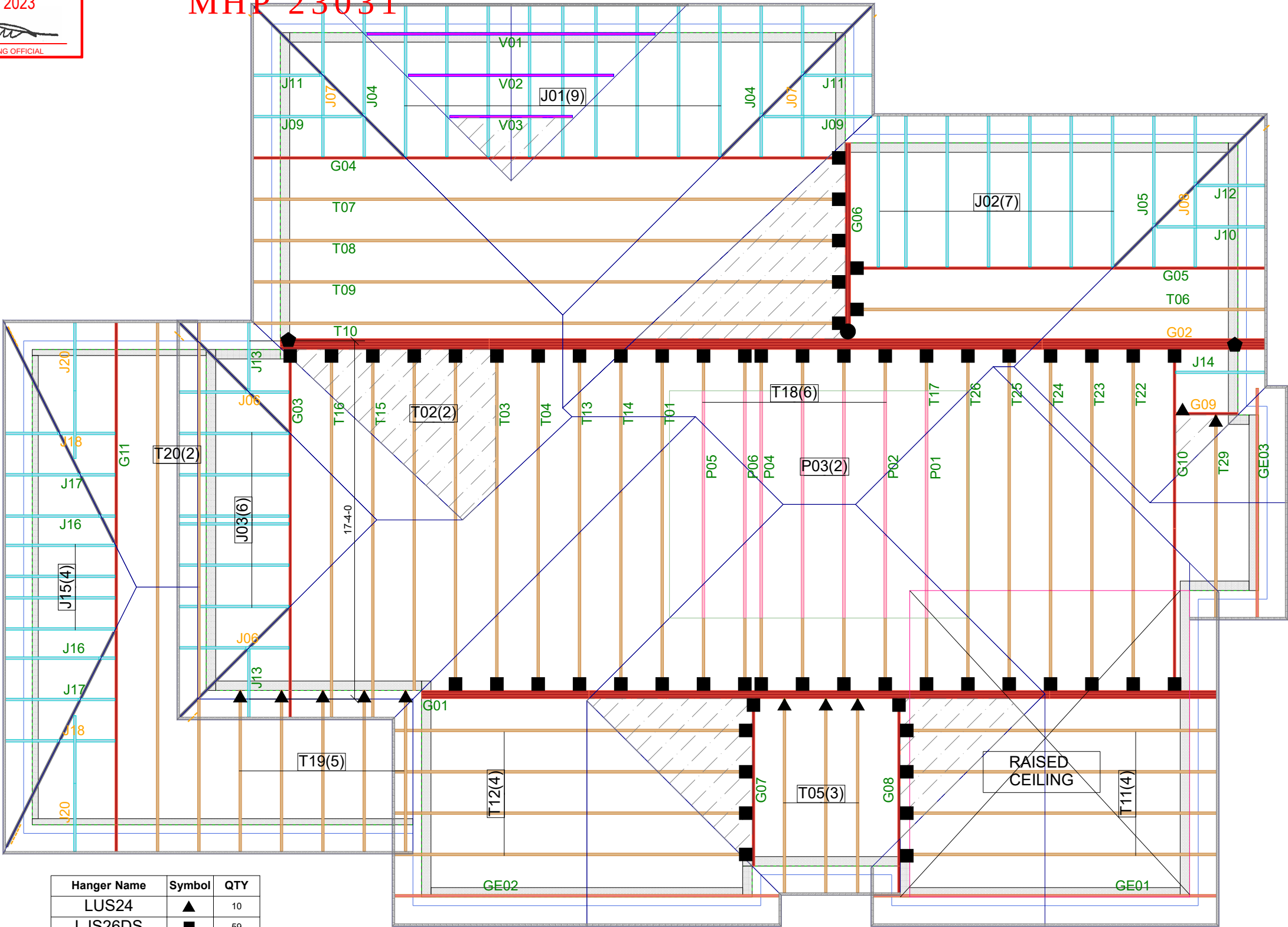


MHP 23031

LOWER GARAGE ROOF



Hanger Name	Symbol	QTY
LUS24	▲	10
LJS26DS	■	59
HGUS28-2	●	1
H2.5A	◆	2

Roof components shown on this layout with clear span less than 40ft are designed for loads as shown conforming to Part 9 building occupancy. Trusses or girder trusses exceeding 40 ft clear span or girders carrying roof trusses exceeding 40 ft clear span are designed for snow loads calculated according to Division B Part 4 Section 4.1.6.2 of OBC (O.Reg. 332/12):
 $S = I_s [S_s (C_b * C_w * C_s * C_a) + S_r]$ Where $I_s = 1.0$, $S_s = 2.3 \text{ kPa}$, $S_r = 0.4$, $C_b = 0.8$, $C_w = 1.0$, $C_a = 1.0$ and C_s calculated according to Section 4.1.6.2 Subsection 5, 6 and 7



CONVENTIONAL
FRAMING BY OTHERS

ALL CONVENTIONAL FRAMING TO CONFORM WITH PART 9 OF THE OBC. ROOF RAFTERS THAT CROSS OVER TRUSSES TO BE MIN. 2x4 SPF @ 24" C/C WITH A 2x4 VERTICAL POST TO THE TRUSS BELOW. VERTICAL POSTS TO BE Laterally BRACED SO THAT UNBRACED LENGTH DOES NOT EXCEED 6'. DESIGN OF CONVENTIONAL FRAMING IS THE RESPONSIBILITY OF THE PROJECT ENGINEER.

JOB INFORMATION

Customer	GREENPARK HOMES
Job #	23-00098R0
Address	ZADORRA ESTATES OSHAWA, ON
Model	ROSE 10-ELEV 1
Sales Rep	RALPH MIRIGELLO
Designer	RB
Date	7/06/23
Path	C:\MITEK\CA\JOBS\GREENPARK\ZADORRA ESTATES\ROSE 10-ELEV 1\ROSE 10-ELEV 1\

DESIGN INFORMATION

Code	NBCC 2015
Bldg	Residential - HSB (NBCC Part 9)
TC LL	34.8 lb/ft ²
TC DL	6.0 lb/ft ²
BC LL	0.0 lb/ft ²
BC DL	7.3 lb/ft ²
Deflection	LL=L/360 TL=L/360
Spacing	24" O/C unless otherwise noted
Complies With	OBC 2012 (2019 Amendment) CSA O86-14 and TPIC 2014

IMPORTANT INFORMATION

Hangers and Fasteners to be installed as per manufacturer

Refer to truss drawings in the Truss Engineering Package for ply-to-ply attachment notes

For site-framed valleys: top chords of all roof trusses must be laterally supported using 2x4 continuous bracing @24 O/C - all bracing must be anchored at ends as per TPIC Installation Guidelines

Read all notes on this page in addition to those shown on the KOTT Truss Engineering package

Field erection, handling and bracing are not the responsibility of KOTT, or KOTT Engineering

Unless noted otherwise, hurricane ties are to be installed at the bearings of all trusses > 40 ft clear span, and any girder or beam supporting trusses with a clear span >40 ft. See hanger legend for type.

Unless noted otherwise, for Part 9 bldgs, all trusses are to be anchored to the top of supporting walls as follows: trusses with a clear span <40 ft use 3-1/4" nails @ each bearing; trusses with a clear span >40 ft use 3-1/4" nails @ each bearing in addition to the appropriate hurricane tie.

KOTT Inc.
14 Anderson Blvd.
Uxbridge, ON
905.642.4400



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Engineering Notes: Trusses
MHP 23031



GREENPARK ZADORRA
ESTATES - ROSE 10-1

PLEASE READ ALL NOTES PRIOR TO INSTALLATION OF THE COMPONENT

RESPONSIBILITIES

THE UNDERSIGNED ENGINEER IS ONLY RESPONSIBLE FOR THE STRUCTURAL INTEGRITY OF THIS BUILDING COMPONENT FOR THE CONDITIONS AND LOADS SHOWN ON CALCULATION PAGE. THE STRUCTURAL INTEGRITY OF THE BUILDING AND THE VERIFICATION OF THE DIMENSIONS AND THE DESIGN LOADS USED ARE THE RESPONSIBILITY OF THE BUILDING DESIGNER. THE UNDERSIGNED ENGINEER DISCLAIMS ANY RESPONSIBILITY FOR DAMAGES AS A RESULT OF FAULTY OR INCORRECT INFORMATION, SPECIFICATION AND/OR DESIGNS FURNISHED TO THE ENGINEER. IT IS THE RESPONSIBILITY OF KOTT Inc. TO ENSURE THAT TRUSSES ARE MANUFACTURED IN CONFORMANCE WITH THESE DESIGNS AND WITH THE SPECIFICATIONS OUTLINED BELOW. THE UNDERSIGNED ENGINEER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT.

DESIGN INFORMATION

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

1. THE BUILDING USE AND OCCUPANCY TYPE IS AS INDICATED ON THE DRAWING.
2. GEOMETRY OF THE TRUSS AND DIMENSIONS INDICATED ON THE DRAWING ARE IDENTICAL TO THOSE OF THE INSTALLED TRUSS.
3. THE TRUSS LOADING INTENSITY AND DISTRIBUTION AS WELL AS LOAD TRANSFER MECHANISM IS THAT INDICATED ON THE DRAWING. NO BUILDINGS, TREES, PARAPETS OR OTHER PROJECTIONS HIGHER THAN THE ROOF FOR WHICH THE TRUSSES ARE USED ARE LOCATED WITHIN A DISTANCE LESS THAN TEN (10) TIMES THE DIFFERENCE IN HEIGHT, OR FIVE METERS (16 FT) WHICHEVER IS GREATER, UNLESS THE DRAWING INDICATES THAT THE SNOW DRIFTING HAS BEEN TAKEN INTO ACCOUNT.
4. THE TRUSSES ARE TO BE SUPPORTED AT THE BEARING POINTS INDICATED AND ANCHORED TO THE SUPPORTS WHERE CONSIDERED NECESSARY BY THE DESIGNER OF THE OVERALL STRUCTURE. BEARING SIZES SHOWN ARE THE MINIMUM REQUIRED TO PREVENT CRUSHING OF THE TRUSS MEMBERS AND DO NOT NECESSARILY TAKE INTO ACCOUNT STABILITY OF THE OVERALL BUILDING STRUCTURE. ELEVATION OF BEARINGS MUST BE CAREFULLY CHECKED AND SHIMMED TO ALIGNMENT FOR SOLID BEARINGS. ADEQUATE WOOD TRUSS BEARING IS THE RESPONSIBILITY OF THE BUILDING DESIGNER.

CODE

TRUSSES ARE DESIGNED IN CONFORMANCE WITH THE RELEVANT SECTIONS OF THE NATIONAL BUILDING CODE OF CANADA OR THE CANADIAN CODE FOR FARM BUILDINGS, WHICHEVER APPLIES TO THE BUILDING TYPE INDICATED ON THE DRAWING, THE ONTARIO BUILDING CODE, TPIC AND CANADIAN STANDARDS ASSOCIATION GUIDELINES.

HANDLING, INSTALLATION AND BRACING

1. THE TRUSSES MUST BE HANDLED AND INSTALLED BY A QUALIFIED PROFESSIONAL AS PER THE SUPPLIED DOCUMENT TITLED INFORMATION FOR TRUSS INSTALLERS AND THE BCSI-B1 AND BCSI-B3 SUMMARY SHEETS.
2. THE COMPRESSION CHORDS ARE Laterally Braced by Continuous Rigid Diaphragm Sheathing or as Specified on the Drawing.
3. TEMPORARY AND PERMANENT BRACING MUST BE INSTALLED AS INDICATED ON THE TRUSS DRAWING AND ACCORDING TO THE BCSI-B1 AND BCSI-B3 SUMMARY SHEETS. BRACING FOR THE LATERAL STABILITY OF THE TRUSS IS TO BE PROVIDED BY THE BUILDING DESIGNER.
4. IT IS RECOMMENDED THAT A PROFESSIONAL ENGINEER'S ADVICE BE OBTAINED FOR THE BRACING OF TRUSSES SPANNING MORE THAN 12.37M (40'-7").

KOTT TRUSS BEARING CAPACITY TABLE

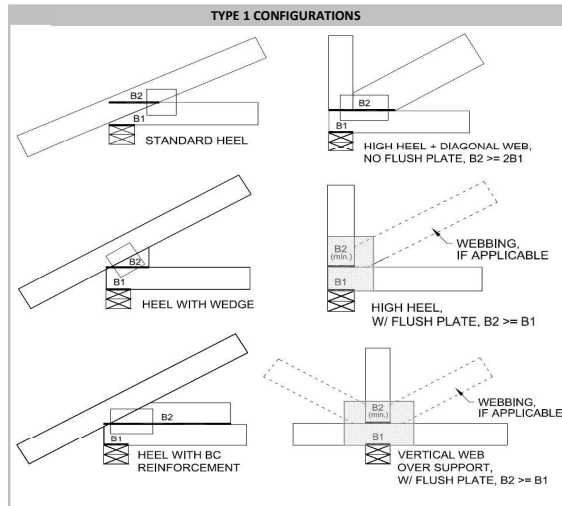
MHP 23031
(INTERNAL USE ONLY)

IES [L.S.], BY TRUSS LUMBER TYPE (SUPPORTED ON SPF #2 TOP PLATE)

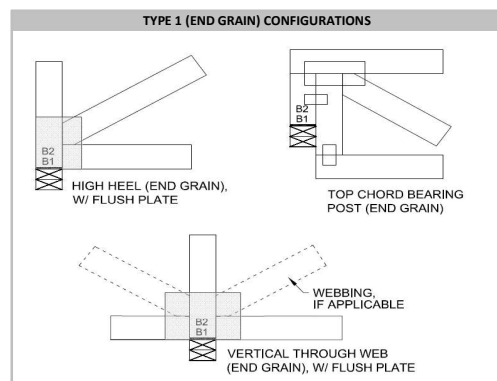
7-Jun-21

PER: *C. M...*
CHIEF BUILDING OFFICIAL

BEARING	1-PLY	2-PLY		3-PLY		4-PLY	
		SPF No.2	MSR2100	SPF No.2	MSR2100	SPF No.2	MSR2100
NO BEARING ENHANCER	PLATE (B1)	MSR2100	SPF No.2	MSR2100	SPF No.2	MSR2100	SPF No.2
	1 1/2"	1383	2767	4151	5534		
	2x4	3712	3228	7425	6457	11138	9685
	2x6	5834	5073	11668	10146	17503	15220
	2x8	7690	6687	15381	13375	23072	20063
FLUSH PLATE	BEARING PLATE (B1)	MSR2100	SPF No.2	MSR2100	SPF No.2	MSR2100	SPF No.2
	1 1/2"	1383	2767	4151	5534		
	2x4	3712	3228	7425	6457	11138	9685
	2x6	5834	5073	11668	10146	17503	15220
	2x8	7690	6687	15381	13375	23072	20063
BEARING ENHANCER	BEARING PLATE (B1)	MSR2100	SPF No.2	MSR2100	SPF No.2	MSR2100	SPF No.2
	1 1/2"	1383	2767	4151	5534		
	2x4	3712	3228	7425	6457	11138	9685
	2x6	5834	5073	11668	10146	17503	15220
	2x8	7690	6687	15381	13375	23072	20063
CPn-4 (Simpson)	2x4	4515	9030	13545	18065		
CPn-6 (Simpson)	2x6	7095	14190	21285	28390		
CP4-9 (KOTT)	2x4	6007	4898	12014	9796	18021	14694
CP6-9 (KOTT)	2x6	8677	7075	17354	14150	26031	21225
SBP4 (MiTek)	2x4	7288	11001	14714	18427		
SBP6 (MiTek)	2x6	11030	16865	22699	28534		
SBP6 (MiTek)	2x8	12886	20578	28269	35960		



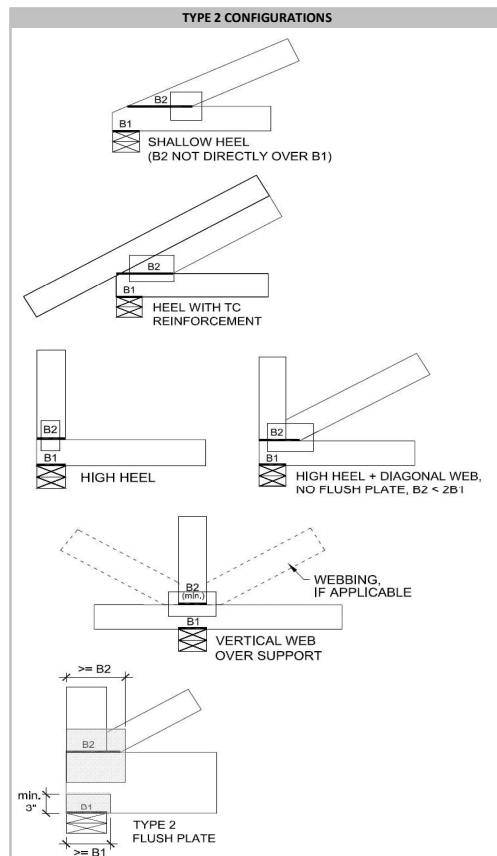
BEARING	POST (B2)	1-PLY		2-PLY		3-PLY		4-PLY	
		MSR2100	SPF No.2	MSR2100	SPF No.2	MSR2100	SPF No.2	MSR2100	SPF No.2
END GRAIN	BEARING PLATE (B1)	MSR2100	SPF No.2	MSR2100	SPF No.2	MSR2100	SPF No.2	MSR2100	SPF No.2
	2x4	3712	7425	11138	14851				
	2x6	5834	11668	17503	23337				
	2x8	7690	15381	23072	30763				
	2x8	7690	15381	23072	30763				
END GRAIN, BEARING ENHANCER	BEARING PLATE (B1)	MSR2100	SPF No.2	MSR2100	SPF No.2	MSR2100	SPF No.2	MSR2100	SPF No.2
	2x4	4515	9030	13545	18065				
	2x6	7095	14190	21285	28390				
	2x4	6007	4898	12014	9796	18021	14694	19801	15952
	2x6	8677	7075	17354	14150	26031	21225	31117	28300
CPn-4 (Simpson)	2x4	4515	9030	13545	18065				
CPn-6 (Simpson)	2x6	7095	14190	21285	28390				
CP4-9 (KOTT)	2x4	6007	4898	12014	9796	18021	14694	19801	15952
CP6-9 (KOTT)	2x6	8677	7075	17354	14150	26031	21225	31117	28300
CP6-9 (KOTT)	2x8	12834	13009	31117	26019	31117	31117	31117	31117



BEARING	POST (B2)	1-PLY		2-PLY		3-PLY		4-PLY	
		MSR2100	SPF No.2	MSR2100	SPF No.2	MSR2100	SPF No.2	MSR2100	SPF No.2
NO BEARING ENHANCER	BEARING PLATE (B1)	MSR2100	SPF No.2	MSR2100	SPF No.2	MSR2100	SPF No.2	MSR2100	SPF No.2
	2x4	2639	2152	5279	4304	7919	6457	10588	8609
	2x6	3393	2767	6787	5534	10181	8302	13575	11069
	2x8	4147	3382	8296	6764	12444	10146	16592	13529
	2x10	5562	4535	11124	9070	16686	13606	22248	18141
	2x4	3959	3228	7919	6457	11878	9685	15838	12914
	2x6	4808	3920	9616	7840	14424	11761	19232	15681
	2x8	4808	3920	9616	7840	14424	11761	19232	15681
	2x8	5467	4458	10935	8916	16403	13375	21871	17833
	2x8	5467	4458	10935	8916	16403	13375	21871	17833
FLUSH PLATE	BEARING PLATE (B1)	MSR2100	SPF No.2	MSR2100	SPF No.2	MSR2100	SPF No.2	MSR2100	SPF No.2
	2x4	4672	3809	9344	7619	14016	11429	18689	15238
	2x6	4672	3809	9344	7619	14016	11429	18689	15238
	2x8	4672	3809	9344	7619	14016	11429	18689	15238
	2x10	4672	3809	9344	7619	14016	11429	18689	15238
	2x4	4672	3809	9344	7619	14016	11429	18689	15238
	2x6	4672	3809	9344	7619	14016	11429	18689	15238
	2x8	4672	3809	9344	7619	14016	11429	18689	15238
	2x10	4672	3809	9344	7619	14016	11429	18689	15238
	2x8	7342	5986	14684	11973	22026	17959	29368	23946

NOTES:

- Factored truss reaction shall not exceed bearing capacity corresponding to: configuration type, size of bearing surfaces, truss lumber, # of plies, and applicable enhancers.
- Values in table are in conformance with CSA O86-14 Cl. 6.5.7 and TPIC 2014-Update 2, and may be used for residential or commercial designs.
- Values in table are in conformance with MiTek Canada Detail B37821Q "SPF Bearing Capacities".
- Values in table are in conformance with Simpson Catalogue C-C-CAN2020.
- Conditions for use of table values include: standard duration ($K_{d1}=1$), dry lumber ($K_{d2}=1$), untreated lumber ($K_{d3}=1$), length of bearing factor not applied ($K_{d4}=1$).
- Size factor (K_{d5}) applied to support material calculation when acceptable. Flush plate factor (K_p) applied to truss material calculation when acceptable (ie. excludes end grain).
- Flat roof factor (K_r) must applied for trusses making up a flat roof system; to do so, multiply bearing capacity values by 0.75 for this application.
- Bearing plate is to be specified by the project engineer; values in table assume a bearing material of SPF #2 (or better).
- When required, flush plate must not be located further than 1/4" away from bearing surface, and must cover the entire bearing plate length (B1).
- When required, bearing enhancer must be installed as per manufacturer's guidelines.
- Type 2 bearing configurations can be converted to use Type 1 table values as outlined in TPIC 2014-Update 1 Cl. 7.5.9.
- This table is not valid after April 30, 2022.



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PER: *C. M...*
CHIEF BUILDING OFFICIAL

MHP 23031

STANDARD DETAIL MSD2015-H

Issued: MARCH 1, 2022

Expiry: APRIL 30, 2024

TOE-NAIL CAPACITY DETAILS

LATERAL AND WITHDRAWAL RESISTANCE OF BEARING ANCHORAGE BY TOE-NAILS

NAIL TYPE	Length (in)	Diameter (in)	LATERAL Resistance per nail (Lbs.)		WITHDRAWAL Resistance per nail (Lbs.)	
			SPF	D. FIR	SPF	D. FIR
COMMON WIRE	3.00	0.144	122	139	30	42
	3.25	0.144	127	144	32	45
	3.50	0.160	152	173	38	52
COMMON SPIRAL	3.00	0.122	96	108	26	36
	3.25	0.122	97	108	28	40
	3.50	0.152	142	161	36	50
3.25" Gun nail	3.25	0.120	94	105	28	39

Note: If using truss with D. Fir lumber and SPF bearing plate, use tabulated SPF values in table.

Nail type:	Common wire	Common spiral	Common wire	Common spiral	Gun Nail
Diameter (in.)	0.160	0.152	0.144	0.122	0.120
Length (in.)	3.50	3.50	3.00	3.00	3.25
LUMBER	MAXIMUM NUMBER OF TOE-NAILS				
2x4 SPF	2	2	3	3	3
2x6 SPF	4	4	4	5	5
2x4 D. FIR	2	2	2	2	2
2x6 D. FIR	3	3	3	4	4

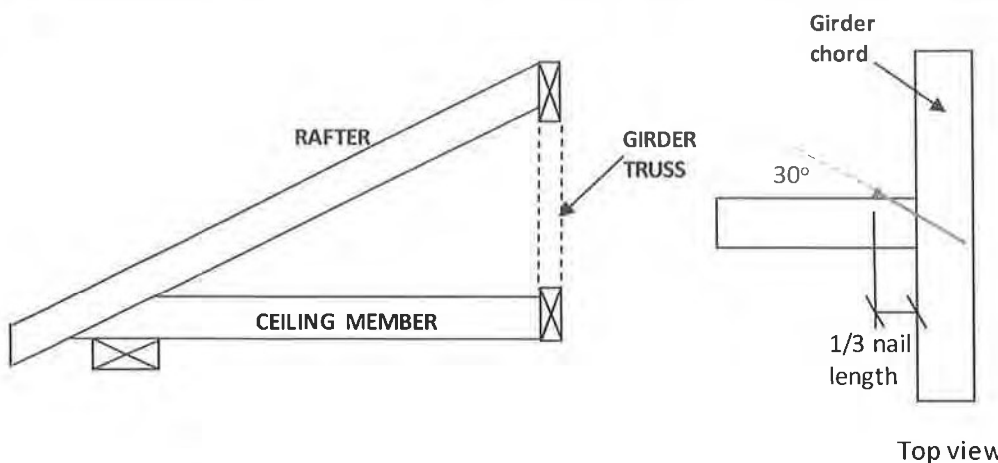


Figure 1: Toe-Nailing Rafter / Ceiling Member to Girder Truss



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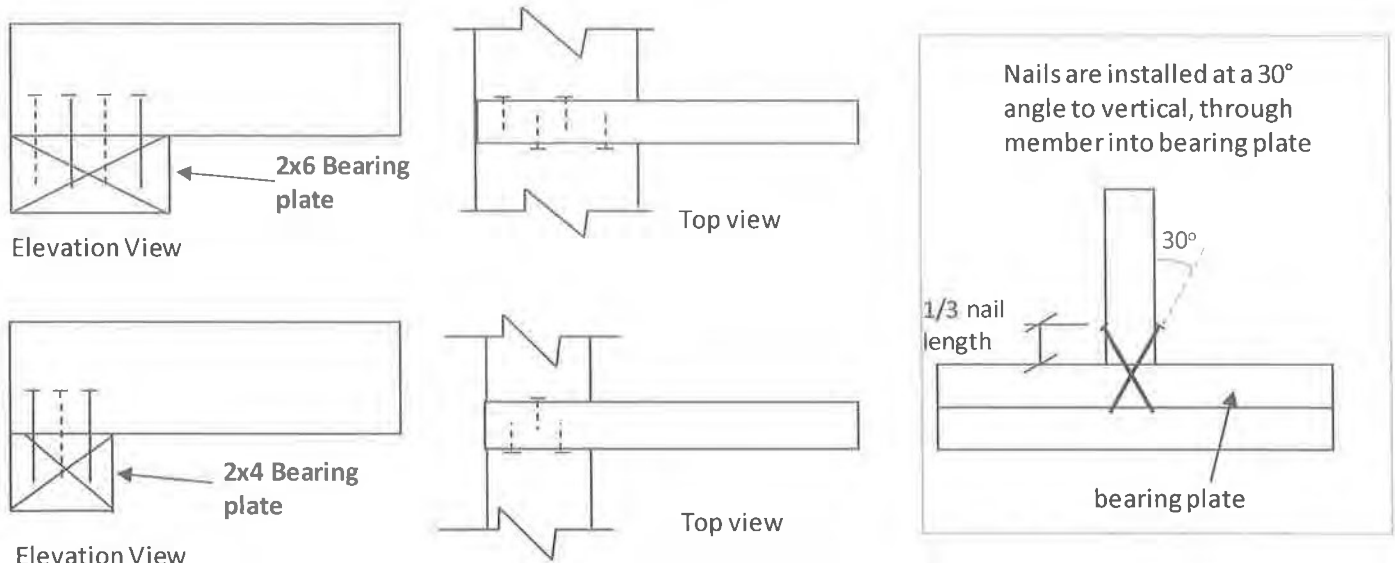
STANDARD DETAIL MSD2015-H

Issued: MARCH 1, 2022

Expiry: APRIL 30, 2024

TOE-NAIL CAPACITY DETAILS

Figure 2: Toe-Nail Anchorage to Bearing Plate for Uplift



NOTES:

1. Rafter and ceiling members may be connected to top and bottom chords of girder truss by toe-nailing the members into the girder chords (see fig. 1), provided the factored vertical reactions of the supported members do not exceed the lateral resistance of the toe-nails. Mechanical connectors (hangers) are required if factored vertical reactions exceed the toe-nail capacity, or if the connection must resist horizontal loads (loads perpendicular to the face of girder or rafter).
2. Trusses, rafters or ceiling members may be anchored to the bearing plate with toe-nails (see fig. 2), provided that the factored uplift reactions due to **wind or earthquake loads** do not exceed the **withdrawal resistance of the toe-nails**. Mechanical anchors (tie-downs) are required for reactions that exceed the toe-nail withdrawal capacity. Toe-nail anchorage to bearing plates is **NOT** permitted if uplift reactions are generated from gravity loads (snow, floor live, dead).
3. Tabulated toe-nail resistances on page 1 are for **one** toe-nail. Multiply unit values by the number of nails used in the connection. Maximum number of nails in a connection shall not exceed the tabulated limits shown on page 1 for a given lumber size /species.
4. Nail values are based on specific gravity of $G = 0.42$ (SPF) and $G = 0.49$ (D. Fir).
5. 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.
6. For wind / earthquake loads, tabulated lateral resistances may be multiplied by 1.15 (K_D factor). No increases are permitted for tabulated withdrawal resistances.
7. Lumber must be dry ($< 19\%$ moisture content) at the time of nail installation.
8. Nail values in this table comply with CSA O86-19, Clause 12.9.



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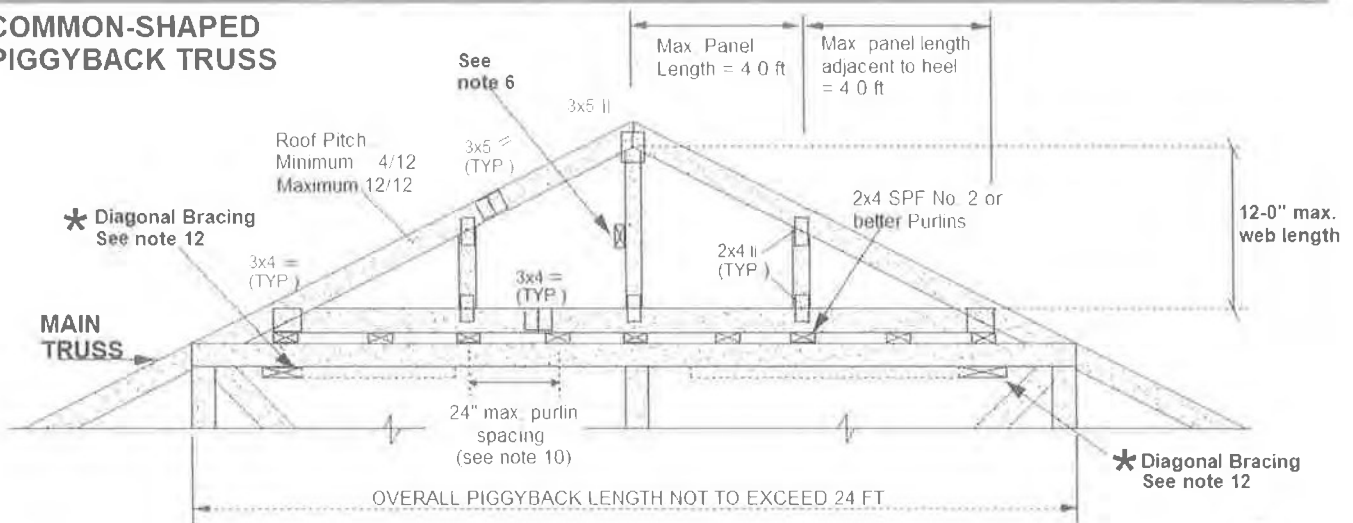
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STANDARD DETAIL MSD2015-I

Issued: MARCH 1, 2022

Expiry: APRIL 30, 2024

STANDARD PIGGYBACK TRUSS

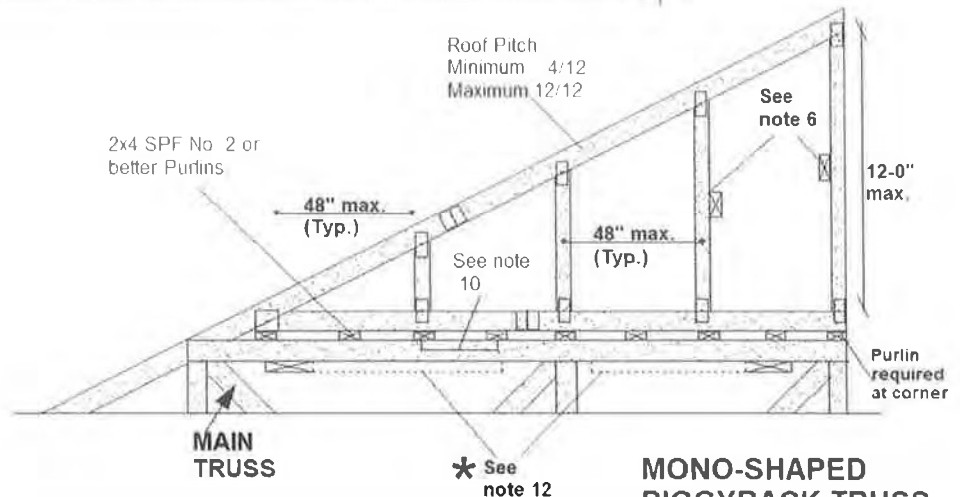
COMMON-SHAPED
PIGGYBACK TRUSS

Specified Load Rating:

Top chord live:	60.0 PSF
Top chord dead:	6.0 PSF
Bottom chord live:	0.0 PSF
Bottom chord dead:	7.3 PSF

Truss spacing not to exceed 24 inches cc

The design requirements and limits shown on this page are applicable to both common shaped and mono-shaped piggybacks. Diagrams are for illustration purposes only.

MONO-SHAPED
PIGGYBACK TRUSS

NOTES:

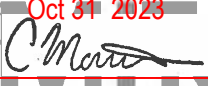
1. This detail is applicable only to projects conforming to **PART 9 NBCC2015** that do not require a wind analysis to be incorporated into the truss design. Piggyback length not to exceed 24 ft.
2. All piggyback truss lumber to be SPF or D. Fir species and No. 2 DRY (or better) grade.
3. Piggyback top chord size shall be 2x4. Vertical webs and bottom chord sizes shall be 2x3 or 2x4.
4. Splice joints shall not be located in the first panel adjacent to the heel joint or peak joint. Splices shall be located at 1/4 length of any permissible panel.
5. Maximum web length not to exceed 12.0 ft. Maximum panel lengths not to exceed 48 inches.
6. One continuous lateral brace required at $\frac{1}{2}$ length of all vertical members longer than 6.0 ft. Scab brace or L-brace substitutions are permitted. Scab braces shall be limited to 10 ft. long webs or less. Scab and L-braces shall cover 90% of web length and connected as per MITEK detail MSD2015-K.
7. Piggyback truss must be installed directly on top of each main truss.
8. All plates shall be MiTek MT20, centered at each joint and pressed into both faces of truss.
9. **DO NOT** cantilever mono-shaped piggyback truss over the end of main truss. Piggyback length must match the length of the flat chord of the main truss.
10. Purlin spacing to be equal to main truss maximum unbraced top chord length (as shown on main truss engineering drawing), but not to exceed 24 inches c/c.
11. Purlin design and overall roof system bracing shall be specified by the building designer.
12. Diagonal bracing required. See **'BCSI CANADA -B2C: FIELD ASSEMBLY & OTHER SPECIAL CONDITIONS'**

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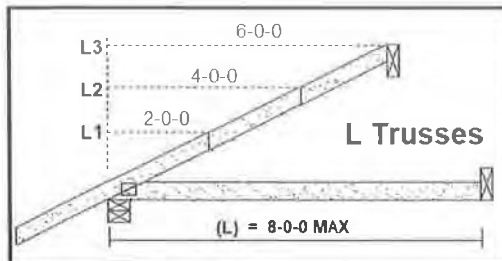
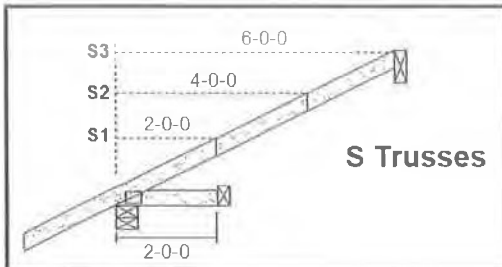
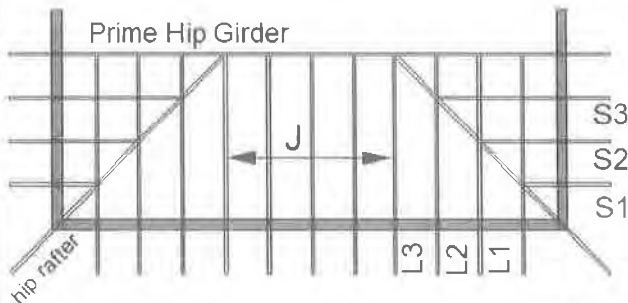
STANDARD DETAIL MSD2015-J

Issued: MARCH 17, 2021

Expiry: APRIL 30, 2023

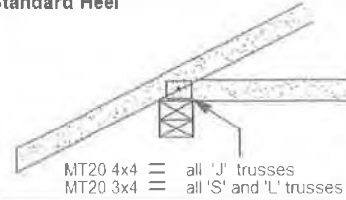
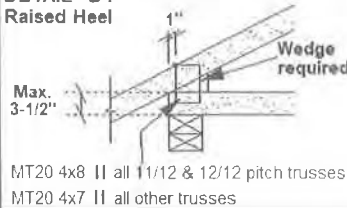
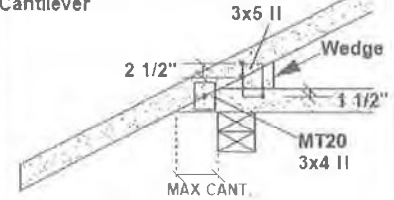
STANDARD HIP END FRAMING

PLAN VIEW



Specified Load Rating:

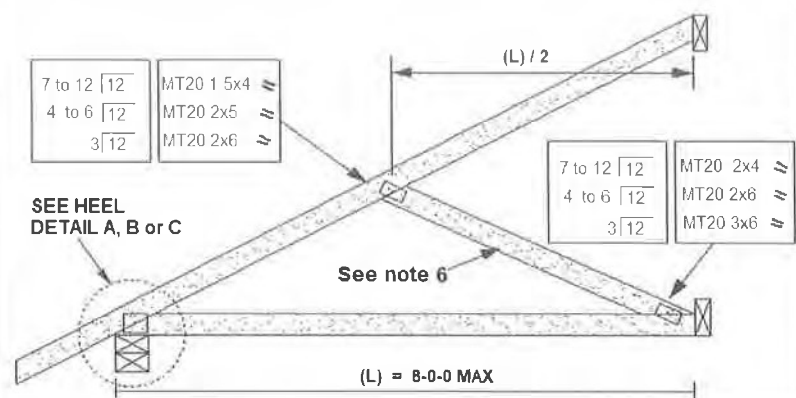
Top chord Live:	51.0 PSF or less
Top chord Dead:	6.0 PSF or less
Bottom chord Live:	0.0 PSF
Bottom chord Dead:	7.3 PSF or less

HEEL DETAIL 'A'
Standard HeelDETAIL 'B':
Raised HeelHEEL DETAIL 'C'
Cantilever

CANTILEVER DETAIL 'C'

SLOPE	MAX CANT.	WEDGE PLATE	WEDGE SIZE
3/12	17"	3 X 5	2 X 3
4/12	14"	3 X 5	2 X 3
5/12	12"	3 X 5	2 X 4
6/12	10"	3 X 5	2 X 4
7/12	9"	3 X 5	2 X 6
8/12	8 5/8"	3 X 5	2 X 6
9/12	8"	3 X 5	2 X 6
10/12	7 5/8"	3 X 5	2 X 6

J Trusses



PEO

Certificate No. 10889485

NOTES:

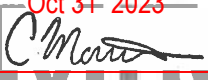
1. This detail is valid only for projects conforming to **PART 9 NBCC 2015** that do not require a wind analysis to be incorporated into the design of the trusses.
2. Overhang length shall not exceed 24 inches.
3. All lumber shall be 2x4 SPF (or D-Fir) DRY No. 2 grade or better.
4. All plates specified are MITEK MT20, pressed into both faces of each truss. Heel plates of all trusses shall conform to heel details 'A', 'B' or 'C'.
5. Diagonal hip rafter design shall conform to section 9.23.14.6 of NBCC 2015.
6. For 6.0 ft. or less span, diagonal web on truss 'J' is optional. Girder design must reflect choice of partial jack ('J' with diagonal web) or open jack ('J' without diagonal web)
7. All truss-to-rafter and truss-to-truss connections shall be specified as per MITEK standard detail 'MSD2015-H: Toe-Nail Capacity Details'



TRUE COPY

OF PERMIT PLANS

Oct 31 - 2023

PER: 
CHIEF BUILDING OFFICIAL

MHP 23031

STANDARD DETAIL MSD2015-K

Issued: MARCH 1, 2022

Expiry: APRIL 30, 2024

STANDARD GABLE END DETAIL

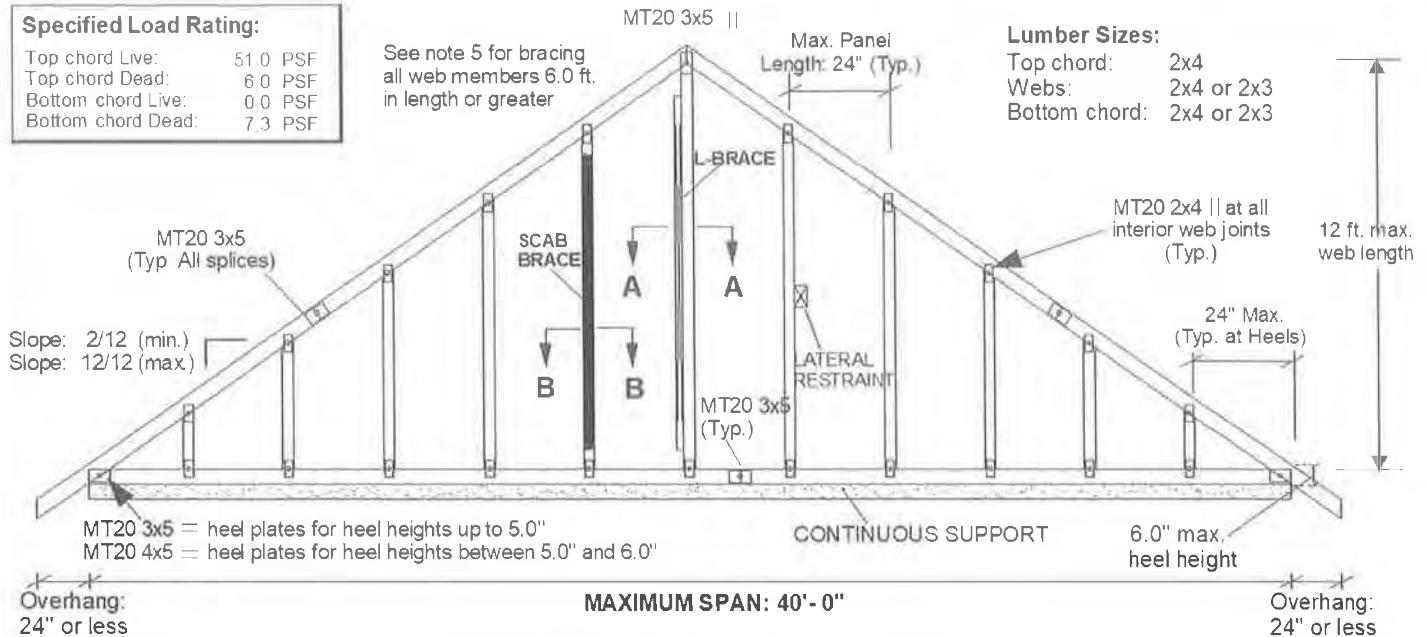
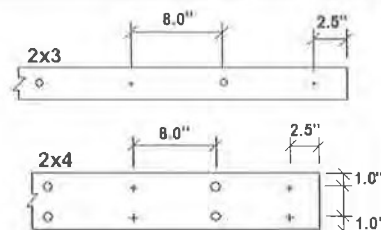
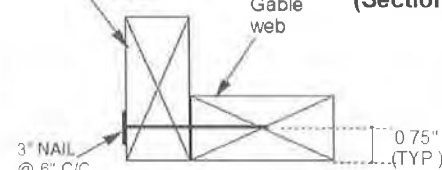
Specified Load Rating:

Top chord Live:	51.0 PSF
Top chord Dead:	6.0 PSF
Bottom chord Live:	0.0 PSF
Bottom chord Dead:	7.3 PSF

See note 5 for bracing
all web members 6.0 ft.
in length or greater

Lumber Sizes:

Top chord:	2x4
Webs:	2x4 or 2x3
Bottom chord:	2x4 or 2x3

SCAB BRACE DETAIL
(Section B-B)SPF No. 2 DRY Scab, same
size as web. Scab brace
must cover 90% of web length+ 0.122"x3.0" nail driven from front face
o 0.122"x3.0" nail driven from back face2x4 SPF No. 2
DRY L-BraceL BRACE DETAIL
(Section A-A)Fasten L-Brace to narrow edge of web with one row of 0.122" x 3.0"
nails spaced at 6.0" c/c along entire length of web. Brace must cover
90% of the web length. Respect a 2.5" minimum end distance.

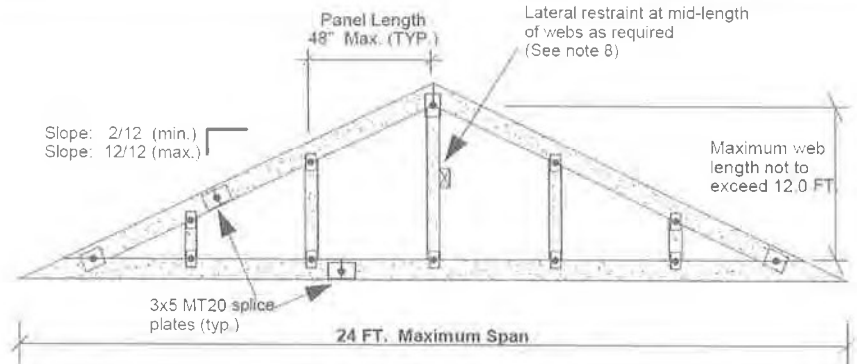
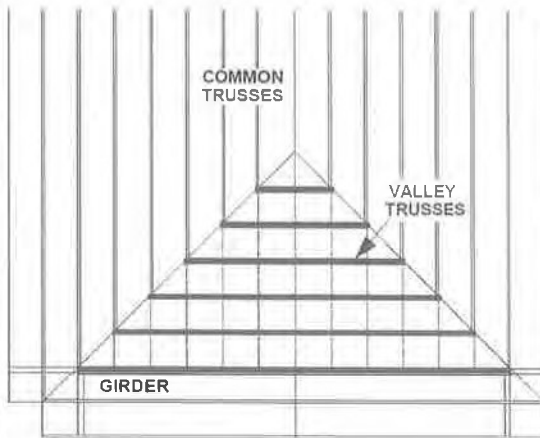
Notes:

1. This detail is only valid for projects conforming to **Part 9, NBCC 2015** that do not require a wind analysis to be incorporated into the design of the truss.
2. This detail is for vertical (gravity) load rating of the truss only. Truss must be continuously supported over the entire length of bottom chord.
3. Maximum web length not to exceed 12.0 ft. Spacing of gable stud webs in the truss not to exceed 24 inches cc.
4. Splice joints shall not be located in the first panel adjacent to the heel joint or peak joint.
5. Lateral restraint required at half-length of all webs over 6.0 ft. long. Alternatively install an L-Brace or scab brace as shown above. Scab braces shall be limited to 10 ft. long webs or less.
6. All plates are MITEK MT20 pressed into both faces of truss.
7. All lumber to be SPF (or D-Fir) DRY and of No.2 grade or better.
8. Additional building bracing is typically installed to brace the face of the end wall assembly. See BCSI Canada 'Building Designer Responsibilities for Gable End Frame Bracing' for additional information on building bracing for gable-end assemblies.

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VALLEY SET DETAIL

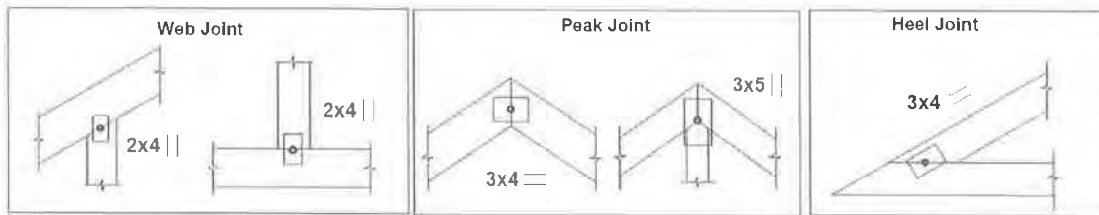
VALLEY SET ROOF FRAMING PLAN



VALLEY TRUSS LUMBER:

Top Chord	2x4
Bottom Chord	2x3 or 2x4
Web	2x3 or 2x4

Splices (if required) shall be located at 1/4 point of a panel. Splice joints shall not be located in the first panel adjacent to the heel joint or peak joint. If beveling the bottom chord, splice plates shall be flush with top edge of bottom chord.

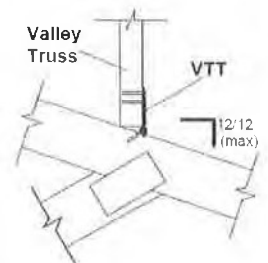
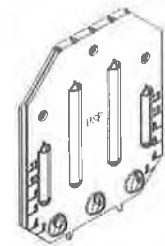


NOTES:

- Specified roof loads shall not exceed the maximum limits shown below:

Top chord:	Live =	70.0 PSF
Top Chord:	Dead =	6.0 PSF
Bottom Chord:	Live =	0.0 PSF
Bottom Chord:	Dead =	7.3 PSF
- Valley truss design assumes continuous support by the truss system underneath. Spacing of all valley trusses as well as the underlying trusses shall not exceed **24 in. c/c**.
- Vertical web spacing in valley trusses not to exceed **48 in. c/c**. Web lengths not to exceed 12 ft.
- All lumber to be DRY No. 2 grade or better, SPF or D-Fir.
- Bottom chord may be beveled to match the slope of the intersecting roof. If beveling, a minimum 2x4 bottom chord is required, with a maximum bevel slope of 4/12 (spliced chord) or 8/12 (non-spliced chord). For bevel slopes exceeding the 2x4 limits, use a 2x6 bottom chord.
- Truss plates are MITEK MT20 pressed into both faces of the truss and centered at each joint.
- Use MiTek VTT Valley Truss Ties to attach each valley truss at the intersection point between valley chord and underlying truss chord. Install clips as per product installation instructions. Alternatively, toe-nail valley truss bottom chord at all intersection points with each underlying truss, using two 0.122"x3.25" nails per connection.
- One continuous lateral brace is required at **1/2 length** of all webs that exceed 6.0 ft. in length.
- This detail is only valid for residential projects conforming to **PART 9 - NBCC2015**, that do not require a wind analysis to be incorporated into the design of the trusses.

MITEK VTT (Valley Truss Tie)



Install as per MiTek product installation instructions

PEO
Certificate No 10889485



B1C

BCSI-B1C SUMMARY SHEET - GUIDE FOR HANDLING, INSTALLING, RESTRAINING AND BRACING OF TRUSSES
Spans over 60' may require complex permanent bracing. Please always consult a registered design professional.

General Notes

Trusses are not marked in any way to identify the frequency or location of temporary lateral restraint and diagonal bracing. Follow the recommendations for handling, installing and temporary restraint and bracing of trusses. Refer to BCS1-CANADA - Guide to Good Practice for Handling, Installing, Restraint and Bracing of Metal Plate Connected Wood Trusses for more detailed information.

Truss Design Drawings may specify locations of permanent lateral restraint or reinforcement for individual truss members. Refer to the BCS1-B1C Summary Sheet for more information. An other permanent bracing design is the responsibility of the building designer.

NOTICE The consequences of improper handling, erecting, installing, restraining and bracing can result in a collapse of the structure, or worse, serious personal injury or death.

NOTICE Les conséquences d'une manipulation, d'une installation, d'une installation, d'un renforcement ou d'un autre bracement permanent peuvent entraîner l'effondrement de la structure, ou pire, des blessures graves ou la mort.

NOTICE Exercice care when removing handling and handling trusses to avoid damaging trusses and personnel. Wear personal protective equipment for the eyes, feet, hands and head when working with trusses.

NOTICE Faites attention lorsque vous retirez des sangles et manipulez des fermes pour éviter d'endommager les fermes et personnel. Portez l'équipement de protection individuelle pour les yeux, les pieds, les mains et la tête lorsque vous travaillez avec des fermes.

Handling - Manipulation

NOTICE Avoid lateral bending. Evitez la flexion latérale.

NOTICE The contractor is responsible for properly receiving, unloading and storing the trusses at the jobsite. Unload trusses to smooth surface to prevent damage. L'entrepreneur est responsable de la réception, du déchargement et de l'entreposage appropriés des fermes sur le chantier de construction. Déchargez les fermes sur une surface lisse pour éviter tout dommage.

Trusses may be unloaded directly on the ground at the time of delivery or stored temporarily in contact with the ground after delivery. If trusses are to be stored for more than one week, place blocking of sufficient height beneath the slack of trusses at (2.4 m) or (8 ft) on center (see).

For trusses stored for more than one week, cover bundles to protect from the environment. Pour des fermes entreposées pendant plus d'une semaine, couvrez les lots pour les protéger des intempéries.

Refer to BCS1-CANADA for more detailed information pertaining to handling and storage of trusses. Reportez-vous au BCS1-CANADA pour obtenir des renseignements détaillés concernant la manipulation et l'entreposage des fermes sur le chantier de construction.

Remarques générales

Les fermes ne sont pas marquées d'aucune façon pour identifier la fréquence ou l'emplacement de la retenue latérale temporaire ou du contreventement diagonal. Suivez les recommandations pour la manipulation, l'installation et le contreventement temporaire des fermes. Reportez-vous au BCS1-CANADA - Guide to Good Practice for Handling, Installing, Restraint and Bracing of Metal Plate Connected Wood Trusses for more detailed information.

Les aspects de conception de fermes peuvent précéder des plans de retenue latérale permanente ou de renforcement pour des membres de fermes individuelles. Reportez-vous à la fiche sommaire BCS1-B1C pour obtenir plus de renseignements. La conception du bracement est la responsabilité de toute autre conception de contreventement.

NOTICE Les conséquences d'une manipulation, d'une installation, d'une installation, d'un renforcement ou d'un autre bracement permanent peuvent entraîner l'effondrement de la structure, ou pire, des blessures graves ou la mort.

NOTICE Exercice care when removing handling and handling trusses to avoid damaging trusses and personnel. Wear personal protective equipment for the eyes, feet, hands and head when working with trusses.

NOTICE Faites attention lorsque vous retirez des sangles et manipulez des fermes pour éviter d'endommager les fermes et personnel. Portez l'équipement de protection individuelle pour les yeux, les pieds, les mains et la tête lorsque vous travaillez avec des fermes.

NOTICE The contractor is responsible for properly receiving, unloading and storing the trusses at the jobsite. Unload trusses to smooth surface to prevent damage. L'entrepreneur est responsable de la réception, du déchargement et de l'entreposage appropriés des fermes sur le chantier de construction. Déchargez les fermes sur une surface lisse pour éviter tout dommage.

Handling - Manipulation

NOTICE Avoid lateral bending. Evitez la flexion latérale.

NOTICE The contractor is responsible for properly receiving, unloading and storing the trusses at the jobsite. Unload trusses to smooth surface to prevent damage. L'entrepreneur est responsable de la réception, du déchargement et de l'entreposage appropriés des fermes sur le chantier de construction. Déchargez les fermes sur une surface lisse pour éviter tout dommage.

Trusses may be unloaded directly on the ground at the time of delivery or stored temporarily in contact with the ground after delivery. If trusses are to be stored for more than one week, place blocking of sufficient height beneath the slack of trusses at (2.4 m) or (8 ft) on center (see).

For trusses stored for more than one week, cover bundles to protect from the environment. Pour des fermes entreposées pendant plus d'une semaine, couvrez les lots pour les protéger des intempéries.

Refer to BCS1-CANADA for more detailed information pertaining to handling and storage of trusses. Reportez-vous au BCS1-CANADA pour obtenir des renseignements détaillés concernant la manipulation et l'entreposage des fermes sur le chantier de construction.

Hoisting and Placement of Truss Bundle

NOTICE Do not overload the crane. NE surchargez PAS la grue.

NOTICE NEVER use bracing to lift a bundle. N'utilisez JAMAIS de brayages pour soulever un lot.

A single lift point may be used for bundles of top chord pitch trusses up to 45' (13.7 m) and parallel chord trusses up to 60' (18.3 m).

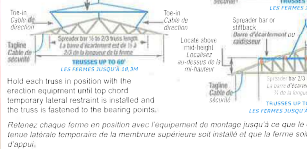
Use at least two lift points for bundles of top chord pitch trusses up to 60' (18.3 m) and parallel chord trusses up to 60' (18.3 m). Use at least three lift points for bundles of top chord pitch trusses >60' (18.3 m) and parallel chord trusses >60' (18.3 m).

Un seul point de levage peut être utilisé pour les lots de fermes en porte à membrane supérieure jusqu'à 45,7 m (150 pi) et de fermes à membrane parallèle jusqu'à 60,9 m (200 pi). Utilisez au moins trois points de levage pour les lots de fermes à membrane supérieure >45,7 m (150 pi) et de fermes à membrane parallèle >60,9 m (200 pi).

Mechanical Hoisting Recommendations for Single Trusses

NOTICE Using a single pick-point at the peak can damage the truss.

Le fait d'utiliser un seul point de prélevement au faite peut endommager la ferme.



Installation of Single Trusses by Hand

NOTICE Trusses 27' (8.1 m) or less, support over peak. Les fermes de 8,1 m (26 pi) ou moins doivent être supportées au-dessus du faite.

Trusses up to 27' (8.1 m) or less, support at quarter points. Les fermes jusqu'à 27' (8.1 m) supportées aux points de quart.

Trusses up to 30' (9.1 m) or less, support at quarter points. Les fermes jusqu'à 30' (9.1 m) supportées aux points de quart.

Temporary Restraint & Bracing

NOTICE Refer to BCS1-B1C for more information. Reportez-vous au BCS1-B1C pour obtenir plus de renseignements.

Localize ground bracing for full truss directly in line with all rows of top chord temporary lateral restraint (see table in the next column).

Localisez les contreventements du sol de la première ferme directement en ligne avec toutes les rangées de la retenue latérale temporaire à la membrane supérieure (consultez le tableau de la colonne suivante).

NOTICE Do not walk on unbraced trusses. NE marchez PAS sur des fermes non contreventées.

NOTICE Do not stand on cross overhangs until the diaphragm sheathing has been applied to the truss and overhangs. NE vous tenez PAS sur les surplombs de la ferme avant que le revêtement diaphragme ait été appliqué au toit et aux surplombs.

Steps to Setting Trusses

NOTICE Refer to BCS1-B1C for more information. Reportez-vous au BCS1-B1C pour obtenir plus de renseignements.

1) Install ground bracing. 2) Set first truss and attach supports to ground bracing. 3) Set next 4 trusses with short member temporary lateral restraint (see below). 4) Install top chord diagonal bracing (see below). 5) Install top chord member plate diagonal bracing to stabilize the first two trusses (see below). 6) Install bottom chord temporary lateral restraint and diagonal bracing (see below). 7) Repeat process with all trusses until all trusses are set.

1) Installez le contreventement du sol. 2) Placez la première ferme, puis fixez-la solidement au contreventement du sol. 3) Placez les quatre fermes suivantes avec la membrane latérale temporaire de la membrane courte (ci-dessous). 4) Installez le contreventement diagonal de la membrane supérieure (ci-dessous). 5) Installez le contreventement diagonal de la membrane inférieure de la membrane supérieure (ci-dessous). 6) Installez la retenue latérale temporaire de la membrane inférieure et le contreventement diagonal (ci-dessous). 7) Répétez la procédure par tranches de quatre fermes jusqu'à ce que toutes les fermes soient installées.

NOTICE Refer to BCS1-B1C for more information. Reportez-vous au BCS1-B1C pour obtenir plus de renseignements.

Restraint/Bracing for All Planes of Trusses

NOTICE Refer to BCS1-B1C for more information. Reportez-vous au BCS1-B1C pour obtenir plus de renseignements.

1) Install ground bracing. 2) Set first truss and attach supports to ground bracing. 3) Set next 4 trusses with short member temporary lateral restraint (see below). 4) Install top chord diagonal bracing (see below). 5) Install top chord member plate diagonal bracing to stabilize the first two trusses (see below). 6) Install bottom chord temporary lateral restraint and diagonal bracing (see below). 7) Repeat process with all trusses until all trusses are set.

Top Chord

NOTICE Refer to BCS1-B1C for more information. Reportez-vous au BCS1-B1C pour obtenir plus de renseignements.

1) Install ground bracing. 2) Set first truss and attach supports to ground bracing. 3) Set next 4 trusses with short member temporary lateral restraint (see below). 4) Install top chord diagonal bracing (see below). 5) Install top chord member plate diagonal bracing to stabilize the first two trusses (see below). 6) Install bottom chord temporary lateral restraint and diagonal bracing (see below). 7) Repeat process with all trusses until all trusses are set.

Bottom Chord

NOTICE Refer to BCS1-B1C for more information. Reportez-vous au BCS1-B1C pour obtenir plus de renseignements.

1) Install ground bracing. 2) Set first truss and attach supports to ground bracing. 3) Set next 4 trusses with short member temporary lateral restraint (see below). 4) Install top chord diagonal bracing (see below). 5) Install top chord member plate diagonal bracing to stabilize the first two trusses (see below). 6) Install bottom chord temporary lateral restraint and diagonal bracing (see below). 7) Repeat process with all trusses until all trusses are set.

Restraint & Bracing for 3x2 and 4x2 Parallel Chord Trusses

NOTICE Refer to BCS1-B1C for more information. Reportez-vous au BCS1-B1C pour obtenir plus de renseignements.

1) Install ground bracing. 2) Set first truss and attach supports to ground bracing. 3) Set next 4 trusses with short member temporary lateral restraint (see below). 4) Install top chord diagonal bracing (see below). 5) Install top chord member plate diagonal bracing to stabilize the first two trusses (see below). 6) Install bottom chord temporary lateral restraint and diagonal bracing (see below). 7) Repeat process with all trusses until all trusses are set.

Installing - Installation

NOTICE Refer to BCS1-B1C for more information. Reportez-vous au BCS1-B1C pour obtenir plus de renseignements.

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Out-of-Plumb

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Out-of-Plumb - Hors Axes

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Out-of-Plumb - Hors Axes

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Out-of-Plumb - Hors Axes

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Out-of-Plumb - Hors Axes

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Out-of-Plumb - Hors Axes

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Out-of-Plumb - Hors Axes

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Out-of-Plumb - Hors Axes

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Out-of-Plumb - Hors Axes

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Out-of-Plumb - Hors Axes

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