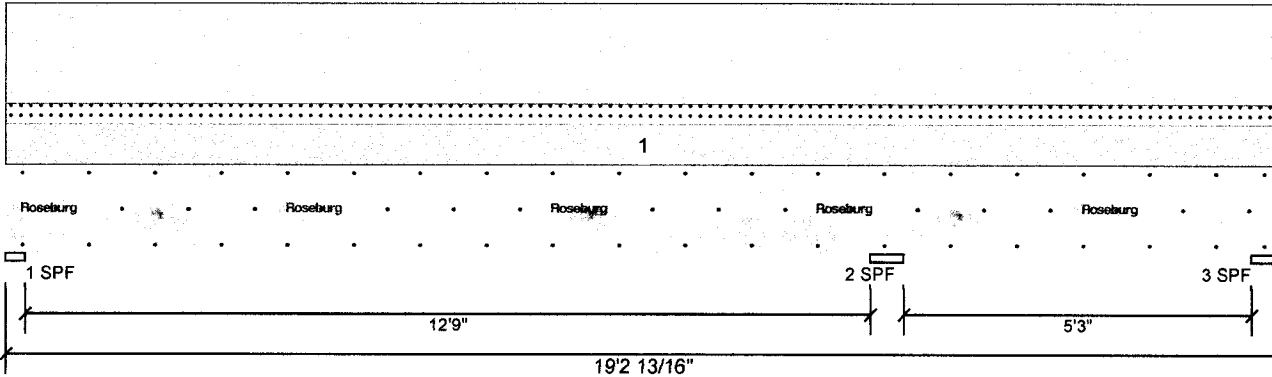


B1 2.0E Rigidlam LVL 1.750" X 16.000" 2-Ply - PASSED Level: Level



Member Information

| | |
|---------------------|---------------|
| Type: | Girder |
| Plies: | 2 |
| Moisture Condition: | Dry |
| Deflection LL: | 480 |
| Deflection TL: | 240 |
| Importance: | Normal |
| Temperature: | Temp <= 100°F |

| | |
|----------------|--------------|
| Application: | Floor |
| Design Method: | ASD |
| Building Code: | IBC/IRC 2015 |
| Load Sharing: | No |
| Deck: | Not Checked |

Reactions UNPATTERNED lb (Uplift)

| Brg | Live | Dead | Snow | Wind | Const |
|-----|------|------|------|------|-------|
| 1 | 2119 | 929 | 424 | 0 | 0 |
| 2 | 5153 | 2260 | 1031 | 0 | 0 |
| 3 | 101 | 44 | 20 | 0 | 0 |

Bearings

| Bearing | Length | Cap. React | D/L lb | Total | Ld. Case | Ld. Comb. |
|---------|--------|------------|-------------|-------|----------|-----------|
| 1 - SPF | 3.500" | 59% | 929 / 2153 | 3082 | L_ | D+L |
| 2 - SPF | 6.000" | 83% | 2260 / 5153 | 7413 | LL | D+L |
| 3 - SPF | 5.313" | 15% | 44 / 1132 | 1177 | _L | D+L(D+L) |

Analysis Results

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|--------------|----------------|------------|---------------|-------------|-------|------|
| Neg Moment | -8886 ft-lb | 13'3 1/2" | 37215 ft-lb | 0.239 (24%) | D+L | LL |
| Unbraced | -8886 ft-lb | 13'3 1/2" | 31380 ft-lb | 0.283 (28%) | D+L | LL |
| Pos Moment | 7919 ft-lb | 5'7 1/16" | 37215 ft-lb | 0.213 (21%) | D+L | L_ |
| Unbraced | 7919 ft-lb | 5'7 1/16" | 31380 ft-lb | 0.252 (25%) | D+L | L_ |
| Shear | 3547 lb | 11'11 1/2" | 10827 lb | 0.328 (33%) | D+L | LL |
| LL Defl inch | 0.062 (L/2548) | 6'2 1/4" | 0.327 (L/480) | 0.190 (19%) | L | L_ |
| TL Defl inch | 0.087 (L/1800) | 6'2" | 0.653 (L/240) | 0.130 (13%) | D+L | L_ |

Design Notes

- 1 Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 2 Refer to last page of calculations for fasteners required for specified loads.
- 3 Girders are designed to be supported on the bottom edge only.
- 4 Top loads must be supported equally by all plies.
- 5 Tie-down connection required at bearing 3 for uplift 841 lb (Combination D+L, Load Case L_).
- 6 Top braced at bearings.
- 7 Bottom braced at bearings.
- 8 Lateral slenderness ratio based on full section width.



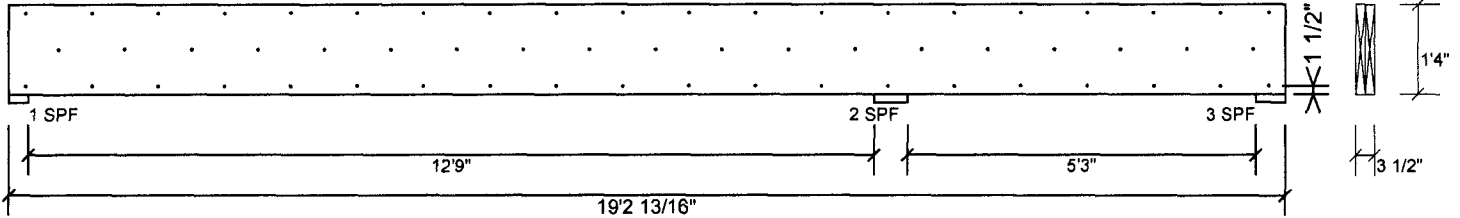
| ID | Load Type | Location | Trib Width | Side | Dead | Live | Snow | Wind | Const. | Comments |
|----|-------------|----------|------------|------|--------|--------|--------|-------|--------|----------|
| 1 | Uniform | | 7-8-0 | Top | 20 PSF | 50 PSF | 10 PSF | 0 PSF | 1.25 | |
| | Self Weight | | | | 15 PLF | | | | | |

| | | |
|--|---|--|
| <p>Notes</p> <p>Calculated Structural Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.</p> <p>Lumber</p> <ol style="list-style-type: none"> 1 Dry service conditions, unless noted otherwise 2 LVL not to be treated with fire retardant or corrosive chemicals <p>Handling & Installation</p> <ol style="list-style-type: none"> 1 LVL beams must not be cut or drilled 2 Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals 3 Damaged Beams must not be used 4 Design assumes top edge is laterally restrained 5 Provide lateral support at bearing points to avoid lateral displacement and rotation | <p>6. For flat roofs provide proper drainage to prevent ponding</p> | <p>Manufacturer info</p> <p>Roseburg Forest Products 4500 Riddle By-pass Rd Riddle, OR 97469 (541) 784-4005 www.roseburg.com APA: PR-L289, PR-L270, ICC-ES: ESR-1210</p> |
| | <p>This design is valid until 11/15/2022</p> | |



B1 2.0E Rigidlam LVL 1.750" X 16.000" 2-Ply - PASSED

Level: Level



Multi-Ply Analysis

Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6"

| | |
|--------------------------|-----------|
| Capacity | 0.0 % |
| Load | 0.0 PLF |
| Yield Limit per Foot | 271.6 PLF |
| Yield Limit per Fastener | 90.5 lb. |
| Yield Mode | IV |
| Edge Distance | 1 1/2" |
| Min. End Distance | 3" |
| Load Combination | |
| Duration Factor | 1.00 |

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive

chemicals

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation

6 For flat roofs provide proper drainage to prevent ponding

Manufacturer info

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Riddle, OR 97469
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APA: PR-L289, PR-L270, ICC-ES:
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