HDR-1 Kerto-S LVL 1.750" X 9.250" 2.Ply - PASSED Level Level Image: Second Secon	is	Design	P	lient: Si roject: ddress:	gnature Homes		Date: Input by Job Nan Project /	ne: Lot 9 Wil	Williams liams Farms		Page 1 o
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Index chemicals 6. For flat roofs provide proper drainage to provent ponding Manufacturer Info Comtech, Inc. alculated Structured Designs is responsible only of the sign oriteria and loadings shown. It is the sign oriteria and loadings shown. It is the ponsibility of the customer and/or the contractor of manufacturer's product information regarding installation regurements, beam strength values, and code approvals Metsä Wood Metsä Wood 1001 S. Reilly Road, Suite #639 2. Refer to manufacturer's product information regarding installation and to verify the dimensions and loads. 1. UV beams must not be used Norwalk, CT 06851 Wood 3. Damaged Beams must not be used 3. Damaged Beams must not be used www.metsawood.com/us 1001 S. Reilly Road, Suite #639	2				iop			UFLF	UFLF U	FLF WALL	
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umber 3. Damaged Beams must not be used	esponsibility of the consure the component	ustomer and/or the contract ent suitability of the inte	tor to regarding fastening	installation red details, beam strer	uirements, multi-ply			(800) 622-58	50	910-864-TRUS	
1. Decign accuracy top edge is laterally restrained	umber		approvals 3. Damaged	Beams must not be	used			www.metsav	/ood.com/us		
Dry service conditions, unless noted otherwise ULV not to be treated with fire retardant or corrosive UV not to be treated with fire retardant or corrosive UV not to be treated with fire retardant or corrosive This design is valid until 11/3/2024	. Dry service condition 2. LVL not to be treat	ons, unless noted otherwise ted with fire retardant or corr	5. Provide la	ateral support at be	earing points to avoid	This design is us	id uptil 11/3/2024			CO	тесн

isDesign	Client: Signa Project: Address:	ature Homes	Date: Input by: Job Name Project #:	5/29/2023 Anthony Williams : Lot 9 Williams Farms J0523-2758	Page 2 of 8
HDR-1 Kerto-S L	.VL 1.750" X	9.250" 2-Ply		Level: Level	
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1 SPF End Grain	5'6"		2 SPF End Grain	— <u> </u>	3 1/2"
1 Multi-Ply Analysis	6'		1		
Load Yield Limit per Foot Yield Limit per Fastener Yield Mode Edge Distance Min. End Distance Load Combination	0.0 % 0.0 % 0.0 PLF 163.7 PLF 81.9 lb. IV 1 1/2" 3" 1.00				
Notes Calculated Structured Designs is responsible only of structural adequacy of this component based on design criteria and loadings shown. It is responsibility of the customer and/or the contractor ensure the component suitability of the intern application, and to verify the dimensions and loads. Lumber	 t. LVL beams must not be cut or drille Refer to manufacturer's protore requirer fastening details, beam strength approvals Damaged Beams must not be use 	ponding ed duct information ments, multi-ply values, and code	ovide proper drainage to prevent	Manufacturer Info Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us	Comtech, Inc. 1001 S. Reilly Road, Suite #639 Fayetteville, NC USA 28314 910-864-TRUS
1. Dry service conditions, unless noted otherwise LUL not to be treated with fire retardant or corros	 Design assumes top edge is lateral Provide lateral support at bearin lateral displacement and rotation 	lly restrained g points to avoid	s valid until 11/3/2024		соттесн

		Client: Signature Homes Project:		Date: Input by:	5/29/2023 Anthony Williams	Page 3 of 8
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IDR-2	Kerto-S LV	L 1.750" X 9.250"	2-Ply -	PASSED	Level: Level	
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				1 - SPF 3.000' End	" Vert 33% 1498 / 13	386 2884 L D+S
nalysis Re	sults			Grain		
Analysis		ation Allowed Capacity Comb.	Case	2 - SPF 3.000' End	" Vert 33% 1498 / 13	386 2884 L D+S
Moment	3802 ft-lb	3' 14423 ft-lb 0.264 (26%) D+S	L	Grain		
Unbraced	3802 ft-lb	3' 10944 ft-lb 0.347 (35%) D+S	L			
Shear	1908 lb 0.029 (L/2324)	1' 1/4" 7943 lb 0.240 (24%) D+S 3' 0.141 (L/480) 0.207 (21%) S	L			
	0.060 (L/1117)	3' 0.188 (L/360) 0.322 (32%) D+S	L			
esign Not			_	1		
1 Provide sup	port to prevent lateral m	ovement and rotation at the end bearings. L	ateral support	1		
	•	bearings by the building code. Box nails (.128x3") at 12" o.c. Maximum end	d distance not			
to exceed 6	5".	fasteners required for specified loads.				
		ed on the bottom edge only.				
	nust be supported equal					
	e laterally braced at end st be laterally braced at e	-				
	derness ratio based on s					1 4 05 0 ···
ID 4	Load Type	Location Trib Width Side	Dead 0.9		ow 1.15 Wind 1.6 Consi	
1	Uniform	Тор	462 PLF		462 PLF 0 PLF	0 PLF B2 TRUSS
2		Тор	30 PLF 7 PLF	0 PLF	0 PLF 0 PLF	0 PLF WALL
	Self Weight					
lotes				roper drainage to prevent	Manufacturer Info	Comtech, Inc. 1001 S. Reilly Road, Suite #639
Calculated Structured tructural adequacy of	of this component based on the		onding		Metsä Wood 301 Merritt 7 Building, 2nd Floor	Fayetteville, NC USA
esign criteria and esponsibility of the c		2. Refer to manufacturer's product information regarding installation requirements, multi-ply			Norwalk, CT 06851 (800) 622-5850	28314 910-864-TRUS
pplication, and to veri upplication, and to veri	ify the dimensions and loads.	fastening details, beam strength values, and code approvals 3. Damaged Beams must not be used			www.metsawood.com/us	
. Dry service conditi	ons, unless noted otherwise ted with fire retardant or corrosive	 Design assumes top edge is laterally restrained Provide lateral support at bearing points to avoid 				соттесн
		lateral displacement and rotation TI	his design is valio	until 11/3/2024		

isDesign	Client: Signature Homes Project: Address:	Date: Input by: Job Nam Project #:		Page 4 of 8
HDR-2 Kerto-S LV	L 1.750" X 9.250"	2-Ply - PASSED	Level: Level	
	• •	• • •	11/2"	9 1/
1 SPF End Grain	5'6"	2 SPF End Grain		3 1/2"
ŕ	6'		ł	
Multi-Ply Analysis Fasten all plies using 2 rows of		o.c Maximum end distance n	ot to exceed 6".	
Capacity0.0Load0.0Yield Limit per Foot163				
Yield Mode IV Edge Distance 11 Min. End Distance 3" Load Combination				
Duration Factor 1.0	0			
Notes	chemicals	 For flat roofs provide proper drainage to prevent ponding. 	Manufacturer Info	Comtech, Inc. 1001 S. Reilly Road, Suite #639
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 ensure the component suitability of the intended application, and to verify the dimensions and loads.	Handling & Installation 1. UL beams must not be cut or drilled 2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastering details, beam strength values, and code approvals Descent product information information approvals	y	Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us	Fayetteville, NC USA 28314 910-864-TRUS
Lumber 1. Dry service conditions, unless noted otherwise 2. LVL not to be treated with fire retardant or corrosive	3. Damaged Beams must not be used 4. Design assumes top edge is laterally restrained 5. Provide lateral support at bearing points to avoid lateral displacement and rotation 22414F011	This design is valid until 11/3/2024		соттесн

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Version 21.80.417 Powered by iStruct[™] Dataset: 22111501.1

HDR-3 Kerto-S LVL 1.750" X 9.250" Image: state of the	2 SPF End Grain	Level: Level	↓ ↓ 1/2"
Image: Second system Second system Image: Second system Second system <td< th=""><th>ł</th><th></th><th></th></td<>	ł		
Image: second system Image: second system Image: second system 5'6" Image: second system 6' Image: second system 6' Image: second system 0.0 % Image: second system	ł		
5'6" 6' Multi-Ply Analysis Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.0 Capacity 0.0 % Load 0.0 PLF Yield Limit per Foot 163.7 PLF Yield Limit per Fastener 81.9 lb. Yield Mode IV Edge Distance 1 1/2" Min. End Distance 3" Load Combination 10	ł	ot to exceed 6".	↓ ↓ ↓ 3 1/2"
Multi-Ply Analysis Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.0 Capacity 0.0 % Load 0.0 PLF Yield Limit per Foot 163.7 PLF Yield Limit per Fastener 81.9 lb. Yield Mode IV Edge Distance 1 1/2" Min. End Distance 3" Load Combination Image: Comparison of the second se	c Maximum end distance n	1 ot to exceed 6".	
Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.0 Capacity 0.0 % Load 0.0 PLF Yield Limit per Foot 163.7 PLF Yield Limit per Fastener 81.9 lb. Yield Mode IV Edge Distance 1 1/2" Min. End Distance 3" Load Combination Image: Comparison of the second	c Maximum end distance n	ot to exceed 6".	
	For flat roofs provide proper drainage to prevent ponding	Manufacturer Info Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us	Comtech, Inc. 1001 S. Reilly Road, Suite #639 Fayetteville, NC USA 28314 910-864-TRUS

isl	Design	Client: Signature Homes Project: Address:	Date: Input by: Job Nan Project #	ne: Lot 9 Williams Farms	Page 7 of 8
GDH-18	Kerto-S LVL	1.750" X 14.000" 2-I	Ply - PASSED	Level: Level	
1 SPF End		1		2 SPF End	Grain
ľ		18'3"			1 1/2"
ť		18'10"			
Nember Inf		-		IPATTERNED lb (Uplift)	
Type: Plies: Moisture Cond Deflection LL: Deflection TL: Importance:	Girder 2 ition: Dry 480 360 Normal - II	Application:FloorDesign Method:ASDBuilding Code:IBC/IRC 2015Load Sharing:NoDeck:Not Checked	Brg Direction 1 Vertical 2 Vertical	Live Dead 3 377 2504 377 2504	Snow Wind Con 377 0 377 0
Temperature:	Temp <= 100°F				
			Bearing Leng 1 - SPF 3.500 End	•	Total Ld. Case Ld. Com 3069 L D+0.75(L+
Analysis Res			Grain 2 - SPF 3.500	" Vert 30% 2504 / 565	3069 L D+0.75(L+
	0.102 (L/2160) 9'5 1/16"	26999 ft-lb 0.478 (48%) D+L 13784 ft-lb 0.998 (100%) D+0.75(L+S) 10453 lb 0.234 (23%) D+L 0.459 (L/480) 0.222 (22%) 0.75(L+S)	L Grain L Grain L	vert 30% 23047303	3069 L D+0.75(L+
TL Defl inch	. ,	0.612 (L/360) 0.905 (91%) D+0.75(L+S)			
 may also be 2 Fasten all pl to exceed 6' 3 Refer to last 4 Girders are 5 Top loads m 6 Top must be 7 Bottom must 	port to prevent lateral moveme required at the interior bearin ies using 3 rows of 10d Box n	ails (.128x3") at 12" o.c. Maximum end dista hers required for specified loads. he bottom edge only. Il plies. n of 7'5 9/16" o.c. arings.			
ID	Load Type		Dead 0.9 Live 1 Sn	ow 1.15 Wind 1.6 Const. 1.2	25 Comments
1	Uniform	Тор	55 PLF 40 PLF	40 PLF 0 PLF 0 PL	
2	Uniform Self Weight	Тор	200 PLF 0 PLF 11 PLF	0 PLF 0 PLF 0 PI	LF WALL
structural adequacy of design criteria and responsibility of the cu ensure the compone application, and to verifi Lumber 1. Dry service conditio	loadings shown. It is the regative reductor to nt suitability of the intended y the dimensions and loads. ns, unless noted otherwise 5. Provi	Ing & Installation ponding beams must not be cut or drilled to manufacturer's product information ding installation requirements, multi-ply ning details, beam strength values, and code vola saged Beams must not be used on assumes top edge is laterally restrained de lateral support at bearing points to avoid	oofs provide proper drainage to prevent sign is valid until 11/3/2024	Manufacturer Info Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us	Comtech, Inc. 1001 S. Raily Road, Suite #639 Fayetteville, NC USA 28314 910-864-TRUS

	Client: Signature Homes	Date:	5/29/2023	Page 8 of 8
isDesign	Project:	Input by	•	
Ispesign	Address:	Job Na Project	ne: Lot 9 Williams Farms #: J0523-2758	
GDH-18 Kerto-S LV	/L 1.750" X 14.000'		Level: Level	
GDH-16 Kerto-5 LV	L 1.750 A 14.000	2-Ply - PASSED		
				-
• • • • •	• • • •	• • • • •	• • • •	
		• • • •		
1 SPF End Grain	• • • •	• • • • •	••••••••••••••••••••••••••••••••••••••	
			2 SPF End	
ſ		18'3"		1 3 1/2"
/ /		18'10"		/
Multi Dhy Analysis				
Multi-Ply Analysis				
Fasten all plies using 3 rows of	10d Box nails (.128x3") at 12"	o.c Maximum end distance	not to exceed 6".	
) %) PLF			
Yield Limit per Foot 24	5.6 PLF			
	.9 lb.			
Yield Mode IV				
Edge Distance 1 1 Min. End Distance 3"	/2"			
Load Combination				
Duration Factor 1.0	00			
				Orretark Inc.
Notes	chemicals	6. For flat roofs provide proper drainage to prevent ponding		Comtech, Inc. 1001 S. Reilly Road, Suite #639
structural adequacy of this component based on the	Handling & Installation 1. LVL beams must not be cut or drilled		Metsä Wood 301 Merritt 7 Building, 2nd Floor	Fayetteville, NC USA 28314
design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended	 Refer to manufacturer's product information regarding installation requirements, multi-ply 		Norwalk, CT 06851 (800) 622-5850	28314 910-864-TRUS
application, and to verify the dimensions and loads.	fastening details, beam strength values, and code approvals 3. Damaged Beams must not be used		www.metsawood.com/us	
Lumber 1. Dry service conditions, unless noted otherwise	 Danaged Beams must not be used Design assumes top edge is laterally restrained Provide lateral support at bearing points to avoid 			сотесн
2. LVL not to be treated with fire retardant or corrosive	lateral displacement and rotation	This design is valid until 11/3/2024		CONTECH