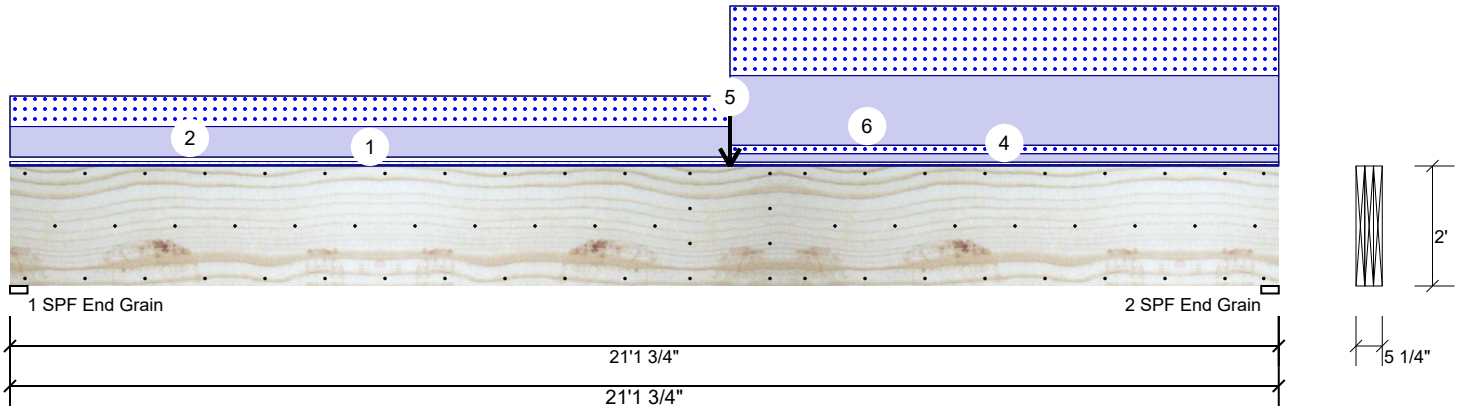
| | | | |
|---|---|---|---|
| Client: | Wellco Contractors, Inc. | Date: | 9/14/2022 |
| Project: | | Input by: | David Landry |
| Address: | | Job Name: | Lot 146 Hidden Lakes |
| | | Project #: | J0822-4269 |

# BM1 Kerto-S LVL 1.750" X 24.000" 3-Ply - PASSED

Level: Level




## Member Information

| | | | |
|---|---|---|---|
| Type: | Girder | Application: | Floor |
| Plies: | 3 | Design Method: | ASD |
| Moisture Condition: | Dry | Building Code: | IBC/IRC 2015 |
| Deflection LL: | 480 | Load Sharing: | Yes |
| Deflection TL: | 360 | Deck: | Not Checked |
| Importance: | Normal - II | Ceiling: | Gypsum 1/2" |
| Temperature: | Temp <= 100°F | | |

## Reactions UNPATTERNED lb (Uplift)

| Brg | Direction | Live | Dead | Snow | Wind | Const |
|---|---|---|---|---|---|---|
| 1 | Vertical | 423 | 4121 | 3667 | 0 | 0 |
| 2 | Vertical | 423 | 6030 | 5575 | 0 | 0 |

## Bearings

| Bearing | Length | Dir. | Cap. | React D/L lb | Total | Ld. Case | Ld. Comb. |
|---|---|---|---|---|---|---|---|
| 1 - SPF End Grain | 3.500" | Vert | 50% | 4121 / 3667 | 7788 | L | D+S |
| 2 - SPF End Grain | 3.500" | Vert | 75% | 6030 / 5575 | 11606 | L | D+S |

## Analysis Results

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|---|---|---|---|---|---|---|
| Moment | 61594 ft-lb | 12' | 131295 ft-lb | 0.469 (47%) | D+S | L |
| Unbraced | 61594 ft-lb | 12' | 61804 ft-lb | 0.997 (100%) | D+S | L |
| Shear | 10110 lb | 18'10 1/4" | 30912 lb | 0.327 (33%) | D+S | L |
| LL Defl inch | 0.196 (L/1266) | 11'3 15/16" | 0.518 (L/480) | 0.379 (38%) | S | L |
| TL Defl inch | 0.409 (L/607) | 11'3 9/16" | 0.690 (L/360) | 0.593 (59%) | D+S | L |

## Design Notes

1. Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
2. Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
3. Refer to last page of calculations for fasteners required for specified loads.
4. Concentrated load fastener specification is in addition to hanger fasteners if a hanger is present.
5. Girders are designed to be supported on the bottom edge only.
6. Top loads must be supported equally by all plies.
7. Top must be laterally braced at a maximum of 4'3 7/16" o.c.
8. Lateral slenderness ratio based on single ply width.

| ID | Load Type | Location | Trib Width | Side | Dead 0.9 | Live 1 | Snow 1.15 | Wind 1.6 | Const. 1.25 | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Tie-In Far | 0-0-0 to 21-1-12 | 1-0-0 | Top | 15 PSF | 40 PSF | 0 PSF | 0 PSF | 0 PSF | Floor |
| 1 | Tie-In Near | 0-0-0 to 21-1-12 | 0-0-0 | Top | 15 PSF | 40 PSF | 0 PSF | 0 PSF | 0 PSF | Floor |
| 2 | Part. Uniform | 0-0-0 to 12-0-0 | | Near Face | 188 PLF | 0 PLF | 188 PLF | 0 PLF | 0 PLF | M2 |
| 3 | Point | 12-0-0 | | Near Face | 431 lb | 0 lb | 431 lb | 0 lb | 0 lb | M2-GR |

Continued on page 2...

**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

This design is valid until 11/3/2024

**Manufacturer Info**

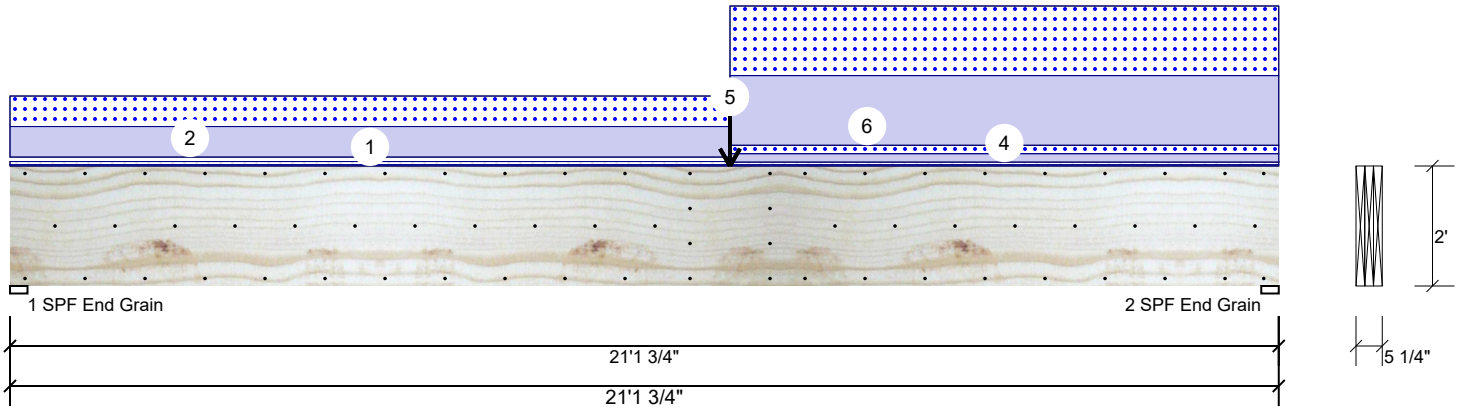
Metsä Wood
301 Merritt 7 Building, 2nd Floor
Norwalk, CT 06851
(800) 622-5850
www.metsawood.com/us

Comtech, Inc.
1001 S. Reilly Road, Suite #639
Fayetteville, NC
USA
28314
910-864-TRUS

| | | | |
|---|---|---|---|
| Client: | Wellco Contractors, Inc. | Date: | 9/14/2022 |
| Project: | | Input by: | David Landry |
| Address: | | Job Name: | Lot 146 Hidden Lakes |
| | | Project #: | J0822-4269 |

# BM1 Kerto-S LVL 1.750" X 24.000" 3-Ply - PASSED

Level: Level




...Continued from page 1

| ID | Load Type | Location | Trib Width | Side | Dead 0.9 | Live 1 | Snow 1.15 | Wind 1.6 | Const. 1.25 | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| 4 | Part. Uniform | 12-0-0 to 21-1-12 | | Near Face | 52 PLF | 0 PLF | 52 PLF | 0 PLF | 0 PLF | M1 |
| 5 | Point | 12-0-0 | | Top | 2156 lb | 0 lb | 2156 lb | 0 lb | 0 lb | B1-GR |
| | Bearing Length | 0-3-8 | | | | | | | | |
| 6 | Part. Uniform | 12-0-0 to 21-1-12 | | Top | 429 PLF | 0 PLF | 429 PLF | 0 PLF | 0 PLF | A2 |
| | Self Weight | | | | 28 PLF | | | | | |

**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

This design is valid until 11/3/2024

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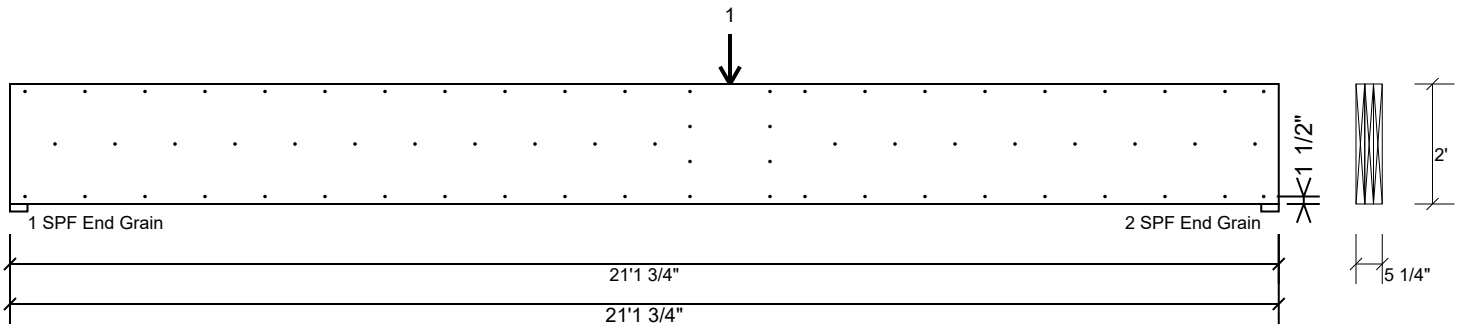
|---|---|---|---|
| Client: | Wellco Contractors, Inc. | Date: | 9/14/2022 |
| Project: | | Input by: | David Landry |
| Address: | | Job Name: | Lot 146 Hidden Lakes |
| | | Project #: | J0822-4269 |

# BM1 Kerto-S LVL 1.750" X 24.000" 3-Ply - PASSED

Level: Level




## Multi-Ply Analysis

Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c.. except for regions covered by concentrated load fastening. Nail from both sides. Maximum end distance not to exceed 6".

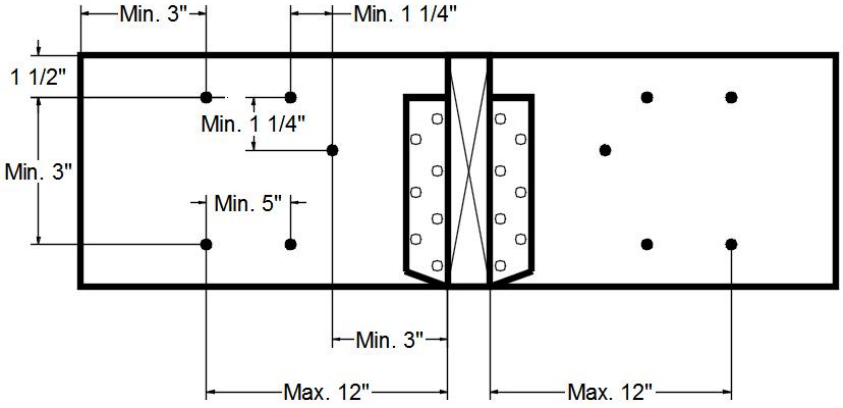
| | |
|---|---|
| Capacity | 88.8 % |
| Load | 250.7 PLF |
| Yield Limit per Foot | 282.4 PLF |
| Yield Limit per Fastener | 94.1 lb. |
| Yield Mode | IV |
| Edge Distance | 1 1/2" |
| Min. End Distance | 3" |
| Load Combination | D+S |
| Duration Factor | 1.15 |

## Concentrated Load

Fasten at concentrated side load at 12-0-0 with a minimum of (8) – 10d Box nails (.128x3") in the pattern shown. Repeat fasteners on both sides.

| | |
|---|---|
| Capacity | 76.4 % |
| Load | 574.7lb. |
| Total Yield Limit | 752.6 lb. |
| Cg | 0.9994 |
| Yield Limit per Fastener | 94.1 lb. |
| Yield Mode | IV |
| Load Combination | D+S |
| Duration Factor | 1.15 |

### Min/Max fastener distances for Concentrated Side Loads




**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

This design is valid until 11/3/2024

**Manufacturer Info**

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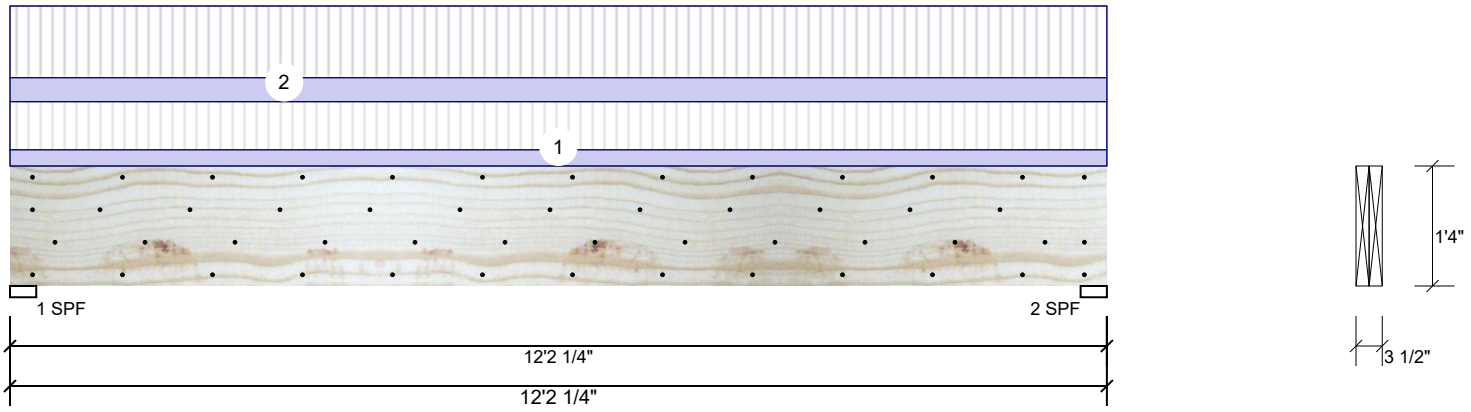
910-864-TRUS

| | | | |
|---|---|---|---|
| Client: | Wellco Contractors, Inc. | Date: | 9/14/2022 |
| Project: | | Input by: | David Landry |
| Address: | | Job Name: | Lot 146 Hidden Lakes |
| | | Project #: | J0822-4269 |

# BM2 Kerto-S LVL 1.750" X 16.000" 2-Ply - PASSED

Level: Level




## Member Information

| | | | |
|---|---|---|---|
| Type: | Girder | Application: | Floor |
| Plies: | 2 | Design Method: | ASD |
| Moisture Condition: | Dry | Building Code: | IBC/IRC 2015 |
| Deflection LL: | 480 | Load Sharing: | No |
| Deflection TL: | 360 | Deck: | Not Checked |
| Importance: | Normal - II | Ceiling: | Gypsum 1/2" |
| Temperature: | Temp <= 100°F | | |

## Reactions UNPATTERNED lb (Uplift)

| Brg | Direction | Live | Dead | Snow | Wind | Const |
|---|---|---|---|---|---|---|
| 1 | Vertical | 3790 | 1343 | 0 | 0 | 0 |
| 2 | Vertical | 3790 | 1343 | 0 | 0 | 0 |

## Bearings

| Bearing | Length | Dir. | Cap. | React D/L lb | Total | Ld. Case | Ld. Comb. |
|---|---|---|---|---|---|---|---|
| 1 - SPF | 3.500" | Vert | 99% | 1343 / 3790 | 5134 | L | D+L |
| 2 - SPF | 3.500" | Vert | 99% | 1343 / 3790 | 5134 | L | D+L |

## Analysis Results

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|---|---|---|---|---|---|---|
| Moment | 14539 ft-lb | 6'1 1/8" | 34565 ft-lb | 0.421 (42%) | D+L | L |
| Unbraced | 14539 ft-lb | 6'1 1/8" | 14539 ft-lb | 1.000 (100%) | D+L | L |
| Shear | 4888 lb | 1'7 1/2" | 11947 lb | 0.409 (41%) | D+L | L |
| LL Defl inch | 0.134 (L/1054) | 6'1 1/8" | 0.294 (L/480) | 0.455 (46%) | L | L |
| TL Defl inch | 0.181 (L/778) | 6'1 1/8" | 0.392 (L/360) | 0.462 (46%) | D+L | L |

## Design Notes

1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
2 Fasten all plies using 4 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
3 Refer to last page of calculations for fasteners required for specified loads.
4 Girders are designed to be supported on the bottom edge only.
5 Top must be laterally braced at a maximum of 8'1 1/2" o.c.
6 Lateral slenderness ratio based on single ply width.

| ID | Load Type | Location | Trib Width | Side | Dead 0.9 | Live 1 | Snow 1.15 | Wind 1.6 | Const. 1.25 | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Uniform | | | Far Face | 84 PLF | 250 PLF | 0 PLF | 0 PLF | 0 PLF | F6 |
| 2 | Uniform | | | Near Face | 124 PLF | 372 PLF | 0 PLF | 0 PLF | 0 PLF | F7 |
| | Self Weight | | | | 12 PLF | | | | | |

**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

This design is valid until 11/3/2024

**Manufacturer Info**

Metsä Wood
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Comtech, Inc.
1001 S. Reilly Road, Suite #639
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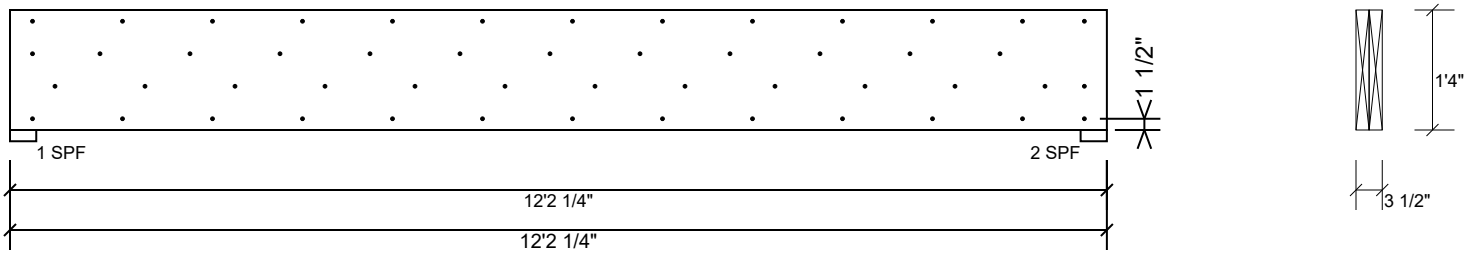
910-864-TRUS

| | | | |
|---|---|---|---|
| Client: | Wellco Contractors, Inc. | Date: | 9/14/2022 |
| Project: | | Input by: | David Landry |
| Address: | | Job Name: | Lot 146 Hidden Lakes |
| | | Project #: | J0822-4269 |

# BM2 Kerto-S LVL 1.750" X 16.000" 2-Ply - PASSED

Level: Level




## Multi-Ply Analysis

Fasten all plies using 4 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6".

| | |
|---|---|
| Capacity | 75.7 % |
| Load | 248.0 PLF |
| Yield Limit per Foot | 327.4 PLF |
| Yield Limit per Fastener | 81.9 lb. |
| Yield Mode | IV |
| Edge Distance | 1 1/2" |
| Min. End Distance | 3" |
| Load Combination | D+L |
| 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

This design is valid until 11/3/2024

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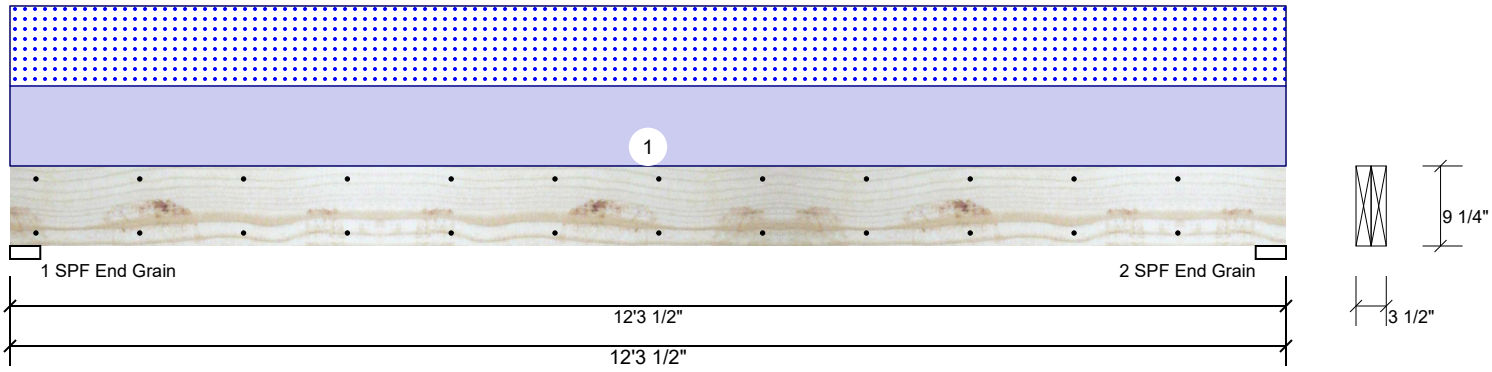
| | | | |
|---|---|---|---|
| Client: | Wellco Contractors, Inc. | Date: | 9/14/2022 |
| Project: | | Input by: | David Landry |
| Address: | | Job Name: | Lot 146 Hidden Lakes |
| | | Project #: | J0822-4269 |

# BM3 Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED

Level: Level




## Member Information

| | | | |
|---|---|---|---|
| Type: | Girder | Application: | Floor |
| Plies: | 2 | Design Method: | ASD |
| Moisture Condition: | Dry | Building Code: | IBC/IRC 2015 |
| Deflection LL: | 480 | Load Sharing: | No |
| Deflection TL: | 360 | Deck: | Not Checked |
| Importance: | Normal - II | Ceiling: | Gypsum 1/2" |
| Temperature: | Temp <= 100°F | | |

## Reactions UNPATTERNED lb (Uplift)

| Brg | Direction | Live | Dead | Snow | Wind | Const |
|---|---|---|---|---|---|---|
| 1 | Vertical | 0 | 997 | 953 | 0 | 0 |
| 2 | Vertical | 0 | 997 | 953 | 0 | 0 |

## Bearings

| Bearing | Length | Dir. | Cap. | React D/L lb | Total | Ld. Case | Ld. Comb. |
|---|---|---|---|---|---|---|---|
| 1 - SPF End Grain | 3.500" | Vert | 19% | 997 / 953 | 1949 | L | D+S |
| 2 - SPF End Grain | 3.500" | Vert | 19% | 997 / 953 | 1949 | L | D+S |

## Analysis Results

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|---|---|---|---|---|---|---|
| Moment | 5552 ft-lb | 6'1 3/4" | 14423 ft-lb | 0.385 (38%) | D+S | L |
| Unbraced | 5552 ft-lb | 6'1 3/4" | 6421 ft-lb | 0.865 (86%) | D+S | L |
| Shear | 1618 lb | 1' 3/4" | 7943 lb | 0.204 (20%) | D+S | L |
| LL Defl inch | 0.158 (L/900) | 6'1 3/4" | 0.296 (L/480) | 0.533 (53%) | S | L |
| TL Defl inch | 0.323 (L/440) | 6'1 3/4" | 0.394 (L/360) | 0.819 (82%) | D+S | L |

## Design Notes

1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
2 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
3 Refer to last page of calculations for fasteners required for specified loads.
4 Girders are designed to be supported on the bottom edge only.
5 Top loads must be supported equally by all plies.
6 Top must be laterally braced at end bearings.
7 Lateral slenderness ratio based on single ply width.

| ID | Load Type | Location | Trib Width | Side | Dead 0.9 | Live 1 | Snow 1.15 | Wind 1.6 | Const. 1.25 | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Uniform | | | Top | 155 PLF | 0 PLF | 155 PLF | 0 PLF | 0 PLF | D1 |
| | Self Weight | | | | 7 PLF | | | | | |

**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

This design is valid until 11/3/2024

**Manufacturer Info**

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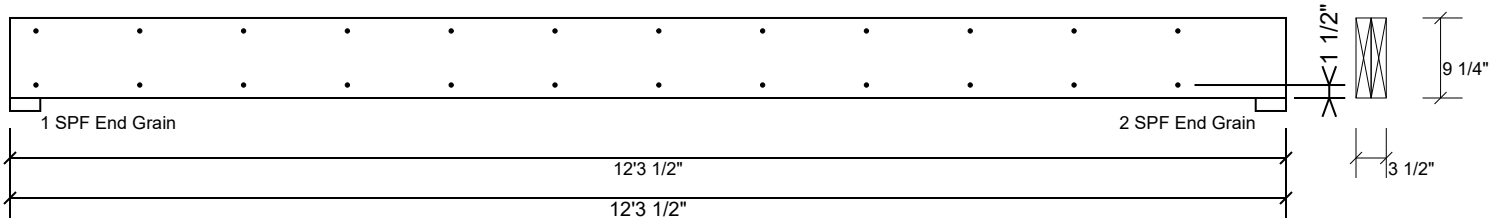
# BM3 Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED

Level: Level




## Multi-Ply Analysis

Fasten all plies using 2 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 | 163.7 PLF |
| Yield Limit per Fastener | 81.9 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
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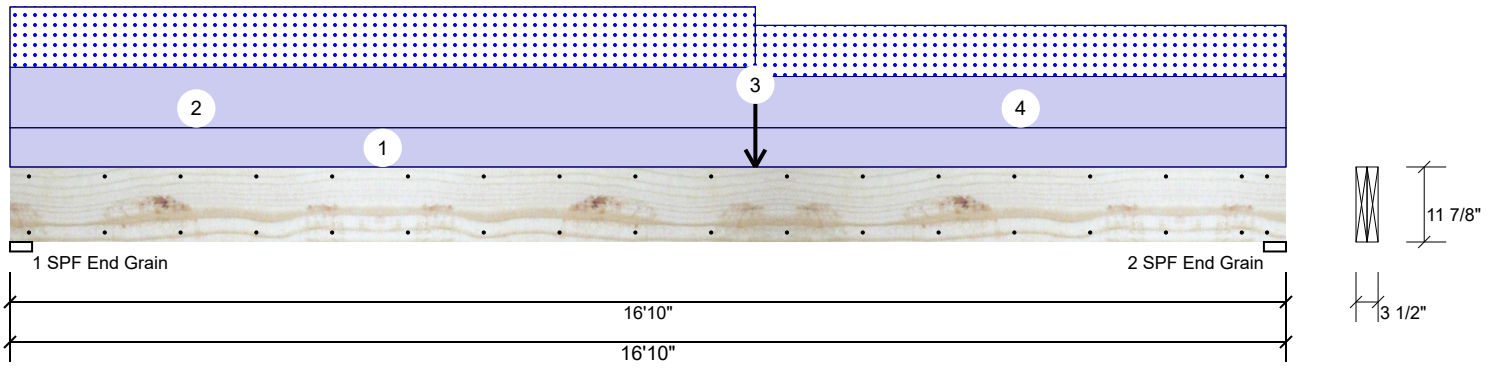
| | | | |
|---|---|---|---|
| Client: | Wellco Contractors, Inc. | Date: | 9/14/2022 |
| Project: | | Input by: | David Landry |
| Address: | | Job Name: | Lot 146 Hidden Lakes |
| | | Project #: | J0822-4269 |

# GDH Kerto-S LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Level




## Member Information

| | | | |
|---|---|---|---|
| Type: | Girder | Application: | Floor |
| Plies: | 2 | Design Method: | ASD |
| Moisture Condition: | Dry | Building Code: | IBC/IRC 2015 |
| Deflection LL: | 480 | Load Sharing: | No |
| Deflection TL: | 360 | Deck: | Not Checked |
| Importance: | Normal - II | Ceiling: | Gypsum 1/2" |
| Temperature: | Temp <= 100°F | | |

## Reactions UNPATTERNED lb (Uplift)

| Brg | Direction | Live | Dead | Snow | Wind | Const |
|---|---|---|---|---|---|---|
| 1 | Vertical | 0 | 1416 | 833 | 0 | 0 |
| 2 | Vertical | 0 | 1390 | 807 | 0 | 0 |

## Bearings

| Bearing | Length | Dir. | Cap. | React D/L lb | Total | Ld. Case | Ld. Comb. |
|---|---|---|---|---|---|---|---|
| 1 - SPF End Grain | 3.500" | Vert | 22% | 1416 / 833 | 2249 | L | D+S |
| 2 - SPF End Grain | 3.500" | Vert | 21% | 1390 / 807 | 2197 | L | D+S |

## Analysis Results

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|---|---|---|---|---|---|---|
| Moment | 9481 ft-lb | 8'10 9/16" | 22897 ft-lb | 0.414 (41%) | D+S | L |
| Unbraced | 9481 ft-lb | 8'10 9/16" | 9502 ft-lb | 0.998 (100%) | D+S | L |
| Shear | 1934 lb | 1'3 3/8" | 10197 lb | 0.190 (19%) | D+S | L |
| LL Defl inch | 0.183 (L/1072) | 8'5 3/4" | 0.409 (L/480) | 0.448 (45%) | S | L |
| TL Defl inch | 0.488 (L/403) | 8'5 9/16" | 0.546 (L/360) | 0.893 (89%) | D+S | L |

## Design Notes

1. Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
2. Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
3. Refer to last page of calculations for fasteners required for specified loads.
4. Girders are designed to be supported on the bottom edge only.
5. Top loads must be supported equally by all plies.
6. Top must be laterally braced at a maximum of 9'9 13/16" o.c.
7. Lateral slenderness ratio based on single ply width.

| ID | Load Type | Location | Trib Width | Side | Dead 0.9 | Live 1 | Snow 1.15 | Wind 1.6 | Const. 1.25 | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Uniform | | | Top | 60 PLF | 0 PLF | 0 PLF | 0 PLF | 0 PLF | Wall |
| 2 | Part. Uniform | 0-0-0 to 9-10-0 | | Top | 92 PLF | 0 PLF | 92 PLF | 0 PLF | 0 PLF | M2 |
| 3 | Point | 9-10-0 | | Top | 190 lb | 0 lb | 190 lb | 0 lb | 0 lb | M2-GR |
| | Bearing Length | 0-3-8 | | | | | | | | |
| 4 | Part. Uniform | 9-10-0 to 16-10-0 | | Top | 78 PLF | 0 PLF | 78 PLF | 0 PLF | 0 PLF | M1 |
| | Self Weight | | | | 9 PLF | | | | | |

### 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

This design is valid until 11/3/2024

**Manufacturer Info**

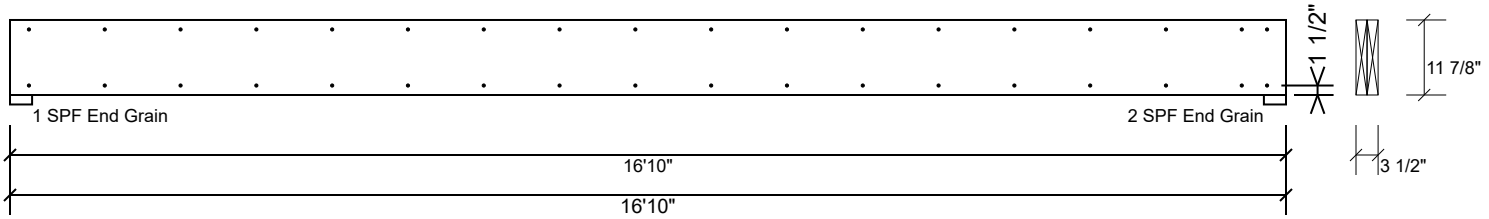
Metsä Wood
301 Merritt 7 Building, 2nd Floor
Norwalk, CT 06851
(800) 622-5850
www.metsawood.com/us

Comtech, Inc.
1001 S. Reilly Road, Suite #639
Fayetteville, NC
USA
28314
910-864-TRUS

| | | | |
|---|---|---|---|
| Client: | Wellco Contractors, Inc. | Date: | 9/14/2022 |
| Project: | | Input by: | David Landry |
| Address: | | Job Name: | Lot 146 Hidden Lakes |
| | | Project #: | J0822-4269 |

# GDH Kerto-S LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Level




## Multi-Ply Analysis

Fasten all plies using 2 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 | 163.7 PLF |
| Yield Limit per Fastener | 81.9 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

This design is valid until 11/3/2024

**Manufacturer Info**

Metsä Wood
301 Merritt 7 Building, 2nd Floor
Norwalk, CT 06851
(800) 622-5850
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