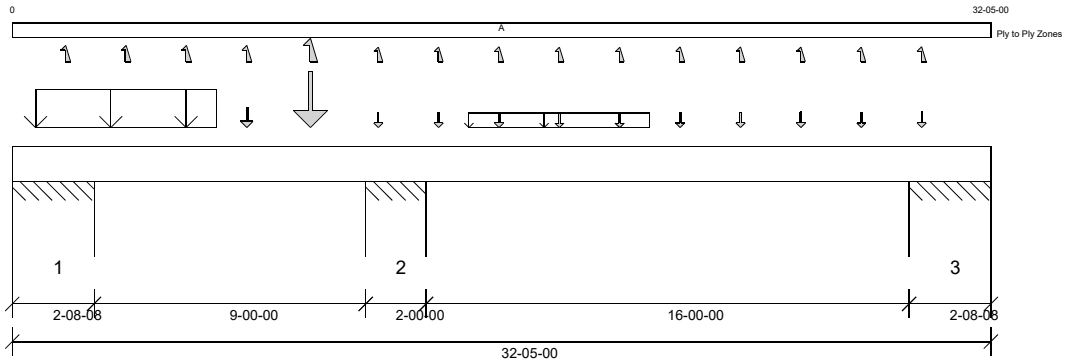
MiTek	Customer: Street 1: City: Customer Ph...	Job Name: **B** Level: **1st FLOOR** Label: **GDH - i202** Type: **Beam**	**2 Ply Member** **2.0 RigidLam DF LVL 1-3/4 x 14**	Status: **Design Passed**

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 04/10/2025 08:24



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: 22'- 3 1/2" Bottom: 32'- 5"

Bearing Stress of Support Material:

- 725 psi Wall @ 0'- 1 1/2"
- 725 psi Wall @ 2'- 7"
- 725 psi Wall @ 11'- 10"
- 725 psi Wall @ 13'- 7"
- 725 psi Wall @ 29'- 10"
- 725 psi Wall @ 32'- 3 1/2"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	9'- 10 1/2"	D + 0.75(L + Lr + 0.6W)	1.60	5389 lb ft	20679 lb ft	Passed - 26%
Max Neg. Moment:	11'- 10"	D + 0.75(L + Lr + 0.6W)	1.60	10494 lb ft	14455 lb ft	Passed - 73%
Max Shear:	10'- 6 1/2"	D + 0.75(L + Lr)	1.15	7745 lb	10894 lb	Passed - 71%
Live Load (LL) Pos. Defl.:	7'- 8 15/16"	0.75(L + Lr + 0.6W)		0.021"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	7'- 8 9/16"	D + 0.75(L + Lr + 0.6W)		0.038"	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	8-00	0.6D + 0.6W	1.60	3 lb		29217 lb	20300 lb	Passed - 0%
1	8-00	D + 0.75(L + Lr)	1.15		-2051 lb	-	-	
1	1-09-00	D + 0.75(L + Lr)	1.15	6207 lb		55125 lb	53288 lb	Passed - 12%
1	1-09-00	0.6D + 0.6W	1.60		-215 lb	-	-	
2	1-05-08	D + 0.75(L + Lr)	1.15	13271 lb		45938 lb	44406 lb	Passed - 30%
2	6-08	D + 0.75(L + Lr + 0.6W)	1.60	692 lb		17063 lb	16494 lb	Passed - 4%
2	6-08	D + 0.75(L + Lr + 0.6W)	1.60		-4989 lb	-	-	
3	1-09-00	D + 0.75(L + Lr)	1.15	2195 lb		55125 lb	53288 lb	Passed - 4%
3	1-09-00	0.6D + 0.6W	1.60		-186 lb	-	-	
3	10-08	0.6D + 0.6W	1.60	61 lb		38348 lb	26644 lb	Passed - 0%
3	10-08	D + 0.75(L + Lr)	1.15		-1045 lb	-	-	

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	32'- 5"	Self Weight	Top	13 lb/ft	-	-	-	-
Uniform	0'- 9 1/4"	6'- 9 1/4"	Smoothed Load	Top	254 lb/ft	139 lb/ft	106 lb/ft	201 lb/ft	92 lb/ft
Uniform	15'- 1 1/2"	21'- 1 1/2"	Smoothed Load	Top	-	30 lb/ft	-	-	-
Point	1'- 9 1/4"	1'- 9 1/4"	H1(c01)	Top	-	-	-	-	-572 lb
Point	3'- 9 1/4"	3'- 9 1/4"	H1(c04)	Top	-	-	-	-	-572 lb
Point	5'- 9 1/4"	5'- 9 1/4"	H1(c03)	Top	-	-	-	-	-572 lb
Point	7'- 9 1/4"	7'- 9 1/4"	H1(c02)	Top	517 lb	301 lb	219 lb	412 lb	189/-587 lb
Point	9'- 10 9/16"	9'- 10 9/16"	-	Top	3296 lb	3386/-2 lb	1160 lb	2484/-229 lb	725/-2216 lb
Point	12'- 1 1/2"	12'- 1 1/2"	C1GE(c01)	Top	140 lb	-5 lb	36 lb	68 lb	42/-137 lb
Point	14'- 1 1/2"	14'- 1 1/2"	C1GE(c01)	Top	107 lb	67 lb	40 lb	85/-10 lb	44/-149 lb
Point	16'- 1 1/2"	16'- 1 1/2"	C1GE(c01)	Top	112 lb	-	48 lb	149/-51 lb	53/-179 lb
Point	18'- 1 1/2"	18'- 1 1/2"	C1GE(c01)	Top	96 lb	-	30 lb	68/-10 lb	28/-107 lb
Point	20'- 1 1/2"	20'- 1 1/2"	C1GE(c01)	Top	93 lb	-	27 lb	58/-6 lb	-92 lb
Point	22'- 1 1/2"	22'- 1 1/2"	C1GE(c01)	Top	109 lb	61 lb	43 lb	124/-39 lb	49/-152 lb
Point	24'- 1 1/2"	24'- 1 1/2"	C1GE(c01)	Top	102 lb	63 lb	44 lb	119/-33 lb	50/-167 lb
Point	26'- 1 1/2"	26'- 1 1/2"	C1GE(c01)	Top	133 lb	54 lb	38 lb	78 lb	45/-149 lb
Point	28'- 1 1/2"	28'- 1 1/2"	C1GE(c01)	Top	96 lb	-3 lb	32 lb	76 lb	37/-122 lb
Point	30'- 1 1/2"	30'- 1 1/2"	C1GE(c01)	Top	112 lb	-2 lb	58 lb	113 lb	69/-231 lb

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	2'- 8 1/2"	E36(i76)	1782 lb	1147 lb	691 lb	1445/-70 lb	773 lb/ -2469 lb
==>	0'- 1 1/2"	0'- 1 1/2"	E36(i76)	-	80 lb	-	114 lb	-
==>	2'- 7"	2'- 7"	E36(i76)	1782 lb	1067 lb	691 lb	1331/-70 lb	-
2	11'- 8 1/2"	13'- 8 1/2"	E35(i75)	6349/-1907 lb	7153/-3362 lb	2351/-808 lb	6589/-3195 lb	773 lb/ -2469 lb
==>	11'- 10"	11'- 10"	E35(i75)	6349 lb	6483/-386 lb	2351 lb	5516/-603 lb	-
==>	13'- 7"	13'- 7"	E35(i75)	-1907 lb	670/-2976 lb	-808 lb	1073/-2592 lb	-
3	29'- 8 1/2"	32'- 5"	E13(i7)	1240/-567 lb	461/-271 lb	374/-170 lb	959/-546 lb	773 lb/ -2469 lb
==>	29'- 10"	29'- 10"	E13(i7)	1240 lb	460/-6 lb	374 lb	884/-128 lb	-
==>	32'- 3 1/2"	32'- 3 1/2"	E13(i7)	-567 lb	1/-265 lb	-170 lb	75/-418 lb	-

MiTek	Customer: Street 1: City: Customer Ph...	Job Name: **B** Level: **1st FLOOR** Label: **GDH - i202** Type: **Beam**	**2 Ply Member** **2.0 RigidLam DF LVL 1-3/4 x 14**	Status: **Design Passed**

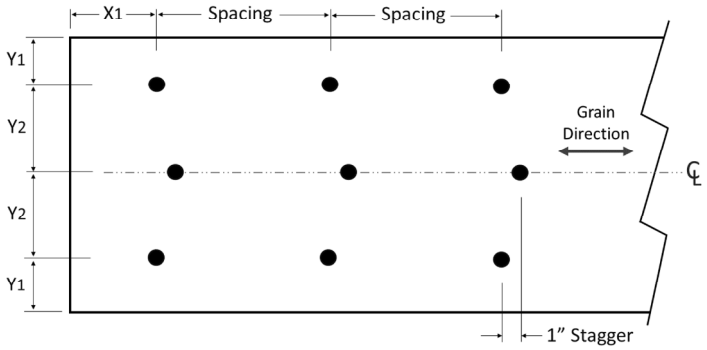
DESIGN NOTES

- 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) = 0.44
- Beam Stability Factor used in the calculation for Allowable Max Neg Moment (CL) = 0.31

PLY TO PLY CONNECTION

- Zone A: Factored load = 0 plf. Use 12d (0.148"x3.25") nails. LDF = 1.00. Qty = 99. 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)

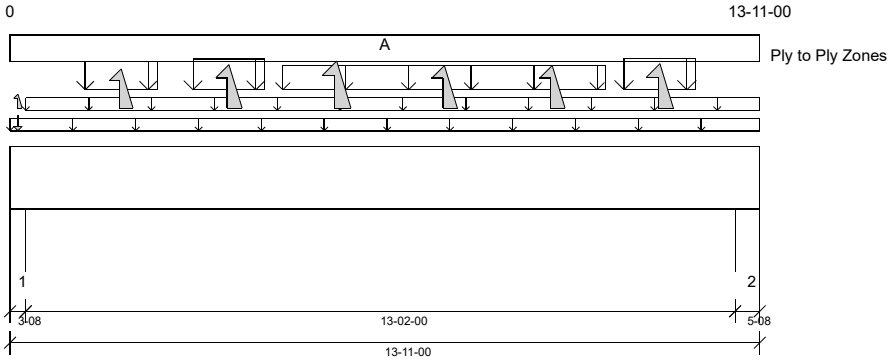


MiTek	Customer: Street 1: City: Customer Ph...	Job Name: **B** Level: **1st FLOOR** Label: **FB2-2 - i210** Type: **Beam**	**2 Ply Member** **2.0 RigidLam DF LVL 1-3/4 x 14**	Status: **Design Passed**

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 04/10/2025 08:24



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:

- 425 psi Wall @ 0'- 2 1/2"
- 425 psi Wall @ 13'- 6 1/2"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	6'- 11"	D + Lr	1.15	16241 lb ft	33318 lb ft	Passed - 49%
Max Neg. Moment:	6'- 3/4"	0.6D + 0.6W	1.60	2247 lb ft	46355 lb ft	Passed - 5%
Max Shear:	1'- 5 1/2"	D + Lr	1.15	4130 lb	10894 lb	Passed - 38%
Live Load (LL) Pos. Defl.:	6'- 10 11/16"	0.75(L + Lr + 0.6W)		0.174"	L/360	Passed - L/907
Total Load (TL) Pos. Defl.:	6'- 10 5/8"	D + 0.75(L + Lr + 0.6W)		0.343"	L/240	Passed - L/460

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	4402 lb		9188 lb	5206 lb	Passed - 85%
1	3-08	0.6D + 0.6W	1.60		-481 lb	-	-	
2	5-08	D + Lr	1.15	4674 lb		14438 lb	8181 lb	Passed - 57%
2	5-08	0.6D + 0.6W	1.60		-525 lb	-	-	

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	13'- 11"	Self Weight	Top	13 lb/ft	-	-	-	-
Uniform	-0'	13'- 11"	FC1 Floor Decking (Plan View Fill)	Top	10 lb/ft	40 lb/ft	-	-	-
Uniform	0'- 3 1/2"	13'- 11"	73(i154)	Top	65 lb/ft	-	-	-	-
Uniform	1'- 4 3/4"	2'- 8 3/4"	73(i154)	Top	415 lb/ft	-	221 lb/ft	467 lb/ft	174 lb/ft
Uniform	3'- 4 3/4"	4'- 8 3/4"	73(i154)	Top	446 lb/ft	-	255 lb/ft	540 lb/ft	174 lb/ft
Uniform	5'- 3/4"	11'- 3/4"	73(i154)	Top	297 lb/ft	-	158 lb/ft	356 lb/ft	126 lb/ft
Uniform	11'- 4 3/4"	12'- 8 3/4"	73(i154)	Top	462 lb/ft	-	255 lb/ft	557 lb/ft	218 lb/ft
Point	0'- 1 3/4"	0'- 1 3/4"	E47(i87)	Top	83 lb	-	-	-6 lb	-58 lb
Point	2'- 3/4"	2'- 3/4"	73(i154)	Top	-	-	-	-29 lb	-782 lb
Point	4'- 3/4"	4'- 3/4"	73(i154)	Top	-	-	-	-33 lb	-904 lb
Point	6'- 3/4"	6'- 3/4"	73(i154)	Top	-	-	-	-71 lb	-972 lb
Point	8'- 3/4"	8'- 3/4"	73(i154)	Top	-	-	-	-70 lb	-840 lb
Point	10'- 3/4"	10'- 3/4"	73(i154)	Top	-	-	-	-70 lb	-840 lb
Point	12'- 3/4"	12'- 3/4"	73(i154)	Top	-	-	-	-64 lb	-902 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"	E5(i8)	2368 lb	272 lb	935 lb	2035/-148 lb	1305 lb/ -3170 lb
2	13'- 5 1/2"	13'- 11"	74(i155)	2462 lb	279 lb	1000 lb	2210/-195 lb	1305 lb/ -3170 lb

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) = 1.00

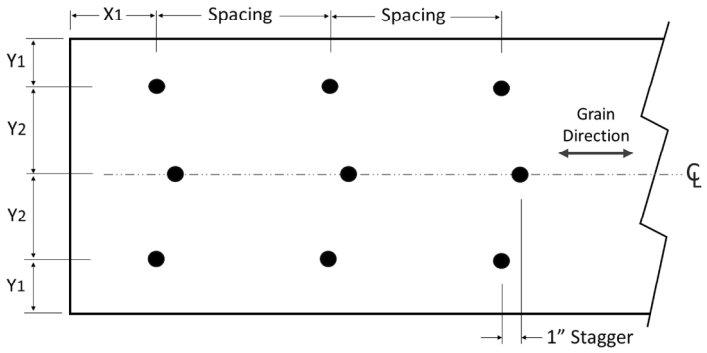
PLY TO PLY CONNECTION

MiTek	Customer: Street 1: City: Customer Ph...	Job Name: **B** Level: **1st FLOOR** Label: **FB2-2 - i210** Type: **Beam**	**2 Ply Member** **2.0 RigidLam DF LVL 1-3/4 x 14**	Status: **Design Passed**

PLY TO PLY CONNECTION

- Zone A: Factored load = 0 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)

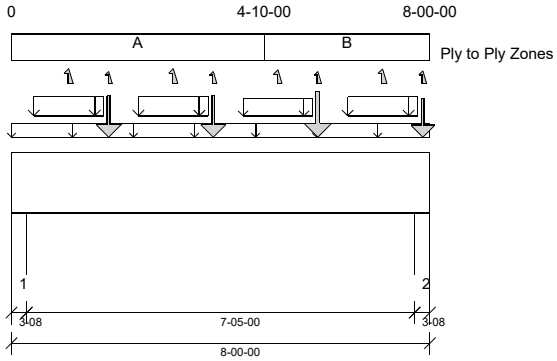


MiTek	Customer: Street 1: City: Customer Ph...	Job Name: **B** Level: **1st FLOOR** Label: **FB3-2 - i212** Type: **Beam**	**2 Ply Member** **2.0 RigidLam DF LVL 1-3/4 x 14**	Status: **Design Passed**

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 04/10/2025 08:24



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:

- 425 psi Wall @ 0'- 2 1/2"
- 425 psi Wall @ 7'- 9 1/2"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	3'- 10 1/4"	D + L	1.00	5830 lb ft	28972 lb ft	Passed - 20%
Max Shear:	1'- 5 1/2"	D + L	1.00	2381 lb	9473 lb	Passed - 25%
Live Load (LL) Pos. Defl.:	3'- 11 3/4"	L		0.017"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	3'- 11 15/16"	D + L		0.036"	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 + L	1.00	2558 lb		9188 lb	5206 lb	Passed - 49%
2	3-08	D + L	1.00	3696 lb		9187 lb	5206 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'	8'	Self Weight	Top	13 lb/ft	-	-	-	-
Uniform	0'	8'	E47(i87)	Top	65 lb/ft	-	-	-	-
Uniform	0'- 5 1/8"	1'- 9 1/8"	E47(i87)	Top	62 lb/ft	-	33 lb/ft	68 lb/ft	40 lb/ft
Uniform	2'- 5 1/8"	3'- 9 1/8"	E47(i87)	Top	60 lb/ft	-	32 lb/ft	68 lb/ft	41 lb/ft
Uniform	4'- 5 1/8"	5'- 9 1/8"	E47(i87)	Top	52 lb/ft	-	23 lb/ft	50 lb/ft	14 lb/ft
Uniform	6'- 5 1/8"	7'- 9 1/8"	E47(i87)	Top	59 lb/ft	-	31 lb/ft	66 lb/ft	38 lb/ft
Point	1'- 10 5/16"	1'- 10 5/16"	-	Front	523 lb	767 lb	15 lb	34/-12 lb	12/-28 lb
Point	3'- 10 5/16"	3'- 10 5/16"	-	Front	531 lb	767 lb	15 lb	34/-12 lb	12/-28 lb
Point	5'- 10 5/16"	5'- 10 5/16"	-	Front	715 lb	767 lb	15 lb	33/-12 lb	11/-27 lb
Point	7'- 10 3/8"	7'- 10 3/8"	-	Front	401 lb	767 lb	19 lb	39/-1 lb	21/-71 lb
Point	1'- 1 1/8"	1'- 1 1/8"	E47(i87)	Top	-	-	-	-	-171 lb
Point	3'- 1 1/8"	3'- 1 1/8"	E47(i87)	Top	-	-	-	-	-169 lb
Point	5'- 1 1/8"	5'- 1 1/8"	E47(i87)	Top	-	-	-	-	-117 lb
Point	7'- 1 1/8"	7'- 1 1/8"	E47(i87)	Top	-	-	-	-	-158 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(i29)	1397 lb	1223 lb	102 lb	219/-18 lb	107 lb/ -366 lb
2	7'- 8 1/2"	8'	E4(i6)	1789 lb	1845 lb	119 lb	257/-19 lb	107 lb/ -366 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

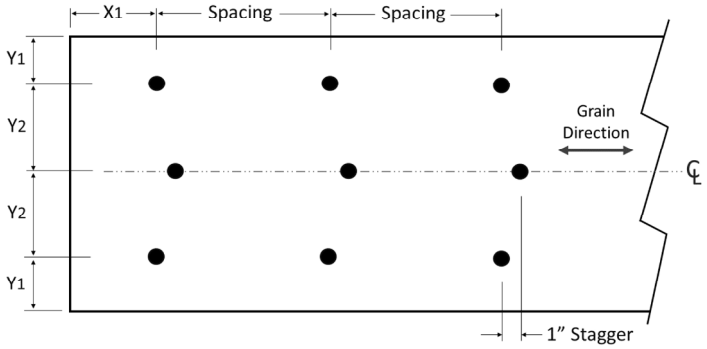
PLY TO PLY CONNECTION

- Zone A: Factored load = 741 plf. Use 12d (0.148"x3.25") nails. LDF = 1.00. Qty = 18. Row = 3, Spacing = 11"
  Zone B: Factored load = 943 plf. Use 12d (0.148"x3.25") nails. LDF = 1.00. Qty = 15. Row = 3, Spacing = 8"
  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.

MiTek	Customer: Street 1: City: Customer Ph...	Job Name: **B** Level: **1st FLOOR** Label: **FB3-2 - i212** Type: **Beam**	**2 Ply Member** **2.0 RigidLam DF LVL 1-3/4 x 14**	Status: **Design Passed**

PLY TO PLY CONNECTION

FASTENER INSTALLATION – 3 ROWS (FROM ONE FACE)

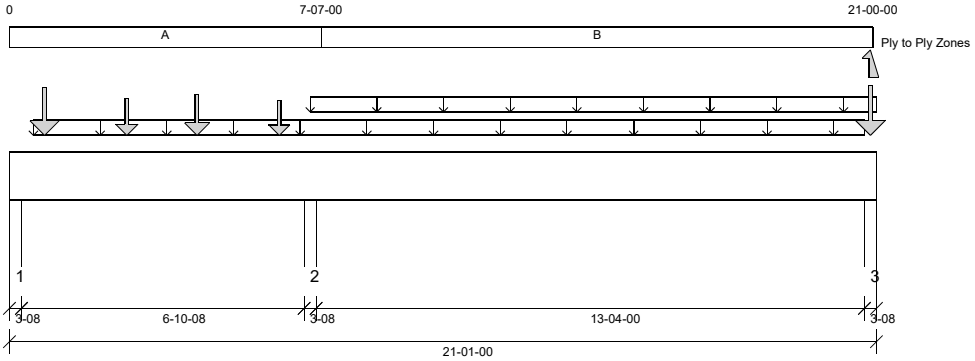


MiTek	Customer: Street 1: City: Customer Ph...	Job Name: **B** Level: **1st FLOOR** Label: **FB4-2 - i209** Type: **Beam**	**2 Ply Member** **2.0 RigidLam DF LVL 1-3/4 x 14**	Status: **Design Passed**

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 04/10/2025 08:24



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'- 3 1/2" Bottom: 0'

Bearing Stress of Support Material:

- 425 psi Wall @ 0'- 2 1/2"
- 425 psi Wall @ 7'- 3 3/4"
- 425 psi Wall @ 20'- 10 1/2"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	2'- 10 1/4"	D + L	1.00	3018 lb ft	28972 lb ft	Passed - 10%
Max Neg. Moment:	7'- 3 3/4"	D + L	1.00	3392 lb ft	28972 lb ft	Passed - 12%
Max Shear:	6'	D + L	1.00	2617 lb	9473 lb	Passed - 28%
Live Load (LL) Pos. Defl.:	3'- 7 3/4"	L		0.011"	L/360	Passed - L/999
Live Load (LL) Neg. Defl.:	13'- 9/16"	L		0.011"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	14'- 10 1/2"	D + L		0.031"	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 + L	1.00	2300 lb		9187 lb	5206 lb	Passed - 44%
2	3-08	D + L	1.00	3857 lb		10172 lb	5206 lb	Passed - 74%
3	3-08	D + 0.75(L + Lr)	1.15	1618 lb		9187 lb	5206 lb	Passed - 31%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	21'- 1"	Self Weight	Top	13 lb/ft	-	-	-	-
Uniform	0'- 7"	20'- 9 1/2"	46(i98)	Top	65 lb/ft	-	-	-	-
Uniform	7'- 3 3/4"	21'- 1"	FC1 Floor Decking (Plan View Fill)	Top	11 lb/ft	43 lb/ft	-	-	-
Point	0'- 10 1/4"	0'- 10 1/4"	FL7A(c01)	Back	703 lb	698 lb	-	-	-
Point	2'- 10 1/4"	2'- 10 1/4"	FL7A(c02)	Back	262 lb	708 lb	-	-	-
Point	4'- 6 3/4"	4'- 6 3/4"	FL7C(c02)	Back	326 lb	806 lb	-	-	-
Point	6'- 6 3/4"	6'- 6 3/4"	FL7C(c01)	Back	258 lb	617 lb	-	-	-
Point	20'- 11 1/4"	20'- 11 1/4"	E37(i79)	Top	604 lb	-	239 lb	478/-26 lb	151/-550 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"	28(i68)	997 lb	1365/-91 lb	-	-	-
2	7'- 2"	7'- 5 1/2"	82(i184)	1835 lb	1955 lb	-	-	-
3	20'- 9 1/2"	21'- 1"	E11(i17)	1070 lb	252/-61 lb	239 lb	478/-26 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

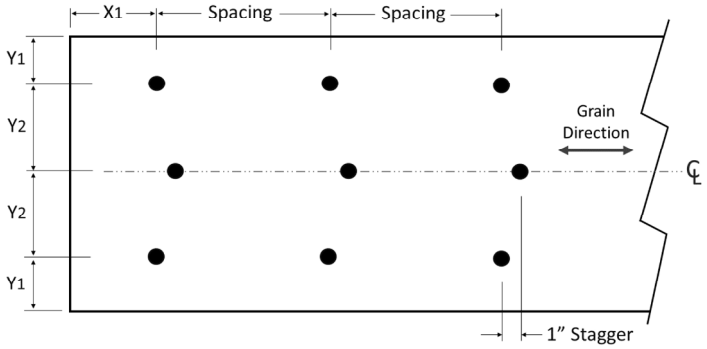
PLY TO PLY CONNECTION

- Zone A: Factored load = 756 plf. Use 12d (0.148"x3.25") nails. LDF = 1.00. Qty = 27. Row = 3, Spacing = 11"
  Zone B: Factored load = 0 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.

MiTek	Customer: Street 1: City: Customer Ph...	Job Name: **B** Level: **1st FLOOR** Label: **FB4-2 - i209** Type: **Beam**	**2 Ply Member** **2.0 RigidLam DF LVL 1-3/4 x 14**	Status: **Design Passed**

PLY TO PLY CONNECTION

FASTENER INSTALLATION – 3 ROWS (FROM ONE FACE)



MiTek	Customer: Street 1: City: Customer Ph...	Job Name: **B** Level: **1st FLOOR** Label: **FB7-2 - i211** Type: **Beam**	**2 Ply Member** **2.0 RigidLam DF LVL 1-3/4 x 14**	Status: **Design Passed**

Illustration Not to Scale. Pitch: 0/12

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

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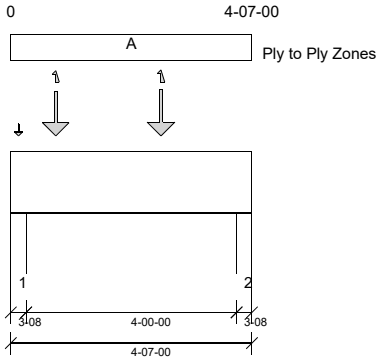


DESIGN INFORMATION a

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:

- 425 psi Wall @ 0'- 2 1/2"
- 425 psi Wall @ 4'- 4 1/2"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	2'- 10 1/4"	D + L	1.00	1851 lb ft	28972 lb ft	Passed - 6%
Max Shear:	1'- 5 1/2"	D + L	1.00	1821 lb	9473 lb	Passed - 19%

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 + L	1.00	1858 lb		9187 lb	5206 lb	Passed - 36%
2	3-08	D + L	1.00	1230 lb		9187 lb	5206 lb	Passed - 24%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	4'- 7"	Self Weight	Top	13 lb/ft	-	-	-	-
Point	0'- 10 1/4"	0'- 10 1/4"	-	Front	605 lb	871 lb	0/-1 lb	1/-1 lb	1/-1 lb
Point	2'- 10 1/4"	2'- 10 1/4"	-	Front	677/-41 lb	893 lb	0/0 lb	1/0 lb	1/-1 lb
Point	0'- 1 3/4"	0'- 1 3/4"	47(i99)	Top	19 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"	76(i161)	797 lb	1062 lb	-	1/-1 lb	1 lb/ 0 lb
2	4'- 3 1/2"	4'- 7"	79(i166)	527 lb	702 lb	-	-	1 lb/ 0 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

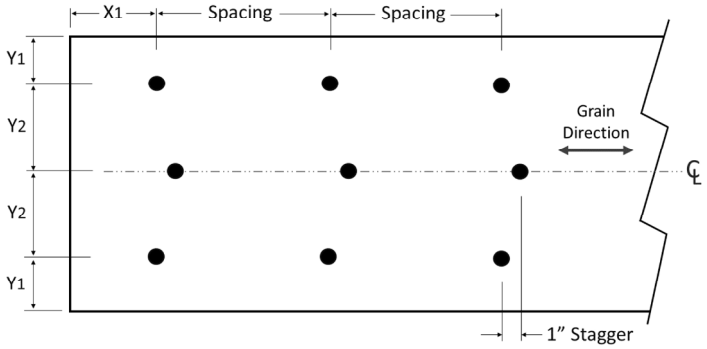
PLY TO PLY CONNECTION

- Zone A: Factored load = 654 plf. Use 12d (0.148"x3.25") nails. LDF = 1.00. Qty = 15. 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.

MiTek	Customer: Street 1: City: Customer Ph...	Job Name: **B** Level: **1st FLOOR** Label: **FB7-2 - i211** Type: **Beam**	**2 Ply Member** **2.0 RigidLam DF LVL 1-3/4 x 14**	Status: **Design Passed**

PLY TO PLY CONNECTION

FASTENER INSTALLATION – 3 ROWS (FROM ONE FACE)

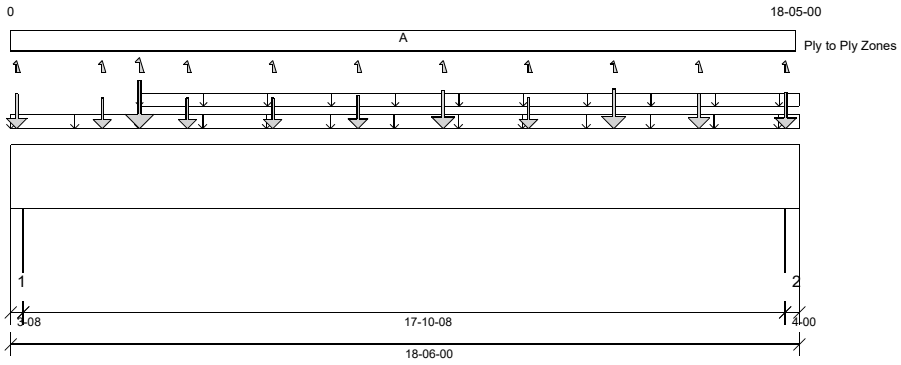


MiTek	Customer: Street 1: City: Customer Ph...	Job Name: **B** Level: **1st FLOOR** Label: **FB8-2 - i187** Type: **Beam**	**2 Ply Member** **2.0 RigidLam DF LVL 1-3/4 x 18**	Status: **Design Passed**

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 04/10/2025 08:24



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: 1'- 8 1/2"

Bearing Stress of Support Material:

- 1323 psi Wall @ 0'- 2 1/2"
- 1323 psi Wall @ 18'- 3"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	9'- 4 13/16"	D + L	1.00	24197 lb ft	46413 lb ft	Passed - 52%
Max Shear:	16'- 8"	D + L	1.00	5618 lb	12180 lb	Passed - 46%
Live Load (LL) Pos. Defl.:	9'- 1"	L		0.229"	L/360	Passed - L/938
Total Load (TL) Pos. Defl.:	9'- 2 1/8"	D + L		0.422"	L/240	Passed - L/508

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 + L	1.00	6506 lb		9188 lb	16207 lb	Passed - 71%
2	4-00	D + L	1.00	5885 lb		10500 lb	18522 lb	Passed - 56%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	18'- 6"	Self Weight	Top	17 lb/ft	-	-	-	-
Uniform	-0'	18'- 6"	62(i118)	Top	65 lb/ft	-	-	-	-
Uniform	3'- 1/4"	18'- 6"	FC1 Floor Decking (Plan View Fill)	Top	-	9 lb/ft	-	-	-
Point	0'- 1 5/8"	0'- 1 5/8"	-	Back	383 lb	557 lb	3 lb	5/0 lb	1/-6 lb
Point	2'- 1 3/4"	2'- 1 3/4"	FL9A(c14)	Back	211 lb	557 lb	3 lb	5/0 lb	1/-6 lb
Point	4'- 1 3/4"	4'- 1 3/4"	FL9A(c05)	Back	211 lb	557 lb	3 lb	5/0 lb	1/-6 lb
Point	6'- 1 3/4"	6'- 1 3/4"	FL9A(c11)	Back	211 lb	557 lb	3 lb	5/0 lb	1/-6 lb
Point	8'- 1 3/4"	8'- 1 3/4"	FL9A(c15)	Back	330 lb	557 lb	3 lb	5/0 lb	1/-6 lb
Point	10'- 1 3/4"	10'- 1 3/4"	FL9A(c04)	Back	529 lb	557 lb	3 lb	5/0 lb	1/-6 lb
Point	12'- 1 3/4"	12'- 1 3/4"	FL9A(c08)	Back	245 lb	557 lb	3 lb	4/0 lb	1/-6 lb
Point	14'- 1 3/4"	14'- 1 3/4"	FL9A(c07)	Back	600 lb	557 lb	3 lb	4/0 lb	1/-4 lb
Point	16'- 1 3/4"	16'- 1 3/4"	FL9A(c17)	Back	415 lb	557 lb	1 lb	2/0 lb	1/-2 lb
Point	18'- 2 1/8"	18'- 2 1/8"	-	Back	446 lb	577 lb	1 lb	3/0 lb	1/-3 lb
Point	3'- 1/4"	3'- 1/4"	FB6-2(i179)	Top	479 lb	1022/-133 lb	0 lb	0 lb	0 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"	75(i158)	2750 lb	3760/-112 lb	15 lb	24/-1 lb	7 lb/ -34 lb
2	18'- 2"	18'- 6"	80(i167)	2860 lb	3023/-21 lb	11 lb	19/-1 lb	7 lb/ -34 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.
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- 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 = 769 plf. Use 12d (0.148"x3.25") nails. LDF = 1.00. Qty = 69. Row = 3, Spacing = 10"
  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.

MiTek	Customer: Street 1: City: Customer Ph...	Job Name: **B** Level: **1st FLOOR** Label: **FB8-2 - i187** Type: **Beam**	**2 Ply Member** **2.0 RigidLam DF LVL 1-3/4 x 18**	Status: **Design Passed**

PLY TO PLY CONNECTION

FASTENER INSTALLATION – 3 ROWS (FROM ONE FACE)