

SD30-1
ELEV. C
407810



* 16" RAISED PLATE

HARDWARE:
LUS24 - (O)
LJS26DS - (V)
HGUS26-2 - (XX)

DENOTES
CONV.
FRAMING

DESIGN CONFORMS WITH OBC 2012
(2019 AMENDMENT)
OCCUPANCY: RESIDENTIAL PART: 9
Ss = 43.9 psf Sr = 8.4 psf

DESIGN LOADS:
TCSL = 32.5 psf
TCDL = 6.0 psf
BCLL = 0.0 psf
BCDL = 7.4 psf

ALL CONV. FRAMING TO CONFORM WITH PART 9 OF O.B.C.2012 (2019 AMENDMENT) ROOF RAFTERS THAT CROSS MEET OVER TRUSSES TO BE 2X4 SPF @ 24"O.C. WITH A 2X4 VERT. POST TO THE TRUSS UNDER NEATH AT EACH CROSS PT. VERT. POST LONGER THAN 6" TO HAVE LATERAL BRACING SO THAT THE DISTANCE BETWEEN END PT. & BETWEEN ROWS OF BRACING DOES NOT EXCEED 6"

TOWN OF BRADFORD WEST GWILLIMBURY
BUILDING DEPARTMENT
PLANS EXAMINED
ONTARIO BUILDING CODE APPLIES

DATE: 2020-03-20

INSPECTOR: BG



Layout ID: 407805

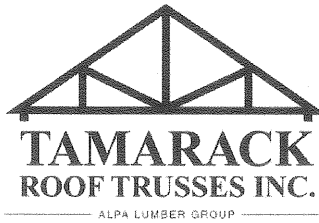
Designer: LC

SD30-1 / C

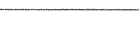
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DELIVERY SHIPLIST				
	Lumber Yard:	TAMARACK LUMBER	Job Track:	50465
	Builder:	BAYVIEW WELLINGTON HOMES	PlanLog:	202294
	Project:	GREEN VALLEY EAST	Layout ID:	407810
	Location:	BRADFORD	Ref #	
	Model:	SD30-1	Page:	1 of 2
	Lot #:		Date:	03-03-2020
Elevation:	C	Designer:	Leo Chen	
		Sales Rep:	Mario DiCano	

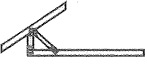
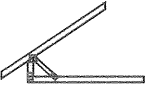
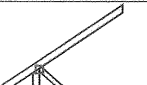
Roof Trusses

PROFILE	QTY PLY	MARK TYPE	PITCH	SPAN	HEIGHT	LUMBER	OVERHANG LEFT RIGHT	HEEL HEIGHT LEFT RIGHT	LBS. BFT.	BUNDLE # STACK #	LOAD BY REMARKS
	1 2-ply	T1 Half Hip Girder	8 /12	25-03-08	4-01-04	2 x 4 2 x 6	1-03-08	1-04-13 4-01-04	235.9 145.00		
	1 2-ply	T12 Half Hip Girder	8 /12	25-03-08	4-01-04	2 x 4 2 x 6	1-03-08	1-04-13 4-01-04	235.9 145.00		
	2	T2 Half Hip	8 /12	25-03-08	5-01-04	2 x 4	1-03-08	1-04-13 5-01-04	217.11 136.67		
	2	T3 Half Hip	8 /12	25-03-08	6-01-04	2 x 4	1-03-08	1-04-13 6-01-04	223.64 139.00		
	2	T4 Half Hip	8 /12	25-03-08	7-01-04	2 x 4	1-03-08	1-04-13 7-01-04	236.96 148.67		
	2	T5 Half Hip	8 /12	25-03-08	8-01-04	2 x 4	1-03-08	1-04-13 8-01-04	251.12 156.00		
	8	T6 Half Hip	8 /12	25-03-08	9-01-04	2 x 4	1-03-08	1-04-13 9-01-04	1062.02 661.33		
	1	T7 Hip	8 /12	14-10-00	6-07-13	2 x 4	1-03-08	1-04-13 2-10-13	71.31 46.17		
	1	T8 Hip Girder	8 /12	14-10-00	5-03-13	2 x 4 2 x 6	1-03-08	1-04-13 2-10-13	78.35 50.50		
	1	T9 Common	8 /12	9-01-00	5-11-02	2 x 4	1-03-08 1-03-08	2-10-13 2-10-13	44.54 29.33		
	1	T10 Common Girder	8 /12	9-07-00	4-07-02	2 x 4	1-03-08 1-03-08	1-04-13 1-04-13	40.76 25.67		
	2	PB1 Piggyback	8 /12	13-08-14	1-00-00	2 x 4		1-00-00	64.22 42.67		
	2	PB2 Piggyback	8 /12	13-08-14	2-00-00	2 x 4		2-00-00	86.35 56.00		
	2	PB3 Piggyback	8 /12	13-08-13	3-00-00	2 x 4		3-00-00	91.5 58.67		

SITE COPY

DELIVERY SHIPLIST			
	Lumber Yard:	TAMARACK LUMBER	Job Track: 50465
	Builder:	BAYVIEW WELLINGTON HOMES	PlanLog: 202294
	Project:	GREEN VALLEY EAST	Layout ID: 407810
	Location:	BRADFORD	Ref #
	Model:	SD30-1	Page: 2 of 2
	Lot #:		Date: 03-03-2020
Elevation:	C	Designer: Leo Chen	Sales Rep: Mario DiCano

Roof Trusses

PROFILE	QTY PLY	MARK TYPE	PITCH	SPAN	HEIGHT	LUMBER	OVERHANG LEFT RIGHT	HEEL HEIGHT LEFT RIGHT	LBS. BFT.	BUNDLE # STACK #	LOAD BY REMARKS
	19	J1 Jack-Open	6 /12	5-10-08	4-01-04	2 x 4	1-03-08	1-02-00 4-01-04	319.1 202.67		
	1	J3 Jack-Open	8 /12	1-10-15	2-08-02	2 x 4	1-03-08 3-11-09	1-04-13 2-08-02	13.65 9.00		
	1	J4 Jack-Open	8 /12	3-10-15	4-00-02	2 x 4	1-03-08 1-11-09	1-04-13 4-00-02	16.39 10.33		
	3	J5 Jack-Open	8 /12	2-00-00	2-08-02	2 x 4	1-03-08	1-04-13 2-08-13	28.72 19.00		
	3	J6 Jack-Open	8 /12	2-00-00	4-00-02	2 x 4	1-03-08 1-10-15	1-04-13 2-08-13	36.94 23.00		
	1	J7 Jack-Open	8 /12	4-10-15	4-08-02	2 x 4	1-03-08 11-09	1-04-13 4-08-02	17.76 11.00		
	2	J8 Jack-Open	8 /12	1-10-15	2-08-02	2 x 4	1-03-08 2-10-09	1-04-13 2-08-02	24.83 16.67		
	2	J9 Jack-Open	8 /12	3-10-15	4-00-02	2 x 4	1-03-08 10-09	1-04-13 4-00-02	30.31 19.33		
	6	J10 Jack-Partial	4 /12	7-08-00	3-03-08	2 x 4	1-03-08	3-15 2-10-10	134.88 84.00		

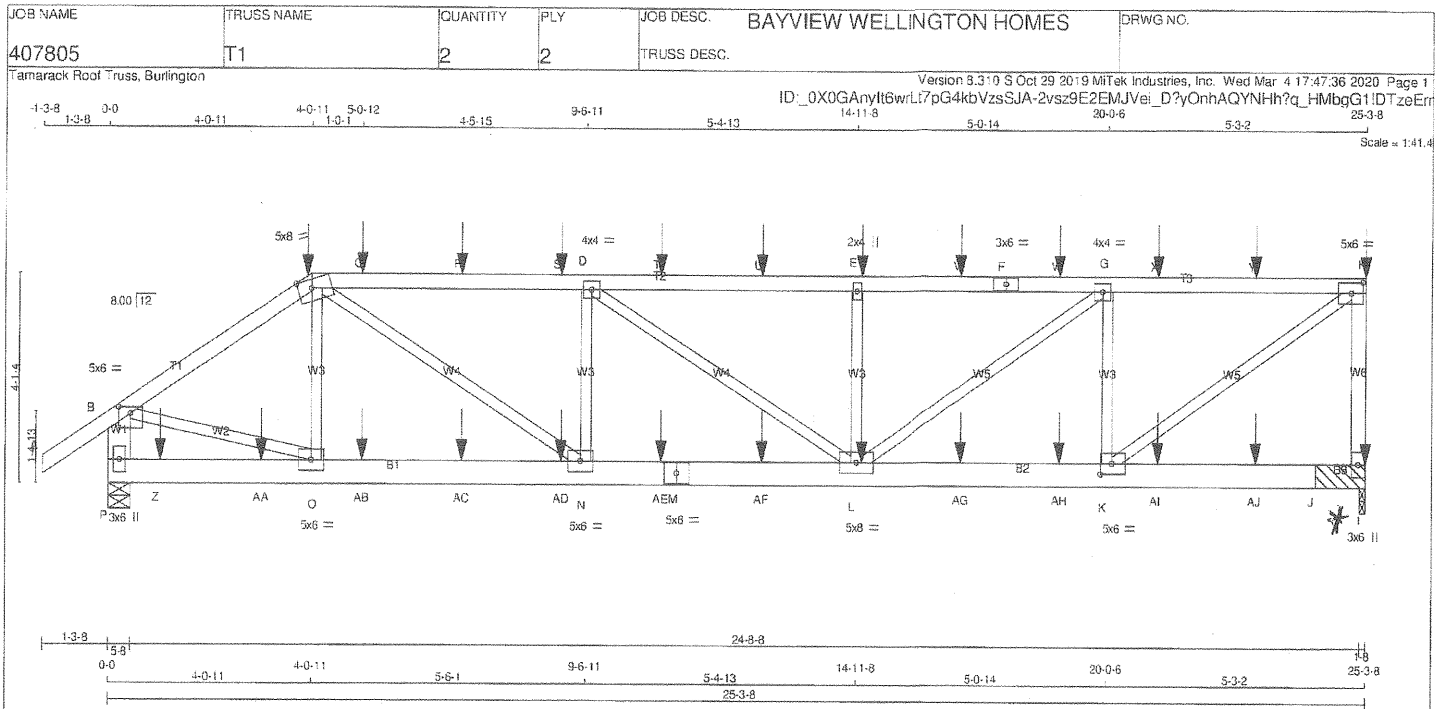
TOTAL # TRUSS= 68 TOTAL BFT OF ALL TRUSSES= 2235.68 BFT. TOTAL WEIGHT OF ALL TRSSES 3562.24 LBS

HARDWARE

QTY	TYPE	MODEL	LENGTH
2	Hardware	LUS24	
2	Hardware	LJS26DS	
2	Hardware	HGUS26-2	

TOTAL NUMBER OF
ITEMS= 6

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TOTAL WEIGHT = 4 X 118 = 472 lb

LUMBER

N. L. G. A. RULES

CHORDS	SIZE	LUMBER	DESCR.
A - C	2x4	DRY	No.2
C - F	2x4	DRY	No.2
F - H	2x4	DRY	No.2
H - I	2x4	DRY	No.2
P - B	2x6	DRY	No.2
P - M	2x6	DRY	No.2
M - I	2x6	DRY	No.2

ALL WEBS 2x3 DRY No.2
EXCEPT:

DRY: SEASONED LUMBER.

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

CHORDS #ROWS	SURFACE SPACING (IN)	LOAD (PLF)
TOP CHORDS: (0.122"x3") SPIRAL NAILS		
A - C	12	SIDE (61.0)
C - F	12	SIDE (61.0)
F - H	12	TOP
H - I	12	TOP
P - B	12	TOP
BOTTOM CHORDS: (0.122"x3") SPIRAL NAILS		
P - M	12	SIDE (61.0)
M - I	12	SIDE (183.1)
WEBS: (0.122"x3") SPIRAL NAILS		
2x3	6	

NAILS TO BE DRIVEN FROM ONE SIDE ONLY.

GIRDER NAILING ASSUMES NAILED HANGERS ARE FASTENED WITH MIN. 3-0 INCH NAILS.

TOP - COMPONENTS ARE LOADED FROM THE TOP AND MUST BE PLACED ON TOP EDGE OF ALL PLIES FOR THE LOAD TO BE TRANSFERRED TO EACH PLY.

SIDE - PLF SHOWN IS THE EQUIVALENT UDL APPLIED TO ONE SIDE THAT THE CORRESPONDING NAILING PATTERN SHALL BE CAPABLE OF TRANSFERING. REMAINING PLF MUST BE APPLIED ON THE OPPOSITE SIDE OR ON THE TOP.

PLATES (table is in inches)						
JT	TYPE	PLATES	W	LEN	Y	X
B	TMVW-p	MT20	5.0	6.0	1.50	3.00
C	TTWW-m	MT20	5.0	8.0	2.00	3.25
D	TMVW-t	MT20	4.0	4.0		
E	TMVW-w	MT20	2.0	4.0		
F	TS-t	MT20	3.0	6.0		
G	TMVW-t	MT20	4.0	4.0		
H	TMVW-t	MT20	5.0	6.0	2.50	2.75
I	BMV1-p	MT20	3.0	6.0		
K	BMVW-t	MT20	5.0	6.0	2.50	2.75
L	BMVWW-t	MT20	5.0	8.0		
M	BS-t	MT20	5.0	6.0		
N	BMVW-t	MT20	5.0	6.0		
O	BMVW-t	MT20	5.0	6.0		
P	BMV1+p	MT20	3.0	6.0		

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 2834	0	2834	0
P VERT 2892	0	2892	0

UNFACTORED REACTIONS

1ST CASE	MAX. MIN. COMPONENT REACTIONS
JT COMBINED SNOW	1988 1395 / 0
I	1988 1395 / 0
P	2026 1440 / 0

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

2x6 DRY SPF NO.2 BEARING BLOCK 12" LONG AT JT. I ATTACHED TO FRONT SIDE WITH 3 ROWS OF (0.122"x3") SPIRAL NAILS SPACED 3" C.C. 12 NAILS TOTAL.

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.86 FT.

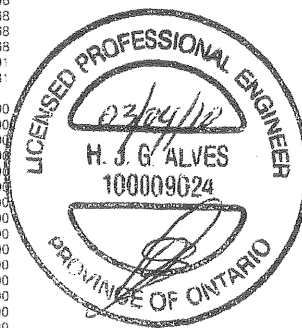
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS		WEBS	
MEMB	FORCE (LBS)	MEMB	FORCE (LBS)
FR-TO		FR-TO	
A-B	-112.4 -112.4 0.08 (1)	O-C	-467 / 4 0.05 (1)
B-C	-3255 / 0	B-D	0 / 2780 0.34 (1)
C-D	-4575 / 0	L-E	-867 / 0 0.11 (1)
C-R	-4575 / 0	D-L	-19 / 12 0.01 (1)
R-S	-4575 / 0	C-N	0 / 2274 0.28 (1)
S-D	-4575 / 0	N-D	-1109 / 0 0.14 (1)
D-T	-4560 / 0	K-H	0 / 3882 0.48 (1)
T-U	-4560 / 0	L-G	0 / 1729 0.21 (1)
U-E	-4560 / 0	K-G	-2069 / 0 0.26 (1)
E-V	-4560 / 0		
V-F	-4560 / 0		
F-W	-4560 / 0		
W-G	-4560 / 0		
G-X	-3167 / 0		
X-Y	-3167 / 0		
Y-H	-3167 / 0		
I-I	-2733 / 0		
P-B	-2842 / 0		



DESIGN CRITERIA

*** SPECIAL LOADS ANALYSIS ***

GEOMETRY AND/OR BASIC LOADS CHANGED BY USER.

LOADS WERE DERIVED FROM USER INPUT

NO FURTHER MODIFICATIONS WERE MADE

SPECIFIED LOADS:

TOP CH. LL = 32.5 PSF

DL = 6.0 PSF

BOT CH. LL = 0.0 PSF

DL = 7.4 PSF

TOTAL LOAD = 45.9 PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 6.00/12

*** NON STANDARD GIRDER ***

ADD'L USER-DEFINED LOADS APPLIED TO ALL LOAD CASES.

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2010, NBCC 2015

THIS DESIGN COMPLIES WITH:

- PART 9 OF BCBC 2018, OBC 2012, ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 088-09, CSA 086-14
- TPIC 2011, TPIC 2014

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

ALLOWABLE DEFL.(LL) = L/360 (0.84")

CALCULATED VERT. DEFL.(LL) = L/999 (0.10")

ALLOWABLE DEFL.(TL) = L/360 (0.84")

CALCULATED VERT. DEFL.(TL) = L/999 (0.18")

CSI: IC=0.59/1.00 (C-D:1), BC=0.35/1.00 (L-N:1), WB=0.48/1.00 (H-K:1), SS=0.27/1.00 (C-D: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

AUTOSOLVE RIGHT HEEF ONLY

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.88 (G) (INPUT = 0.90)

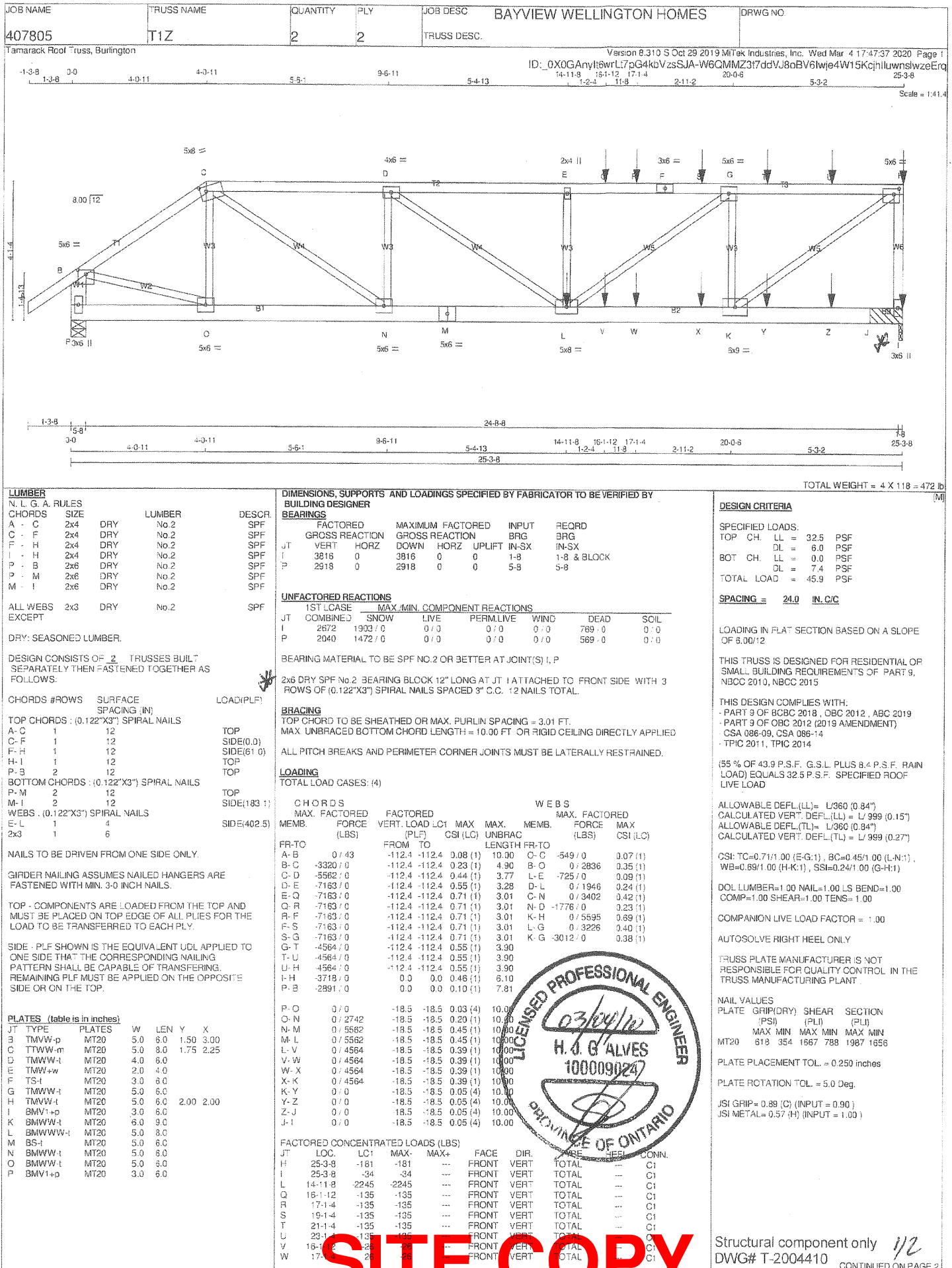
JSI METAL= 0.45 (M) (INPUT = 1.00)

Structural component only

DWG# T-2004409

CONTINUED ON PAGE 2

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JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	BAYVIEW WELLINGTON HOMES		DRWG NO.
407805	T1Z	2	2	TRUSS DESC.			

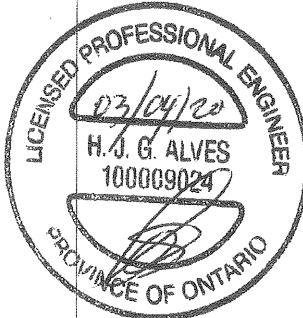
Tamarack Roof Truss, Burlington

Version 8.310 S Oct 29 2019 MiTek Industries, Inc. Wed Mar 4 17:47:37 2020 Page 2
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FACTORED CONCENTRATED LOADS (LBS)									
JT	LCC	LC1	MAX-	MAX+	FACE	DIR.	TYPE	HEEL	CONN.
X	19-1-4	-26	-26	---	FRONT	VERT	TOTAL	---	C1
Y	21-1-4	-26	-26	---	FRONT	VERT	TOTAL	---	C1
Z	23-1-4	-26	-26	---	FRONT	VERT	TOTAL	---	C1

CONNECTION REQUIREMENTS

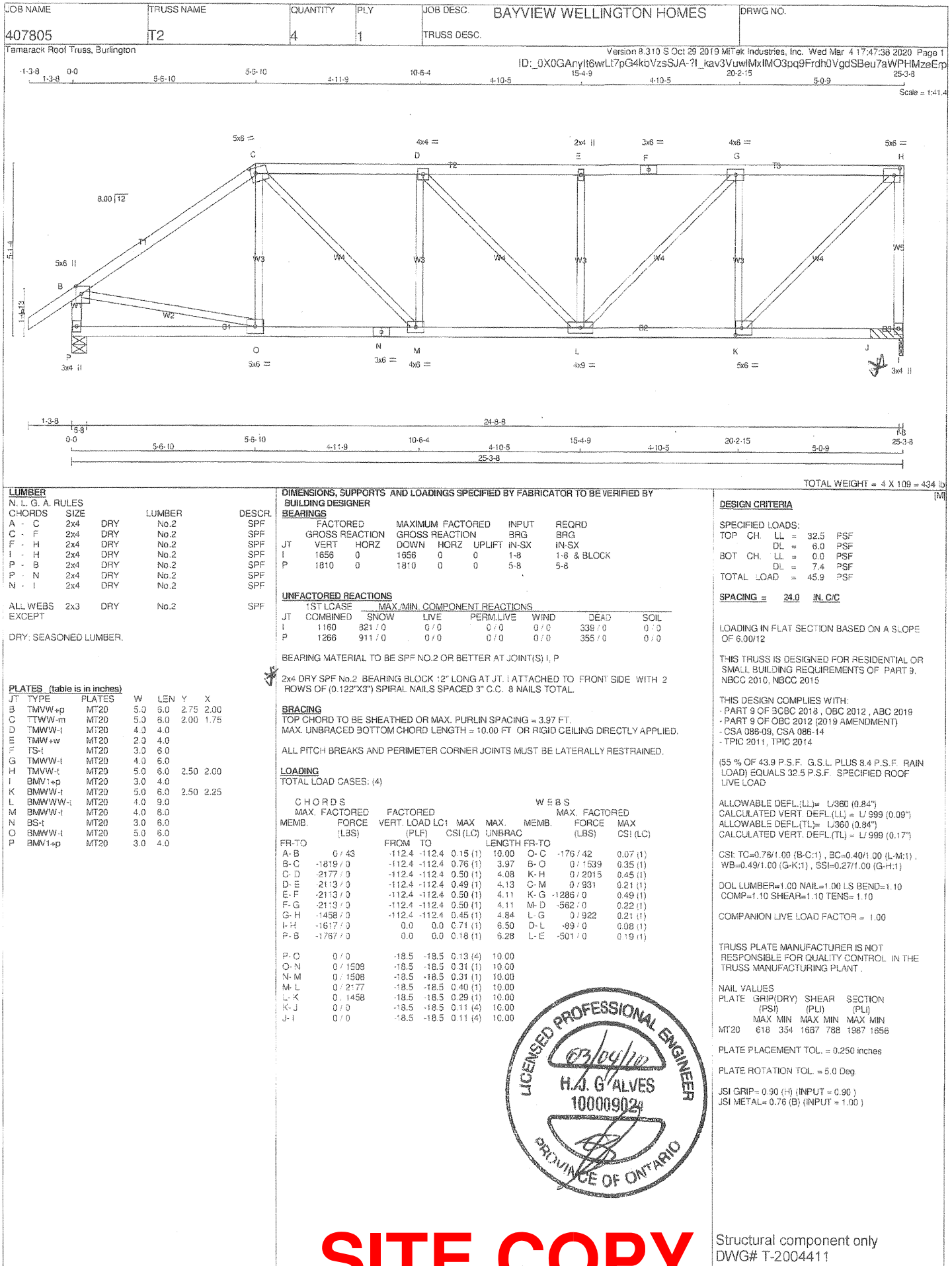
1) C1: A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED.

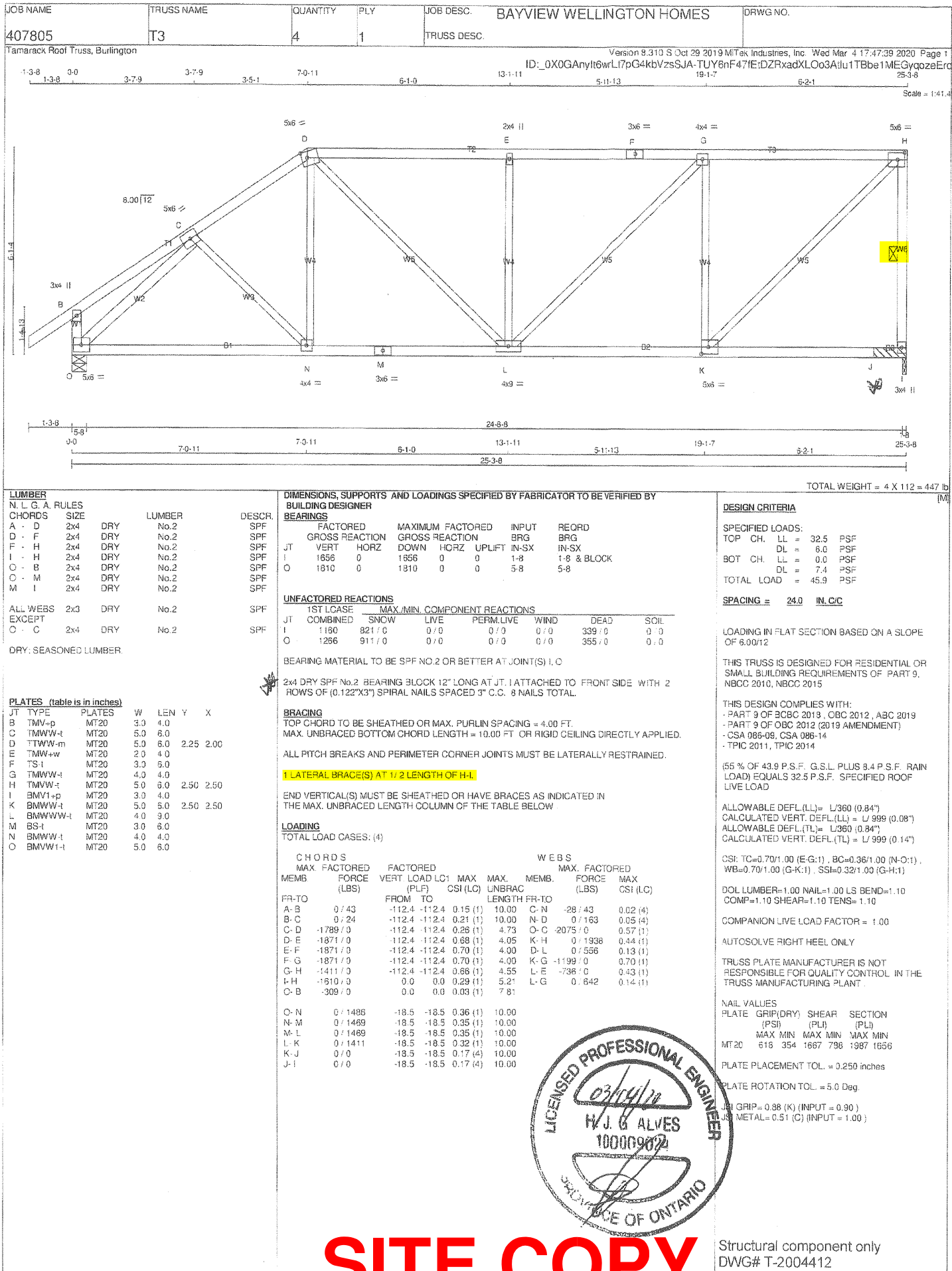


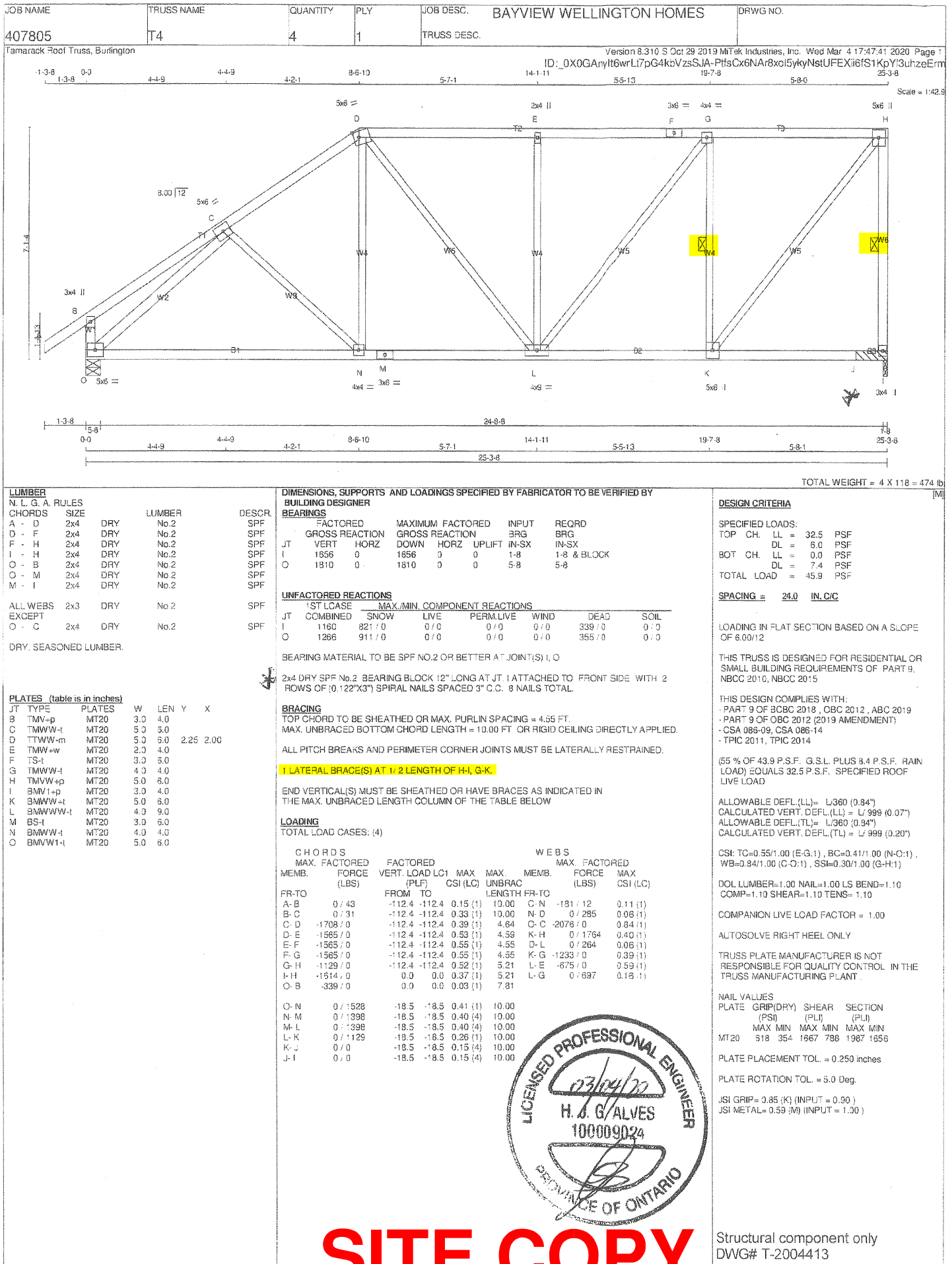
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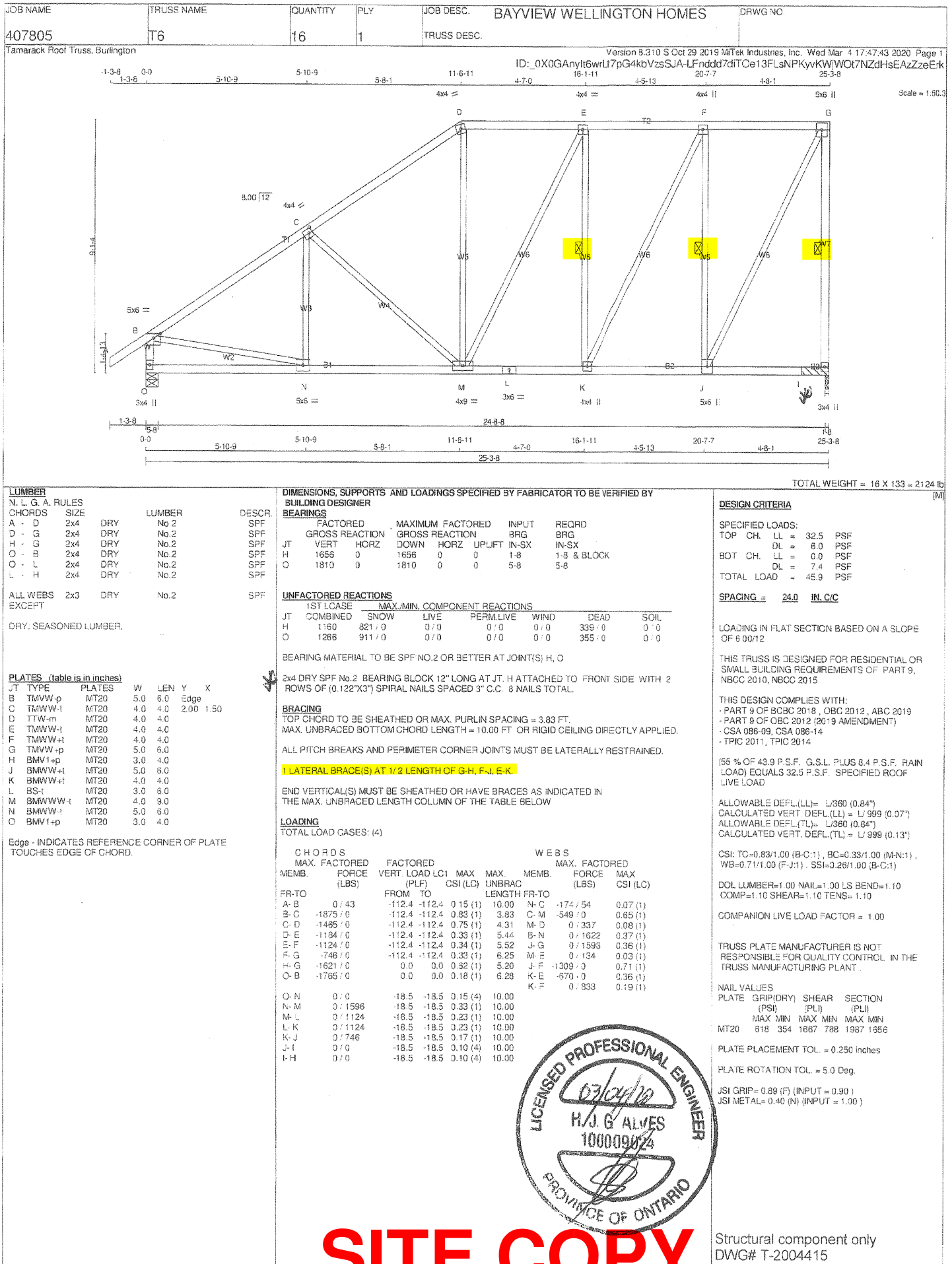
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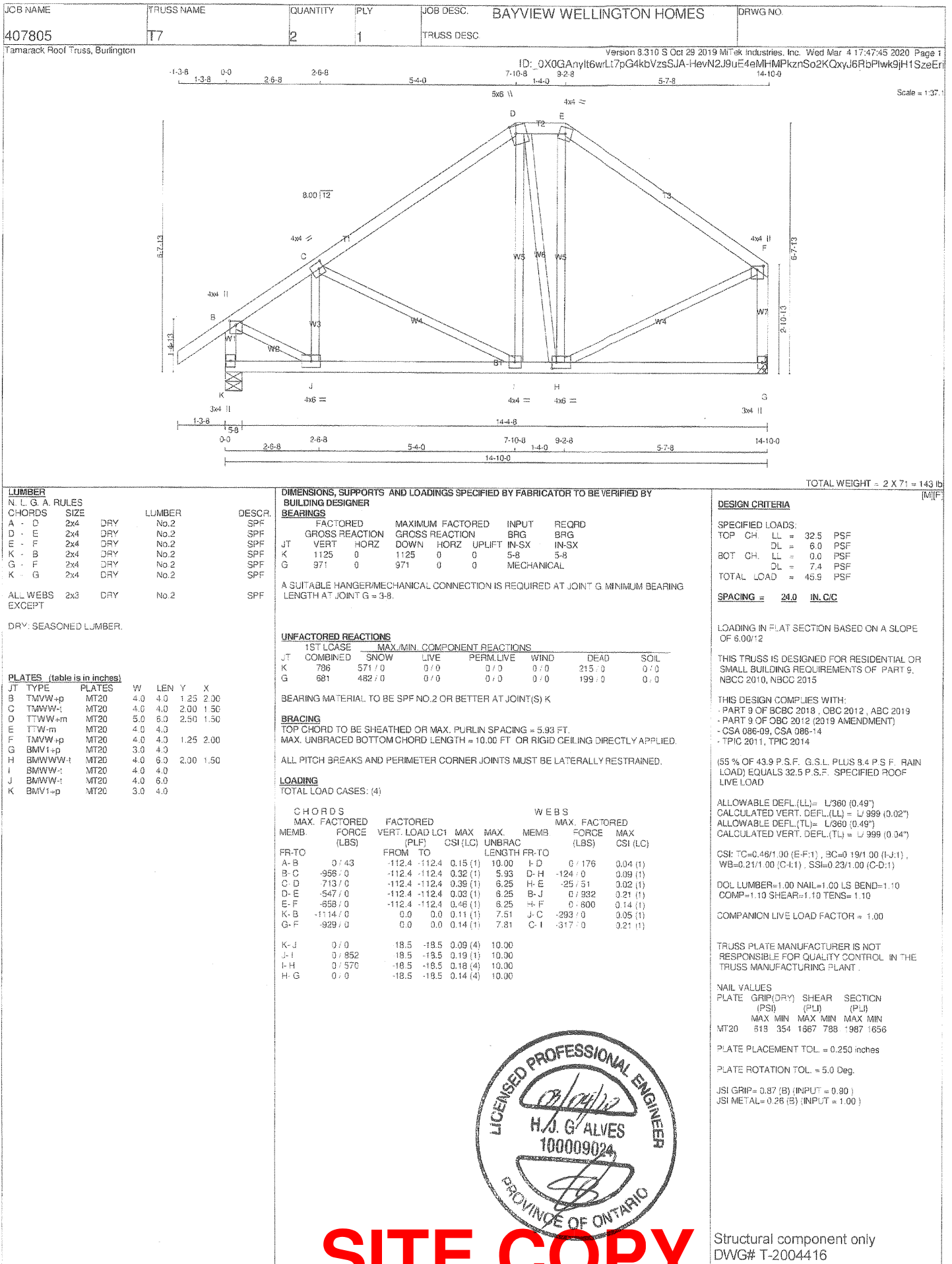






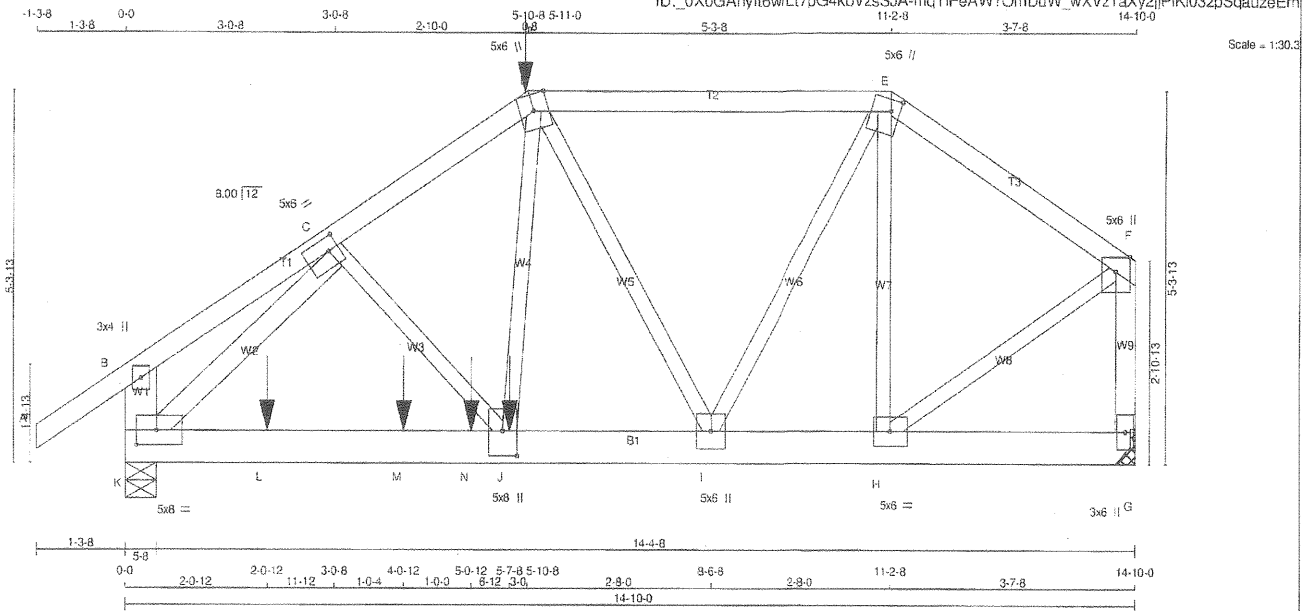
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JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
407805	T8	2	1	BAYVIEW WELLINGTON HOMES	
Tamarack Roof Truss, Burlington				TRUSS DESC.	

Version 8.310 S Oct 29 2019 Mitek Industries, Inc. Wed Mar 4 17:47:46 2020 Page 1
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TOTAL WEIGHT = 2 X 78 = 157 lb

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

PLATES (table is in inches)	JT	TYPE	PLATES	W	LEN	Y	X
B	TMV+p	MT20	3.0	4.0			
C	TMWW-t	MT20	5.0	6.0	2.25	1.75	
D	TTWW+m	MT20	5.0	6.0	Edge		
E	TTWW+m	MT20	5.0	6.0	2.00	1.50	
F	TMVW+p	MT20	5.0	6.0	Edge		
G	BMV1+p	MT20	3.0	6.0			
H	BMVW-t	MT20	5.0	6.0			
I	BMVW-t	MT20	5.0	6.0			
J	BMVW-t	MT20	5.0	8.0	4.25	2.50	
K	BMVW1-t	MT20	5.0	8.0	2.50	3.50	

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	DOWN	IN-SX	IN-SX
G	0	1980	0	MECHANICAL
K	2785	0	5-8	5-8

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

UNFACTORED REACTIONS

1ST LCASE	MAX./MIN.	COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
G	1383	1004 / 0	0 / 0	0 / 0	0 / 0	379 / 0	0 / 0
K	1947	1410 / 0	0 / 0	0 / 0	0 / 0	537 / 0	0 / 0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.67 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT. OR RIGID CEILING DIRECTLY APPLIED.

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS	MAX. FACTORED	FACTORED	VERT. LOAD	LC1	MAX	MAX.	MEMB.	MAX. FACTORED
MEMB.	FORCE (LBS)	VERT. (PLF)	LOAD (LBS)	CS1 (LC)	UNBRAC	LENGTH	FR-TO	FORCE (LBS)
FR-TO		FROM	TO					
A-B	0 / 43	-112.4	-112.4	0.17 (1)	10.00	H-E	-794 / 0	0.32 (1)
B-C	0 / 15	-112.4	-112.4	0.13 (1)	10.00	H-F	0 / 1575	0.39 (1)
C-D	-3158 / 0	-112.4	-112.4	0.28 (1)	3.67	J-D	0 / 1788	0.44 (1)
D-E	-1922 / 0	-112.4	-112.4	0.72 (1)	3.82	C-J	0 / 358	0.09 (1)
E-F	-1575 / 0	-112.4	-112.4	0.33 (1)	4.85	D-I	-1242 / 0	0.65 (1)
K-B	-292 / 0	0.0	0.0	0.02 (1)	7.81	I-E	0 / 1324	0.33 (1)
G-F	-1957 / 0	0.0	0.0	0.30 (1)	5.97	K-C	-3372 / 0	0.66 (1)
K-L	0 / 2375	-18.5	-18.5	0.45 (1)	10.00			
L-M	0 / 2375	-18.5	-18.5	0.45 (1)	10.00			
M-N	0 / 2375	-18.5	-18.5	0.45 (1)	10.00			
N-J	0 / 2375	-18.5	-18.5	0.45 (1)	10.00			
J-I	0 / 2504	-18.5	-18.5	0.38 (1)	10.00			
I-H	0 / 1292	-18.5	-18.5	0.20 (1)	10.00			
H-G	0 / 0	-18.5	-18.5	0.04 (4)	10.00			

FACTORED CONCENTRATED LOADS (LBS)

JT	LOC.	LC1	MAX.	MAX+	FACE	TYPE	TYPE	TYPE
D	5-11-0	-621	-621	---	BACK	VERT	TOTAL	0.00009024
J	5-7-8	-1941	-1941	---	BACK	VERT	TOTAL	0.00009024
L	2-0-12	-36	-36	---	BACK	VERT	TOTAL	0.00009024
M	4-0-12	-36	-36	---	BACK	VERT	TOTAL	0.00009024
N	5-0-12	-36	-36	---	BACK	VERT	TOTAL	0.00009024

CONNECTION REQUIREMENTS

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

DESIGN CRITERIA

SPECIFIED LOADS:
TOP CH. LL = 32.5 PSF
DL = 6.0 PSF
BOT CH. LL = 0.0 PSF
DL = 7.4 PSF
TOTAL LOAD = 45.9 PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 6.00/12

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2010, NBCC 2015

THIS DESIGN COMPLIES WITH:
- PART 9 OF BCBC 2018, OBC 2012, ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-09, CSA 086-14
- TPIC 2011, TPIC 2014

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

ALLOWABLE DEFL.(LL) = L/360 (0.49")
CALCULATED VERT. DEFL.(LL) = L/999 (0.05")
ALLOWABLE DEFL.(TL) = L/360 (0.49")
CALCULATED VERT. DEFL.(TL) = L/999 (0.10")

CSI: TC=0.72/1.00 (D-E:1), BC=0.45/1.00 (J-K:1), WB=0.66/1.00 (C-K:1), SSI=0.26/1.00 (D-E: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

AUTOSOLVE RIGHT HEEL ONLY

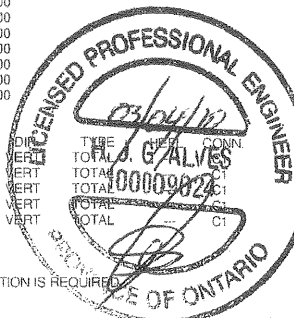
TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT

NAIL VALUES
PLATE GRIP(DRY) SHEAR SECTION (PSI) (PLI)
MAX MIN MAX MIN MAX MIN
MT20 618 354 1667 788 1987 1556

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (E) (INPUT = 0.90)
JSI METAL= 0.84 (C) (INPUT = 1.00)

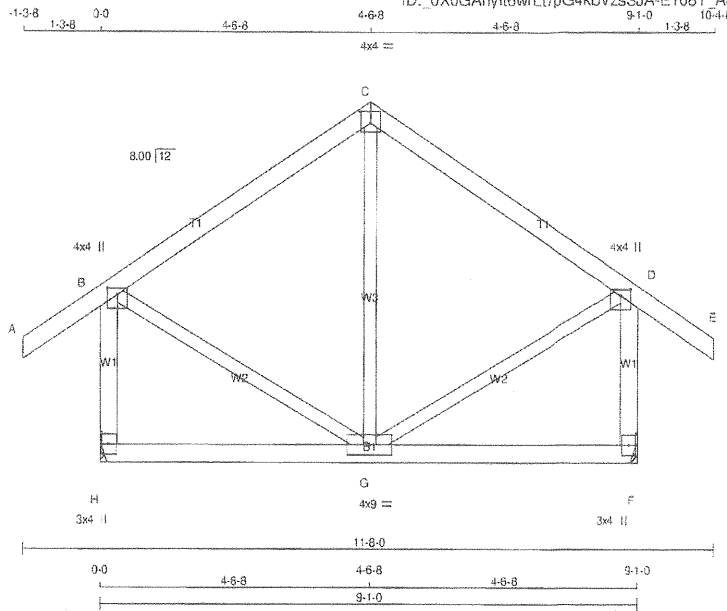


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Structural component only
DWG# T-2004417

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
407805	T9	2	1	BAYVIEW WELLINGTON HOMES	
Tamarack Roof Truss, Burlington				TRUSS DESC.	

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Scale = 1:34.8

TOTAL WEIGHT = 2 X 45 = 90 lb

LUMBER	CHORDS	SIZE	DRY	NO.2
N. L. G. A. RULES	A - C	2x4	DRY	No.2
	C - E	2x4	DRY	No.2
	H - B	2x4	DRY	No.2
	F - D	2x4	DRY	No.2
	H - F	2x4	DRY	No.2

ALL WEBS 2x3 DRY No.2 EXCEPT

DRY, SEASONED LUMBER

PLATES (table is in inches)						
JT	TYPE	PLATES	W	LEN	Y	X
B	TMVW+p	MT20	4.0	4.0	1.25	2.00
C	TTW-p	MT20	4.0	4.0	2.25	2.00
D	TMVW+p	MT20	4.0	4.0	1.25	2.00
F	BMV1+p	MT20	3.0	4.0		
G	BMVWW-t	MT20	4.0	9.0		
H	BMV1+p	MT20	3.0	4.0		

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

BEARINGS	FACTORED	MAXIMUM FACTORED	INPUT	RECORD
	GROSS REACTION	GROSS REACTION	BRG	BRG
JT	VERT	HORZ	DOWN	UP
H	749	0	0	0
F	749	0	0	0

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

UNFACTORED REACTIONS

1ST LOASE		MAX/MIN COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
H	522	384 / 0	0 / 0	0 / 0	0 / 0	138 / 0	0 / 0
F	522	384 / 0	0 / 0	0 / 0	0 / 0	138 / 0	0 / 0

BRACING

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

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS	MAX. FACTORED	FACTORED	VERT. LOAD LC1	MAX	MAX.	MEMB.	FORCE	MAX
MEMB.	FORCE	VERT. LOAD LC1	MAX	MAX.	MEMB.	FORCE	MAX	
FR-TO	FROM	TO	LENGTH	FR-TO	FROM	TO	LENGTH	
A-B	0 / 43	-112.4	-112.4	0.15 (1)	10.00	G-C	-179 / 28	0.10 (1)
B-C	-299 / 0	-112.4	-112.4	0.30 (1)	6.25	B-G	0 / 286	0.06 (1)
C-D	-299 / 0	-112.4	-112.4	0.30 (1)	6.25	G-D	0 / 286	0.06 (1)
D-E	0 / 43	-112.4	-112.4	0.15 (1)	10.00			
H-B	-716 / 0	0.0	0.0	0.11 (1)	7.81			
F-D	-716 / 0	0.0	0.0	0.11 (1)	7.81			
H-G	0 / 0	-18.5	-18.5	0.11 (4)	10.00			
G-F	0 / 0	-18.5	-18.5	0.11 (4)	10.00			

DESIGN CRITERIA

SPECIFIED LOADS:
TOP CH. LL = 32.5 PSF
DL = 6.0 PSF
BOT CH. LL = 0.0 PSF
DL = 7.4 PSF
TOTAL LOAD = 45.9 PSF

SPACING = 24.0 IN. C/C

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2010, NBCC 2015

THIS DESIGN COMPLIES WITH:
PART 9 OF NBCC 2018, OBC 2012, ABC 2019
PART 9 OF OBC 2012 (2019 AMENDMENT)
CSA 386-09, CSA 386-14
TPIC 2011, TPIC 2014

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

ALLOWABLE DEFL.(LL) = L/360 (0.30")
CALCULATED VERT. DEFL.(LL) = L/999 (0.00")
ALLOWABLE DEFL.(TL) = L/360 (0.30")
CALCULATED VERT. DEFL.(TL) = L/999 (0.01")

CSI: TC=0.30/1.00 (C-D:1), BC=0.11/1.00 (G-H:4),
WB=0.10/1.00 (G-G:1), SS=0.17/1.00 (C-D:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

NAIL VALUES
PLATE GRIP(DRY) SHEAR SECTION
(PSI) (PLI) (PLI)
MAX MIN MAX MIN MAX MIN
MT20 612 354 1667 788 1987 1656

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.50 (B) (INPUT = 0.90)
JSI METAL= 0.15 (B) (INPUT = 1.00)



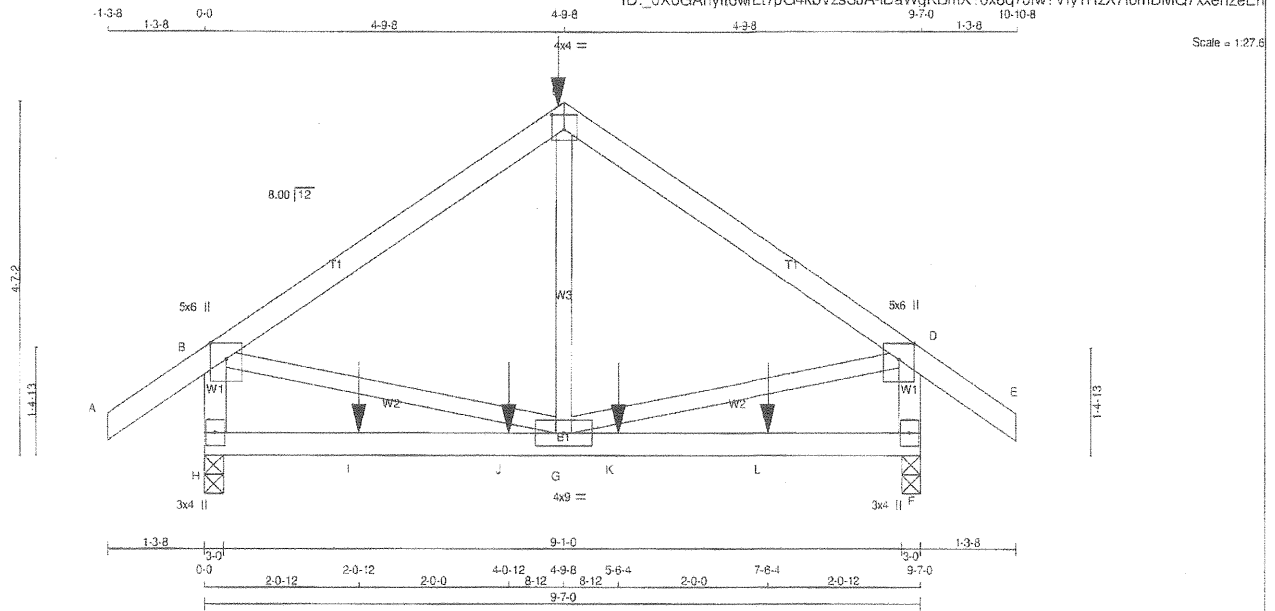
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Structural component only
DWG# T-2004418

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
407805	T10	2	1	BAYVIEW WELLINGTON HOMES	
Tamarack Roof Truss, Burlington				TRUSS DESC.	

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TOTAL WEIGHT = 2 X 41 = 82 lb

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

ALL WEBS 2x3 DRY No.2 SPF EXCEPT

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT TYPE	PLATES	W	LEN	Y	X
B TMVW+p	MT20	5.0	6.0	Edge	
C TTW+p	MT20	4.0	4.0	2.25	2.00
D TMVW+p	MT20	5.0	6.0	Edge	
F BMV1+p	MT20	3.0	4.0		
G BMVWW+	MT20	4.0	9.0		
H BMV1+p	MT20	3.0	4.0		

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

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

BEARINGS

	FACTORED GROSS REACTION	MAXIMUM FACTORED GROSS REACTION	INPUT BRG	REQD BRG
JT	VERT	HORZ	DOWN	UP
H	1287	0	1287	0
F	1287	0	1287	0

UNFACTORED REACTIONS

	1ST LOASE	MAX./MIN. COMPONENT REACTIONS					
	COMBINED	SNOW	LIVE	PERM. LIVE	WIND	DEAD	SOIL
H	997	662 / 0	0 / 0	0 / 0	0 / 0	236 / 0	0 / 0
F	997	662 / 0	0 / 0	0 / 0	0 / 0	236 / 0	0 / 0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.20 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT. OR RIGID CEILING DIRECTLY APPLIED.

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. LC1 (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. LC1 (LC)	
FR-TO		FROM TO	LENGTH	FR-TO			
A-B	0 / 43	-112.4 -112.4	0.17 (1)	10.00	G-C	225 / 106	0.07 (1)
B-C	-1099 / 0	-112.4 -112.4	0.54 (1)	5.20	B-G	0 / 937	0.23 (1)
C-D	-1099 / 0	-112.4 -112.4	0.54 (1)	5.20	G-D	0 / 937	0.23 (1)
D-E	0 / 43	-112.4 -112.4	0.17 (1)	10.00			
H-B	-1239 / 0	0.0 0.0	0.14 (1)	7.18			
F-D	-1239 / 0	0.0 0.0	0.14 (1)	7.18			
H-I	0 / 0	-18.5 -18.5	0.22 (4)	10.00			
I-J	0 / 0	-18.5 -18.5	0.22 (4)	10.00			
J-K	0 / 0	-18.5 -18.5	0.22 (4)	10.00			
G-K	0 / 0	-18.5 -18.5	0.22 (4)	10.00			
K-L	0 / 0	-18.5 -18.5	0.22 (4)	10.00			
L-F	0 / 0	-18.5 -18.5	0.22 (4)	10.00			

FACTORED CONCENTRATED LOADS (LBS)

JT	LOC.	LC1	MAX-	MAX+	FACE	DIR.	TYPE	HEEL	CONN.
C	1-9.8	-905	-905	---	BACK	VERT	TOTAL	---	C1
I	2-0-12	-27	-27	---	BACK	VERT	TOTAL	---	C1
J	4-0-12	-26	-26	---	BACK	VERT	TOTAL	---	C1
K	5-6.4	-26	-26	---	BACK	VERT	TOTAL	---	C1
L	7-6.4	-27	-27	---	BACK	VERT	TOTAL	---	C1

CONNECTION REQUIREMENTS

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

DESIGN CRITERIA

SPECIFIED LOADS:
TOP CH. LL = 32.5 PSF
DL = 5.0 PSF
BOT CH. LL = 0.0 PSF
DL = 7.4 PSF
TOTAL LOAD = 45.9 PSF

SPACING = 24.0 IN. C/C

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBC 2010, NBCC 2015

THIS DESIGN COMPLIES WITH:
- PART 9 OF BCBC 2018, OBC 2012, ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-09, CSA 086-14
- TPIC 2011, TPIC 2014.

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

ALLOWABLE DEFL.(LL) = L/360 (0.32")
CALCULATED VERT. DEFL.(LL) = L/999 (0.01")
ALLOWABLE DEFL.(TL) = L/360 (0.32")
CALCULATED VERT. DEFL.(TL) = L/999 (0.03")

CSI: TC=0.54/1.00 (B-C:1), BC=0.22/1.00 (F-G:4), WB=0.23/1.00 (B-G:1), SSI=0.19/1.00 (B-C:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

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

PLATE PLACEMENT TOL. = 0.250 inches

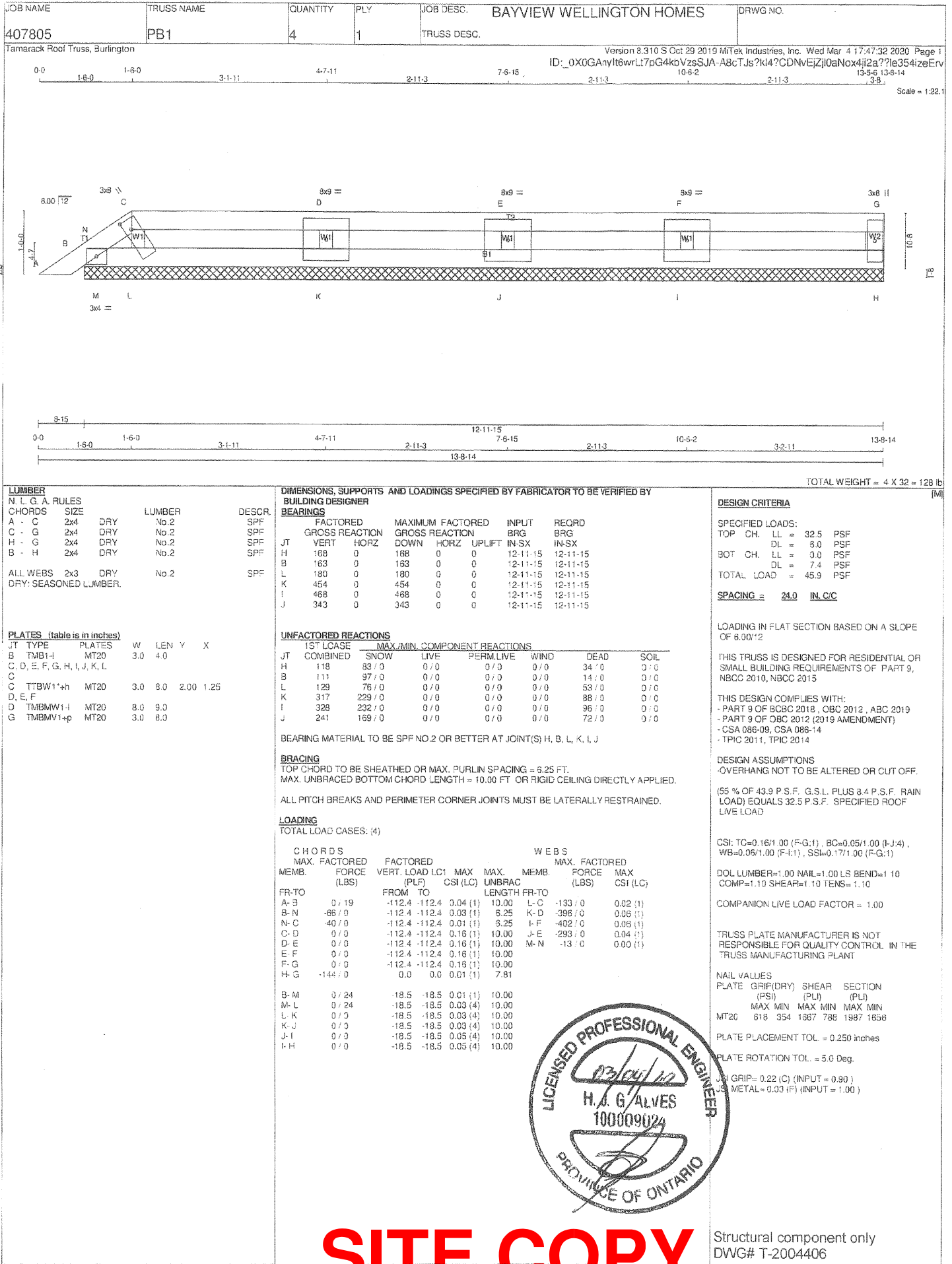
PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP = 0.68 (B) (INPUT = 0.90)
JSI METAL = 0.49 (D) (INPUT = 1.00)



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Structural component only
DWG# T-2004419



JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	Version 8.310 S Oct 29 2019 MiTek Industries, Inc. Wed Mar 4 17:47:33 2020 Page 1	DRWG NO.
407805	PB2	4	1	TRUSS DESC.	ID: 0X0GAnyt6wLrL7pG4kbVzsSJA-eKArXC0M3O73rWUQGGE_ZowtdU1Un0Q9zIpec8zeErU	

Tamarack Roof Truss, Burlington

Scale = 1:22.5

The diagram shows a truss structure with various members labeled T1, W1, W2, B1, G, F, J, C, D, H, I, K. Dimensions include spans of 3-0-0, 5-3-15, 8-3-15, and 5-4-15. Total weight is noted as 4 X 43 = 173 lb.

LUMBER				DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER				DESIGN CRITERIA			
N. L. G. A. RULES				BEARINGS				SPECIFIED LOADS:			
CHORDS	SIZE	LUMBER	DESCR.					TOP CH. LL = 32.5 PSF			
A - C	2x4	DRY	No.2					DL = 6.0 PSF			
C - E	2x4	DRY	No.2					BOT CH. LL = 0.0 PSF			
F - E	2x4	DRY	No.2					DL = 7.4 PSF			
B - F	2x4	DRY	No.2					TOTAL LOAD = 45.9 PSF			
ALL WEBS 2x3 DRY No.2 SPF								SPACING = 24.0 IN./C			
DRY; SEASONED LUMBER.								LOADING IN FLAT SECTION BASED ON A SLOPE OF 6.00/12			
								THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2010, NBCC 2015			
								THIS DESIGN COMPLIES WITH: PART 3 OF CBC 2018, CBC 2012, ABC 2019 PART 3 OF OBC 2012 (2019 AMENDMENT) CSA 086-09, CSA 086-14 TPIC 2011, TPIC 2014			
								(55% OF 43.9 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 32.5 P.S.F. SPECIFIED ROOF LIVE LOAD			
								CSI: TC=0.55/1.00 (D-E:1), BC=0.14/1.00 (G-H:4), WB=0.11/1.00 (D-G:1), SS=0.30/1.00 (D-E:1)			
								DOL LUMBER=1.00 NAIL=1.00 L.S. BEND=1.10 COMP=1.10 SHEAR=1.10 TENS=1.10			
								COMPANION LIVE LOAD FACTOR = 1.00			
								AUTOSOLVE LEFT HEEL ONLY			
								TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT.			
								NAIL VALUES			
								PLATE GRIP(DRY) SHEAR SECTION (PSI) (PLI) (PLI)			
								MAX MIN MAX MIN MAX MIN			
								WT20 618 354 1667 798 1987 1656			
								PLATE PLACEMENT TOL. = 0.250 inches			
								PLATE ROTATION TOL. = 5.0 Deg.			
								JSI GRIP= 0.39 (D) (INPUT = 0.90)			
								JSI METAL= 0.15 (D) (INPUT = 1.00)			

PLATES (table is in inches)

JT TYPE	PLATES	W	LEN	Y	X
B-TMB1-l	MT20	3.0	4.0		
C-TTW+M	MT20	5.0	6.0	2.00	1.50
D-TMW+w	MT20	2.0	4.0		
E-TMVW-l	MT20	4.0	4.0		
F-BMVf+p	MT20	3.0	4.0		
G-BMWVWf+l	MT20	4.0	9.0		
H-BMWf+w	MT20	2.0	4.0		

UNFACTORED REACTIONS

JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
F	189	133 / 0	0 / 0	0 / 0	0 / 0	56 / 0	0 / 0
B	169	136 / 0	0 / 0	0 / 0	0 / 0	33 / 0	0 / 0
H	273	179 / 0	0 / 0	0 / 0	0 / 0	94 / 0	0 / 0
G	613	440 / 0	0 / 0	0 / 0	0 / 0	173 / 0	0 / 0

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.25 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.	FORCE (LBS)	VERT. LOAD (LBS)	MAX. FACTORED (LC1)	MEMB.	FORCE (LBS)	MAX. FACTORED (LC1)	MAX. FACTORED (LC1)
FR-TO				FR-TO			
A-B	0 / 19	-112.4	-112.4 0.04 (1)	H-C	-293 / 0	0.04 (1)	
B-J	-39 / 0	-112.4	-112.4 0.02 (1)	C-E	0 / 0	0.00 (1)	
J-C	-66 / 0	-112.4	-112.4 0.06 (1)	C-G	-34 / 0	0.02 (1)	
C-D	0 / 0	-112.4	-112.4 0.55 (1)	G-D	-754 / 0	0.11 (1)	
D-E	0 / 0	-112.4	-112.4 0.55 (1)	I-J	-169 / 0	0.00 (1)	
F-E	-229 / 0	0.0	0.0 0.02 (1)				
B-I	0 / 51	-18.5	-18.5 0.07 (1)				
I-H	0 / 51	-18.5	-18.5 0.07 (1)				
H-G	0 / 33	-18.5	-18.5 0.14 (4)				
G-F	0 / 0	-18.5	-18.5 0.14 (4)				

LICENSED PROFESSIONAL ENGINEER

03/04/20

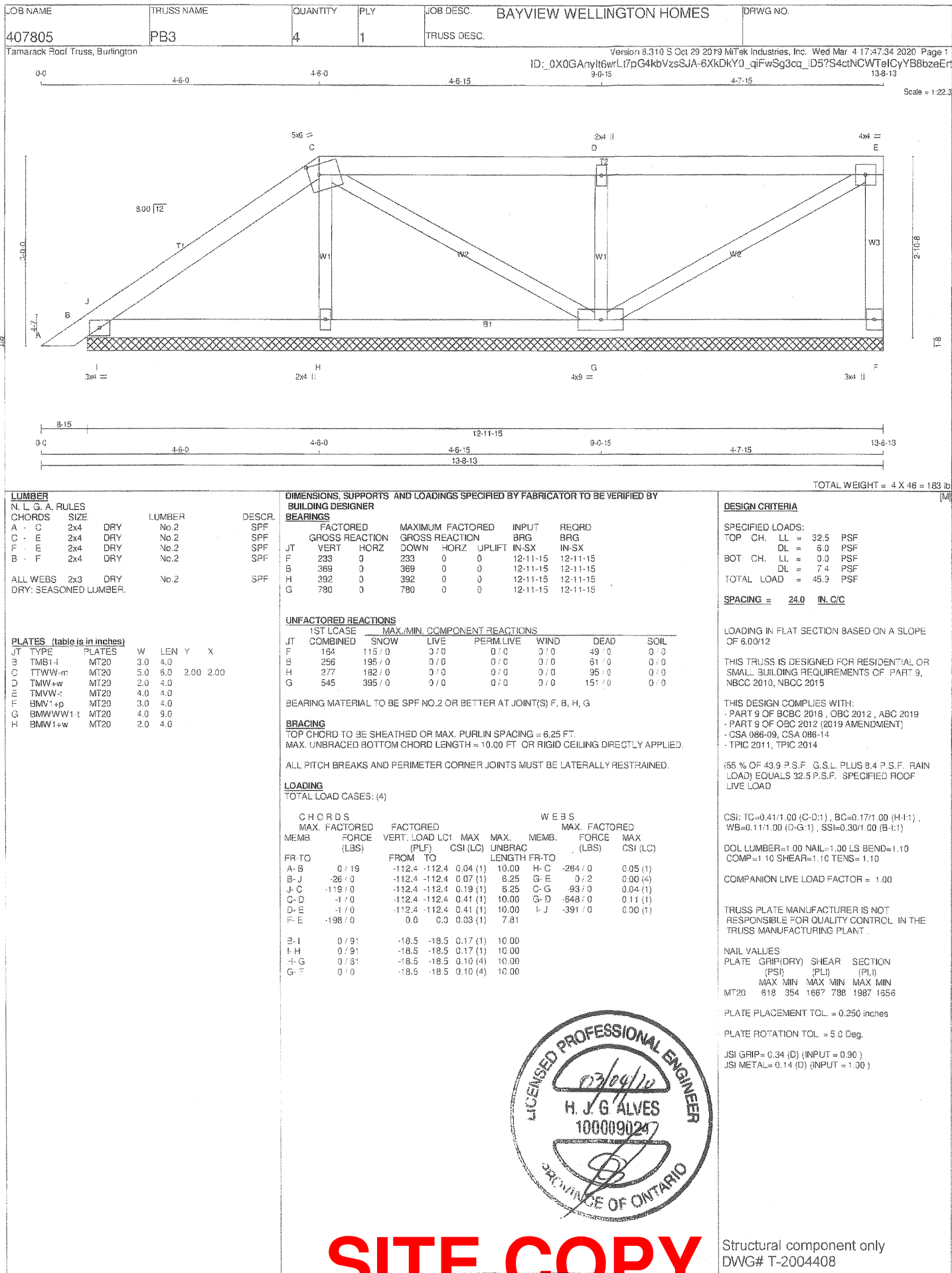
H. J. GALVES

100009024

PROVINCE OF ONTARIO

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Structural component only
DWG# T-2004407



JOB NAME

TRUSS NAME

QUANTITY

PLY

JOB DESC.

DRWG NO.

407805

J1

38

1

BAYVIEW WELLINGTON HOMES

Tamarack Roof Truss, Burlington

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ID: 0X0GAnyIt6wrLi7pG4kbVzsSJA-WquwolsC7OUvnW_w01VxX2td9EbZE9vE_n9TgPzeEs5

Scale = 1:22.9

LUMBER

N L G A RULES

CHORDS SIZE LUMBER

E - B 2x4 DRY No.2

A - C 2x4 DRY No.2

E - D 2x4 DRY No.2

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT TYPE PLATES W LEN Y X

B TMV+p MT20 3.0 4.0

E BMV1+p MT20 3.0 4.0

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

BEARINGS

JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX
E	629	0	629	0	0	5-8	5-8
C	248	0	248	0	0	1-8	1-8
D	45	0	50	0	0	1-8	1-8

SEE MITEK STANDARD DETAIL B97791H FOR CONNECTION TO JOINT(S) C, D

UNFACTORED REACTIONS

JT	1ST LOASE	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
E	438	327 / 0	0 / 0	0 / 0	0 / 0	111 / 0	0 / 0
C	170	143 / 0	0 / 0	0 / 0	0 / 0	26 / 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

BRACING

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

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

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. FACTORED LENGTH FR-TO	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. FACTORED LENGTH FR-TO	MEMB.
FR-TO				FR-TO			FR-TO
E-B	-565 / 0	0.0	0.0 0.13 (4)	7.81			
A-B	0 / 34	-112.4	-112.4 0.15 (1)	10.00			
B-C	-37 / 0	-112.4	-112.4 0.66 (1)	6.25			
E-D	0 / 0	-18.5	-18.5 0.13 (4)	10.00			

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH. LL = 32.5 PSF

DL = 6.0 PSF

BOT CH. LL = 0.0 PSF

DL = 7.4 PSF

TOTAL LOAD = 45.9 PSF

SPACING = 24.0 IN. C/C

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2010, NBCC 2015

THIS DESIGN COMPLIES WITH:

- PART 9 OF BCBC 2018, OBC 2012, ABC 2019

- PART 9 OF OBC 2012 (2019 AMENDMENT)

- CSA 086-09, CSA 086-14

- TPIC 2011, TPIC 2014

DESIGN ASSUMPTIONS

- OVERHANG NOT TO BE ALTERED OR CUT OFF.

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

ALLOWABLE DEFL.(LL) = L/360 (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=0.66/1.00 (B-C:1), BC=0.13/1.00 (D-E:4), WB=0.00/1.00 (n/a:0), SSI=0.29/1.00 (B-C:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

AUTOSOLVE RIGHT HEEL ONLY

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

NAIL VALUES

PLATE	GRIP(DRY)	SHEAR	SECTION
	(PSI)	(PLI)	(PLI)
	MAX MIN	MAX MIN	MAX MIN
MT20	618 354	1667 788	1967 1656

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.24 (E) (INPUT = 0.90)

JSI METAL= 0.16 (B) (INPUT = 1.00)

TOTAL WEIGHT = 38 X 17 = 638 lb

03/04/2022

H. O. G. ALVES

1000000000

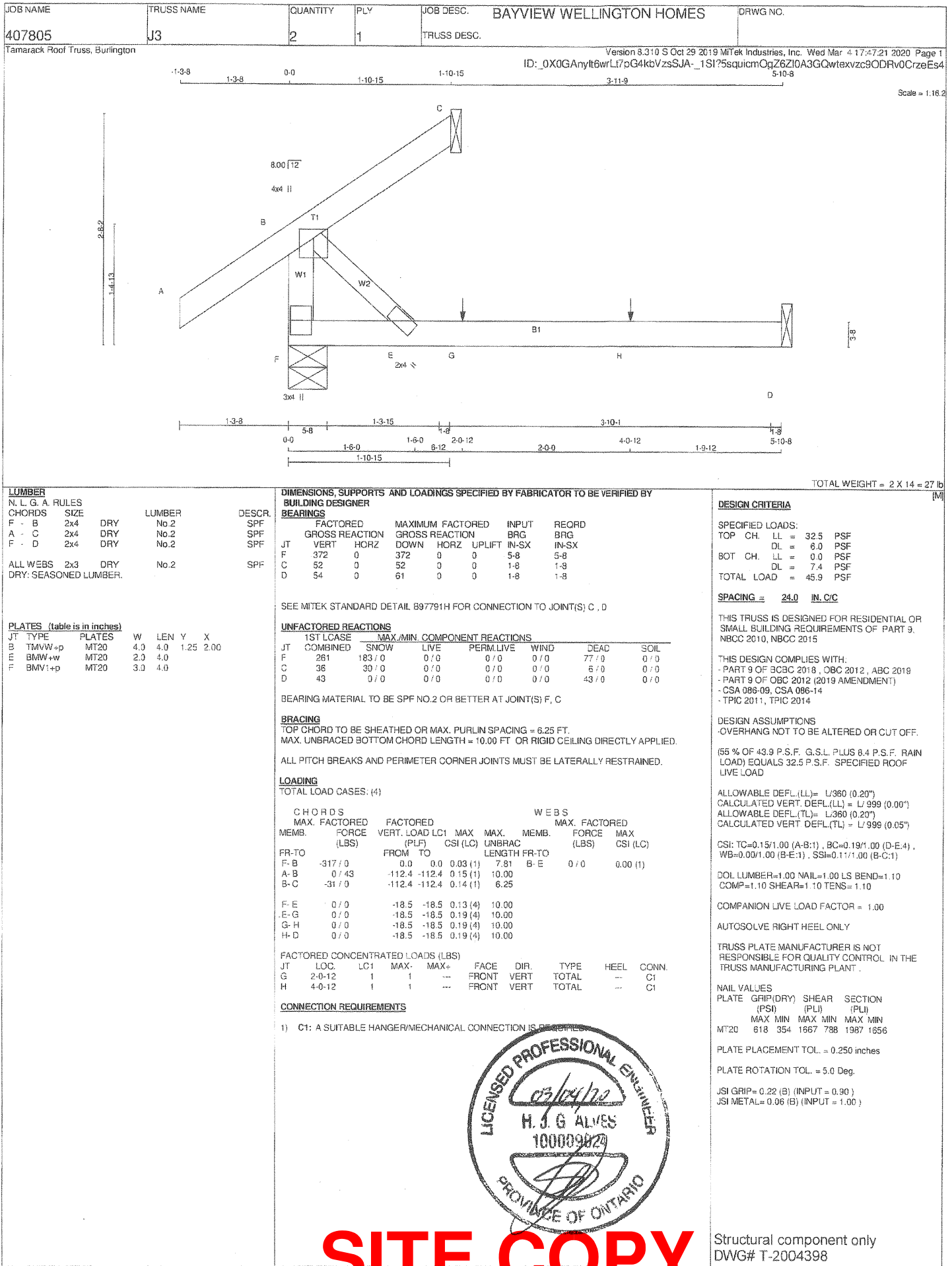
LICENSED PROFESSIONAL ENGINEER

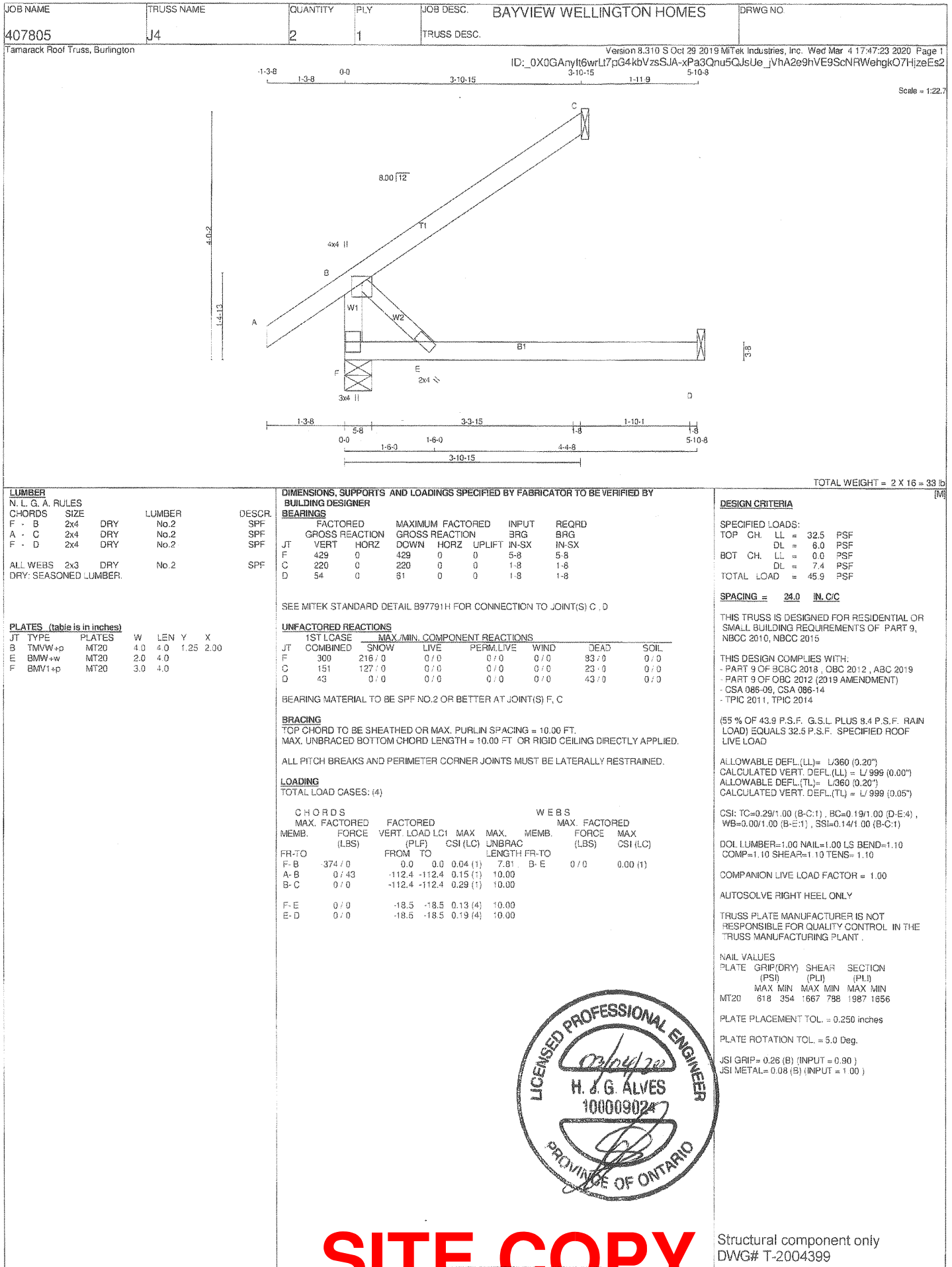
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Structural component only

DWG# T-2004397





JOB NAME

407805

TRUSS NAME

J6

QUANTITY

6

PLY

1

JOB DESC.

BAYVIEW WELLINGTON HOMES

DRWG NO.

Tamarack Roof Truss, Burlington

Version 8.310 S Oct 29 2019 MiTek Industries, Inc. Wed Mar 4 17:47:25 2020 Page 1

ID: 0X0GAnylt6wrLi7pG4kbVzsSJA-tohprTvlYx7Ctltuob56E6bZlFKTVP8z82tELcZeEs0

Scale = 1/23.0

LUMBER

N. L. G. A. RULES

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

ALL WEBS 2x3 DRY

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMVW+p	MT20	4.0	4.0	1.25	2.00
D	BMV1-t	MT20	4.0	4.0	2.00	Edge
E	BMV1+p	MT20	3.0	4.0		

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

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

BEARINGS

	FACTORED	MAXIMUM FACTORED	INPUT	RECORD
	GROSS REACTION	GROSS REACTION	BRG	BRG
JT	VERT	HORZ	DOWN	HORZ
E	392	0	392	0
C	220	0	220	0
D	18	0	20	0

SEE MITEK STANDARD DETAIL 397791H FOR CONNECTION TO JOINT(S) C, D

UNFACTORED REACTIONS

1ST LCASE	SNOW	LIVE	PERM LIVE	WIND	DEAD	SOIL
JT	COMBINED					
E	270	216.0	0.0	0.0	54.0	0.0
C	151	127.0	0.0	0.0	23.0	0.0
D	14	0.0	0.0	0.0	14.0	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 = 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: (5)

CHORDS	MAX. FACTORED	FACTORED	WEBS	MAX. FACTORED	
MEMB.	FORCE	VERT. LOAD LC1	MEMB.	FORCE	
	(LBS)	(PLF)		(LBS)	
FR-TO	FROM	TO	FR-TO	FROM	
E-B	-374.0	0.0	0.0	0.04 (1)	7.81
A-B	0.43	-112.4	-112.4	0.15 (5)	10.00
B-C	0.0	-112.4	-112.4	0.29 (1)	10.00
E-D	0.0	-18.5	-18.5	0.02 (4)	10.00

CANTILEVER ANALYSIS HAS BEEN CONSIDERED IN THIS DESIGN

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH. LL = 32.5 PSF

DL = 6.0 PSF

BOT CH. LL = 0.0 PSF

DL = 7.4 PSF

TOTAL LOAD = 45.9 PSF

SPACING = 24.0 IN. C/C

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2010, NBCC 2015

THIS DESIGN COMPLIES WITH:

PART 9 OF CBC 2018, OBC 2012, ABC 2019

PART 9 OF OBC 2012 (2019 AMENDMENT)

CSA 086-09, CSA 086-14

TPIC 2011, TPIC 2014

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

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

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

CSI: TC=0.29/1.00 (B-C:1) , BC=0.02/1.00 (D-E:4) , WB=0.00/1.00 (B-D:1) , SSI=0.14/1.00 (B-C:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10

COMP=1.10 SHEAR=1.10 TENS=1.10

COMPANION LIVE LOAD FACTOR = 1.00

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

NAIL VALUES

PLATE GRIP(DRY) SHEAR SECTION

(PSI) (PLI) (PLI)

MAX MIN MAX MIN MAX MIN

MT20 619 354 1667 788 1987 1556

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.26 (B) (INPUT = 0.90)

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

LICENSED PROFESSIONAL ENGINEER

03/04/20

H. J. G. ALVES

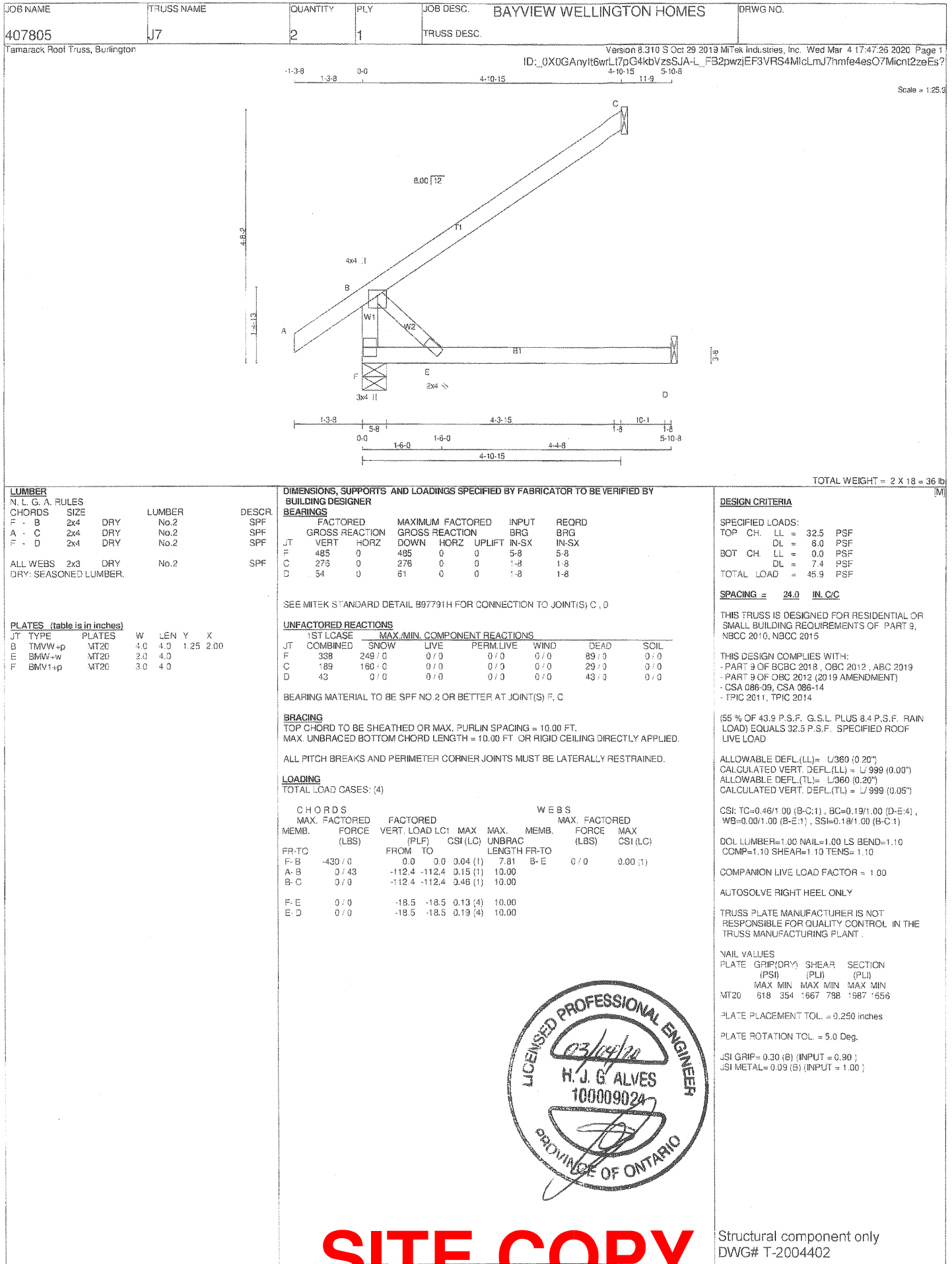
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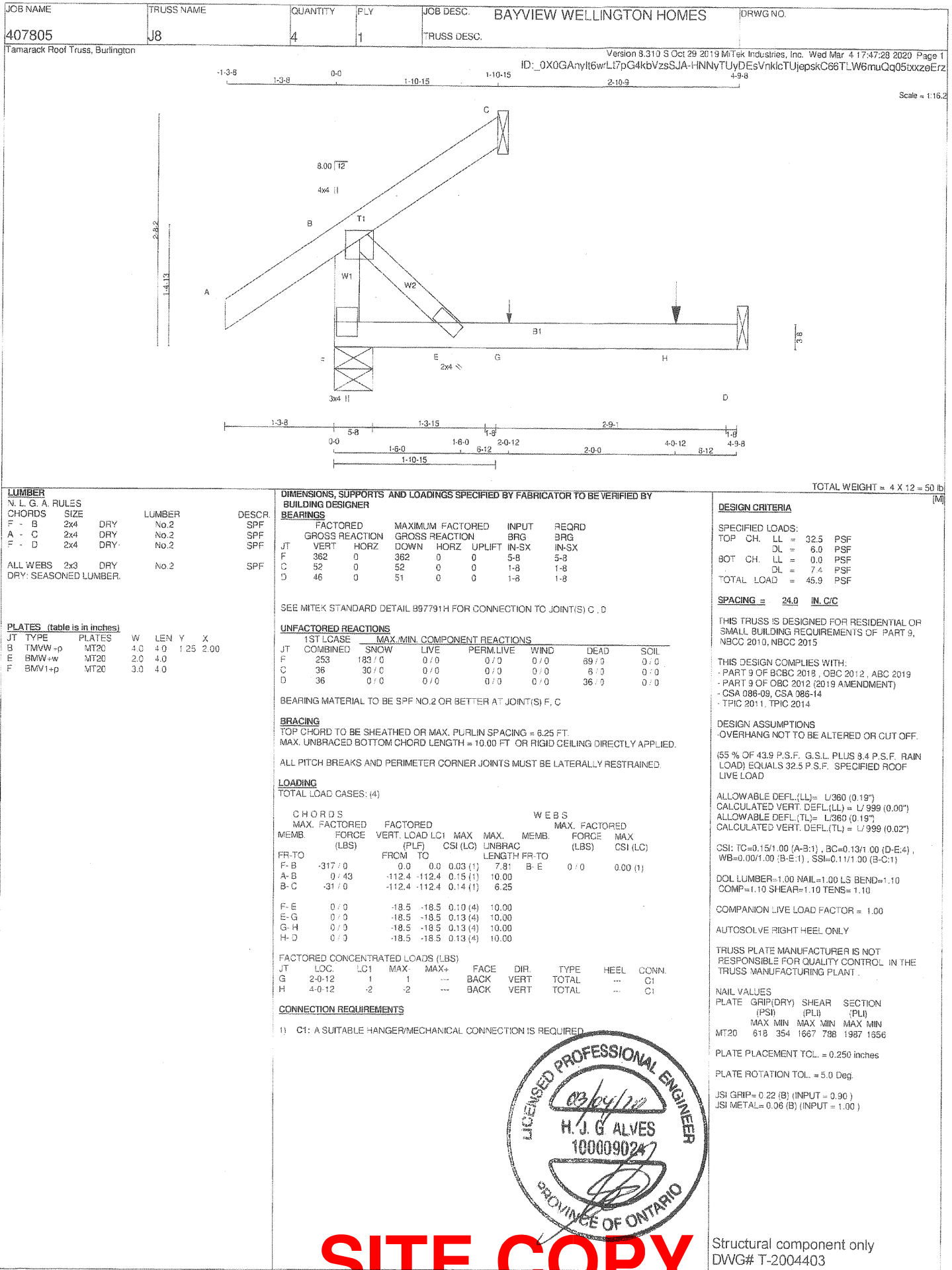
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Structural component only

DWG# T-2004401





LUL/LUS/LJS/HUS/HHUS/HGUS

Standard and Double-Shear Joist Hangers



This product is preferable to similar connectors because of
a) easier installation, b) higher capacities, c) lower installed cost, or a combination of these features.

Most hangers in this series have double-shear nailing — an innovation that distributes the load through two points on each joist nail for greater strength. This allows for fewer nails, faster installation, and the use of all common nails for the same connection. (Do not bend or remove tabs)

Double-shear hangers range from the light capacity LUS hangers to the highest capacity HGUS hangers. For medium load truss applications, the HUS offers a lower cost alternative and easier installation than the HGUS hangers, while providing greater load capacity and bearing than the LUS.

Material: See table on pp. 258–259.

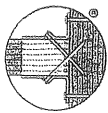
Finish: Galvanized. Some products available in stainless steel or ZMAX® coating; see Corrosion Information, pp. 20–24.

Installation:

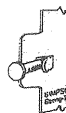
- Use all specified fasteners; see General Notes.
- Nails must be driven at an angle through the joist or truss into the header to achieve the tabulated resistances (except LUL).
- Where 16d commons are specified, 10d commons may be used at 0.83 of the tabulated factored resistance.
- Not designed for welded or nailer applications.
- With single ply 2x carrying members, use 10d x 1½" nails into the header and 10d commons into the joist, and reduce the resistance to 0.64 of the table value where 16d nails are specified and 0.77 where 10d nails are specified.

Options:

- LUS, LJS, LUL and HUS hangers cannot be modified.
- Other sizes available; consult your Simpson Strong-Tie representative.
- See Hanger Options information on p. 126.



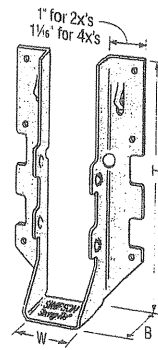
Double-Shear Nailing Top View



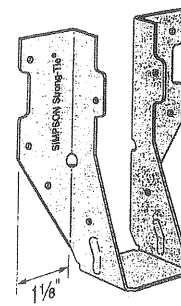
Double-Shear Nailing Side View; Do not bend tab



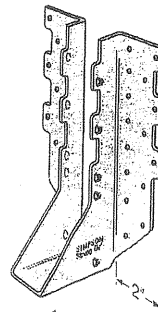
Dome Double-Shear Nailing Side View (available on some models)
U.S. Patent 5,603,580



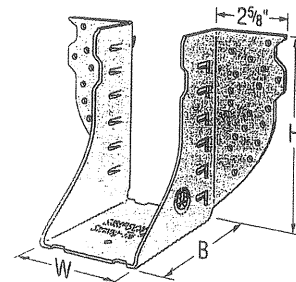
LUS28



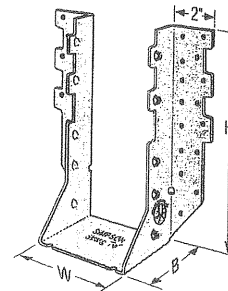
LU26L



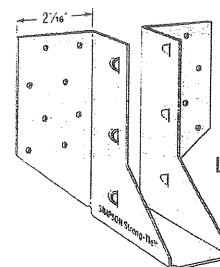
HUS210
(HUS26, HUS28, and HHUS similar)



HGUS28-2

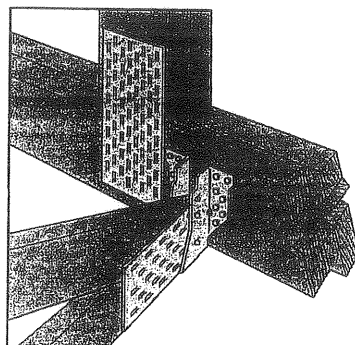


HHUS210-2



LJS26DS

Typical HUS26 Installation with Reduced Heel Height
(Truss Designer to provide fastener quantity for connecting multiple members together)



Plated Truss Connectors

SITE COPY

LUL/LUS/LJS/HUS/HHUS/HGUS

HHUS/HGUS

See Hanger Options information on pp. 125–127.

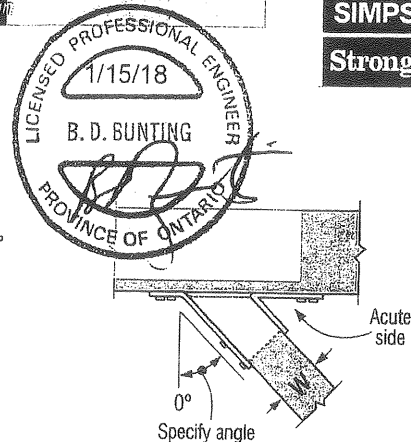
HHUS — Sloped and/or Skewed Seat

- HHUS hangers can be skewed to a maximum of 45° and/or sloped to a maximum of 45°
- For skew only, maximum factored down resistance is 0.85 of the table value
- For sloped only or sloped and skewed hangers, the maximum factored down resistance is 0.72 of the table value
- Uplift resistances for sloped/skewed conditions are 0.62 of the table value
- The joist must be bevel-cut to allow for double-shear nailing

HGUS — Skewed Seat

- HGUS hangers can be skewed only to a maximum of 45°. Factored resistances are:

HGUS Seat Width	Joist	Down Resistance	Uplift
$W < 2"$	Bevel or square cut	0.62 of table value	0.46 of table value
$2" < W < 6"$	Bevel cut	0.67 of table value	0.41 of table value
$2" < W < 6"$	Square cut	0.46 of table value	0.41 of table value
$W > 6"$	Bevel cut	0.75 of table value	0.41 of table value



**Top View HHUS Hanger
Skewed Right**
(joist must be bevel cut)
All joist nails installed on the
outside angle (non-acute side).

Standard and Double-Shear Joist Hangers (cont.)

These products are available with additional corrosion protection. For more information, see p. 24.

These products are approved for installation with the Strong-Drive® SD Connector screw. See pp. 32–34 for more information.

Model No.	Ga.	Dimensions (in.)				Fasteners		Factored Resistance				
		W	H	B	d _e ³	Header	Joist	D.Fir-L		S-P-F		
								Uplift	Normal	Uplift	Normal	
								(K _D = 1.15)	(K _D = 1.00)	(K _D = 1.15)	(K _D = 1.00)	
								lb.	lb.	lb.	lb.	
kN	kN	kN	kN									
Single 2x Sizes												
■	LUS24	18	1⅞	3⅞	1⅜	2¼	(4) 10d	(2) 10d	710	1625	645	1155
									3.16	7.23	2.87	5.14
■	LU24L	22	1⅞	3	1⅜	2⅞	(4) 10d	(2) 10d x 1½"	360	1020	320	725
									1.60	4.54	1.42	3.22
■	LU26L	22	1⅞	5	1⅜	4⅞	(6) 10d	(4) 10d x 1½"	720	1605	645	1140
									3.20	7.14	2.87	5.07
SS	LUS26	18	1⅞	4¾	1⅜	3¾	(4) 10d	(4) 10d	1420	2170	1290	1630
									6.32	9.65	5.74	7.25
■	HUS26	16	1⅞	5⅞	3	3⅞	(14) 16d	(6) 16d	2705	4940	2065	3875
									11.30	21.97	9.20	17.24
■	LJS26DS	18	1⅞	5	3½	4⅞	(16) 16d	(6) 16d	2055	4265	1460	4115
									9.14	18.97	6.49	18.31
■	HGUS26	12	1⅞	5⅞	5	4⅞	(20) 16d	(8) 16d	2685	6625	2685	5700
									11.96	29.51	11.96	25.35
■	LU28L	20	1⅞	6¾	1⅞	5⅞	(8) 10d	(6) 10d x 1½"	1140	2185	1020	1550
									5.07	9.72	4.54	6.89
SS	LUS28	18	1⅞	6⅞	1⅜	3¾	(6) 10d	(4) 10d	1420	2520	1290	1790
									6.32	11.21	5.74	7.96
■	HUS28	16	1⅞	7⅞	3	6⅞	(22) 16d	(8) 16d	3605	5365	2675	4345
									16.04	23.86	11.90	19.33
■	HGUS28	12	1⅞	7⅞	5	6⅞	(36) 16d	(12) 16d	3310	7675	3310	6900
									14.74	34.19	14.74	30.73
■	LU210L	20	1⅞	8	1⅞	7⅞	(10) 10d	(6) 10d x 1½"	1140	2495	1020	1770
									5.07	11.10	4.54	7.87
SS	LUS210	18	1⅞	7⅞	1⅜	3¾	(8) 10d	(4) 10d	1420	2785	1290	2210
									6.32	12.39	5.74	9.83

1. Factored uplift resistances have been increased 15% for wind or earthquake loading; no further increase is allowed.
2. Designer must ensure that hanger is compatible with truss when reduced heel height is used.
3. d_e is the distance from the bearing seat to the top joist nail.
4. Resistances shown require a minimum 2-ply girder truss. For fastening to single-ply truss request technical bulletin T-C-N10TRSSCN and/or see installation notes.
5. Nails: 16d = 0.162" dia. x 3 1/2" long. See pp. 27–28 for other nail sizes and information.

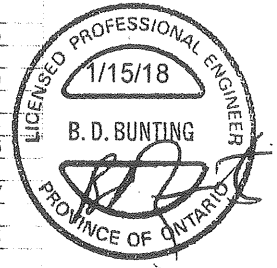
SIMPSON
Strong-Tie

Face-Mount Hangers

These products are available with additional corrosion protection. For more information, see p. 24.

These products are approved for installation with the Strong-Drive® SD Connector screw. See pp. 32-34 for more information.

Model No.	Ga.	Dimensions (in.)				Fasteners		Factored Resistance			
		W	H	B	d _e ³	Header	Joist	D.Fir-L		S-P-F	
								Uplift	Normal	Uplift	Normal
								(K _D = 1.15)	(K _D = 1.00)	(K _D = 1.15)	(K _D = 1.00)
								lb.	lb.	lb.	lb.
								kN	kN	kN	kN
Double 2x Sizes											
SS LUS24-2	18	3 3/8	3 3/8	2	1 1/2	(4) 16d	(2) 16d	835	2020	590	1435
								3.71	8.99	2.62	6.38
SS LUS26-2	18	3 3/8	4 1/8	2	4	(4) 16d	(4) 16d	1720	2595	1545	1920
								7.65	11.54	6.87	8.54
HHUS26-2	14	3 3/8	5 3/8	3	3 15/16	(14) 16d	(6) 16d	2850	7335	2065	5205
								12.68	32.63	9.20	23.15
HGUS26-2	12	3 3/8	5 7/8	4	4 1/8	(20) 16d	(8) 16d	4385	8950	3110	6355
								19.51	39.81	13.83	28.27
SS LUS28-2	18	3 3/8	7	2	4	(6) 16d	(4) 16d	1720	3325	1545	2575
								7.65	14.79	6.87	11.45
HHUS28-2	14	3 3/8	7 5/8	3	6 1/8	(22) 16d	(8) 16d	3765	8940	2675	6345
								16.75	39.77	11.90	28.22
HGUS28-2	12	3 3/8	7 7/8	4	6 1/8	(36) 16d	(12) 16d	6070	12980	4310	9215
								27.00	57.74	19.17	40.99
SS LUS210-2	18	3 3/8	9	2	6	(8) 16d	(6) 16d	2580	4500	2320	3195
								11.48	20.02	10.32	14.21
HHUS210-2	14	3 3/8	9 3/8	3	8	(30) 16d	(10) 16d	4670	9660	4235	7000
								20.77	42.97	18.84	31.14
HGUS210-2	12	3 3/8	9 7/8	4	8 1/8	(46) 16d	(16) 16d	6840	14015	4855	10270
								30.43	62.34	21.60	45.69
Triple 2x Sizes											
HGUS26-3	12	4 15/16	5 1/2	4	4 1/8	(20) 16d	(8) 16d	4385	8950	3110	6355
								19.51	39.81	13.83	28.27
HGUS28-3	12	4 15/16	7 1/2	4	6 1/8	(36) 16d	(12) 16d	6070	12980	4310	9215
								27.00	57.74	19.17	40.99
HHUS210-3	14	4 11/16	9	3	7 15/16	(30) 16d	(10) 16d	4670	9670	4235	6865
								20.77	43.02	19.84	30.54
HGUS210-3	12	4 15/16	9 1/4	4	8 3/8	(46) 16d	(16) 16d	6840	14645	4855	10400
								30.43	65.14	21.60	46.26
Quadruple 2x Sizes											
HGUS26-4	12	6 9/16	5 7/8	4	4 1/8	(20) 16d	(8) 16d	4385	8950	3110	6355
								19.51	39.81	13.83	28.27
HGUS28-4	12	6 9/16	7 3/8	4	6 1/8	(36) 16d	(12) 16d	6070	12980	4310	9215
								27.00	57.74	19.17	40.99
HHUS210-4	14	6 1/8	8 7/8	3	7 13/16	(30) 16d	(10) 16d	4670	10155	4235	7210
								20.77	45.17	18.84	32.07
HGUS210-4	12	6 9/16	9 3/8	4	8 3/8	(46) 16d	(16) 16d	6840	14645	4855	10400
								30.43	65.14	21.60	46.26
HGUS212-4	12	6 9/16	10 3/8	4	10 1/8	(56) 16d	(20) 16d	7640	14995	5425	10645
								33.98	66.70	24.13	47.35
HGUS214-4	12	6 9/16	12 3/8	4	11 1/8	(66) 16d	(22) 16d	10130	16400	7195	11645
								45.06	72.95	32.00	51.80
4x Sizes											
LUS46	18	3 3/8	4 3/8	2	3 3/8	(4) 16d	(4) 16d	1720	2595	1545	1920
								7.65	11.54	6.87	8.54
HHUS46	14	3 3/8	5 1/4	3	3 15/16	(14) 16d	(6) 16d	2540	7335	2065	5205
								11.30	32.63	9.20	23.15
HGUS46	12	3 3/8	5 1/4	4	4 1/8	(20) 16d	(8) 16d	4385	8950	3110	6355
								19.51	39.81	13.83	28.27
LUS48	18	3 3/8	6 3/8	2	3 3/8	(6) 16d	(4) 16d	1720	3325	1545	2575
								7.65	14.79	6.87	11.45
HHUS48	14	3 3/8	7 1/8	3	6 1/8	(22) 16d	(8) 16d	3765	8940	2675	6345
								16.75	39.77	11.90	28.22
HGUS48	12	3 3/8	7 1/8	4	6 1/8	(36) 16d	(12) 16d	6070	12980	4310	9215
								27.00	57.74	19.17	40.99
LUS410	18	3 3/8	8 3/8	2	5 3/8	(8) 16d	(6) 16d	2580	4500	2320	3195
								11.48	20.02	10.32	14.21
HGUS410	12	3 3/8	9	4	8 3/8	(46) 16d	(16) 16d	6840	14015	4855	10270
								30.43	62.34	21.60	45.69
HGUS412	12	3 3/8	10 3/8	4	10 1/8	(56) 16d	(20) 16d	7640	14995	5425	10645
								33.98	66.70	24.13	47.35
HGUS414	12	3 3/8	12 3/8	4	11 1/8	(66) 16d	(22) 16d	10130	16400	7195	11645
								45.06	72.95	32.00	51.80



Plated Truss Connectors

See footnotes on p. 258.

SITE COPY

TC – Truss Connectors

SIMPSON
Strong-Tie

The TC truss connector is an ideal connector for scissor trusses and can allow horizontal movement up to 1/4". The TC also attaches plated trusses to top plates or sill plates to resist uplift forces. Typically used on one or both ends of truss as determined by the building designer.

Material: 16 gauge

Finish: G90 galvanized

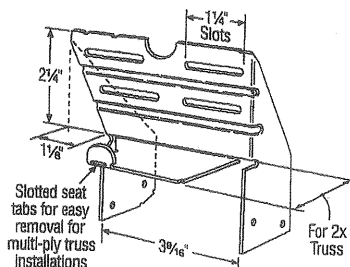
Design: Factored resistances are in accordance with CSA 086-14

Installation:

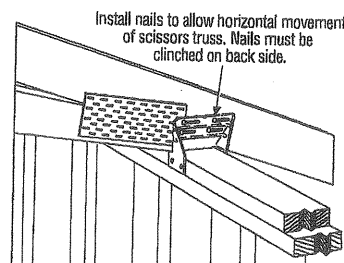
- Use all specified fasteners.
- Nails: 10d = 0.148" dia. x 3" long common wire, 10d x 1 1/2" = 0.148" dia. x 1 1/2" long.
- Drive 10d nails into the truss at the inside end of the slotted holes (inside end is towards the centre of the truss) and clinch on the back side. Do not seat these nails into the truss—allow room under the nail head for movement of the truss with respect to the wall.

Optional TC Installation:

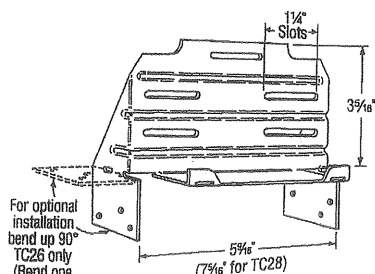
- Bend one flange up 90°. Drive specified nails into the top and face of the top plates or install Titen® screws into the top and face of masonry wall. See optional load tables and installation details.



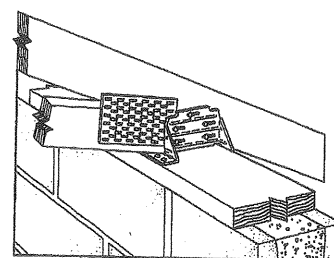
TC24
U.S. Patent 4,932,173



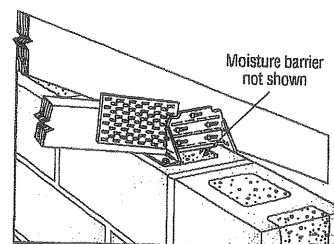
Typical TC24 Installation



TC26
(TC28 Similar)



Optional TC26 Installation for Grouted Concrete Block using a Wood Nailer
(8", 10", 12" Wall Installation Similar)



Optional TC26 Installation for Grouted Concrete Block using Titen Screws

Model No.	Fasteners		Factored Resistance	
	Truss	Wall Plates	D.Fir-L	S-P-F
			Uplift (K ₀ =1.15)	Uplift (K ₀ =1.15)
TC24	(4) 10d	(4) 10d	605	430
TC26	(5) 10d	(6) 10d	1015	720
TC28	(5) 10d	(6) 10d	1015	720

Optional TC Installation Table

Model No.	Fasteners		Factored Resistance	
	Truss	Wall Plates	D.Fir-L	S-P-F
			Uplift (K ₀ =1.15)	Uplift (K ₀ =1.15)
TC26	(5) 10d	(6) 10d x 1 1/2"	810	660
	(5) 10d	(6) 10d	930	660

1. Factored resistances have been increased 15% for earthquake or wind loading; no further increase allowed; reduce where other loads govern.
2. Grout strength is 15 MPa minimum.
3. Optional TC26 installation with 10d nails requires minimum 3" top plate thickness.
4. TC26 fastened to grouted concrete block with (6) – 3/16" x 2 1/4" Titen screws has a factored uplift resistance of 275 lb.



LIMIT
STATES
DESIGN

This technical bulletin is effective until June 30, 2019, and reflects information available as of March 1, 2017. This information is updated periodically and should not be relied upon after June 30, 2019. Contact Simpson Strong-Tie for current information and related warranty or see strongtie.com. © 2017 Simpson Strong-Tie Company. TSP-TC-17-01-17 exp. 6/19

(800) 999-5099
strongtie.com

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H/TSP

Seismic and Hurricane Ties (cont.)

These products are available with additional corrosion protection. For more information, see p. 24.

These products are approved for installation with the Strong-Drive® SD Connector screw. See pp. 32–34 for more information.

Model No.	Ga.	Fasteners			Factored Resistance ($K_D = 1.15$)					
					D.Fir-L			S-P-F		
		To Rafters/ Truss	To Plates	To Studs	Uplift	Lateral		Uplift	Lateral	
						F ₁	F ₂		F ₁	F ₂
					lb.	lb.	lb.	lb.	lb.	lb.
					kN	kN	kN	kN	kN	kN
H1	18	(6) 8d x 1 1/2"	(4) 8d	—	740	685	300	680	485	215
					3.29	3.05	1.33	3.02	2.16	0.96
SS H2A	18	(5) 8d x 1 1/2"	(2) 8d x 1 1/2"	(5) 8d x 1 1/2"	830	220	75	590	155	55
					3.69	0.98	0.33	2.62	0.69	0.24
SS H2.5A	18	(5) 8d	(5) 8d	—	805	160	160	755	160	160
					3.58	0.71	0.71	3.36	0.71	0.71
H2.5T	18	(5) 8d	(5) 8d	—	835	175	210	740	160	210
					3.71	0.78	0.93	3.29	0.71	0.93
SS H3	18	(4) 8d	(4) 8d	—	740	180	265	615	125	190
					3.29	0.80	1.18	2.74	0.56	0.85
H6	16	—	(8) 8d	(8) 8d	1585	1085	—	1125	770	—
					7.05	4.83	—	5.00	3.43	—
H7Z	16	(4) 8d	(2) 8d	(8) 8d	1390	670	—	990	475	—
					6.18	2.98	—	4.40	2.11	—
SS H8 ³	18	(5) 10d x 1 1/2"	(5) 10d x 1 1/2"	—	1120	—	—	1025	—	—
					4.98	—	—	4.56	—	—
SS H10A ³	18	(9) 10d x 1 1/2"	(9) 10d x 1 1/2"	—	1735	795	410	1505	565	290
					7.72	3.54	1.82	6.69	2.51	1.29
H10AR	18	(9) 10d x 1 1/2"	(9) 10d x 1 1/2"	—	1485	690	430	1220	570	305
					6.61	3.07	1.91	5.43	2.54	1.36
H10A-2	18	(9) 10d x 1 1/2"	(9) 10d x 1 1/2"	—	1835	1275	430	1645	880	305
					8.16	5.67	1.91	7.32	3.91	1.36
H10S ^{7,9}	18	(8) 8d x 1 1/2"	(8) 8d x 1 1/2"	(8) 8d	1465	795	315	1040	565	225
					6.52	3.54	1.40	4.63	2.51	1.00
H11Z	18	(6) 16d x 2 1/2"	(6) 16d x 2 1/2"	—	1095	920	545	780	655	390
					4.87	4.09	2.42	3.47	2.91	1.73
H14	18	① (12) 8d x 1 1/2"	(13) 8d	—	2390	855	320	1805	610	230
					10.63	3.80	1.42	8.03	2.71	1.02
		② (12) 8d x 1 1/2"	(15) 8d	—	2390	855	320	1805	610	230
					10.63	3.80	1.42	8.03	2.71	1.02
TSP	16	(9) 10d x 1 1/2"	(6) 10d x 1 1/2"	—	1295	440	—	920	310	—
					5.76	1.96	—	4.09	1.38	—
		(9) 10d x 1 1/2"	(6) 10d	—	1560	440	—	1105	310	—
					6.94	1.96	—	4.92	1.38	—

- Factored resistances have been increased 15% for short term loading; no further increase is allowed.
- Factored resistances are for one anchor. A minimum rafter thickness of 2 1/2" must be used when framing anchors are installed on the same side of the plate (exception: H2.5A).
- H8 factored uplift resistances for stud-to-bottom plate installations are 595 lb. (2.65 kN) for D.Fir-L and 390 lb. (1.74 kN) for S-P-F.
- When cross-grain bending or cross-grain tension cannot be avoided, mechanical reinforcement to resist such forces should be considered.
- Hurricane ties are shown installed on the outside of the wall for clarity. Installation on the inside of the wall is acceptable. For a continuous load path, connections at the top and bottom of the wall must be on the same side of the wall (see technical bulletin T-HTIECONPATH).
- Factored resistances in the F₁ direction are not intended to replace diaphragm boundary members or prevent cross grain bending of the truss or rafter members. Additional shear transfer elements shall be considered where there may be effects of cross grain bending or tension.

- H10S can have the stud offset a maximum of 1" from the rafter (centre to centre) for a reduced uplift of 1435 lb. (6.38 kN) D.Fir-L and 1015 lb. (4.51 kN) S-P-F.
- H10S nails to plates are optional for uplift but required for lateral loads.
- H10A may be field-bent up to a slope of 6/12. Multiply the tabulated uplift value x 0.75. Full tabulated lateral resistances apply.
- The factored resistances of stainless-steel connectors match carbon-steel connectors when installed with Simpson Strong-Tie® stainless-steel, SCNPR ring-shank nails. For more information, refer to engineering letter L-F-SSNAILS at strongtie.com.
- D.Fir-L/S-P-F factored uplift resistances for the H2.5A fastened to a 2x4 truss bottom chord and double top plates using (5) 8d x 1 1/2" nails into the top plates and (3) 8d x 1 1/2" nails into the lowest three flange holes into the truss bottom chord is 495 lb. (2.20 kN).
- Nails: 16d x 2 1/2" = 0.162" dia. x 2 1/2" long, 10d = 0.148" dia. x 3" long, 10d x 1 1/2" = 0.148" dia. x 1 1/2" long, 8d = 0.131" dia. x 2 1/2" long, 8d x 1 1/2" = 0.131" dia. x 1 1/2" long. See pp. 27–28 for other nail sizes and information.

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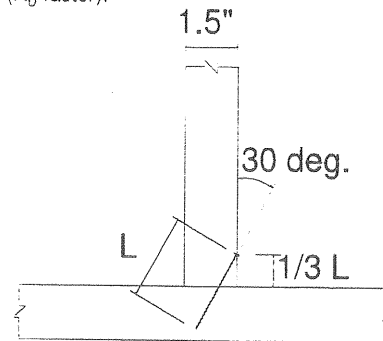
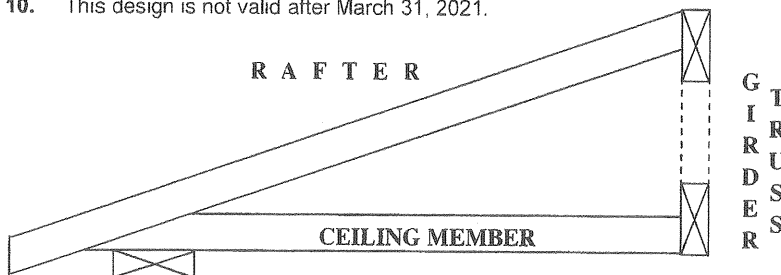
BEARING ANCHORAGE BY TOE-NAILS FOR LATERAL CAPACITY

B97791H1

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 O86-14, section 12.9.4.1.
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 30° 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 O86-14, section 12.9.4
10. This design is not valid after March 31, 2021.

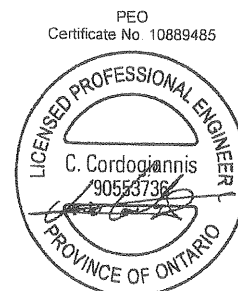


Nail type	Common wire	Common spiral	Common wire	Common spiral
Nail dia. (in)	0.160	0.152	0.144	0.122
	(3.5" nail)		(3" and 3.25" nail)	
LUMBER SIZE	MAXIMUM NUMBER OF TOE-NAILS			
2X4 SPF	2	2	3	3
2X4 D. Fir	2	2	2	2
2X6 SPF	4	4	4	5
2X6 D. Fir	3	3	3	4

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

December 2, 2019

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BEARING ANCHORAGE BY TOE-NAILS FOR WIND LOADING

B97791H2

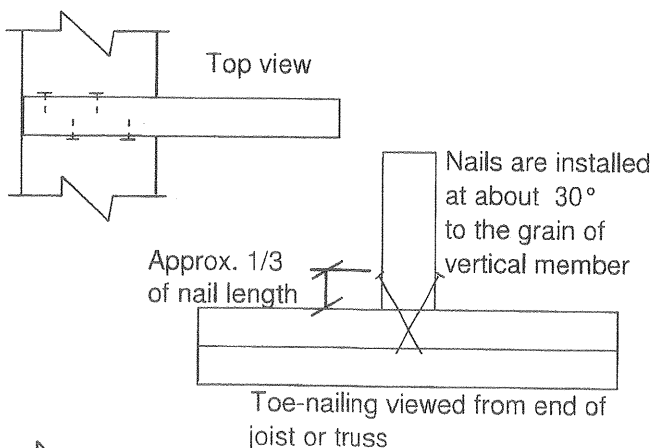
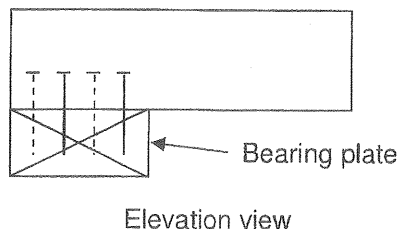
NAIL TYPE	LENGTH (IN)	DIAMETER (IN)	NAIL WITHDRAWAL CAPACITY (LB)	
			S-P-F	D. FIR
COMMON WIRE	3.00	0.144	30	42
	3.25	0.144	32	45
	3.50	0.160	38	52
COMMON SPIRAL	3.00	0.122	26	36
	3.25	0.122	28	40
	3.50	0.152	36	50

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

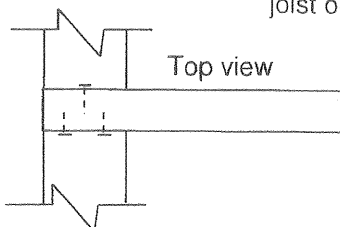
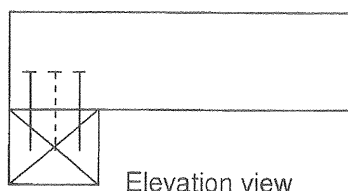
NOTES:

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 O86-14, section 12.9.5.2.
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 O86-14, section 12.9.5
9. This design is not valid after March 31, 2021.

Toe-nailing on 2x6 Bearing Plate



Toe-nailing on 2x4 Bearing Plate



MiTek®

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

December 2, 2019

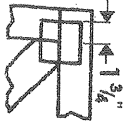
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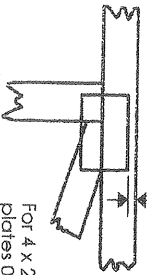


Symbols

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

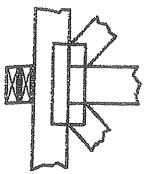
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



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

BEARING

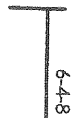


Indicates location where bearings (support) occur. Icons vary but reaction section indicates joint number where bearings occur.

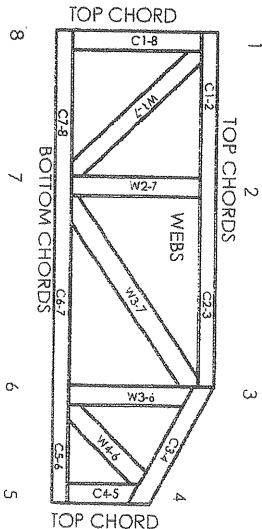
Industry Standards:

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

Numbering System



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



JOINTS ARE GENERALLY NUMBERED/LETTERED 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

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Mitek Engineering Reference Sheet: Mill-7473C rev. 10-08

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g., diagonal or X-bracing, is always required. See BCSI.
2. 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.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by TPIC.
7. Design assumes trusses will be suitably protected from the environment in accord with TPIC.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing of 10 ft. spacing or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures done is not sufficient.
20. Design assumes manufacture in accordance with TPIC Quality Criteria.

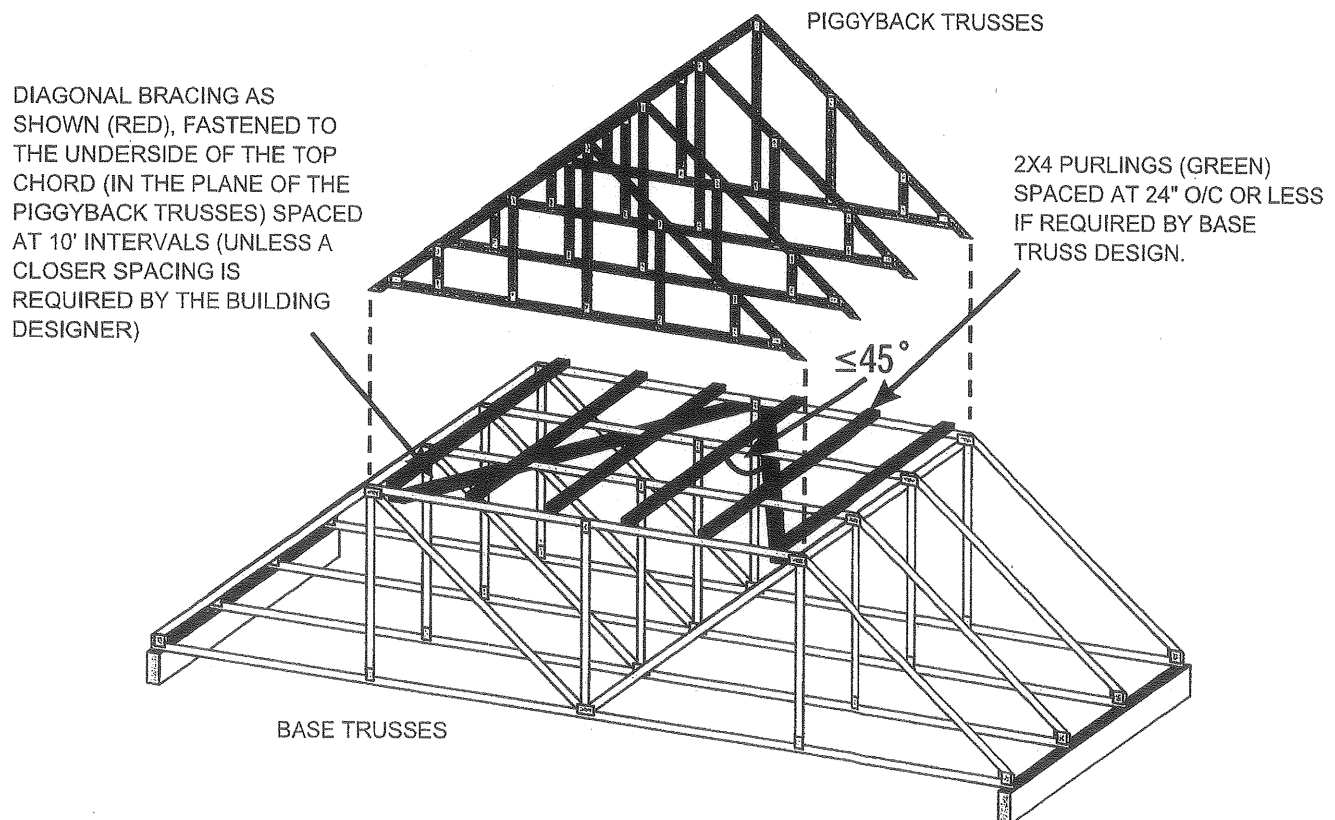
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Overview:

Where piggybacks are connected overtop of base trusses, 2x4 purlins must be first added to the flat portion of the base truss at a spacing no more than 24" o/c. These purlins not only provide support for the piggyback trusses above, but are required to laterally support the top chord of the base truss which will not have the sheathing directly connected to the flat portion of the base truss. This ensures the top chord, most often in compression, will not buckle laterally.

Further, the purlins in the plane of the flat portion require diagonal bracing to prevent lateral displacement of the purlins themselves where under certain conditions, the trusses may in fact all buckle in the same direction if this additional bracing is not added in the plane of the purlins.

Detail:

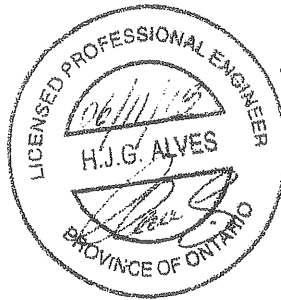


NOTE: THE SLOPED PORTION OF THE TOP CHORD OF THE BASE TRUSS AND PIGGYBACK TRUSS IN THIS SKETCH IS ASSUMED TO BE SHEATHED IN ACCORDANCE WITH THE OBC.

SKETCH FROM BCSI-CANADA 2013

Disclaimer:

OWTFA Tech Notes are intended to provide guidance to the design community both within the membership as well as to third party designers who might benefit from the information. The details have been developed by the OWTFA technical committee and although there may be professional engineers involved in development, the information contained in the tech-note are not intended to be used without having a professional engineer review the information for a specific application. The OWTFA takes no responsibility with respect to the information provided but has developed this tech-note to offer guidance where it is not currently readily available.



Alves Engineering Services Inc.

5208 Easton road
Burlington, Ontario L7L 6N6
(289) 259 5455

RESPONSABILITIES

- 1-Alves Engineering Services Inc. is responsible for the design of trusses as individual components
- 2-It is the responsibility of others to ascertain that the design loads utilized on this drawing meet or exceed the actual dead load imposed by the structure and the live load imposed by the local building code or the authorities having jurisdictions.
- 3- All dimensions are to be verified by owner, contractor, architect or other authority before manufacture.
- 4- Alves Engineering Services Inc. bears no responsibility for the erection of the trusses. Persons erecting trusses are cautioned to seek professional advice regarding temporary and permanent bracing system. Bracing shown on Alves Engineering Services Inc. drawings is specified for the truss as a single component and forms an integral part of the truss design, but is not meant to represent the only required bracing for that truss when trusses are installed in a series of trusses forming a roof truss system.
- 5- It is the manufactures responsibility to ensure that the trusses are manufactured in conformance with Alves Engineering Services Inc. specifications outlined below.

SPECIFICATIONS

- 1-Truss components sealed by Alves Engineering Services Inc. conform to the relevant sections of the current Building Code of Ontario and Canada (part 4 or part 9) or the current Canadian code for Farm Buildings in accordance with the application specified on the sealed truss component drawing. All truss component design procedures must conform to the current design standard issued by the truss plate institute of Canada (TPIC). All lumber and nailing stresses to conform to the current CSA wood design standard identified on the current Building Code and TPIC.
- 2- Lumber is to be the sizes and grade specified on the truss drawing.
- 3- Moist content of lumber is not to exceed 19% in service unless otherwise specified.
- 4- Plates shall be applied to both faces of the each truss joint and shall be positioned as shown on the truss drawings
- 5- Lumber used on manufacture of trusses is not to be treated with chemicals unless otherwise specified on the truss drawings.
- 6- The top chord is assumed to be continuously laterally braced by the roof sheathing or purlins at intervals specified on the truss drawing but not exceeding 24" c/c for (part 9) and not exceeding 48" for (part 4 or farm design)
- 7- When rigid ceiling is not attached directly to the bottom chord, lateral bracing is required and it should not exceed more than 3m or 10' intervals.
- 8-Refer to Mitek sheet MII7473C REV.10-08 attached for information on symbols, numbering system and General Safety notes.

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