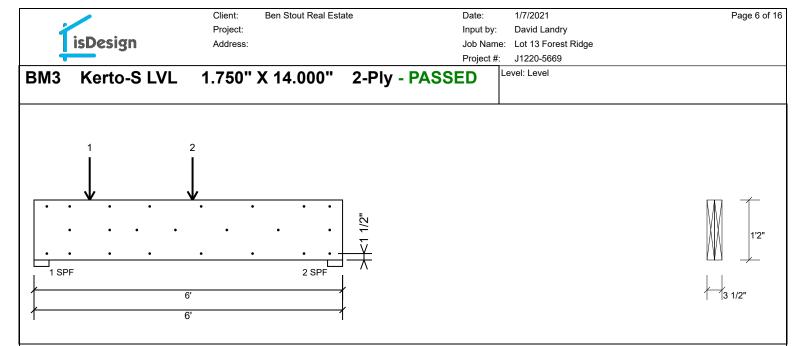


	Client:	Ben Stout Real Est	ate	Date:	1/7/2021		Page 2 of 16
	Project:			Input			-
isDesign	Address:			Job N	lame: Lot 13 Forest Rie	dge	
Ť Ť				Projec	ct #: J1220-5669		
BM1 Kerto-S L	// 1 750" \	K 14.000"	2_Dlv	DASSED	Level: Level		
		14.000	Z- F iy ·	FASSED			
							,
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							1/2
	• •	• •	•	• •	•		<u> </u>
• • •	• •	•	•	• •	• •	• •_	<u> </u>
1 SPF End Grain						2 SPF End Grain	Λ
1			12'7"				3 1/2"
ł			12'7"				
Multi-Ply Analysis							
Fasten all plies using 3 row	s of 10d Box nails (.128x3") at 12"	o.c Maxim	um end distance	e not to exceed 6"		
Capacity	0.0 %						
oad	0.0 PLF						
/ield Limit per Foot	245.6 PLF						
∕ield Limit per Fastener ∕ield Mode	81.9 lb. IV						
Edge Distance	1 1/2"						
/in. End Distance	3"						
oad Combination							
Duration Factor	1.00						
Notes	chemicals		6. For flat roofs pro	vide proper drainage to preve	ent Manufacturer Info	Comtech	, Inc. Reilly Road, Suite #639
Calculated Structured Designs is responsible only structural adequacy of this component based of	of the Handling & Installati	on	ponding		Metsä Wood	Fayettevi	lle, NC
structural adequacy of this component based of design criteria and loadings shown. It is responsibility of the customer and/or the contract	the 2. Refer to manufacture	er's product information			301 Merritt 7 Building Norwalk, CT 06851	I, 2nd Floor 28314 910-864-	TRUS
ensure the component suitability of the int application, and to verify the dimensions and loads	ended fastening details, beam	requirements, multi-ply strength values, and code			(800) 622-5850		
Lumber	3. Damaged Beams must no 4. Docime accurrent top odde	ot be used			www.metsawood.con ICC-ES: ESR-3633		
1. Dry service conditions, unless noted otherwise 2. LVL not to be treated with fire retardant or con	5 Provide lateral support	at bearing points to avoid	This decime :	valid until 2/26/2022			отесн
Varrian 20.20.044 Doward by iStructIM			rnis aesign is	valid until 2/26/2023			

	Page 3 of
Project: Input by: David Landry isDesign Address: Job Name: Lot 13 Forest Ridge	
Address: Job Name: Lot 13 Forest Ridge Project #: J1220-5669	
BM2 Kerto-S LVL 1.750" X 18.000" 2-Ply - PASSED	
Sinz Rento-5 EVE 1.750 X 10.000 2-119-1 ASSED	
2	
3 5	
	M
and the second	1'6"
1 SPF End Grain	
12'7"	3 1/2"
12'7"	
Nember Information Reactions UNPATTERNED Ib (Uplift)	
	Vind Const
Plies: 2 Design Method: ASD 1 0 5114 4887	0 0
Moisture Condition: Dry Building Code: IBC/IRC 2015 2 0 5329 4635	0 0
Deflection LL: 480 Load Sharing: No Deflection TL: 360 Deck: Not Checked	
Importance: Normal	
Temperature: Temp <= 100°F	
Bearings	
Bearing Length Cap. React D/L lb Total	Ld. Case Ld. Comb.
1 - SPF 3.500" 94% 5114 / 4887 10001	L D+S
nalveis Posults End Grain	
nalysis Results Grain Analysis Actual Location Allowed Capacity Comb. Case 2 - SPF 3.500" 93% 5329 / 4635 9964	L D+S
Memore 42202 ft lb 777 1/2" 40429 ft lb 0.956 (66%) DLS L End	
Unbraced 42293 ft-lb 7'7 1/2" 42329 ft-lb 0.999 D+S L	
Shear 9273 lb 10'10 3/8" 15456 lb 0.600 (60%) D+S L L D Finite D 4/8" D Finite D D Finit D	
LL Defl inch 0.179 (L/816) 6'8 1/8" 0.304 (L/480) 0.590 (59%) S L TL Defl inch 0.368 (L/396) 6'8 5/16" 0.405 (L/360) 0.910 (91%) D+S L	
esign Notes 1 Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not	
to exceed 6".	
 2 Refer to last page of calculations for fasteners required for specified loads. 3 Girders are designed to be supported on the bottom edge only. 	
4 Top loads must be supported equally by all plies.	
5 Top must be laterally braced at a maximum of 2'6" o.c.	
6 Bottom braced at bearings. 7 Lateral slenderness ratio based on single ply width.	
	Comments
	B1
	G1
	B1-GR
	Wall Above
Self Weight 14 PLF	
Manufashuar Isfa Cor	ntech, Inc.
Notes chemicals 6. For flat roots provide proper drainage to prevent chemicals 1001 Calculated Structured Designs is responsible only of the Handling & Installation ponding Faye	1 S. Reilly Road, Suite #639 retteville, NC
structural adequacy of this component based on the 1. LVL beams must not be cut or drilled 2. Refer to manufacturer's product information USA Nonvalk CT 06851	A 14
esponsibility of the customer and/or the contractor to ensure the component suitability of the intended fastening details, beam strength values, and code (800) 622-5850	-864-TRUS
Lumber 3. Damaged Beams must not be used ICC-ES: ESR-3633	
1. Dry service conditions, unless noted otherwise 4. Design assumes upper up assume super up as up assume super up as up assume super up as	соттесн

	Client:	Ben Stout Real Estate	Date:	1/7/2021	Page 4 of 16
La Dantara	Project:		Input by	-	
isDesign	Address:			ne: Lot 13 Forest Ridge #: J1220-5669	
				Level: Level	
BM2 Kerto-S	LVL 1.750	X 18.000" 2-PI	y - PASSED		
					π \neq
					M
• • •	• •	• • • •	• •		1'6"
• • •	• • •	• • •	• • •	. <u> </u>	
1 SPF End Grain			2 SPF Er	ud Grain	/
·		12'7"			3 1/2"
,					0 1/2
l		12'7"		I	
Multi-Ply Analysis					
		(.128x3") at 12" o.c Max	kimum end distance r	not to exceed 6"	
Capacity Load	0.0 % 0.0 PLF				
/ield Limit per Foot	245.6 PLF				
/ield Limit per Fastener /ield Mode	81.9 lb. IV				
Edge Distance	1 1/2"				
Ain. End Distance	3"				
Load Combination Duration Factor	1.00				
				Manufacturor Info	Comtech, Inc.
Notes Calculated Structured Designs is responsible	chemicals e only of the Handling & Installati		is provide proper drainage to prevent	Manufacturer Info Metsä Wood	1001 S. Reilly Road, Suite #639 Fayetteville, NC
structural adequacy of this component ba design criteria and loadings shown.	sed on the 1. LVL beams must not be of It is the 2. Refer to manufacture	ut or drilled er's product information		301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851	USA 28314
responsibility of the customer and/or the c ensure the component suitability of th application, and to verify the dimensions and	e intended fastening details, beam	requirements, multi-ply strength values, and code		(800) 622-5850	910-864-TRUS
Lumber	3. Damaged Beams must n 4. Design assumes top edg	e is laterally restrained		www.metsawood.com/us ICC-ES: ESR-3633	
 Dry service conditions, unless noted other LVL not to be treated with fire retardant 	I WISE 5 Provide lateral support	at bearing points to avoid	gn is valid until 2/26/2023		соттесн
Version 20.20.044 Powered by iStru	ct™		-	1	

is	, Design	F	Client: E Project: Address:	8en Stout Rea	al Estate		Inp	ate: out by: b Name	1/7/2021 David Lan : Lot 13 For	-			Page 5 of
			75011 1/	44.000			Pr	oject #:	J1220-566 evel: Level	-			
BM3 M	Kerto-S L	VL 1.	/50" X	14.000)" 2-	Ply - P	ASSE)					
1 SPF	2	3 ↓ · · · · · · · · · · ·	•	• • 2 SF	•••••								1'2" 3 1/2"
ļ		0			Ι								
lember Inf	ormation						Reaction	s UNF	PATTERNE	D lb (Uplift			
Type: Plies: Moisture Cond Deflection LL: Deflection TL: Importance:	480 360 Normal		Applicatio Design M Building C Load Sha Deck:	ethod: As Code: IB ring: No	oor SD C/IRC 2015 o ot Checked		Brg 1 2	Live 678 189	70	9 0		Wind 0 0	Const 0 0
Temperature:	Temp <= 10	0°F					Bearings						
							Bearing 1 - SPF	Length 3.500"	Cap. 27%	React D/L lb 709 / 678	Total 1387	Ld. Case L	Ld. Comb. D+L
nalysis Res	ults						2 - SPF	3.500"	14%	546 / 189	734	L	D+L
Analysis Moment Unbraced Shear	Actual 1305 ft-lb 1305 ft-lb 1162 lb	2'8 7/16" 2 2'8 7/16" 1 1'4 3/4" 1	0453 lb	Capacity 0.048 (5%) 0.074 (7%) 0.111 (11%)	D+L	Case L L L							
LL Defl inch	(L/21799)		.139 (L/480)	. ,		L							
	0.008 (L/8727)	2'10 1/16" 0	.185 (L/360)	0.040 (4%)	D+L	L	{						
to exceed 6 2 Refer to last 3 Concentrate present. 4 Girders are 5 Top loads m 6 Top braced 7 Bottom brac	ies using 3 rows o ". page of calculation d load fastener sp designed to be su ust be supported	ons for fastener pecification is ir pported on the equally by all p	rs required for addition to h bottom edge lies.	r specified loa anger fasten	ads.								
ID	Load Type			rib Width	Side	Dead 0.9	Live 1	Sno	w 1.15 V	Vind 1.6 Cons	t. 1.25	Comment	s
1	Uniform				Тор	150 PLF	0 PLF		0 PLF	0 PLF	0 PLF	Wall Above	9
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 lk)	0 lb	0 lb	0 lb	F/	
structural adequacy of design criteria and responsibility of the cu ensure the compone application, and to verif Lumber 1. Dry service conditio	Designs is responsible only f this component based loadings shown. It i stormer and/or the contra nt sutability of the in y the dimensions and load with fire retardant or co d with fire retardant or co	on the is the tended s. 4. Design a 5. Provide	& Installation ns must not be cut o o manufacturer's installation re details, beam stre	or drilled product inform equirements, mu ength values, and e used laterally restrained bearing points to	pondir lation lti-ply code avoid	at roofs provide p ig design is valid	roper drainage to until 2/26/2023		Manufacturer Metsä Wood 301 Merritt 7 E Norwalk, CT 0 (800) 622-585 www.metsawo ICC-ES: ESR-	Building, 2nd Floor 6851 0 od.com/us	10 Fa U 28	omtech, Inc. 101 S. Reilly Road ayetteville, NC SA 101-864-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"

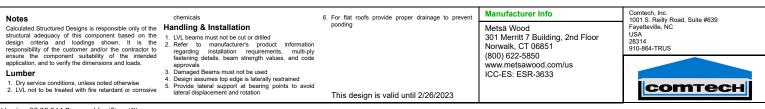
maximum end distance not to exceed o							
Capacity	0.0 %						
Load	0.0 PLF						
Yield Limit per Foot	245.6 PLF						
Yield Limit per Fastener	81.9 lb.						
Yield Mode	IV						
Edge Distance	1 1/2"						
Min. End Distance	3"						
Load Combination							
Duration Factor	1.00						

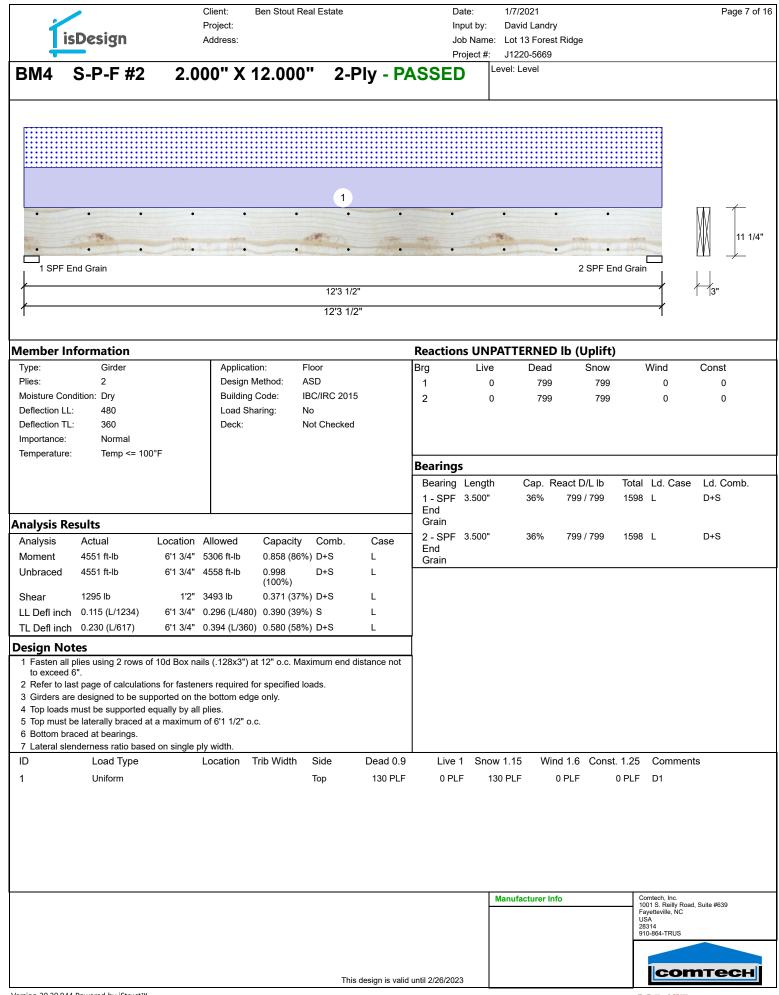
Concentrated Load

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".

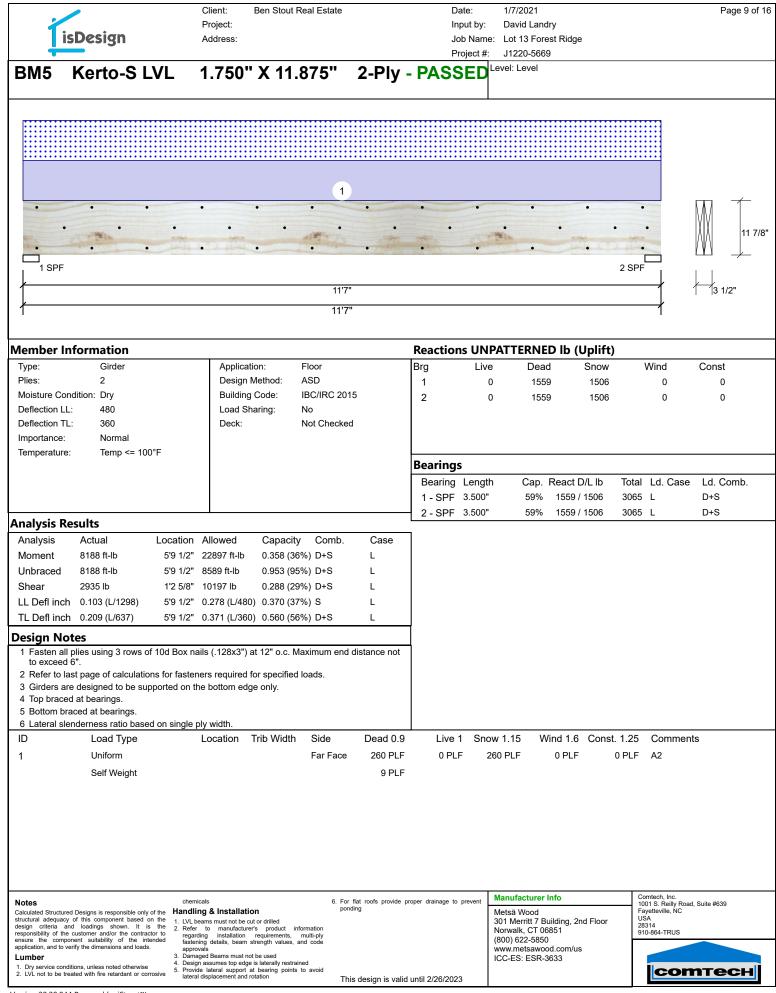




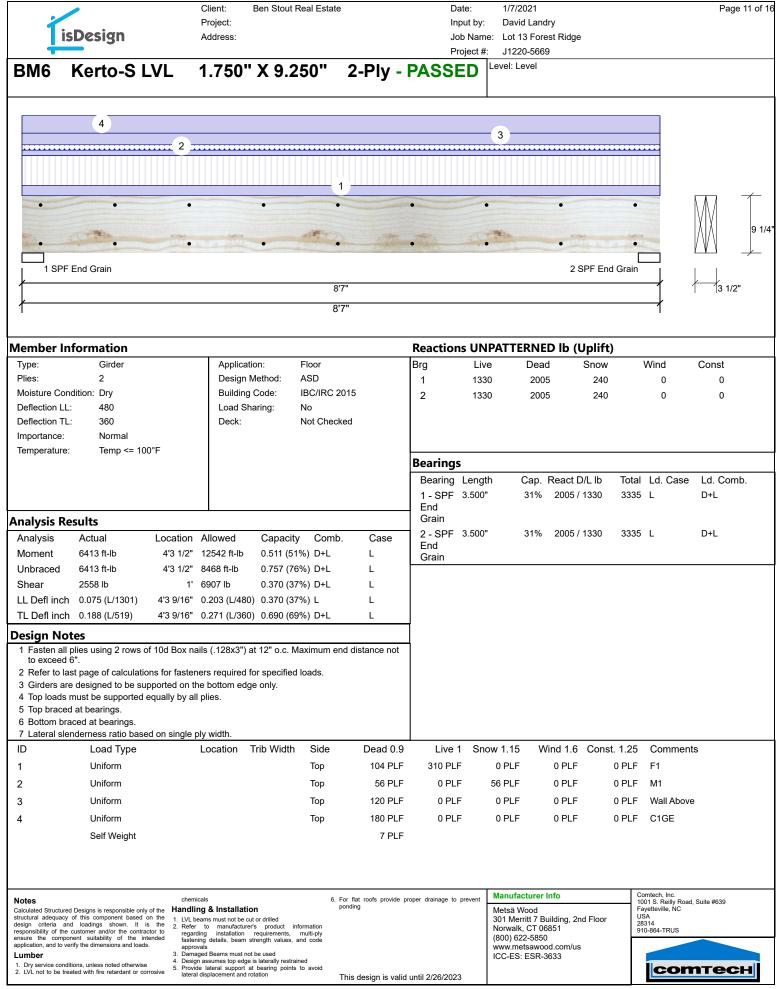
1	isDesign	Ado	ect: lress:	n Stout Real E			Project #:	1/7/2021 David Landry Lot 13 Forest Ridge J1220-5669	Page 8 of 16
BM4	S-P-F #2	2 2.000	" X 12	2.000"	2-Ply -	PASSE	D	evel: Level	
•	•	• •	•	•	•	•	•	• • •	/ ₪ /3
•	•	• •	•	٠	•	٠	•		
1 SPF	End Grain				12'3 1/2"			2 SPF End G	$rain \rightarrow 7$
<i> </i>					12'3 1/2"				
Multi-Ply									
Capacity	plies using 2 r	ows of 10d Box	nails (.12	8x3") at 12	' o.c Maxin	num end dis	tance not	to exceed 6"	
Load Yield Limit pe		0.0 PLF 157.4 PLF							
Yield Limit pe Yield Mode	r Fastener	78.7 lb. IV							
Edge Distanc		1 1/2"							
Min. End Dist Load Combin		3"							
Duration Fact	or	1.00							
							_		-
							Ν	lanufacturer Info	Comtech, Inc. 1001 S. Reilly Road, Suite #639 Fayetteville, NC
									Fayetteville, NC USA 28314
									910-864-TRUS

This design is valid until 2/26/2023	

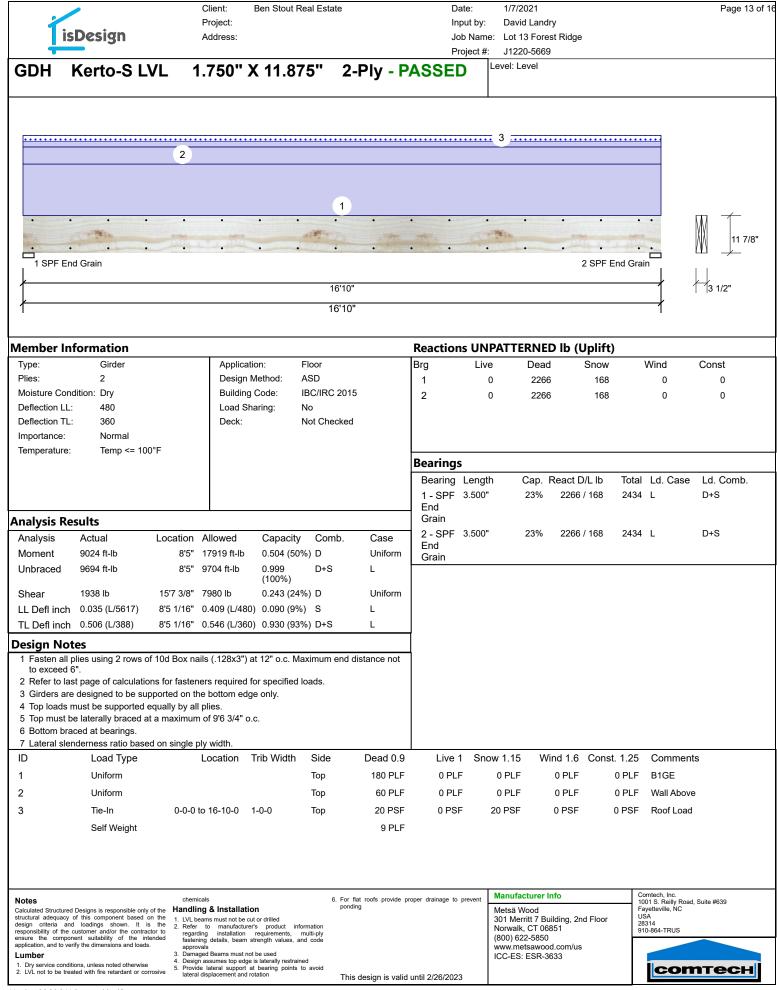
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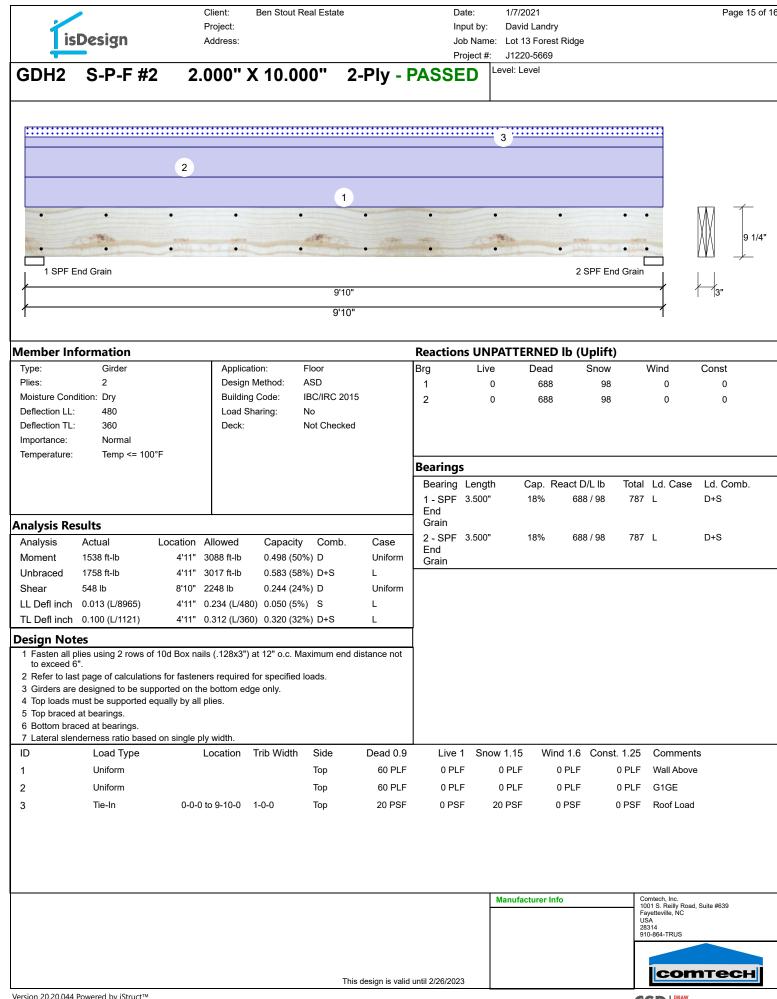
isDesign	Client: Project: Address:	Ben Stout Real Es	tate		1/7/2021 David Landry : Lot 13 Forest Ridge	Page 10 of 10
BM5 Kerto-S LVL	1.750'	' X 11.875	5" 2-Ply	Project #:	J1220-5669 Level: Level	
· · ·	•	• •	•	· ·	• •	
• • • •	•	• •	•••	•	•••	
			11'7" 11'7"			3 1/2"
Multi-Ply Analysis Fasten all plies using 3 rows of 10 Capacity 92.1 %		(.128x3") at 12"	o.c Maximum	end distance nc	ot to exceed 6"	
Load260.0Yield Limit per Foot282.4Yield Limit per Fastener94.1 lb	PLF PLF					
Yield ModeIVEdge Distance1 1/2"Min. End Distance3"Load CombinationD+SDuration Factor1.15						
Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to	egarding installation	cut or drilled er's product information requirements, multi-ply	 For flat roofs provide p ponding 	proper drainage to prevent	Manufacturer Info Metsä Wood 301 Merritt 7 Building, 2nd Flor Norwalk, CT 06851 (800) 622-5850	Comtech, Inc. 1001 S. Reilly Road, Suite #639 Fayetteville, NC USA 28314 910-864-TRUS
application, and to verify the dimensions and loads. Lumber 3. 1. Dry service conditions, unless noted otherwise 5.	pprovals Damaged Beams must n Design assumes top edg	e is laterally restrained at bearing points to avoid	This design is valic	l until 2/26/2023	www.metsawood.com/us ICC-ES: ESR-3633	соттесн



	Client: Ben Stout Real Est		1/7/2021	Page 12 of 16
isDesign	Project:	Input by:	-	
IsDesign	Address:	Job Nam Project #	e: Lot 13 Forest Ridge : J1220-5669	
DMC Karta C IV/I	4 760" V 0 960"		Level: Level	
BM6 Kerto-S LVL	1./50 X 9.250	2-Ply - PASSED		
••••	•	• •	• •	• •
				÷
• • •	•	• •	•	• <u>+</u> <u>¥</u> // _
1 SPF End Grain			2 SPF End Gra	
/		8'7"		3 1/2"
		8'7"		I
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				
	sizele	C. For flat roafs my de manage d'	Manufacturer Info	Comtech, Inc.
Notes chem Calculated Structured Designs is responsible only of the Handli	ing & Installation	6. 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 an 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	ate	Date:	1/7/2021	Page 14 of 1
	Project:			Input by	: David Landry	-
isDesign	Address:				me: Lot 13 Forest Ridge	
				Project	#: J1220-5669 Level: Level	
GDH Kerto-S LVL	. 1.750"	X 11.875"	2-Ply -	PASSED		
• • • •	• •	• •	• •	• •	• • • •	
						↓ ↓ 11 7/8"
	• •	• •	• •	• •	• • • •	▲ Ш →
1 SPF End Grain					2 SPF En	d Grain //
×			16'10"			3 1/2"
/ <u>/</u>			16'10"			
1			10 10			I
Multi-Ply Analysis						
Fasten all plies using 2 rows o	of 10d Box nails	(.128x3") at 12"	o.c Maximu	um end distance	not to exceed 6"	
Capacity 0.	.0 %					
	.0 PLF 63.7 PLF					
	1.9 lb.					
Yield Mode IV	/					
-	1/2" "					
Min. End Distance 3' Load Combination						
	.00					
Notoo	chemicals		6 For flat roofs are	ride proper drainage to prevent	Manufacturer Info	Comtech, Inc.
Notes Calculated Structured Designs is responsible only of the	Handling & Installa		6. For flat roots prov ponding	to proper urainage to prevent	Metsä Wood	1001 S. Reilly Road, Suite #639 Fayetteville, NC
structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to	2. Refer to manufact	urer's product information			301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851	USA 28314 910-864-TRUS
responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.		n requirements, multi-ply m strength values, and code			(800) 622-5850 www.metsawood.com/us	510-00 1 -1105
Lumber	approvals 3. Damaged Beams must 4. Design assumes top ed	not be used Ige is laterally restrained			ICC-ES: ESR-3633	
 Dry service conditions, unless noted otherwise LVL not to be treated with fire retardant or corrosive 	5 Provide lateral support	t at bearing points to avoid	This design is	valid until 2/26/2023		соттесн
			design 15		1	



is	Design		Client: Project: Address:	Ben Stout Real E	state	lı J	Date: nput by: ob Name Project #:	1/7/2021 David Landry 2: Lot 13 Forest Ridge J1220-5669	Page 16 of 16
GDH2	S-P-F	#2	2.000"	X 10.000"	2-Ply			Level: Level	
	•	•	•	•	•	•		• • •	
•	٠	•	•	•	•	•		• • •	9 1/4"
1 SPF E	nd Grain				9'10"			2 SPF End G	Grain
<i> </i>					9'10"				
Multi-Ply A	-			(400.00) (40)					
Fasten all plu Capacity Load	es using 2	rows of 0.0 9	%	(.128x3") at 12	o.c Maximi	um end dista	ance no	ot to exceed 6"	
Yield Limit per Fo Yield Limit per Fa		157. 78.7	4 PLF						
Yield Mode Edge Distance		IV 1 1/2	2"						
Min. End Distand Load Combinatio		3"							
Duration Factor		1.00							
							Γ	Manufacturer Info	Comtech, Inc. 1001 S. Reilly Road, Suite #639
							Γ		Fayetteville, NC USA 28314
									910-864-TRUS

соттесн