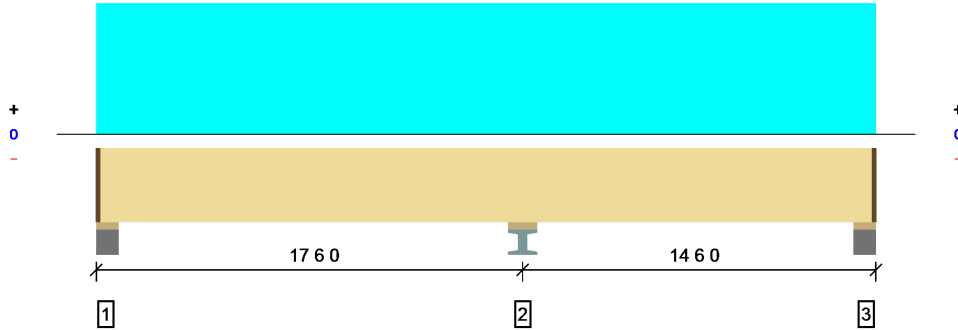


01: Level			
Member Name	Results	Current Solution	Comments
Floor: Joist (living area)	Passed	1 Piece(s) 2 x 12 Douglas Fir-Larch No. 2 @ 12" OC	
Floor: Joist (storage)	Passed	1 Piece(s) 2 x 12 Douglas Fir-Larch No. 2 @ 12" OC	
Floor: Drop Beam #1 option #1	Failed	3 Piece(s) 1 3/4" x 16" 1.9E Microllam® LVL	Multiple Failures/Errors
Floor: Drop Beam #1 option #2	Passed	3 Piece(s) 1 3/4" x 14" 1.9E Microllam® LVL	
Free Standing Column #1	Passed	1 Piece(s) 3 1/2" x 3 1/2" 1.3E TimberStrand® LSL	
Free Standing Column #2	Passed	1 Piece(s) 7" x 7" 1.8E Parallam® PSL	
Floor: Drop Beam #2	Passed	2 Piece(s) 1 3/4" x 11 7/8" 1.9E Microllam® LVL	

Forte Software Operator	Job Notes
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1 piece(s) 2 x 12 Douglas Fir-Larch No. 2 @ 12" OC

Overall Length: 32 0 0



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.; Drawing is Conceptual

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	1020 @ 17 6 0	5100 (8.00")	Passed (20%)	--	1.0 D + 1.0 L (All Spans)
Shear (lbs)	473 @ 16 2 12	2025	Passed (23%)	1.00	1.0 D + 1.0 L (All Spans)
Moment (Ft-lbs)	-1622 @ 17 6 0	2729	Passed (59%)	1.00	1.0 D + 1.0 L (All Spans)
Live Load Defl. (in)	0.182 @ 8 5 3	0.427	Passed (L/999+)	--	1.0 D + 1.0 L (Alt Spans)
Total Load Defl. (in)	0.222 @ 8 4 1	0.854	Passed (L/925)	--	1.0 D + 1.0 L (Alt Spans)
TJ-Pro™ Rating	N/A	N/A	--	--	--

 System : Floor
 Member Type : Joist
 Building Use : Residential
 Building Code : IBC 2009
 Design Methodology : ASD

- Deflection criteria: LL (L/480) and TL (L/240).
- Bracing (Lu): All compression edges (top and bottom) must be braced at 9 0 10 o/c unless detailed otherwise. Proper attachment and positioning of lateral bracing is required to achieve member stability.
- A 15% increase in the moment capacity has been added to account for repetitive member usage.
- Applicable calculations are based on NDS.
- No composite action between deck and joist was considered in analysis.

Supports	Bearing			Loads to Supports (lbs)			Accessories
	Total	Available	Required	Dead	Floor Live	Total	
1 - Plate on concrete - SPF	6.00"	4.75"	1.50"	86	312/-22	398/-22	1 1/4" Rim Board
2 - Plate on steel - SPF	8.00"	8.00"	1.60"	235	785	1020	None
3 - Plate on concrete - SPF	6.00"	4.75"	1.50"	63	267/-53	330/-53	1 1/4" Rim Board

- Rim Board is assumed to carry all loads applied directly above it, bypassing the member being designed.

Loads	Location (Side)	Spacing	Dead (0.90)	Floor Live (1.00)	Comments
1 - Uniform (PSF)	0 0 0 to 32 0 0	12"	12.0	40.0	Residential - Living Areas

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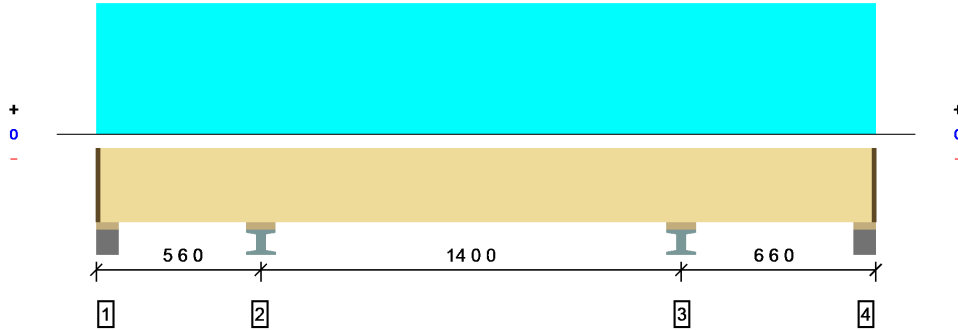


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1 piece(s) 2 x 12 Douglas Fir-Larch No. 2 @ 12" OC

Overall Length: 26 0 0



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.; Drawing is Conceptual

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	649 @ 5 6 0	5100 (8.00")	Passed (13%)	--	1.0 D + 1.0 L (Adj Spans)
Shear (lbs)	305 @ 6 9 4	2025	Passed (15%)	1.00	1.0 D + 1.0 L (Adj Spans)
Moment (Ft-lbs)	-742 @ 5 6 0	2729	Passed (27%)	1.00	1.0 D + 1.0 L (Adj Spans)
Live Load Defl. (in)	0.045 @ 12 6 10	0.350	Passed (L/999+)	--	1.0 D + 1.0 L (Alt Spans)
Total Load Defl. (in)	0.057 @ 12 6 8	0.700	Passed (L/999+)	--	1.0 D + 1.0 L (Alt Spans)
TJ-Pro™ Rating	N/A	N/A	--	--	--

 System : Floor
 Member Type : Joist
 Building Use : Residential
 Building Code : IBC 2009
 Design Methodology : ASD

- Deflection criteria: LL (L/480) and TL (L/240).
- Bracing (Lu): All compression edges (top and bottom) must be braced at 21 11 12 o/c unless detailed otherwise. Proper attachment and positioning of lateral bracing is required to achieve member stability.
- A 15% increase in the moment capacity has been added to account for repetitive member usage.
- Applicable calculations are based on NDS.
- No composite action between deck and joist was considered in analysis.

Supports	Bearing			Loads to Supports (lbs)			Accessories
	Total	Available	Required	Dead	Floor Live	Total	
1 - Plate on concrete - SPF	6.00"	4.75"	1.50"	3	115/-101	118/-101	1 1/4" Rim Board
2 - Plate on steel - SPF	8.00"	8.00"	1.50"	147	502	649	None
3 - Plate on steel - SPF	8.00"	8.00"	1.50"	147	497	644	None
4 - Plate on concrete - SPF	6.00"	4.75"	1.50"	15	130/-77	145/-77	1 1/4" Rim Board

- Rim Board is assumed to carry all loads applied directly above it, bypassing the member being designed.

Loads	Location (Side)	Spacing	Dead (0.90)	Floor Live (1.00)	Comments
1 - Uniform (PSF)	0 0 0 to 26 0 0	12"	12.0	40.0	Residential - Living Areas

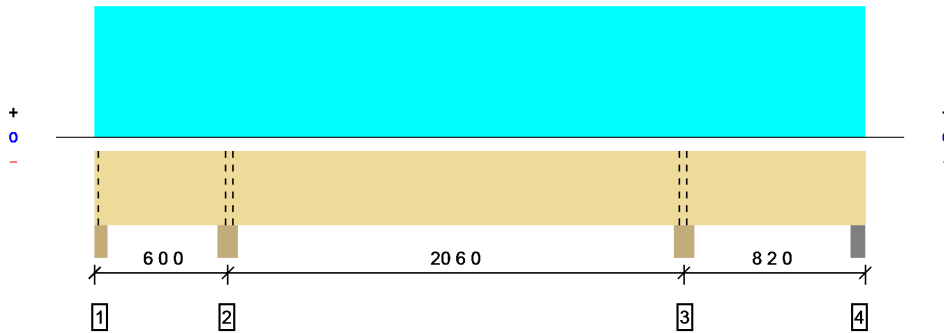
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This product failed due to an excessive uplift of -4653 lbs at support located at 0 2 0.
 This product failed due to an excessive uplift of -2512 lbs at support located at 34 5 8.

Overall Length: 34 8 0



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.; Drawing is Conceptual

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	19565 @ 6 0 0	21656 (5.50")	Passed (90%)	--	1.0 D + 1.0 L (Adj Spans)
Shear (lbs)	9286 @ 7 6 12	15960	Passed (58%)	1.00	1.0 D + 1.0 L (Adj Spans)
Moment (Ft-lbs)	-32670 @ 6 0 0	46671	Passed (70%)	1.00	1.0 D + 1.0 L (Adj Spans)
Live Load Defl. (in)	0.376 @ 16 4 8	0.683	Passed (L/654)	--	1.0 D + 1.0 L (Alt Spans)
Total Load Defl. (in)	0.492 @ 16 4 5	1.025	Passed (L/500)	--	1.0 D + 1.0 L (Alt Spans)

System : Floor
 Member Type : Drop Beam
 Building Use : Residential
 Building Code : IBC 2009
 Design Methodology : ASD

- Deflection criteria: LL (L/360) and TL (L/240).
- Bracing (Lu): All compression edges (top and bottom) must be braced at 10 11 8 o/c unless detailed otherwise. Proper attachment and positioning of lateral bracing is required to achieve member stability.

Supports	Bearing			Loads to Supports (lbs)			Accessories
	Total	Available	Required	Dead	Floor Live	Total	
1 - Column - LSL	3.50"	3.50"	1.50"	-558	2408/-4095	2408/-4653	Blocking
2 - Column - LSL	5.50"	5.50"	4.97"	4793	14772	19565	Blocking
3 - Column - LSL	5.50"	5.50"	4.75"	4622	14076	18698	Blocking
4 - Pocket in masonry - concrete	4.00"	4.00"	1.50"	139	3072/-2651	3211/-2651	None

- Blocking Panels are assumed to carry no loads applied directly above them and the full load is applied to the member being designed.

Loads	Location (Side)	Tributary Width	Dead (0.90)	Floor Live (1.00)	Comments
0 - Self Weight (PLF)	0 0 0 to 34 8 0	N/A	24.5		
1 - Uniform (PSF)	0 0 0 to 34 8 0 (Front)	1 0 0	235.0	785.0	Residential - Living Areas

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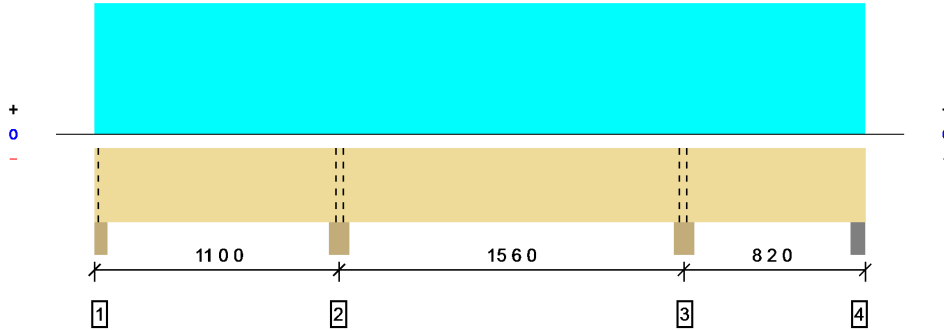
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Overall Length: 34 8 0



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.; Drawing is Conceptual

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	15967 @ 11 0 0	21656 (5.50")	Passed (74%)	--	1.0 D + 1.0 L (Adj Spans)
Shear (lbs)	6990 @ 12 4 12	13965	Passed (50%)	1.00	1.0 D + 1.0 L (Adj Spans)
Moment (Ft-lbs)	-20393 @ 11 0 0	36387	Passed (56%)	1.00	1.0 D + 1.0 L (Adj Spans)
Live Load Defl. (in)	0.230 @ 18 7 14	0.517	Passed (L/808)	--	1.0 D + 1.0 L (Alt Spans)
Total Load Defl. (in)	0.286 @ 18 8 7	0.775	Passed (L/650)	--	1.0 D + 1.0 L (Alt Spans)

System : Floor
 Member Type : Drop Beam
 Building Use : Residential
 Building Code : IBC 2009
 Design Methodology : ASD

- Deflection criteria: LL (L/360) and TL (L/240).
- Bracing (Lu): All compression edges (top and bottom) must be braced at 16 8 9 o/c unless detailed otherwise. Proper attachment and positioning of lateral bracing is required to achieve member stability.
- -981 lbs uplift at support 34 5 8. Strapping or other restraint may be required.

Supports	Bearing			Loads to Supports (lbs)			Accessories
	Total	Available	Required	Dead	Floor Live	Total	
1 - Column - LSL	3.50"	3.50"	1.50"	984	3962/-950	4946/-950	Blocking
2 - Column - LSL	5.50"	5.50"	4.06"	3868	12099	15967	Blocking
3 - Column - LSL	5.50"	5.50"	3.77"	3489	11347	14836	Blocking
4 - Pocket in masonry - concrete	4.00"	4.00"	1.50"	549	3212/-1530	3761/-1530	None

- Blocking Panels are assumed to carry no loads applied directly above them and the full load is applied to the member being designed.

Loads	Location (Side)	Tributary Width	Dead (0.90)	Floor Live (1.00)	Comments
0 - Self Weight (PLF)	0 0 0 to 34 8 0	N/A	21.5		
1 - Uniform (PSF)	0 0 0 to 34 8 0 (Front)	1 0 0	235.0	785.0	Residential - Living Areas

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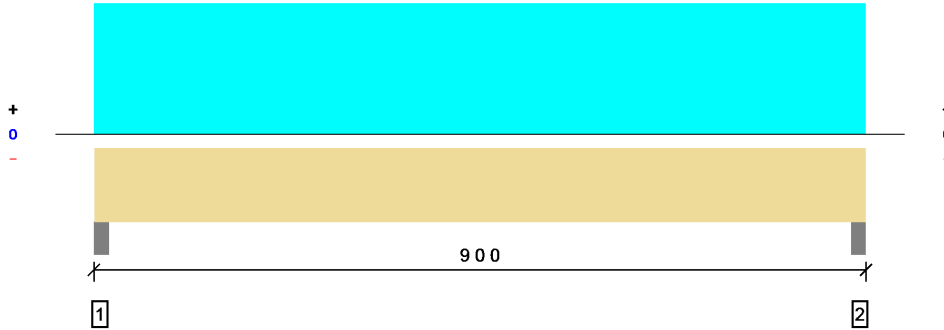


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2 piece(s) 1 3/4" x 11 7/8" 1.9E Microllam® LVL

Overall Length: 9 0 0



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.; Drawing is Conceptual

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	5189 @ 0 2 8	10500 (4.00")	Passed (49%)	--	1.0 D + 1.0 L (All Spans)
Shear (lbs)	3664 @ 1 3 14	7897	Passed (46%)	1.00	1.0 D + 1.0 L (All Spans)
Moment (Ft-lbs)	10619 @ 4 6 0	17848	Passed (59%)	1.00	1.0 D + 1.0 L (All Spans)
Live Load Defl. (in)	0.102 @ 4 6 0	0.286	Passed (L/999+)	--	1.0 D + 1.0 L (All Spans)
Total Load Defl. (in)	0.183 @ 4 6 0	0.429	Passed (L/564)	--	1.0 D + 1.0 L (All Spans)

 System : Floor
 Member Type : Drop Beam
 Building Use : Residential
 Building Code : IBC 2009
 Design Methodology : ASD

- Deflection criteria: LL (L/360) and TL (L/240).
- Bracing (Lu): All compression edges (top and bottom) must be braced at 9 0 0 o/c unless detailed otherwise. Proper attachment and positioning of lateral bracing is required to achieve member stability.

Supports	Bearing			Loads to Supports (lbs)			Accessories
	Total	Available	Required	Dead	Floor Live	Total	
1 - Pocket in masonry - concrete	4.00"	4.00"	1.98"	2291	2898	5189	None
2 - Pocket in masonry - concrete	4.00"	4.00"	1.98"	2291	2898	5189	None

Loads	Location (Side)	Tributary Width	Dead (0.90)	Floor Live (1.00)	Comments
0 - Self Weight (PLF)	0 0 0 to 9 0 0	N/A	12.1		
1 - Uniform (PSF)	0 0 0 to 9 0 0 (Front)	1 0 0	497.0	644.0	Residential - Living Areas

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1 piece(s) 3 1/2" x 3 1/2" 1.3E TimberStrand® LSL

Post Height: 8 0 0



Design Results	Actual	Allowed	Result	LDF	Load: Combination
Slenderness	27	50	Passed (55%)	--	--
Compression (lbs)	4635	8350	Passed (56%)	1.00	1.0 D + 1.0 L
Base Bearing (lbs)	4635	5206	Passed (89%)	--	1.0 D + 1.0 L
Bending/Compression	0.78	1	Passed (78%)	1.00	1.0 D + 1.0 L

- Axial load eccentricity for this design is 1/6 of applicable member side dimension.
- Applicable calculations are based on NDS.
- Bearing shall be on a metal plate or strap, or on other equivalently durable, rigid, homogeneous material with sufficient stiffness to distribute applied load

Supports	Type	Material
Base	Plate	Spruce-Pine-Fir

Member Type : Free Standing Post

Building Code : IBC 2009

Design Methodology : ASD

Max Unbraced Length	Comments
Full Member Length	No bracing assumed.

Drawing is Conceptual

Vertical Load	Dead (0.90)	Floor Live (1.00)	Comments
1 - Point (lb)	540	4095	

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1 piece(s) 7" x 7" 1.8E Parallam® PSL

Post Height: 8 0 0



Design Results	Actual	Allowed	Result	LDF	Load: Combination
Slenderness	14	50	Passed (27%)	--	--
Compression (lbs)	19565	108880	Passed (18%)	1.00	1.0 D + 1.0 L
Base Bearing (lbs)	19565	20825	Passed (94%)	--	1.0 D + 1.0 L
Bending/Compression	0.21	1	Passed (21%)	1.00	1.0 D + 1.0 L

- Axial load eccentricity for this design is 1/6 of applicable member side dimension.
- Applicable calculations are based on NDS.
- Bearing shall be on a metal plate or strap, or on other equivalently durable, rigid, homogeneous material with sufficient stiffness to distribute applied load

Supports	Type	Material
Base	Plate	Spruce-Pine-Fir

Member Type : Free Standing Post

Building Code : IBC 2009

Design Methodology : ASD

Max Unbraced Length	Comments
Full Member Length	No bracing assumed.

Drawing is Conceptual

Vertical Load	Dead (0.90)	Floor Live (1.00)	Comments
1 - Point (lb)	4793	14772	

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