

Í	isDesign	Client: Project: Address:	Watermark Homes	Woods	Dat Inpi Job	te: ut by: Name:	8/5/2022 Hampton Horrocks Peach Willow III	Page 2 of 11
BM1	Kerto-S L	.VL 1.750"	X 14.000"	3-Ply	- PASSED		evel: Level	
	• •	· · ·	•	• •	•	•	• •	· ·] [2] [2] [2] [2] [2] [2] [2] [2] [2] [
• 	• • •	•••	•••	•	•••	•	• • • •	
				12'11" 12'11"			2 SFF Ellu	5 1/4"
Multi-Pl	y Analysis							
Fasten al 6".	l plies using 3 ro	ws of 10d Box nails	(.128x3") at 12"	o.c Nail fro	om both sides.	Maxir	num end distance not to	o exceed
Capacity Load Yield Limit p Yield Limit p	per Foot per Fastener	0.0 % 0.0 PLF 245.6 PLF 81.9 lb.						
Edge Distan Min. End Dis Load Combi	nce stance ination	1 1/2" 3"						
Duration Fa	CCOF	1.00						
Notes		chemicals		6. For flat roofs pro	ovide proper drainage to p	revent	Manufacturer Info	Comtech, Inc. 1001 S. Reilly Road, Suite #639
Calculated Struc structural adeq design criteria responsibility of ensure the co application, and	Inclured Designs is responsible on quacy of this component based a and loadings shown. It of the customer and/or the contr component suitability of the i d to verify the dimensions and load	ly of the on the actor to thended ds. Handling & Installa 1. LVL beams must not b 2. Refer to manufact fastening details, bea approvals	ation e cut or drilled urer's product information n requirements, multi-ply m strength values, and code	ponding		N 3 1 (V	Metsä Wood 301 Merritt 7 Building, 2nd Floor Vorwalk, CT 06851 800) 622-5850 www.metsawood.com/us	Fayetteville, NC USA 28314 910-864-TRUS
Lumber 1. Dry service 2. LVL not to b	conditions, unless noted otherwis be treated with fire retardant or c	3. Damaged Beams mus 4. Design assumes top e 5. Provide lateral suppo lateral displacement ar	t not be used dge is laterally restrained rt at bearing points to avoid nd rotation	This design is	valid until 3/30/2024	I	CC-ES: ESR-3633	соттесн

		Client:	Watermark Homes			Date:	8/5/2022				Page 3 of 11
Lis	Design	Project:	Lat 100 Dallard	\//aada		Input by:	Hampton Hor	rocks			
		Audress:	Lot 128 Ballard	VVOODS		Project #:	J0822-3990	111			
BM3	Kerto-S I VI	1 750	" X 9 250"	2-Plv -	PΔ	SSED	Level: Level				
DIVIS		. 1.750	X J.230	<u> 2-i iy -</u>		JOLD					
	2										
			1								
		•	•		•					Λ	$1 \uparrow$
										IXIX	0.1/4
-	a size			p. of		-	-			/\//	9 1/4
										<u> </u>	
1 SPF E	End Grain				2 SP	F End Grain					
			5'8"			· ·				.	3 1/2"
1			6'2"				1				
 .	e										
Member In	tormation	A			Rea		PATTERNED	Ib (Uplift)	Spour	10/:	Canat
Plies:	2	Applic	n Method: ASD		Big 1	Vertical	561	2224	2013	vvind 0	Const 0
Moisture Con	dition: Dry	Buildir	ng Code: IBC/IRC	C 2015	2	Vertical	561	2224	2013	0	0
Deflection LL:	480	Load S	Sharing: No	aakad							
Importance:	Normal - II	Deck:	Not Ch	ескеа							
Temperature:	Temp <= 100°F										
					Bea	rings					
					Be	aring Length	n Dir. Cap	 React D/L lt 2224 / 2011 	o Total	Ld. Case	Ld. Comb.
					En	SPF 3.000 d	Vent 40	/0 2224/201	5 4237	L	D+3
Analysis Re	sults				Gra	ain SDE 3.000"	Vert 46	% 2224 / 2011	3 1237		D+S
Analysis	Actual Loc	ation Allowed	Capacity Cor	nb. Case	En	d	Vent 40	/0 2224/2013	5 4257	-	D+3
Unbraced	5762 ft-lb	3'1" 10779 ft-lb	0.535 (53%) D+S	s L	Gra	ain					
Shear	2840 lb	1' 1/4" 7943 lb	0.358 (36%) D+S	S L							
LL Defl inch	0.046 (L/1526)	3'1" 0.145 (L/48	30) 0.315 (31%) S	L							
TL Defl inch	0.096 (L/725)	3'1" 0.193 (L/30	60) 0.497 (50%) D+S	S L	1						
Design Not	tes				1						
1 Provide su may also b	pport to prevent lateral m e required at the interior	ovement and rotat bearings by the bu	ion at the end bearing ilding code.	s. Lateral support							
2 Fasten all	blies using 2 rows of 10d	Box nails (.128x3") at 12" o.c. Maximum	end distance not							
3 Refer to las	st page of calculations for	r fasteners required	d for specified loads.								
4 Girders are	e designed to be supported equal	ed on the bottom e	dge only.								
6 Top must b	e laterally braced at end	bearings.									
7 Bottom mu 8 Lateral slev	st be laterally braced at e	end bearings.									
ID	Load Type	Location	Trib Width Side	Dead 0.9	1	Live 1 Sno	w 1.15 Win	d 1.6 Const.	1.25 Con	nments	
1	Uniform		Тор	653 PLF		0 PLF 6	53 PLF (PLF 0	PLF A3 F	ROOF	
2	Uniform		Тор	61 PLF	1	82 PLF	0 PLF (PLF 0	PLF A3 F	LOOR	
	Self Weight			7 PLF							
Notes		chemicals	tion	 For flat roofs provide ponding 	proper dra	inage to prevent	Manufacturer Inf	0	Comtech, I 1001 S. Re Favetteville	Inc. eilly Road, Suite # e. NC	639
structural adequacy design criteria and	of this component based on the d loadings shown. It is the	1. LVL beams must not be 2. Refer to manufaction	cut or drilled irer's product information				301 Merritt 7 Build	ling, 2nd Floor	USA 28314	-,	
responsibility of the ensure the compor application and to ver-	customer and/or the contractor to nent suitability of the intended ify the dimensions and loads	regarding installation fastening details, bear	requirements, multi-ply n strength values, and code				(800) 622-5850		910-864-T	RUS	
Lumber	ione unless noted otherwise	 Damaged Beams must Design assumes top ed 	not be used ge is laterally restrained				ICC-ES: ESR-363	3			
2. LVL not to be trea	ated with fire retardant or corrosive	 Provide lateral suppor lateral displacement an 	t at bearing points to avoid d rotation	This design is valio	d until 3/	30/2024			C	OMT	есн

	Client: Watermark Homes	Date	e: 8/5/2022	Page 4 of 11
	Project:	Inpu	t by: Hampton Horrocks	-
isDesign	Address: Lot 128 Ballard	Woods Job	Name: Peach Willow III	
		Proj	ect #: J0822-3990	
BM3 Kerto-S LVL	1.750" X 9.250"	2-Plv - PASSE	D Level: Level	
		-		
• •	• •	• •	• -	
			11/2	
			$\frac{1}{\Sigma}$	/ / 9 1/
• •	• •	• •	• <u>+ +</u>	
1 SPE End Grain		2 SPE End G		/
		2 SFF Ella G		
	5'8"		1	· · 3 1/2"
1	6'2"			
Multi-Ply Analysis				
Fasten all plies using 2 rows of 10	Id Box hails (.128x3") at 12"	o.c Maximum end distance	ce not to exceed 6".	
Capacity 0.0 %	F			
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				
Notes	chemicals	6. For flat roofs provide proper drainage to pre-	Manufacturer Info	Comtech, Inc. 1001 S. Reilly Road, Suite #639
Calculated Structured Designs is responsible only of the structural adequacy of this component based on the	ndling & Installation	ponding	Metsä Wood 301 Merritt 7 Building 2nd Floor	Fayetteville, NC USA
design criteria and loadings shown. It is the 2. R responsibility of the customer and/or the contractor to	Refer to manufacturer's product information egarding installation requirements, multi-ply		Norwalk, CT 06851	28314 910-864-TRUS
ensure the component suitability of the intended fa application, and to verify the dimensions and loads.	astening details, beam strength values, and code		(000) 0∠2-5850 www.metsawood.com/us	
Lumber 3. D 1. Dry service conditions, unless noted otherwise 4. D	Design assumes top edge is laterally restrained Provide lateral support at bearing points to avoid		ICC-ES: ESR-3633	
2. LVL not to be treated with fire retardant or corrosive	ateral displacement and rotation	This design is valid until 3/30/2024		COMIECH



	7	- De stars		Client: Project:	Watermark Homes		Date: Input	: by:	8/5/2022 Hampton Horrocks	Page 6 of 11
		sDesign		Address:	Lot 128 Ballard	Woods	Job N Proje	vame: ect #:	Peach Willow III J0822-3990	
GD	H1	Kerto-S	LVL	1.750'	' X 11.875'	' 2-Ply	- PASSED) Lev	vel: Level	
		• • •	• •	•	• •	•	• •	•	• • • •	
				•		. .		•		¥11 7/8"
	1 SPF	End Grain							2 SPF End Gr	
	<u>}</u>					16'3"				3 1/2"
1-						17'3"				
N 4 1 4 -										
Faster	n all p	lies usina 2 ro	ws of 10d	Box nails ((.128x3") at 12"	o.c Maximu	m end distanc	e not f	to exceed 6".	
Capacit	ty	5	0.0 %		<u> </u>					
Yield Li	mit per	Foot	163.7 PLF	-						
Yield Li	mit per lode	Fastener	81.9 lb. IV							
Edge D Min En	istance	nce	1 1/2" 3"							
Load Co	ombinat	tion	5							
Duratio	n Facto	r	1.00							
								<u> </u>		
Notes	ad Structure	d Designs is reconcible and	chem	cals ng & Installati	on	 For flat roofs provid ponding 	e proper drainage to prev	vent Ma	anufacturer Info	Comtech, Inc. 1001 S. Reilly Road, Suite #639 Fayetteville, NC
structural	l adequacy criteria ar	of this component based nd loadings shown. It	on the 1. LVL b is the 2. Refer	eams must not be o to manufacture	cut or drilled er's product information			30 No	1 Merritt 7 Building, 2nd Floor prwalk, CT 06851	USA 28314 910-864-TRUS
ensure	the compo on, and to ve	onent suitability of the erify the dimensions and loa	intended faster ds. appro	ing installation ing details, beam vals	requirements, multi-ply strength values, and code			(80 ww	00) 622-5850 /w.metsawood.com/us	
1. Dry s	er service cond	litions, unless noted otherwis	3. Dama 4. Desig 5. Provio	ged Beams must n n assumes top edg le lateral support	ot be used e is laterally restrained at bearing points to avoid			ICO	C-ES: ESR-3633	соттесн
L. LVL1			latera	usplacement and	rotation	This design is va	alid until 3/30/2024			



	/	Client: Waterma	rk Homes		Date:	8/5/2022				Page 8 of 11
· ·	_	Project:			Input by:	Hampton Horro	ocks			
	sDesign	Address: Lot 128	Ballard Woods		Job Name	: Peach Willow I	1			
					Project #:	J0822-3990				
FDH	Kerto-S LVL	1.750" X 9.	250" 2-Ply	- PASS	SED	evel: Level				
	2									
		1								
		•			-				M	
	a riter		alter In Int						Å Å	9 1/4
AT A COMPANY OF				States of the second second					L V	
1 SPF	End Grain	E!4"	2	SPF End Gra	in -				<u> </u>	2 1/0"
		5'4"							I	3 1/2"
1		510			I					
Member lı	nformation			Reactio	ons UNF	PATTERNED I	b (Uplift)			
Туре:	Girder	Application:	Floor	Brg D	irection	Live	Dead	Snow	Wind	Const
Plies:	2	Design Method:	ASD	1 Ve	ertical	493	1290	1105	0	0
Moisture Col	ndition: Dry	Building Code:	IBC/IRC 2015	2 Ve	ertical	493	1290	1105	0	0
Deflection TI	L: 460 L: 360	Deck:	Not Checked							
Importance:	Normal - II	Book								
Temperature	e: Temp <= 100°F									
				Bearing	gs					
				Bearin	g Length	Dir. Cap.	React D/L lb	o Total	Ld. Case	Ld. Comb.
				1 - SPI	F 3.000"	Vert 27%	1290 / 1199	2488	L	D+0.75(L+S)
Analysis R	oculto			End Grain						
Analysis	Actual Loca	tion Allowed Capac	itv Comb. Case	2 - SPI	F 3.000"	Vert 27%	1290 / 1199	2488	L	D+0.75(L+S)
Moment	3177 ft-lb 2	'11" 14423 ft-lb 0.220 (22%) D+0.75(L+S) L	End						
Unbraced	3177 ft-lb 2	111" 11110 ft-lb 0.286 (29%) D+0.75(L+S) L	Grain						
Shear	1623 lb 1'	1/4" 7943 lb 0.204 (20%) D+0.75(L+S) L							
LL Defl inch	h 0.023 (L/2820) 2	.'11" 0.136 (L/480) 0.170 (17%) 0.75(L+S) L							
TL Defl incl	h 0.048 (L/1358) 2	"11" 0.182 (L/360) 0.265 (26%) D+0.75(L+S) L							
Design No	otes									
1 Provide s	upport to prevent lateral mov	ement and rotation at the er	nd bearings. Lateral suppo	rt						
2 Fasten all	be required at the interior be I plies using 2 rows of 10d B	earings by the building code.	Maximum end distance no	ot						
to exceed	l 6".									
3 Refer to la	ast page of calculations for fa	asteners required for specifie	ed loads.							
5 Top loads	must be supported equally	by all plies.								
6 Top must	be laterally braced at end be	earings.								
7 Bottom m	iust be laterally braced at en ondernoss ratio based on sir	d bearings. alo ply width								
	Load Type	Location Trib Widt	h Side Dead 0	.9 Live	e 1 Snov	w 1.15 Wind	1.6 Const	1.25 Co	mments	
1	Uniform		Top 379 PI	_F 0 P	PLF .3	79 PLF 0	PLF 0	PLF A3	ROOF	
2	Uniform		Top 56 P	F 160 P	ч F	0 PLF 0			FLOOR	
-	Self Weight		3011	F		0		,		
	Sen Weight			_Г						
Notes	ed Designs is reenoneible only of the H	chemicals andling & Installation	6. For flat roofs provid ponding	le proper drainage	to prevent	Manufacturer Info		Comtech, 1001 S. R Favettevil	Inc. eilly Road, Suite # le, NC	639
structural adequacy design criteria a	y of this component based on the 1.	LVL beams must not be cut or drilled Refer to manufacturaria product	information			301 Merritt 7 Buildir	ng, 2nd Floor	USA 28314		
responsibility of the ensure the comp	e customer and/or the contractor to ponent suitability of the intended	regarding installation requirements fastening details, beam strength values	multi-ply and code			Norwalk, CT 06851 (800) 622-5850		910-864-1	TRUS	
application, and to v Lumber	verify the dimensions and loads. 3.	approvals Damaged Beams must not be used				www.metsawood.co	m/us			
 Dry service cond LVL not to be tr 	ditions, unless noted otherwise 5. reated with fire retardant or corrosive	Design assumes top edge is laterally res Provide lateral support at bearing poin lateral displacement and rotation	rained its to avoid						omt	есн
		าลเอาสา นารมาสองสาทสาท สาทุน เอเสียเอก	This design is v	alıd until 3/30/20	024					

	Client: Wat	ermark Homes	Date:	8/5/2022	Page 9 of 11
TisDesign	Address: Lot	128 Ballard Woods	Input by: Job Name:	Hampton Horrocks Peach Willow III	
	200		Project #:	J0822-3990	
FDH Kerto-S L	/L 1.750" X	9.250" 2-Ply -	PASSED L	evel: Level	
		-			
•	•	• •	••	72"	$\Lambda \Lambda / \Lambda$
				$\overline{\nabla}$	X X 9 1.
• •	•	• •	• •		
1 SPF End Grain		2 SI	PF End Grain	Λ	
	5'4"		ł		3 1/2"
 	5'10"				
Multi-Ply Analysis					
Fasten all plies using 2 rows	of 10d Box nails (.128	3x3") at 12" o.c Maximum	n end distance no	t to exceed 6".	
Capacity	0.0 %				
Load Yield Limit per Foot	163.7 PLF				
Yield Limit per Fastener Vield Mode	81.9 lb.				
Edge Distance	1 1/2"				
Min. End Distance Load Combination	3"				
Duration Factor	1.00				
					1
Notes	chemicals	6. For flat roofs provide ponding	proper drainage to prevent	Manufacturer Info	Comtech, Inc. 1001 S. Reilly Road, Suite #639 Favetteville_NC
structural adequacy of this component based on design criteria and loadings shown. It is	the 1. LVL beams must not be cut or dr the 2. Refer to manufacturer's m	lled roduct information		Weisa Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851	USA 28314
responsibility of the customer and/or the contractor ensure the component suitability of the inter application, and to verify the dimensions and loads	ded regarding installation requi fastening details, beam strengt	ements, multi-ply n values, and code		(800) 622-5850	910-864-TRUS
Lumber 1. Dry service conditions, unless noted otherwise	 Damaged Beams must not be us Design assumes top edge is late 	ed rally restrained		ICC-ES: ESR-3633	
2. LVL not to be treated with fire retardant or corro	sive 5. Provide lateral support at bear lateral displacement and rotation	This design is vali	d until 3/30/2024		соттесн
Versien 21 20 200 Deversed by Chryster D					

		Client: Watern	ark Homes			Date:	8/5/2022				Page 10 of 1
Tis	Design	Project: Address: Lot 12	8 Ballard Wood	e		Input by: Job Name	Hamptor e: Peach W	i Horrocks /illow III			
		20(12		0		Project #:	J0822-39	990			
DWH	Kerto-S LVL	1.750" X 🕯	9.250" 2	2-Ply -	PA	SSED	Level: Level				
	2										
		1									
•		•	•		•					NA.	1
	17 19 Mar 19		al March				-			IXIX	9 1/4
•	1 A A A A A A A A A A A A A A A A A A A		•		•	•				/ V	
	End Grain				2 SPI	End Grain					
1		5'8"				1				1	3 1/2"
1		6'2"					1				
Mombor In	formation				Poar	tions UNI	DATTEDN	IED Ib (Uplift)			
Туре:	Girder	Application:	Floor		Brg	Direction	Live	Dead	Snow	Wind	Const
Plies:	2	Design Method:	ASD		1	Vertical	743	2665	2396	0	0
Moisture Con	dition: Dry · 480	Building Code:	IBC/IRC 2015		2	Vertical	743	2665	2396	0	0
Deflection TL	: 360	Deck:	Not Checked								
Importance:	Normal - II										
Temperature:	Temp <= 100°F				Page	inac					
					Bear	ings	Dia	Car Deast D/	lh Total		I d. Camp
					Bea	ring Lengtr SPF 3.000"	1 DIF. Vert	55% 2665 / 239	1D IOTAI	Ld. Case	La. Comp. D+S
					Enc	5FT 0.000	ven	2000 / 200	0000	-	0.0
Analysis Re	esults				Gra	in 205 3.000"	Vort	55% 2665/230	06 5060		D+8
Analysis	Actual Locat	ion Allowed Capa	acity Comb.	Case	Enc	SPF 3.000	ven	55% 20057238	90 5000	L	D+3
Moment	6881 π-ID	3.1° 14423 ft-lb 0.477	(48%) D+S	L	Gra	in					
Shear	3391 lb 1' 1	1/4" 7943 lb 0.427	(43%) D+S	L							
LL Defl inch	0.054 (L/1282)	3'1" 0.145 (L/480) 0.374	(37%) S	L							
TL Defl inch	0.114 (L/607)	3'1" 0.193 (L/360) 0.593	8 (59%) D+S	L							
Design Not	tes				7						
1 Provide su	pport to prevent lateral mov	ement and rotation at the	end bearings. Later	ral support	7						
2 Fasten all	plies using 2 rows of 10d Bo	x nails (.128x3") at 12" o.	e. c. Maximum end dis	stance not							
to exceed	6". st page of calculations for fa	steners required for spec	ified loads								
4 Girders are	e designed to be supported	on the bottom edge only.									
5 Top loads i	must be supported equally b	oy all plies. arings									
7 Bottom mu	ist be laterally braced at end	l bearings.									
8 Lateral sle	nderness ratio based on sin	gle ply width.									
1U	Load Type	Location Trib Wi	ath Side	Dead 0.9		LIVE 1 Sno	W 1.15	vvina 1.6 Const.	. 1.25 Con	nments	
ו 2	Uniform		Тор	80 DI F	24	1 PI F			0 PLF A2 F		
2	Self Weight		iop	7 PLF	24					2001	
	een meigin										
Notes		chemicals	6. For flat ponding	t roofs provide p	proper drair	age to prevent	Manufacture	er Info	Comtech, I 1001 S. Re Favetteville	Inc. eilly Road, Suite # e. NC	639
structural adequacy design criteria and	of this component based on the 1. d loadings shown. It is the 2	LVL beams must not be cut or drilled	t information				301 Merritt 7	Building, 2nd Floor	USA 28314	2, 110	
responsibility of the ensure the compo	customer and/or the contractor to nent suitability of the intended	regarding installation requireme fastening details, beam strength val	nts, multi-ply ues, and code				(800) 622-58	50 , ,	910-864-T	RUS	
Lumber	ing are unionsions and todats.	approvals Damaged Beams must not be used Design assumes top edge is laterally	restrained				www.metsav ICC-ES: ESI	100a.com/us R-3633			
2. LVL not to be treat	ated with fire retardant or corrosive 5.	Provide lateral support at bearing lateral displacement and rotation	points to avoid This c	design is valid	d until 3/3	0/2024			C	отт	есн
					-						

	/	Client:	Watermark Homes		Date:	8/5/2022	Page 11 of 1
Í	icDocign	Project:			Input by:	Hampton Horrocks	
│ ↓	Ispesign	Address:	Lot 128 Ballard W	/oods	Job Nam Project #:	e: Peach Willow III	
	Korto S L	1 750	" V 0 250"	2 DIV	DASSED	Level: Level	
	Reno-3 L	VL 1.750	A 9.250	2-riy	- PASSED		
•	•	•	•	•	• •	.2"	$\Lambda \Lambda / \Lambda$
							X X X 9 1/4
•	•	•	•	•	• •	<u> </u>	
	F End Grain				2 SPF End Grain		/
			5'8"				3 1/2"
			612"			\rightarrow	
			02			Ι	
Multi-Ply	Analysis						
Fasten all	plies using 2 rows	of 10d Box nails	(.128x3") at 12" o.	c Maximun	n end distance n	ot to exceed 6".	
Capacity Load		0.0 % 0.0 PLF					
Yield Limit pe	er Foot	163.7 PLF					
Yield Limit pe Yield Mode	er Fastener	81.9 lb. IV					
Edge Distanc	e	1 1/2"					
Min. End Dist	ance	3"					
Duration Fact	tor	1.00					
Notos		chemicals	3	For flat roofs provide	proper drainage to prevent	Manufacturer Info	Comtech, Inc.
Calculated Structure	ured Designs is responsible only of t	the Handling & Installat	ion	ponding	E-shor graningle in higherit	Metsä Wood	TUUT S. Kelliy Road, Suite #639 Fayetteville, NC USA
design criteria responsibility of t	and loadings shown. It is the customer and/or the contractor	the 2. Refer to manufactu to regarding installation	rer's product information requirements, multi-plv			Norwalk, CT 06851	28314 910-864-TRUS
ensure the con application, and to	nponent suitability of the intend overify the dimensions and loads.	fastening details, beam approvals	strength values, and code			(000) 022-3850 www.metsawood.com/us	
1. Dry service co	nditions, unless noted otherwise	Design assumes top ed S. Provide lateral support	ge is laterally restrained at bearing points to avoid			ICC-ES: ESR-3633	Comtech
 LVL not to be 	ucated with fire retardant or corros	lateral displacement and	l rotation	This design is val	id until 3/30/2024		