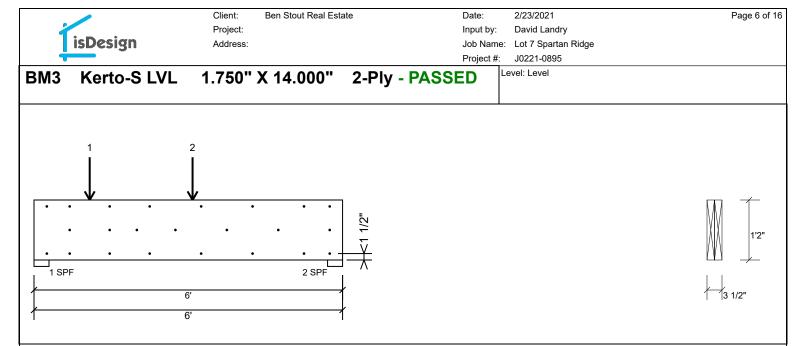


-	Client:	Ben Stout Real Es	state	Date:	2/23/2021	Page 2 of 16
	Project:			Input by:	David Landry	
isDesign	Address	S:			e: Lot 7 Spartan Ridge	
				Project #:	J0221-0895	
BM1 Kerto-S	LVL 1.750	" X 14.000"	2-Ply - PASSE	ED	Level: Level	
			-			
• •	• •	• •	• • •		• • •	
	• •		• •	·	• •	1'2"
• •	• •	• •	• • •		• • •	
1 SPF End Grain					2 SPF End	d Grain
ļ			401711			
·			12'7"			1 3 1/2"
1			12'7"			
/ulti-Ply Analysis						
	nerve of 10d Devices	:La (1002!!) at 12!				
apacity	0.0 %	lis (.128x3) at 12	' o.c Maximum end dis	stance no	ot to exceed 6	
oad	0.0 % 0.0 PLF					
ield Limit per Foot	245.6 PLF					
ield Limit per Fastener	81.9 lb.					
ield Mode dge Distance	IV 1 1/2"					
in. End Distance	3"					
oad Combination						
uration Factor	1.00					
Notes	chemicals		6. For flat roofs provide proper drainage	e to prevent	Manufacturer Info	Comtech, Inc. 1001 S. Reilly Road, Suite #639
Calculated Structured Designs is responsib structural adequacy of this component b	ased on the 1. IVI beams must n		ponding		Metsä Wood 301 Merritt 7 Building, 2nd Floor	Fayetteville, NC USA
design criteria and loadings shown. esponsibility of the customer and/or the	It is the 2 Refer to manu contractor to regarding install	facturer's product information ation requirements, multi-ply			Norwalk, CT 06851	28314 910-864-TRUS
ensure the component suitability of t application, and to verify the dimensions an	d loads. approvals	beam strength values, and code			(800) 622-5850 www.metsawood.com/us	
Lumber 1. Dry service conditions, unless noted oth	erwise 5 Provide lateral su	nust not be used op edge is laterally restrained pport at bearing points to avoid			ICC-ES: ESR-3633	
2. LVL not to be treated with fire retardan		t and rotation	This design is valid until 2/26/2	2023		соттесн
/ersion 20 20 044 Powered by iStr	uct™					

2			ent: E oject:	Ben Stout Re	al Estate			ate: out by:	2/23/202 David La				Page 3 o
is 🛛	Design		dress:							artan Ridge			
							Pro	oject #:	J0221-0	895			
3M2	Kerto-S LV	′L 1.7	50" X	18.00	0" 2-	Ply - P	ASSE)	Level: Leve				
					• • • • •								
	2												
					3	 							
		1			·····	- 5	_4						
				•		•	•	-	•				M T
	and the	ite:	•	•	all services	•	•		-				1'6"
•						•		•	•				
1 SPF En	d Grain						2 SI	PF End	Grain				
				12'7"									3 1/2"
1				12'7"					1				
ember In	formation						Reaction	s UNI	PATTERN	IED lb (Upl	ift)		
Туре:	Girder		Applicatio	n: F	loor		Brg	Live		ead Sno		Wind	Const
Plies:	2		Design M		SD		1	C		114 48		0	0
Moisture Con Deflection LL:			Building C Load Sha		BC/IRC 2015		2	C) 5	329 46	35	0	0
Deflection TL:			Deck:	•	lot Checked								
mportance:	Normal												
Temperature:	Temp <= 100°	°F					-						
							Bearings						
							Bearing 1 - SPF	•	n Caן 94	 React D/L II 5114 / 488[°] 		Ld. Case	Ld. Comb. D+S
							End	3.300	54	/0 31147400	10001	L	D+3
nalysis Re					<u> </u>	-	Grain 2 - SPF	3 500"	939	% 5329 / 463	5 9964	1	D+S
Analysis Moment	Actual 42293 ft-lb	Location Alle 7'7 1/2" 494	owed 128 ft-lb	Capacity 0.856 (86%	Comb.	Case L	End	0.000				-	5.0
Unbraced	42293 ft-lb	7'7 1/2 492		0.830 (80%	D+S	L	Grain						
ensideed.				(100%)									
Shear		10'10 3/8" 154		0.600 (60%	-	L							
	0.179 (L/816)	6'8 1/8" 0.3	. ,		,	L							
	0.368 (L/396)	6'8 5/16" 0.4	05 (L/360)	0.910 (91%) D+S	L	-						
esign Not	ces olies using 3 rows of	10d Box nails (.128x3") at	12" o.c. Ma	ximum end di	stance not	4						
to exceed 6	6".	,	,										
	st page of calculation e designed to be supp		•		baus.								
	nust be supported ec												
•	e laterally braced at a ced at bearings.	a maximum of 2	2'6" o.c.										
	nderness ratio based	on single ply w	vidth.										
D	Load Type	Loc	cation T	rib Width	Side	Dead 0.9			w 1.15	Wind 1.6 Co		Comment	ts
1	Part. Uniform	0-0-0 to	7-7-8		Тор	367 PLF	0 PLF	- 3	67 PLF	0 PLF	0 PLF	B1	
2	Part. Uniform	0-0-0 to	7-7-8		Тор	173 PLF	0 PLF	1	73 PLF	0 PLF	0 PLF	G1	
3	Point		7-7-8		Тор	4815 lb	0 lb)	4815 lb	0 lb	0 lb	B1-GR	
1	Part. Uniform	7-7-8 to			Тор	150 PLF	0 PLF		0 PLF	0 PLF	0 PLF	Wall Above	e
5	Part. Uniform	7-7-8 to	12-7-0		Тор	119 PLF	0 PLF	: 1	19 PLF	0 PLF	0 PLF	G2	
	Self Weight					14 PLF							
lataa		chemicals			6 Ear fa	t roofs provide -	proper drainage to	nrevent	Manufactur	er Info	c	omtech, Inc.	0.4.4
lotes calculated Structured	Designs is responsible only of of this component based on	f the Handling &			6. For fla pondin		лорег отапладе то	PIEVEII	Metsä Wood	1	F	001 S. Reilly Road ayetteville, NC SA	, Suite #639
esign criteria and esponsibility of the	d loadings shown. It is customer and/or the contracto	the 2. Refer to		or drilled product infor equirements, m					Norwalk, CT		2	8314 10-864-TRUS	
nsure the compor pplication, and to ver	nent suitability of the inten rify the dimensions and loads.	nded fastening de approvals	etails, beam stre	ength values, and	d code					vood.com/us			
.umber 1. Dry service condit	ions, unless noted otherwise	 Design assu Brovido lato 	eams must not b mes top edge is eral support at	e used laterally restraine bearing points to	d avoid				ICC-ES: ES				ATACI
. LVL not to be trea	ated with fire retardant or corro	sive lateral displa	acement and rota	ation		design is valid	l until 2/26/2023	3				Con	птесн

	Client:	Ben Stout Real E	state	Date:	2/23/2021	Page 4 of 16
LieDooier	Project:			Input by:	David Landry	
isDesign	Address	.:		Job Name Project #:	E: Lot 7 Spartan Ridge J0221-0895	
BM2 Kerto-S	IVI 1750	" X 18 000"	2-Ply - PA		Level: Level	
		X 10.000		JULD		
· · ·	• • •	• •	• •	• •	•	Π \uparrow
					1/2"	M
				-		1'6"
•••	• • •	• •	• •	• •		
1 SPF End Grain				2 SPF End	Grain	
1		12'7"				3 1/2"
, ł		12'7"				
Multi-Ply Analysis						
Fasten all plies using 3 i	rows of 10d Box na	ils (.128x3") at 12'	' o.c Maximum en	d distance n	ot to exceed 6"	
Capacity	0.0 %					
Load Yield Limit per Foot	0.0 PLF 245.6 PLF					
Yield Limit per Fastener	81.9 lb.					
Yield Mode Edge Distance	IV 1 1/2"					
Min. End Distance	3"					
Load Combination Duration Factor	1.00					
	1.00					
Notes	chemicals	llation	 For flat roofs provide proper ponding 	drainage to prevent	Manufacturer Info	Comtech, Inc. 1001 S. Reilly Road, Suite #639 Fayetteville, NC
Calculated Structured Designs is responsible structural adequacy of this component ba design criteria and loadings shown.	sed on the 1. LVL beams must no				Metsä Wood 301 Merritt 7 Building, 2nd Floor	USA 28314
responsibility of the customer and/or the c ensure the component suitability of th	ontractor to regarding installa e intended fastening details, t	acturer's product information ation requirements, multi-ply beam strength values, and code			Norwalk, CT 06851 (800) 622-5850	910-864-TRUS
application, and to verify the dimensions and Lumber	loads. approvals 3. Damaged Beams n 4. Design assumes to				www.metsawood.com/us ICC-ES: ESR-3633	
 Dry service conditions, unless noted othe LVL not to be treated with fire retardant 	1 WISE 5 Provide lateral sur	port at bearing points to avoid	This design is valid unti	1 2/26/2023		соттесн
Version 20.20.044 Powered by iStru	ct™					

is	Design	F	Client: B Project: Address:	en Stout Rea	I Estate		Inț Jo	ate: put by: b Name: oject #:	2/23/2021 David Lan : Lot 7 Spar J0221-089	tan Ridge			Page 5 of
BM3 M	Kerto-S L	VL 1.	750" X	14.000)" 2-	Ply - P	ASSE)	evel: Level.				
1 SPF	2	3	1 •	• • • 2 SP	• • F								1'2"
4		6' 6'											3 1/2"
/lember Inf	ormation						Reaction	s UNF	PATTERNI	ED lb (Uplift	:)		
Type: Plies: Moisture Cond Deflection LL: Deflection TL: Importance:	Girder 2		Applicatio Design Ma Building C Load Shar Deck:	ethod: As code: IB ring: No	C/IRC 2015		Brg 1 2	Live 678 189	Dea 70	id Snow		Wind 0 0	Const 0 0
Temperature:	Temp <= 10	00°F					Bearings Bearing 1 - SPF	Length 3.500"	Cap. 27%	React D/L lb 709 / 678	Total 1387	Ld. Case	Ld. Comb. D+L
nalysis Res	sults						2 - SPF	3.500"	14%	546 / 189	734	L	D+L
Analysis Moment Unbraced Shear LL Defl inch	Actual 1305 ft-lb 1305 ft-lb 1162 lb 0.003 (L/21799)	2'8 7/16" 2 2'8 7/16" 2 1'4 3/4" 2	17623 ft-lb	Capacity 0.048 (5%) 0.074 (7%) 0.111 (11%) 0.020 (2%)	D+L D+L	Case L L L L							
TL Defl inch	0.008 (L/8727)	2'10 1/16" (0.185 (L/360)	0.040 (4%)	D+L	L							
esign Not													
to exceed 6 2 Refer to last 3 Concentrate present. 4 Girders are 5 Top loads m 6 Top braced 7 Bottom brac	t page of calculati ed load fastener s designed to be su nust be supported	ons for fastene pecification is i upported on the equally by all p	rs required for n addition to h bottom edge plies.	r specified loa anger fasten	ads.								
ID	Load Type			ib Width	Side	Dead 0.9	Live 1		w 1.15 V	Vind 1.6 Cons	st. 1.25	Comment	ts
1	Uniform				Тор	150 PLF	0 PLF	=	0 PLF	0 PLF	0 PLF	Wall Above	e
2	Point		1-1-0		Far Face	238 lb	714 lb		0 lb	0 lb	0 lb	F2A	
3	Point Self Weight		3-1-0		Far Face	51 lb 11 PLF	153 lb	D	0 lb	0 lb	0 lb	F7	
structural adequacy or design criteria and responsibility of the cu ensure the compone application, and to verif Lumber 1. Dry service condition	Designs is responsible onl f this component based loadings shown. It ustomer and/or the contru- nt suitability of the in y the dimensions and load ons, unless noted otherwis ed with fire retardant or co	e the constraints of the constra	g & Installation ms must not be cut o to manufacturer's g installation re g details, beam stre	or drilled product inform equirements, mul ength values, and e used laterally restrained pearing points to a	pondir ation ti-ply code avoid	ng	roper drainage to until 2/26/2023	prevent	Manufacturer Metsä Wood 301 Merritt 7 E Norwalk, CT 0 (800) 622-585 www.metsawo ICC-ES: ESR-	Building, 2nd Floor 6851 0 iod.com/us	10 F- U 20	comtech, Inc. 001 S. Reilly Road ayetteville, NC ISA 8314 10-864-TRUS	, Suite #639



Multi-Ply Analysis

Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c.. except for regions covered by concentrated load fastening. Maximum end distance not to exceed 6"

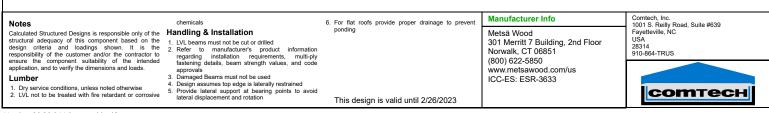
Maximum cha distance	
Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	245.6 PLF
Yield Limit per Fastener	81.9 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

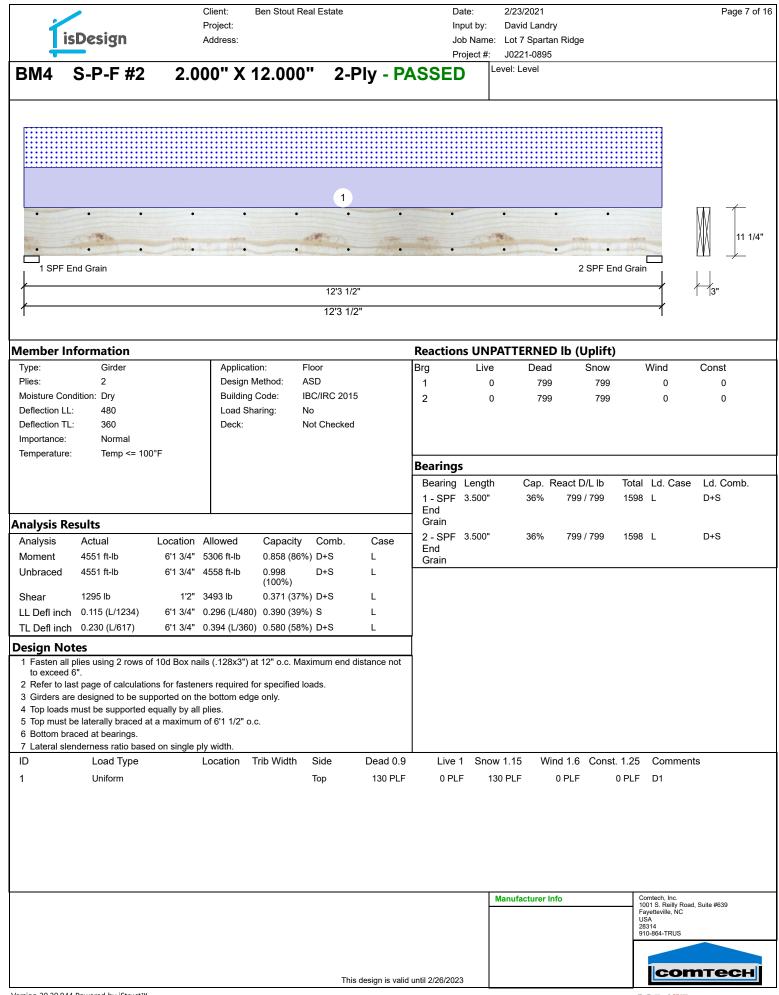
Concentrated Load

Fasten at concentrated side load at 1-1-0 with a

minimum of (6) – 10d Box nails (.128x3") in the

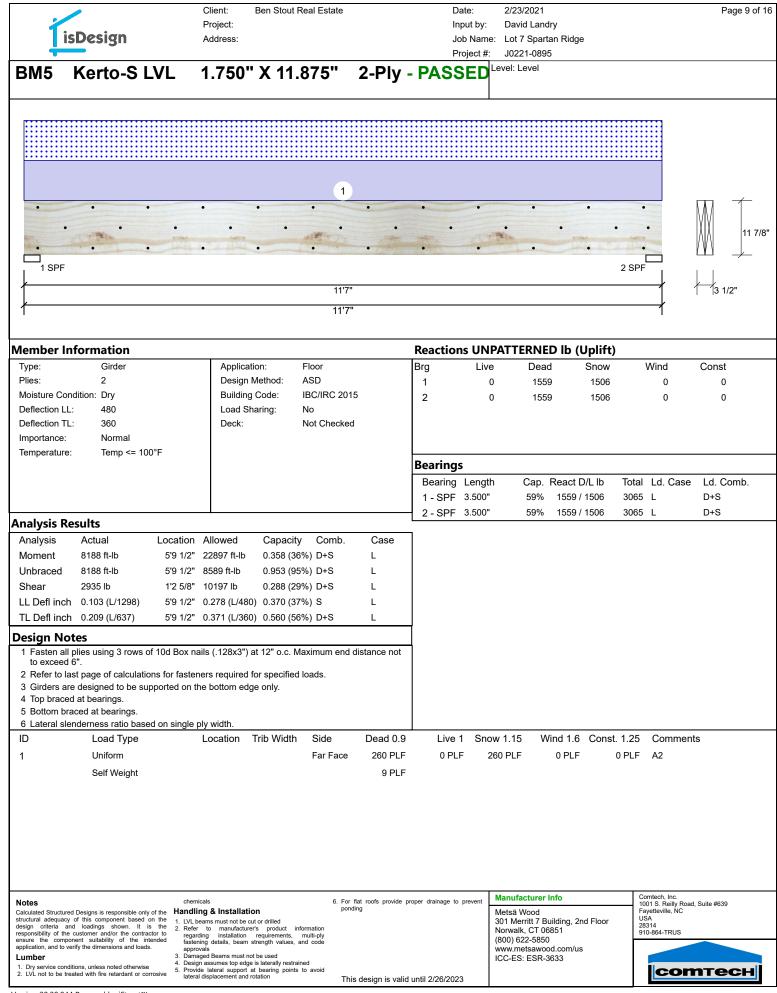
Min/Max fastener distances for Concentrated Side Loads pattern shown. Capacity 96.9 % -Min. 3"⊣ Min. 1 1/4" 476.0lb. Load Total Yield Limit 491.0 lb. 1 1/2" 0.9998 Са Yield Limit per Fastener 81.9 lb. 1/4" Min. 1 Yield Mode IV Load Combination D+L Min. 3' Duration Factor 1.00 Min. 5" -Min. 3"--Max. 12"· Max. 12".



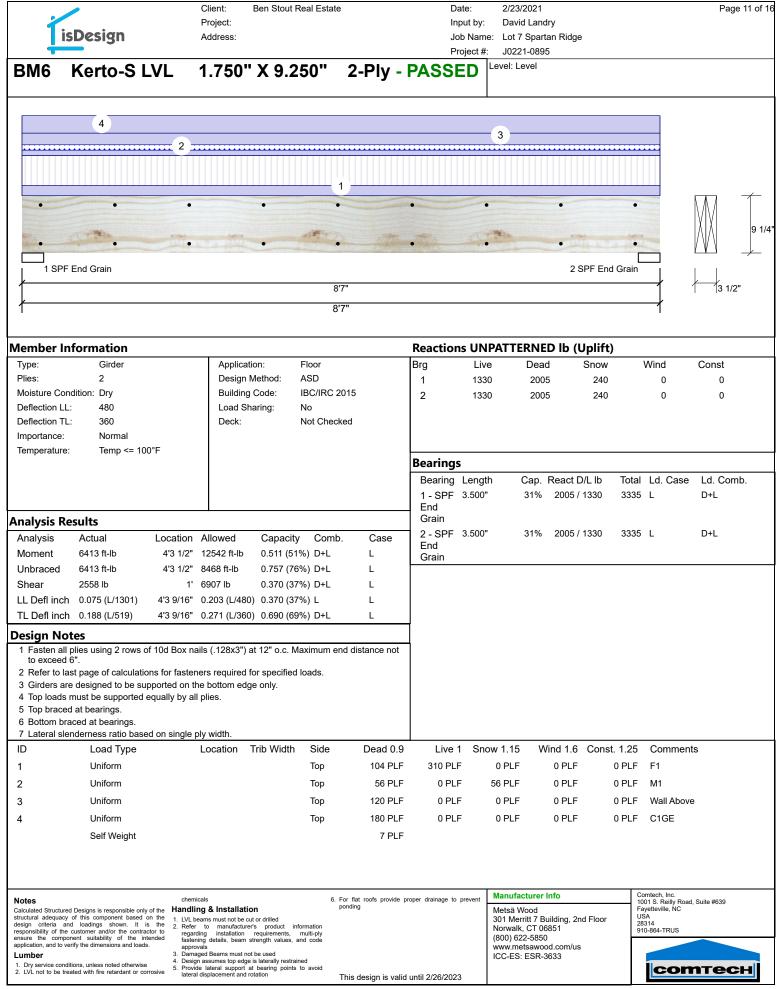


1	isDesign	Client: Project: Address		Real Estate		Date: Input by: Job Name: Project #:	2/23/2021 David Landry Lot 7 Spartan Ridge J0221-0895	Page 8 of
BM4	S-P-F #2	2.000"	X 12.00	0" 2-Ply	- PASS	ED	evel: Level	
•	• •	•	•	• •	•	•	• • •	
	• •	•	•	• •	•	•	2 SPF End Grain	╡═╪╨╵╭┝
1				12'3 1/2"				
/				12'3 1/2"				\rightarrow
/lulti-Ply	/ Analysis							
	plies using 2 row	s of 10d Box nai	ls (.128x3")	at 12" o.c Max	kimum end d	istance no	t to exceed 6"	
apacity	<u> </u>	0.0 %	. ,					
bad		0.0 PLF						
eld Limit pe		157.4 PLF						
	er Fastener	78.7 lb.						
ield Mode dge Distand	20	IV 1 1/2"						
in. End Dis		3"						
ad Combir		5						
uration Fac		1.00						

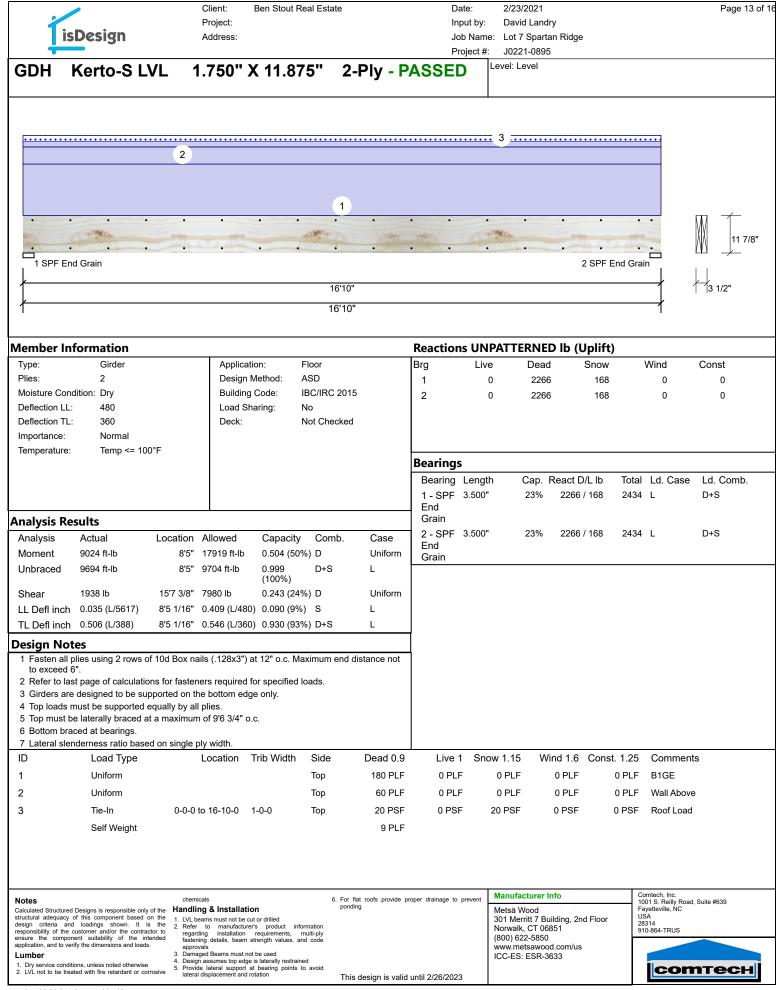
Manufacturer Info	Comtech, Inc. 1001 S. Reilly Road, Suite #639 Fayetteville, NC USA 28314 910-864-TRUS
	соттесн



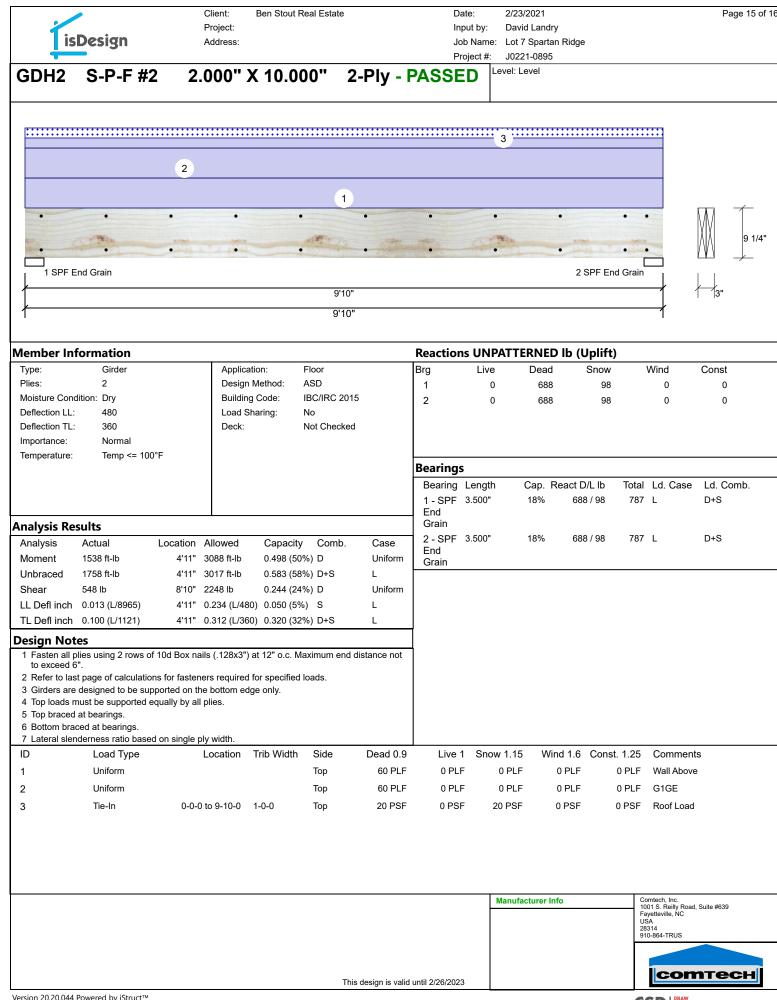
	Client:	Ben Stout Real Est	ate	Date:	2/23/2021	Page 10 of 1
	Project:			Input by:	David Landry	-
isDesign	Address:				e: Lot 7 Spartan Ridge	
· · · · · · · · · · · · · · · · · · ·				Project #:		
BM5 Kerto-S		V 11 075	" 2 DIV		Level: Level	
BINIS Kerto-S	LVL 1./50	' X 11.875	2-Piy -	PASSED		
	• •	• •	•	• •	• •	• 5
	• •	•	• •	•	• •	• • C
	• •		-			
1 SPF						2 SPF
×			11'7"			3 1/2"
						r
1			11'7"			1
Multi-Ply Analysis						
Fasten all plies using 3 rov		(.128x3") at 12"	o.c Maximum	end distance no	ot to exceed 6"	
Capacity	92.1 %					
Load Yield Limit per Foot	260.0 PLF 282.4 PLF					
Yield Limit per Fastener	94.1 lb.					
Yield Mode	IV					
Edge Distance	1 1/2"					
Min. End Distance	3"					
Load Combination Duration Factor	D+S 1.15					
	1.10					
				I	Manufacturer Info	Comtech, Inc.
Notes Calculated Structured Designs is responsible on	chemicals ly of the Handling & Installat		For flat roofs provide pr ponding	oper drainage to prevent	Metsä Wood	Comtech, Inc. 1001 S. Reilly Road, Suite #639 Fayetteville, NC
structural adequacy of this component based design criteria and loadings shown. It	on the 1. LVL beams must not be	cut or drilled			301 Merritt 7 Building, 2nd Floor	r USA 28314
responsibility of the customer and/or the contri- ensure the component suitability of the i	actor to regarding installation fastening details beam	er's product information requirements, multi-ply strength values, and code			Norwalk, CT 06851 (800) 622-5850	910-864-TRUS
application, and to verify the dimensions and load	ds. approvals 3. Damaged Beams must r				www.metsawood.com/us	
1. Dry service conditions, unless noted otherwis	e 4. Design assumes top edg 5. Provide lateral support	e is laterally restrained at bearing points to avoid			ICC-ES: ESR-3633	соттесн
2. LVL not to be treated with fire retardant or c	orrosive lateral displacement and	rotation	This design is valid	until 2/26/2023		Соптесн
Versien 20.20.044 Deversed by iCtrust						



	Client: Ben Stout Real Est		2/23/2021	Page 12 of 16
isDesign	Project:	Input by:	-	
IsDesign	Address:	Job Nam Project #	e: Lot 7 Spartan Ridge : J0221-0895	
DMC Karta C IV/I	4 760" V 0 960"		Level: Level	
BM6 Kerto-S LVL	1.750 X 9.250	2-Ply - PASSED		
	•	• •	•	• §
				<u>.</u> Å Å 9 1/4"
• • •	•	• •	•	• <u>+</u> <u>+</u> <u>+</u> <u>+</u> <u>+</u>
1 SPF End Grain			2 SPF End Gra	
		8'7"		3 1/2"
		8'7"		1
Multi-Ply Analysis				
Fasten all plies using 2 rows of 10d	Box nails (.128x3") at 12"	o.c Maximum end distance n	ot to exceed 6"	
Capacity 0.0 %				
Load 0.0 PLF Yield Limit per Foot 163.7 PLI	F			
Yield Limit per Fastener 81.9 lb.				
Yield Mode IV				
Edge Distance 1 1/2" Min. End Distance 3"				
Load Combination				
Duration Factor 1.00				
			Manufacturer Info	Comtech, Inc.
Notes chem Calculated Structured Designs is responsible only of the Handli	ing & Installation	For flat roofs provide proper drainage to prevent ponding	Metsä Wood	1001 S. Reilly Road, Suite #639 Fayetteville, NC
structural adequacy of this component based on the 1. LVL b design criteria and loadings shown. It is the 2. Refer	beams must not be cut or drilled r to manufacturer's product information		301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851	USA 28314 910-864-TRUS
	rding installation requirements, multi-ply ning details, beam strength values, and code ovals		(800) 622-5850 www.metsawood.com/us	
Lumber 3. Dama 4. Desid	aged Beams must not be used gn assumes top edge is laterally restrained		ICC-ES: ESR-3633	
	de lateral support at bearing points to avoid al displacement and rotation	This design is valid until 2/26/2023		сотесн



			Client:	Ben Stout Real Es	state	Dat	e:	2/23/2021		Page 14 of 1
2			Project:				ut by:	David Landry		. ago 17 01 1
1	isDesign		Address:			-	-	Lot 7 Spartan Ridge		
-							ject #:	J0221-0895		
GDH	Kerto-S	I VI	1 750"	X 11.875"	2-Plv	- PASSED	L	.evel: Level		
•=					_ · · · ,					
									Ξ.	
•	• •	•	• •	• •	• •	• •	•	• • •		\overline{M} $\overline{1}$
									$\overline{\mathbf{v}}$	11 7/8"
<u> </u>	• •	•	• •	• •	• •	• •	•	• • •	╧╧╧	
1 SPF	End Grain							2 SPF End	Grain /	1.1
					1010				,	2 1/0"
					16'10"					3 1/2"
1					16'10"				1	
Mult: DI	y Analysis									
-										
	l plies using 2 r			(.128x3") at 12'	' o.c Maximi	um end distan	ce no	t to exceed 6"		
Capacity		0.0 9								
Load Vield Linsit n	an Faat	0.0 1								
Yield Limit p Yield Limit p		163. 81.9	7 PLF							
Yield Mode	der i asterier	IV	ib.							
Edge Distan	ice	1 1/2	2"							
Min. End Dis		3"								
Load Combi	ination									
Duration Fac	ctor	1.00)							
Notes			chemicals		6. For flat roofs prov	vide proper drainage to p	revent	Manufacturer Info	Comtech, Inc. 1001 S. Reilly Road,	Suite #639
Calculated Struc	ctured Designs is responsible		landling & Installa		ponding	•		Metsä Wood	Fayetteville, NC USA	
design criteria	uacy of this component ba a and loadings shown.	It is the	 LVL beams must not be Refer to manufactular 	arer's product information				301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851	28314 910-864-TRUS	
ensure the co	f the customer and/or the c omponent suitability of th	contractor to ne intended	regarding installation fastening details, bean	n requirements, multi-ply n strength values, and code				(800) 622-5850	910-604-1RUS	
application, and Lumber	to verify the dimensions and	3	approvals 3. Damaged Beams must	not be used				www.metsawood.com/us ICC-ES: ESR-3633		
1. Dry service of	conditions, unless noted othe be treated with fire retardant	iwise r	 Design assumes top ed Provide lateral support 	t at bearing points to avoid				0000	Icon	птесн
2. LVL 1101 10 D	~ acated with life retardant	or corrosive	lateral displacement an	d rotation		valid until 2/26/2023				
VI	044 Doworod by Stru									



	-	Client: Project:	Ben Stout Real Es	ate		Date: Input by:	2/23/2021 David Landry	Page 16 of 1
l is	Design	Address:					Lot 7 Spartan Ridge J0221-0895	
GDH2	S-P-F #	2 2.000"	X 10.000"	2-Ply			evel: Level	
•	•	• •	•	•	•	•	•	•••
								÷ ↓ ↓ 9 1/4"
	• End Grain	• •	•	•	•	•	• 2 SPF End	
				9'10"				
ſ				9'10"				1
Multi-Ply A	nalysis							
Fasten all pl ^{Capacity}	ies using 2 rov	ws of 10d Box nail	s (.128x3") at 12"	o.c Maximu	um end dist	ance no	t to exceed 6"	
Load Yield Limit per F	oot	0.0 PLF 157.4 PLF						
Yield Limit per F		78.7 lb.						
Yield Mode Edge Distance		IV 1 1/2"						
Min. End Distan		3"						
Load Combination Duration Factor	on	1.00						
		1.00						
						Γ	Manufacturer Info	Comtech, Inc. 1001 S. Reilly Road, Suite #639
								Fayetteville, NC USA
								28314 910-864-TRUS

This	design	is	valid	until	2/26/2023

соттесн