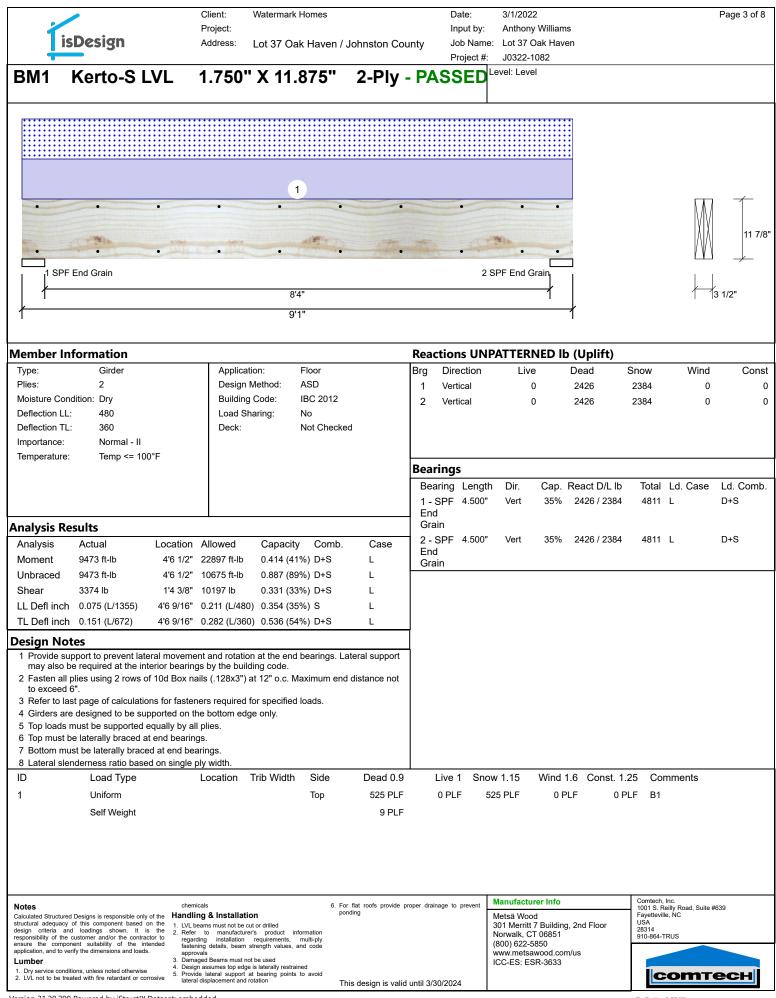


		Client:	Watermark Homes	6		Date:	3/1/2022	Page 2 of 8
		Project:				Input by:	Anthony Williams	5
isDesig	n	Address:	Lot 37 Oak Hav	en / Johns	ston County	Job Name	e: Lot 37 Oak Haven	
						Project #:		
GDH-FRONT	Kerto-S	LVL 1	.750" X 11.8	75" 2	2-Ply - F	PASSED	Level: Level	
					•			
	•	• •	• •	• •	•	• •	• • • •	· · · · · · · · · · · · · · · · · · ·
								V  11 7/8"
1 SPF End Grain							2 SPF End G	
				17'3"				3 1/2"
				17'3"				<b>/</b> /
								•
Multi-Ply Analysis								
Fasten all plies using	g 2 rows of 1	10d Box nails	s (.128x3") at 12"	o.c Ma	ximum en	d distance no	ot to exceed 6".	
Capacity	0.0 %							
Load Vield Limit ner Feet	0.0 F							
Yield Limit per Foot Yield Limit per Fastener	81.9	7 PLF Ib						
Yield Mode	IV	15.						
Edge Distance	1 1/2	2"						
Min. End Distance	3"							
Load Combination	1.00							
Duration Factor	1.00							
Notes		chemicals		6. For flat roo	ofs provide proper	drainage to prevent	Manufacturer Info	Comtech, Inc. 1001 S. Reilly Road, Suite #639
Calculated Structured Designs is resp structural adequacy of this compone	oonsible only of the H ent based on the 1	landling & Installa		ponding			Metsä Wood 301 Merritt 7 Building, 2nd Eleer	Fayetteville, NC USA
design criteria and loadings sh responsibility of the customer and/or	nown. It is the 2 r the contractor to	Refer to manufact	e cut or drilled turer's product information n requirements, multi-ply				301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851	28314 910-864-TRUS
ensure the component suitability application, and to verify the dimension	of the intended	fastening details, bea approvals	in requirements, multi-ply im strength values, and code				(800) 622-5850 www.metsawood.com/us	
Lumber	3	<ul> <li>Damaged Beams mus</li> <li>Design assumes top e</li> </ul>	dge is laterally restrained				ICC-ES: ESR-3633	
<ol> <li>Dry service conditions, unless note</li> <li>LVL not to be treated with fire retained</li> </ol>	eu ounerwise 5	<ul> <li>Provide lateral support lateral displacement ar</li> </ul>	rt at bearing points to avoid	This des	ign is valid unti	3/30/2024		соттесн
L				.110 005	J. IS Yunu unu			



	isDesign	F	Project:	Vatermark Homes ₋ot 37 Oak Hav		County	Date: Input by: Job Name:	3/1/2022 Anthony Williams Lot 37 Oak Haven		Page 4 of 8
		<u>,                                    </u>					Project #:	J0322-1082 evel: Level		
BM1	Kerto-S L	VL 1	.750	X 11.875	2-PI	y - PA	SSED			
	•	•	•	•	•	•	•	•••	<1 1/2"	11 7/8"
	SPF End Grain						2 S	PF End Grain	<del></del>	
				8'4" 9'1"				1		13 1/2"
				-						
	l <b>y Analysis</b> Il plies using 2 rows	s of 10d B	ov nails ( 1	28v3") at 12"	'oc Maximi	um and d	istance no	t to exceed 6"		
Capacity Load Yield Limit p Yield Limit p Yield Mode Edge Distar Min. End Di Load Comb Duration Fa	oer Fastener nce istance vination	0.0 % 0.0 PLF 163.7 PLF 81.9 lb. IV 1 1/2" 3" 1.00								
Notas		chemical	ŝ		6. For flat roofs pro	ride proper drain	age to prevent	Manufacturer Info		Comtech, Inc.
structural adeq design criteria responsibility o ensure the c application, and Lumber	uctured Designs is responsible only o quacy of this component based on a and loadings shown. It is of the customer and/or the contract component suitability of the inter d to verify the dimensions and loads.	of the Handling 1. LVL bear 2. Refer regarding fastening 3. Damage	& Installation     ms must not be cut     to manufacturer's     g installation r     g details, beam str     s     d Beams must not b	or drilled product information equirements, multi-ply ength values, and code	ponding	ιαο ρισρ <del>ο</del> ι uralΝ	age to prevent	Metsä Wood 301 Merritt 7 Building, 2r Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us ICC-ES: ESR-3633		1001 S. Reilly Road, Suite #639 Fayetteville, NC USA 28314 910-864-TRUS
<ol> <li>Dry service</li> <li>LVL not to I</li> </ol>	conditions, unless noted otherwise be treated with fire retardant or corro	5. Provide	lateral support at splacement and rot	bearing points to avoid	This design is	valid until 3/3	0/2024			соттесн

Ť	isDesign	Client Projec Addre	ot:	ark Homes Oak Haven	/ Johnston Co	untv	Date: Input by: Job Nam	3/1/2023 : Anthony ne: Lot 37 0	Williams			Page 5 of 8
- T							Project #	#: J0322-1	082			
BM2	Kerto-S L\	/L 1.7	50" X 9.	250"	2-Ply -	PAS	SED	Level: Leve	1			
									]			
			1									
•	-	•	•		•	•		•			M	
	Contration -		-	alt in y				- Parta			- MA	9 1/
 1 SP	۶F							2 SPF	]		<u>v v</u>	
			6'7 1/	2"					ł			3 1/2"
<u>,                                     </u>			6'7 1/	2"					1			
ember I	nformation					Read	tions UN	NPATTERI	NED lb (Uplift)			
ype: lies:	Girder 2		pplication:	Floor ASD		Brg	Direction	Live		Snow	Wind	Const
	2 ondition: Dry		esign Method: uilding Code:	IBC 2012		1	Vertical Vertical	513 513		928 928	0	0
eflection L	L: 480	L	oad Sharing:	No		-	, or a ball	010		020	Ũ	· · ·
eflection T		D	eck:	Not Chec	ked							
nportance: emperature		=										
emperature	e. 1611p <= 100 f					Bear	ings					
							ring Leng	th Dir.	Cap. React D/L lt	o Total	Ld. Case	Ld. Comb.
							SPF 3.500		42% 1120 / 108 <sup>-</sup>		L	D+0.75(L+8
	N					2 - \$	SPF 3.500	)" Vert	42% 1120 / 108	1 2201	L	D+0.75(L+8
<b>nalysis R</b> Analysis		Location Allow	ved Capad	city Comb	o. Case	1						
loment	3158 ft-lb	3'3 3/4" 14423	- 1	(22%) D+0.7								
Inbraced	3158 ft-lb	3'3 3/4" 10411		(30%) D+0.7								
Shear	1501 lb	5'6 3/4" 7943		(19%) D+0.7								
L Defl inc	h 0.029 (L/2595)	3'3 3/4" 0.154	(L/480) 0.185	(18%) 0.75(L	.+S) L							
L Defl inc	ch 0.058 (L/1274)	3'3 3/4" 0.206	(L/360) 0.282	(28%) D+0.7	5(L+S) L							
esign No	otes					1						
may also	support to prevent latera be required at the inter	ior bearings by th	ne building code	. 0		1						
2 Fasten al to exceed	II plies using 2 rows of 1 d 6".	10d Box nails (.12	28x3") at 12" o.c	. Maximum e	nd distance not							
	last page of calculations			ed loads.								
	are designed to be supported equilations are supported equilations and the supported equilations are supported equilations		om edge only.									
-	t be laterally braced at e	-										
	nust be laterally braced lenderness ratio based o	-	'n									
D	Load Type	Locat		th Side	Dead 0.9		_ive 1 Sn	now 1.15	Wind 1.6 Const.	1.25 Cc	omments	
	Uniform			Тор	331 PLF	15	5 PLF	280 PLF	0 PLF 0	PLF D2	A	
	Self Weight				7 PLF							
	g											
		ale and a de			For Art and an and a			Manufactu	rer Info	Comtech	n, Inc.	
	red Designs is responsible only of t	chemicals the Handling & Ins	stallation		For flat roofs provide p ponding	roper drain	age to prevent	Metsä Woo	d	1001 S. Fayettev	Reilly Road, Suite #	639
alculated Structur			t not be cut or drilled						7 Building, 2nd Floor	USA 28314		
ructural adequad sign criteria	cy of this component based on t and loadings shown. It is t be customer and/or the contractor	the 2 Pofor to m	anufacturer's product	information				Norwalk, C	1 00001	910-864	-TRUS	
alculated Structur ructural adequad sign criteria a sponsibility of th sure the comp	cy of this component based on t and loadings shown. It is t he customer and/or the contractor ponent suitability of the intend verify the dimensions and loads.	the 2. Refer to ma to regarding ins ded fastening details	anufacturer's product tallation requirement s, beam strength value	s, multi-ply				(800) 622-5	850	910-864-	-TRUS	
Iculated Structur uctural adequad sign criteria a sponsibility of the sure the comp plication, and to umber	and loadings shown. It is the customer and/or the contractor ponent suitability of the intend	the 2. Refer to ma to regarding ins fastening details approvals 3. Damaged Beam 4. Design assumes	tallation requirement	s, multi-ply es, and code strained				(800) 622-5	850 wood.com/us			

1	isDesign	Client: Project: Address:	Watermark Homes	n / Johnston	County	Date: Input by: Job Name		Page 6 of 8
BM2	Kerto-S L	VL 1.750'	' X 9 250"	2-Plv	- PAS	Project #:	J0322-1082 Level: Level	
DIVIZ			X J.230	2-i iy	-170			
•	•	•	•	•	٠		• <11/2"	9 1/4
	•	•	•	•	•		•	
	SPF					2	2 SPF	
			6'7 1/2" 6'7 1/2"					3 1/2"
							•	
	y Analysis							
Fasten al Capacity	l plies using 2 row	s of 10d Box nails	(.128x3") at 12" c	o.c Maxim	um end di	stance no	t to exceed 6".	
Load Yield Limit p	per Foot	0.0 PLF 163.7 PLF						
Yield Limit p Yield Mode		81.9 lb. IV						
Edge Distan	nce	1 1/2"						
Min. End Dis Load Combi		3"						
Duration Fa		1.00						
Netza		chemicals	م م	. For flat roofs pro	vide proper drainer	e to prevent	Manufacturer Info	Comtech, Inc.
Notes Calculated Structural adeq	ctured Designs is responsible only o uacy of this component based or	of the Handling & Installat	ion	ponding		e to prevent	Metsä Wood	<ul> <li>1001 S. Reilly Road, Suite #639</li> <li>Fayetteville, NC</li> <li>USA</li> </ul>
design criteria responsibility of	a and loadings shown. It is f the customer and/or the contract	the 2 Refer to manufactur or to regarding installation	er's product information requirements, multi-ply				301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851	28314 910-864-TRUS
ensure the co application, and	omponent suitability of the inte to verify the dimensions and loads.		strength values, and code				(800) 622-5850 www.metsawood.com/us	
1. Dry service 2. LVL not to b	conditions, unless noted otherwise be treated with fire retardant or corr	<ol> <li>Design assumes top edg</li> <li>Provide lateral support</li> </ol>	e is laterally restrained at bearing points to avoid				ICC-ES: ESR-3633	соттесн
<ol> <li>EVE HOLIO L</li> </ol>		lateral displacement and	rotation	This design is	valid until 3/30/	2024		

7		Client: Project:	Watermark Homes			Date: Input by:	3/1/2022 Anthony William				Page 7 o
_ <b> </b>	isDesign	Address:	Lot 37 Oak Haven /	Johnston C	,	Job Name: Project #:	Lot 37 Oak Have J0322-1082	en			
BM3	Kerto-S LVI	L 1.750"	X 9.250"	2-Ply	- PASS	ED L	evel: Level				
•••••						•••••					
	<u></u>	<u></u>		<u></u>							
		1									
•		•	•	•	•	•				M	1 1
	a rittle		at the second							Å	
		and the second second second			SPF End Gra					<u>v</u>	<u>بر</u> لا
	F End Grain	5'4	u	2	SPF End Gra					-	3 1/2"
<u>}</u>		5'10	)"								
l <b>ember</b> Type:	Information Girder	Applicati	on: Floor		1	ons UNP	ATTERNED IL	(Uplift) Dead	Snow	Wind	Co
Plies:	2	Design M	lethod: ASD		Ŭ	ertical	0	1479	1458	0	00
Voisture C Deflection I	ondition: Dry LL: 480	Building Load Sh			2 Ve	ertical	0	1479	1458	0	
Deflection		Deck:	Not Check	ed							
mportance											
Femperatu	re: Temp <= 100°F				Bearin	as					
						g Length	Dir. Cap.	React D/L lb	Total L	.d. Case	Ld. Cor
						= 3.000"	Vert 32%	1479 / 1458	2938 L		D+S
nalysis I	Results	I			End Grain						
Analysis		cation Allowed	Capacity Comb.	Case	2 - SPI End	3.000"	Vert 32%	1479 / 1458	2938 L		D+S
Moment	3751 ft-lb	2'11" 14423 ft-lb	0.260 (26%) D+S	L	Grain						
Unbraced Shear	3751 ft-lb 1915 lb 4	2'11" 11110 ft-lb '9 3/4" 7943 lb	0.338 (34%) D+S 0.241 (24%) D+S	L							
	ch 0.028 (L/2318)	2'11" 0.136 (L/480)		L							
	ch 0.057 (L/1151)	2'11" 0.182 (L/360)		L							
esign N	otes				7						
	support to prevent lateral n b be required at the interior			_ateral suppor	t						
-	all plies using 2 rows of 100		-	d distance no	t						
	last page of calculations fo	or fasteners required f	or specified loads.								
	are designed to be support ls must be supported equa	•	e only.								
6 Top mus	t be laterally braced at end	l bearings.									
	must be laterally braced at slenderness ratio based on	-									
D	Load Type	Location	Trib Width Side	Dead 0	.9 Live	e 1 Snov	v 1.15 Wind '	.6 Const. 1	.25 Comr	nents	
1	Uniform		Тор	500 PL		LF 50	0 PLF 0 P	LF 0	PLF A2		
	Self Weight			7 PL	.F						
otes		chemicals	6. F	or flat roofs provid	e proper drainage	to prevent	Manufacturer Info		Comtech, Inc 1001 S Reill	/ Road, Suite #	639
alculated Structi ructural adequa	ured Designs is responsible only of the acy of this component based on the	Handling & Installatio	n <sup>p</sup>	onding	5	1	Metsä Wood 301 Merritt 7 Building	, 2nd Floor	Fayetteville, I USA	NC	
esign criteria esponsibility of t	and loadings shown. It is the the customer and/or the contractor to aponent suitability of the intended	<ol> <li>Refer to manufacturer regarding installation</li> </ol>	s product information			1	Norwalk, CT 06851 800) 622-5850		28314 910-864-TRL	IS	
nsure the con											
nsure the con oplication, and to <b>umber</b>	o verify the dimensions and loads.	<ol> <li>approvals</li> <li>Damaged Beams must not</li> <li>Design assumes top edge</li> </ol>	be used			N	www.metsawood.cor CC-ES: ESR-3633	n/us			

	Client: Watermark Homes Project:		Date: 3/1/2022 Input by: Anthony Williams	Page 8 of 8
isDesign	Address: Lot 37 Oak Hav	,	Job Name: Lot 37 Oak Haven Project #: J0322-1082	
BM3 Kerto-S LVL	1.750" X 9.250"			
• •	• •	• •	• 1/2"	
			$\overline{\nabla}$	9 1/
	• •	• •		
1 SPF End Grain	5'4"	2 SPF End Gra		3 1/2"
<del> </del>	5'10"			
Multi-Ply Analysis Fasten all plies using 2 rows of 100	d Boy nails ( 128v3") at 12"	o c Maximum end dis	tance not to exceed 6"	
Capacity 0.0 %		o.c Waximum end dis		
Load 0.0 PLF Yield Limit per Foot 163.7 F	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				
		6 Far fish reads	te provent Manufacturer Info	Comtech, Inc.
Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the 2 R	nemicals dling & Installation /L beams must not be cut or drilled efer to manufacturer's product information	<ol> <li>For flat roofs provide proper drainage ponding</li> </ol>	Metsä Wood 301 Merritt 7 Building, 2nd Norwalk, CT 06851	1001 S. Reilly Road, Suite #639 Fayetteville, NC USA 28314
responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.	garding installation requirements, multi-ply stening details, beam strength values, and code provals		(800) 622-5850 www.metsawood.com/us	910-864-TRUS
1. Dry service conditions, unless noted otherwise 4. De 5. Pr	amaged Beams must not be used esign assumes top edge is laterally restrained ovide lateral support at bearing points to avoid teral displacement and rotation	This design is valid until 3/30/2	ICC-ES: ESR-3633	соттесн