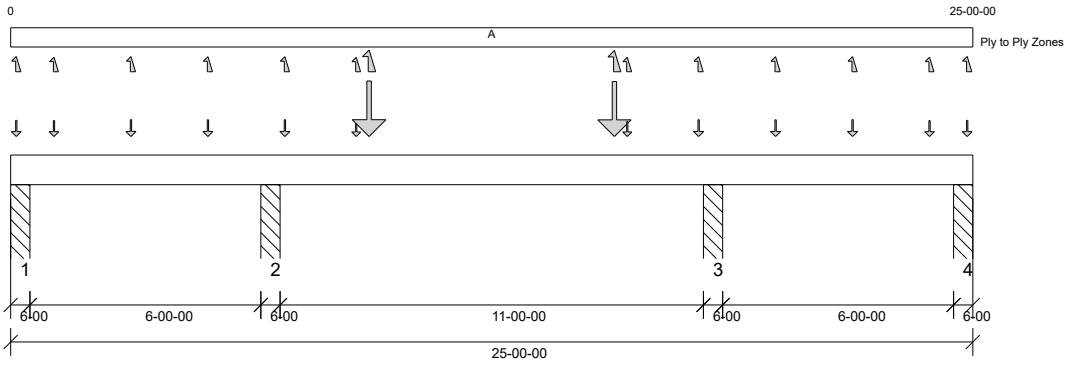
MiTek	Customer: Street 1: City: Customer Ph...	Job Name: **Dale 05-23-107** Level: **1st Floor** Label: **PBM1 - i126** Type: **Beam**	**2 Ply Member** **1 3/4" x 9 1/4" 2.0E** **Microllam® LVL**	Status: **Design Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.6.2.271.Update3.22

Report Version: 2021.03.26 06/01/2023 13:35



DESIGN INFORMATION

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
LL Deflection Limit:	L/360, 0.75" (absolute)
TL Deflection Limit:	L/240, 1.00" (absolute)

Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 8'- 10" Bottom: 24'- 5"

Bearing Stress of Support Material:

- 725 psi Column @ 0'- 5"
- 725 psi Column @ 6'- 9"
- 725 psi Column @ 18'- 3"
- 725 psi Column @ 24'- 7"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	11'- 9 5/8"	D + 0.6W	1.60	2235 lb ft	17096 lb ft	Passed - 13%
Max Neg. Moment:	6'- 9"	D + 0.6W	1.60	2988 lb ft	11782 lb ft	Passed - 25%
Max Shear:	7'- 9 1/4"	D + 0.6W	1.60	2031 lb	9842 lb	Passed - 21%
Live Load (LL) Pos. Defl.:	12'- 5 7/8"	0.6W		0.118"	L/360	Passed - L/999
Live Load (LL) Neg. Defl.:	4'- 7/16"	0.6W		0.030"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	12'- 5 7/8"	D + 0.6W		0.119"	L/240	Passed - L/999
Total Load (TL) Neg. Defl.:	4'- 1 1/4"	D + 0.6W		0.028"	L/240	Passed - L/999

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Downward Reaction	Uplift Reaction	Resistance of Member	Resistance of Support	Result
1	6-00	D + 0.75(L + Lr + 0.6W)	1.60	430 lb		15750 lb	15225 lb	Passed - 3%
1	6-00	0.6D + 0.6W	1.60		-490 lb	-	-	
2	6-00	D + 0.6W	1.60	2586 lb		16734 lb	15225 lb	Passed - 17%
2	6-00	0.6D + 0.6W	1.60		-143 lb	-	-	
3	6-00	D + 0.6W	1.60	2559 lb		15750 lb	15225 lb	Passed - 17%
3	6-00	0.6D + 0.6W	1.60		-132 lb	-	-	
4	6-00	D + 0.75(L + Lr + 0.6W)	1.60	431 lb		15750 lb	15225 lb	Passed - 3%
4	6-00	0.6D + 0.6W	1.60		-487 lb	-	-	

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	25'	Self Weight	Top	9 lb/ft	-	-	-	-
Point	0'- 1 3/4"	0'- 1 3/4"	P01(c01)	Top	44 lb	-	-	88 lb	31/-101 lb
Point	1'- 1 1/2"	1'- 1 1/2"	P01(c01)	Top	55 lb	-	-	78/-11 lb	17/-39 lb
Point	3'- 1 1/2"	3'- 1 1/2"	P01(c01)	Top	85 lb	-	-	95 lb	35/-94 lb
Point	5'- 1 1/2"	5'- 1 1/2"	P01(c01)	Top	80 lb	-	-	92 lb	32/-87 lb
Point	7'- 1 1/2"	7'- 1 1/2"	P01(c01)	Top	84 lb	-	-	90 lb	34/-90 lb
Point	8'- 11 3/4"	8'- 11 3/4"	P01(c01)	Top	32 lb	-	-	38/-5 lb	13/-35 lb
Point	9'- 3 3/4"	9'- 3 3/4"	A07(c02)	Top	-	-	-	168/-58 lb	2800/-503 lb
Point	15'- 8 1/4"	15'- 8 1/4"	A07(c01)	Top	-	-	-	168/-52 lb	2763/-478 lb
Point	16'- 1/4"	16'- 1/4"	P01(c02)	Top	32 lb	-	-	38/-5 lb	13/-35 lb
Point	17'- 10 1/2"	17'- 10 1/2"	P01(c02)	Top	84 lb	-	-	90 lb	34/-90 lb
Point	19'- 10 1/2"	19'- 10 1/2"	P01(c02)	Top	80 lb	-	-	92 lb	32/-87 lb
Point	21'- 10 1/2"	21'- 10 1/2"	P01(c02)	Top	85 lb	-	-	95 lb	35/-94 lb
Point	23'- 10 1/2"	23'- 10 1/2"	P01(c02)	Top	55 lb	-	-	78/-11 lb	17/-39 lb
Point	24'- 10 1/4"	24'- 10 1/4"	P01(c02)	Top	44 lb	-	-	88 lb	31/-101 lb

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'- 6"	PBO1(i33)	167 lb	-	-	232/-50 lb	206 lb/ -985 lb
2	6'- 6"	7'	PBO4(i125)	331 lb	-	-	481/-78 lb	206 lb/ -985 lb
3	18'	18'- 6"	PBO3(i124)	335 lb	-	-	489/-73 lb	206 lb/ -985 lb
4	24'- 6"	25'	PBO2(i34)	163 lb	-	-	225/-50 lb	206 lb/ -985 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.

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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) = 0.95

PLY TO PLY CONNECTION

- Zone A: Factored load = 0 plf. Use 12d (0.131"x3.25") nails. LDF = 1.00. Qty = 52. 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.

FASTENER INSTALLATION – 2 ROWS (FROM ONE FACE)