

PLY TO PLY CONNECTION



Customer:
Street 1:
City:
Customer Ph...

Job Name: **B**
Level: **1st FLOOR**
Label: **GDH2 - i28**
Type: **Beam**

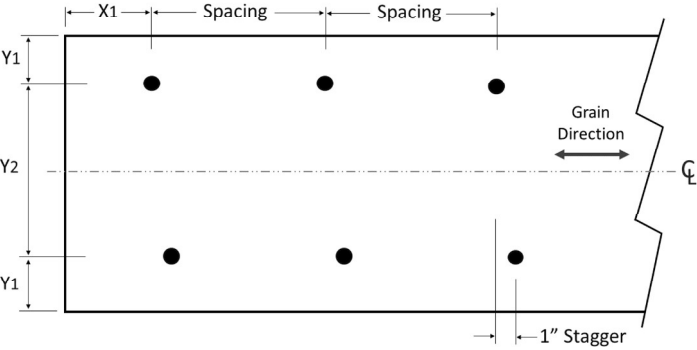
2 Ply Member
2.0 RigidLam DF LVL 1-3/4
x 11-7/8

Status:
Design
Passed

PLY TO PLY CONNECTION

- Zone A: Factored load = 0 plf. Use 12d (0.148"x3.25") nails. LDF = 1.00. Qty = 24. Row = 2, Spacing = 12"
12d (0.148"x3.25") nails properties: D = 0.148", L = 3.25". Fastener capacity = 117 lbs. X1 = 2.25", 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)



- 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.



Customer:
Street 1:
City:
Customer Ph...

Job Name: **B**
Level: **1st FLOOR**
Label: **GDH1 - i29**
Type: **Beam**

2 Ply Member
2.0 RigidLam DF LVL 1-3/4
x 11-7/8

Status:
Design
Passed

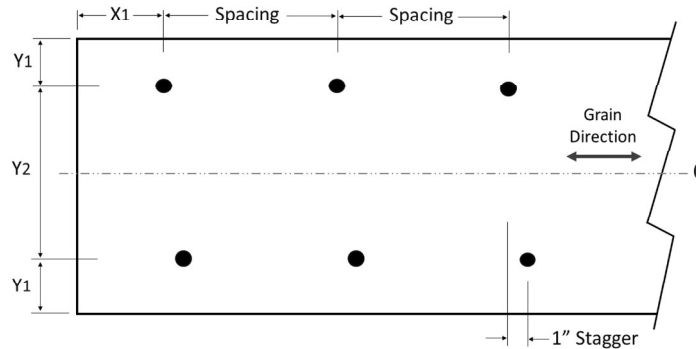
DESIGN NOTES

- 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) = 0.83

PLY TO PLY CONNECTION

- Zone A: Factored load = 0 plf. Use 12d (0.148"x3.25") nails. LDF = 1.00. Qty = 48. Row = 2, Spacing = 12"
12d (0.148"x3.25") nails properties: D = 0.148" , L = 3.25". Fastener capacity = 117 lbs. X1 = 2.25" , 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)

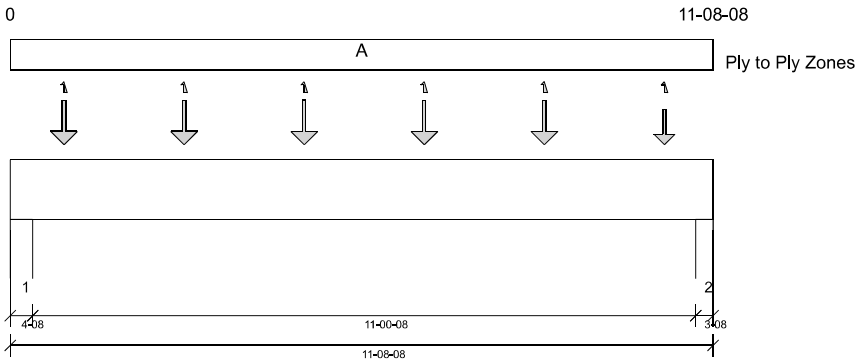


	Customer:	Job Name: B	2 Ply Member	Status:
	Street 1:	Level: 1st FLOOR	2.0 RigidLam DF LVL 1-3/4 x 11-7/8	Design Passed
	City:	Label: DB1-2 - i30		
	Customer Ph...	Type: Beam		

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.7.3.303.Update13.26

Report Version: 2023.09.18 09/11/2024 15:36



DESIGN INFORMATION a

Building Code: IRC 2021

Design Methodology: ASD

Risk Category: II (General Construction) Residential

Service Condition: Dry

System Spacing: -

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'- 8 1/2" Bottom: 11'- 5"

Bearing Stress of Support Material:

- 1323 psi Wall @ 0'- 3 1/2"
- 1323 psi Wall @ 11'- 6"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	4'- 10 3/4"	D + L	1.00	18290 lb ft	21161 lb ft	Passed - 86%
Max Shear:	1'- 4 3/8"	D + L	1.00	5925 lb	8035 lb	Passed - 74%
Live Load (LL) Pos. Defl.:	5'- 10 5/8"	L		0.306"	L/360	Passed - L/433
Total Load (TL) Pos. Defl.:	5'- 10 5/8"	D + L		0.427"	L/240	Passed - L/310

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Downward Reaction	Uplift Reaction	Resistance of Member	Resistance of Support	Result
1	4'-08	D + L	1.00	7047 lb		11813 lb	20837 lb	Passed - 60%
2	3'-08	D + L	1.00	6484 lb		9188 lb	16207 lb	Passed - 71%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	11'- 8 1/2"	Self Weight	Top	11 lb/ft	-	-	-	-
Point	0'- 10 3/4"	0'- 10 3/4"	F1(c04)	Top	644 lb	1693 lb	5 lb	7 lb	2/-11 lb
Point	2'- 10 3/4"	2'- 10 3/4"	F1(c03)	Top	644 lb	1695 lb	4 lb	6 lb	2/-9 lb
Point	4'- 10 3/4"	4'- 10 3/4"	F1(c04)	Top	643 lb	1695 lb	3 lb	5 lb	2/-7 lb
Point	6'- 10 3/4"	6'- 10 3/4"	F1(c05)	Top	647 lb	1695 lb	6 lb	10/0 lb	3/-11 lb
Point	8'- 10 3/4"	8'- 10 3/4"	F1(c06)	Top	649 lb	1695 lb	9 lb	15/0 lb	5/-19 lb
Point	10'- 10 3/4"	10'- 10 3/4"	F1(c01)	Top	511 lb	1192 lb	0 lb	1 lb	0/-1 lb

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'- 4 1/2"	4(i25)	1991 lb	5056 lb	14 lb	22 lb	2 lb/-31 lb
2	11'- 5"	11'- 8 1/2"	E2(i3)	1875 lb	4609 lb	13 lb	22 lb	2 lb/-31 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 (0.148"x3.25") nails. LDF = 1.00. Qty = 24. Row = 2, Spacing = 12" 12d (0.148"x3.25") nails properties: D = 0.148" , L = 3.25". Fastener capacity = 117 lbs. X1 = 2.25" , Y1 = 0.75", Y2 = 1.5" Install fasteners from one face. X1 = Minimum end distance, X2 = Minimum edge distance, Y2 = Minimum row spacing.



Customer:
Street 1:
City:
Customer Ph...

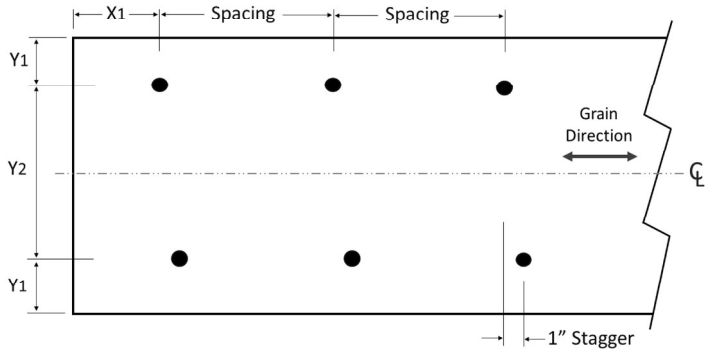
Job Name: **B**
Level: **1st FLOOR**
Label: **DB1-2 - i30**
Type: **Beam**

2 Ply Member
2.0 RigidLam DF LVL 1-3/4
x 11-7/8

Status:
Design
Passed

PLY TO PLY CONNECTION

FASTENER INSTALLATION – 2 ROWS (FROM ONE FACE)

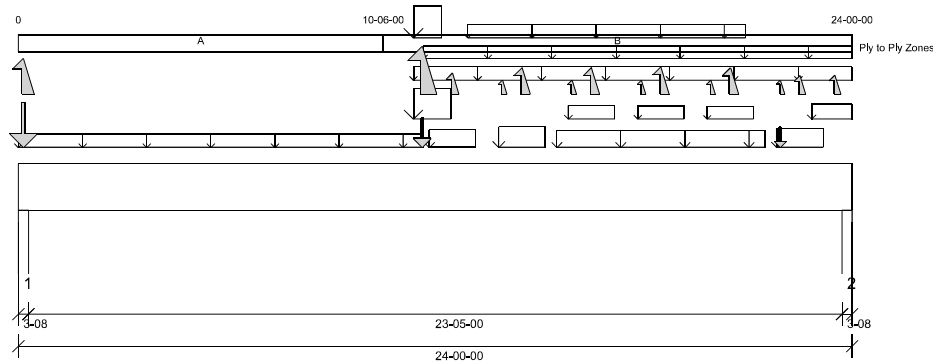


Customer:	Job Name: B	2 Ply Member	Status:
Street 1:	Level: 1st FLOOR	2.0 RigidLam DF LVL 1-3/4 x 16	Design Passed
City:	Label: FB4-2 - i39		
Customer Ph...	Type: Beam		

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version
8.7.3.303.Update13.26

Report Version: 2023.09.18 09/11/2024 15:36



DESIGN INFORMATION a

Building Code:	IRC 2021
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
System Spacing:	-
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: 0' Bottom: 0'

Bearing Stress of Support Material:

- 405 psi Beam @ 0'- 2 1/2"
- 425 psi Wall @ 23'- 9 1/2"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	12'- 3"	D + 0.75(L + Lr)	1.15	17644 lb ft	42799 lb ft	Passed - 41%
Max Shear:	22'- 4 1/2"	D + 0.75(L + Lr)	1.15	2680 lb	12451 lb	Passed - 22%
Live Load (LL) Pos. Defl.:	12'- 3 7/16"	0.75(L + Lr + 0.6W)		0.298"	L/360	Passed - L/944
Total Load (LL) Pos. Defl.:	12'- 4 7/16"	D + 0.75(L + Lr + 0.6W)		0.720"	L/240	Passed - L/390

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 + 0.75(L + Lr)	1.15	2238 lb		9188 lb	4961 lb	Passed - 45%
2	3-08	D + 0.75(L + Lr)	1.15	3056 lb		9188 lb	5206 lb	Passed - 59%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	24'	Self Weight	Top	15 lb/ft	-	-	-	-
Uniform	0'	11'- 8"	FC1 Floor Decking (Plan View Fill)	Top	10 lb/ft	40 lb/ft	-	-	-
Uniform	11'- 4 1/2"	24'	E18(i33)	Top	65 lb/ft	-	-	-	-
Uniform	11'- 4 1/2"	12'- 5 1/2"	E18(i33)	Top	275 lb/ft	-	166 lb/ft	252 lb/ft	82 lb/ft
Uniform	11'- 4 1/2"	12'- 2 1/4"	E18(i33)	Top	276 lb/ft	-	188 lb/ft	273 lb/ft	89 lb/ft
Uniform	11'- 8"	24'	FC1 Floor Decking (Plan View Fill)	Top	6 lb/ft	24 lb/ft	-	-	-
Uniform	11'- 10"	13'- 2"	E18(i33)	Top	79 lb/ft	-	47 lb/ft	73 lb/ft	44 lb/ft
Uniform	12'- 11 1/4"	20'- 11 1/4"	Smoothed Load	Front	16 lb/ft	-	10 lb/ft	18 lb/ft	4 lb/ft
Uniform	13'- 10"	15'- 2"	E18(i33)	Top	98 lb/ft	-	72 lb/ft	112 lb/ft	66 lb/ft
Uniform	15'- 6"	21'- 6"	E18(i33)	Top	66 lb/ft	-	50 lb/ft	77 lb/ft	25 lb/ft
Uniform	15'- 10"	17'- 2"	E18(i33)	Top	-	-	-	-	68 lb/ft
Uniform	17'- 10"	19'- 2"	E18(i33)	Top	-	-	-	-	57 lb/ft
Uniform	19'- 10"	21'- 2"	E18(i33)	Top	-	-	-	-	16 lb/ft
Uniform	21'- 10"	23'- 2"	E18(i33)	Top	103 lb/ft	-	50 lb/ft	94 lb/ft	24 lb/ft
Uniform	22'- 10 1/16"	24'	E18(i33)	Top	31 lb/ft	-	26 lb/ft	41 lb/ft	24 lb/ft
Point	11'- 7 1/2"	11'- 7 1/2"	-	Front	133 lb	143 lb	12/-3 lb	23/-14 lb	22/-660 lb
Point	13'- 11 1/4"	13'- 11 1/4"	J8(c02)	Front	-	-	-	-	-35 lb
Point	15'- 11 1/4"	15'- 11 1/4"	J8(c03)	Front	-	-	-	-9 lb	-35 lb
Point	17'- 11 1/4"	17'- 11 1/4"	J8(c04)	Front	-	-	-	-9 lb	-35 lb
Point	19'- 11 1/4"	19'- 11 1/4"	J8(c01)	Front	-	-	-	-9 lb	-35 lb
Point	21'- 11 1/4"	21'- 11 1/4"	J8(c01)	Front	61 lb	-	27 lb	50/-13 lb	12/-29 lb
Point	0'- 1 3/4"	0'- 1 3/4"	E21(i36)	Top	239 lb	-	132 lb	190 lb	63/-451 lb
Point	12'- 6"	12'- 6"	E18(i33)	Top	-	-	-	-	-178 lb
Point	14'- 6"	14'- 6"	E18(i33)	Top	-	-	-	-	-278 lb
Point	16'- 6"	16'- 6"	E18(i33)	Top	-	-	-	-	-282 lb
Point	18'- 6"	18'- 6"	E18(i33)	Top	-	-	-	-	-293 lb
Point	20'- 6"	20'- 6"	E18(i33)	Top	-	-	-	-	-274 lb
Point	22'- 6"	22'- 6"	E18(i33)	Top	-	-	-	-23 lb	-107 lb
Point	23'- 6 1/16"	23'- 6 1/16"	E18(i33)	Top	-	-	-	-	-136 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"	-	1321 lb	503 lb	467 lb	713/-20 lb	-
++>	0'- 1/4"	0'- 1/4"	E12(i)12	189 lb	72 lb	67 lb	102/-3 lb	-
++>	0'- 1 1/2"	0'- 1 1/2"	BBO1(i)17	1132 lb	431 lb	400 lb	611/-17 lb	-
2	23'- 8 1/2"	24'	E9(i)2	1957 lb	400 lb	664 lb	1073/-66 lb	0 lb/- 184 lb

DESIGN NOTES

- CAUTION: One or more plies are not supported properly at 1-12. At least 75% of every ply must be contacting support.



Customer:
Street 1:
City:
Customer Ph...

Job Name: **B**
Level: **1st FLOOR**
Label: **FB4-2 - i39**
Type: **Beam**

2 Ply Member
2.0 RigidLam DF LVL 1-3/4
x 16

Status:
Design
Passed

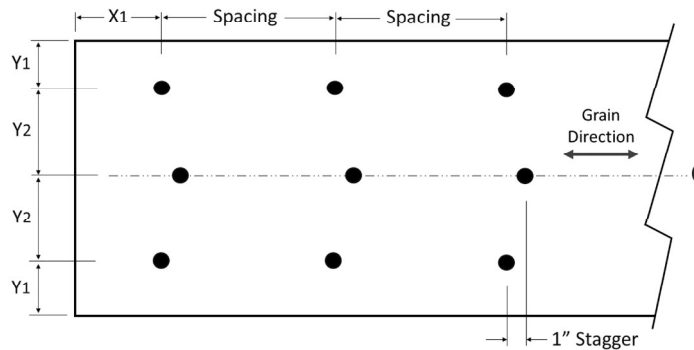
DESIGN NOTES

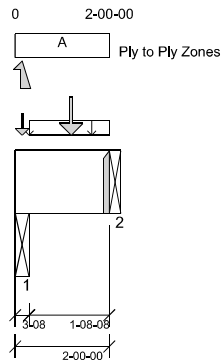
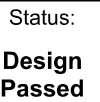
- CAUTION: One or more plies are not supported properly at 1-12. At least 75% of every ply must be contacting support.
- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Analysis and Design has been performed using precision loading from actual 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
- Bearing length at support 1 was calculated based on the actual bearing area divided by the supported member width and may not match expected value when bearing is not rectangular or when the supported member is not supported by its full width.
- One or more plies are not properly supported at 1. Verify with structural engineer or EWP manufacturer if this condition is acceptable.

PLY TO PLY CONNECTION

- Zone A: Factored load = 0 plf. Use 12d (0.148"x3.25") nails. LDF = 1.00. Qty = 33. Row = 3, Spacing = 12"
 - Zone B: Factored load = 228 plf. Use 12d (0.148"x3.25") nails. LDF = 1.00. Qty = 42. Row = 3, Spacing = 12"
- 12d (0.148"x3.25") nails properties: D = 0.148", L = 3.25". Fastener capacity = 117 lbs. X1 = 2.25", 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 – 3 ROWS (FROM ONE FACE)





- Zone A: Factored load = 209 plf. Use 12d (0.148"x3.25") nails. LDF = 1.00. Qty = 6. Row = 3, Spacing = 12"
 12d (0.148"x3.25") nails properties: D = 0.148", L = 3.25". Fastener capacity = 117 lbs. X1 = 2.25", Y1 = 0.75", Y2 = 1.5"
 Install fasteners from one face.
 X1 = Minimum end distance. X2 = Minimum edge distance. Y2 = Minimum row spacing.



Customer:
Street 1:
City:
Customer Ph...

Job Name: **B**
Level: **1st FLOOR**
Label: **FB5-2 - i40**
Type: **Beam**

2 Ply Member
2.0 RigidLam DF LVL 1-3/4
x 16

Status:
Design
Passed

PLY TO PLY CONNECTION

FASTENER INSTALLATION – 3 ROWS (FROM ONE FACE)

