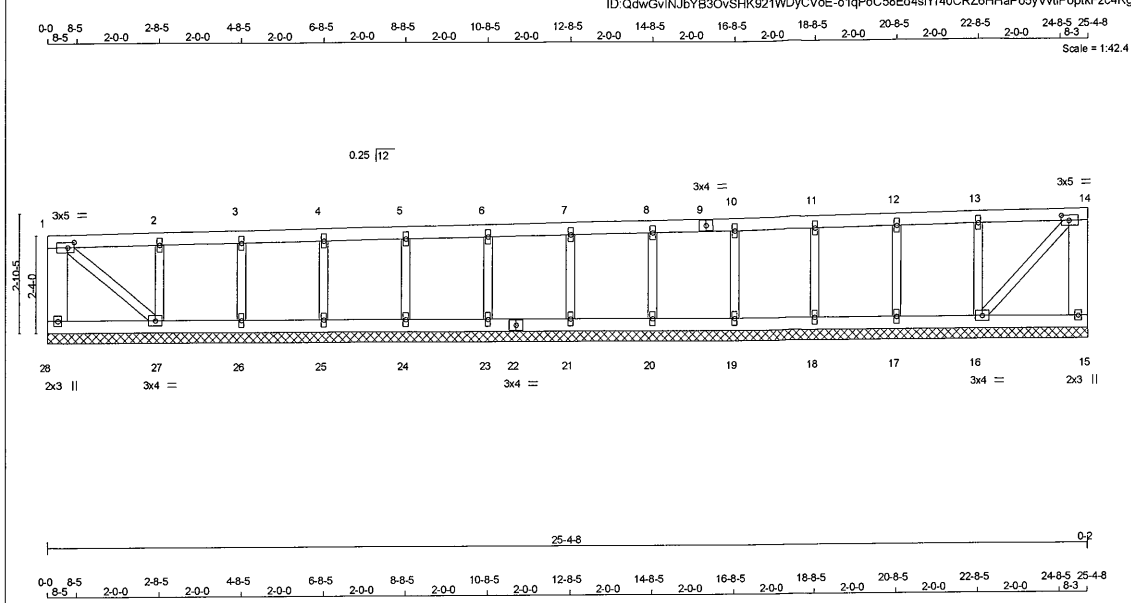
PLATE ROTATION TOL. = 5.0 Deg

JSI GRIP= 0.90 (7) (INPUT = 0.90)
JSI METAL= 0.90 (1) (INPUT = 1.00)

PEO Certificate No. 10889485

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473C rev. 10/02/2015 BEFORE USE. Design valid for use only with MITEK connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see TPIC Appendix G - Manufacturing and material variances available from www.tpic.ca and BCSC CANADA Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.





TOTAL WEIGHT = 2 X 88 = 176 lb

LUMBER
N. L. G. A. RULES

CHORDS	SIZE	DRY	LUMBER	DESCR.
28 - 1	2x6	DRY	No.2	SPF
1 - 9	2x4	DRY	No.2	SPF
9 - 14	2x4	DRY	No.2	SPF
15 - 14	2x6	DRY	No.2	SPF
28 - 22	2x4	DRY	No.2	SPF
22 - 15	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
1	TMWV-I	MT20	3.0	5.0	1.50	2.00
2	TMWVW	MT20	1.5	4.0		
9	TS-I	MT20	3.0	4.0		
14	TMWV-I	MT20	3.0	5.0	1.50	2.25
15	BMV-I+p	MT20	2.0	3.0		
16	BMWV-I	MT20	3.0	4.0		
17, 18, 19, 20, 21, 23, 24, 25, 26	BMV-I	MT20	1.5	4.0		
22	BS-I	MT20	3.0	4.0		
27	BMWV-I	MT20	3.0	4.0		
28	BMV-I+p	MT20	2.0	3.0		

DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER
PROVIDE ADEQUATE DRAINAGE TO PREVENT PONDING BEARINGS
THIS TRUSS DESIGNED FOR CONTINUOUS BEARINGS.
THIS TRUSS REQUIRES RIGID SHEATHING ON EXPOSED FACE.
PROVIDE ANCHORAGE AT ALL BEARING JOINTS FOR 150 LBS FACTORED UPLIFT.
PROVIDE FOR 128 LBS FACTORED HORIZONTAL REACTION AT JOINT 28

HORIZONTAL REACTIONS

1ST CASE	MAX./MIN. COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
28	---	0/0	0/0	0/0	91/-60	0/0	0/0

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

BRACING
MAX. UNBRACED TOP CHORD LENGTH = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT. OR RIGID CEILING DIRECTLY APPLIED.
ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE LATERALLY RESTRAINED.

LOADING
TOTAL LOAD CASES: (18)

FR-TO	CHORDS			WEBS				
	MEMB.	FORCE (LBS)	FACTORED VERT. LOAD L1 (PLF)	MEMB.	FORCE (LBS)	FACTORED MAX. CSI (LC)		
28-1	-256 / 79	0.0	0.0	0.02 (1)	7.81	21-7	-456 / 112	0.07 (1)
1-2	-24 / 29	-227.9	-227.9	0.21 (1)	6.25	23-6	-456 / 112	0.07 (1)
2-3	-22 / 31	-227.9	-227.9	0.21 (1)	6.25	24-5	-453 / 111	0.07 (1)
3-4	-20 / 32	-227.9	-227.9	0.11 (1)	6.25	25-4	-469 / 115	0.07 (1)
4-5	-18 / 34	-227.9	-227.9	0.11 (1)	6.25	26-3	-400 / 98	0.06 (1)
5-6	-17 / 35	-227.9	-227.9	0.11 (1)	6.25	27-2	-436 / 156	0.10 (1)
6-7	-15 / 37	-227.9	-227.9	0.11 (1)	6.25	20-8	-456 / 112	0.07 (1)
7-8	-14 / 39	-227.9	-227.9	0.11 (1)	6.25	19-10	-453 / 111	0.07 (1)
8-9	-13 / 40	-227.9	-227.9	0.11 (1)	6.25	18-11	-468 / 115	0.06 (1)
9-10	-13 / 40	-227.9	-227.9	0.11 (1)	6.25	17-12	-401 / 98	0.07 (1)
10-11	-13 / 42	-227.9	-227.9	0.11 (1)	6.25	16-13	-434 / 155	0.11 (1)
11-12	-13 / 43	-227.9	-227.9	0.11 (1)	6.25	1-27	-29 / 76	0.01 (12)
12-13	-13 / 46	-227.9	-227.9	0.20 (1)	6.25	16-14	-23 / 5	0.00 (8)
13-14	-13 / 49	-227.9	-227.9	0.20 (1)	6.25			
15-14	-236 / 63	0.0	0.0	0.02 (13)	7.81			

DESIGN CRITERIA

SPECIFIED LOADS:
TOP CH. LL = 63.1 PSF
DL = 15.5 PSF
BOT CH. LL = 0.0 PSF (*)
DL = 15.5 PSF
TOTAL LOAD = 94.0 PSF

SPACING = 24.0 IN. C/C

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBC 2010

THIS DESIGN COMPLIES WITH:
- PART 4 OF OBC 2012, BCSC 2012, ABC 2014
- CSA 086-09
- TPIC 2011

(*) - BC LL SPECIFIED BY FABRICATOR, DOES NOT COMPLY WITH NBC TABLE 4.1.5.3
LOADING TO BE VERIFIED BY BUILDING DESIGNER

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED

(80% OF 68.4 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 63.1 P.S.F. SPECIFIED ROOF LIVE LOAD

CSI: TC=0.21/1.00 (1-2:1), BC=0.06/1.00 (26-27:18), WB=0.11/1.00 (13-16:1), SSI=0.28/1.00 (1-2:1)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
COMPANION LIVE LOAD FACTOR = 0.50

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

NAIL VALUES

PLATE	GRIP(DRY)	SHEAR (PSI)	SECTION (PLI)
MT20	618	354	1667

PLATE PLACEMENT TOL. = 0.250 inches
PLATE ROTATION TOL. = 5.0 Deg.
JSI GRIP= 0.75 (27) (INPUT = 0.90)
JSI METAL= 0.16 (2) (INPUT = 1.00)

PEO Certificate No. 10889485

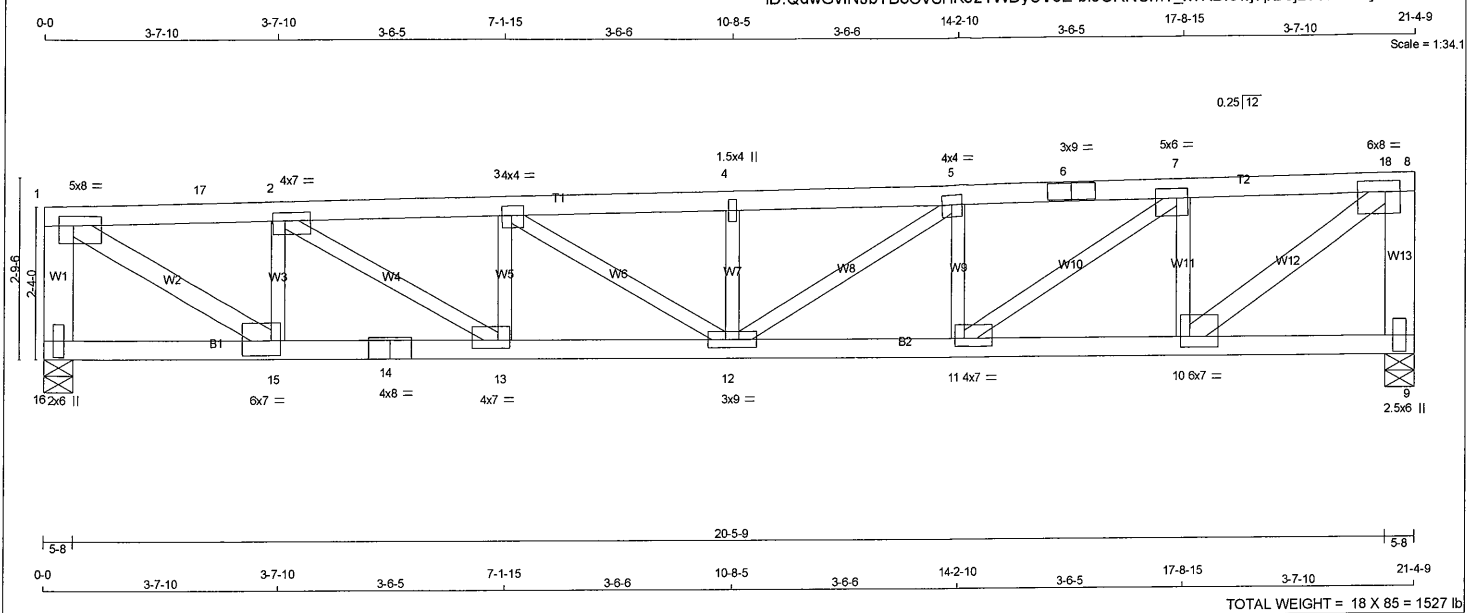
March 12, 2020

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

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF (8.6) PSF AT (40.0) FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE (MAIN WIND FORCE RESISTING SYSTEM). INTERNAL WIND PRESSURE IS BASED ON DESIGN (CATEGORY 2). BUILDING MAY BE LOCATED ON (OPEN TERRAIN), AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST (0-0) FT-IN-SX AWAY FROM EAVE. TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 5.0 PSF RESPECTIVELY.

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	Tal-Co Building Innovations Ltd.	DRWG NO.
1912-1701	C01	18	1	TRUSS DESC.		

Terra Nova Truss, Glenburnie ON K0H 1S0, Mark Fox
 Version 8.320 S Oct 29 2019 MiTek Industries, Inc. Tue Mar 3 08:24:04 2020 Page 1
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LUMBER

N. L. G. A. RULES

CHORDS	SIZE	DRY	LUMBER	DESCR.
16 - 1	2x6	DRY	No.2	SPF
9 - 8	2x6	DRY	No.2	SPF
1 - 6	2x4	DRY	2100F 1.8E	SPF
6 - 8	2x4	DRY	2100F 1.8E	SPF
16 - 14	2x4	DRY	No.2	SPF
14 - 9	2x4	DRY	2100F 1.8E	SPF
ALL WEBS EXCEPT	2x3	DRY	No.2	SPF
1 - 15	2x4	DRY	No.2	SPF
10 - 8	2x4	DRY	No.2	SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
1	TMVW-p	MT20	5.0	8.0	1.75	2.75
2	TMVW-t	MT20	4.0	7.0	1.50	2.25
3	TMVW-t	MT20	4.0	4.0	1.75	1.75
4	TMVW+w	MT20	1.5	4.0		
5	TMVW-t	MT20	4.0	4.0	1.75	2.00
6	TS-t	MT20	3.0	9.0		
7	TMVW-t	MT20	5.0	6.0	1.75	2.00
8	TMVW-t	MT20	6.0	8.0	2.00	2.75
9	BMV1+p	MT20	2.5	6.0		
10	BMVW-t	MT20	6.0	7.0	2.00	1.75
11	BMVW-t	MT20	4.0	7.0	1.50	1.75
12	BMVWVW-t	MT20	3.0	9.0		
13	BMVW-t	MT20	4.0	7.0	1.50	2.25
14	BS-t	MT20	4.0	8.0		
15	BMVW-t	MT20	6.0	7.0	2.75	1.75
16	BMV1+p	MT20	2.0	6.0		

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

PROVIDE ADEQUATE DRAINAGE TO PREVENT PONDING

BEARINGS

FACTORED GROSS REACTION	MAXIMUM FACTORED GROSS REACTION	INPUT DOWN	REQRD BRG IN-SX
JT VERT	HORZ	UPLIFT	IN-SX
16	2868 0	2868 123	-504 5-8
9	3618 0	3618 0	-502 5-8

PROVIDE ANCHORAGE AT BEARING JOINT 16 FOR 504 LBS FACTORED UPLIFT

PROVIDE ANCHORAGE AT BEARING JOINT 9 FOR 502 LBS FACTORED UPLIFT

PROVIDE FOR 123 LBS FACTORED HORIZONTAL REACTION AT JOINT 16

UNFACTORED REACTIONS

JT	1ST LCASE	MAX. COMBINED	MIN. SNOW	COMPONENT LIVE	PERM. LIVE	WIND	DEAD	SOIL
16	2022	1360 / 0	0 / 0	0 / 0	0 / 0	0 / -498	663 / 0	0 / 0
9	2523	1860 / 0	0 / 0	0 / 0	0 / 0	0 / -496	663 / 0	0 / 0

HORIZONTAL REACTIONS

JT	MAX. HORIZ	MIN. HORIZ	WIND	DEAD	SOIL
16	0 / 0	0 / 0	88 / -61	0 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 16, 9

BRACING

MAX. UNBRACED TOP CHORD LENGTH = 2.58 FT.
 MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

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

LOADING

TOTAL LOAD CASES: (18)

MEMB.	CHORDS			WEBS		
	MAX. FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. LC1 (LC)	MAX. UNBRAC LENGTH FR-TO	MEMB. FORCE (LBS)	MAX. FACTORED FORCE (LBS)
16-1	-2805 / 516	0.0	0.0	0.23 (1)	6.21	15-2 -2293 / 455
9-8	-3553 / 514	0.0	0.0	0.34 (1)	5.61	13-3 -1370 / 252
1-17	-4367 / 774	-174.1	-174.1	0.32 (1)	3.88	12-4 -955 / 200
17-2	-4367 / 774	-174.1	-186.9	0.32 (1)	3.88	11-5 -1516 / 295
2-3	-6858 / 1139	-186.9	-226.8	0.47 (1)	3.02	10-7 -3009 / 483
3-4	-7794 / 1234	-226.8	-266.7	0.55 (1)	2.75	1-15 -853 / 5009
4-5	-7793 / 1239	-266.7	-306.6	0.56 (1)	2.73	2-13 -429 / 2903
5-6	-7025 / 1078	-306.6	-326.7	0.73 (1)	2.58	3-12 -117 / 1104
6-7	-7025 / 1078	-326.7	-346.6	0.73 (1)	2.58	12-5 -199 / 920
7-18	-4636 / 697	-346.6	-383.3	0.58 (1)	3.41	11-7 -467 / 2906
18-8	-4636 / 697	-174.1	-174.1	0.58 (1)	3.41	10-8 -791 / 5606
16-15	-88 / 72	-38.8	-38.8	0.11 (18)	6.25	
15-14	-708 / 4367	-38.8	-38.8	0.86 (1)	6.25	
14-13	-708 / 4367	-38.8	-38.8	0.86 (1)	6.25	
13-12	-1067 / 6856	-38.8	-38.8	0.65 (1)	6.25	
12-11	-992 / 7025	-38.8	-38.8	0.67 (1)	6.25	
11-10	-606 / 4626	-38.8	-38.8	0.45 (1)	6.25	
10-9	-18 / 47	-38.8	-38.8	0.08 (18)	6.25	

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

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 8.6 } PSF AT { 40-0-0 } FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE (MAIN WIND FORCE RESISTING SYSTEM), INTERNAL WIND PRESSURE IS BASED ON DESIGN { CATEGORY 2 }. BUILDING MAY BE LOCATED ON { OPEN TERRAIN }, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST { 0-0 } FT-IN-SX AWAY FROM EAVE. TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 5.0 PSF RESPECTIVELY.

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 = 45.1 PSF
 DL = 15.5 PSF
 BOT CH. LL = 0.0 PSF (*)
 DL = 15.5 PSF
 TOTAL LOAD = 76.1 PSF

SPACING = 24.0 IN. C/C

*** NON STANDARD GIRDER ***
 ADDTL USER-DEFINED LOADS APPLIED TO LOADCASE(S): 1,2,4,5,7,8,9

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2010

THIS DESIGN COMPLIES WITH:
 - PART 4 OF OBC 2012 , BCBC 2012 , ABC 2014
 - CSA 086-09
 - TPIC 2011
 (*)- BC LL SPECIFIED BY FABRICATOR, DOES NOT COMPLY WITH NBC TABLE 4.1.5.3.
 LOADING TO BE VERIFIED BY BUILDING DESIGNER

DESIGN ASSUMPTIONS
 - SLOPE REDUCTION FACTOR USED

(80 % OF 46.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 45.1 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.71")
 CALCULATED VERT. DEFL.(LL) = L/950 (0.27")
 ALLOWABLE DEFL.(TL)= L/180 (1.43")
 CALCULATED VERT. DEFL.(TL) = L/655 (0.39")

CSI: TC=0.73/1.00 (5-7-1), BC=0.86/1.00 (13-15:1), WB=0.99/1.00 (8-10:1), SSI=0.66/1.00 (7-8:1)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
 WIND LOAD IMPORTANCE FACTOR = 1.00
 COMPANION LIVE LOAD FACTOR = 0.50

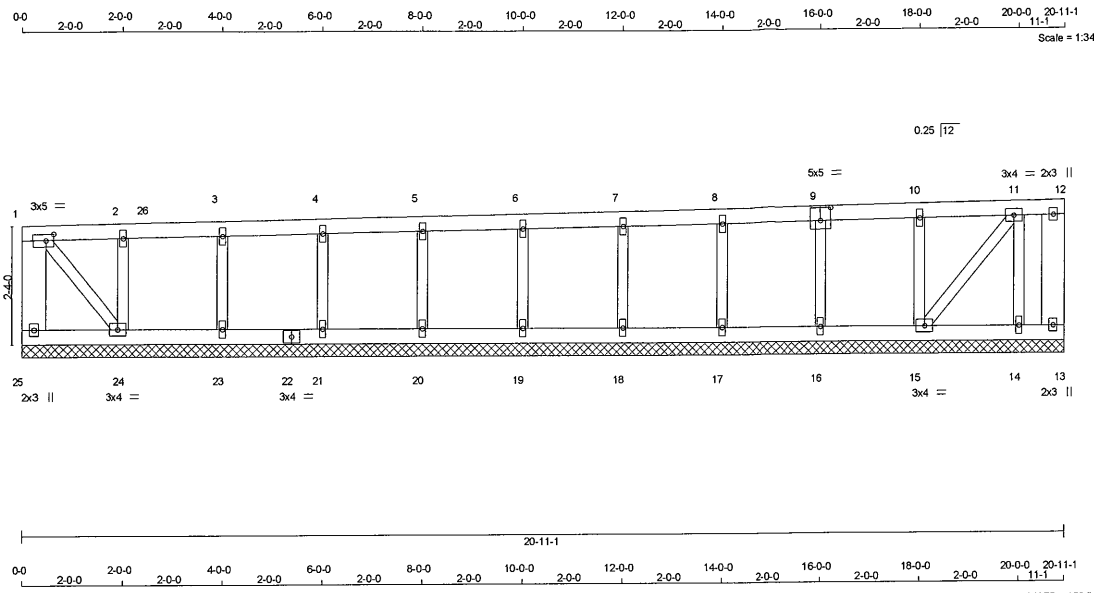
TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT.

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches
 PLATE ROTATION TOL. = 5.0 Deg.

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
1912-1701	C01	18	1	Tal-Co Building Innovations Ltd. TRUSS DESC.	
<p style="text-align: right;">Version 8.320 S Oct 29 2019 MITek Industries, Inc. Tue Mar 3 08:24:05 2020 Page 2</p> <p>Terra Nova Truss, Glenburnie ON K0H 1S0, Mark Fox ID:QdwGvINJbYB3OvSHK921WDyCVoE-3uimejDOEI3syNEKUQe2msG8uy26rUubBlmXazejC8</p>					
<div style="float: right; margin-top: 20px;"> <p>JSI GRIP= 0.90 (11) (INPUT = 0.90) JSI METAL= 0.99 (10) (INPUT = 1.00)</p> </div>					



LUMBER
 N. L. G. A. RULES

CHORDS	SIZE	LUMBER	DESCR
26 - 1	2x6	DRY No.2	SPF
13 - 12	2x6	DRY No.2	SPF
1 - 9	2x4	DRY No.2	SPF
9 - 12	2x4	DRY No.2	SPF
26 - 22	2x4	DRY No.2	SPF
22 - 13	2x4	DRY No.2	SPF

ALL WEBS 2x3 DRY No.2 SPF
 ALL GABLE WEBS 2x3 DRY No.2 SPF
 DRY: SEASONED LUMBER.

GABLE STUDS SPACED AT 2-0-0 OC.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
1	TMWV-I	MT20	3.0	5.0	1.50	2.00
2, 3, 4, 5, 6, 7, 8, 10	TMW+V	MT20	1.5	4.0		
9	TSW-I	MT20	5.0	5.0	3.00	2.50
11	TMWV-I	MT20	3.0	4.0		
12	TMV+P	MT20	2.0	3.0		
13	BMV1+P	MT20	2.0	3.0		
14, 16, 17, 18, 19, 20, 21, 23	BMV1+V	MT20	1.5	4.0		
15	BMWV-I	MT20	3.0	4.0		
22	BS-I	MT20	3.0	4.0		
24	BMWV-I	MT20	3.0	4.0		
25	BMV1+P	MT20	2.0	3.0		

DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER
 PROVIDE ADEQUATE DRAINAGE TO PREVENT PONDING

BEARINGS
 THIS TRUSS DESIGNED FOR CONTINUOUS BEARINGS.
 THIS TRUSS REQUIRES RIGID SHEATHING ON EXPOSED FACE.
 PROVIDE ANCHORAGE AT ALL BEARING JOINTS FOR 150 LBS FACTORED UPLIFT.
 PROVIDE FOR 123 LBS FACTORED HORIZONTAL REACTION AT JOINT 25

HORIZONTAL REACTIONS
 1ST LCASE MAX. MIN. COMPONENT REACTIONS
 COMBINED SNOW LIVE PERM.LIVE WIND DEAD SOIL
 25 - 0/0 0/0 0/0 88/-62 0/0 0/0

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

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

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

LOADING
 TOTAL LOAD CASES: (18)

MEMB.	FR-TO	CHORDS			WEBS			
		MAX. FACTORED FORCE (LBS)	VERT. LOAD (PL)	MAX. FACTORED CSI (LC)	MEMB. FORCE (LBS)	MAX. FACTORED CSI (LC)		
25-1	-111 / 65	0.0	0.0	0.02 (13)	7.81	24-2	-391 / 125	0.07 (1)
13-12	-86 / 11	0.0	0.0	0.02 (13)	7.81	23-3	-372 / 109	0.06 (1)
1-2	-22 / 41	-174.1	-174.1	0.11 (1)	6.25	21-4	-450 / 112	0.07 (1)
2-26	-20 / 41	-174.1	-174.1	0.11 (1)	6.25	20-5	-473 / 112	0.06 (1)
26-3	-20 / 41	-174.1	-191.1	0.11 (1)	6.25	19-6	-519 / 112	0.09 (1)
3-4	-19 / 42	-191.1	-213.8	0.12 (1)	6.25	18-7	-564 / 112	0.10 (1)
4-5	-17 / 42	-213.8	-236.5	0.13 (1)	6.25	17-8	-610 / 112	0.11 (1)
5-6	-16 / 43	-236.5	-259.2	0.14 (1)	6.25	16-9	-648 / 111	0.12 (1)
6-7	-14 / 43	-259.2	-282.0	0.15 (1)	6.25	15-10	-732 / 117	0.13 (1)
7-8	-13 / 44	-282.0	-304.7	0.16 (1)	6.25	14-11	-849 / 88	0.10 (1)
8-9	-11 / 45	-304.7	-327.4	0.17 (1)	6.25	1-24	-70 / 84	0.02 (12)
9-10	-10 / 47	-327.4	-350.1	0.20 (1)	10.00	15-11	-81 / 16	0.02 (1)
10-11	-9 / 47	-350.1	-372.9	0.20 (1)	10.00			
11-12	-20 / 46	-372.9	-363.3	0.12 (1)	6.25			
25-24	-87 / 72	-38.8	-38.8	0.04 (18)	6.25			
24-23	-63 / 52	-38.8	-38.8	0.04 (18)	6.25			
23-22	-63 / 52	-38.8	-38.8	0.03 (18)	6.25			
22-21	-63 / 52	-38.8	-38.8	0.03 (18)	6.25			
21-20	-64 / 53	-38.8	-38.8	0.03 (18)	6.25			
20-19	-65 / 53	-38.8	-38.8	0.03 (18)	6.25			
19-18	-65 / 53	-38.8	-38.8	0.03 (18)	6.25			
18-17	-66 / 53	-38.8	-38.8	0.03 (18)	6.25			
17-16	-67 / 53	-38.8	-38.8	0.03 (18)	6.25			
16-15	-69 / 54	-38.8	-38.8	0.04 (18)	6.25			
15-14	-18 / 46	-38.8	-38.8	0.04 (18)	6.25			
14-13	-18 / 46	-38.8	-38.8	0.03 (18)	6.25			

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 = 45.1 PSF
 DL = 15.5 PSF
 BOT CH. LL = 0.0 PSF (*)
 DL = 15.5 PSF
 TOTAL LOAD = 76.1 PSF

SPACING = 24.0 IN. C/C

*** NON STANDARD GIRDER ***
 ADDTL USER-DEFINED LOADS APPLIED TO LOADCASE(S): 1,2,4,5,7,8,9

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBC 2010

THIS DESIGN COMPLIES WITH:
 - PART 4 OF OBC 2012, BCB 2012, ABC 2014
 - CSA 086-09
 - TPIC 2011
 (*) - BC LL SPECIFIED BY FABRICATOR, DOES NOT COMPLY WITH NBC TABLE 4.1.5.3.
 LOADING TO BE VERIFIED BY BUILDING DESIGNER

DESIGN ASSUMPTIONS
 - SLOPE REDUCTION FACTOR USED
 (80% OF 46.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 45.1 P.S.F. SPECIFIED ROOF LIVE LOAD

CSI: TC=0.20/10.0(10-11:1), BC=0.04/1.00 (23-24:18), WB=0.13/1.00 (10-15:1), SSI=0.33/1.00(10-11:1)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
 WIND LOAD IMPORTANCE FACTOR = 1.00
 COMPANION LIVE LOAD FACTOR = 0.50

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

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

PLATE PLACEMENT TOL. = 0.250 inches
 PLATE ROTATION TOL. = 5.0 Deg.
 JSI GRIP= 0.89 (9) (INPUT = 0.90)
 JSI METAL= 0.18 (10) (INPUT = 1.00)

PEO Certificate No. 10889485

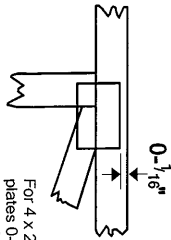
TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBC 4.1.6.2.(8)

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF (8.6) PSF AT (40-0-0) FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, C_eC_g, BASED ON THE MAIN WIND FORCE RESISTING SYSTEM. INTERNAL WIND PRESSURE IS BASED ON DESIGN (CATEGORY 2). BUILDING MAY BE LOCATED ON (OPEN TERRAIN), AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST (0-0) FT-IN-SX AWAY FROM EAVE. TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 5.0 PSF RESPECTIVELY.

Symbols

PLATE LOCATION AND ORIENTATION

Center plate on joint unless x, y offsets are indicated. Dimensions are in ft-in-sixteenths or mm. Apply plates to both sides of truss and fully embed teeth.



For 4 x 2 orientation, locate plates 0- 1/8" from outside edge of truss.



This symbol indicates the required direction of slots in connector plates.

* Plate location details available in MITek software or upon request.

PLATE SIZE

4 X 4

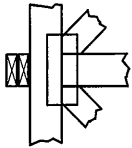
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



Indicated by symbol shown and/or by text in the bracing section of the output. Use 'I' or Eliminator Bracing if indicated.

BEARING



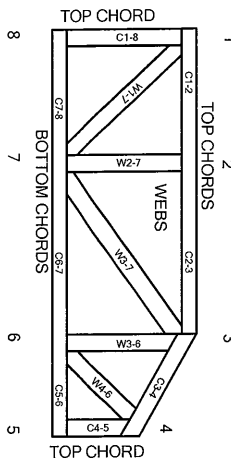
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min. size shown is for crushing only.

Industry Standards:

TPIC: Truss Design Procedures and Specifications for Light Metal Plate Connected Wood Trusses
DSB-89: Design Standard for Bracing
BCS11: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate
Connected Wood Trusses.

Numbering System

6-4-8 dimensions shown in ft-in-sixteenths or mm (Drawings not to scale)



JOINTS ARE GENERALLY NUMBERED ALTERNATED CLOCKWISE AROUND THE TRUSS STARTING AT THE JOINT FARTHEST TO THE LEFT.

CHORDS AND WEBS ARE IDENTIFIED BY END JOINT NUMBERS/LETTERS.

PRODUCT CODE APPROVALS

CCMC Reports:

11996-L, 10319-L, 13270-L, 12691-R

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MITek Engineering Reference Sheet: Mill-7473C rev. 09/13/2012



General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

- Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCS11.
- Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative T, I, or Eliminator bracing should be considered.
- Never exceed the design loading shown and never stack materials on inadequately braced trusses.
- Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
- Cut members to bear tightly against each other.
- Place plates on each face of truss at each joint and embed fully. Knots and warps at joint locations are regulated by TPIC.
- Design assumes trusses will be suitably protected from the environment in accord with TPIC.
- Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
- Unless expressly noted, this design is not applicable for use with the retardant, preservative treated, or green lumber.
- Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
- Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
- Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
- Top chords must be sheathed or purlins provided at spacing indicated on design.
- Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed unless otherwise noted.
- Connections not shown are the responsibility of others.
- Do not cut or alter truss member or plate without prior approval of an engineer.
- Install and load vertically unless indicated otherwise.
- Use of green or treated lumber may pose unacceptable structural, health and performance risks. Consult with project engineer before use.
- Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
- Design assumes manufacture in accordance with TPIC Quality Criteria.