



Customer:
Street 1:
City:
Customer P...

Job Name: **B**
Level: **1st FLOOR**
Label: **FB1-2 - i28**
Type: **Beam**

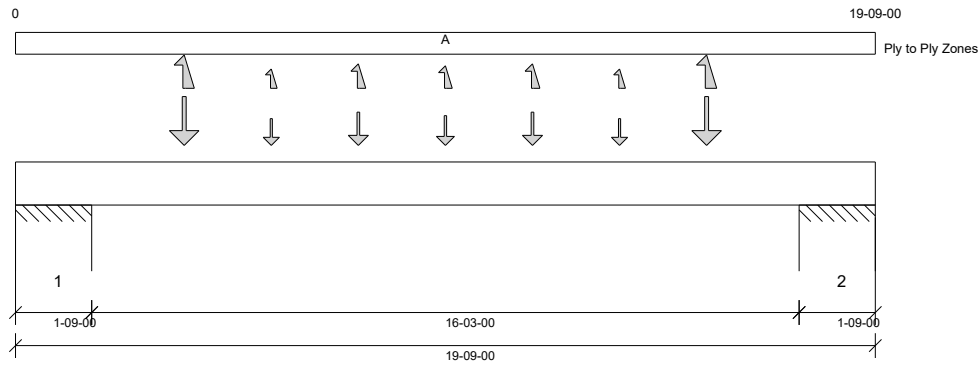
2 Ply Member
2.0 RigidLam DF LVL 1-3/4
x 11-7/8

Status:
Design Passed

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in Mitek® Structure version
R 4 2 286 I n d a t e R 2 4

Report Version: 2020.06.20 03/30/2021 08:38



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: 19'- 9" Bottom: 0'

Bearing Stress of Support Material:

- 875 psi Wall @ 0'- 1 1/2"
- 875 psi Wall @ 1'- 7 1/2"
- 875 psi Wall @ 18'- 1 1/2"
- 875 psi Wall @ 19'- 7 1/2"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	9'- 10 1/2"	D + Lr	1.15	1309 lb ft	24470 lb ft	Passed - 5%
Max Neg. Moment:	18'- 1 1/2"	D + Lr	1.15	2292 lb ft	24470 lb ft	Passed - 9%
Max Shear:	17'- 1/8"	D + Lr	1.15	829 lb	9241 lb	Passed - 9%
Live Load (LL) Neg. Defl.:	9'- 10 1/2"	0.6W		0.023"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	9'- 10 1/2"	D + Lr		0.045"	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	7-00	0.6D + 0.6W	1.60	321 lb		25565 lb	21438 lb	Passed - 1%
1	7-00	D + Lr	1.15		-1518 lb	-	-	
1	7-00	D + Lr	1.15	2378 lb		18375 lb	21438 lb	Passed - 13%
1	7-00	0.6D + 0.6W	1.60		-479 lb	-	-	
2	7-00	D + Lr	1.15	2378 lb		18375 lb	21438 lb	Passed - 13%
2	7-00	0.6D + 0.6W	1.60		-479 lb	-	-	
2	7-00	0.6D + 0.6W	1.60	321 lb		25565 lb	21438 lb	Passed - 1%
2	7-00	D + Lr	1.15		-1518 lb	-	-	

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	19'- 9"	Self Weight	Top	11 lb/ft	-	-	-	-
Point	3'- 10 1/2"	3'- 10 1/2"	B01(c01)	Top	161 lb	-	109 lb	173 lb	47/-282 lb
Point	5'- 10 1/2"	5'- 10 1/2"	B01(c01)	Top	46 lb	-	34 lb	99/-1 lb	15/-93 lb
Point	7'- 10 1/2"	7'- 10 1/2"	B01(c01)	Top	90 lb	-	62 lb	102 lb	27/-163 lb
Point	9'- 10 1/2"	9'- 10 1/2"	B01(c01)	Top	75 lb	-	52 lb	85 lb	22/-137 lb
Point	11'- 10 1/2"	11'- 10 1/2"	B01(c01)	Top	90 lb	-	62 lb	102 lb	27/-163 lb
Point	13'- 10 1/2"	13'- 10 1/2"	B01(c01)	Top	46 lb	-	34 lb	99/-1 lb	15/-93 lb
Point	15'- 10 1/2"	15'- 10 1/2"	B01(c01)	Top	161 lb	-	109 lb	173 lb	47/-282 lb

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	1'- 9"	W19(i27)	1195/-752 lb	-	650/-419 lb	1185/-770 lb	141 lb/-707 lb
==>	0'- 1 1/2"	0'- 1 1/2"	W19(i27)	-752 lb	-	-419 lb	2/-767 lb	-
==>	1'- 7 1/2"	1'- 7 1/2"	W19(i27)	1195 lb	-	650 lb	1183/-3 lb	-
2	18'	19'- 9"	W6(i6)	1195/-752 lb	-	650/-419 lb	1185/-770 lb	141 lb/-707 lb
==>	18'- 1 1/2"	18'- 1 1/2"	W6(i6)	1195 lb	-	650 lb	1183/-3 lb	-
==>	19'- 7 1/2"	19'- 7 1/2"	W6(i6)	-752 lb	-	-419 lb	2/-767 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.

PLY TO PLY CONNECTION



Customer:
Street 1:
City:
Customer P...

Job Name: **B**
Level: **1st FLOOR**
Label: **FB1-2 - i28**
Type: **Beam**

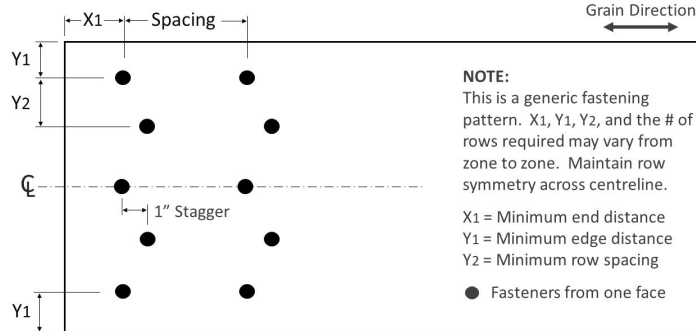
2 Ply Member
2.0 RigidLam DF LVL 1-3/4
x 11-7/8

Status:
Design
Passed

PLY TO PLY CONNECTION

Zone A: Factored load = 0 plf. Use 16d (0.162"x 3.5") nails. LDF = 1.00. Qty = 40. Row = 2, Spacing = 12"
16d (0.162"x 3.5") nails properties: D = 0.162" , L = 3.5". Fastener capacity = 140 lbs. X1 = 2.5" , Y1 = 1" , Y2 = 1.75"
Install fasteners from one face.

FASTENER INSTALLATION (FROM ONE FACE)





Customer:
Street 1:
City:
Customer P...

Job Name: **B**
Level: **1st FLOOR**
Label: **DB2-2 - i70**
Type: **Beam**

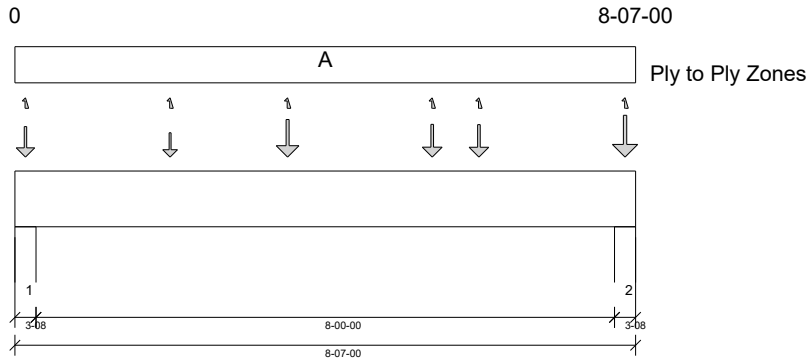
2 Ply Member
2.0 RigidLam DF LVL 1-3/4
x 9-1/4

Status:
Design Passed

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in Mitek® Structure version
R 4 2 286 | Update R 24

Report Version: 2020.06.20 03/30/2021 08:38



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'- 8 3/4" Bottom: 0'

Bearing Stress of Support Material:

- 875 psi Wall @ 0'- 2 1/2"
- 875 psi Wall @ 8'- 4 1/2"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	3'- 9 1/4"	D + L	1.00	8034 lb ft	13321 lb ft	Passed - 60%
Max Neg. Moment:	8'- 4 1/2"	D + L	1.00	139 lb ft	13321 lb ft	Passed - 1%
Max Shear:	7'- 6 1/4"	D + L	1.00	3373 lb	6259 lb	Passed - 54%
Live Load (LL) Pos. Defl.:	4'- 4 5/16"	L		0.147"	L/360	Passed - L/652
Total Load (TL) Pos. Defl.:	4'- 4 5/16"	D + L		0.212"	L/240	Passed - L/453

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	4168 lb		9188 lb	10719 lb	Passed - 45%
2	3-08	D + L	1.00	5599 lb		9188 lb	10719 lb	Passed - 61%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	8'- 7"	Self Weight	Top	9 lb/ft	-	-	-	-
Point	0'- 1 3/4"	0'- 1 3/4"	F212(c01)	Top	404 lb	1018 lb	2 lb	4 lb	1/-5 lb
Point	2'- 1 3/4"	2'- 1 3/4"	F205(c01)	Top	274 lb	709 lb	2 lb	3 lb	1/-5 lb
Point	3'- 9 1/4"	3'- 9 1/4"	F204(c01)	Top	571 lb	1355 lb	3 lb	4 lb	1/-6 lb
Point	5'- 9 1/4"	5'- 9 1/4"	F203(c02)	Top	482 lb	1101 lb	2 lb	3 lb	1/-2 lb
Point	6'- 5"	6'- 5"	F203(c01)	Top	478 lb	1084 lb	2 lb	4 lb	1/-7 lb
Point	8'- 5 1/4"	8'- 5 1/4"	F213(c01)	Top	594 lb	1623 lb	-4 lb	3/-7 lb	14/-2 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"	W20(i29)	1250 lb	2960 lb	6 lb	11 lb	4 lb/-18 lb
2	8'- 3 1/2"	8'- 7"	W21(i30)	1626 lb	3930 lb	1 lb	10/-7 lb	4 lb/-18 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.

PLY TO PLY CONNECTION



Customer:
Street 1:
City:
Customer P...

Job Name: **B**
Level: **1st FLOOR**
Label: **DB2-2 - i70**
Type: **Beam**

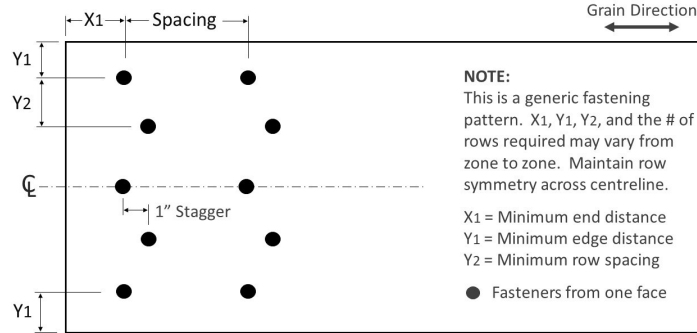
2 Ply Member
2.0 RigidLam DF LVL 1-3/4
x 9-1/4

Status:
Design
Passed

PLY TO PLY CONNECTION

Zone A: Factored load = 0 plf. Use 16d (0.162"x 3.5") nails. LDF = 1.00. Qty = 18. Row = 2, Spacing = 12"
16d (0.162"x 3.5") nails properties: D = 0.162" , L = 3.5". Fastener capacity = 140 lbs. X1 = 2.5" , Y1 = 1" , Y2 = 1.75"
Install fasteners from one face.

FASTENER INSTALLATION (FROM ONE FACE)





Customer:
Street 1:
City:
Customer P...

Job Name: **B**
Level: **1st FLOOR**
Label: **DB3-2 - i71**
Type: **Beam**

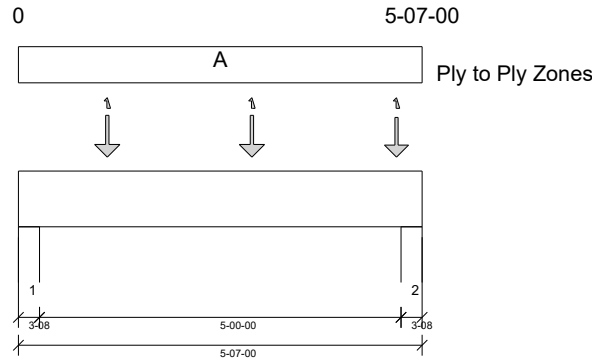
2 Ply Member
2.0 RigidLam DF LVL 1-3/4
x 9-1/4

Status:
Design Passed

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in Mitek® Structure version
R 4 2 286 | Update R 24

Report Version: 2020.06.20 03/30/2021 08:38



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'- 8 1/2" Bottom: 0'

Bearing Stress of Support Material:

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

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	3'- 2 3/4"	D + L	1.00	3901 lb ft	13321 lb ft	Passed - 29%
Max Shear:	1'- 3/4"	D + L	1.00	2756 lb	6259 lb	Passed - 44%
Live Load (LL) Pos. Defl.:	2'- 9 3/8"	L		0.029"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	2'- 9 3/8"	D + L		0.039"	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	2765 lb		9188 lb	10719 lb	Passed - 30%
2	3-08	D + L	1.00	3747 lb		9188 lb	10719 lb	Passed - 41%

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	1'- 2 3/4"	1'- 2 3/4"	F202(c02)	Top	586 lb	1617 lb	-6 lb	3/-9 lb	13/-3 lb
Point	3'- 2 3/4"	3'- 2 3/4"	F202(c06)	Top	586 lb	1617 lb	-5 lb	3/-9 lb	12/-2 lb
Point	5'- 2 3/4"	5'- 2 3/4"	F202(c05)	Top	559 lb	1499 lb	-4 lb	3/-7 lb	9/-2 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"	W21(i30)	737 lb	1969 lb	-7 lb	4/-11 lb	17 lb/ -3 lb
2	5'- 3 1/2"	5'- 7"	W22(i31)	1041 lb	2764 lb	-8 lb	5/-14 lb	17 lb/ -3 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.

PLY TO PLY CONNECTION



Customer:
Street 1:
City:
Customer P...

Job Name: **B**
Level: **1st FLOOR**
Label: **DB3-2 - i71**
Type: **Beam**

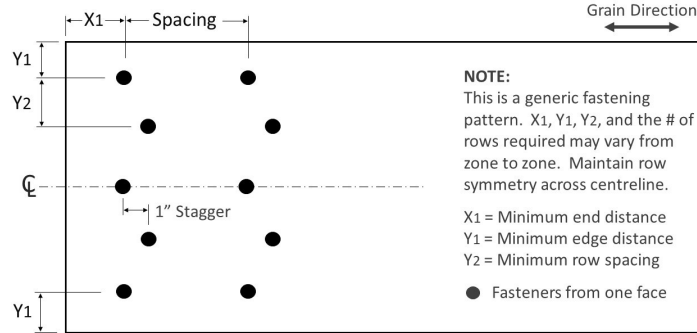
2 Ply Member
2.0 RigidLam DF LVL 1-3/4
x 9-1/4

Status:
Design
Passed

PLY TO PLY CONNECTION

Zone A: Factored load = 0 plf. Use 16d (0.162"x 3.5") nails. LDF = 1.00. Qty = 12. Row = 2, Spacing = 12"
16d (0.162"x 3.5") nails properties: D = 0.162" , L = 3.5". Fastener capacity = 140 lbs. X1 = 2.5" , Y1 = 1" , Y2 = 1.75"
Install fasteners from one face.

FASTENER INSTALLATION (FROM ONE FACE)





Customer:
Street 1:
City:
Customer P...

Job Name: **B**
Level: **1st FLOOR**
Label: **FB4-3 - i69**
Type: **Beam**

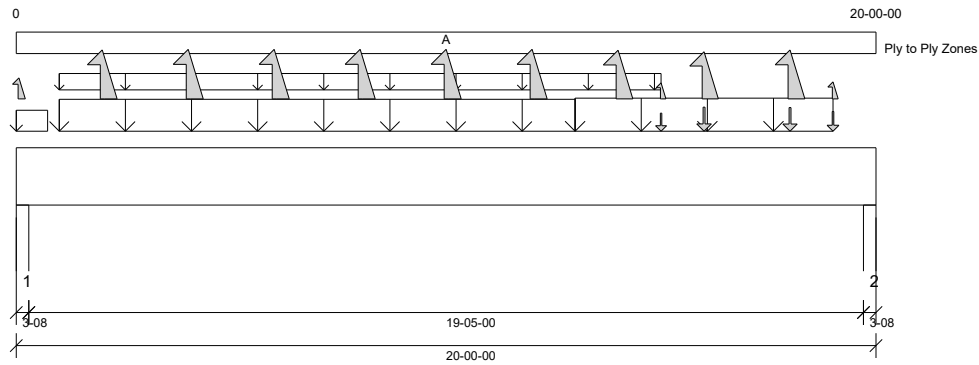
3 Ply Member
2.0 RigidLam DF LVL 1-3/4
x 16

Status:
Design Passed

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in Mitek® Structure version
R 4 2 286 I Indate R 24

Report Version: 2020.06.20 03/30/2021 08:38



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: 0' Bottom: 0'

Bearing Stress of Support Material:

- 875 psi Wall @ 0'- 2 1/2"
- 875 psi Wall @ 19'- 9 1/2"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	10'	D + 0.75(L + Lr)	1.15	38076 lb ft	64198 lb ft	Passed - 59%
Max Neg. Moment:	10'	0.6D + 0.6W	1.60	8954 lb ft	89319 lb ft	Passed - 10%
Max Shear:	18'- 4 1/2"	D + 0.75(L + Lr)	1.15	7060 lb	18676 lb	Passed - 38%
Live Load (LL) Pos. Defl.:	10'- 1/4"	0.75(L + Lr + 0.6W)		0.436"	L/360	Passed - L/534
Total Load (TL) Pos. Defl.:	10'- 7/16"	D + 0.75(L + Lr + 0.6W)		0.836"	L/240	Passed - L/278

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 + 0.6W)	1.60	8062 lb		13781 lb	16078 lb	Passed - 59%
1	3-08	0.6D + 0.6W	1.60		-1847 lb	-	-	
2	3-08	D + 0.75(L + Lr)	1.15	7574 lb		13781 lb	16078 lb	Passed - 55%
2	3-08	0.6D + 0.6W	1.60		-1452 lb	-	-	

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	20'	Self Weight	Top	22 lb/ft	-	-	-	-
Uniform	0'	0'- 8 3/4"	W17(i11)	Top	125 lb/ft	-	110 lb/ft	159 lb/ft	52 lb/ft
Uniform	1'	15'	Smoothed Load	Back	54 lb/ft	153 lb/ft	-	-	-
Uniform	1'	13'	W17(i11)	Top	328 lb/ft	-	235 lb/ft	340 lb/ft	112 lb/ft
Uniform	13'	19'	W17(i11)	Top	380 lb/ft	-	238 lb/ft	344 lb/ft	113 lb/ft
Point	19'	19'	VL08(c01)	Front	-	-	90 lb	129 lb	39/-164 lb
Point	2'	2'	-	Back	-	-60 lb	-	-	-1229 lb
Point	4'	4'	-	Back	-	-60 lb	-	-	-1248 lb
Point	6'	6'	-	Back	-	-60 lb	-	-	-1248 lb
Point	8'	8'	-	Back	-	-62 lb	-	-	-1248 lb
Point	10'	10'	-	Back	-	-62 lb	-	-	-1248 lb
Point	12'	12'	-	Back	-	-62 lb	-	-	-1248 lb
Point	14'	14'	-	Back	-	-62 lb	-	-	-1216 lb
Point	16'	16'	-	Back	108 lb	303/-62 lb	-	-	-1162 lb
Point	18'	18'	-	Back	105 lb	292/-61 lb	-	-	-1226 lb
Point	0'- 3/4"	0'- 3/4"	W17(i11)	Top	-	-	-	-	-304 lb
Point	15'	15'	W17(i11)	Top	-	-	70 lb	101 lb	30/-129 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"	W1(i2)	3835 lb	1379/-274 lb	2223 lb	3212 lb	1742 lb/ -6916 lb
2	19'- 8 1/2"	20'	W9(i9)	4046 lb	1372/-277 lb	2308 lb	3334 lb	1742 lb/ -6916 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.



Customer:
Street 1:
City:
Customer P...

Job Name: **B**
Level: **1st FLOOR**
Label: **FB4-3 - i69**
Type: **Beam**

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

Status:
Design
Passed

PLY TO PLY CONNECTION

Zone A: Factored load = 564 plf. Use 16d (0.162"x 3.5") nails. LDF = 1.00. Qty = 123. Row = 3, Spacing = 12"
16d (0.162"x 3.5") nails properties: D = 0.162" , L = 3.5". Fastener capacity = 140 lbs. X1 = 2.5" , Y1 = 1" , Y2 = 1.75"
Install fasteners from both faces.

FASTENER INSTALLATION (FROM BOTH FACES)

