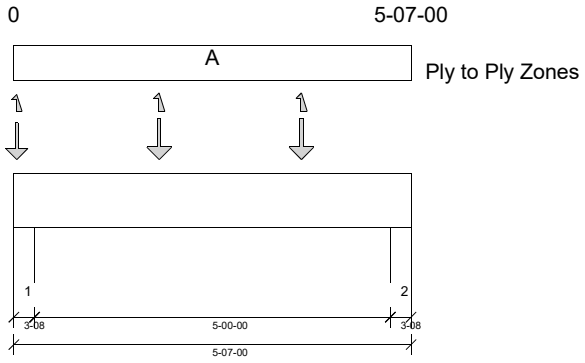
MiTek	Customer: Street 1: City: Customer Ph...	Job Name: **Q2301429** Level: **1st Floor** Label: **H4 - i15** Type: **Beam**	**2 Ply Member** **1 3/4" x 9 1/4" 2.0E Microllam® LVL**	Status: **Design Passed**

Illustration Not to Scale. Pitch: 0/12

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

Report Version: 2021.03.26 09/13/2023 16:26



DESIGN INFORMATION

Building Code:	IRC2015
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: 1'- 10 1/2" Bottom: 5'- 7"

Bearing Stress of Support Material:

- 1323 psi Wall @ 0'- 2 1/2"
- 1323 psi Wall @ 5'- 4 1/2"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	2'- 1/2"	D + Lr	1.15	2275 lb ft	12824 lb ft	Passed - 18%
Max Neg. Moment:	0'- 2 1/2"	D + Lr	1.15	202 lb ft	12674 lb ft	Passed - 2%
Max Shear:	4'- 6 1/4"	D + Lr	1.15	1550 lb	7074 lb	Passed - 22%
Live Load (LL) Pos. Defl.:	2'- 9 7/8"	0.75(L + Lr + 0.6W)		0.012"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	2'- 9 7/8"	D + 0.75(L + Lr + 0.6W)		0.024"	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	3-08	D + Lr	1.15	2572 lb		9187 lb	16206 lb	Passed - 28%
2	3-08	D + Lr	1.15	1560 lb		9187 lb	16207 lb	Passed - 17%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	5'- 7"	Self Weight	Top	9 lb/ft	-	-	-	-
Point	0'- 1/2"	0'- 1/2"	A05(c01)	Top	603 lb	-	-	607 lb	206/-368 lb
Point	2'- 1/2"	2'- 1/2"	A05(c03)	Top	718 lb	-	-	718 lb	232/-450 lb
Point	4'- 1/2"	4'- 1/2"	A05(c08)	Top	717 lb	-	-	716 lb	225/-451 lb

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'- 3 1/2"	E2(i7)	1302 lb	-	-	1279 lb	728 lb/ -1095 lb
2	5'- 3 1/2"	5'- 7"	E9(i14)	789 lb	-	-	762 lb	728 lb/ -1095 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) = 0.99

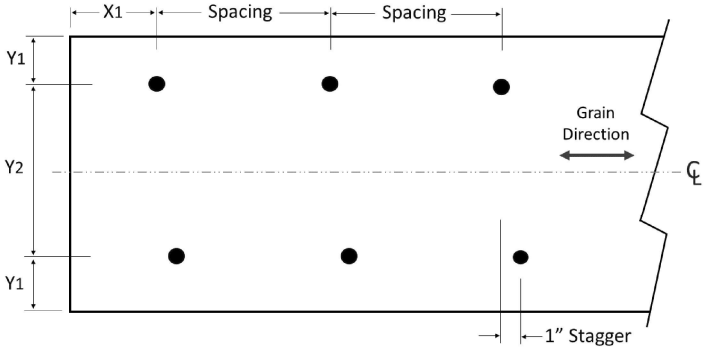
PLY TO PLY CONNECTION

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

MiTek	Customer: Street 1: City: Customer Ph...	Job Name: **Q2301429** Level: **1st Floor** Label: **H4 - i15** Type: **Beam**	**2 Ply Member** **1 3/4" x 9 1/4" 2.0E Microllam® LVL**	Status: **Design Passed**

PLY TO PLY CONNECTION

FASTENER INSTALLATION – 2 ROWS (FROM ONE FACE)



MiTek	Customer: Street 1: City: Customer Ph...	Job Name: **Q2301429** Level: **1st Floor** Label: **DB7 - i17** 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.S.22

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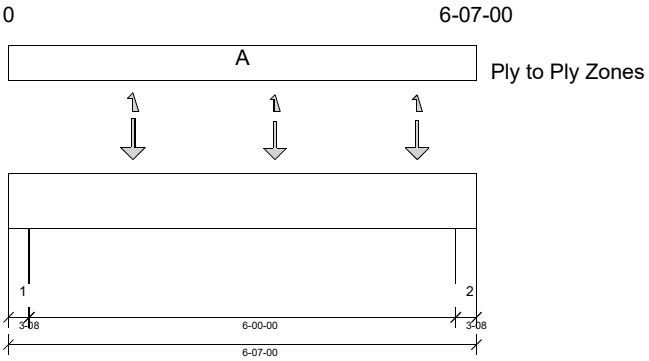


DESIGN INFORMATION

Building Code:	IRC2015
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: 1'- 10 1/2" Bottom: 6'- 7"

Bearing Stress of Support Material:

- 1323 psi Wall @ 0'- 2 1/2"
- 1323 psi Wall @ 6'- 4 1/2"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	3'- 9"	D + Lr	1.15	3422 lb ft	12824 lb ft	Passed - 27%
Max Shear:	5'- 6 1/4"	D + Lr	1.15	1909 lb	7074 lb	Passed - 27%
Live Load (LL) Pos. Defl.:	3'- 3 1/2"	Lr		0.024"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	3'- 3 9/16"	D + Lr		0.050"	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	3-08	D + Lr	1.15	1802 lb		9188 lb	16207 lb	Passed - 20%
2	3-08	D + Lr	1.15	2304 lb		9188 lb	16207 lb	Passed - 25%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	6'- 7"	Self Weight	Top	9 lb/ft	-	-	-	-
Point	1'- 9"	1'- 9"	A04(c02)	Top	722 lb	-	-	725 lb	174/-467 lb
Point	3'- 9"	3'- 9"	A04(c01)	Top	672 lb	-	-	631/-17 lb	159/-344 lb
Point	5'- 9"	5'- 9"	A04(c03)	Top	671 lb	-	-	623/0 lb	247/-352 lb

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'- 3 1/2"	E10(i16)	927 lb	-	-	875/-7 lb	317 lb/ -738 lb
2	6'- 3 1/2"	6'- 7"	E6(i2)	1201 lb	-	-	1104/-10 lb	317 lb/ -738 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) = 0.99

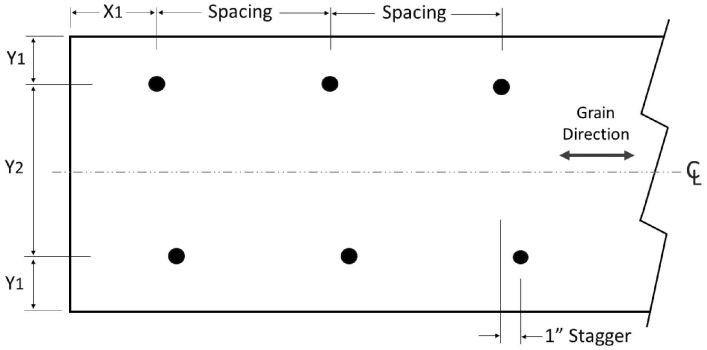
PLY TO PLY CONNECTION

- Zone A: Factored load = 0 plf. Use 12d (0.131"x3.25") nails. LDF = 1.00. Qty = 14. 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.

MiTek	Customer: Street 1: City: Customer Ph...	Job Name: **Q2301429** Level: **1st Floor** Label: **DB7 - i17** Type: **Beam**	**2 Ply Member** **1 3/4" x 9 1/4" 2.0E Microllam® LVL**	Status: **Design Passed**

PLY TO PLY CONNECTION

FASTENER INSTALLATION – 2 ROWS (FROM ONE FACE)



MiTek	Customer: Street 1: City: Customer Ph...	Job Name: **Q2301429** Level: **1st Floor** Label: **DB9 - i18** 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.S.22

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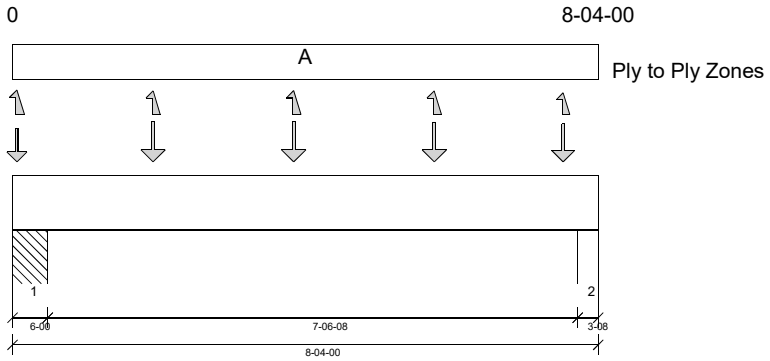


DESIGN INFORMATION

Building Code:	IRC2015
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: 1'- 10 1/2" Bottom: 8'- 1/2"

Bearing Stress of Support Material:

- 725 psi Column @ 0'- 5"
- 1323 psi Wall @ 8'- 1 1/2"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	4'	D + Lr	1.15	3827 lb ft	12824 lb ft	Passed - 30%
Max Neg. Moment:	0'- 5"	D + Lr	1.15	262 lb ft	12569 lb ft	Passed - 2%
Max Shear:	1'- 3 1/4"	D + Lr	1.15	1709 lb	7074 lb	Passed - 24%
Live Load (LL) Pos. Defl.:	4'- 3 7/16"	0.75(L + Lr + 0.6W)		0.045"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	4'- 3 7/16"	D + 0.75(L + Lr + 0.6W)		0.089"	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 + Lr	1.15	2459 lb		15750 lb	15225 lb	Passed - 16%
1	6-00	0.6D + 0.6W	1.60		-362 lb	-	-	
2	3-08	D + Lr	1.15	2301 lb		9188 lb	16207 lb	Passed - 25%
2	3-08	0.6D + 0.6W	1.60		-185 lb	-	-	

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	8'- 4"	Self Weight	Top	9 lb/ft	-	-	-	-
Point	0'- 3/4"	0'- 3/4"	C01(c01)	Top	346 lb	-	-	392 lb	192/-586 lb
Point	2'	2'	C02(c02)	Top	491 lb	-	-	510 lb	213/-548 lb
Point	4'	4'	C02(c03)	Top	495 lb	-	-	518 lb	216/-557 lb
Point	6'	6'	C02(c01)	Top	488 lb	-	-	504 lb	212/-548 lb
Point	7'- 10"	7'- 10"	C03(c01)	Top	470 lb	-	-	467 lb	191/-471 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(i9)	1195 lb	-	-	1235 lb	839 lb/ -1795 lb
2	8'- 1/2"	8'- 4"	E10(i16)	1174 lb	-	-	1156 lb	839 lb/ -1795 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) = 0.99

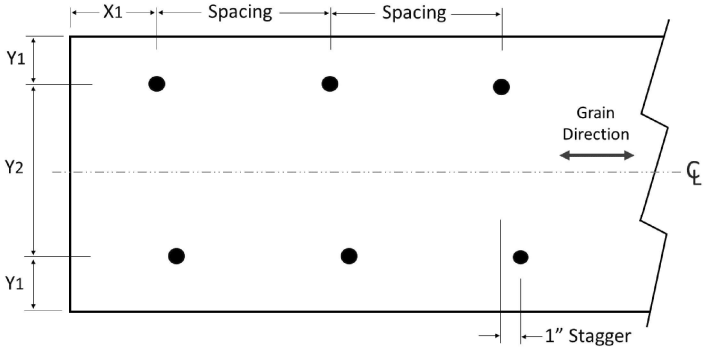
PLY TO PLY CONNECTION

- Zone A: Factored load = 0 plf. Use 12d (0.131"x3.25") nails. LDF = 1.00. Qty = 18. 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.

MiTek	Customer: Street 1: City: Customer Ph...	Job Name: **Q2301429** Level: **1st Floor** Label: **DB9 - i18** Type: **Beam**	**2 Ply Member** **1 3/4" x 9 1/4" 2.0E Microllam® LVL**	Status: **Design Passed**

PLY TO PLY CONNECTION

FASTENER INSTALLATION – 2 ROWS (FROM ONE FACE)



MiTek	Customer: Street 1: City: Customer Ph...	Job Name: **Q2301429** Level: **1st Floor** Label: **DB3 - i19** 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.S.22

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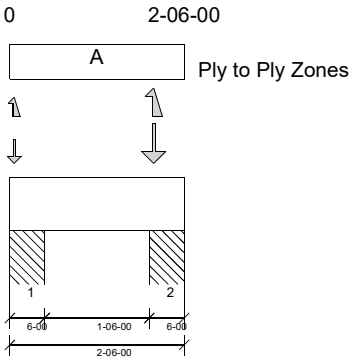


DESIGN INFORMATION

Building Code:	IRC2015
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: 1'- 10 1/2" Bottom: 2'- 6"

Bearing Stress of Support Material:

- 725 psi Column @ 0'- 5"
- 725 psi Column @ 2'- 1"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	0'- 5"	0.6D + 0.6W	1.60	51 lb ft	17806 lb ft	Passed - 0%
Max Neg. Moment:	0'- 5"	D + Lr	1.15	160 lb ft	12802 lb ft	Passed - 1%
Max Shear:	1'- 2 3/4"	D + Lr	1.15	109 lb	7074 lb	Passed - 2%

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	591 lb		15750 lb	15225 lb	Passed - 4%
1	6-00	0.6D + 0.6W	1.60		-173 lb	-	-	
2	6-00	D + Lr	1.15	969 lb		15750 lb	15225 lb	Passed - 6%
2	6-00	0.6D + 0.6W	1.60		-166 lb	-	-	

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	2'- 6"	Self Weight	Top	9 lb/ft	-	-	-	-
Point	0'- 3/4"	0'- 3/4"	B01(c01)	Top	192 lb	-	-	258 lb	120/-375 lb
Point	2'- 3/4"	2'- 3/4"	C01(c01)	Top	533 lb	-	-	533 lb	171/-752 lb

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'- 6"	PBO2(i10)	252 lb	-	-	323 lb	226 lb/ -545 lb
2	2'	2'- 6"	PBO3(i11)	497 lb	-	-	468 lb	226 lb/ -545 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) = 0.99

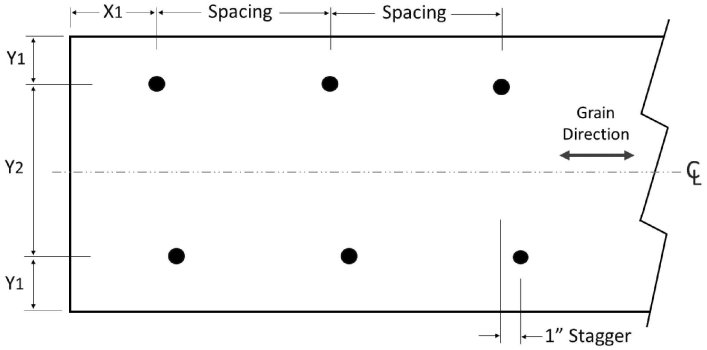
PLY TO PLY CONNECTION

- Zone A: Factored load = 0 plf. Use 12d (0.131"x3.25") nails. LDF = 1.00. Qty = 6. 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.

MiTek	Customer: Street 1: City: Customer Ph...	Job Name: **Q2301429** Level: **1st Floor** Label: **DB3 - i19** Type: **Beam**	**2 Ply Member** **1 3/4" x 9 1/4" 2.0E Microllam® LVL**	Status: **Design Passed**

PLY TO PLY CONNECTION

FASTENER INSTALLATION – 2 ROWS (FROM ONE FACE)



MiTek	Customer: Street 1: City: Customer Ph...	Job Name: **Q2301429** Level: **1st Floor** Label: **DB11 - i20** 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.S.22

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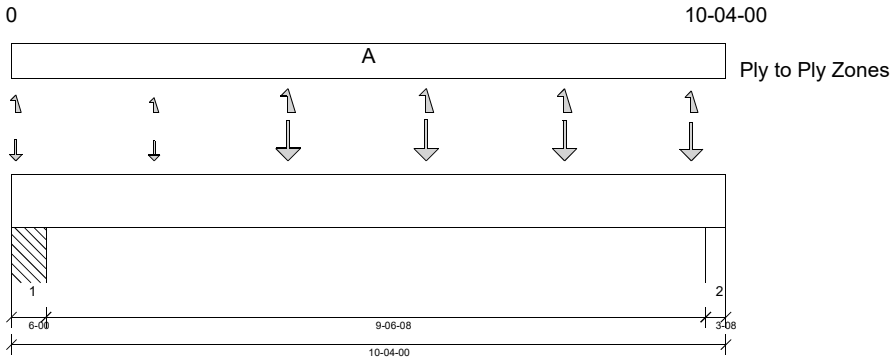


DESIGN INFORMATION

Building Code:	IRC2015
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: 1'- 10 1/2" Bottom: 10'- 1/2"

Bearing Stress of Support Material:

- 725 psi Column @ 0'- 5"
- 1323 psi Wall @ 10'- 1 1/2"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	6'	D + Lr	1.15	5579 lb ft	12824 lb ft	Passed - 44%
Max Neg. Moment:	6'	0.6D + 0.6W	1.60	543 lb ft	16914 lb ft	Passed - 3%
Max Shear:	9'- 3 1/4"	D + Lr	1.15	2034 lb	7074 lb	Passed - 29%
Live Load (LL) Pos. Defl.:	5'- 4 1/4"	0.75(L + Lr + 0.6W)		0.107"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	5'- 4 5/16"	D + 0.75(L + Lr + 0.6W)		0.207"	L/240	Passed - L/552

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 + Lr	1.15	1984 lb		15750 lb	15225 lb	Passed - 13%
1	6-00	0.6D + 0.6W	1.60		-287 lb	-	-	
2	3-08	D + Lr	1.15	2728 lb		9187 lb	16207 lb	Passed - 30%
2	3-08	0.6D + 0.6W	1.60		-230 lb	-	-	

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	10'- 4"	Self Weight	Top	9 lb/ft	-	-	-	-
Point	0'- 3/4"	0'- 3/4"	B01(c01)	Top	165 lb	-	-	206 lb	83/-303 lb
Point	2'- 3/4"	2'- 3/4"	C01(c01)	Top	112 lb	-	-	170 lb	98/-195 lb
Point	4'	4'	C02(c02)	Top	494 lb	-	-	514 lb	215/-552 lb
Point	6'	6'	C02(c03)	Top	498 lb	-	-	522 lb	219/-560 lb
Point	8'	8'	C02(c01)	Top	490 lb	-	-	506 lb	213/-550 lb
Point	9'- 10"	9'- 10"	C03(c01)	Top	470 lb	-	-	467 lb	191/-463 lb

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'- 6"	PBO4(i12)	945 lb	-	-	1013 lb	681 lb/ -1423 lb
2	10'- 1/2"	10'- 4"	E6(i2)	1381 lb	-	-	1372 lb	681 lb/ -1423 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) = 0.99

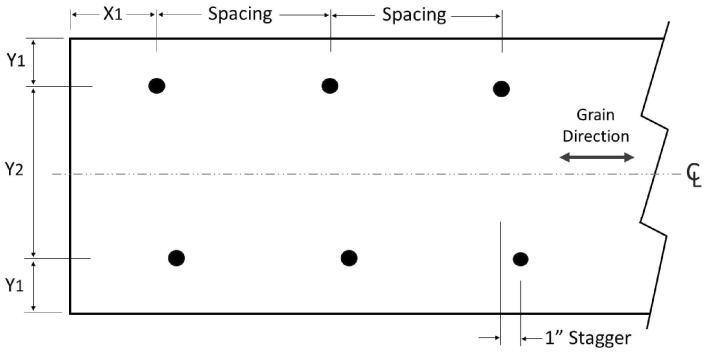
PLY TO PLY CONNECTION

- Zone A: Factored load = 0 plf. Use 12d (0.131"x3.25") nails. LDF = 1.00. Qty = 22. 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.

MiTek	Customer: Street 1: City: Customer Ph...	Job Name: **Q2301429** Level: **1st Floor** Label: **DB11 - i20** Type: **Beam**	**2 Ply Member** **1 3/4" x 9 1/4" 2.0E Microllam® LVL**	Status: **Design Passed**

PLY TO PLY CONNECTION

FASTENER INSTALLATION – 2 ROWS (FROM ONE FACE)

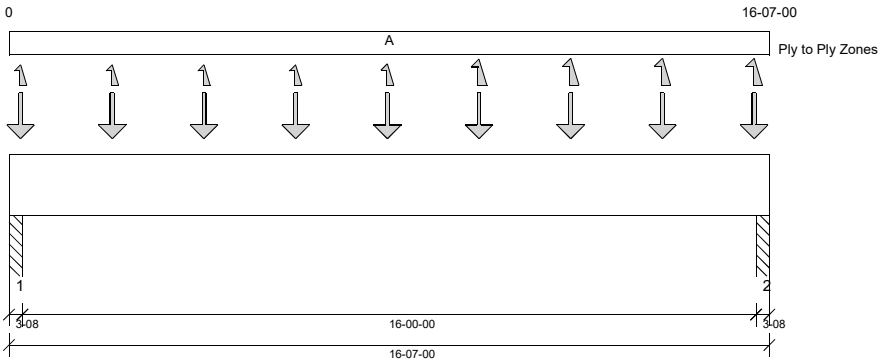


MiTek	Customer: Street 1: City: Customer Ph...	Job Name: **Q2301429** Level: **1st Floor** Label: **DB17 - i23** Type: **Beam**	**2 Ply Member** **1 3/4" x 16" 2.0E Microllam® LVL**	Status: **Design Passed**

Illustration Not to Scale. Pitch: 0/12

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

Report Version: 2021.03.26 09/13/2023 16:26



DESIGN INFORMATION

Building Code:	IRC2015
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: 1'- 10 1/2" Bottom: 16'- 7"

Bearing Stress of Support Material:

- 725 psi Column @ 0'- 2 1/2"
- 725 psi Column @ 16'- 4 1/2"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	8'- 3"	D + Lr	1.15	17092 lb ft	35795 lb ft	Passed - 48%
Max Neg. Moment:	12'- 3"	0.6D + 0.6W	1.60	424 lb ft	29301 lb ft	Passed - 1%
Max Shear:	1'- 7 1/2"	D + Lr	1.15	3670 lb	12236 lb	Passed - 30%
Live Load (LL) Pos. Defl.:	8'- 3 1/2"	0.75(L + Lr + 0.6W)		0.177"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	8'- 3 1/2"	D + 0.75(L + Lr + 0.6W)		0.350"	L/240	Passed - L/547

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Downward Reaction	Uplift Reaction	Resistance of Member	Resistance of Support	Result
1	3-08	D + Lr	1.15	4707 lb		9188 lb	8881 lb	Passed - 53%
2	3-08	D + Lr	1.15	4660 lb		9188 lb	8881 lb	Passed - 52%
2	3-08	0.6D + 0.6W	1.60		-243 lb	-	-	

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	16'- 7"	Self Weight	Top	16 lb/ft	-	-	-	-
Point	0'- 3"	0'- 3"	E02(c01)	Top	494 lb	-	-	516 lb	216/-322 lb
Point	2'- 3"	2'- 3"	E02(c03)	Top	494 lb	-	-	516 lb	216/-322 lb
Point	4'- 3"	4'- 3"	E02(c09)	Top	494 lb	-	-	516 lb	216/-322 lb
Point	6'- 3"	6'- 3"	E02(c04)	Top	494 lb	-	-	516 lb	216/-322 lb
Point	8'- 3"	8'- 3"	E02(c07)	Top	495 lb	-	-	518 lb	217/-357 lb
Point	10'- 3"	10'- 3"	E02(c08)	Top	495 lb	-	-	518 lb	217/-531 lb
Point	12'- 3"	12'- 3"	E02(c11)	Top	494 lb	-	-	516 lb	216/-557 lb
Point	14'- 3"	14'- 3"	E02(c06)	Top	494 lb	-	-	516 lb	216/-557 lb
Point	16'- 3"	16'- 3"	E02(c05)	Top	494 lb	-	-	516 lb	216/-557 lb

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'- 3 1/2"	PBO6(i25)	2375 lb	-	-	2340 lb	1538 lb/ -2205 lb
2	16'- 3 1/2"	16'- 7"	PBO5(i24)	2344 lb	-	-	2308 lb	1538 lb/ -2205 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) = 0.99

PLY TO PLY CONNECTION

- Zone A: Factored load = 0 plf. Use 12d (0.131"x3.25") nails. LDF = 1.00. Qty = 51. Row = 3, 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.

MiTek	Customer: Street 1: City: Customer Ph...	Job Name: **Q2301429** Level: **1st Floor** Label: **DB17 - i23** Type: **Beam**	**2 Ply Member** **1 3/4" x 16" 2.0E Microllam® LVL**	Status: **Design Passed**

PLY TO PLY CONNECTION

FASTENER INSTALLATION – 3 ROWS (FROM ONE FACE)