	Customer:			Job Name: Q2400926-27 2 Ply Member							Status:
	Street 1:			Level:	1st Floor	•		1	3/4" x 1	14" 2.0E	Design
MiTek [®]	Customer Ph			Type:	Beam	3		r	Microlla	m® LVL	Passed
Illustration Not to S	Scale Pitch: 0/12	Designed b	v Sinale Mem	ber Desian E	- Engine in MiTe	ek® Struct	ure Version	Re	port Version	n [.] 2021 03 26 0	5/03/2024 16·30
		5	8	.7.2.270.Ŭpc	late10.S.13				port referei		
		0			6-02-00 8	-02-00	10-03-00				
			A		В	A	Ply to Ply	Zones			
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							2				
		1 3408		9-08-1	00		1 3108				
		'		10-03	-00		ŗ				
DESI	GN INFORMATION	ANAL	SIS RESU	LTS							
Building Code:	IRC2015	D	esign Criteria	Loc	cation	Load Coml	bination LI	DF De	esign	Limit	Result
Design Methodolog	gy: ASD II (General Construction)	Max Pos	. Moment:	6'- 2'	1 1/2" 9 1/2"	D +	L 1.	00 110	9 lb ft 2 77 lb	24252 lb ft 9310 lb	Passed - 5%
	Residential	Live Loa	d (LL) Pos. D	efl.: 5'-	3 1/8"	L	L I.	00 37	010"	L/360 F	Passed - 478 Passed - L/999
LL Deflection Limit	Dry : L/360. 0.75" (absolute)	Total Loa	ad (TL) Pos. D	Defl.: 5'- 3	3 5/16"	D +	L	0.	016"	L/240 F	assed - L/999
TL Deflection Limit	: L/240, 1.00" (absolute)	SUPPO	ORT AND R	EACTION	INFORMAT	ION					
	D	ID I	Input Bearing	Controlling	g Load	DF Dow	nward U	lplift I	Resistance	Resistance	Result
Both ends of the m	Requirements: ember and the outer supports		Length	Combina	auon	Rea		action			D 1 4504
must be laterally re	estrained. Top and bottom edge st be fully restrained or have the		3-08 3-08	D + 0.75(I D + I	_ + Lr)	1.15 <i>/ 1</i> 1.00 41	16 lb		9188 lb 9188 lb	5206 lb 5206 lb	Passed - 15% Passed - 8%
following maximum	n unbraced length:	LOAD	NG								
Тор: 0'	Bottom: 6'- 8 1/2"	Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L) Snov	v (S) Roof Live (Lr) Wind (W)
Bearing Stress of	Support Material:	Self Weight	0'	10'- 3"	Self Weight	Тор	14 lb/ft	-	-	· -	-
• 425 psi Wall @) 0'- 2 1/2"	Uniform	-0'	7'- 3 1/2"	FC1 Floor Decking (Pla	n Top	10 lb/ft	40 lb/ft	: -		
• 425 psi Wall @) 10'- 1/2"				View Fill) FC1 Floor						
		Uniform	7'- 3 1/2"	10'- 3"	Decking (Pla View Fill)	n Top	2 lb/ft	10 lb/ft			-
		Point	7'- 1 3/4"	7'- 1 3/4" 0'- 1 3/4"	2FB4A(i84)	Back	95 lb	167 lb	-	· 3 lb	1/-3 lb
		UNFA		EACTIONS	E 10(142)	Юр	247 ID	-	-	· 250 lb	di 00
		ID	Start Loc	End Loc	Sour	ce	Dead (D)	Live (L	.) Snov	w (S) Roof Live (Lr) Wind (W)
		1	0' 9'- 11 1/2"	0'- 3 1/2" 10'- 3"	E8(i ² 6(i1	10) 9)	400 lb 168 lb	240 lb 248 lb		- 256 lb	80 lb/ -1 lb 80 lb/ -1 lb
		DESIG	N NOTES_	.0 0	0(11	-/		2-10 10		-5 10	00 10/ -1 10
		The dependence	ad loads use	d in the desi	gn of this mei	mber were	applied to the	structure a	as projected	dead loads.	
		Analys	is and Desigr	n has been p	erformed usir	ng precisio	n loading from	actual mo	deled condit	ions. Some loads	may have
		Tributa	ary Loads hav	e been gene	erated based	on actual s	pacing betwee	n member	s in the mod	lel which may diffe	er from the
		default • Transf	t system spac er reactions n	ing. The ac nav differ fro	:tual loads ap m design resເ	plied to the ults as allo	e member are s wed per buildin	shown in th ia codes ai	e Specified	Loads table. load distribution r	oractices.
		This reference	port is based	on modeled	l conditions in	put by the	user. Source i	information	for the load	ls and supports a	e provided for
		Review	v all loads and	d reactions to	o ensure that	the member	er/bearing/con	nector/stru	cture can re	sist adequately. l	Jnless already
		specifi require	ed on this rep ed) as per ma	ort, anchora nufacturer's	ge for uplift re	eactions to	be specified by	y others. I	nstallation o	f member and ac	cessories (if
		• Beam	Stability Facto	or used in th	e calculation	for Allowab	le Max Pos Mo	oment (CL)) = 1.00		
		PLY TO	O PLY CON	NECTION							
		• Zone A	A: Factored lo	ad = 0 plf. L	Jse 12d (0.13	1"x3.25") n 131"x3 25"	ails. LDF = 1.) nails_IDF =	00. $Qty = 100 Oty$	30. Row = $30 = 6$ Row = $30 = 6$	3, Spacing = 12"	
		12d	(0.131"x3.25	") nails prope	erties: $D = 0.1$	31" , L = 3	.25". Fastener	capacity =	96 lbs. X1 :	= 2" , Y1 = 0.75", `	Y2 = 1.5"
		X1 :	= Minimum er	nd distance,	. X2 = Minimu	m edge dis	tance, Y2 = M	linimum ro	w spacing.		
I											

MiTek [®]	Customer: Street 1: City: Customer Ph	Job Name: Level: Label: Type:	Q2400926-27 1st Floor 2FB11 - i83 Beam	2 Ply Member 1 3/4" x 14" 2.0E Microllam® LVL	Status: Design Passed

FASTENER INSTALLATION - 3 ROWS (FROM ONE FACE)







Customer: Street 1: City: Customer Ph..

Job Name: Q2400926-27 2 Ply Member Status: Level: 1st Floor 1 3/4" x 24" 2.0E Design Label: 2FB28 - i21 Microllam® LVL Passed Type: Beam LOADING Start Loc End Loc Source Dead (D) Live (L) Roof Live (Lr) Wind (W) Туре Face Snow (S) 3'- 1 1/2" 3'- 1 1/2" E18(i39) Point Тор -179 lb 5'- 1 1/2" 5'- 1 1/2" E18(i39) Point -105 lb Top -Point 7'- 1 1/2" 7'- 1 1/2" E18(i39) Тор -129 lb ----Point 9'- 1 1/2" 9'- 1 1/2" E18(i39) -123 lb Top Point 11'- 1 1/2" 11'- 1 1/2" E18(i39) Тор -124 lb 13'- 1 1/2" 13'- 1 1/2" E18(i39) -113 lb Point Тор Point 15'- 1 1/2" 15'- 1 1/2" E18(i39) -124 lb Top ----Point 17'- 1 1/2" 17'- 1 1/2" E18(i39) -123 lb Тор Point 19'- 1 1/2" 19'- 1 1/2" E18(i39) Top -129 lb

			. ,						
Point	21'- 1 1/2"	21'- 1 1/2"	E18(i39)	Тор	-	-	-	-	-106 lb
Point	23'- 1 1/2"	23'- 1 1/2"	E18(i39)	Тор	-	-	-	-	-178 lb
Point	26'- 2 3/4"	26'- 2 3/4"	E18(i39)	Тор	-	-	-	-	-175 lb
JNFAC	CTORED RI	EACTIONS							
ID	Start Loc	End Loc	Source		Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'- 3 1/2"	E1(i6)		2462 lb	3286 lb	-	1068/-42 lb	89 lb/ -1280 lb
2	25'- 11 1/2"	26'- 3"	E9(i2)		2591 lb	3414 lb	-	1100/-45 lb	89 lb/ -1280 lb

DESIGN NOTES

• The dead loads used in the design of this member were applied to the structure as projected dead loads.

 Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.

• Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.

• Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.

• This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for

reference only. Verify that all loads and support conditions are correct. • Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.

• Beam Stability Factor used in the calculation for Allowable Max Pos Moment (CL) = 1.00

PLY TO PLY CONNECTION

Zone A: Factored load = 371 plf. Use 12d (0.131"x3.25") nails. LDF = .90. Qty = 24. Row = 4, Spacing = 12" Zone B: Factored load = 752 pfl. Use 12d (0.131*x3.25") nails. LDF = 1.00. Qty = 88. Row = 4, Spacing = 12" 12d (0.131*x3.25") nails properties: D = 0.131", L = 3.25". Fastener capacity = 96 lbs. X1 = 2", Y1 = 0.75", Y2 = 1.5"

Install fasteners from one face.

X1 = Minimum end distance, X2 = Minimum edge distance, Y2 = Minimum row spacing.

FASTENER INSTALLATION - 4 ROWS (FROM ONE FACE)







Status: Design Passed

DESIGN NOTES

- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already
 specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if
 required) as per manufacturer's instruction.
- Beam Stability Factor used in the calculation for Allowable Max Pos Moment (CL) = 1.00

PLY TO PLY CONNECTION

- Zone A: Factored load = 379 plf. Use 12d (0.131"x3.25") nails. LDF = 1.00. Qty = 44. Row = 4, Spacing = 12"
 Zone B: Factored load = 748 plf. Use 12d (0.131"x3.25") nails. LDF = 1.00. Qty = 228. Row = 4, Spacing = 9"
- 12d (0.131"x3.25") nails properties: D = 0.131", L = 3.25". Fastener capacity = 96 lbs. X1 = 2", Y1 = 0.75", Y2 = 1.5" Install fasteners from both faces.
 - X1 = Minimum end distance, X2 = Minimum edge distance, Y2 = Minimum row spacing.

FASTENER INSTALLATION - 4 ROWS (FROM BOTH FACES)



+ Fasteners installed from back face

	Customer:	Job Name: Q2	400926-27			2 Ply N	Status:		
MiTek®	Street 1: City:		Level: 1st Label: 2F	t Floor B4A - i84			1 3/4" x Microlla	14" 2.0E m® I VI	Design Passed
Illustration Not to 6	Customer Ph	osigned by Single Mem	Type: Be	am	Structure	Vorsion	Depart V/araia		
illustration Not to S	scale. Pltch: 0/12 L	8 8 8 8 8 8 8 8 8 8 8	.7.2.270.Update1	10.S.13	Structure	version	Report Versio	n: 2021.03.26 05	/03/2024 16:31
		0		3-06-00					
			А	Ply to Ply	Zones				
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		1 310 /	8 3-03-00	_1 ∤					
		·	3-06-08						
DESI	GN INFORMATION	ANALYSIS RESU	LTS						
Building Code:	IRC2015	Design Criteria	Locatio	n Load '	l Combinat	tion LDF	Design	Limit	Result
Risk Category:	II (General Construction)	Max Shear:	2'- 4 1/2	2"	D+L	1.00	246 lb	9310 lb F	Passed - 2%
Service Condition:	Residential Dry	SUPPORT AND R	EACTION INF	ORMATION					
LL Deflection Limit TL Deflection Limit	: L/360, 0.75" (absolute) : L/240, 1.00" (absolute)	Input ID Bearing Length	Controlling Loa Combination	ad LDF	Downwa Reactio	ard Uplif on Reacti	t Resistance on of Member	Resistance of Support	Result
Lateral Restraint	Requirements:	1 3-08	D + L	1.00	395 lb 262 lb)	9188 lb	5206 lb	Passed - 8%
Both ends of the m	ember and the outer supports	CONNECTOR INF		1.00	202 10	,	3937 10	·	Fassed - 770
of the member mus	st be fully restrained or have the	ID Part No. M	lanufacturer	Nailing	g Requirem	nents	Other Informat	ion or Requirement	t for
Top: 0'	Bottom: 1'- 4 1/4"	2 HUS410	Simpson	- -	-	-	Connector ma	nually specified by	the user.
		* Connectors: Ref	er to manufactur	er's specifica	tions, faste	eners requiren	nents and installat	ion instruction. Wh	ere header
425 psi Wall @	<u>Support Material:</u> 2 0'- 2 1/2"	LOADING			orang mor	mbol, motali b			
• 405 psi Beam	@ 3'- 6 1/2"	Type Start Loc	End Loc	Source	Face [Dead (D)	Live (L) Sno	w (S) Roof Live (L	_r) Wind (W)
		Self 0' Weight	3'- 6 1/2" S	Self Weight	Тор	14 lb/ft	-		-
		Point 1'- 1/2" Point 2'- 1/2"	1'- 1/2" 2 2'- 1/2" 2	2F12(c02) 2F12(c01)	Front Front	91 lb 88 lb	227 lb 201 lb	- 1 lb - 5 lb	0 lb 1/-6 lb
		UNFACTORED R	EACTIONS						
		ID Start Loc	End Loc	Source 8(i87)		Dead (D)	Live (L) Sno	w (S) Roof Live (L	r) Wind (W)
		2 3'- 6 1/2"	3'- 6 1/2"	2FB11(i83)		95 lb	167 lb	- 3 lb	1 lb/ -4 lb
		DESIGN NOTES							
		 The dead loads use Analysis and Design 	d in the design o n has been perfo	f this membe rmed usina p	r were app recision loa	lied to the stru ading from act	ucture as projected ual modeled condi	i dead loads. itions. Some loads	mav have
		been modified to sir	nplify reporting.	d based on a	ctual spaci	ing between n	embers in the mo	del which may diffe	r from the
		default system space	ing. The actual	loads applied	to the me	mber are sho	wn in the Specified	l Loads table.	
		 Transfer reactions in This report is based 	on modeled con	ditions input l	as allowed by the user	r. Source info	rmation for the loa	ds and supports are	e provided for
		 reference only. Veri Review all loads and 	ify that all loads a d reactions to en:	and support of sure that the	onditions a member/be	re correct. earing/connec	tor/structure can re	esist adequately. U	nless already
		specified on this rep required) as per ma	oort, anchorage fo nufacturer's instr	or uplift reacti uction.	ons to be s	specified by of	thers. Installation	of member and acc	essories (if
		Beam Stability Fact	or used in the cal	Iculation for A	llowable M	lax Pos Mome	ent (CL) = 1.00		
		PLY TO PLY CON	NECTION	401/0404	0.05%)		0 01 10 D		
		• Zone A: Factored Io 12d (0.131"x3.25	ad = 212 plf. Us ") nails properties	e 12d (0.131" s: D = 0.131"	x3.25") na , L = 3.25"	. Fastener ca	0. Qty = 12. Row pacity = 96 lbs. X1	= 3, Spacing = 12 = 2", Y1 = 0.75", Y	′2 = 1.5"
		Install fasteners f X1 = Minimum er	rom one face. id distance, X2 =	= Minimum ec	lge distanc	e, Y2 = Minir	num row spacing.		

MiTek [®]	Customer: Street 1: City: Customer Ph	Job Name: Level: Label: Type:	Q2400926-27 1st Floor 2FB4A - i84 Beam	2 Ply Member 1 3/4" x 14" 2.0E Microllam® LVL	Status: Design Passed

FASTENER INSTALLATION - 3 ROWS (FROM ONE FACE)



MiTek* C c	ustomer: treet 1: ity: ustomer Ph		Job Name: Q24009 Level: 1st Flo Label: 2FB4 - Type: Beam	126-27 or i82		2 Ply 1 3/4" x Microll	Member (14" 2.0E am® LVL	Status: Design Passed
Illustration Not to Scal	e. Pitch: 0/12	Designed by Single Memb 8.	per Design Engine in 7.2.270.Update10.S.1	MiTek® Structur 3	e Version	Report Vers	ion: 2021.03.26 (05/03/2024 16:31
			3-09- A 2 3-02-00 3-02-00 3-09-00	00 Ply to Ply Zones				
DESIGN	INFORMATION	ANALYSIS RESUL	.TS					
Building Code:	IRC2015	Design Criteria	Location	Load Combi	nation LDF	Design	Limit	Result
Design Methodology:	ASD	Max Pos. Moment:	2'- 6"	D + L	1.00	1318 lb ft	24252 lb ft	Passed - 5%
Risk Category:	II (General Construction)	Max Shear:	2'- 3 1/2"	D + L	1.00	958 lb	9310 lb	Passed - 10%
Service Condition:	Dry	SUPPORT AND RI	EACTION INFORM	IATION	_	_	_	
LL Deflection Limit: TL Deflection Limit:	L/360, 0.75" (absolute) L/240, 1.00" (absolute)	ID Bearing Length	Controlling Load Combination	LDF Down Read	ward Uplift ction Reaction	Resistanc	e Resistance er of Support	Result
Lateral Restraint Rec	uirements:	1 3-08 2 3-08	D + L D + I	1.00 166 1.00 127	1 lb 6 lb	9188 lb 9188 lb	5206 lb 5206 lb	Passed - 32% Passed - 25%
Both ends of the mem	ber and the outer supports			100 121		010018	0200 15	1 40004 20%
of the member must be	e fully restrained or have the	Type Start Loc	End Loc Source	e Face	Dead (D)	Live (L) Sr	now (S) Roof Live	(Lr) Wind (W)
following maximum un	braced length:	Self 0'	3'- 9" Self We	ight Top	14 lb/ft	-		-
Top: 0	BOILOTTI: 1 - 0 1/2	Point 0'- 6"	0'- 6" 2F13(c	01) Front	174 lb	388 lb	- 2 lb	0/-3 lb
Bearing Stress of Su	nnort Material	Point 2'- 6"	2'- 6" 2F13(c	02) Front	235 lb	628 lb	- 3 lb	1/-3 lb
 425 psi Wall @ 0'- 	2 1/2"	Point 0'- 6"	0'- 6" 2F06(c	01) Back	187 lb 218 lb	473 lb	 3 lb	- 1/3 lb
• 425 psi Wall @ 3'-	· 6 1/2"	UNFACTORED RE	ACTIONS	Dack	21010	380 10	- 310	17-5 10
		ID Start Loc	End Loc S	Source	Dead (D)	Live (L) Si	now (S) Roof Live	(Lr) Wind (W)
		1 0'	0'- 3 1/2"	6(i19)	529 lb	1239 lb	- 4 lb	1 lb/ -6 lb
		2 3'- 5 1/2"	3'- 9"	3(i16)	338 lb	830 lb	- 4 lb	1 lb/ -6 lb
		DESIGN NOTES						
		 Analysis and Design been modified to sim Tributary Loads have default system spaci Transfer reactions m This report is based reference only. Verif Review all loads and specified on this repr required) as per mar Beam Stability Facto PLY TO PLY CONN 	has been performed plify reporting. a been generated bas ng. The actual loads ay differ from design on modeled condition y that all loads and su reactions to ensure to ort, anchorage for upl nufacturer's instruction r used in the calculati	ed on actual spa applied to the r results as allow s input by the u upport condition hat the member ft reactions to b n. on for Allowable	loading from act acing between m member are show ed per building co ser. Source infor s are correct. //bearing/connect e specified by ot	ual modeled con embers in the m vn in the Specific odes and standa mation for the lo tor/structure can hers. Installation nt (CL) = 1.00	ditions. Some load odel which may diff ed Loads table. Ird load distribution bads and supports a resist adequately. n of member and ac	s may have ier from the practices. re provided for Unless already cessories (if
		Lone A: Factored loa 12d (0.131"x3.25" Install fasteners fr X1 = Minimum end	ia = 839 plf. Use 12d) nails properties: D = om one face. d distance, X2 = Mini	(0.131"x3.25") 0.131" , L = 3.2 mum edge dista	naıls. LDF = 1.0 25". Fastener cap ance, Y2 = Minin	u. Qty = 18. Ro vacity = 96 lbs. X	w = 3, Spacing = 8 1 = 2" , Y1 = 0.75", j.	Ϋ́ Y2 = 1.5"

MiTek [®]	Customer: Street 1: City: Customer Ph	Job Name: Level: Label: Type:	Q2400926-27 1st Floor 2FB4 - i82 Beam	2 Ply Member 1 3/4" x 14" 2.0E Microllam® LVL	Status: Design Passed

FASTENER INSTALLATION - 3 ROWS (FROM ONE FACE)



	Customer:				Job Name:	Q2400926-27	7		2	Ply Mem	ber	Status:
	Street 1: City:				Level:	1st Floor 2FB20 - i79			1 3/	4" x 20"	2.0E	Design
MiTek®	Customer Ph				Туре:	Beam			Mic	rollam®	LVL	Passed
Illustration Not to S	cale Pitch: 0/12	Г)esigned b	v Single Merr	ber Design F	ngine in MiTek	® Struct	ture Version	Report	Version: 20	21 03 26 05/0	13/2024 16:31
		-	Joong nou b	8	.7.2.270.Upd	ate10.S.13	o oli uol		Кероп	. version. 202	21.00.20 00/0	10.01
		0						11	8-02-00			
			4	<u>^ ^</u>	A		4		Ply to Ply Zones			
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		1 7-12			16-1	07-05		1	11-00			
		1			18	-02-01			1			
DESIG			ANAL	SIS RESU	LTS							
Building Code:	IRC2015		D	esign Criteria	Loc	ation Lo	ad Com	bination L	DF Design	n Lin	nit	Result
Design Methodolog	IV: ASD		Max Pos	. Moment:	9'	- 1" D	+ 0.75	(L + Lr) 1	.15 29861 lb	oft 5424	4 lb ft Pa	ssed - 55%
Risk Category:	II (General Construct	ion)	Max Neg	. Moment:	17'- 4	1/16" D+0	.75(L +	Lr + 0.6W) 1	.60 868 lb	ft 3667	6 lb ft Pa	assed - 2%
Service Condition:	Residential Drv		Max She	ar:	15'- 7	7 1/16" D	+ 0.75((L + Lr) 1	.15 5990 lk	o 1529	95 lb Pa	ssed - 39%
LL Deflection Limit:	L/360, 0.75" (absolu	te)	Live Loa	d (LL) Pos. D	efl.: 8'- 1	1 1/2" 0.7	5(L + Lr	+ 0.6W)	0.234"	L/3	860 Pas	sed - L/850
TL Deflection Limit:	L/240, 1.00" (absolu	te)	Total Loa	ad (TL) Pos. [Defl.: 8'- 1	1 3/8" D + 0	.75(L +	Lr + 0.6W)	0.445"	' L/2	240 Pas	sed - L/447
			SUPPO		REACTION	INFORMATIC	DN	_	_	_	_	
Lateral Restraint	Requirements:	orte	ID I	Input Bearing	Controlling	Load LD	F Dov	vnward L	Jplift Resi	stance Re	esistance	Result
must be laterally re	strained. Top and bottom	edges		Length	COMDINA		Re				Support	
of the member mus	t be fully restrained or hav	ve the	1	7-12	D + 0.75(L	.+Lr) 1.1	5 72	287 lb	203	304 lb 1	9627 lb P	assed - 37%
Top: 0'	Bottom: 16'- 4 9/16"			11-00	D + 0.75(L	.+LI) I.I	5 65	מוווכ	200	509 ID 2	7 040 ID P	assed - 31%
			LUAD	Start Loc	Endloc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)) Wind (W)
Bearing Stress of	Support Material:		Self			Colf Mainht	Table	20 Ib/#	Live (L)	3110W (3)	ROOI LIVE (LI)	
• 725 psi Column	@ 0'- 6 3/4"		Weight	0	0'- 6 1/4"		Тор	20 ID/IL 461 Ib/ft	-	-	- 476 lb/ft	- 11/1 lb/ft
725 psi Column	@ 17'- 4 1/16"		Uniform	7'- 2 1/4"	8'- 6 1/4"	E14(i40)	Тор	452 lb/ft	-	-	457 lb/ft	110 lb/ft
			Uniform	8'- 11 1/4"	10'- 3 1/4"	E14(i40)	Тор	462 lb/ft	-	-	479 lb/ft	115 lb/ft
			Tapered	11'- 2 1/4" 0'- 10 1/4"	12'- 6 1/4" 6'- 10 1/4"	E14(i40) E14(i40)	тор Тор	492 lb/π 308 To 311 lb/ft	- t -	-	511 lb/ft 318 To 326 lb/	122 lb/ft ft 76 To 78 lb/ft
			Tapered	12'- 10 1/4"	18'- 2 1/16"	E14(i40)	Тор	308 To 307 lb/f	t -	-	320 To 318 lb/	ft 77 To 76 lb/ft
			Point	1'- 10 1/4" 2'- 10 1/4"	1'- 10 1/4" 2'- 10 1/4"	2F04(c06)	Front	160 lb	438/-26 lb	-	-	-
			Point	5'- 10 1/4" 5'- 10 1/4"	5'- 10 1/4"	2F04(c03) 2F04(c01)	Front	160 lb	438/-26 lb	-	-	-
			Point	7'- 10 1/4"	7'- 10 1/4"	2F04(c04)	Front	160 lb	438/-26 lb	-	-	-
			Point Point	9'- 10 1/4" 11'- 10 1/4"	9'- 10 1/4" 11'- 10 1/4"	2E04(c07) 2E04(c05)	Front Front	160 lb 133 lb	438/-26 lb 329/-20 lb	-	-	-
			Point	12'- 10 1/4"	12'- 10 1/4"	2F04(c02)	Front	134 lb	332/-15 lb	-	-	-
			Point	14'- 10 1/4"	14'- 10 1/4"	2F05(c01)	Front	134 lb	331 lb	-	-	-
			Point	15 - 10 1/4" 17'- 10 1/4"	15 - 10 1/4" 17'- 10 1/4"	∠F05(c02) 2F06(c01)	Front Front	210 lb	567 lb	-	-	-
			Point	3'- 3 3/4"	3'- 3 3/4"	J01(c02)	Back	15 lb	-	-	8/-10 lb	9/-1 lb
			Point Point	4'- 6 11/16" 6'- 6 11/16"	4'- 6 11/16" 6'- 6 11/16"	J02(c04)	Back Back	32 lb	-	-	34/-9 lb	8/-23 lb
			Point	8'- 6 11/16"	8'- 6 11/16"	J02(c04)	Back	31 lb	-	-	29/-6 lb	7/-21 lb
			Point	9'- 4 13/16"	9'- 4 13/16"	J02(c01)	Back	31 lb	-	-	29/-6 lb	7/-21 lb
			Point Point	11'- 4 13/16" 13'- 4 13/16"	11 - 4 13/16" 13'- 4 13/16"	JU2(c05) J02(c02)	Back Back	36 lb 32 lb	-	-	41/-9 lb 34/-9 lb	10/-29 lb 8/-23 lb
			Point	14'- 7 3/4"	14'- 7 3/4"	J01(c01)	Back	15 lb	-	-	8/-10 lb	9/-1 lb
			Point	1'- 10 1/4"	1'- 10 1/4"	E14(i40)	Тор	- 11 IL	-	-	-	-639 lb
			Point	3-33/4" 3'-101/4"	3-33/4" 3'-101/4"	E14(i40)	тор Тор	14 ID -	-	-	34/-8 ID -	-666 lb
			Point	5'- 10 1/4"	5'- 10 1/4"	E14(i40)	Top	-	-	-	-1 lb	-673 lb
			Point	7'- 10 1/4" 9'. 7 1/4"	7'- 10 1/4" 9'- 7 1/4"	E14(i40)	Top	-	-	-	- 1 lb	-627 lb
			Point	11'- 10 1/4"	11'- 10 1/4"	E14(i40)	Тор	-	-	-		-480 lb
			Point	13'- 10 1/4"	13'- 10 1/4"	E14(i40)	Тор	-	-	-	-	-667 lb
			Point Point	14'- 7 3/4" 15'- 10 1/4"	14'- 7 3/4" 15'- 10 1/4"	E14(i40) E14(i40)	Top Top	14 Ib -	-	-	34/-8 lb -	8/-10 lb -683 lb
			Point	17'- 10 1/4"	17'- 10 1/4"	E14(i40)	Тор	-	-	-	-	-682 lb
			Point	18'- 1 13/16"	18'- 1 13/16"	E14(i40)	Тор	204 lb			211 lb	50 lb
			UNFA	Start Loo	Endlog	Source		Dead (D)		Spour (S)	Roof Live (L-)	Wind (M)
			1	0'	0'- 7 3/4"	- Source		3714 lb	1774/-99 lb	- SHOW (5)	3006/-43 lb	-
I				-								



Street 1: City: Customer Ph..

Customer:

			Job Name: Level: Label: Type:	Q2400926-27 1st Floor 2FB20 - i79 Beam		2 1 3/4 Mici	Status: Design Passed		
	ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
	++>	0'- 3"	0'- 3"	PBO10(i88)	2881 lb	1376/-77 lb	-	2332/-33 lb	-
	++>	0'- 8 7/16"	0'- 8 7/16"	E3(i3)	833 lb	398/-22 lb	-	674/-10 lb	-
	2	17'- 3 1/16"	18'- 2 1/16"	-	4269 lb	2323/-66 lb	-	3313/-44 lb	-
	++>	17'- 3 1/16"	17'- 3 1/16"	E5(i5)	963 lb	524/-15 lb	-	747/-10 lb	-
	++>	17'- 8 9/16"	17'- 8 9/16"	PBO11(i89)	2334 lb	1270/-36 lb	-	1811/-24 lb	-
_	++>	18'- 13/16"	18'- 13/16"	E6(i7)	972 lb	529/-15 lb	-	755/-10 lb	-
	DESIG	N NOTES							

• CAUTION: One or more plies are not supported properly at 8-07. At least 75% of every ply must be contacting support.

• The dead loads used in the design of this member were applied to the structure as projected dead loads.

- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already
 specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if
 required) as per manufacturer's instruction.
- Beam Stability Factor used in the calculation for Allowable Max Pos Moment (CL) = 1.00

PLY TO PLY CONNECTION

- Zone A: Factored load = 592 plf. Use 12d (0.131"x3.25") nails. LDF = 1.00. Qty = 76. Row = 4, Spacing = 12" 12d (0.131"x3.25") nails properties: D = 0.131", L = 3.25". Fastener capacity = 96 lbs. X1 = 2", Y1 = 0.75", Y2 = 1.5" Install fasteners from one face.
 - X1 = Minimum end distance, X2 = Minimum edge distance, Y2 = Minimum row spacing.





	Customer:		Job Name: Q24	100926-27		2 Ply	Member	Status:
	Street 1:		Level: 1st	Floor		1 3/4" x	9 1/4" 2.0E	Design
MiTek [®]	City: Customer Ph		Type: H4	- 190 am		Microl	am® LVL	Passed
Illustration Not to S	cale. Pitch: 0/12	Designed by Single Mem	ber Design Engin	e in MiTek® Structu	ure Version	Report Vers	ion: 2021.03.26	05/03/2024 16:31
		0	.7.2.270.0pdate h	5.0.10 E 07.00				
		0	٨	5-07-00				
			A	Ply t	to Ply Zones			
			\bigtriangledown	~~				
		1 1 3-68	5-00-00	2				
		ł	5-07-00					
DESIC	GN INFORMATION	ANALYSIS RESU	LTS					
Building Code:	IRC2015	Design Criteria	Location	Load Comb	pination LD	F Design	Limit	Result
Risk Category:	y: ASD II (General Construction)	Max Pos. Moment: Max Shear:	3'- 4" 1'- 3/4"	D + 0.75(L D + 0.75(L	L+Lr) 1.1 L+Lr) 1.1	5 2831 lb π 5 2023 lb	12830 lb π 7074 lb	Passed - 22% Passed - 29%
Service Condition:	Residential Dry	Live Load (LL) Pos. D	efl.: 2'- 9 1/4'	0.75(L + Lr ·	+ 0.6W)	0.025"	L/360	Passed - L/999
LL Deflection Limit: TL Deflection Limit:	L/360, 0.75" (absolute) L/240, 1.00" (absolute)	SUPPORT AND R	EACTION INF	D + 0.75(L + L	_r + 0.6vv)	0.046	L/240	Passed - L/999
	(<i>appendix</i>)	Input ID Bearing	Controlling Loa		nward Up	lift Resistand	e Resistance	Result
Both ends of the m	Requirements: ember and the outer supports	Length 1 2.08		N 115 200	action Read		er of Support	Decod 22%
must be laterally re of the member mus	strained. Top and bottom edges t be fully restrained or have the	2 3-08	D + 0.75(L + Lr) 1.15 200) 1.15 27	10 lb	9188 lb	16207 lb	Passed - 22% Passed - 29%
following maximum Top: 1'- 8 1/2"	unbraced length: Bottom: 5'- 7"	2 3-08	0.6D + 0.6W	1.60	-10	1 lb -		
Desire Officer of	Ourse of Materials	Type Start Loc	End Loc S	Source Face	Dead (D)	Live (L) S	now (S) Roof Liv	e (Lr) Wind (W)
1323 psi Wall (<u>Support Material:</u> @ 0'- 2 1/2"	Self 0' Weight	5'- 7" Se	elf Weight Top	9 lb/ft	-		-
• 1323 psi Wall (@ 5'- 4 1/2"	Point 1'- 4" Point 3'- 4"	1'- 4" 2 3'- 4" 2	F07(c01) Top F08(c02) Top	829 lb 769 lb	568 lb 497/-85 lb	- 639/0 - 633/-1	lb 152/-676 lb 1 lb 151/-673 lb
		Point 5'- 4" UNFACTORED RI	5'- 4" 2 EACTIONS	F08(c01) Top	650 lb	373/-85 lb	- 546/-1	lb 130/-662 lb
		ID Start Loc	End Loc	Source	Dead (D)	Live (L) S	now (S) Roof Live	e (Lr) Wind (W)
		1 0 [.] 2 5'- 3 1/2"	0'- 3 1/2" 5'- 7"	E6(17) E11(i26)	979 lb 1322 lb	641/-34 lb 797/-136 lb	- 750 - 1068/-	-1 lb 298 lb/ -973 lb -1 lb 298 lb/ -973 lb
		DESIGN NOTES						
		 The dead loads use Analysis and Design 	d in the design of has been perfor	this member were a med using precisior	applied to the s n loading from a	tructure as project actual modeled cor	ed dead loads. iditions. Some loa	ds may have
		been modified to sin Tributary Loads hav	nplify reporting. e been generated	l based on actual sp	pacing between	members in the m	odel which may di	iffer from the
		 default system space Transfer reactions n 	ing. The actual I nay differ from de	oads applied to the sign results as allow	member are sh ved per building	own in the Specifi codes and standa	ed Loads table. ard load distributior	n practices.
		This report is based reference only. Veri	on modeled cond ify that all loads a	ditions input by the und support condition	user. Source in ns are correct.	formation for the lo	ads and supports	are provided for
		Review all loads and specified on this rep	d reactions to ens port, anchorage fo	ure that the member r uplift reactions to	er/bearing/conno be specified by	ector/structure can others. Installation	resist adequately. n of member and a	Unless already accessories (if
		 required) as per ma Beam Stability Factorial 	nufacturer's instru or used in the calo	iction. culation for Allowabl	le Max Pos Mor	ment (CL) = 0.99		
		PLY TO PLY CON	NECTION					
		• Zone A: Factored lo 12d (0.131"x3.25	ad = 0 plf. Use 12 ") nails properties	2d (0.131"x3.25") na : D = 0.131" , L = 3.	ails. LDF = 1.0 .25". Fastener o	0. Qty = 12. Row apacity = 96 lbs. X	= 2, Spacing = 12 (1 = 2" , Y1 = 0.75'	.'" ", Y2 = 1.5"
		Install fasteners f X1 = Minimum en	rom one face. id distance, X2 =	Minimum edge dist	tance, Y2 = Mir	nimum row spacing].	
		11						

MiTek [®]	Customer: Street 1: City: Customer Ph	Job Name: Level: Label: Type:	Q2400926-27 1st Floor H4 - i90 Beam	2 Ply Member 1 3/4" x 9 1/4" 2.0E Microllam® LVL	Status: Design Passed

FASTENER INSTALLATION - 2 ROWS (FROM ONE FACE)



MiTek °	Customer: Street 1: City: Customer Ph			Job Name: Level: Label: Type:	Q2400926 1st Floor 2DB28 - i3 Beam	-27 6			2 Ply 1 3/4" x 1 Microlla	Member 1 7/8" 2.0E am® LVL		Status: Design Passed
Illustration Not to Sc	ale. Pitch: 0/12	Designed b	y Single Memb 8.	per Design E 7.2.270.Upd	Engine in MiTe ate10.S.13	ek® Stru	ucture Versior	I	Report Version	on: 2021.03.26	05/0	3/2024 16:31
	0		0.						26.0	3-00		
		A	A	A				Λ	4	Ply to Ply Zones		
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		₽			↓ ↓	4		\checkmark		-		
	1 2	N.							3			
	2-01-08 2-00-00 2-0	00-00			18-00-0	0			2-01-0	8		
	/			26	6-03-00				/	ł		
DESIG		ΔΝΔΙ	YSIS RESUL	TS	_		_	-	_	_		
Building Code:	IRC2015	D	esign Criteria	Loc	ation I	oad Co	ombination	LDF	Design	Limit	F	Result
Design Methodology	: ASD	Max Pos	s. Moment:		16'	D	+ Lr	1.15	1731 lb ft	20392 lb ft	Pa	ssed - 8%
Risk Category.	Residential	Max Neg Max She	g. Moment: ear:	7'- 1	6' 1 3/8"	D	+ Lr + Lr	1.15 1.15	2941 lb ft 914 lb	13572 lb ft 9081 lb	Pas Pas	sed - 22% sed - 10%
Service Condition: LL Deflection Limit:	Dry L/360, 0.75" (absolute)	Live Loa	id (LL) Pos. De	efl.: 15	5'- 2"		Lr		0.048"	L/360	Pas	sed - L/999
TL Deflection Limit:	L/240, 1.00" (absolute)	Total Los SUPP	ad (TL) Pos. D ORT AND RI	efl.: 15'- 1 EACTION	15/16" INFORMAT	D ION	+ Lr	-	0.095"	L/240	Pas	sed - L/999
Lateral Restraint Re	equirements:		Input	Controlling	Load		ownward	Uplift	Resistance	e Resistance	_	Desult
Both ends of the mer must be laterally rest	mber and the outer supports trained. Top and bottom edges		Length	Combina	ation	.DF F	Reaction	Reaction	of Member	of Support		Result
of the member must following maximum u	be fully restrained or have the inbraced length:	1	4-12 4-12	D + L 0.6D + 0	r 1 .6W 1	.15 .60	167 lb	-56 lb	12469 lb -	12053 lb -	P	assed - 1%
Top: 1'- 10 1/2"	Bottom: 26'- 3"	1	1-06-00	D + L	r 1	.15	737 lb		47250 lb	45675 lb	Ρ	assed - 2%
Bearing Stress of S	upport Material:	2	10-00	0.6D + 0 0.6D + 0	.6W 1	.60 .60	97 lb	-40 ID	- 36522 lb	- 25375 lb	Р	assed - 0%
• 725 psi Wall @ 0)'- 1 1/2"	2	10-00 1-02-00	D + L D + I	r 1 r 1	.15	3202 lb	-2249 lb	- 36750 lb	- 35525 lb	D	lassed - 9%
725 psi Wall @ 2 725 psi Wall @ 2	<u>-</u> 	2	1-02-00	0.6D + 0	.6W 1	.60	5202 15	-109 lb	-	-	'	assea - 570
 725 psi Wall @ 6 725 psi Wall @ 6 	5' 24'- 3"	3	1-04-12 1-04-12	D + L 0.6D + 0	r 1 .6W 1	.15 .60	2653 lb	-216 lb	43969 lb -	42503 lb -	P	assed - 6%
• 725 psi Wall @ 2	26'- 1 1/2"	3	8-12	0.6D + 0	.6W 1	.60	63 lb		31957 lb	22203 lb	Ρ	assed - 0%
			8-12	D + L	r 1	.15	_	-1403 lb		•		
		Туре	Start Loc	End Loc	Source	Fac	e Dead (D) L	ive (L) Sn	ow (S) Roof Li	ve (Lr)	Wind (W)
		Self Weight	0'	26'- 3"	Self Weight	Тор	p 12 lb/ft		-			-
		Point Point	0'- 3/4" 2'	0'- 3/4" 2'	C01(c02) C02(c05)	Τοι Τοι	p 89 lb p 87 lb		-	- 112 - 111	lb Ib	37/-168 lb 37/-138 lb
		Point Point	4' 6'	4' 6'	C02(c03)	Top	p 88 lb		-	- 112	lb Ib	37/-140 lb 37/-140 lb
		Point	8'	8'	C02(c00)	Тор	p 88 lb		-	- 112	lb	37/-131 lb
		Point Point	10' 12'	10' 12'	C02(c01) C02(c11)	Top Top	o 88 lb p 88 lb		-	- 112 - 112	lb lb	37/-100 lb 37/-100 lb
		Point Point	14' 16'	14' 16'	C02(c02) C02(c09)	Top Top	o 88 lb o 88 lb		-	- 112 - 112	lb Ib	37/-100 lb 37/-100 lb
		Point	18' 20'	18' 20'	C02(c04)	Top Top	p 88 lb		-	- 112	lb	37/-128 lb
		Point	20	20	C02(c13)	Тор	p 88 lb		-	- 112	lb	37/-140 lb
		Point Point	24' 25'- 6"	24' 25'- 6"	C02(c07) C02(c08)	Top Top	p 81 lb p 62 lb		-	- 98 - 61	lb Ib	33/-122 lb 20/-76 lb
		Point	26'- 2 1/4" CTORED RE	26'- 2 1/4"	C01(c01)	Тор	p 72 lb	-		- 78	lb	26/-126 lb
		ID	Start Loc	End Loc	Source	e	Dead (E)) L	ive (L) Sn	ow (S) Roof Liv	ve (Lr)	Wind (W)
		1 ++>	0' 0'- 1 1/2"	2'- 1 1/2" 0'- 1 1/2"	- E12(i	29)	319/-489 319 lb	lb	-	- 360/-6	390 lb) lb	-
		++>	2'	2'	PBO4	, i32)	-489 lb		-	690) lb	-
		++>	4- 1 1/2" 4'- 3"	4'- 3"	- PBO5(i33)	- 1054	,	-	- 1167/	dl dl	-
		++> ++>	4'- 5" 6'	5'- 10" 6'	E13(i PBO7(30) i35)	- 1054 lk)	-	1054,	/-1 lb	3 lb/ -13 lb -
		3 ++>	24'- 1 1/2" 24'- 3"	26'- 3" 24'- 3"	- PBO6/	i34)	1371/-665 1371 바	5 lb	-	- 1472/- - 135	788 lb 4 lb	-
		++>	26'- 1 1/2"	26'- 1 1/2"	E10(1)	-665 lb)	-	- 118/-7	'88 lb	-
1												



DESIGN NOTES

- CAUTION: The maximum net analysis reaction exceeds the user-defined maximum uplift value at one or more supports.
- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- Beam Stability Factor used in the calculation for Allowable Max Pos Moment (CL) = 0.99

PLY TO PLY CONNECTION

 Zone A: Factored load = 0 plf. Use 12d (0.131"x3.25") nails. LDF = 1.00. Qty = 54. Row = 2, Spacing = 12" 12d (0.131"x3.25") nails properties: D = 0.131", L = 3.25". Fastener capacity = 96 lbs. X1 = 2", Y1 = 0.75", Y2 = 1.5" Install fasteners from one face.

X1 = Minimum end distance, X2 = Minimum edge distance, Y2 = Minimum row spacing.



