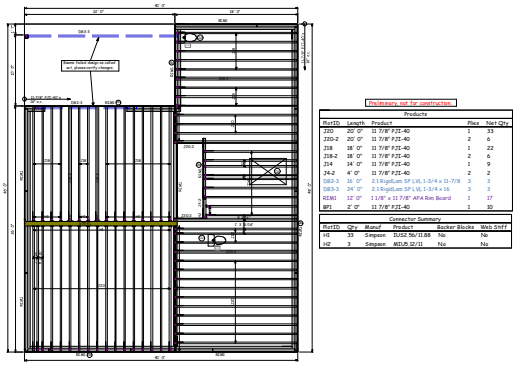
Carter Sanford Component Plant
298 Harvey Faulk Rd
Sanford, NC 27332

Phone #:919-775-1450



Builder: Robert Bennett

Model: 7281 NC HWY 42

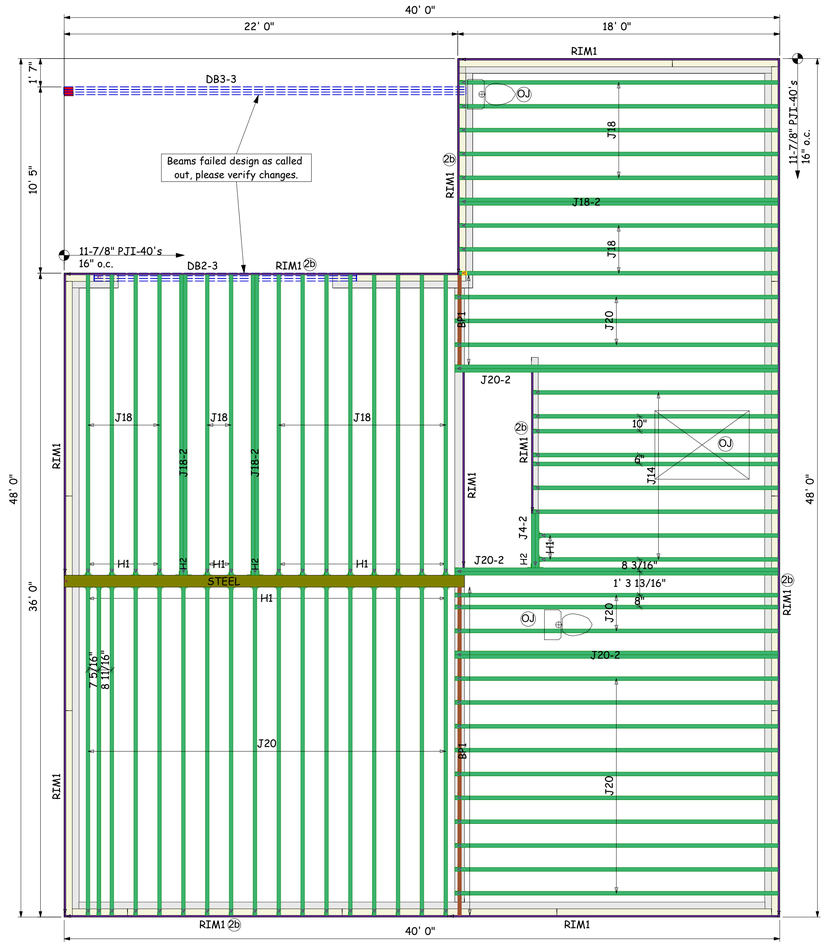
THE PLACEMENT PLAN NOTES:

1. The Placement Plan is a diagram for truss installation. It is not an engineered drawing and has not been reviewed by an engineer. The Owner/Building Designer is responsible for obtaining an engineer's review if one is required by the local jurisdiction.
2. The responsibilities of the Owner, Contractor, Building Designer, Component Designer and Component Manufacturer shall be as set forth in ANSI/TPI 1. Capitalized terms shall be as defined in ANSI/TP 1 unless otherwise indicated.
3. Each Component is designed as an individual component utilizing information provided by others. The Owner/Building Designer is responsible for reviewing all Component Submittal Packages and individual Component Design Drawings for compliance with the Construction Documents and compatibility with the overall Building design.
4. Contractor will not proceed with component installation until the Owner/Building Designer has reviewed the Component Submittal Package. Questions on the suitability of any Component will be resolved by the Building Designer.
5. The Building Designer and Contractor are responsible for all temporary and permanent bracing.
6. The Placement Plan assumes the building is dimensionally correct, structurally sound, and in a suitable condition to support each Component during installation and thereafter, including but not limited to installation of all bearing points. Proper design and construction of all structural components, including foundations, headers, beams, walls and columns are the responsibility of the Owner, Building Designer and Contractor.
7. Do not cut, drill, or modify any Component without first consulting the Component Manufacturer or Building Designer. Damaged Components shall not be installed unless directed by the Building Designer or approved by the Component Manufacturer.
8. Components must be handled and installed following all applicable safety standards and best practices, including but not limited to BCSI, OSHA, TPI and local codes. Failure to properly handle, brace or otherwise install Component can result in serious injury or death.

General Notes:

** CUTTING OR DRILLING OF COMPONENTS SHOULD NOT BE DONE WITHOUT CONTACTING COMPONENT SUPPLIER FIRST. CUSTOMER TAKES FULL RESPONSIBILITY FOR COMPONENTS IF CUT BEFORE AUTHORIZATION.

** LVL AND JOISTS MUST BE FULLY CONNECTED TOGETHER PRIOR TO ADDING ANY LOADS.

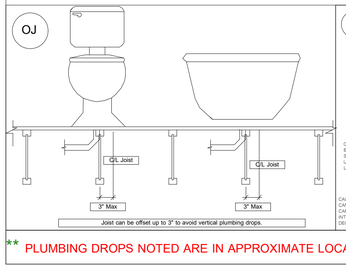


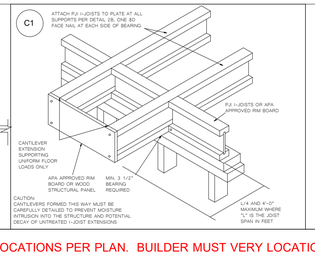
Preliminary, not for construction.

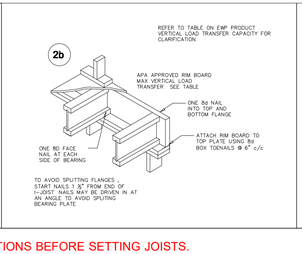
Products				
PlotID	Length	Product	Plies	Net Qty
J20	20' 0"	11 7/8" PJI-40	1	33
J20-2	20' 0"	11 7/8" PJI-40	2	6
J18	18' 0"	11 7/8" PJI-40	1	22
J18-2	18' 0"	11 7/8" PJI-40	2	6
J14	14' 0"	11 7/8" PJI-40	1	9
J4-2	4' 0"	11 7/8" PJI-40	2	2
DB2-3	16' 0"	2.1 RigidLam SP LVL 1-3/4 x 11-7/8	3	3
DB3-3	24' 0"	2.1 RigidLam SP LVL 1-3/4 x 16	3	3
RIM1	12' 0"	1 1/8" x 11 7/8" APA Rim Board	1	17
BP1	2' 0"	11 7/8" PJI-40	1	10

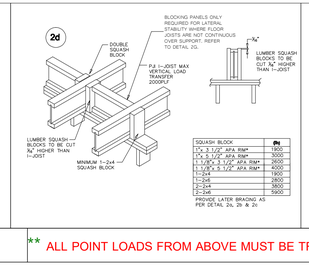
Connector Summary					
PlotID	Qty	Manuf	Product	Backer Blocks	Web Stiff
H1	33	Simpson	IUS2.56/11.88	No	No
H2	3	Simpson	MIU5.12/11	No	No

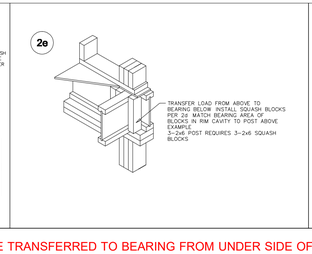
1ST FLOOR LAYOUT

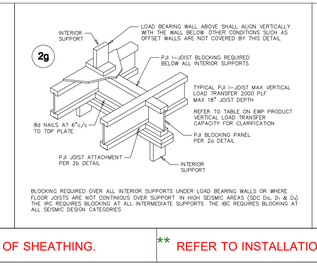


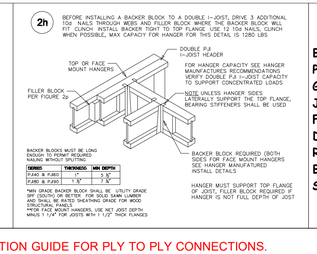












BACKER BLOCK	MIN DEPTH
PJI/BCI 5000S	5 ¼"
PJI/BCI 6000S	7 ¼"

LABEL LEGEND

BBO = Beam by Others
PBO = Post by Others
GBO = Girder by Others
J = I-Joist
FB = Flush Beam
DB = Dropped Beam
RB = Roof Beam
BP = Blocking Panels
SB = Squash Blocks

** PLUMBING DROPS NOTED ARE IN APPROXIMATE LOCATIONS PER PLAN. BUILDER MUST VERY LOCATIONS BEFORE SETTING JOISTS.

** ALL POINT LOADS FROM ABOVE MUST BE TRANSFERRED TO BEARING FROM UNDER SIDE OF SHEATHING.

** REFER TO INSTALLATION GUIDE FOR PLY TO PLY CONNECTIONS.

** FRAMER MUST REFER TO PLANS WHILE SETTING COMPONENTS.

** DIMENSIONS ARE READ AS: FOOT-INCH-SIXTEENTH.

** DAMAGED FLOOR JOISTS SHOULD NOT BE INSTALLED UNLESS APPROVED BY COMPONENT PLANT.

Revisions	
00/00/00	Name
00/00/00	Name
00/00/00	Name
00/00/00	Name
00/00/00	Name

This is an I-Joist Placement Plan Only. All designs of I-Joist follow the IBC/IRC Code Requirements along with Manufacturer's guidelines. This is NOT an engineered placement plan. This placement plan is created from plans provided by the customer using Manufactures guidelines. It is the responsibility of the EOR, or builder to review and approve all bearing conditions, connections, spans, loading, product usage, and quantities. Do not notch or drill holes in beams or flanges on joists without prior approval from the manufacturing Representative unless following hole guidlines in the installation guide of product. Builder takes full responsibility for doing so and NO Back charge will be accepted.

Kempsville Building Materials
A Division of the Carter Lumber Company

Robert Bennett
7281 NC HWY 42
FLOOR JOIST LAYOUT

Scale: **1/4" = 1'-0"**
Date: **// 09/26/24**
Designer: **DW**
Project #: **24090120**
Sheet Number:
1 / 2

General Notes:

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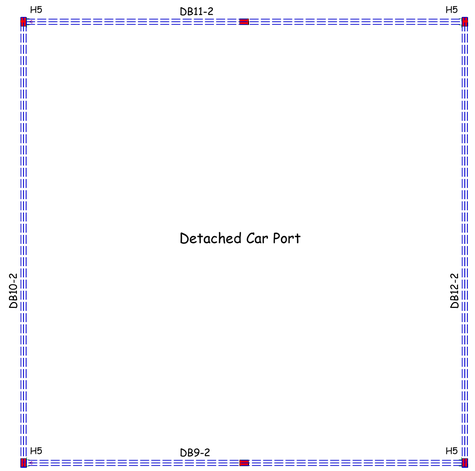
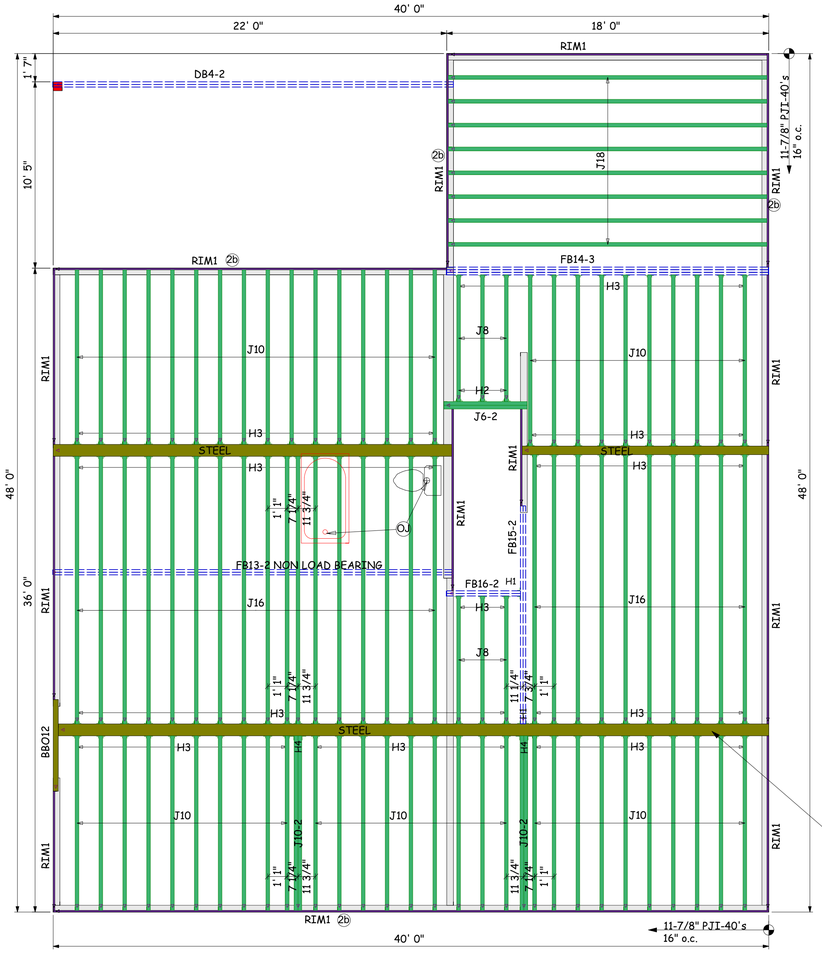




In order for steel beam to pick up wall above, span through. Please verify.

Preliminary, not for construction.

Joists ran vertically into steel beams to reduce deflection below .70" if ran horizontally. Verify steel capacity with EOR.

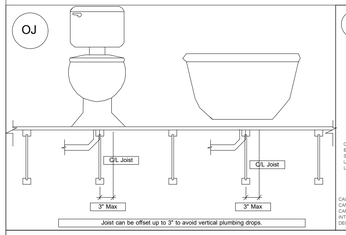
Products

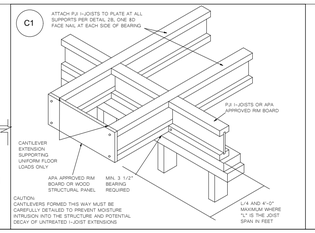
PlotID	Length	Product	Plies	Net Qty
J18	18' 0"	11 7/8" PJI-40	1	8
J16	16' 0"	11 7/8" PJI-40	1	27
J10	10' 0"	11 7/8" PJI-40	1	55
J10-2	10' 0"	11 7/8" PJI-40	2	4
J8	8' 0"	11 7/8" PJI-40	1	6
J6-2	6' 0"	11 7/8" PJI-40	2	2
DB11-2	26' 0"	2.1 RigidLam SP LVL 1-3/4 x 11-7/8	2	2
DB9-2	26' 0"	2.1 RigidLam SP LVL 1-3/4 x 11-7/8	2	2
FB13-2 NON LOAD BEARING	24' 0"	2.1 RigidLam SP LVL 1-3/4 x 11-7/8	2	2
FB14-3	18' 0"	2.1 RigidLam SP LVL 1-3/4 x 11-7/8	3	3
FB15-2	14' 0"	2.1 RigidLam SP LVL 1-3/4 x 11-7/8	2	2
FB16-2	6' 0"	2.1 RigidLam SP LVL 1-3/4 x 11-7/8	2	2
DB10-2	26' 0"	2.1 RigidLam SP LVL 1-3/4 x 14	2	2
DB12-2	26' 0"	2.1 RigidLam SP LVL 1-3/4 x 14	2	2
DB4-2	24' 0"	2.1 RigidLam SP LVL 1-3/4 x 16	2	2
RIM1	12' 0"	1 1/8" x 11 7/8" APA Rim Board	1	16

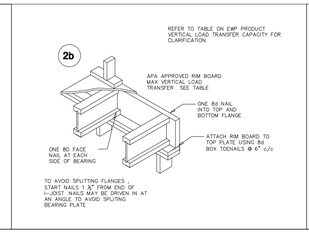
Connector Summary

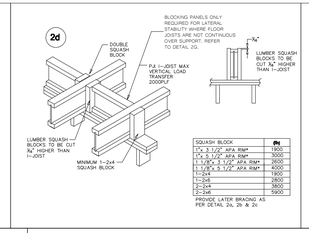
PlotID	Qty	Manuf	Product	Backer Blocks	Web Stiff
H1	2	MiTek	HUS410	No	No
H2	3	Simpson	IUS2.56/11.88	2 and Filler	No
H3	128	Simpson	IUS2.56/11.88	No	No
H4	2	Simpson	MIU5.12/11	No	No
H5	4	Simpson	HUCQ412-SDS	No	No

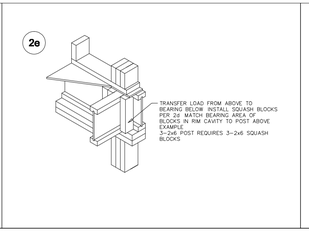
2ND FLOOR LAYOUT

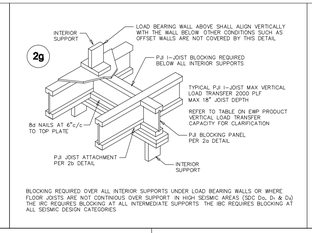


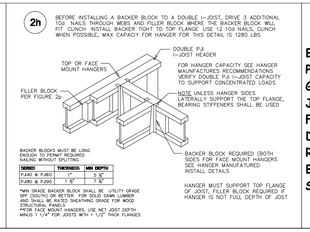












LABEL LEGEND

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Revisions	
00/00/00	Name
00/00/00	Name
00/00/00	Name
00/00/00	Name
00/00/00	Name

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Kempsville Building Materials
A Division of the Carter Lumber Company

Robert Bennett

7281 NC HWY 42

FLOOR JOIST LAYOUT

Scale: **1/4" = 1'-0"**

Date: **// 09/26/24**

Designer: **DW**

Project #: **24090120**

Sheet Number:

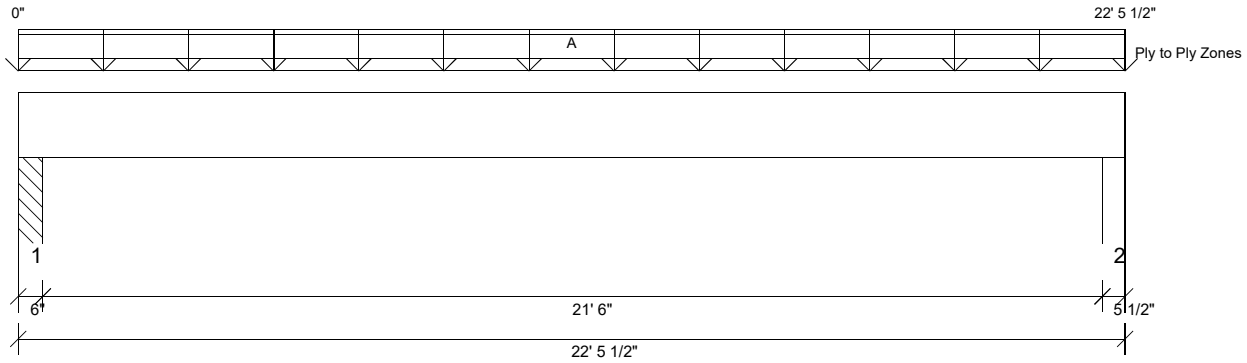
2 / 2

MiTek	Customer: Job Name: Adress: City/State:	Job Name: **24090120a 09.27.24 7281 NC H...** Level: **1ST FLOOR** Label: **DB3-3 - i551** Type: **Beam**	**3 Ply Member** **2.1 RigidLam SP 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 8.7.3.303.Update13.26

Report Version: 2023.09.18 09/27/2024 11:46



DESIGN INFORMATION a

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
System Spacing:	-
LL Deflection Limit:	L/480, 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: 21'- 6"

Bearing Stress of Support Material:

- 725 psi Column @ 0'- 5"
- 725 psi Wall @ 22'- 1"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	11'- 3"	D + L	1.00	29429 lb ft	54632 lb ft	Passed - 54%
Max Shear:	1'- 10"	D + L	1.00	4729 lb	16240 lb	Passed - 29%
Live Load (LL) Pos. Defl.:	11'- 3"	L		0.512"	L/480	Passed - L/503
Total Load (TL) Pos. Defl.:	11'- 3"	D + L		0.699"	L/240	Passed - L/369

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"	D + L	1.00	5650 lb		23625 lb	22838 lb	Passed - 25%
2	5 1/2"	D + L	1.00	5628 lb		21656 lb	20934 lb	Passed - 27%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	22'- 5 1/2"	Self Weight	Top	22 lb/ft	-	-	-	-
Uniform	-0'	22'- 5 1/2"	User Load	Top	120 lb/ft	360 lb/ft	-	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'- 6"	PBO2(i75)	1600 lb	4050 lb	-	-	-
2	22'	22'- 5 1/2"	W2(i4)	1593 lb	4035 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
- The unbraced length used in this design was manually input by the user. Install lateral bracing to satisfy the unbraced lengths specified on this report.

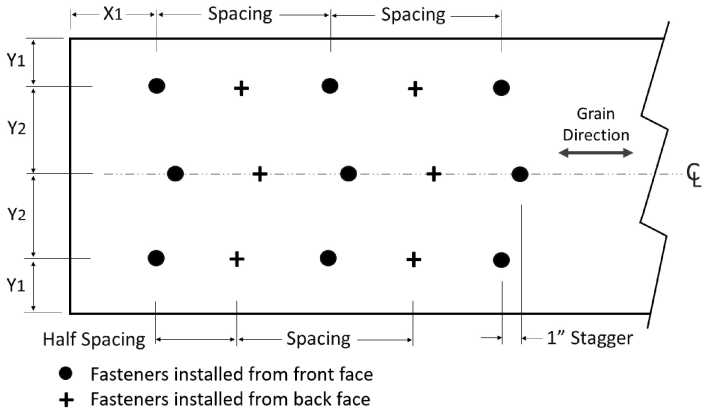
PLY TO PLY CONNECTION

- Zone A: Factored load = 0 plf. Use 12d (0.148"x3.25") nails. LDF = 1.00. Qty = 135. Row = 3, Spacing = 12"
  12d (0.148"x3.25") nails properties: D = 0.148" , L = 3.25". Fastener capacity = 128 lbs. X1 = 2.25" , Y1 = 0.75", Y2 = 1.5"
  Install fasteners from both faces.
  X1 = Minimum end distance, X2 = Minimum edge distance, Y2 = Minimum row spacing.

MiTek	Customer: Job Name: Adress: City/State:	Job Name: **24090120a 09.27.24 7281 NC H...** Level: **1ST FLOOR** Label: **DB3-3 - i551** Type: **Beam**	**3 Ply Member** **2.1 RigidLam SP LVL 1-3/4 x 16**	Status: **Design Passed**

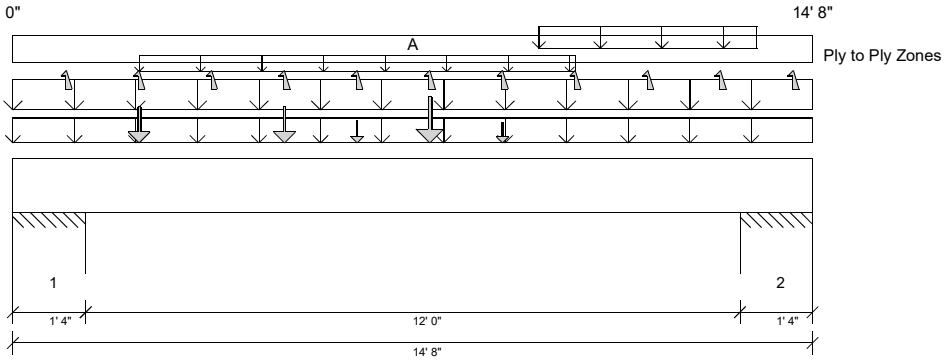
PLY TO PLY CONNECTION

FASTENER INSTALLATION – 3 ROWS (FROM BOTH FACES)



MiTek	Customer: Job Name: Adress: City/State:	Job Name: **24090120a 09.27.24 7281 NC H...** Level: **1ST FLOOR** Label: **DB2-3 - i2542** Type: **Beam**	**3 Ply Member** **2.1 RigidLam SP 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 8.7.3.303.Update13.26 | Report Version: 2023.09.18 09/27/2024 11:46



DESIGN INFORMATION a

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
System Spacing:	-
LL Deflection Limit:	L/480, 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: 12'

Bearing Stress of Support Material:

- 725 psi Wall @ 1'- 3"
- 725 psi Wall @ 13'- 5"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	7'- 5 3/4"	D + L	1.00	28978 lb ft	31942 lb ft	Passed - 91%
Max Neg. Moment:	1'- 3"	D + 0.75(L + S)	1.15	983 lb ft	12166 lb ft	Passed - 8%
Max Shear:	2'- 3 7/8"	D + L	1.00	8306 lb	12053 lb	Passed - 69%
Live Load (LL) Pos. Defl.:	7'- 4"	0.75(L + S)		0.234"	L/480	Passed - L/615
Total Load (TL) Pos. Defl.:	7'- 4"	D + 0.75(L + S)		0.556"	L/240	Passed - L/258

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Downward Reaction	Uplift Reaction	Resistance of Member	Resistance of Support	Result
1	1' 4"	D + L	1.00	10956 lb		63000 lb	60900 lb	Passed - 18%
2	1' 4"	D + L	1.00	11214 lb		63000 lb	60900 lb	Passed - 18%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	14'- 8"	Self Weight	Top	16 lb/ft	-	-	-	-
Uniform	0'	14'- 8"	RIM1(i2548)	Top	362 lb/ft	204 lb/ft	220 lb/ft	-	-
Uniform	-0'	14'- 8"	User Load	Top	560 lb/ft	-	-	-	-
Uniform	2'- 3 3/4"	10'- 3 3/4"	Smoothed Load	Top	-	173 lb/ft	-	-	-
Uniform	9'- 7 3/4"	13'- 7 3/4"	Smoothed Load	Top	86 lb/ft	345 lb/ft	-	-	-
Point	0'- 11 3/4"	0'- 11 3/4"	RIM1(i2548)	Top	-	-135 lb	-	-	-
Point	2'- 3 3/4"	2'- 3 3/4"	-	Top	-	460/-135 lb	-	-	-
Point	3'- 7 3/4"	3'- 7 3/4"	RIM1(i2548)	Top	-	-135 lb	-	-	-
Point	4'- 11 3/4"	4'- 11 3/4"	-	Top	-	460/-135 lb	-	-	-
Point	6'- 3 3/4"	6'- 3 3/4"	-	Top	192 lb	-135 lb	-	-	-
Point	7'- 7 3/4"	7'- 7 3/4"	-	Top	193 lb	460/-135 lb	-	-	-
Point	8'- 11 3/4"	8'- 11 3/4"	-	Top	163 lb	-135 lb	-	-	-
Point	10'- 3 3/4"	10'- 3 3/4"	RIM1(i2548)	Top	-	-135 lb	-	-	-
Point	11'- 7 3/4"	11'- 7 3/4"	RIM1(i2548)	Top	-	-135 lb	-	-	-
Point	12'- 11 3/4"	12'- 11 3/4"	RIM1(i2548)	Top	-	-135 lb	-	-	-
Point	14'- 3 3/4"	14'- 3 3/4"	RIM1(i2548)	Top	-	-135 lb	-	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	1'- 4"	W1(i3)	7495 lb	4576/-2519 lb	1613 lb	-	-
==>	0'- 1 1/2"	0'- 1 1/2"	W1(i3)	-	1102/-706 lb	-	-	-
==>	1'- 2 1/2"	1'- 2 1/2"	W1(i3)	7495 lb	3474/-1813 lb	1613 lb	-	-
2	13'- 4"	14'- 8"	W67(i76)	7538 lb	5067/-2518 lb	1613 lb	-	-
==>	13'- 5 1/2"	13'- 5 1/2"	W67(i76)	7538 lb	3675/-1749 lb	1613 lb	-	-
==>	14'- 6 1/2"	14'- 6 1/2"	W67(i76)	-	1392/-769 lb	-	-	-

DESIGN NOTES

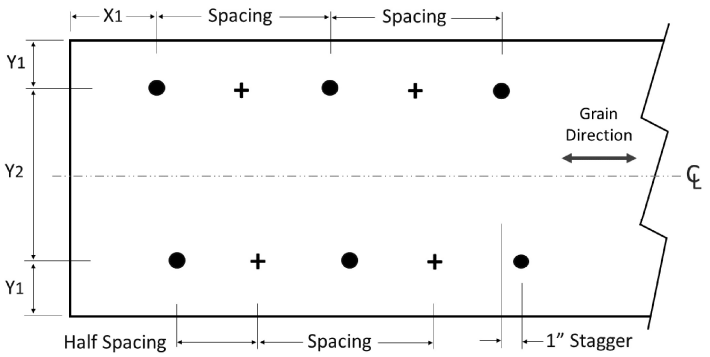
- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based 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
- The unbraced length used in this design was manually input by the user. Install lateral bracing to satisfy the unbraced lengths specified on this report.

MiTek	Customer: Job Name: Adress: City/State:	Job Name: **24090120a 09.27.24 7281 NC H...** Level: **1ST FLOOR** Label: **DB2-3 - i2542** Type: **Beam**	**3 Ply Member** **2.1 RigidLam SP 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 = 60. Row = 2, Spacing = 12"
  12d (0.148"x3.25") nails properties: D = 0.148" , L = 3.25". Fastener capacity = 128 lbs. X1 = 2.25" , Y1 = 0.75", Y2 = 1.5"
  Install fasteners from both faces.
  X1 = Minimum end distance, X2 = Minimum edge distance, Y2 = Minimum row spacing.

FASTENER INSTALLATION – 2 ROWS (FROM BOTH FACES)

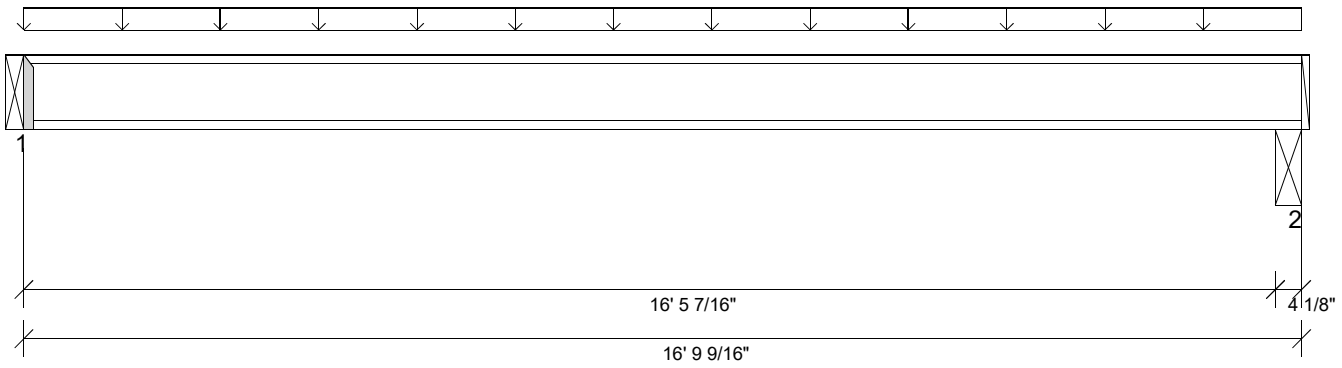


MiTek	Customer: Job Name: Adress: City/State:	Job Name: **24090120a 09.27.24 7281 NC H...** Level: **1ST FLOOR** Label: **J18 - i2551** Type: **FloorJoist**	**1 Ply Member** **11 7/8" PJI-40**	Status: **Design Passed**

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 09/27/2024 11:46



DESIGN INFORMATION a

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
System Live Load:	40.0 psf
System Dead Load:	10.0 psf
System Spacing:	16" c.c
LL Deflection Limit:	L/480, 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: 16'- 5 7/16"

Bearing Stress of Support Material:

- 425 psi Beam @ 0'
- 750 psi Beam @ 16'- 6 7/16"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	8'- 3 3/16"	D + L	1.00	2276 lb ft	3545 lb ft	Passed - 64%
Max Shear:	0'- 1/16"	D + L	1.00	551 lb	1620 lb	Passed - 34%
Live Load (LL) Pos. Defl.:	8'- 3 3/16"	L		0.248"	L/480	Passed - L/796
Total Load (TL) Pos. Defl.:	8'- 3 3/16"	D + L		0.310"	L/240	Passed - L/637

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Downward Reaction	Uplift Reaction	Resistance of Member	Resistance of Support	Result
1	1 3/4"	D + L	1.00	573 lb		1200 lb	-	Passed - 48%
2	4 1/8"	D + L	1.00	575 lb		1430 lb	7734 lb	Passed - 40%

CONNECTOR INFORMATION

ID	Part No.	Manufacturer	Nailing Requirements			Other Information or Requirement for Reinforcement Accessories
			Top	Face	Member	
1	IUS2.56/11.88	Simpson	-	10- 10d	2- Strong-Grip	Connector manually specified by the user.

* Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Uniform	0'	16'- 9 9/16"	FC2 Floor Decking (Plan View Fill)	Top	13 lb/ft	53 lb/ft	-	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'	STEEL(i84)	115 lb	459 lb	-	-	-
2	16'- 5 7/16"	16'- 9 9/16"	DB2-3(i2542)	115 lb	460 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.
- A load bearing wall is supported by the I-joist at a location where the I-joist is supported by a member below. Please see manufacturer installation guidelines for requirements of blocking/squash blocks.
- 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

MiTek	Customer: Job Name: Adress: City/State:	Job Name: **24090120a 09.27.24 7281 NC H...** Level: **1ST FLOOR** Label: **J18-2 - i2550** Type: **FloorJoist**	**2 Ply Member** **11 7/8" PJI-40**	Status: **Design Passed**

Illustration Not to Scale. Pitch: 0/12

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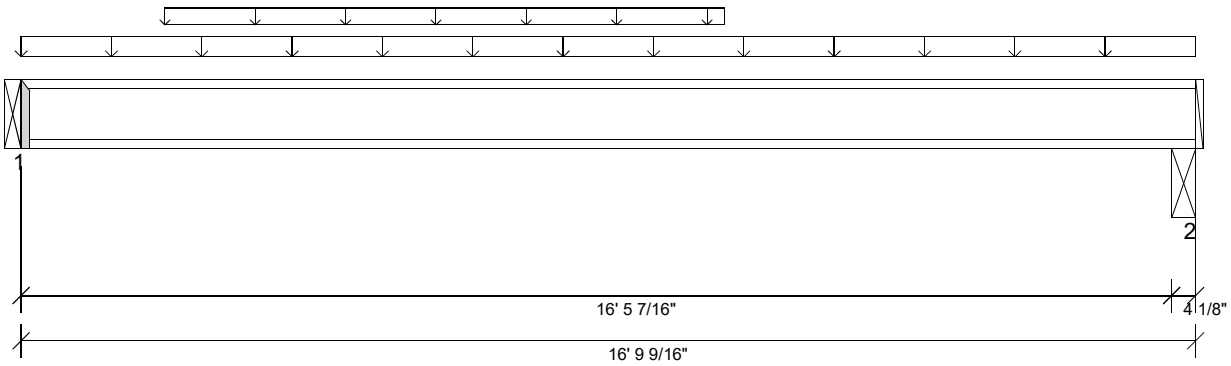
Report Version: 2023.09.18 09/27/2024 11:46



DESIGN INFORMATION a

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
System Live Load:	40.0 psf
System Dead Load:	10.0 psf
System Spacing:	16" c.c
LL Deflection Limit:	L/480, 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: 16'- 5 7/16"

Bearing Stress of Support Material:

- 425 psi Beam @ 0'
- 750 psi Beam @ 16'- 6 7/16"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	8'- 1 3/8"	D + L	1.00	2508 lb ft	7090 lb ft	Passed - 35%
Max Shear:	0'- 1/16"	D + L	1.00	602 lb	3240 lb	Passed - 19%
Live Load (LL) Pos. Defl.:	8'- 3 3/16"	L		0.133"	L/480	Passed - L/999
Total Load (TL) Pos. Defl.:	8'- 2 3/4"	D + L		0.183"	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	1 3/4"	D + L	1.00	625 lb		2400 lb	-	Passed - 26%
2	4 1/8"	D + L	1.00	605 lb		2860 lb	15469 lb	Passed - 21%

CONNECTOR INFORMATION

ID	Part No.	Manufacturer	Nailing Requirements			Other Information or Requirement for Reinforcement Accessories
			Top	Face	Member	
1	MIU5.12/11	Simpson	-	-	-	Connector manually specified by the user.

* Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Uniform	0'	16'- 9 9/16"	FC2 Floor Decking (Plan View Fill)	Top	13 lb/ft	53 lb/ft	-	-	-
Uniform	2'- 11/16"	10'- 11/16"	FC2 Floor Decking (Plan View Fill)	Top	10 lb/ft	-	-	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'	STEEL(i84)	166 lb	459 lb	-	-	-
2	16'- 5 7/16"	16'- 9 9/16"	DB2-3(i2542)	145 lb	460 lb	-	-	-

DESIGN NOTES

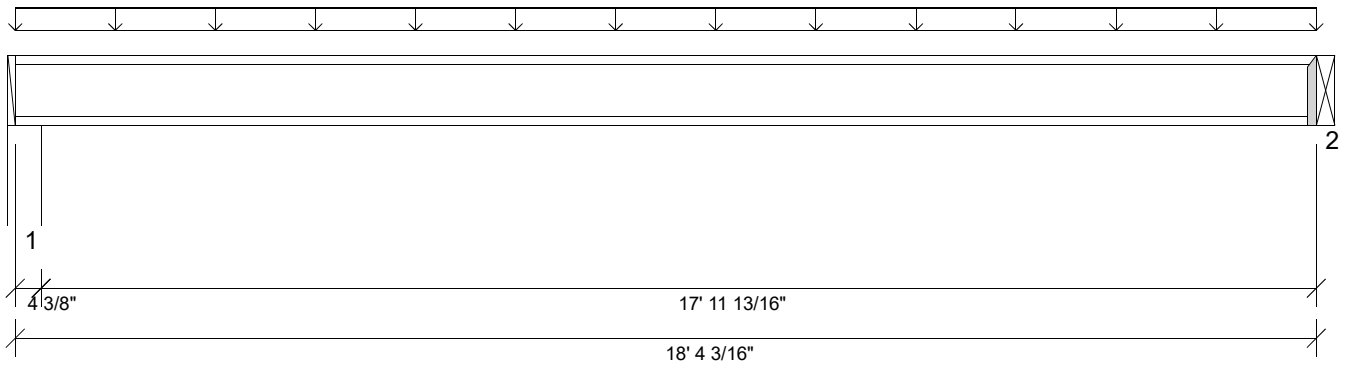
- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- A load bearing wall is supported by the I-joist at a location where the I-joist is supported by a member below. Please see manufacturer installation guidelines for requirements of blocking/squash blocks.
- 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

- Member design assumed proper ply to ply connection by others. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

MiTek	Customer: Job Name: Adress: City/State:	Job Name: **24090120a 09.27.24 7281 NC H...** Level: **1ST FLOOR** Label: **J20 - i2372** Type: **FloorJoist**	**1 Ply Member** **11 7/8" PJI-40**	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 09/27/2024 11:46



DESIGN INFORMATION a

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
System Live Load:	40.0 psf
System Dead Load:	10.0 psf
System Spacing:	16" c.c
LL Deflection Limit:	L/480, 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: 17'- 11 13/16"

Bearing Stress of Support Material:

- 425 psi Wall @ 0'- 3 3/8"
- 425 psi Beam @ 18'- 4 3/16"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	9'- 3 13/16"	D + L	1.00	2718 lb ft	3545 lb ft	Passed - 77%
Max Shear:	18'- 4 1/8"	D + L	1.00	602 lb	1620 lb	Passed - 37%
Live Load (LL) Pos. Defl.:	9'- 3 13/16"	L		0.347"	L/480	Passed - L/622
Total Load (TL) Pos. Defl.:	9'- 3 13/16"	D + L		0.433"	L/240	Passed - L/497

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 3/8"	D + L	1.00	628 lb		1430 lb	4649 lb	Passed - 44%
2	1 3/4"	D + L	1.00	624 lb		1200 lb	-	Passed - 52%

CONNECTOR INFORMATION

ID	Part No.	Manufacturer	Nailing Requirements			Other Information or Requirement for Reinforcement Accessories
			Top	Face	Member	
2	IUS2.56/11.88	Simpson	-	10- 10d	2- Strong-Grip	Connector manually specified by the user.

* Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Uniform	0'	18'- 4 3/16"	FC2 Floor Decking (Plan View Fill)	Top	13 lb/ft	53 lb/ft	-	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'- 4 3/8"	W6(i6)	126 lb	502 lb	-	-	-
2	18'- 4 3/16"	18'- 4 3/16"	STEEL(i84)	125 lb	499 lb	-	-	-

DESIGN NOTES

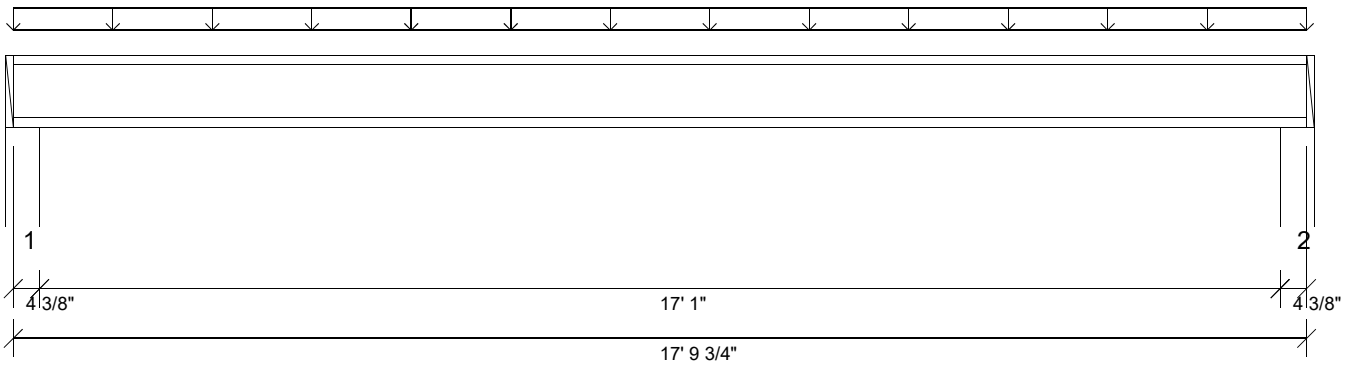
- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- A load bearing wall is supported by the I-joist at a location where the I-joist is supported by a member below. Please see manufacturer installation guidelines for requirements of blocking/squash blocks.
- 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.

Customer: Job Name: Adress: City/State:	Job Name: **24090120a 09.27.24 7281 NC H...** Level: **1ST FLOOR** Label: **J18 - i2487** Type: **FloorJoist**	**1 Ply Member** **11 7/8" PJI-40**	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 09/27/2024 11:46



DESIGN INFORMATION a

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
System Live Load:	40.0 psf
System Dead Load:	10.0 psf
System Spacing:	16" c.c
LL Deflection Limit:	L/480, 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: 17'- 1"

Bearing Stress of Support Material:

- 425 psi Wall @ 0'- 3 3/8"
- 425 psi Wall @ 17'- 6 3/8"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	8'- 10 7/8"	D + L	1.00	2475 lb ft	3545 lb ft	Passed - 70%
Max Shear:	0'- 4 7/16"	D + L	1.00	569 lb	1620 lb	Passed - 35%
Live Load (LL) Pos. Defl.:	8'- 10 7/8"	L		0.290"	L/480	Passed - L/705
Total Load (TL) Pos. Defl.:	8'- 10 7/8"	D + L		0.363"	L/240	Passed - L/564

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 3/8"	D + L	1.00	600 lb		1430 lb	4648 lb	Passed - 42%
2	4 3/8"	D + L	1.00	600 lb		1430 lb	4648 lb	Passed - 42%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Uniform	0'	17'- 9 3/4"	FC2 Floor Decking (Plan View Fill)	Top	13 lb/ft	53 lb/ft	-	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'- 4 3/8"	W2(i4)	120 lb	480 lb	-	-	-
2	17'- 5 3/8"	17'- 9 3/4"	W4(i1)	120 lb	480 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.
- A load bearing wall is supported by the I-joist at a location where the I-joist is supported by a member below. Please see manufacturer installation guidelines for requirements of blocking/squash blocks.
- 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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- Beam Stability Factor used in the calculation for Allowable Max Pos Moment (CL) = 1.00
- Bearing length at support 1, 2 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.

Customer: Job Name: Adress: City/State:	Job Name: **24090120a 09.27.24 7281 NC H...** Level: **1ST FLOOR** Label: **J18-2 - i2482** Type: **FloorJoist**	**2 Ply Member** **11 7/8" PJI-40**	Status: **Design Passed**

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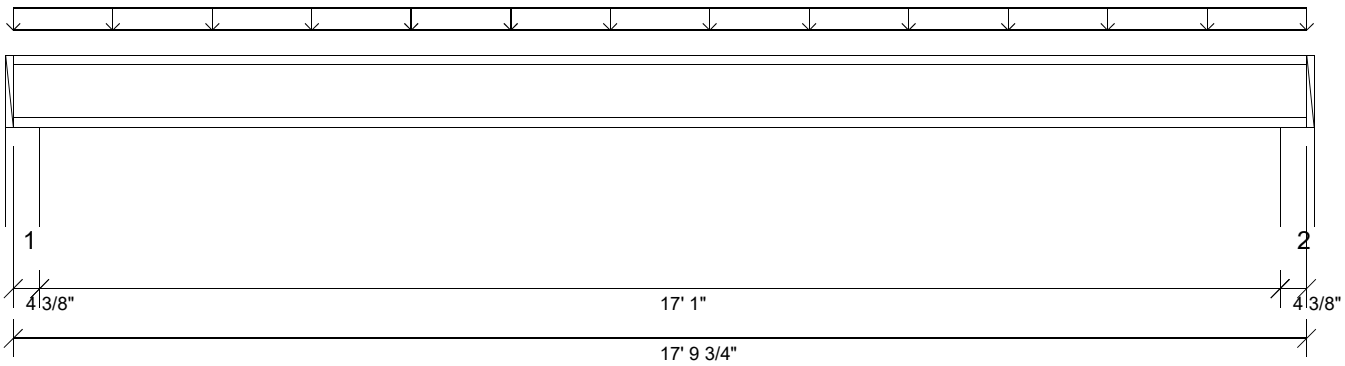

DESIGN INFORMATION a

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
System Live Load:	40.0 psf
System Dead Load:	10.0 psf
System Spacing:	16" c.c
LL Deflection Limit:	L/480, 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: 17'- 1"

Bearing Stress of Support Material:

- 425 psi Wall @ 0'- 3 3/8"
- 425 psi Wall @ 17'- 6 3/8"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	8'- 10 7/8"	D + L	1.00	2475 lb ft	7090 lb ft	Passed - 35%
Max Shear:	0'- 4 7/16"	D + L	1.00	569 lb	3240 lb	Passed - 18%
Live Load (LL) Pos. Defl.:	8'- 10 7/8"	L		0.157"	L/480	Passed - L/999
Total Load (TL) Pos. Defl.:	8'- 10 7/8"	D + L		0.196"	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	4 3/8"	D + L	1.00	600 lb		2860 lb	9297 lb	Passed - 21%
2	4 3/8"	D + L	1.00	600 lb		2860 lb	9297 lb	Passed - 21%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Uniform	0'	17'- 9 3/4"	FC2 Floor Decking (Plan View Fill)	Top	13 lb/ft	53 lb/ft	-	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'- 4 3/8"	W2(i4)	120 lb	480 lb	-	-	-
2	17'- 5 3/8"	17'- 9 3/4"	W4(i1)	120 lb	480 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.
- A load bearing wall is supported by the I-joist at a location where the I-joist is supported by a member below. Please see manufacturer installation guidelines for requirements of blocking/squash blocks.
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- 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, 2 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.

PLY TO PLY CONNECTION

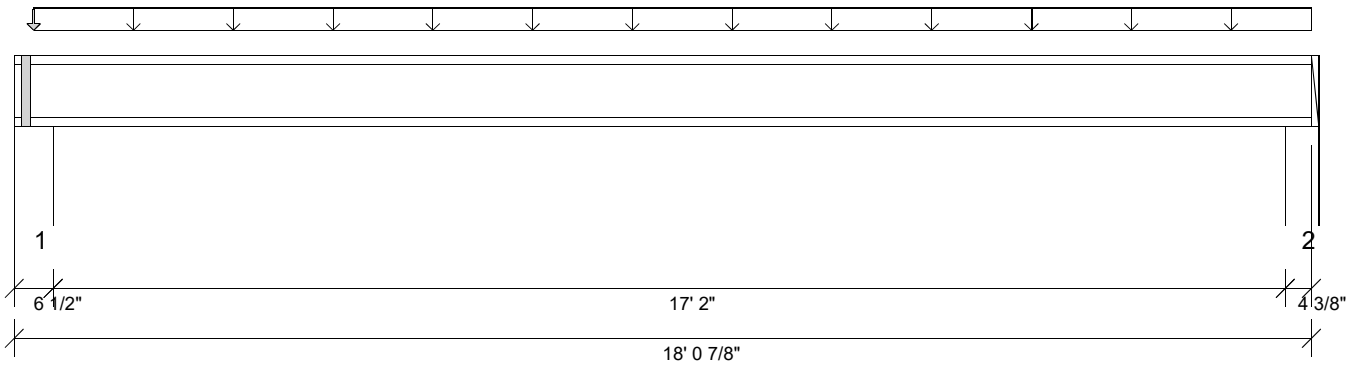
- Member design assumed proper ply to ply connection by others. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

Customer: Job Name: Adress: City/State:	Job Name: **24090120a 09.27.24 7281 NC H...** Level: **1ST FLOOR** Label: **J20 - i2436** Type: **FloorJoist**	**1 Ply Member** **11 7/8" PJI-40**	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 09/27/2024 11:46



DESIGN INFORMATION a

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
System Live Load:	40.0 psf
System Dead Load:	10.0 psf
System Spacing:	16" c.c
LL Deflection Limit:	L/480, 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: 17'- 2"

Bearing Stress of Support Material:

- 725 psi Wall @ 0'- 5 1/2"
- 425 psi Wall @ 17'- 9 1/2"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	9'- 1 1/2"	D + L	1.00	2498 lb ft	3545 lb ft	Passed - 70%
Max Shear:	0'- 6 9/16"	D + L	1.00	572 lb	1620 lb	Passed - 35%
Live Load (LL) Pos. Defl.:	9'- 1 1/2"	L		0.296"	L/480	Passed - L/695
Total Load (TL) Pos. Defl.:	9'- 1 1/2"	D + L		0.370"	L/240	Passed - L/557

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 1/2"	D + L	1.00	617 lb		1430 lb	11781 lb	Passed - 43%
2	4 3/8"	D + L	1.00	603 lb		1430 lb	4648 lb	Passed - 42%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Uniform	0'- 3 1/4"	18'- 7/8"	FC2 Floor Decking (Plan View Fill)	Top	13 lb/ft	53 lb/ft	-	-	-
Point	0'- 3 1/4"	0'- 3 1/4"	W62(i66)	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'- 6 1/2"	W71(i81)	138 lb	474 lb	-	-	-
2	17'- 8 1/2"	18'- 7/8"	W4(i1)	121 lb	487 lb	-	-	-

DESIGN NOTES

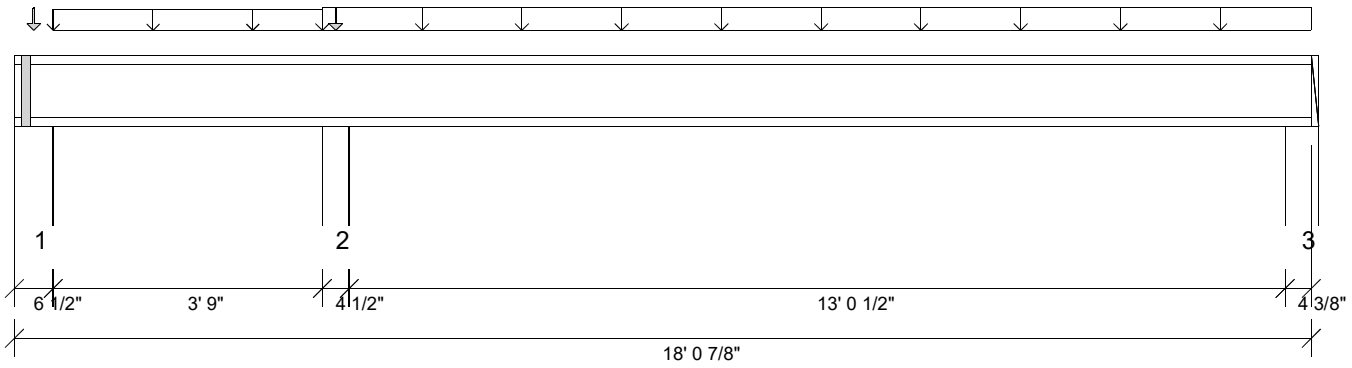
- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- A load bearing wall is supported by the I-joist at a location where the I-joist is supported by a member below. Please see manufacturer installation guidelines for requirements of blocking/squash blocks.
- 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 2 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.

MiTek	Customer: Job Name: Adress: City/State:	Job Name: **24090120a 09.27.24 7281 NC H...** Level: **1ST FLOOR** Label: **J20-2 - i2530** Type: **FloorJoist**	**2 Ply Member** **11 7/8" PJI-40**	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 09/27/2024 11:46



DESIGN INFORMATION a

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
System Live Load:	40.0 psf
System Dead Load:	10.0 psf
System Spacing:	16" c.c
LL Deflection Limit:	L/480, 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: 13'- 1/2"

Bearing Stress of Support Material:

- 725 psi Wall @ 0'- 5 1/2"
- 725 psi Wall @ 4'- 5 3/4"
- 425 psi Wall @ 17'- 9 1/2"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	12'- 4 15/16"	D + L	1.00	961 lb ft	7090 lb ft	Passed - 14%
Max Neg. Moment:	4'- 5 3/4"	D + L	1.00	1150 lb ft	7090 lb ft	Passed - 16%
Max Shear:	4'- 8 1/16"	D + L	1.00	517 lb	3240 lb	Passed - 16%
Live Load (LL) Pos. Defl.:	11'- 9 7/8"	L		0.034"	L/480	Passed - L/999
Total Load (TL) Pos. Defl.:	11'- 9 11/16"	D + L		0.042"	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 1/2"	D + L	1.00	62 lb		2860 lb	23562 lb	Passed - 2%
1	6 1/2"	D + L	1.00		-226 lb	-	-	
2	4 1/2"	D + L	1.00	934 lb		6000 lb	16313 lb	Passed - 16%
3	4 3/8"	D + L	1.00	384 lb		2860 lb	9297 lb	Passed - 13%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Uniform	0'- 6 1/2"	4'- 3 1/2"	FC2 Floor Decking (Plan View Fill)	Top	8 lb/ft	31 lb/ft	-	-	-
Uniform	4'- 3 1/2"	18'- 7/8"	FC2 Floor Decking (Plan View Fill)	Top	13 lb/ft	53 lb/ft	-	-	-
Point	0'- 3 1/4"	0'- 3 1/4"	W62(i66)	Top	38 lb	-	-	-	-
Point	4'- 5 3/4"	4'- 5 3/4"	W66(i70)	Top	38 lb	-	-	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'- 6 1/2"	W71(i81)	1 lb	61/-225 lb	-	-	-
2	4'- 3 1/2"	4'- 8"	W81(i92)	213 lb	719 lb	-	-	-
3	17'- 8 1/2"	18'- 7/8"	W4(i1)	78 lb	310/-1 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.
- A load bearing wall is supported by the I-joist at a location where the I-joist is supported by a member below. Please see manufacturer installation guidelines for requirements of blocking/squash blocks.
- 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 3 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.

PLY TO PLY CONNECTION

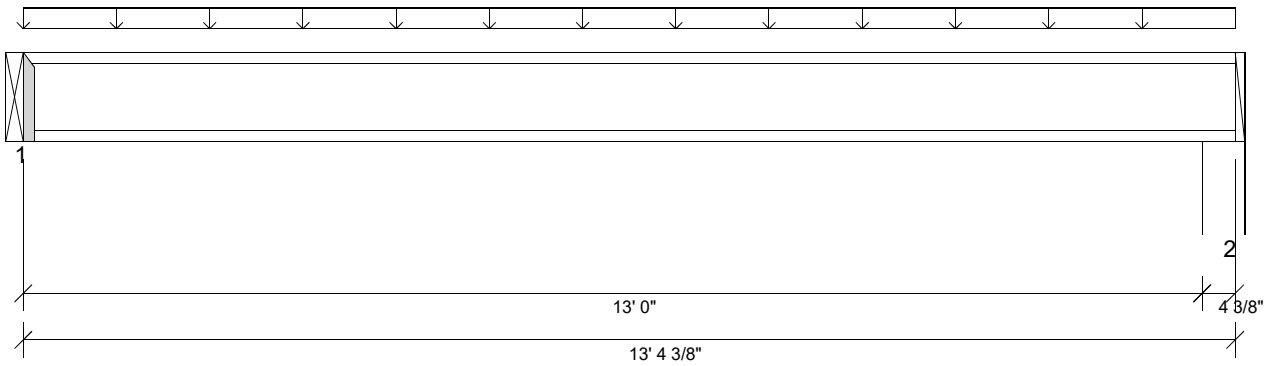
- Member design assumed proper ply to ply connection by others. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

MiTek	Customer: Job Name: Adress: City/State:	Job Name: **24090120a 09.27.24 7281 NC H...** Level: **1ST FLOOR** Label: **J14 - i2462** Type: **FloorJoist**	**1 Ply Member** **11 7/8" PJI-40**	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 09/27/2024 11:46



DESIGN INFORMATION a

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
System Live Load:	40.0 psf
System Dead Load:	10.0 psf
System Spacing:	16" c.c
LL Deflection Limit:	L/480, 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: 13'

Bearing Stress of Support Material:

- 425 psi Beam @ 0'
- 425 psi Wall @ 13'- 1"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	6'- 6 7/16"	D + L	1.00	1424 lb ft	3545 lb ft	Passed - 40%
Max Shear:	0'- 1/16"	D + L	1.00	435 lb	1620 lb	Passed - 27%
Live Load (LL) Pos. Defl.:	6'- 6 1/2"	L		0.104"	L/480	Passed - L/999
Total Load (TL) Pos. Defl.:	6'- 6 1/2"	D + L		0.130"	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	1 3/4"	D + L	1.00	464 lb		1200 lb	-	Passed - 39%
2	4 3/8"	D + L	1.00	461 lb		1430 lb	4648 lb	Passed - 32%

CONNECTOR INFORMATION

ID	Part No.	Manufacturer	Nailing Requirements			Other Information or Requirement for Reinforcement Accessories
			Top	Face	Member	
1	IUS2.56/11.88	Simpson	-	10- 10d	2- Strong-Grip	Connector manually specified by the user.

* Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Uniform	0'	13'- 4 3/8"	FC2 Floor Decking (Plan View Fill)	Top	13 lb/ft	53 lb/ft	-	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'	J4-2(i2444)	93 lb	371 lb	-	-	-
2	13'	13'- 4 3/8"	W4(i1)	92 lb	369 lb	-	-	-

DESIGN NOTES

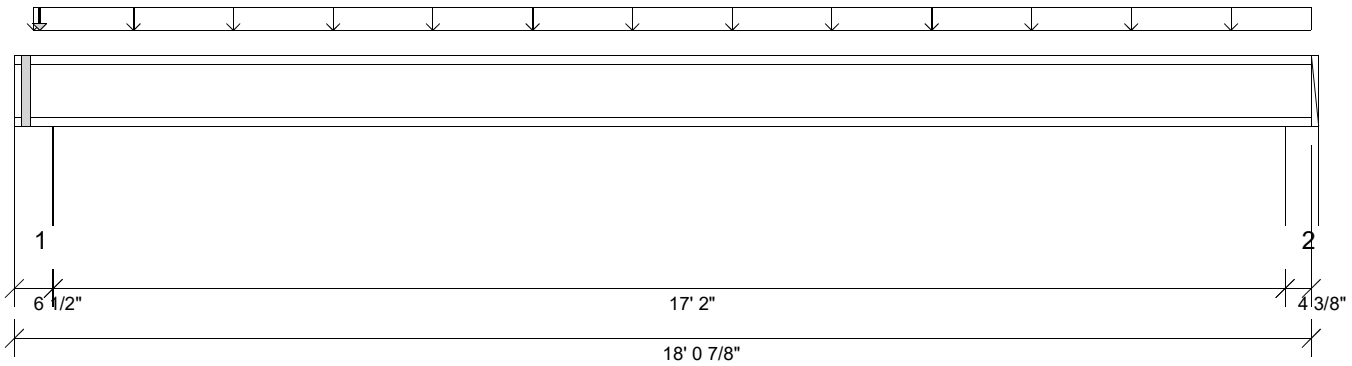
- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- A load bearing wall is supported by the I-joist at a location where the I-joist is supported by a member below. Please see manufacturer installation guidelines for requirements of blocking/squash blocks.
- 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 2 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.

MiTek	Customer: Job Name: Adress: City/State:	Job Name: **24090120a 09.27.24 7281 NC H...** Level: **1ST FLOOR** Label: **J20-2 - i2399** Type: **FloorJoist**	**2 Ply Member** **11 7/8" PJI-40**	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 09/27/2024 11:46



DESIGN INFORMATION a

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
System Live Load:	40.0 psf
System Dead Load:	10.0 psf
System Spacing:	16" c.c
LL Deflection Limit:	L/480, 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: 17'- 2"

Bearing Stress of Support Material:

- 725 psi Wall @ 0'- 5 1/2"
- 425 psi Wall @ 17'- 9 1/2"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	9'- 1 1/2"	D + L	1.00	2499 lb ft	7090 lb ft	Passed - 35%
Max Shear:	0'- 6 9/16"	D + L	1.00	572 lb	3240 lb	Passed - 18%
Live Load (LL) Pos. Defl.:	9'- 1 1/2"	L		0.160"	L/480	Passed - L/999
Total Load (TL) Pos. Defl.:	9'- 1 1/2"	D + L		0.199"	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 1/2"	D + L	1.00	628 lb		2860 lb	23563 lb	Passed - 22%
2	4 3/8"	D + L	1.00	603 lb		2860 lb	9297 lb	Passed - 21%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Uniform	0'- 3 1/4"	18'- 7/8"	FC2 Floor Decking (Plan View Fill)	Top	13 lb/ft	53 lb/ft	-	-	-
Point	0'- 4 1/4"	0'- 4 1/4"	W63(i67)	Top	38 lb	-	-	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'- 6 1/2"	W71(i81)	155 lb	467 lb	-	-	-
2	17'- 8 1/2"	18'- 7/8"	W4(i1)	122 lb	487 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.
- A load bearing wall is supported by the I-joist at a location where the I-joist is supported by a member below. Please see manufacturer installation guidelines for requirements of blocking/squash blocks.
- 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 2 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.

PLY TO PLY CONNECTION

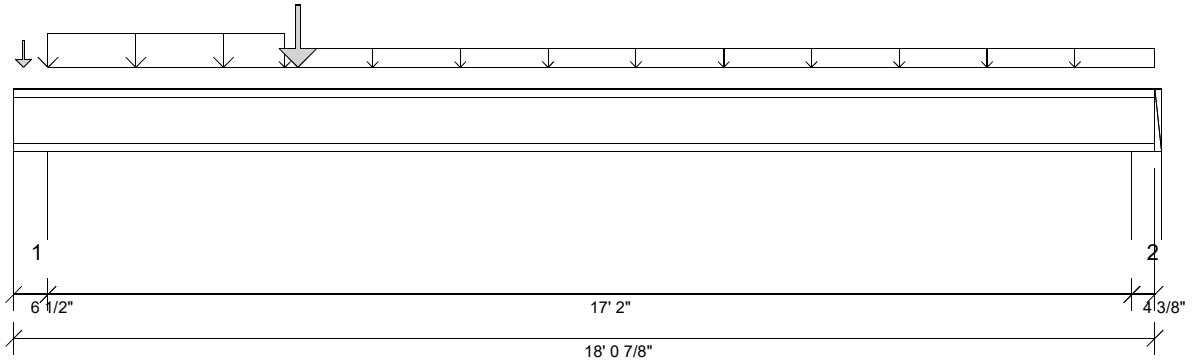
- Member design assumed proper ply to ply connection by others. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

Customer: Job Name: Adress: City/State:	Job Name: **24090120a 09.27.24 7281 NC H...** Level: **1ST FLOOR** Label: **J20-2 - i2531** Type: **FloorJoist**	**2 Ply Member** **11 7/8" PJI-40**	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 09/27/2024 11:46



DESIGN INFORMATION a

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
System Live Load:	40.0 psf
System Dead Load:	10.0 psf
System Spacing:	16" c.c
LL Deflection Limit:	L/480, 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: 13'

Bearing Stress of Support Material:

- 725 psi Wall @ 0'- 5 1/2"
- 425 psi Wall @ 17'- 9 1/2"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	4'- 8 7/16"	D + L	1.00	4281 lb ft	7090 lb ft	Passed - 60%
Max Neg. Moment:	0'- 5 1/2"	D + L	1.00	36 lb ft	7090 lb ft	Passed - 1%
Max Shear:	0'- 6 9/16"	D + L	1.00	1681 lb	3240 lb	Passed - 52%
Live Load (LL) Pos. Defl.:	8'- 6 1/4"	L		0.262"	L/480	Passed - L/786
Total Load (TL) Pos. Defl.:	8'- 6 1/4"	D + L		0.327"	L/240	Passed - L/630

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 1/2"	D + L	1.00	1805 lb		2860 lb	23563 lb	Passed - 63%
2	4 3/8"	D + L	1.00	673 lb		2860 lb	9297 lb	Passed - 24%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Uniform	0'- 6 1/2"	4'- 3 1/2"	FC2 Floor Decking (Plan View Fill)	Top	64 lb/ft	254 lb/ft	-	-	-
Uniform	4'- 3 1/2"	18'- 7/8"	FC2 Floor Decking (Plan View Fill)	Top	10 lb/ft	40 lb/ft	-	-	-
Point	4'- 6"	4'- 6"	J4-2(i2444)	Back	94 lb	376 lb	-	-	-
Point	0'- 1 13/16"	0'- 1 13/16"	-	Top	55 lb	56 lb	-	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'- 6 1/2"	W71(i81)	394 lb	1421 lb	-	-	-
2	17'- 8 1/2"	18'- 7/8"	W4(i1)	132 lb	532 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.
- A load bearing wall is supported by the I-joist at a location where the I-joist is supported by a member below. Please see manufacturer installation guidelines for requirements of blocking/squash blocks.
- 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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- Beam Stability Factor used in the calculation for Allowable Max Pos Moment (CL) = 1.00
- Bearing length at support 2 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.

PLY TO PLY CONNECTION

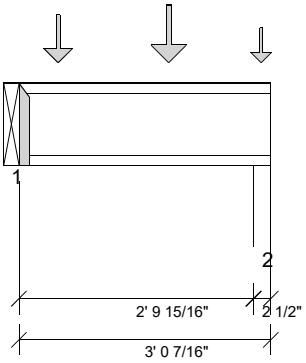
- Member design assumed proper ply to ply connection by others. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

Customer: Job Name: Adress: City/State:	Job Name: **24090120a 09.27.24 7281 NC H...** Level: **1ST FLOOR** Label: **J4-2 - i2444** Type: **FloorJoist**	**2 Ply Member** **11 7/8" PJI-40**	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 09/27/2024 11:46



DESIGN INFORMATION a

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
System Live Load:	40.0 psf
System Dead Load:	10.0 psf
System Spacing:	16" c.c
LL Deflection Limit:	L/480, 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'- 1 1/2"

Bearing Stress of Support Material:

- 425 psi Beam @ 0'
- 725 psi Wall @ 2'- 10 15/16"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	1'- 9 11/16"	D + L	1.00	380 lb ft	7090 lb ft	Passed - 5%
Max Shear:	0'- 1/16"	D + L	1.00	469 lb	3240 lb	Passed - 14%

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Downward Reaction	Uplift Reaction	Resistance of Member	Resistance of Support	Result
1	1 3/4"	D + L	1.00	469 lb		2400 lb	-	Passed - 20%
2	2 1/2"	D + L	1.00	514 lb		2548 lb	8967 lb	Passed - 20%

CONNECTOR INFORMATION

ID	Part No.	Manufacturer	Nailing Requirements			Other Information or Requirement for Reinforcement Accessories
			Top	Face	Member	
1	MIU5.12/11	Simpson	-	-	-	Connector manually specified by the user.

* Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Point	0'- 5 11/16"	0'- 5 11/16"	J14(i2448)	Front	70 lb	280 lb	-	-	-
Point	1'- 9 11/16"	1'- 9 11/16"	J14(i2462)	Front	93 lb	371 lb	-	-	-
Point	2'- 11"	2'- 11"	W66(i70)	Top	79 lb	90 lb	43 lb	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'	J20-2(i2531)	94 lb	376 lb	-	-	-
2	2'- 9 15/16"	3'- 7/16"	W81(i92)	148 lb	365 lb	43 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.
- A load bearing wall is supported by the I-joist at a location where the I-joist is supported by a member below. Please see manufacturer installation guidelines for requirements of blocking/squash blocks.
- 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 2 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.

PLY TO PLY CONNECTION

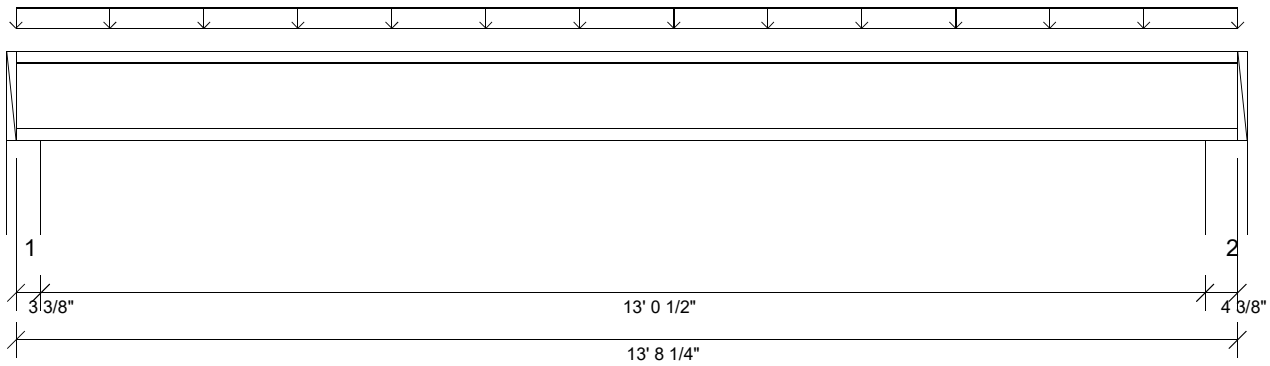
- Member design assumed proper ply to ply connection by others. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

MiTek	Customer: Job Name: Adress: City/State:	Job Name: **24090120a 09.27.24 7281 NC H...** Level: **1ST FLOOR** Label: **J14 - i2534** Type: **FloorJoist**	**1 Ply Member** **11 7/8" PJI-40**	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 09/27/2024 11:46



DESIGN INFORMATION a

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
System Live Load:	40.0 psf
System Dead Load:	10.0 psf
System Spacing:	16" c.c
LL Deflection Limit:	L/480, 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: 13'- 1/2"

Bearing Stress of Support Material:

- 725 psi Wall @ 0'- 2 3/8"
- 425 psi Wall @ 13'- 4 7/8"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	6'- 9 5/8"	D + L	1.00	1178 lb ft	3545 lb ft	Passed - 33%
Max Shear:	13'- 3 13/16"	D + L	1.00	353 lb	1620 lb	Passed - 22%
Live Load (LL) Pos. Defl.:	6'- 9 5/8"	L		0.087"	L/480	Passed - L/999
Total Load (TL) Pos. Defl.:	6'- 9 5/8"	D + L		0.109"	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 3/8"	D + L	1.00	373 lb		1366 lb	6115 lb	Passed - 27%
2	4 3/8"	D + L	1.00	378 lb		1430 lb	4648 lb	Passed - 26%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Uniform	0'	13'- 8 1/4"	FC2 Floor Decking (Plan View Fill)	Top	11 lb/ft	43 lb/ft	-	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'- 3 3/8"	W81(i92)	75 lb	299 lb	-	-	-
2	13'- 3 7/8"	13'- 8 1/4"	W4(i1)	76 lb	302 lb	-	-	-

DESIGN NOTES

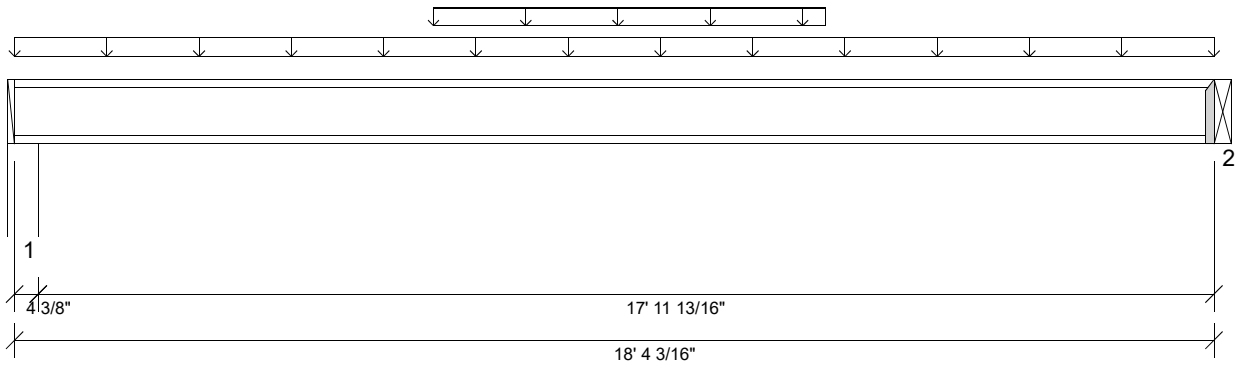
- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- A load bearing wall is supported by the I-joist at a location where the I-joist is supported by a member below. Please see manufacturer installation guidelines for requirements of blocking/squash blocks.
- 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 2 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.

MiTek	Customer: Job Name: Adress: City/State:	Job Name: **24090120a 09.27.24 7281 NC H...** Level: **1ST FLOOR** Label: **J20 - i2366** Type: **FloorJoist**	**1 Ply Member** **11 7/8" PJI-40**	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 09/27/2024 11:46



DESIGN INFORMATION a

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
System Live Load:	40.0 psf
System Dead Load:	10.0 psf
System Spacing:	16" c.c
LL Deflection Limit:	L/480, 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: 17'- 11 13/16"

Bearing Stress of Support Material:

- 425 psi Wall @ 0'- 3 3/8"
- 425 psi Beam @ 18'- 4 3/16"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	9'- 4 1/16"	D + L	1.00	1722 lb ft	3545 lb ft	Passed - 49%
Max Shear:	18'- 4 1/8"	D + L	1.00	349 lb	1620 lb	Passed - 22%
Live Load (LL) Pos. Defl.:	9'- 3 13/16"	L		0.173"	L/480	Passed - L/999
Total Load (TL) Pos. Defl.:	9'- 3 7/8"	D + L		0.270"	L/240	Passed - L/799

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 3/8"	D + L	1.00	361 lb		1430 lb	4649 lb	Passed - 25%
2	1 3/4"	D + L	1.00	361 lb		1200 lb	-	Passed - 30%

CONNECTOR INFORMATION

ID	Part No.	Manufacturer	Nailing Requirements			Other Information or Requirement for Reinforcement Accessories
			Top	Face	Member	
2	IUS2.56/11.88	Simpson	-	10- 10d	2- Strong-Grip	Connector manually specified by the user.

* Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Uniform	0'	18'- 4 3/16"	FC2 Floor Decking (Plan View Fill)	Top	7 lb/ft	27 lb/ft	-	-	-
Uniform	6'- 4 15/16"	12'- 4 7/8"	FC2 Floor Decking (Plan View Fill)	Top	16 lb/ft	-	-	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'- 4 3/8"	W6(i6)	110 lb	251 lb	-	-	-
2	18'- 4 3/16"	18'- 4 3/16"	STEEL(i84)	111 lb	250 lb	-	-	-

DESIGN NOTES

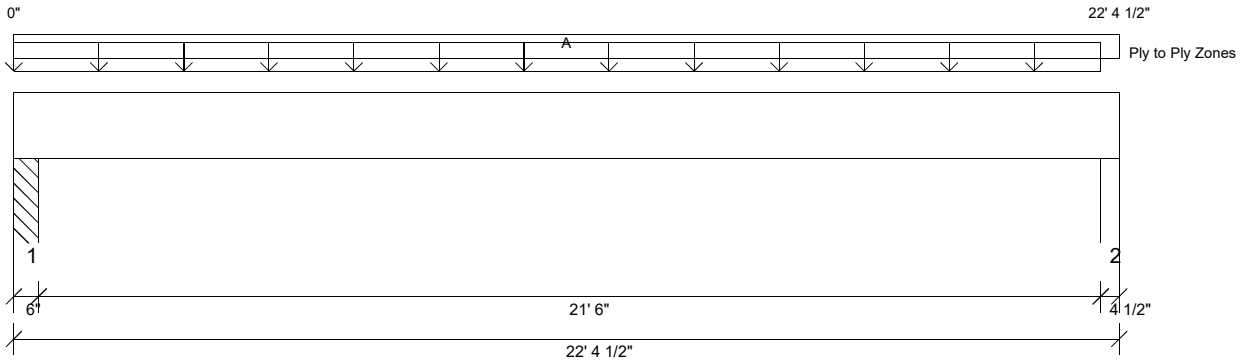
- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- A load bearing wall is supported by the I-joist at a location where the I-joist is supported by a member below. Please see manufacturer installation guidelines for requirements of blocking/squash blocks.
- 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.

MiTek	Customer: Job Name: Adress: City/State:	Job Name: **24090120a 09.27.24 7281 NC H...** Level: **2ND FLOOR** Label: **DB4-2 - i2488** Type: **Beam**	**2 Ply Member** **2.1 RigidLam SP 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 8.7.3.303.Update13.26

Report Version: 2023.09.18 09/27/2024 11:46



DESIGN INFORMATION a

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
System Spacing:	-
LL Deflection Limit:	L/480, 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: 21'- 6"

Bearing Stress of Support Material:

- 725 psi Column @ 0'- 5"
- 725 psi Wall @ 22'- 1"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	11'- 3 1/16"	D + S	1.15	14939 lb ft	41884 lb ft	Passed - 36%
Max Shear:	1'- 10"	D + S	1.15	2400 lb	12451 lb	Passed - 19%
Live Load (LL) Pos. Defl.:	11'- 3"	S		0.266"	L/480	Passed - L/969
Total Load (TL) Pos. Defl.:	11'- 3"	D + S		0.532"	L/240	Passed - L/484

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"	D + S	1.15	2867 lb		15750 lb	15225 lb	Passed - 19%
2	4 1/2"	D + S	1.15	2744 lb		11812 lb	11419 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'	22'- 4 1/2"	Self Weight	Top	15 lb/ft	-	-	-	-
Uniform	0'	22'	User Load	Top	120 lb/ft	-	120 lb/ft	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'- 6"	PBO1(i72)	1512 lb	-	1346 lb	-	-
2	22'	22'- 4 1/2"	W12(i14)	1459 lb	-	1294 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
- The unbraced length used in this design was manually input by the user. Install lateral bracing to satisfy the unbraced lengths specified on this report.

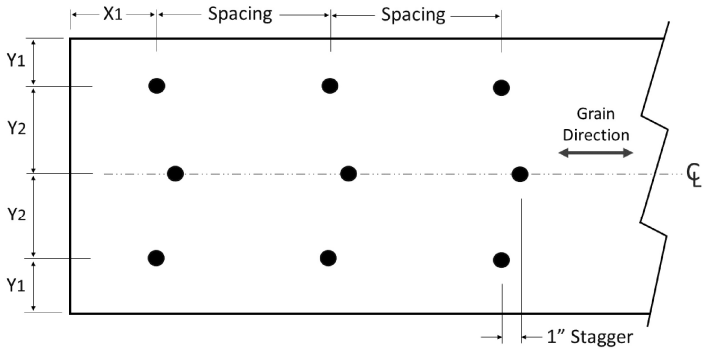
PLY TO PLY CONNECTION

- Zone A: Factored load = 0 plf. Use 12d (0.148"x3.25") nails. LDF = 1.00. Qty = 69. Row = 3, Spacing = 12"
  12d (0.148"x3.25") nails properties: D = 0.148" , L = 3.25". Fastener capacity = 128 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: Job Name: Adress: City/State:	Job Name: **24090120a 09.27.24 7281 NC H...** Level: **2ND FLOOR** Label: **DB4-2 - i2488** Type: **Beam**	**2 Ply Member** **2.1 RigidLam SP LVL 1-3/4 x 16**	Status: **Design Passed**

PLY TO PLY CONNECTION

FASTENER INSTALLATION – 3 ROWS (FROM ONE FACE)

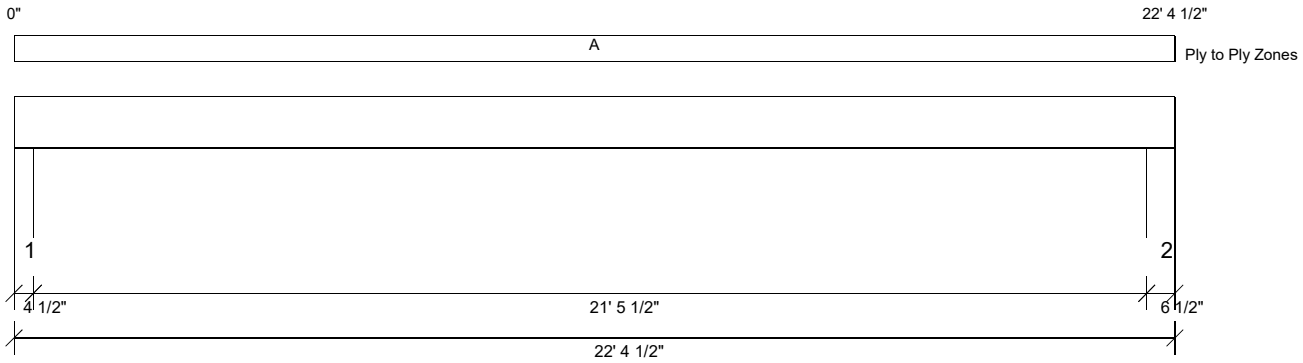


MiTek	Customer: Job Name: Adress: City/State:	Job Name: **24090120a 09.27.24 7281 NC H...** Level: **2ND FLOOR** Label: **FB13-2 NON LOAD BEARING -** Type: **Beam**	**2 Ply Member** **2.1 RigidLam SP LVL 1-3/4 x 11-7/8**	Status: **Design Passed**

Illustration Not to Scale. Pitch: 0/12

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

Report Version: 2023.09.18 09/27/2024 11:46



DESIGN INFORMATION a

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
System Spacing:	-
LL Deflection Limit:	L/480, 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: 21'- 5 1/2" Bottom: 21'- 5 1/2"

Bearing Stress of Support Material:

- 725 psi Wall @ 0'- 3 1/2"
- 725 psi Wall @ 21'- 11"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	11'- 1 3/16"	D	0.90	641 lb ft	4667 lb ft	Passed - 14%
Max Shear:	20'- 10 1/8"	D	0.90	107 lb	7232 lb	Passed - 1%
Total Load (TL) Pos. Defl.:	11'- 1 1/4"	D		0.054"	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	4 1/2"	D	0.90	122 lb		11813 lb	11419 lb	Passed - 1%
2	6 1/2"	D	0.90	124 lb		17063 lb	16494 lb	Passed - 1%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	22'- 4 1/2"	Self Weight	Top	11 lb/ft	-	-	-	-

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"	W103(i627)	122 lb	-	-	-	-
2	21'- 10"	22'- 4 1/2"	W62(i66)	124 lb	-	-	-	-

DESIGN NOTES

- CAUTION: This member didn't transfer any live load reactions to any of its supports. Verify load transfer is occurring as expected for this member.
- 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) = 0.24

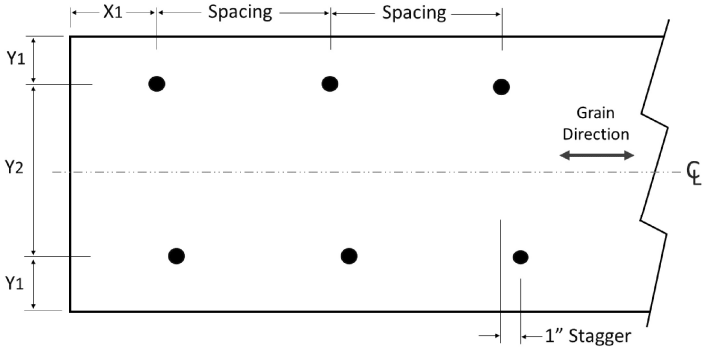
PLY TO PLY CONNECTION

- Zone A: Factored load = 0 plf. Use 12d (0.148"x3.25") nails. LDF = 1.00. Qty = 46. Row = 2, Spacing = 12"
  12d (0.148"x3.25") nails properties: D = 0.148" , L = 3.25". Fastener capacity = 128 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: Job Name: Adress: City/State:	Job Name: **24090120a 09.27.24 7281 NC H...** Level: **2ND FLOOR** Label: **FB13-2 NON LOAD BEARING - Beam** Type:	**2 Ply Member** **2.1 RigidLam SP LVL 1-3/4 x 11-7/8**	Status: **Design Passed**

PLY TO PLY CONNECTION

FASTENER INSTALLATION – 2 ROWS (FROM ONE FACE)

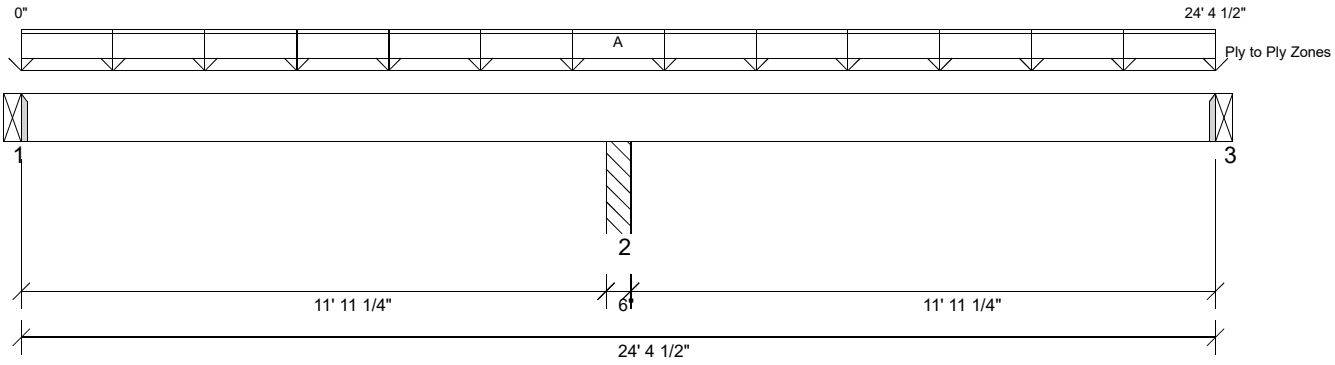


MiTek	Customer: Job Name: Adress: City/State:	Job Name: **24090120a 09.27.24 7281 NC H...** Level: **2ND FLOOR** Label: **DB11-2 - i2498** Type: **Beam**	**2 Ply Member** **2.1 RigidLam SP LVL 1-3/4 x 11-7/8**	Status: **Design Passed**

Illustration Not to Scale. Pitch: 0/12

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

Report Version: 2023.09.18 09/27/2024 11:46



DESIGN INFORMATION a

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
System Spacing:	-
LL Deflection Limit:	L/480, 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: 11'- 11 1/4"

Bearing Stress of Support Material:

- 425 psi Beam @ 0'
- 725 psi Column @ 12'- 2 1/4"
- 425 psi Beam @ 24'- 4 1/2"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	19'- 9 5/8"	D + S	1.15	4501 lb ft	24489 lb ft	Passed - 18%
Max Neg. Moment:	12'- 2 1/4"	D + S	1.15	8002 lb ft	8146 lb ft	Passed - 98%
Max Shear:	13'- 5 1/8"	D + S	1.15	2749 lb	9241 lb	Passed - 30%
Live Load (LL) Pos. Defl.:	19'- 2 7/8"	S		0.068"	L/480	Passed - L/999
Total Load (TL) Pos. Defl.:	19'- 2 7/8"	D + S		0.098"	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	1 1/2"	D + S	1.15	1970 lb		3937 lb	-	Passed - 50%
2	6"	D + S	1.15	6566 lb		15752 lb	15227 lb	Passed - 43%
3	1 1/2"	D + S	1.15	1970 lb		3937 lb	-	Passed - 50%

CONNECTOR INFORMATION

ID	Part No.	Manufacturer	Nailing Requirements			Other Information or Requirement for Reinforcement Accessories
			Top	Face	Member	
1	HUCQ412-SDS		-	-	-	Connector manually specified by the user.
3	HUCQ412-SDS		-	-	-	Connector manually specified by the user.

* Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	24'- 4 1/2"	Self Weight	Top	11 lb/ft	-	-	-	-
Uniform	0'	24'- 4 1/2"	User Load	Top	140 lb/ft	-	280 lb/ft	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'	DB10-2(i2502)	690 lb	-	1280 lb	-	-
2	11'- 11 1/4"	12'- 5 1/4"	PBO7(i617)	2300 lb	-	4266 lb	-	-
3	24'- 4 1/2"	24'- 4 1/2"	DB12-2(i2503)	690 lb	-	1280 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
- Beam Stability Factor used in the calculation for Allowable Max Neg Moment (CL) = 0.33
- The unbraced length used in this design was manually input by the user. Install lateral bracing to satisfy the unbraced lengths specified on this report.

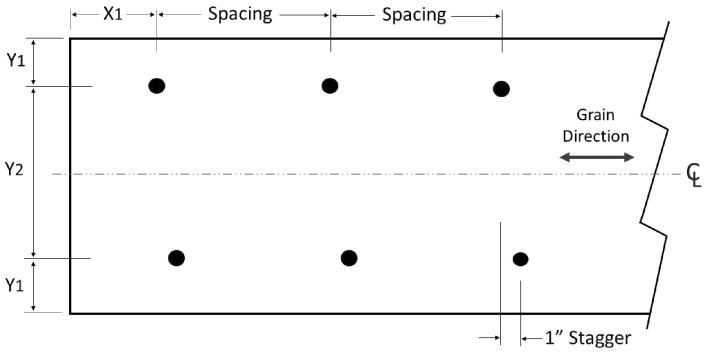
PLY TO PLY CONNECTION

- Zone A: Factored load = 0 plf. Use 12d (0.148"x3.25") nails. LDF = 1.00. Qty = 50. Row = 2, Spacing = 12"
  12d (0.148"x3.25") nails properties: D = 0.148" , L = 3.25". Fastener capacity = 128 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: Job Name: Adress: City/State:	Job Name: **24090120a 09.27.24 7281 NC H...** Level: **2ND FLOOR** Label: **DB11-2 - i2498** Type: **Beam**	**2 Ply Member** **2.1 RigidLam SP LVL 1-3/4 x 11-7/8**	Status: **Design Passed**

PLY TO PLY CONNECTION

FASTENER INSTALLATION – 2 ROWS (FROM ONE FACE)

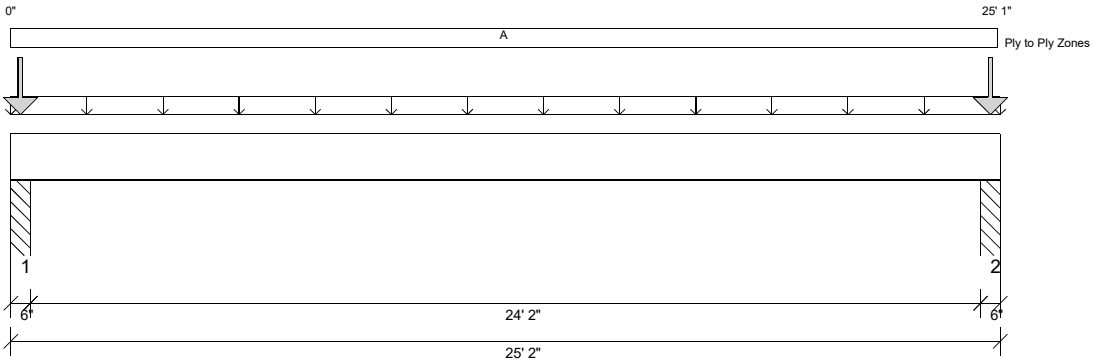


MiTek	Customer: Job Name: Adress: City/State:	Job Name: **24090120a 09.27.24 7281 NC H...** Level: **2ND FLOOR** Label: **DB10-2 - i2502** Type: **Beam**	**2 Ply Member** **2.1 RigidLam SP LVL 1-3/4 x 14**	Status: **Design Passed**

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 09/27/2024 11:46



DESIGN INFORMATION a

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
System Spacing:	-
LL Deflection Limit:	L/480, 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: 24'- 2"

Bearing Stress of Support Material:

- 725 psi Column @ 0'- 5"
- 725 psi Column @ 24'- 9"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	12'- 7"	D + S	1.15	6542 lb ft	32936 lb ft	Passed - 20%
Max Neg. Moment:	0'- 5"	D + S	1.15	336 lb ft	4913 lb ft	Passed - 7%
Max Shear:	1'- 8"	D + S	1.15	1015 lb	10894 lb	Passed - 9%
Live Load (LL) Pos. Defl.:	12'- 7"	S		0.186"	L/480	Passed - L/999
Total Load (TL) Pos. Defl.:	12'- 7"	D + S		0.425"	L/240	Passed - L/681

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"	D + S	1.15	3139 lb		15750 lb	15225 lb	Passed - 21%
2	6"	D + S	1.15	3139 lb		15750 lb	15225 lb	Passed - 21%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	25'- 2"	Self Weight	Top	13 lb/ft	-	-	-	-
Uniform	-0'	25'- 2"	User Load	Top	40 lb/ft	-	40 lb/ft	-	-
Point	0'- 3"	0'- 3"	DB9-2(i2498)	Front	690 lb	-	1280 lb	-	-
Point	24'- 11"	24'- 11"	DB11-2(i2498)	Front	690 lb	-	1280 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(i614)	1368 lb	-	1805 lb	-	-
2	24'- 8"	25'- 2"	PBO3(i613)	1344 lb	-	1761 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
- The unbraced length used in this design was manually input by the user. Install lateral bracing to satisfy the unbraced lengths specified on this report.

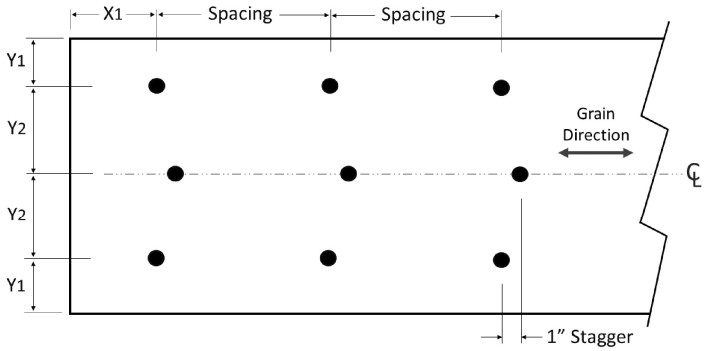
PLY TO PLY CONNECTION

- Zone A: Factored load = 1689 plf. Use 12d (0.148"x3.25") nails. LDF = 1.00. Qty = 183. Row = 3, Spacing = 5"
  12d (0.148"x3.25") nails properties: D = 0.148" , L = 3.25". Fastener capacity = 128 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: Job Name: Adress: City/State:	Job Name: **24090120a 09.27.24 7281 NC H...** Level: **2ND FLOOR** Label: **DB10-2 - i2502** Type: **Beam**	**2 Ply Member** **2.1 RigidLam SP LVL 1-3/4 x 14**	Status: **Design Passed**

PLY TO PLY CONNECTION

FASTENER INSTALLATION – 3 ROWS (FROM ONE FACE)

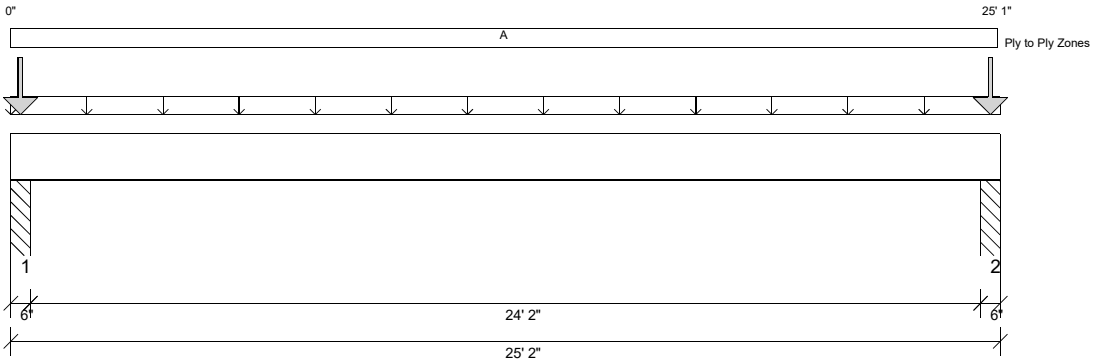


MiTek	Customer: Job Name: Adress: City/State:	Job Name: **24090120a 09.27.24 7281 NC H...** Level: **2ND FLOOR** Label: **DB12-2 - i2503** Type: **Beam**	**2 Ply Member** **2.1 RigidLam SP LVL 1-3/4 x 14**	Status: **Design Passed**

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 09/27/2024 11:46



DESIGN INFORMATION a

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
System Spacing:	-
LL Deflection Limit:	L/480, 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: 24'- 2"

Bearing Stress of Support Material:

- 725 psi Column @ 0'- 5"
- 725 psi Column @ 24'- 9"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	12'- 7"	D + S	1.15	6542 lb ft	32936 lb ft	Passed - 20%
Max Neg. Moment:	0'- 5"	D + S	1.15	336 lb ft	4913 lb ft	Passed - 7%
Max Shear:	1'- 8"	D + S	1.15	1015 lb	10894 lb	Passed - 9%
Live Load (LL) Pos. Defl.:	12'- 7"	S		0.186"	L/480	Passed - L/999
Total Load (TL) Pos. Defl.:	12'- 7"	D + S		0.425"	L/240	Passed - L/681

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"	D + S	1.15	3139 lb		15750 lb	15225 lb	Passed - 21%
2	6"	D + S	1.15	3139 lb		15750 lb	15225 lb	Passed - 21%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	25'- 2"	Self Weight	Top	13 lb/ft	-	-	-	-
Uniform	0'	25'- 2"	User Load	Top	40 lb/ft	-	40 lb/ft	-	-
Point	0'- 3"	0'- 3"	DB9-2(i2498)	Back	690 lb	-	1280 lb	-	-
Point	24'- 11"	24'- 11"	DB11-2(i2498)	Back	690 lb	-	1280 lb	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'- 6"	PBO5(i615)	1368 lb	-	1805 lb	-	-
2	24'- 8"	25'- 2"	PBO6(i616)	1344 lb	-	1761 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
- The unbraced length used in this design was manually input by the user. Install lateral bracing to satisfy the unbraced lengths specified on this report.

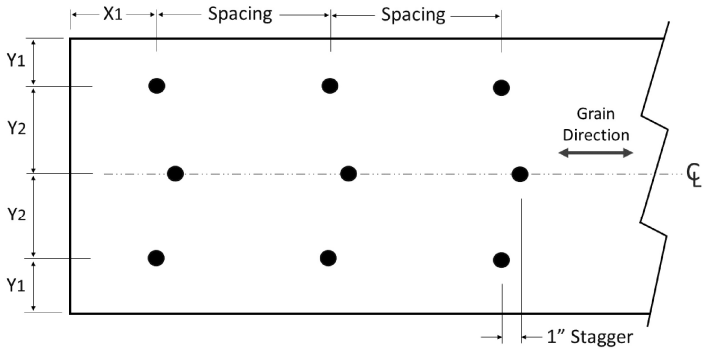
PLY TO PLY CONNECTION

- Zone A: Factored load = 1689 plf. Use 12d (0.148"x3.25") nails. LDF = 1.00. Qty = 183. Row = 3, Spacing = 5"
  12d (0.148"x3.25") nails properties: D = 0.148" , L = 3.25". Fastener capacity = 128 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: Job Name: Adress: City/State:	Job Name: **24090120a 09.27.24 7281 NC H...** Level: **2ND FLOOR** Label: **DB12-2 - i2503** Type: **Beam**	**2 Ply Member** **2.1 RigidLam SP LVL 1-3/4 x 14**	Status: **Design Passed**

PLY TO PLY CONNECTION

FASTENER INSTALLATION – 3 ROWS (FROM ONE FACE)

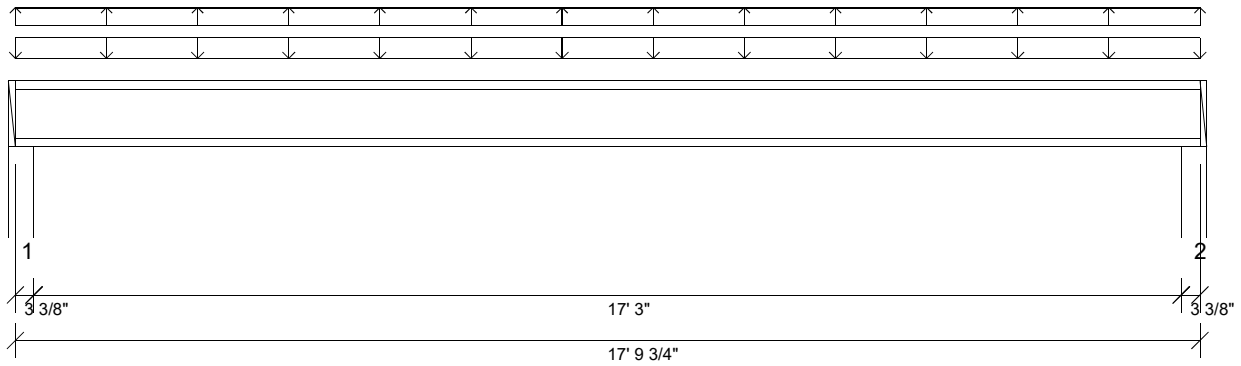


MiTek	Customer: Job Name: Adress: City/State:	Job Name: **24090120a 09.27.24 7281 NC H...** Level: **2ND FLOOR** Label: **J18 - i2479** Type: **FloorJoist**	**1 Ply Member** **11 7/8" PJI-40**	Status: **Design Passed**

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 09/27/2024 11:46



DESIGN INFORMATION a

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
System Live Load:	40.0 psf
System Dead Load:	10.0 psf
System Spacing:	16" c.c
LL Deflection Limit:	L/480, 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: 17'- 3"

Bearing Stress of Support Material:

- 725 psi Wall @ 0'- 2 3/8"
- 725 psi Wall @ 17'- 7 3/8"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	8'- 10 7/8"	D + L	1.00	2525 lb ft	3545 lb ft	Passed - 71%
Max Neg. Moment:	8'- 10 7/8"	D + L	1.00	505 lb ft	3545 lb ft	Passed - 14%
Max Shear:	0'- 3 7/16"	D + L	1.00	575 lb	1620 lb	Passed - 35%
Live Load (LL) Pos. Defl.:	8'- 10 7/8"	L		0.302"	L/480	Passed - L/686
Total Load (TL) Pos. Defl.:	8'- 10 7/8"	D + L		0.377"	L/240	Passed - L/549

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 3/8"	D + L	1.00	600 lb		1366 lb	6117 lb	Passed - 44%
1	3 3/8"	D + L	1.00		-120 lb	-	-	
2	3 3/8"	D + L	1.00	600 lb		1366 lb	6117 lb	Passed - 44%
2	3 3/8"	D + L	1.00		-120 lb	-	-	

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Uniform	0'	17'- 9 3/4"	FC3 Floor Decking (Plan View Fill)	Top	13 lb/ft	53/-27 lb/ft	-	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'- 3 3/8"	W12(i14)	120 lb	480/-240 lb	-	-	-
2	17'- 6 3/8"	17'- 9 3/4"	W14(i16)	120 lb	480/-240 lb	-	-	-

DESIGN NOTES

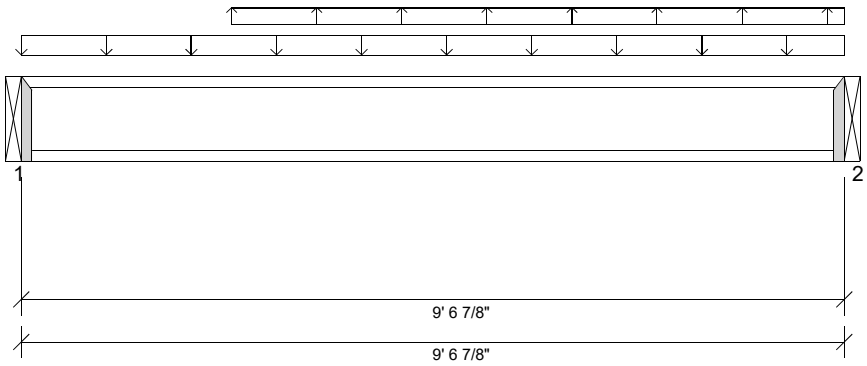
- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based 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

MiTek	Customer: Job Name: Adress: City/State:	Job Name: **24090120a 09.27.24 7281 NC H...** Level: **2ND FLOOR** Label: **J10 - i2438** Type: **FloorJoist**	**1 Ply Member** **11 7/8" PJI-40**	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 09/27/2024 11:46



DESIGN INFORMATION a

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
System Live Load:	40.0 psf
System Dead Load:	10.0 psf
System Spacing:	16" c.c
LL Deflection Limit:	L/480, 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: 9'- 6 7/8"

Bearing Stress of Support Material:

- 425 psi Beam @ 0'
- 425 psi Beam @ 9'- 6 7/8"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	4'- 9 7/16"	D + L	1.00	764 lb ft	3545 lb ft	Passed - 22%
Max Neg. Moment:	5'- 4 15/16"	D + L	1.00	115 lb ft	3545 lb ft	Passed - 3%
Max Shear:	9'- 6 13/16"	D + L	1.00	319 lb	1620 lb	Passed - 20%
Live Load (LL) Pos. Defl.:	4'- 9 7/16"	L		0.034"	L/480	Passed - L/999
Total Load (TL) Pos. Defl.:	4'- 9 7/16"	D + L		0.043"	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	1 3/4"	D + L	1.00	335 lb		1200 lb	-	Passed - 28%
1	1 3/4"	D + L	1.00		-4 lb	-	-	
2	1 3/4"	D + L	1.00	334 lb		1200 lb	-	Passed - 28%
2	1 3/4"	D + L	1.00		-58 lb	-	-	

CONNECTOR INFORMATION

ID	Part No.	Manufacturer	Nailing Requirements			Other Information or Requirement for Reinforcement Accessories
			Top	Face	Member	
1	IUS2.56/11.88	Simpson	-	10- 10d	2- Strong-Grip	Connector manually specified by the user.
2	IUS2.56/11.88	Simpson	-	10- 10d	2- Strong-Grip	-

* Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Uniform	0'	9'- 6 7/8"	FC3 Floor Decking (Plan View Fill)	Top	13 lb/ft	53 lb/ft	-	-	-
Uniform	2'- 5 3/8"	9'- 6 7/8"	FC3 Floor Decking (Plan View Fill)	Top	-	-27 lb/ft	-	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'	STEEL(i624)	67 lb	268/-71 lb	-	-	-
2	9'- 6 7/8"	9'- 6 7/8"	FB14-3(i2460)	67 lb	267/-125 lb	-	-	-

DESIGN NOTES

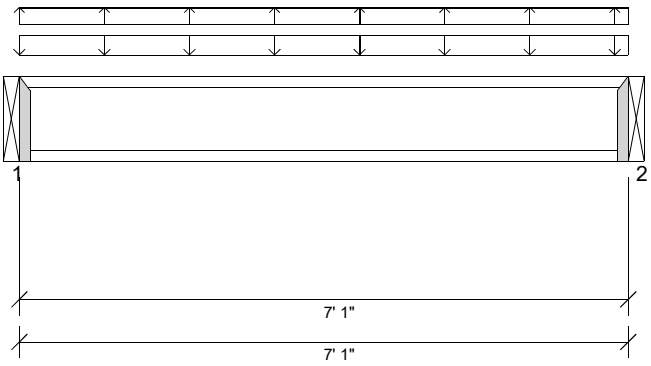
- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based 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

MiTek	Customer: Job Name: Adress: City/State:	Job Name: **24090120a 09.27.24 7281 NC H...** Level: **2ND FLOOR** Label: **J8 - i2468** Type: **FloorJoist**	**1 Ply Member** **11 7/8" PJI-40**	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 09/27/2024 11:46



DESIGN INFORMATION a

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
System Live Load:	40.0 psf
System Dead Load:	10.0 psf
System Spacing:	16" c.c
LL Deflection Limit:	L/480, 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: 7'- 1"

Bearing Stress of Support Material:

- 425 psi Beam @ 0'
- 425 psi Beam @ 7'- 1"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	3'- 6 1/2"	D + L	1.00	418 lb ft	3545 lb ft	Passed - 12%
Max Neg. Moment:	3'- 6 1/2"	D + L	1.00	84 lb ft	3545 lb ft	Passed - 2%
Max Shear:	0'- 1/16"	D + L	1.00	236 lb	1620 lb	Passed - 15%

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Downward Reaction	Uplift Reaction	Resistance of Member	Resistance of Support	Result
1	1 3/4"	D + L	1.00	264 lb		1200 lb	-	Passed - 22%
1	1 3/4"	D + L	1.00		-43 lb	-	-	
2	1 3/4"	D + L	1.00	251 lb		1200 lb	-	Passed - 21%
2	1 3/4"	D + L	1.00		-50 lb	-	-	

CONNECTOR INFORMATION

ID	Part No.	Manufacturer	Nailing Requirements			Other Information or Requirement for Reinforcement Accessories
			Top	Face	Member	
1	IUS2.56/11.88	Simpson	-	10- 10d	2- Strong-Grip	-
2	IUS2.56/11.88	Simpson	-	10- 10d	2- Strong-Grip	-

* Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Uniform	0'	7'- 1"	FC3 Floor Decking (Plan View Fill)	Top	13 lb/ft	53/-27 lb/ft	-	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'	J6-2(i2431)	53 lb	211/-96 lb	-	-	-
2	7'- 1"	7'- 1"	FB14-3(i2460)	50 lb	201/-100 lb	-	-	-

DESIGN NOTES

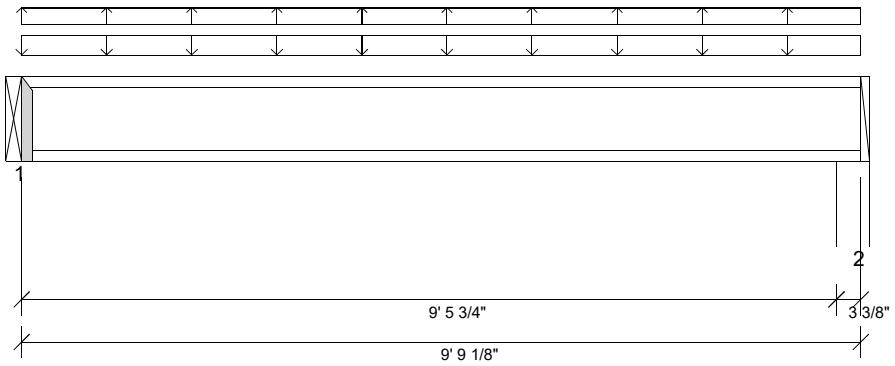
- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based 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

MiTek	Customer: Job Name: Adress: City/State:	Job Name: **24090120a 09.27.24 7281 NC H...** Level: **2ND FLOOR** Label: **J10 - i2320** Type: **FloorJoist**	**1 Ply Member** **11 7/8" PJI-40**	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 09/27/2024 11:46



DESIGN INFORMATION a

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
System Live Load:	40.0 psf
System Dead Load:	10.0 psf
System Spacing:	16" c.c
LL Deflection Limit:	L/480, 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: 9'- 5 3/4"

Bearing Stress of Support Material:

- 425 psi Beam @ 0'
- 725 psi Wall @ 9'- 6 3/4"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	4'- 9 5/16"	D + L	1.00	761 lb ft	3545 lb ft	Passed - 21%
Max Neg. Moment:	4'- 9 5/16"	D + L	1.00	152 lb ft	3545 lb ft	Passed - 4%
Max Shear:	0'- 1/16"	D + L	1.00	318 lb	1620 lb	Passed - 20%
Live Load (LL) Pos. Defl.:	4'- 9 3/8"	L		0.034"	L/480	Passed - L/999
Total Load (TL) Pos. Defl.:	4'- 9 3/8"	D + L		0.042"	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	1 3/4"	D + L	1.00	341 lb		1200 lb	-	Passed - 28%
1	1 3/4"	D + L	1.00		-63 lb	-	-	
2	3 3/8"	D + L	1.00	338 lb		1366 lb	6117 lb	Passed - 25%
2	3 3/8"	D + L	1.00		-68 lb	-	-	

CONNECTOR INFORMATION

ID	Part No.	Manufacturer	Nailing Requirements			Other Information or Requirement for Reinforcement Accessories
			Top	Face	Member	
1	IUS2.56/11.88	Simpson	-	10- 10d	2- Strong-Grip	Connector manually specified by the user.

* Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Uniform	0'	9'- 9 1/8"	FC3 Floor Decking (Plan View Fill)	Top	13 lb/ft	53/-27 lb/ft	-	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'	STEEL(i623)	68 lb	273/-131 lb	-	-	-
2	9'- 5 3/4"	9'- 9 1/8"	W11(i11)	68 lb	271/-135 lb	-	-	-

DESIGN NOTES

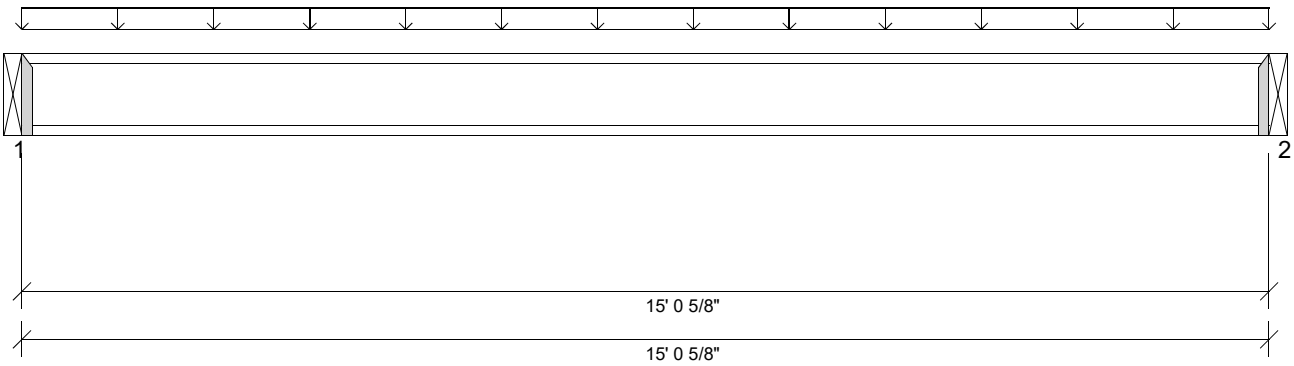
- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based 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

MiTek	Customer: Job Name: Adress: City/State:	Job Name: **24090120a 09.27.24 7281 NC H...** Level: **2ND FLOOR** Label: **J16 - i2272** Type: **FloorJoist**	**1 Ply Member** **11 7/8" PJI-40**	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 09/27/2024 11:46



DESIGN INFORMATION a

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
System Live Load:	40.0 psf
System Dead Load:	10.0 psf
System Spacing:	16" c.c
LL Deflection Limit:	L/480, 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: 15'- 5/8"

Bearing Stress of Support Material:

- 425 psi Beam @ 0'
- 425 psi Beam @ 15'- 5/8"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	7'- 6 5/16"	D + L	1.00	1888 lb ft	3545 lb ft	Passed - 53%
Max Shear:	0'- 1/16"	D + L	1.00	501 lb	1620 lb	Passed - 31%
Live Load (LL) Pos. Defl.:	7'- 6 5/16"	L		0.174"	L/480	Passed - L/999
Total Load (TL) Pos. Defl.:	7'- 6 5/16"	D + L		0.218"	L/240	Passed - L/828

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Downward Reaction	Uplift Reaction	Resistance of Member	Resistance of Support	Result
1	1 3/4"	D + L	1.00	524 lb		1200 lb	-	Passed - 44%
2	1 3/4"	D + L	1.00	518 lb		1200 lb	-	Passed - 43%

CONNECTOR INFORMATION

ID	Part No.	Manufacturer	Nailing Requirements			Other Information or Requirement for Reinforcement Accessories
			Top	Face	Member	
1	IUS2.56/11.88	Simpson	-	10- 10d	2- Strong-Grip	Connector manually specified by the user.
2	IUS2.56/11.88	Simpson	-	10- 10d	2- Strong-Grip	Connector manually specified by the user.

* Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Uniform	0'	15'- 5/8"	FC3 Floor Decking (Plan View Fill)	Top	13 lb/ft	53 lb/ft	-	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'	STEEL(i625)	105 lb	419 lb	-	-	-
2	15'- 5/8"	15'- 5/8"	STEEL(i624)	104 lb	414 lb	-	-	-

DESIGN NOTES

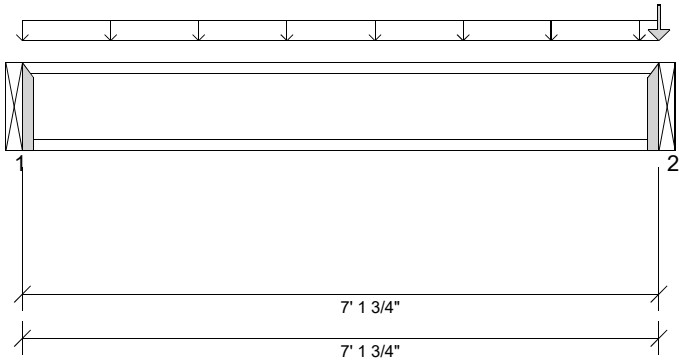
- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based 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

MiTek	Customer: Job Name: Adress: City/State:	Job Name: **24090120a 09.27.24 7281 NC H...** Level: **2ND FLOOR** Label: **J8 - i2285** Type: **FloorJoist**	**1 Ply Member** **11 7/8" PJI-40**	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 09/27/2024 11:46



DESIGN INFORMATION a

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
System Live Load:	40.0 psf
System Dead Load:	10.0 psf
System Spacing:	16" c.c
LL Deflection Limit:	L/480, 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: 7'- 1 3/4"

Bearing Stress of Support Material:

- 425 psi Beam @ 0'
- 425 psi Beam @ 7'- 1 3/4"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	3'- 6 7/8"	D + L	1.00	426 lb ft	3545 lb ft	Passed - 12%
Max Shear:	0'- 1/16"	D + L	1.00	238 lb	1620 lb	Passed - 15%
Total Load (TL) Pos. Defl.:	3'- 6 7/8"	D + L		0.016"	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	1 3/4"	D + L	1.00	260 lb		1200 lb	-	Passed - 22%
2	1 3/4"	D + 0.75(L + S)	1.15	366 lb		1200 lb	-	Passed - 30%

CONNECTOR INFORMATION

ID	Part No.	Manufacturer	Nailing Requirements			Other Information or Requirement for Reinforcement Accessories
			Top	Face	Member	
1	IUS2.56/11.88	Simpson	-	10- 10d	2- Strong-Grip	Connector manually specified by the user.
2	IUS2.56/11.88	Simpson	-	10- 10d	2- Strong-Grip	-

* Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Uniform	0'	7'- 1 3/4"	FC3 Floor Decking (Plan View Fill)	Top	13 lb/ft	53 lb/ft	-	-	-
Point	7'- 1 3/4"	7'- 1 3/4"	FC3 Floor Decking (Plan View Fill)	Top	40 lb	-	160 lb	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'	STEEL(i625)	52 lb	208 lb	-	-	-
2	7'- 1 3/4"	7'- 1 3/4"	FB16-2(i2363)	91 lb	206 lb	160 lb	-	-

DESIGN NOTES

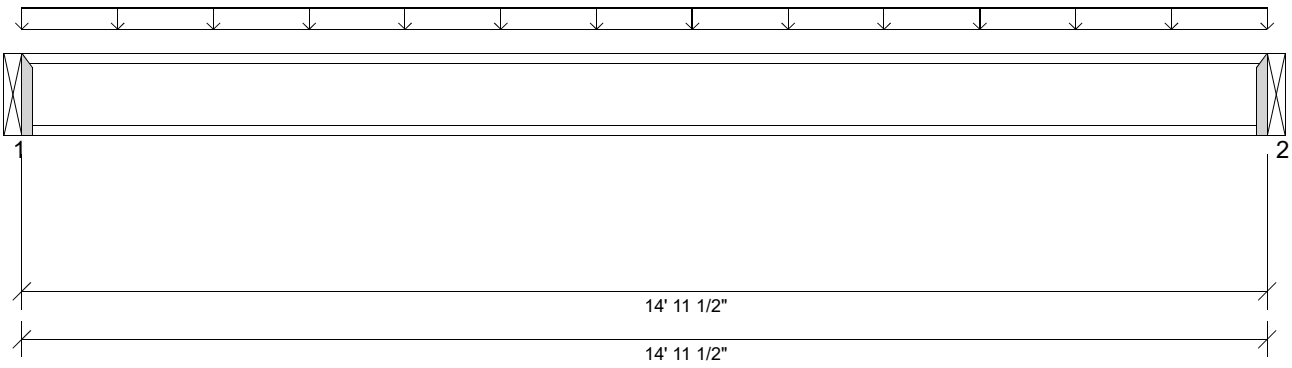
- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based 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

MiTek	Customer: Job Name: Adress: City/State:	Job Name: **24090120a 09.27.24 7281 NC H...** Level: **2ND FLOOR** Label: **J16 - i2346** Type: **FloorJoist**	**1 Ply Member** **11 7/8" PJI-40**	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 09/27/2024 11:46



DESIGN INFORMATION a

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
System Live Load:	40.0 psf
System Dead Load:	10.0 psf
System Spacing:	16" c.c
LL Deflection Limit:	L/480, 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: 14'- 11 1/2"

Bearing Stress of Support Material:

- 425 psi Beam @ 0'
- 425 psi Beam @ 14'- 11 1/2"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	7'- 5 3/4"	D + L	1.00	1865 lb ft	3545 lb ft	Passed - 53%
Max Shear:	14'- 11 7/16"	D + L	1.00	498 lb	1620 lb	Passed - 31%
Live Load (LL) Pos. Defl.:	7'- 5 3/4"	L		0.170"	L/480	Passed - L/999
Total Load (TL) Pos. Defl.:	7'- 5 3/4"	D + L		0.213"	L/240	Passed - L/842

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Downward Reaction	Uplift Reaction	Resistance of Member	Resistance of Support	Result
1	1 3/4"	D + L	1.00	521 lb		1200 lb	-	Passed - 43%
2	1 3/4"	D + L	1.00	521 lb		1200 lb	-	Passed - 43%

CONNECTOR INFORMATION

ID	Part No.	Manufacturer	Nailing Requirements			Other Information or Requirement for Reinforcement Accessories
			Top	Face	Member	
1	IUS2.56/11.88	Simpson	-	10- 10d	2- Strong-Grip	Connector manually specified by the user.
2	IUS2.56/11.88	Simpson	-	10- 10d	2- Strong-Grip	Connector manually specified by the user.

* Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Uniform	0'	14'- 11 1/2"	FC3 Floor Decking (Plan View Fill)	Top	13 lb/ft	53 lb/ft	-	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'	STEEL(i625)	104 lb	417 lb	-	-	-
2	14'- 11 1/2"	14'- 11 1/2"	STEEL(i623)	104 lb	417 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.
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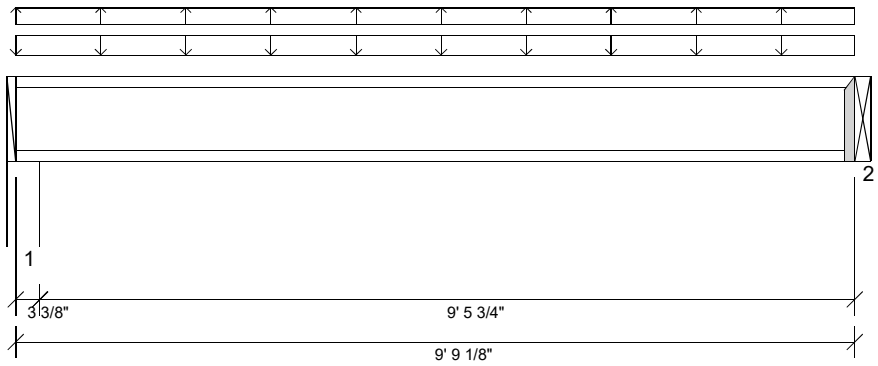
- Beam Stability Factor used in the calculation for Allowable Max Pos Moment (CL) = 1.00

MiTek	Customer: Job Name: Adress: City/State:	Job Name: **24090120a 09.27.24 7281 NC H...** Level: **2ND FLOOR** Label: **J10 - i2334** Type: **FloorJoist**	**1 Ply Member** **11 7/8" PJI-40**	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 09/27/2024 11:46



DESIGN INFORMATION a

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
System Live Load:	40.0 psf
System Dead Load:	10.0 psf
System Spacing:	16" c.c
LL Deflection Limit:	L/480, 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: 9'- 5 3/4"

Bearing Stress of Support Material:

- 725 psi Wall @ 0'- 2 3/8"
- 425 psi Beam @ 9'- 9 1/8"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	4'- 11 13/16"	D + L	1.00	761 lb ft	3545 lb ft	Passed - 21%
Max Neg. Moment:	4'- 11 13/16"	D + L	1.00	152 lb ft	3545 lb ft	Passed - 4%
Max Shear:	9'- 9 1/16"	D + L	1.00	318 lb	1620 lb	Passed - 20%
Live Load (LL) Pos. Defl.:	4'- 11 3/4"	L		0.034"	L/480	Passed - L/999
Total Load (TL) Pos. Defl.:	4'- 11 3/4"	D + L		0.042"	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 3/8"	D + L	1.00	338 lb		1366 lb	6117 lb	Passed - 25%
1	3 3/8"	D + L	1.00		-68 lb	-	-	
2	1 3/4"	D + L	1.00	341 lb		1200 lb	-	Passed - 28%
2	1 3/4"	D + L	1.00		-63 lb	-	-	

CONNECTOR INFORMATION

ID	Part No.	Manufacturer	Nailing Requirements			Other Information or Requirement for Reinforcement Accessories
			Top	Face	Member	
2	IUS2.56/11.88	Simpson	-	10- 10d	2- Strong-Grip	Connector manually specified by the user.

* Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Uniform	0'	9'- 9 1/8"	FC3 Floor Decking (Plan View Fill)	Top	13 lb/ft	53/-27 lb/ft	-	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'- 3 3/8"	W15(i13)	68 lb	271/-135 lb	-	-	-
2	9'- 9 1/8"	9'- 9 1/8"	STEEL(i625)	68 lb	273/-131 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.
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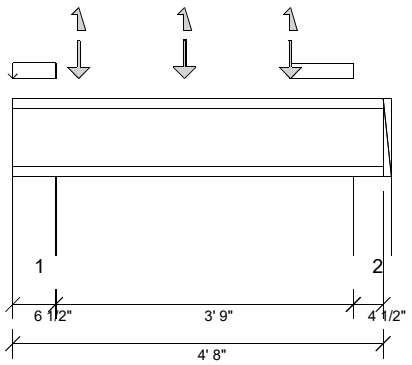
- Beam Stability Factor used in the calculation for Allowable Max Pos Moment (CL) = 1.00

MiTek	Customer: Job Name: Adress: City/State:	Job Name: **24090120a 09.27.24 7281 NC H...** Level: **2ND FLOOR** Label: **J6-2 - i2431** Type: **FloorJoist**	**2 Ply Member** **11 7/8" PJI-40**	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 09/27/2024 11:46



DESIGN INFORMATION a

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
System Live Load:	40.0 psf
System Dead Load:	10.0 psf
System Spacing:	16" c.c
LL Deflection Limit:	L/480, 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'- 1 1/2"

Bearing Stress of Support Material:

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

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	2'- 2"	D + L	1.00	407 lb ft	7090 lb ft	Passed - 6%
Max Neg. Moment:	2'- 2"	D + L	1.00	68 lb ft	7090 lb ft	Passed - 1%
Max Shear:	0'- 6 9/16"	D + L	1.00	442 lb	3240 lb	Passed - 14%

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 1/2"	D + L	1.00	453 lb		2860 lb	23562 lb	Passed - 16%
1	6 1/2"	D + L	1.00		-73 lb	-	-	
2	4 1/2"	D + L	1.00	352 lb		2860 lb	16313 lb	Passed - 12%
2	4 1/2"	D + L	1.00		-56 lb	-	-	

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Uniform	0'	0'- 6 1/2"	FC3 Floor Decking (Plan View Fill)	Top	4 lb/ft	16 lb/ft	-	-	-
Uniform	3'- 6"	4'- 3 1/2"	FC3 Floor Decking (Plan View Fill)	Top	2 lb/ft	8 lb/ft	-	-	-
Point	0'- 10"	0'- 10"	J8(i2402)	Back	51 lb	206/-96 lb	-	-	-
Point	2'- 2"	2'- 2"	J8(i2468)	Back	53 lb	211/-96 lb	-	-	-
Point	3'- 6"	3'- 6"	J8(i2467)	Back	51 lb	206/-96 lb	-	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'- 6 1/2"	W62(i66)	90 lb	364/-162 lb	-	-	-
2	4'- 3 1/2"	4'- 8"	W66(i70)	70 lb	282/-126 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.
- Reinforcement Accessories are required. Refer to current manufacturer's product literature for installation details.
- A load bearing wall is supported by the I-joist at a location where the I-joist is supported by a member below. Please see manufacturer installation guidelines for requirements of blocking/squash blocks.
- 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

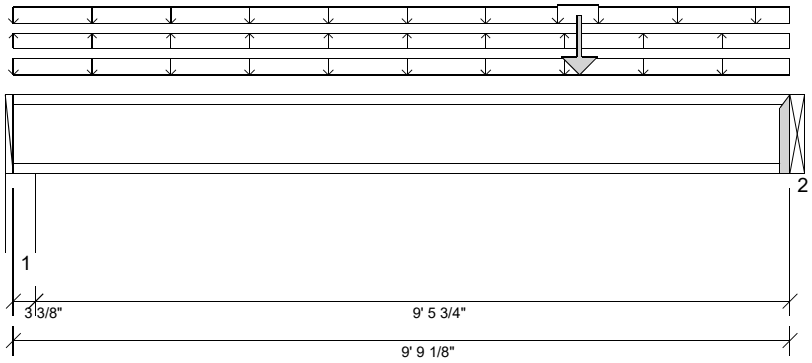
- Member design assumed proper ply to ply connection by others. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

MiTek	Customer: Job Name: Adress: City/State:	Job Name: **24090120a 09.27.24 7281 NC H...** Level: **2ND FLOOR** Label: **J10-2 - i2384** Type: **FloorJoist**	**2 Ply Member** **11 7/8" PJI-40**	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 09/27/2024 11:46



DESIGN INFORMATION a

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
System Live Load:	40.0 psf
System Dead Load:	10.0 psf
System Spacing:	16" c.c
LL Deflection Limit:	L/480, 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: 9'- 5 3/4"

Bearing Stress of Support Material:

- 725 psi Wall @ 0'- 2 3/8"
- 425 psi Beam @ 9'- 9 1/8"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	7'- 1 3/8"	D + S	1.15	3370 lb ft	8154 lb ft	Passed - 41%
Max Shear:	9'- 9 1/16"	D + S	1.15	1346 lb	3726 lb	Passed - 36%
Live Load (LL) Pos. Defl.:	5'- 6 1/16"	S		0.050"	L/480	Passed - L/999
Total Load (TL) Pos. Defl.:	5'- 4 11/16"	D + S		0.087"	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 3/8"	D + 0.75(L + S)	1.15	753 lb		3142 lb	12234 lb	Passed - 24%
2	1 3/4"	D + S	1.15	1348 lb		2400 lb	-	Passed - 56%

CONNECTOR INFORMATION

ID	Part No.	Manufacturer	Nailing Requirements			Other Information or Requirement for Reinforcement Accessories
			Top	Face	Member	
2	MIU5.12/11	Simpson	-	-	-	Connector manually specified by the user.

* Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Uniform	0'	9'- 9 1/8"	FC3 Floor Decking (Plan View Fill)	Top	8 lb/ft	32/-3 lb/ft	-	-	-
Uniform	-0'	6'- 10 1/8"	W111(i1481)	Top	46 lb/ft	-	-	-	-
Uniform	6'- 10 1/8"	7'- 4 1/4"	W106(i1476)	Top	91 lb/ft	-	-	-	-
Uniform	7'- 4 1/4"	9'- 9 1/8"	W108(i1480)	Top	46 lb/ft	-	-	-	-
Point	7'- 1 3/8"	7'- 1 3/8"	W106(i1476)	Top	742 lb	-	742 lb	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'- 3 3/8"	W15(i13)	500 lb	161/-15 lb	226 lb	-	-
2	9'- 9 1/8"	9'- 9 1/8"	STEEL(i625)	790 lb	162/-14 lb	516 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.
- A load bearing wall is supported by the I-joist at a location where the I-joist is supported by a member below. Please see manufacturer installation guidelines for requirements of blocking/squash blocks.
- A load bearing wall is supported by the I-joist at a location where the I-joist is supported by a member below. Please see manufacturer installation guidelines for requirements of blocking/squash blocks.
- 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

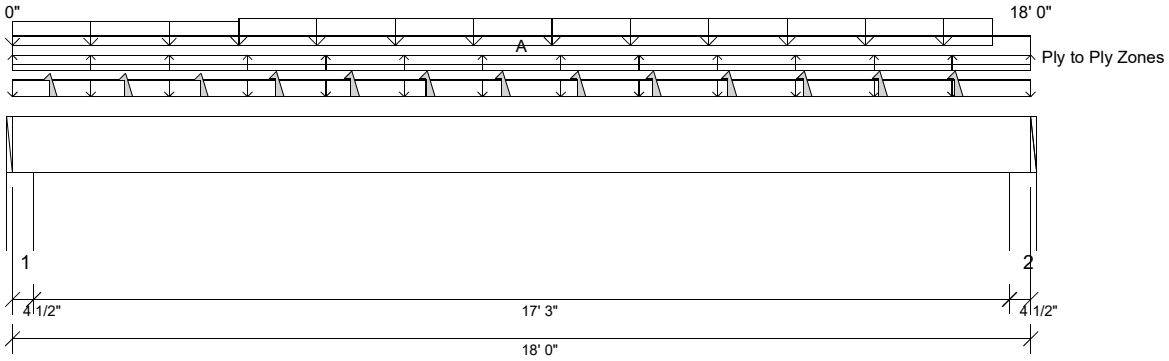
- Member design assumed proper ply to ply connection by others. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

MiTek	Customer: Job Name: Adress: City/State:	Job Name: **24090120a 09.27.24 7281 NC H...** Level: **2ND FLOOR** Label: **FB14-3 - i2460** Type: **Beam**	**3 Ply Member** **2.1 RigidLam SP 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 8.7.3.303.Update13.26

Report Version: 2023.09.18 09/27/2024 11:46



DESIGN INFORMATION a

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
System Spacing:	-
LL Deflection Limit:	L/480, 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'- 1 1/2"

Bearing Stress of Support Material:

- 725 psi Wall @ 0'- 3 1/2"
- 725 psi Wall @ 17'- 8 1/2"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	8'- 8"	D + L	1.00	11323 lb ft	31942 lb ft	Passed - 35%
Max Neg. Moment:	8'- 8"	D + L	1.00	1290 lb ft	31394 lb ft	Passed - 4%
Max Shear:	16'- 7 5/8"	D + L	1.00	2461 lb	12053 lb	Passed - 20%
Live Load (LL) Pos. Defl.:	9'- 5/16"	L		0.322"	L/480	Passed - L/642
Total Load (TL) Pos. Defl.:	9'- 5/16"	D + L		0.420"	L/240	Passed - L/492

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 1/2"	D + L	1.00	2508 lb		17719 lb	17128 lb	Passed - 15%
1	4 1/2"	D + L	1.00		-288 lb	-	-	
2	4 1/2"	D + L	1.00	2545 lb		17720 lb	17129 lb	Passed - 15%
2	4 1/2"	D + L	1.00		-279 lb	-	-	

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	18'	Self Weight	Top	16 lb/ft	-	-	-	-
Uniform	-0'	18'	FC3 Floor Decking (Plan View Fill)	Top	7 lb/ft	30/-15 lb/ft	-	-	-
Uniform	0'	4'	Smoothed Load	Front	38 lb/ft	151 lb/ft	-	-	-
Uniform	4'	17'- 4"	Smoothed Load	Front	50 lb/ft	200 lb/ft	-	-	-
Point	0'- 8"	0'- 8"	J8(i2402)	Front	-	-100 lb	-	-	-
Point	2'	2'	J8(i2468)	Front	-	-100 lb	-	-	-
Point	3'- 4"	3'- 4"	J8(i2467)	Front	-	-100 lb	-	-	-
Point	4'- 8"	4'- 8"	J10(i2463)	Front	-	-123 lb	-	-	-
Point	6'	6'	J10(i2446)	Front	-	-125 lb	-	-	-
Point	7'- 4"	7'- 4"	J10(i2456)	Front	-	-125 lb	-	-	-
Point	8'- 8"	8'- 8"	J10(i2415)	Front	-	-125 lb	-	-	-
Point	10'	10'	J10(i2469)	Front	-	-125 lb	-	-	-
Point	11'- 4"	11'- 4"	J10(i2459)	Front	-	-125 lb	-	-	-
Point	12'- 8"	12'- 8"	J10(i2416)	Front	-	-125 lb	-	-	-
Point	14'	14'	J10(i2422)	Front	-	-125 lb	-	-	-
Point	15'- 4"	15'- 4"	J10(i2438)	Front	-	-125 lb	-	-	-
Point	16'- 8"	16'- 8"	J10(i2461)	Front	-	-125 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"	-	621 lb	1888/-909 lb	-	-	-
++>	0'- 5/16"	0'- 5/16"	W12(i14)	89 lb	270/-130 lb	-	-	-
++>	0'- 1 15/16"	0'- 1 15/16"	W11(i11)	532 lb	1618/-779 lb	-	-	-
2	17'- 7 1/2"	18'	W14(i16)	629 lb	1917/-908 lb	-	-	-

DESIGN NOTES

- CAUTION: One or more plies are not supported properly at 2-04. At least 75% of every ply must be contacting support.
- CAUTION: One or more plies are not supported properly at 2-04. 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.

MiTek	Customer: Job Name: Adress: City/State:	Job Name: **24090120a 09.27.24 7281 NC H...** Level: **2ND FLOOR** Label: **FB14-3 - i2460** Type: **Beam**	**3 Ply Member** **2.1 RigidLam SP LVL 1-3/4 x 11-7/8**	Status: **Design Passed**

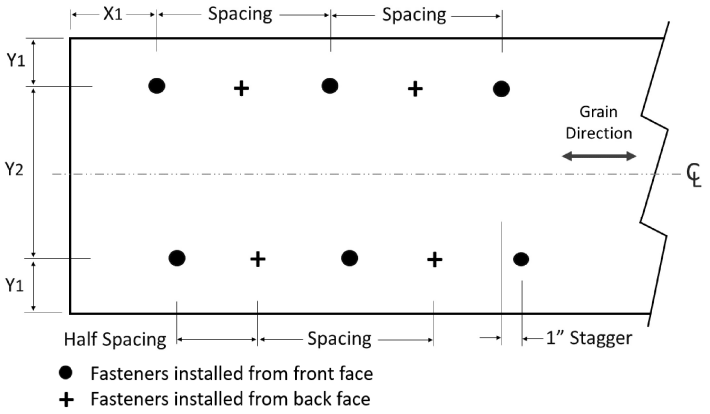
DESIGN NOTES

- 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) = 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 = 501 plf. Use 12d (0.148"x3.25") nails. LDF = 1.00. Qty = 98. Row = 2, Spacing = 9"
  12d (0.148"x3.25") nails properties: D = 0.148" , L = 3.25". Fastener capacity = 128 lbs. X1 = 2.25" , Y1 = 0.75", Y2 = 1.5"
  Install fasteners from both faces.
  X1 = Minimum end distance, X2 = Minimum edge distance, Y2 = Minimum row spacing.

FASTENER INSTALLATION – 2 ROWS (FROM BOTH FACES)

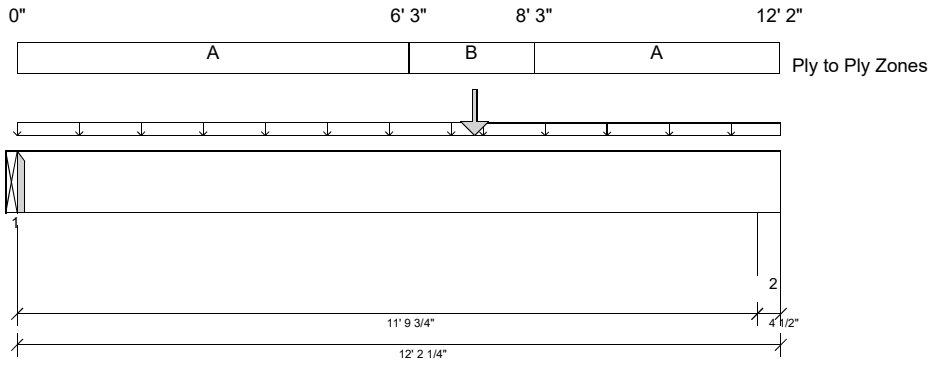


MiTek	Customer: Job Name: Adress: City/State:	Job Name: **24090120a 09.27.24 7281 NC H...** Level: **2ND FLOOR** Label: **FB15-2 - i2360** Type: **Beam**	**2 Ply Member** **2.1 RigidLam SP LVL 1-3/4 x 11-7/8**	Status: **Design Passed**

Illustration Not to Scale. Pitch: 0/12

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

Report Version: 2023.09.18 09/27/2024 11:46



DESIGN INFORMATION a

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
System Spacing:	-
LL Deflection Limit:	L/480, 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: 7'- 1 3/4"

Bearing Stress of Support Material:

- 425 psi Beam @ 0'
- 725 psi Wall @ 11'- 10 3/4"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	7'- 3 1/2"	D + L	1.00	1830 lb ft	21295 lb ft	Passed - 9%
Max Shear:	10'- 9 7/8"	D + L	1.00	436 lb	8035 lb	Passed - 5%
Live Load (LL) Pos. Defl.:	6'- 2 1/4"	0.75(L + S)		0.033"	L/480	Passed - L/999
Total Load (TL) Pos. Defl.:	6'- 2"	D + 0.75(L + S)		0.049"	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	1 1/2"	D + L	1.00	448 lb		3937 lb	-	Passed - 11%
2	4 1/2"	D + L	1.00	478 lb		11810 lb	11416 lb	Passed - 4%

CONNECTOR INFORMATION

ID	Part No.	Manufacturer	Nailing Requirements			Other Information or Requirement for Reinforcement Accessories
			Top	Face	Member	
1	HUS410	MiTek	-	8- 16d	8- 16d	-

* Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	12'- 2 1/4"	Self Weight	Top	11 lb/ft	-	-	-	-
Uniform	0'	7'- 5 1/4"	FC3 Floor Decking (Plan View Fill)	Top	8 lb/ft	32 lb/ft	-	-	-
Uniform	7'- 5 1/4"	12'- 2 1/4"	FC3 Floor Decking (Plan View Fill)	Top	4 lb/ft	16 lb/ft	-	-	-
Point	7'- 3 5/8"	7'- 3 5/8"	-	Back	140 lb	251 lb	226 lb	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'	STEEL(i625)	164 lb	280 lb	85 lb	-	-
2	11'- 9 3/4"	12'- 2 1/4"	W66(i70)	190 lb	293 lb	141 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

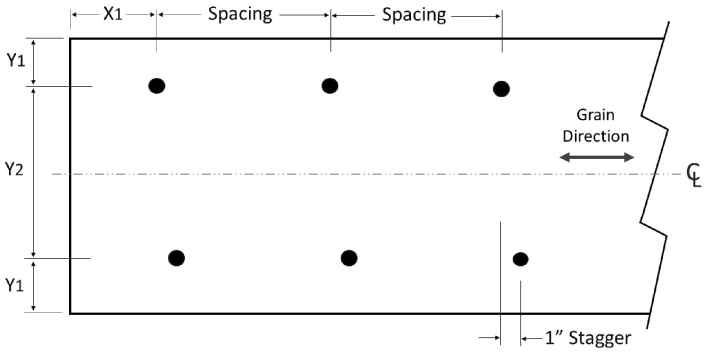
PLY TO PLY CONNECTION

- Zone A: Factored load = 0 plf. Use 12d (0.148"x3.25") nails. LDF = 1.00. Qty = 22. Row = 2, Spacing = 12"
  Zone B: Factored load = 229 plf. Use 12d (0.148"x3.25") nails. LDF = 1.00. Qty = 4. Row = 2, Spacing = 12"
  12d (0.148"x3.25") nails properties: D = 0.148" , L = 3.25". Fastener capacity = 128 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: Job Name: Adress: City/State:	Job Name: **24090120a 09.27.24 7281 NC H...** Level: **2ND FLOOR** Label: **FB15-2 - i2360** Type: **Beam**	**2 Ply Member** **2.1 RigidLam SP LVL 1-3/4 x 11-7/8**	Status: **Design Passed**

PLY TO PLY CONNECTION

FASTENER INSTALLATION – 2 ROWS (FROM ONE FACE)



MiTek	Customer: Job Name: Adress: City/State:	Job Name: **24090120a 09.27.24 7281 NC H...** Level: **2ND FLOOR** Label: **FB16-2 - i2363** Type: **Beam**	**2 Ply Member** **2.1 RigidLam SP 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 8.7.3.303.Update13.26

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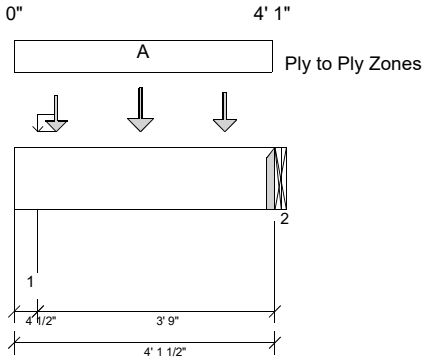

DESIGN INFORMATION a

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
System Spacing:	-
LL Deflection Limit:	L/480, 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'- 1 1/2"

Bearing Stress of Support Material:

- 725 psi Wall @ 0'- 3 1/2"
- 425 psi Beam @ 4'- 1 1/2"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	2'	D + 0.75(L + S)	1.15	539 lb ft	24489 lb ft	Passed - 2%
Max Shear:	1'- 4 3/8"	D + 0.75(L + S)	1.15	246 lb	9241 lb	Passed - 3%

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 1/2"	D + 0.75(L + S)	1.15	582 lb		11813 lb	11419 lb	Passed - 5%
2	1 1/2"	D + 0.75(L + S)	1.15	461 lb		3937 lb	-	Passed - 12%

CONNECTOR INFORMATION

ID	Part No.	Manufacturer	Nailing Requirements			Other Information or Requirement for Reinforcement Accessories
			Top	Face	Member	
2	HUS410	MiTek	-	8- 16d	8- 16d	-

* Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	4'- 1 1/2"	Self Weight	Top	11 lb/ft	-	-	-	-
Uniform	0'- 4 1/2"	0'- 8"	FC3 Floor Decking (Plan View Fill)	Top	30 lb/ft	-	120 lb/ft	-	-
Point	0'- 8"	0'- 8"	J8(i2290)	Front	71 lb	202 lb	80 lb	-	-
Point	2'	2'	J8(i2285)	Front	91 lb	206 lb	160 lb	-	-
Point	3'- 4"	3'- 4"	J8(i2318)	Front	78 lb	176 lb	135 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"	W63(i67)	164 lb	337 lb	224 lb	-	-
2	4'- 1 1/2"	4'- 1 1/2"	FB15-2(i2360)	130 lb	251 lb	186 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 = 274 plf. Use 12d (0.148"x3.25") nails. LDF = 1.00. Qty = 10. Row = 2, Spacing = 12"
  12d (0.148"x3.25") nails properties: D = 0.148" , L = 3.25". Fastener capacity = 128 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: Job Name: Adress: City/State:	Job Name: **24090120a 09.27.24 7281 NC H...** Level: **2ND FLOOR** Label: **FB16-2 - i2363** Type: **Beam**	**2 Ply Member** **2.1 RigidLam SP LVL 1-3/4 x 11-7/8**	Status: **Design Passed**

PLY TO PLY CONNECTION

FASTENER INSTALLATION – 2 ROWS (FROM ONE FACE)