# **Engineering Note Page (ENP-2)**

**REVISION 2018-10-17** 

# Please read all notes prior to installation of the component

## **DESIGN INFORMATION**

This building component is certified as an individual component for the loads and conditions shown on the calculation and drawing page.

The responsibility of the undersigned engineer is <u>only</u> limited to the calculation of this building component for the loads and conditions shown on this drawing.

The responsibility of the undersigned is limited to the verification of the structural capacity of the floor joists and LVL beams based on placement as shown on the layout. The loads applied are limited to the gravity effects of the specified loads. The structural integrity of the building and the effect of wind, uplift, seismic, lateral or other forces, calculation of adequate support and anchorage of components, as well as the dimensions and design loads used to calculate components are the responsibility of the overall building designer.

Floor joists and OSB rim board are designed to carry uniformly distributed loads only. Point loads should be transferred through the floor cavity with transfer blocks. Structural elements such as walls, posts, connectors, and transfer blocks are the responsibility of the overall building designer.

The undersigned engineer disclaims any responsibility for damages as a result of being furnished faulty or incorrect information, specifications and/or designs.

Installation of floor joists is to be carried out in accordance with the current edition of the manufacturer's literature available at http://www.kottgroup.com.

# **CODE**

This building component is designed in accordance with the National Building Code of Canada, the Ontario Building Code, CCMC and Canadian Standards Association guidelines.

# **COMPONENT**

- 1. The building component used in construction must be the same as indicated on the drawings.
- 2. The building component must be installed and assembled as per specification shown on the drawing and in accordance with the manufacturer's assembly and installation.
- Members consisting of multiple plies must be connected as per the document "Mult' Connection Details".
- 4. Pass-thru transfer block framing is required at all point loads over bearings.

# **HANDLING AND INSTALLATION**

Do not drill any hole, cut or notch a certified building component without a written proauthorization.

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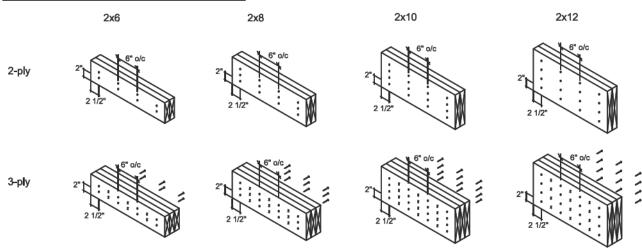
East Gwillimbury

| Discipline    | Reviewer   | BCIN  | Date       |
|---------------|------------|-------|------------|
| Building Code | H. Authier | 43236 | 2021-02-03 |
| Sewage System |            |       |            |
| Zoning        |            |       |            |
|               |            |       |            |



# GREENPARK-TRINAR HALL-EAST GWILLIMBURY-ON-LOT-36

# **Conventional Connections**



Conventional connection notes:

- -Nails to be 3" long wire nails.
- -Nalls to be located 2" mln. from the top and bottom of the member. Start all nalls 2 1/2" mln. from ends.

11 7/8" - 14" LVL

- -Number of rows and spacing as per details shown, unless noted otherwise.
- "X" represents nall driven from the opposite side.

### SIMPSON SDW SPACING REQUIREMENT

4-ply LVL (Top load only)





Spacing Requirements

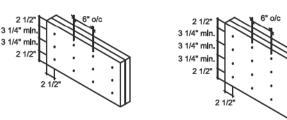
# LVL Connections

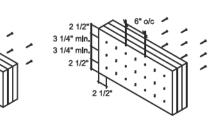
9 1/2" LVL

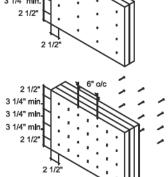
# HEAD OF ALL SPECIFIED NAILS AND SCREWS MUST BE ON THE LOADED SIDE

COMMICCIONS

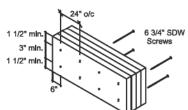
EWS MOST BE ON THE LOADED SIDE







16"-18" LVL



FOR 4 PLY BEAMS, UNLESS NOTED OTHERWISE ON THE ROOF LAYOUT OR THE CALCULATION SHEET OF THE BEAM, USE MINIMUM 6-3/4" SDW SCREWS PLACED IN 2 ROWS AT 16" C/C

- LVL connection notes:
- -LVL ply width is 1-3/4"
- -Nalls to be 3 1/2" common wire nalls.
- -Nails to be located 2 1/2" min. from the top and bottom of the member.
- -Minimum 3 1/4" spacing between rows.
- -Number of rows and spacing as per details shown, unless noted otherwise.
- "X" represents nall or screw driven from the opposite side.



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| Discipline    | Reviewer   | BCIN  | Date       | Ì |
|---------------|------------|-------|------------|---|
| Building Code | H. Authier | 43236 | 2021-02-03 | l |
| Sewage System |            |       |            | l |
| Zoning        |            |       |            | l |

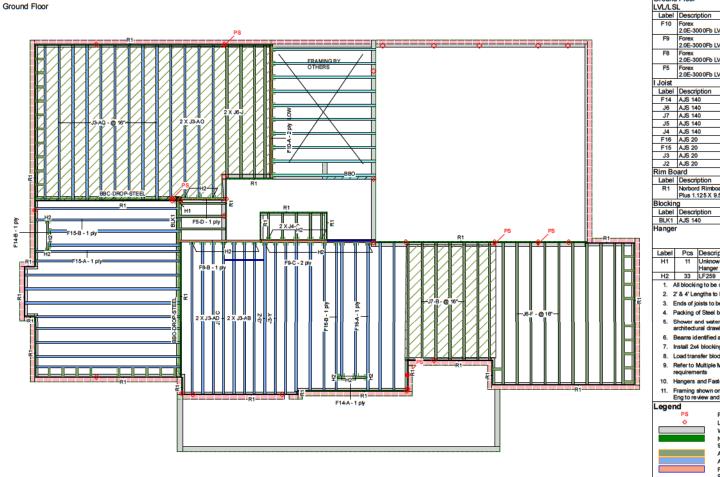
# Multiple Member Connections

All connections are for uniformly distributed loads.

For multi-ply connections of I-joists, refer to Manufacturer's Installation Guide



KOTT Inc. 3228 Moodie Drive Ottawa, ON K2H 7V1 613-838-2775

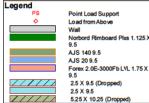


READ ALL NOTES ON THIS PAGE AND ON ENGINEERING NOTE PAGE ENP-2. THIS NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT. REFER TO MULTIPLE MEMBER TO MEMBEI CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS. PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARING

Ground Floor LVL/LSL Label Description Width Depth Qty Plies Pcs Leng F10 1.75 2 Forex 9.5 2 2.0E-3000Fb LVL 12-0 F9 1.75 2 .0E-300 0Fb LVL 10-0 2.0E-3000Fb LVL F5 6-0 1.75 9.5 2.0E-300 0Fb LVL I Joist Label Description Width Depth Qty Plies Pcs Leng F14 AJS 140 2.5 9.5 2 4-J6 AJS 140 2.5 9.5 14 14-J7 AJS 140 2.5 2.5 9.5 J5 AJS 140 J4 AJS 140 2.5 F16 AJS 20 2.5 9.5 2 16-F15 AJS 20 2.5 9.5 2 14-0 J3 AJS 20 2.5 9.5 31 16-0 J2 AJS 20 2.5 9.5 11 14-0 Rim Board Label Description Width Depth Qty Plies Pcs Leng Norbord Rimboard Plus 1.125 X 9.5 1.125 18 Blocking Width Depth Qty Plies Pcs Length Label Description BLK1 AJS 140 2.5 9.5 LinFt Varies 28-0-0

| Hanger |     |                   |      | Beam/Girder Support |           |              |
|--------|-----|-------------------|------|---------------------|-----------|--------------|
| Label  | Pcs | Description       | Skew | Slope               | fasteners | fasteners    |
| H1     | 11  | Unknown<br>Hanger |      |                     |           |              |
| H2     | 33  | LF259             |      |                     | 10 10d    | 1 #8x1 1/4WS |

- 1. All blocking to be out from 12' joists
- 2. 2' & 4' Lengths to be cut from 8' Length, 6' lengths to be cut from 12' Length
- 3. Ends of joists to be laterally supported
- 4. Packing of Steel beams and attachment by others
- Shower and water closet flange locations are approximate only, consult architectural drawing for exact locations
- 6. Beams identified as "B" are dropped and supplied by others
- 7. Install 2x4 blocking @ 24" o/c under parallel non-loadbearing walls 8. Load transfer blocks to be installed under all point loads
- 9. Refer to Multiple Member Connection Detail for ply to ply nailing or bolting
- 10. Hangers and Fasteners to be installed as per manufacturer
- Framing shown on this layout may deviate from architectural drawings. Arch / Eng to review and approve the deviation prior to construction.



JOISTS SPACING 12'O/C UNIESS NOTED OTHERWISE

| JOB INFORMATIO                                | ON  |
|---|---|
| Builder                                       |   |
| Project                                       |   |
| Shipping<br>GREENPARK HOM<br>TRINAR HALL, EAS | ES<br>ST GWILLIMBURY,ON                         |
| Sales Rep                                     |   |
| <b>Designer</b><br>SB                         |   |
| Plotted<br>December 17, 2020                  |   |
| Layout Name<br>LOT-36 (GLENWAY                | 12A EL-2)                                       |
|   | REENPARK HOMESITRINAR<br>ORILOT-36 (GLENWAY 12A |
| DESIGN CRITERIA                               |   |
| Ground Floor                                  | 100 (0  |
| Design Method<br>Building Code<br>Floor       | LSD (Canada)<br>NBCC 2015 / OBC 2012            |
| oads  |   |

| EL-Z/JOI          |                      |
|-------------------|----------------------|
| DESIGN CRITERIA   |                      |
| Ground Floor      |                      |
| Design Method     | LSD (Canada)         |
| Building Code     | NBCC 2015 / OBC 2012 |
| Floor             |                      |
| Loads             |                      |
| Live              | 40                   |
| Dead              | 15                   |
| Deflection Joist  |                      |
| LL Span L/        | 480                  |
| TL Span L/        | 360                  |
| LL Cant 2L/       | 480                  |
| TL Cant 2L/       | 360                  |
| Deflection Girder |                      |
| LL Span L/        | 360                  |
| TL Span L/        | 240                  |
| LL Cant 2L/       | 480                  |
| TL Cant 2L/       | 360                  |
| Decking           |                      |
| Decking           | OSB                  |

3/4"

Nailed & Glued

Vibration CCMC References

Boise - 12472-R , 12787-R LP - 12412-R Forex - 14056-R

Thickness

Fastener

Kott Inc. 3228 Moodie Dr. Ottawa

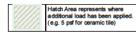
14 Anderson Blvd, Uxbridg Ontario

613-838-2775 905-642-4400



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| Discipline    | Reviewer   | BCIN  | Date       |
|---------------|------------|-------|------------|
| Building Code | H. Authier | 43236 | 2021-02-03 |
| Sewage System |            |       |            |
| Zoning        |            |       |            |
|               |            |       |            |



Version 20.40.075 Powered by iStruct\*\*

This layout is to be used as an installation guide only. It is meant to be used in conjunction with the architectural and structural drawings, not to replace them



Project:

Address:

**GREENPARK HOMES** TRINAR HALL, EAST GWILLIMBURY, ON Date: 12/17/2020 Input by:

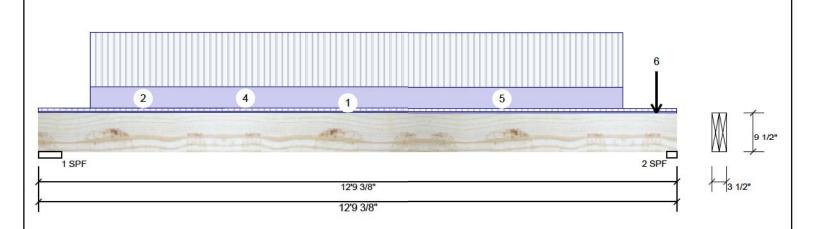
Job Name: LOT-36 (GLENWAY 12A EL-2)

Project #:

F10-A Forex 2.0E-3000Fb LVL

1.750" X 9.500" 2-Ply - PASSED

Level: Ground Floor



| Member Inform      | nation |                |                      | Unfactore  | d Reactio            | ns UNPATTERNE  | D lb (Uplift)  |            |
|--------------------|--------|----------------|----------------------|------------|----------------------|--|----------------|------------|
| Type:              | Girder | Application:   | Floor (Residential)  | Brg        | Live                 | Dead   | Snow           | Wind       |
| Plies:             | 2      | Design Method: | LSD                  | 1          | 1137                 | 482  | 0              | 0          |
| Moisture Condition | Dry    | Building Code: | NBCC 2015 / OBC 2012 | 2          | 1233                 | 518  | 0              | 0          |
| Deflection LL:     | 360    | Load Sharing:  | No                   |            |                      |  |                |            |
| Deflection TL:     | 240    | Deck:          | Not Checked          |            |                      |  |                |            |
| Importance:        | Normal | Vibration:     | Not Checked          |            |                      |  |                |            |
| General Load       |        | 25 AAA (       |                      |            | Fig. 18 (March 1990) | 2 150 VICTOR 1 150 |                |            |
| Floor Live:        | 40 PSF |                |                      | Bearings a | and Factor           | red Reactions  |                |            |
| Dead:              | 15 PSF |                |                      | Bearing L  | ength                | Cap. React D/L lb  | Total Ld. Case | Ld. Comb.  |
|                    |        |                |                      | 1 - SPF 5  | .500"                | 19% 603 / 1706   | 2309 L         | 1.25D+1.5L |
|                    |        |                |                      | 2-SPF 2    | .375"                | 49% 647 / 1850   | 2497 L         | 1.25D+1.5L |

#### **Analysis Results**

| Analysis      | Actual         | Location   | Allowed       | Capacity    | Comb.      | Case    |
|---------------|----------------|------------|---------------|-------------|------------|---------|
| Moment        | 7709 ft-lb     | 6'6 1/4"   | 22724 ft-lb   | 0.339 (34%) | 1.25D+1.5L | L       |
| Unbraced      | 7709 ft-lb     | 6'6 1/4"   | 19760 ft-lb   | 0.390 (39%) | 1.25D+1.5L | L       |
| Shear         | 2523 lb        | 11'10 1/4" | 9277 lb       | 0.272 (27%) | 1.25D+1.5L | L       |
| Perm Defl in. | 0.091 (L/1607) | 6'6 1/4"   | 0.408 (L/360) | 0.220 (22%) | D          | Uniform |
| LL Defl inch  | 0.219 (L/673)  | 6'6 1/4"   | 0.408 (L/360) | 0.540 (54%) | L          | L       |
| TL Defl inch  | 0.310 (L/474)  | 6'6 1/4"   | 0.612 (L/240) | 0.510 (51%) | D+L        | L       |

### **Design Notes**

- 1 Girders are designed to be supported on the bottom edge only.
- 2 Multiple plies must be fastened together as per manufacturer's details.
- 3 Top loads must be supported equally by all plies.
- 4 Top braced at bearings.
- 5 Bottom braced at bearings.

6 Lateral slenderness ratio based on full section width

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PASS THRU FRAMING SQUASH **BLOCK IS REQUIRED AT ALL** POINT LOADS OVER BEARINGS.



Page 1 of 7

| O Edicial Sicilaciness ratio based on full section width. |               |                  |            |           |        |         |       |       |          |
|---|---------------|------------------|------------|-----------|--------|---------|-------|-------|----------|
| ID  | Load Type     | Location         | Trib Width | Side      | Dead   | Live    | Snow  | Wind  | Comments |
| 1   | Tie-In        | 0-0-0 to 12-9-6  | 0-3-7      | Тор       | 15 PSF | 40 PSF  | 0 PSF | 0 PSF |          |
| 2   | Tapered Start | 0-5-8            |            | Тор       | 0 PLF  | 0 PLF   | 0 PLF | 0 PLF |          |
|   | End           | 3-8-11           |            |           | 1 PLF  | 0 PLF   | 0 PLF | 0 PLF |          |
| 4   | Part. Uniform | 1-0-7 to 11-8-7  |            | Near Face | 73 PLF | 194 PLF | 0 PLF | 0 PLF |          |
| 5   | Part. Uniform | 3-8-11 to 12-8-1 |            | Тор       | 1 PLF  | 0 PLF   | 0 PLF | 0 PLF |          |
| 6   | Point         | 12-4-7           |            | Near Face | 59 lb  | 156 lb  | 0 lb  | 0 lb  | J1       |
|   | Self Weight   |                  |            |           | 8 PLF  |         |       |       |          |



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| Jiscipiine    | Reviewer   | BCIN  | Date       |
|---------------|------------|-------|------------|
| Building Code | H. Authier | 43236 | 2021-02-03 |
| Sewage System |            |       |            |
| Coning        |            |       |            |
|               |            |       |            |

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design orineria 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.

- Dry service conditions, unless noted otherwise
   LVL not to be treated with fire retardant or corrosive
- Handling & Installation
- 1. IVI, beams must not be out or drilled
  2. Refer to manufacturer's product informating regarding installation requirements, multifastening details, beam strength values, and co approvals
  3. Damaged Beams must not be used
- Daniaged beams must not be used Design assumes top edge is laterally restrained Provide lateral support at bearing points to avoid lateral displacement and rotation

APA: PR-L318

3228 Moodie Dr, Ottawa, Ontario 613-838-2775 / 905-642-4400



This design is valid until 4/24/2023

Manufacturer Info



Project:

Address: **GREENPARK HOMES** 

TRINAR HALL, EAST GWILLIMBURY, ON

Date: 12/17/2020

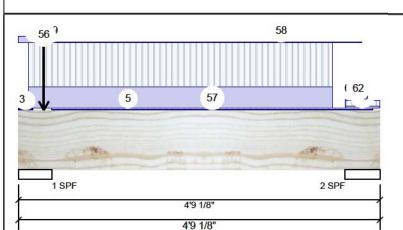
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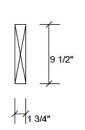
Job Name: LOT-36 (GLENWAY 12A EL-2)

Level: Ground Floor

Project #:

#### 1.750" X 9.500" - PASSED Forex 2.0E-3000Fb LVL F5-D





Page 2 of 7

| Member | Information |
|--------|-------------|
| Type:  | Girder      |
| Dline: | 1           |

Plies: Moisture Condition: Dry Deflection LL: 360 Deflection TL: 240 Importance: Normal General Load

40 PSF 15 PSF Application: Floor (Residential)

Design Method: **Building Code:** NBCC 2015 / OBC 2012

Load Sharing: No Deck: Not Checked Vibration: Not Checked

| Unfactored Reactions UNPATTERNED Ib (Uplift) |     |      |      |      |      |  |  |
|--|-----|------|------|------|------|--|--|
|  | Brg | Live | Dead | Snow | Wind |  |  |
|  | 1   | 1010 | 486  | 0    | 0    |  |  |
|  | 2   | 551  | 278  | 0    | 0    |  |  |

# Bearings and Factored Reactions

Bearing Length Cap. React D/L lb Total Ld. Case Ld. Comb. 1 - SPF 5.250" 38% 607 / 1515 2122 L 1.25D+1.5L 2 - SPF 5.500" 20% 347 / 826 1173 I 1.25D+1.5L

#### **Analysis Results**

Floor Live:

Dead:

| Analysis      | Actual         | Location | Allowed       | Capacity    | Comb.      | Case    |
|---------------|----------------|----------|---------------|-------------|------------|---------|
| Moment        | 1256 ft-lb     | 2'4 3/8" | 11362 ft-lb   | 0.111 (11%) | 1.25D+1.5L | L       |
| Unbraced      | 1256 ft-lb     | 2'4 3/8" | 8847 ft-lb    | 0.142 (14%) | 1.25D+1.5L | L       |
| Shear         | 1253 lb        | 3'6 7/8" | 4638 lb       | 0.270 (27%) | 1.25D+1.5L | L       |
| Perm Defl in. | 0.005 (L/8786) | 2'4 3/8" | 0.133 (L/360) | 0.040 (4%)  | D          | Uniform |
| LL Defl inch  | 0.011 (L/4417) | 2'4 3/8" | 0.133 (L/360) | 0.080 (8%)  | L          | L       |
| TL Defl inch  | 0.016 (L/2939) | 2'4 3/8" | 0.199 (L/240) | 0.080 (8%)  | D+L        | L       |

**Design Notes** 

- 1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 4.5.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Top braced at bearings.
- 4 Bottom braced at bearings

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PASS THRU FRAMING SQUASH **BLOCK IS REQUIRED AT ALL** POINT LOADS OVER BEARINGS.



| ID | Load Type     | Location         | Trib Width | Side     | Dead    | Live    | Snow  | Wind  | Comments           |
|----|---------------|------------------|------------|----------|---------|---------|-------|-------|--------------------|
| 2  | Tapered Start | 0-0-0            |            | Тор      | 3 PLF   | 7 PLF   | 0 PLF | 0 PLF |                    |
|    | End           | 0-2-4            |            |          | 3 PLF   | 7 PLF   | 0 PLF | 0 PLF |                    |
| 3  | Part. Uniform | 0-0-0 to 0-1-10  |            | Тор      | 31 PLF  | 82 PLF  | 0 PLF | 0 PLF | J3                 |
| 4  | Part. Uniform | 0-0-0 to 0-5-4   |            | Тор      | 41 PLF  | 0 PLF   | 0 PLF | 0 PLF | Wall Self Weigh Th |
| 5  | Part. Uniform | 0-1-10 to 4-1-10 |            | Far Face | 142 PLF | 290 PLF | 0 PLF | 0 PLF | ma<br>Sta<br>Zo    |
| 56 | Point         | 0-4-0            |            | Тор      | 129 lb  | 335 lb  | 0 lb  | 0 lb  | F5 F5 Or           |

Ton

Continued on page 2...



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|                                 | Discipline    | Reviewer   | BCIN  | Date       |  |  |  |  |
|---------------------------------|---------------|------------|-------|------------|--|--|--|--|
|                                 | Building Code | H. Authier | 43236 | 2021-02-03 |  |  |  |  |
|                                 | Sewage System |            |       |            |  |  |  |  |
|                                 | Zoning        |            |       |            |  |  |  |  |
| Kott                            |               |            |       |            |  |  |  |  |
| 3228 Moodie Dr, Ottawa, Ontario |               |            |       |            |  |  |  |  |

Notes

57

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

Tie-In

- **Handling & Installation**

0-5-4 to 4-8-0 0-2-8

- LVL beams must not be cut or drilled
   Refer to manufacturer's product regarding installation requirement fastening details, beam strength value
- approvals
  Damaged Beams must not be used Daniaged beams must not be used Design assumes top edge is laterally restrained Provide lateral support at bearing points to avoid lateral displacement and rotation

15 PSF

40 PSF

APA: PR-L318

Manufacturer Info

0 PSF

0 PSF

613-838-2775 / 905-642-4400

CSD DESIGN

| 2.   | LVĹ  | not | to be | treated | with | fire | retardant | or  | corros | iv |
|------|------|-----|-------|---------|------|------|-----------|-----|--------|----|
| Vers | sion | 20  | .40.0 | 075 Pc  | wer  | ed   | by iStru  | ıct | тм     |    |



Project:

Address: **GREENPARK HOMES** 

TRINAR HALL, EAST GWILLIMBURY, ON

Date: 12/17/2020

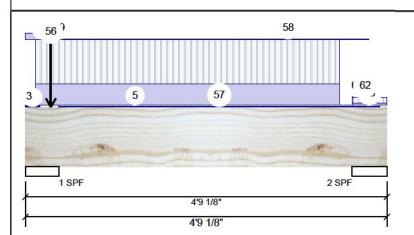
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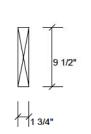
Job Name: LOT-36 (GLENWAY 12A EL-2)

Level: Ground Floor

Project #:

#### Forex 2.0E-3000Fb LVL 1.750" X 9.500" - PASSED F5-D





Page 3 of 7

| Continued from | .Continued from page 1 |                 |            |      |        |        |       |       |                  |  |
|----------------|------------------------|-----------------|------------|------|--------|--------|-------|-------|------------------|--|
| ID             | Load Type              | Location        | Trib Width | Side | Dead   | Live   | Snow  | Wind  | Comments         |  |
| 58             | Part. Uniform          | 0-5-4 to 4-6-4  |            | Тор  | 1 PLF  | 0 PLF  | 0 PLF | 0 PLF |                  |  |
| 59             | Part. Uniform          | 0-5-4 to 0-5-6  |            | Тор  | 82 PLF | 0 PLF  | 0 PLF | 0 PLF | Wall Self Weight |  |
| 60             | Tie-In                 | 4-3-10 to 4-9-2 | 0-11-8     | Тор  | 15 PSF | 40 PSF | 0 PSF | 0 PSF |                  |  |
| 61             | Part. Uniform          | 4-3-10 to 4-5-2 |            | Тор  | 5 PLF  | 0 PLF  | 0 PLF | 0 PLF |                  |  |
| 62             | Tapered Start          | 4-5-2           |            | Тор  | 5 PLF  | 0 PLF  | 0 PLF | 0 PLF |                  |  |
|                | End                    | 4-6-4           |            |      | 0 PLF  | 0 PLF  | 0 PLF | 0 PLF |                  |  |
|                | Self Weight            |                 |            |      | 4 PLF  |        |       |       |                  |  |

READ ALL NOTES ON THIS PAGE AND ON ENGINEERING NOTE PAGE ENP-2. THIS

CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH **BLOCK IS REQUIRED AT ALL** POINT LOADS OVER BEARINGS.



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Discipline Reviewer BCIN Date
Building Code H. Authier 43236 2021-02-03

Kott 3228 Moodie Dr, Ottawa, Ontario 613-838-2775 / 905-642-4400



NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT. REFER TO MULTIPLE MEMBER TO MEMBER

Manufacturer Info

APA: PR-L318

### Notes

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- Dry service conditions, unless noted otherwise
   LVL not to be treated with fire retardant or corrosive
- 1. LVL beams must not be out or drilled
  2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastering 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

Handling & Installation

This design is valid until 4/24/2023

Version 20.40.075 Powered by iStruct™



Client: Project:

Address:

**GREENPARK HOMES** 

TRINAR HALL, EAST GWILLIMBURY, ON

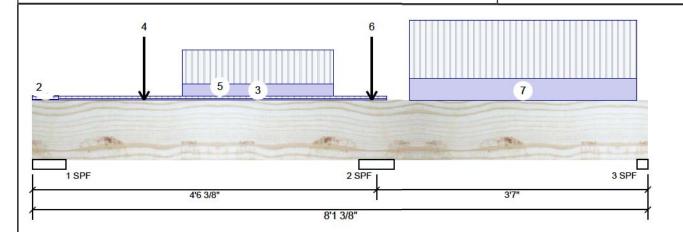
Date: 12/17/2020

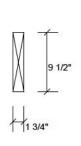
Input by: Job Name: LOT-36 (GLENWAY 12A EL-2)

Level: Ground Floor

Project #:

#### Forex 2.0E-3000Fb LVL 1.750" X 9.500" - PASSED F8-B





Wind 0

0

0

0

Page 4 of 7

| Member Information |         |  |                     |  |  |  |  |
|--------------------|---------|--|---------------------|--|--|--|--|
| Type:              | Girder  | Application:                             | Floor (Residential) |  |  |  |  |
| Plies:             | 1       | Design Method:                           | LSD                 |  |  |  |  |
| Moisture Condition | on: Dry | Building Code:                           | NBCC 2015 / OBC     |  |  |  |  |
| Deflection LL:     | 360     | Load Sharing:                            | No                  |  |  |  |  |
| Deflection TL:     | 240     | Deck:                                    | Not Checked         |  |  |  |  |
| Importance:        | Normal  | Vibration:                               | Not Checked         |  |  |  |  |
| General Load       |         | 20 A A A A A A A A A A A A A A A A A A A |                     |  |  |  |  |
|                    |         |  |                     |  |  |  |  |

| Unfactored Reactions UNPATTERNED Ib (Uplift) |     |      |      |      |   |  |  |  |  |
|--|-----|------|------|------|---|--|--|--|--|
|  | Brg | Live | Dead | Snow | _ |  |  |  |  |
|  | 1   | 466  | 183  | 0    |   |  |  |  |  |
|  | 2   | 1780 | 686  | 0    |   |  |  |  |  |

256

# DBC 2012 Floor Live: 40 PSF 15 PSF Dead:

| Bearings and | Factored | Reactions |
|--------------|----------|-----------|
|--------------|----------|-----------|

667

3

| Bearing | Length | Cap. H | React D/L lb | lotal | Ld. Case | Ld. Comb.  |
|---------|--------|--------|--------------|-------|----------|------------|
| 1 - SPF | 5.250" | 18%    | 214 / 775    | 990   | L_       | 1.25D+1.5L |
| 2 - SPF | 5.500" | 62%    | 888 / 2765   | 3653  | LL       | 1.25D+1.5L |
| 3 - SPF | 1.750" | 75%    | 303 / 1111   | 1414  | _L       | 1.25D+1.5L |

### Analysis Results

| Analysis      | Actual             | Location    | Allowed       | Capacity    | Comb.      | Case    |
|---------------|--------------------|-------------|---------------|-------------|------------|---------|
| Neg Moment    | -1407 ft-lb        | 4'6 3/8"    | 11362 ft-lb   | 0.124 (12%) | 1.25D+1.5L | LL      |
| Unbraced      | -1407 ft-lb        | 4'6 3/8"    | 8633 ft-lb    | 0.163 (16%) | 1.25D+1.5L | LL      |
| Pos Moment    | 1091 ft-lb         | 6'6 9/16"   | 11362 ft-lb   | 0.096 (10%) | 1.25D+1.5L | _L      |
| Unbraced      | 1037 ft-lb         | 1'11 11/16" | 8633 ft-lb    | 0.120 (12%) | 1.25D+1.5L | L_      |
| Shear         | 2105 lb            | 5'3 7/8"    | 4638 lb       | 0.454 (45%) | 1.25D+1.5L | LL      |
| Perm Defl in. | 0.004<br>(L/13387) | 2'2 13/16"  | 0.139 (L/360) | 0.030 (3%)  | D          | Uniform |
| LL Defl inch  | 0.010 (L/4095)     | 6'4 1/16"   | 0.117 (L/360) | 0.090 (9%)  | L          | _L      |
| TI Defl inch  | 0.014 (L/3098)     | 6'4 3/16"   | 0.175 (L/240) | 0.080 (8%)  | D+L        | L       |

READ ALL NOTES ON THIS PAGE AND ON ENGINEERING NOTE PAGE ENP-2. THIS NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

Manufacturer Info

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH **BLOCK IS REQUIRED AT ALL** POINT LOADS OVER BEARINGS.



#### **Design Notes**

- 1 Girders are designed to be supported on the bottom edge only.
- 2 Top braced at bearings.
- 3 Bottom braced at bearings

| 3 DOMONI DIACC    | u at bearings. |                    |            |           |         |         |       |       |          |
|-------------------|----------------|--------------------|------------|-----------|---------|---------|-------|-------|----------|
| ID                | Load Type      | Location           | Trib Width | Side      | Dead    | Live    | Snow  | Wind  | Comments |
| 1                 | Tie-In         | 0-0-0 to 0-4-2     | 0-5-10     | Тор       | 15 PSF  | 40 PSF  | 0 PSF | 0 PSF |          |
| 2                 | Tie-In         | 0-0-0 to 0-4-2     | 0-2-6      | Тор       | 15 PSF  | 40 PSF  | 0 PSF | 0 PSF |          |
| 3                 | Tie-In         | 0-4-2 to 4-8-0     | 0-6-14     | Тор       | 15 PSF  | 40 PSF  | 0 PSF | 0 PSF |          |
| 4                 | Point          | 1-5-10             |            | Near Face | 169 lb  | 450 lb  | 0 lb  | 0 lb  | J3       |
| 5                 | Part. Uniform  | 1-11-10 to 3-11-10 |            | Near Face | 109 PLF | 291 PLF | 0 PLF | 0 PLF |          |
| 6                 | Point          | 4-5-10             |            | Near Face | 99 lb   | 264 lb  | 0 lb  | 0 lb  | J3       |
| Continued on page | 2              |                    |            |           |         |         |       |       |          |



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|                                 | Discipline    | Reviewer   | BCIN  | Date       |  |  |  |  |
|---------------------------------|---------------|------------|-------|------------|--|--|--|--|
|                                 | Building Code | H. Authier | 43236 | 2021-02-03 |  |  |  |  |
|                                 | Sewage System |            |       |            |  |  |  |  |
|                                 | Zoning        |            |       |            |  |  |  |  |
| Kott                            |               |            |       |            |  |  |  |  |
| 3228 Moodie Dr, Ottawa, Ontario |               |            |       |            |  |  |  |  |

#### Notes

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Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corro

## Handling & Installation

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3. Damaged Beams must not be used

Daniaged beams must not be used Design assumes top edge is laterally restrained Provide lateral support at bearing points to avoid lateral displacement and rotation

APA: PR-L318

613-838-2775 / 905-642-4400



isDesign

Client:

Project:

Address: **GREENPARK HOMES** 

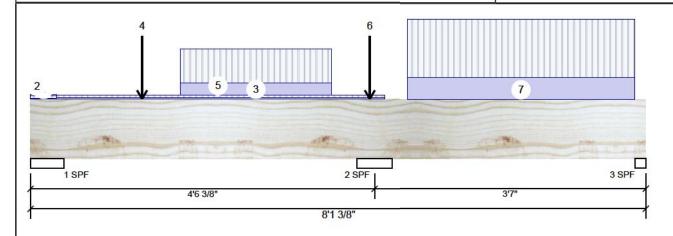
TRINAR HALL, EAST GWILLIMBURY, ON

Date: 12/17/2020 Input by:

Job Name: LOT-36 (GLENWAY 12A EL-2)

Project #:

1.750" X 9.500" - PASSED Level: Ground Floor Forex 2.0E-3000Fb LVL F8-B



Page 5 of 7

.Continued from page 1

ID **Load Type** Location Trib Width Side Dead Live Snow Wind Comments 7 189 PLF 503 PLF 0 PLF 0 PLF Part. Uniform 4-11-10 to 7-11-10 Near Face Self Weight 4 PLF

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> > Manufacturer Info

APA: PR-L318

CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH **BLOCK IS REQUIRED AT ALL** POINT LOADS OVER BEARINGS.



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Discipline Reviewer BCIN Date
Building Code H. Authier 43236 2021-02-03

Kott 3228 Moodie Dr, Ottawa, Ontario

613-838-2775 / 905-642-4400

Notes

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4. 5.

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  - Daniaged beams must not be used Design assumes top edge is laterally restrained Provide lateral support at bearing points to avoid lateral displacement and rotation



Project:

Address: **GREENPARK HOMES** 

TRINAR HALL, EAST GWILLIMBURY, ON

Date: 12/17/2020 Input by:

Job Name: LOT-36 (GLENWAY 12A EL-2)

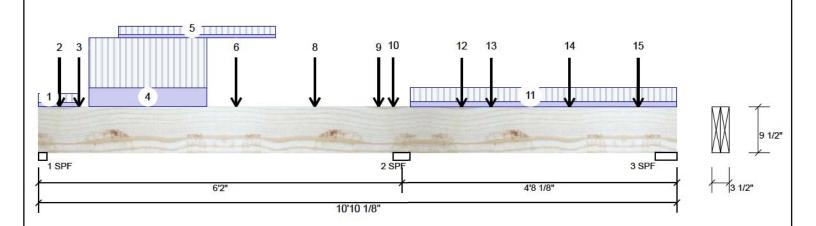
Project #:

Forex 2.0E-3000Fb LVL

1.750" X 9.500"

2-Ply - PASSED

Level: Ground Floor



| Type:            | Girder  | Application:  | Floor (Residential)  |
|------------------|---------|---|----------------------|
| Plies:           | 2       | Design Method:  | LSD                  |
| Moisture Conditi | on: Dry | Building Code:  | NBCC 2015 / OBC 2012 |
| Deflection LL:   | 360     | Load Sharing:   | No                   |
| Deflection TL:   | 240     | Deck:   | Not Checked          |
| Importance:      | Normal  | Vibration:  | Not Checked          |
| General Load     |         | Sign and the control of the control |                      |
| Floor Live:      | 40 PSF  |   |                      |
| Dead:            | 15 PSF  |   |                      |

| Brg | Live | Dead | Snow | Wind |
|-----|------|------|------|------|
| 1   | 1008 | 397  | 0    | 0    |
| 2   | 2237 | 906  | 0    | 0    |
| 3   | 622  | 265  | 0    | 0    |

Unfactored Reactions UNPATTERNED lb (Uplift)

### Analysis Results

| l | Analysis      | Actual             | Location    | Allowed       | Capacity    | Comb.      | Case    |
|---|---------------|--------------------|-------------|---------------|-------------|------------|---------|
| l | Neg Moment    | -2440 ft-lb        | 6'2"        | 22724 ft-lb   | 0.107 (11%) | 1.25D+1.5L | LL      |
| l | Unbraced      | -2440 ft-lb        | 6'2"        | 21993 ft-lb   | 0.111 (11%) | 1.25D+1.5L | LL      |
| l | Pos Moment    | 2177 ft-lb         | 2'7 3/16"   | 22724 ft-lb   | 0.096 (10%) | 1.25D+1.5L | L_      |
| l | Unbraced      | 2177 ft-lb         | 2'7 3/16"   | 21993 ft-lb   | 0.099 (10%) | 1.25D+1.5L | L_      |
| l | Shear         | 1997 lb            | 5'4 1/2"    | 9277 lb       | 0.215 (22%) | 1.25D+1.5L | LL      |
|   | Perm Defl in. | 0.007<br>(L/10925) | 2'10 11/16" | 0.203 (L/360) | 0.030 (3%)  | D          | Uniform |
| l | LL Defl inch  | 0.019 (L/3773)     | 2'11 13/16" | 0.203 (L/360) | 0.100 (10%) | L          | L_      |
| l | TL Defl inch  | 0.026 (1./2805)    | 2'11 9/16"  | 0.304 (1/240) | 0.090 (9%)  | D+I        | 1       |

## Bearings and Factored Reactions

| Bearing Length | Cap. | React D/L lb | Total         | Ld. Case | Ld. Comb.                 |
|----------------|------|--------------|---------------|----------|---------------------------|
| 1 - SPF 1.750" | 55%  | 486 / 1569   | 2055          | L_       | 1.25D+1.5L                |
| 2 - SPF 3.500" | 61%  | 1158 / 3429  | 4586          | LL       | 1.25D+1.5L                |
| 3 - SPF 4.375" | 16%  | 317 / 1186   | 1504<br>(-32) | _L       | 1.25D+1.5L<br>(0.9D+1.5L) |

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PASS THRU FRAMING SQUASH **BLOCK IS REQUIRED AT ALL** POINT LOADS OVER BEARINGS.

NAILING OR BOLTING REQUIREMENTS.



Page 6 of 7

#### **Design Notes**

- 1 Girders are designed to be supported on the bottom edge only.
- 2 Multiple plies must be fastened together as per manufacturer's details.
- 3 Top loads must be supported equally by all plies.
- 4 Tie-down connection required at bearing 3 for uplift 32 lb (Combination 0.9D+1.5L, Load Case L ).
- 5 Top braced at bearings.
- 6 Bottom braced at bearings.
- 7 Lateral slenderness ratio based on full section width.

| ID                | Load Type | Location       | Trib Width | Side      | Dead   | Live   | Snow  | Wind  | Comments |  |
|-------------------|-----------|----------------|------------|-----------|--------|--------|-------|-------|----------|--|
| 1                 | Tie-In    | 0-0-0 to 0-8-4 | 1-4-6      | Тор       | 15 PSF | 40 PSF | 0 PSF | 0 PSF |          |  |
| 2                 | Point     | 0-4-4          |            | Near Face | 140 lb | 374 lb | 0 lb  | 0 lb  | J3       |  |
| 3                 | Point     | 0-8-4          |            | Far Face  | 20 lb  | 53 lb  | 0 lb  | 0 lb  | J4       |  |
| Continued on page | 2         |                |            |           |        |        |       |       |          |  |



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|      | Discipline    | Reviewer   | BCIN  | Date       |
|------|---------------|------------|-------|------------|
|      | Building Code | H. Authier | 43236 | 2021-02-03 |
|      | Sewage System |            |       |            |
|      | Zoning        |            |       |            |
| Kott |               |            |       |            |
| 322  | 3 Moodie L    | r, Otta    | wa, O | ntario     |

Notes

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APA: PR-L318

Manufacturer Info

613-838-2775 / 905-642-4400



Project:

Address: **GREENPARK HOMES** 

TRINAR HALL, EAST GWILLIMBURY, ON

Date: 12/17/2020

Input by:

Job Name: LOT-36 (GLENWAY 12A EL-2)

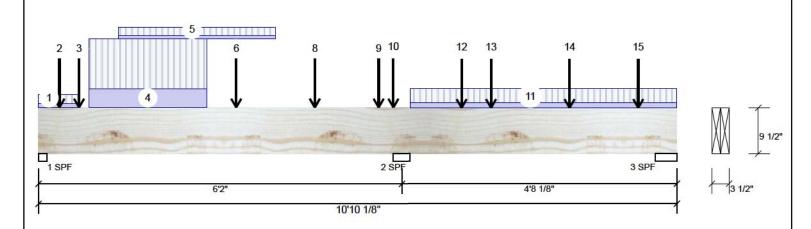
Project #:

Forex 2.0E-3000Fb LVL F9-C

1.750" X 9.500"

2-Ply - PASSED

Level: Ground Floor



| DESCRIPTION OF STREET |               |                   |            |           |         |         |       |       |          |  |
|-----------------------|---------------|-------------------|------------|-----------|---------|---------|-------|-------|----------|--|
| .Continued fr         | om page 1     |                   |            |           |         |         |       |       |          |  |
| ID                    | Load Type     | Location          | Trib Width | Side      | Dead    | Live    | Snow  | Wind  | Comments |  |
| 4                     | Part. Uniform | 0-10-4 to 2-10-4  |            | Near Face | 108 PLF | 289 PLF | 0 PLF | 0 PLF |          |  |
| 5                     | Part. Uniform | 1-4-4 to 4-0-4    |            | Far Face  | 19 PLF  | 50 PLF  | 0 PLF | 0 PLF |          |  |
| 6                     | Point         | 3-4-4             |            | Near Face | 124 lb  | 330 lb  | 0 lb  | 0 lb  | J3       |  |
| 7                     | Point         | 4-8-4             |            | Far Face  | 23 lb   | 60 lb   | 0 lb  | 0 lb  | J4       |  |
| 8                     | Point         | 4-8-4             |            | Near Face | 141 lb  | 377 lb  | 0 lb  | 0 lb  | J3       |  |
| 9                     | Point         | 5-9-4             |            | Far Face  | 15 lb   | 39 lb   | 0 lb  | 0 lb  | J4       |  |
| 10                    | Point         | 6-0-4             |            | Near Face | 132 lb  | 353 lb  | 0 lb  | 0 lb  | J3       |  |
| 11                    | Part. Uniform | 6-3-12 to 10-10-2 |            | Тор       | 30 PLF  | 80 PLF  | 0 PLF | 0 PLF |          |  |
| 12                    | Point         | 7-2-4             |            | Near Face | 118 lb  | 267 lb  | 0 lb  | 0 lb  | F16      |  |
| 13                    | Point         | 7-8-4             |            | Near Face | 88 lb   | 235 lb  | 0 lb  | 0 lb  | J2       |  |
| 14                    | Point         | 9-0-4             |            | Near Face | 120 lb  | 320 lb  | 0 lb  | 0 lb  | J2       |  |
| 15                    | Point         | 10-2-4            |            | Near Face | 148 lb  | 348 lb  | 0 lb  | 0 lb  | F16      |  |
|                       | Self Weight   |                   |            |           | 8 PLF   |         |       |       |          |  |
|                       |               |                   |            |           |         |         |       |       |          |  |

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REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH **BLOCK IS REQUIRED AT ALL** POINT LOADS OVER BEARINGS.



Page 7 of 7

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 Discipline
 Reviewer
 BCIN
 Date

 Building Code
 H. Authier
 43236
 2021-02-03

Notes

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- Handling & Installation
- 1. LVL beams must not be out or drilled
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  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

APA: PR-L318

Manufacturer Info

This design is valid until 4/24/2023

3228 Moodie Dr, Ottawa, Ontario 613-838-2775 / 905-642-4400

Kott



**BC CALC® Member Report** 

# Single 9-1/2" AJS® 140

#### F14-A

**Build 7364** 

Dry | 1 span | No cant.

December 17, 2020 14:53:05

**PASSED** 

Job name: Address:

Customer:

**GREENPARK HOMES** 

C:\Data\SAUMIL\GREENP...GLENWAY 12A EL-2).isl File name:

TRINA...L, EAST GWILLIMBURY,ON

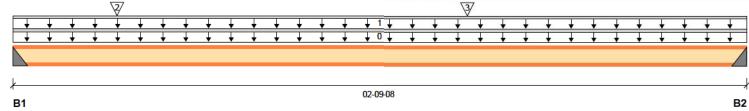
Description: Level - Ground Floor

City, Province, Postal Code:

Specifier:

Code reports: CCMC 12787-R Designer: SB

Company: 3/



Total Horizontal Product Length = 02-09-08

Reaction Summary (Down / Uplift) (lbs)

| Bearing | Live    | Dead    | Snow | Wind |
|---------|---------|---------|------|------|
| B1, 2"  | 363 / 0 | 139 / 0 |      |      |
| B2, 2"  | 264 / 0 | 102 / 0 |      |      |

| Lo  | ad Summary  |                   |      |          |          |      | Live | Dead | Snow | Wind | Tributary |
|-----|-------------|-------------------|------|----------|----------|------|------|------|------|------|-----------|
| Tag | Description | Load Type         | Ref. | Start    | End      | Loc. | 1.00 | 0.65 | 1.00 | 1.15 |           |
| 0   | Self-Weight | Unf. Lin. (lb/ft) | L    | 00-00-00 | 02-09-08 | Тор  |      | 2    |      |      | 00-00-00  |
| 1   |             | Unf. Lin. (lb/ft) | L    | 00-00-00 | 02-09-08 | Тор  | 26   | 10   |      |      | n\a       |
| 2   | J2          | Conc. Pt. (lbs)   | L    | 00-04-12 | 00-04-12 | Back | 235  | 88   |      |      | n\a       |
| 3   | J2          | Conc. Pt. (lbs)   | L    | 01-08-12 | 01-08-12 | Back | 320  | 120  |      |      | n\a       |

| 0 1 0                 |                 | Factored    | Demand/    |      |          |
|-----------------------|-----------------|-------------|------------|------|----------|
| Controls Summary      | Factored Demand | Resistance  | Resistance | Case | Location |
| Pos. Moment           | 471 ft-lbs      | 4095 ft-lbs | 11.5%      | 1    | 01-08-12 |
| End Reaction          | 719 lbs         | 1588 lbs    | 45.3%      | 1    | 00-00-00 |
| End Shear             | 710 lbs         | 1830 lbs    | 38.8%      | 1    | 00-02-00 |
| Total Load Deflection | L/999 (0.008")  | n\a         | n\a        | 4    | 01-08-12 |
| Live Load Deflection  | L/999 (0.006")  | n\a         | n\a        | 5    | 01-08-12 |
| Max Defl.             | 0.008"          | n\a         | n\a        | 4    | 01-08-12 |
| Span / Depth          | 3.3             |             |            |      |          |

| Bearing | g Supports | Dim. (LxW)  | Demand  | Demand/<br>Resistance<br>Support | Demand/<br>Resistance<br>Member | Material |
|---------|------------|-------------|---------|----------------------------------|---------------------------------|----------|
| B1      | Hanger     | 2" x 2-1/2" | 719 lbs | 37.0%                            | 45.3%                           | LF259    |
| B2      | Hanger     | 2" x 2-1/2" | 523 lbs | 26.9%                            | 32.9%                           | LF259    |



### Cautions

Hanger LF259 requires (10) 10dx1.5 face nails, (1) #8x1.25 joist nails. Header for the hanger LF259 is a Single 2-1/2" x 9-1/2" I-joist

Header for the hanger LF259 is a Single 2-1/2" x 9-1/2" I-joist

READ ALL NOTES ON THIS PAGE AND ON ENGINEERING NOTE PAGE ENP-2. THIS NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT. REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH **BLOCK IS REQUIRED AT ALL** POINT LOADS OVER BEARINGS.



These plans have been reviewed for use with the corrections as noted. No other changes may be made without written approval of the Building Standards Branch. All work must comply with Zoning By-Law 2018-043, as amended, and the Ontario Building Code, as amepided. These approved documents must be kept on site at all times. The whiteling nearly must be also all times. The whiteling nearly must be also times. The building permit must be clearly posted on site at all times.

| Discipline    | Reviewer   | BCIN  | Date       |
|---------------|------------|-------|------------|
| Building Code | H. Authier | 43236 | 2021-02-03 |
| Sewage System |            |       |            |
| Zoning        |            |       |            |



City, Province, Postal Code:

# Single 9-1/2" AJS® 140

#### F14-A



**BC CALC® Member Report** Dry | 1 span | No cant. December 17, 2020 14:53:05

**Build 7364** 

Address:

Job name:

C:\Data\SAUMIL\GREENP...GLENWAY 12A EL-2).isl File name: Description: Level - Ground Floor

**GREENPARK HOMES** 

TRINA...L, EAST GWILLIMBURY, ON

Specifier:

Customer: Designer: SB

Code reports: CCMC 12787-R Company:

### Notes

Design meets Code minimum (L/240) Total load deflection criteria.

Design meets Code minimum (L/360) Live load deflection criteria.

Design meets User specified (1") Maximum Total load deflection criteria.

Design meets User specified (0.72") Maximum live load deflection criteria.

Calculations assume member is fully braced.

Hanger Manufacturer: Simpson Strong-Tie, Inc.

Resistance Factor phi has been applied to all presented results per CSA O86.

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA O86.

Design based on Dry Service Condition. Importance Factor: Normal Part code: Part 9

### Disclosure

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Completeness and accuracy of input must be review qualified engine East Gwillimbury

qualified engine expert to assur 🗟

READ ALL NOTES ON THIS PAGE AND ON

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CONTAINS SPECIFICATIONS AND CRITERIA

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| Installation of D   | •             |            |       |            |
|---------------------|---------------|------------|-------|------------|
| engineered woo      | Discipline    | Reviewer   | BCIN  | Date       |
|                     |               | H. Authier | 43236 | 2021-02-03 |
| accordance wit      | Sewage System |            |       |            |
| Guide and appl      | Zoning        |            |       |            |
| obtain Installation |               |            |       |            |

obtain Install questions, please call (800)232-0788 before installation.

BC CALC®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BCI®, BOISE GLULAM™, BC FloorValue®,

VERSA-LAM®, VERSA-RIM PLUS®,

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.



# Single 9-1/2" AJS® 140

### F14-B

December 17, 2020 14:53:05

**BC CALC® Member Report** 

City, Province, Postal Code:

Dry | 1 span | No cant.

**Build 7364** Job name:

Address:

Customer:

**GREENPARK HOMES** 

C:\Data\SAUMIL\GREENP...GLENWAY 12A EL-2).isl Description: Level - Ground Floor

TRINA...L, EAST GWILLIMBURY,ON

Specifier:

Code reports: CCMC 12787-R

SB Designer:

File name:

Company:

3/ 02-09-08 B2

Total Horizontal Product Length = 02-09-08

Reaction Summary (Down / Unlift) (lbs)

| mouotion • |         | P() ()  |      |      |  |
|------------|---------|---------|------|------|--|
| Bearing    | Live    | Dead    | Snow | Wind |  |
| B1, 2"     | 337 / 0 | 130 / 0 |      |      |  |
| B2, 2"     | 265 / 0 | 102 / 0 |      |      |  |

| Lo | ad Summary  |                   |      |          |          |       | Live | Dead | Snow | Wind | Tributary |
|----|-------------|-------------------|------|----------|----------|-------|------|------|------|------|-----------|
|    | Description | Load Type         | Ref. | Start    | End      | Loc.  | 1.00 | 0.65 | 1.00 | 1.15 |           |
| 0  | Self-Weight | Unf. Lin. (lb/ft) | L    | 00-00-00 | 02-09-08 | Тор   |      | 2    |      |      | 00-00-00  |
| 1  | _           | Unf. Lin. (lb/ft) | L    | 00-00-00 | 02-09-08 | Тор   | 24   | 9    |      |      | n\a       |
| 2  | J2          | Conc. Pt. (lbs)   | L    | 00-05-11 | 00-05-11 | Front | 236  | 89   |      |      | n\a       |
| 3  | J2          | Conc. Pt. (lbs)   | L    | 01-09-11 | 01-09-11 | Front | 299  | 112  |      |      | n∖a       |

| 0 1 1 0               |                 | Factored    | Demand/    |      |          |
|-----------------------|-----------------|-------------|------------|------|----------|
| Controls Summary      | Factored Demand | Resistance  | Resistance | Case | Location |
| Pos. Moment           | 437 ft-lbs      | 4095 ft-lbs | 10.7%      | 1    | 01-09-11 |
| End Reaction          | 668 lbs         | 1588 lbs    | 42.1%      | 1    | 00-00-00 |
| End Shear             | 660 lbs         | 1830 lbs    | 36.1%      | 1    | 00-02-00 |
| Total Load Deflection | L/999 (0.007")  | n\a         | n\a        | 4    | 01-09-11 |
| Live Load Deflection  | L/999 (0.005")  | n\a         | n\a        | 5    | 01-09-11 |
| Max Defl.             | 0.007"          | n\a         | n\a        | 4    | 01-09-11 |
| Span / Depth          | 3.3             |             |            |      |          |

| Bearing | g Supports | Dim. (LxW)  | Demand  | Demand/<br>Resistance<br>Support | Demand/<br>Resistance<br>Member | Material |
|---------|------------|-------------|---------|----------------------------------|---------------------------------|----------|
| B1      | Hanger     | 2" x 2-1/2" | 668 lbs | 34.4%                            | 42.1%                           | LF259    |
| B2      | Hanger     | 2" x 2-1/2" | 525 lbs | 27.0%                            | 33.1%                           | LF259    |



Hanger LF259 requires (10) 10dx1.5 face nails, (1) #8x1.25 joist nails. Header for the hanger LF259 is a Single 2-1/2" x 9-1/2" I-joist

Header for the hanger LF259 is a Single 2-1/2" x 9-1/2" I-joist



ED PROFESSIONAL

**PASSED** 



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| Discipline    | Reviewer   | BCIN  | Date       |
|---------------|------------|-------|------------|
| Building Code | H. Authier | 43236 | 2021-02-03 |
| Sewage System |            |       |            |
| Zoning        |            |       |            |



City, Province, Postal Code:

# Single 9-1/2" AJS® 140

### F14-B



**BC CALC® Member Report** Dry | 1 span | No cant. December 17, 2020 14:53:05

**Build 7364** 

Customer:

Job name: Address: **GREENPARK HOMES** 

Description: Level - Ground Floor

C:\Data\SAUMIL\GREENP...GLENWAY 12A EL-2).isl

TRINA...L, EAST GWILLIMBURY, ON

File name:

Specifier:

Code reports: CCMC 12787-R Designer: SB Company:

READ ALL NOTES ON THIS PAGE AND ON

NOTE PAGE IS AN INTEGRAL PART OF THIS

CONTAINS SPECIFICATIONS AND CRITERIA

USED IN THE DESIGN OF THIS COMPONENT.

ENGINEERING NOTE PAGE ENP-2. THIS

CALCULATION SUMMARY PAGE AS IT

# **Notes**

Design meets Code minimum (L/240) Total load deflection criteria.

Design meets Code minimum (L/360) Live load deflection criteria.

Design meets User specified (1") Maximum Total load deflection criteria.

Design meets User specified (0.72") Maximum live load deflection criteria.

Calculations assume member is fully braced.

Hanger Manufacturer: Simpson Strong-Tie, Inc.

Resistance Factor phi has been applied to all presented results per CSA O86.

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA O86.

Design based on Dry Service Condition. Importance Factor: Normal Part code: Part 9

# Disclosure

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Completeness and accuracy of input

must be review qualified engine East Gwillimbury qualified engine expert to assuri Installation of B posted on site at all times.

anyone relying These plans have been reviewed for use with the evidence of sui corrections as noted. No other changes may be application. The Standards Branch. All work must comply with building code-a Ontario Building Code, as amended, and the building code-a Ontario Building Code, as amended. These properties and itimes. The building permit must be clearly properly conference of Properties and itimes. The building permit must be clearly properly conference of Properties and itimes.

engineered wor Discipline Building Code 43236 accordance wit Guide and appl 2

obtain Installati questions, please call (800)232-0788 before installation.

BC CALC®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BCI®, BOISE GLULAM™, BC FloorValue®,

VERSA-LAM®, VERSA-RIM PLUS®,

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# Single 9-1/2" AJS® 20

### F15-A

December 17, 2020 14:53:05

PASSED

**BC CALC® Member Report** 

Dry | 1 span | No cant.

**Build 7364** Job name:

Customer:

Address: **GREENPARK HOMES** 

TRINA...L, EAST GWILLIMBURY, ON

C:\Data\SAUMIL\GREENP...GLENWAY 12A EL-2).isl File name:

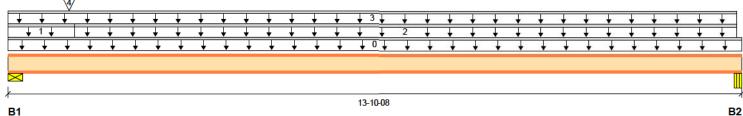
Description: Level - Ground Floor

City, Province, Postal Code:

Specifier:

Designer: SB

Code reports: CCMC 12787-R Company:



Total Horizontal Product Length = 13-10-08

### Reaction Summary (Down / Unlift) (lbs)

| reaction out | illiary (Down / O |         |      |      |  |
|--------------|-------------------|---------|------|------|--|
| Bearing      | Live              | Dead    | Snow | Wind |  |
| B1, 2-3/8"   | 575 / 0           | 236 / 0 |      |      |  |
| B2, 5-1/4"   | 237 / 0           | 107 / 0 |      |      |  |

| Lo | ad Summary  |                   |      |          |          |      | Live | Dead | Snow | Wind | Tributary |
|----|-------------|-------------------|------|----------|----------|------|------|------|------|------|-----------|
|    | Description | Load Type         | Ref. | Start    | End      | Loc. | 1.00 | 0.65 | 1.00 | 1.15 |           |
| 0  | Self-Weight | Unf. Lin. (lb/ft) | L    | 00-00-00 | 13-10-08 | Тор  |      | 3    |      |      | 00-00-00  |
| 1  |             | Unf. Lin. (lb/ft) | L    | 00-00-00 | 01-03-02 | Тор  | 60   | 23   |      |      | n\a       |
| 2  |             | Unf. Lin. (lb/ft) | L    | 01-03-02 | 13-09-06 | Тор  | 12   | 4    |      |      | n\a       |
| 3  |             | Unf. Lin. (lb/ft) | L    | 00-00-00 | 13-09-06 | Тор  | 18   | 7    |      |      | n\a       |
| 4  | F14         | Conc. Pt. (lbs)   | L    | 01-01-14 | 01-01-14 | Back | 337  | 130  |      |      | n∖a       |

|                       |                 | Factored    | Demand/    |      |          |
|-----------------------|-----------------|-------------|------------|------|----------|
| Controls Summary      | Factored Demand | Resistance  | Resistance | Case | Location |
| Pos. Moment           | 1784 ft-lbs     | 5675 ft-lbs | 31.4%      | 1    | 05-10-10 |
| End Reaction          | 1157 lbs        | 1653 lbs    | 70.0%      | 1    | 00-00-00 |
| End Shear             | 1125 lbs        | 1830 lbs    | 61.5%      | 1    | 00-02-06 |
| Total Load Deflection | L/799 (0.201")  | n\a         | 30.0%      | 4    | 06-07-03 |
| Live Load Deflection  | L/1151 (0.139") | n\a         | 31.3%      | 5    | 06-07-03 |
| Max Defl.             | 0.201"          | n\a         | 20.1%      | 4    | 06-07-03 |
| Span / Depth          | 16.9            |             |            |      |          |

| Bearing | Supports   | Dim. (LxW)      | Demand   | Demand/<br>Resistance<br>Support | Demand/<br>Resistance<br>Member | Material        |
|---------|------------|-----------------|----------|----------------------------------|---------------------------------|-----------------|
| B1      | Wall/Plate | 2-3/8" x 2-1/2" | 1157 lbs | 31.7%                            | 70.0%                           | Spruce-Pine-Fir |
| B2      | Beam       | 5-1/4" x 2-1/2" | 489 lbs  | 6.1%                             | 26.4%                           | Spruce-Pine-Fir |

### Notes

Design meets Code minimum (L/240) Total load deflection criteria.

Design meets Code minimum (L/360) Live load deflection criteria.

Design meets User specified (1") Maximum Total load deflection criteria.

Design meets User specified (0.72") Maximum live load deflection criteria.

Calculations assume member is fully braced.

Resistance Factor phi has been applied to all presented results per CSA O86.

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA O86.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9



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qualified engine expert to assur §

anyone relying These plans have been reviewed for use with the evidence of suii corrections as noted. No other changes may be made without written approval of the Building application. The Standards Branch. All work must comply with building codes. building code-a Ontario Building Code, as amehded, and properties and it times. The building permit must be contained to be co nes. The building permit must Installation of B posted on site at all times.

| engineered woo    | Disciplina    | Reviewer   | BCIN  | Date   |
|-------------------|---------------|------------|-------|--------|
| engineered woo    | Building Code |            |       |        |
| accordance wit    | Building Code | H. Authier | 43236 | 2021-0 |
| accordance with   | Sewage System |            |       |        |
| Guide and appl    | Zoning        |            |       |        |
| obtain Installati |               |            |       |        |

questions, please call (800)232-0788 before installation.

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REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS ENGINEERING NOTE PAGE ENP-2. THIS NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

READ ALL NOTES ON THIS PAGE AND ON



# Single 9-1/2" AJS® 20

### F15-B

December 17, 2020 14:53:05

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PASSED

**BC CALC® Member Report** 

Dry | 1 span | No cant.

**Build 7364** Job name:

Customer:

Address: **GREENPARK HOMES** 

TRINA...L, EAST GWILLIMBURY, ON

Description: Level - Ground Floor

SB

City, Province, Postal Code:

Specifier:

Designer:

Code reports: CCMC 12787-R Company:

File name:

| <u>@</u>    | 7        |              |              |              |   |   |   |              |   |   |              |   |              |       |     |   |   |   |   |   |   |   |   |          |   |   |   |   |              |
|-------------|----------|--------------|--------------|--------------|---|---|---|--------------|---|---|--------------|---|--------------|-------|-----|---|---|---|---|---|---|---|---|----------|---|---|---|---|--------------|
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| + + +       | ¥        | ¥            | +            | ¥            | ¥ | ¥ | ¥ | ¥            | ¥ | ¥ | ¥            | + | 1            | +     | ¥   | + | + | + | + | + | + | + | + | <b>+</b> | + | ¥ | + | + | 12           |
| + + +       | ¥        | ¥            | ¥            | ¥            | ¥ | ¥ | ¥ | ¥            | ¥ | ¥ | ¥            | + | ¥            | 0     | +   | + | + | ¥ | + | + | + | + | + | +        | + | + | + | + | $\downarrow$ |
|             |          |              |              |              |   |   |   |              |   |   |              |   |              |       |     |   |   |   |   |   |   |   |   |          |   |   |   |   |              |
| $\boxtimes$ |          |              |              |              |   |   |   |              |   |   |              |   |              |       |     |   |   |   |   |   |   |   |   |          |   |   |   |   |              |
| <u> </u>    |          |              |              |              |   |   |   |              |   |   |              |   |              |       |     |   |   |   |   |   |   |   |   |          |   |   |   |   | Щ            |
| 1           |          |              |              |              |   |   |   |              |   |   |              |   | 13-          | 10-08 |     |   |   |   |   |   |   |   |   |          |   |   |   |   |              |
| B1          |          |              |              |              |   |   |   |              |   |   |              |   |              |       |     |   |   |   |   |   |   |   |   |          |   |   |   |   | B2           |

Total Horizontal Product Length = 13-10-08

Deagtion Cummon, (Down / Haliff) /lbs\

| Neaction Sui | ililialy (Dowli / O | pilit) (ibə) |      |      |  |
|--------------|---------------------|--------------|------|------|--|
| Bearing      | Live                | Dead         | Snow | Wind |  |
| B1, 2-3/8"   | 587 / 0             | 239 / 0      |      |      |  |
| B2, 5-1/4"   | 319 / 0             | 138 / 0      |      |      |  |

| Lo | ad Summary  |                   |      |          |          |       | Live | Dead | Snow | Wind | Tributary |
|----|-------------|-------------------|------|----------|----------|-------|------|------|------|------|-----------|
|    | Description | Load Type         | Ref. | Start    | End      | Loc.  | 1.00 | 0.65 | 1.00 | 1.15 |           |
| 0  | Self-Weight | Unf. Lin. (lb/ft) | L    | 00-00-00 | 13-10-08 | Тор   |      | 3    |      |      | 00-00-00  |
| 1  |             | Unf. Lin. (lb/ft) | L    | 00-00-00 | 13-05-04 | Тор   | 22   | 8    |      |      | n\a       |
| 2  |             | Unf. Lin. (lb/ft) | L    | 13-05-04 | 13-10-08 | Тор   | 7    | 2    |      |      | n\a       |
| 3  |             | Unf. Lin. (lb/ft) | L    | 00-00-00 | 01-03-02 | Тор   | 60   | 23   |      |      | n\a       |
| 4  |             | Unf. Lin. (lb/ft) | L    | 01-03-02 | 13-05-04 | Тор   | 22   | 8    |      |      | n\a       |
| 5  |             | Unf. Lin. (lb/ft) | L    | 13-05-04 | 13-10-08 | Тор   | 18   | 7    |      |      | n\a       |
| 6  | F14         | Conc. Pt. (lbs)   | L    | 01-01-14 | 01-01-14 | Front | 265  | 102  |      |      | n\a       |

|                       |                 | Factored    | Demand/    |      |          |
|-----------------------|-----------------|-------------|------------|------|----------|
| Controls Summary      | Factored Demand | Resistance  | Resistance | Case | Location |
| Pos. Moment           | 2277 ft-lbs     | 5675 ft-lbs | 40.1%      | 1    | 06-02-14 |
| End Reaction          | 1179 lbs        | 1653 lbs    | 71.3%      | 1    | 00-00-00 |
| End Shear             | 1147 lbs        | 1830 lbs    | 62.7%      | 1    | 00-02-06 |
| Total Load Deflection | L/630 (0.254")  | n\a         | 38.1%      | 4    | 06-07-03 |
| Live Load Deflection  | L/899 (0.178")  | n\a         | 40.1%      | 5    | 06-07-03 |
| Max Defl.             | 0.254"          | n\a         | 25.4%      | 4    | 06-07-03 |
| Span / Depth          | 16.9            |             |            |      |          |

| Bearin | ng Supports | Dim. (LxW)      | Demand   | Demand/<br>Resistance<br>Support | Demand/<br>Resistance<br>Member | Material        |
|--------|-------------|-----------------|----------|----------------------------------|---------------------------------|-----------------|
| B1     | Wall/Plate  | 2-3/8" x 2-1/2" | 1179 lbs | 32.3%                            | 71.3%                           | Spruce-Pine-Fir |
| B2     | Beam        | 5-1/4" x 2-1/2" | 651 lbs  | 8.1%                             | 35.2%                           | Spruce-Pine-Fir |

### Notes

Design meets Code minimum (L/240) Total load deflection criteria.

Design meets Code minimum (L/360) Live load deflection criteria.

Design meets User specified (1") Maximum Total load deflection criteria.

Design meets User specified (0.72") Maximum live load deflection criteria.

Calculations assume member is fully braced.

Resistance Factor phi has been applied to all presented results per CSA O86.

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA O86.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

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qualified engine expert to assure

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| engineered woo    | Discipline    | Reviewer   | BCIN  | Da  |
|-------------------|---------------|------------|-------|-----|
| accordance with   |               | H. Authier | 43236 | 202 |
| accordance with   | Sewage System |            |       |     |
| Guide and appl    | Zoning        |            |       |     |
| obtain Installati |               |            |       |     |

questions, please call (800)232-0788 before installation.

BC CALC®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BCI®, BOISE GLULAM™, BC FloorValue®, VERSA-LAM®, VERSA-RIM PLUS®,

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City, Province, Postal Code:

# Single 9-1/2" AJS® 20

### F16-A

File name:

Dry | 1 span | No cant. December 17, 2020 14:53:05

**BC CALC® Member Report Build 7364** 

C:\Data\SAUMIL\GREENP...GLENWAY 12A EL-2).isl

**PASSED** 

Job name:

Customer:

Code reports:

Address: **GREENPARK HOMES** 

Description: Level - Ground Floor

SB

TRINA...L, EAST GWILLIMBURY,ON

Specifier:

Designer: CCMC 12787-R Company:

14-01-14 **B2** 

Total Horizontal Product Length = 14-01-14

### Reaction Summary (Down / Unlift) (lbs)

| redection of | miniary (Bowin / Op | int, (188) |      |      |  |
|--------------|---------------------|------------|------|------|--|
| Bearing      | Live                | Dead       | Snow | Wind |  |
| B1, 2-3/8"   | 621 / 0             | 254 / 0    |      |      |  |
| B2, 2"       | 348 / 0             | 148 / 0    |      |      |  |

| Lo | ad Summary  |                   |      |          |          |      | Live | Dead | Snow | Wind | Tributary |
|----|-------------|-------------------|------|----------|----------|------|------|------|------|------|-----------|
|    | Description | Load Type         | Ref. | Start    | End      | Loc. | 1.00 | 0.65 | 1.00 | 1.15 |           |
| 0  | Self-Weight | Unf. Lin. (lb/ft) | L    | 00-00-00 | 14-01-14 | Тор  |      | 3    |      |      | 00-00-00  |
| 1  |             | Unf. Lin. (lb/ft) | L    | 00-00-00 | 01-04-02 | Тор  | 60   | 23   |      |      | n\a       |
| 2  |             | Unf. Lin. (lb/ft) | L    | 01-04-02 | 14-01-14 | Тор  | 23   | 9    |      |      | n∖a       |
| 3  |             | Unf. Lin. (lb/ft) | L    | 13-09-06 | 14-01-14 | Тор  | 10   | 4    |      |      | n∖a       |
| 4  |             | Unf. Lin. (lb/ft) | L    | 00-00-00 | 13-09-06 | Тор  | 23   | 9    |      |      | n\a       |
| 5  | F14         | Conc. Pt. (lbs)   | L    | 01-02-14 | 01-02-14 | Back | 264  | 102  |      |      | n\a       |

|                       |                 | Factored    | Demand/    |      |          |
|-----------------------|-----------------|-------------|------------|------|----------|
| Controls Summary      | Factored Demand | Resistance  | Resistance | Case | Location |
| Pos. Moment           | 2626 ft-lbs     | 5675 ft-lbs | 46.3%      | 1    | 06-06-06 |
| End Reaction          | 1249 lbs        | 1653 lbs    | 75.5%      | 1    | 00-00-00 |
| End Shear             | 1216 lbs        | 1830 lbs    | 66.4%      | 1    | 00-02-06 |
| Total Load Deflection | L/530 (0.315")  | n\a         | 45.3%      | 4    | 06-10-13 |
| Live Load Deflection  | L/754 (0.221")  | n\a         | 47.7%      | 5    | 06-10-13 |
| Max Defl.             | 0.315"          | n\a         | 31.5%      | 4    | 06-10-13 |
| Span / Depth          | 17.6            |             |            |      |          |

| Bearing | g Supports | Dim. (LxW)      | Demand   | Demand/<br>Resistance<br>Support | Demand/<br>Resistance<br>Member | Material        |
|---------|------------|-----------------|----------|----------------------------------|---------------------------------|-----------------|
| B1      | Wall/Plate | 2-3/8" x 2-1/2" | 1249 lbs | 34.2%                            | 75.5%                           | Spruce-Pine-Fir |
| B2      | Hanger     | 2" x 2-1/2"     | 707 lbs  | 28.0%                            | 44.5%                           | LF259           |

### Cautions

Hanger LF259 requires (10) 10d face nails, (1) #8x1.25 joist nails. Header for the hanger LF259 is a Double 1-3/4" x 9-1/2" LVL beam



ED PROFESSIONAL

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| Discipline    | Reviewer   | BCIN  | Date       |
|---------------|------------|-------|------------|
| Building Code | H. Authier | 43236 | 2021-02-03 |
| Sewage System |            |       |            |
| Zoning        |            |       |            |
|               |            |       |            |



# Single 9-1/2" AJS® 20

### F16-A

Designer:



**BC CALC® Member Report** Dry | 1 span | No cant. December 17, 2020 14:53:05

**Build 7364** 

Job name: Address: **GREENPARK HOMES** 

TRINA...L, EAST GWILLIMBURY, ON

C:\Data\SAUMIL\GREENP...GLENWAY 12A EL-2).isl File name:

Description: Level - Ground Floor

SB

READ ALL NOTES ON THIS PAGE AND ON

NOTE PAGE IS AN INTEGRAL PART OF THIS

CONTAINS SPECIFICATIONS AND CRITERIA

USED IN THE DESIGN OF THIS COMPONENT.

ENGINEERING NOTE PAGE ENP-2. THIS

CALCULATION SUMMARY PAGE AS IT

City, Province, Postal Code:

Specifier:

Code reports: CCMC 12787-R Company:

### **Notes**

Customer:

Design meets Code minimum (L/240) Total load deflection criteria.

Design meets Code minimum (L/360) Live load deflection criteria.

Design meets User specified (1") Maximum Total load deflection criteria.

Design meets User specified (0.72") Maximum live load deflection criteria.

Calculations assume member is fully braced.

Hanger Manufacturer: Simpson Strong-Tie, Inc.

Resistance Factor phi has been applied to all presented results per CSA O86.

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA O86.

Design based on Dry Service Condition. Importance Factor: Normal Part code: Part 9

### Disclosure

Use of the Boise Cascade Software is subject to the terms of the End User License Agreement (EULA).

Completeness and accuracy of input

must be review qualified engine East Gwillimbury qualified engine expert to assuri Installation of B posted on site at all times.

anyone relying These plans have been reviewed for use with the evidence of sui corrections as noted. No other changes may be application. The Standards Branch. All work must comply with building code-a Ontario Building Code, as amended, and the building code-a Ontario Building Code, as amended. These properties and itimes. The building permit must be clearly properly conference of Properties and itimes. The building permit must be clearly properly conference of Properties and itimes.

engineered wor Discipline Building Code 43236 accordance wit Guide and appl 2 obtain Installati

questions, please call (800)232-0788 before installation.

BC CALC®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BCI®, BOISE GLULAM™, BC FloorValue®, VERSA-LAM®, VERSA-RIM PLUS®,



# Single 9-1/2" AJS® 20

### F16-B

December 17, 2020 14:53:05

**PASSED** 

**BC CALC® Member Report Build 7364** 

Dry | 1 span | No cant.

Job name:

Customer:

Address: **GREENPARK HOMES** 

TRINA...L, EAST GWILLIMBURY,ON

C:\Data\SAUMIL\GREENP...GLENWAY 12A EL-2).isl

Description: Level - Ground Floor

City, Province, Postal Code:

Specifier:

File name:

SB Designer:

Code reports: CCMC 12787-R Company:

|              |          | 4/ |              |   |   |   |   |          |   |          |          |   |          |              |          |              |          |              |          |   |   |   |   |   |   |          |   |   |   | 50           |
|--------------|----------|----|--------------|---|---|---|---|----------|---|----------|----------|---|----------|--------------|----------|--------------|----------|--------------|----------|---|---|---|---|---|---|----------|---|---|---|--------------|
| $\downarrow$ | 2        | ¥  | $\downarrow$ | + | + | ¥ | + | ¥        | ¥ | ¥        | <b>+</b> | + | ¥        | ¥            | + +      | 3            | <b>—</b> | +            | <b>+</b> | + | + | + | + | + | + | <b>—</b> | + | ¥ | + | +            |
| $\downarrow$ | ¥        | ¥  | ¥            | ¥ | ¥ | ¥ | + | ¥        | + | ¥        | ¥        | + | ¥        | $\downarrow$ | ↓ 1 ↓    | $\downarrow$ | +        | $\downarrow$ | +        | + | + | + | ¥ | + | + | +        | ¥ | ¥ | ¥ | $\downarrow$ |
| <b>+</b>     | <b>+</b> | +  | <b>+</b>     | + | + | + | + | <b>+</b> | + | <b>+</b> | +        | + | <b>+</b> | +            | ↓ 0 ↓    | +            | +        | +            | +        | Ţ | + | + | + | + | + | +        | + | + | + | +            |
|              |          |    |              |   |   |   |   |          |   |          |          |   |          |              |          |              |          |              |          |   |   |   |   |   |   |          |   |   |   |              |
| $\times$     |          |    |              |   |   |   |   |          |   |          |          |   |          |              |          |              |          |              |          |   |   |   |   |   |   |          |   |   |   |              |
| <del> </del> |          |    |              |   |   |   |   |          |   |          |          |   |          |              |          |              |          |              |          |   |   |   |   |   |   |          |   |   |   |              |
| B1           |          |    |              |   |   |   |   |          |   |          |          |   |          |              | 14-01-14 |              |          |              |          |   |   |   |   |   |   |          |   |   |   | B2           |

Total Horizontal Product Length = 14-01-14

Position Summany (Down / Halift) (Iba)

| Reaction Summary (Down / Opint) (IDS) |         |         |      |      |  |  |  |  |  |  |  |
|---------------------------------------|---------|---------|------|------|--|--|--|--|--|--|--|
| Bearing                               | Live    | Dead    | Snow | Wind |  |  |  |  |  |  |  |
| B1, 2-3/8"                            | 635 / 0 | 259 / 0 |      |      |  |  |  |  |  |  |  |
| B2, 2"                                | 267 / 0 | 118 / 0 |      |      |  |  |  |  |  |  |  |

| Lo | ad Summary  |                   |      |          |          |       | Live | Dead | Snow | Wind | Tributary |
|----|-------------|-------------------|------|----------|----------|-------|------|------|------|------|-----------|
|    | Description | Load Type         | Ref. | Start    | End      | Loc.  | 1.00 | 0.65 | 1.00 | 1.15 |           |
| 0  | Self-Weight | Unf. Lin. (lb/ft) | L    | 00-00-00 | 14-01-14 | Тор   |      | 3    |      |      | 00-00-00  |
| 1  | _           | Unf. Lin. (lb/ft) | L    | 00-00-00 | 14-01-14 | Тор   | 23   | 9    |      |      | n∖a       |
| 2  |             | Unf. Lin. (lb/ft) | L    | 00-00-00 | 01-04-02 | Тор   | 60   | 23   |      |      | n∖a       |
| 3  |             | Unf. Lin. (lb/ft) | L    | 01-04-02 | 14-01-14 | Тор   | 10   | 4    |      |      | n∖a       |
| 4  | F14         | Conc. Pt. (lbs)   | L    | 01-02-14 | 01-02-14 | Front | 363  | 139  |      |      | n\a       |

| Controls Summary      | Factored Demand | Factored<br>Resistance | Demand/<br>Resistance | Case | Location |
|-----------------------|-----------------|------------------------|-----------------------|------|----------|
| Pos. Moment           | 2125 ft-lbs     | 5675 ft-lbs            | 37.5%                 | 1    | 06-01-15 |
| End Reaction          | 1276 lbs        | 1653 lbs               | 77.2%                 | 1    | 00-00-00 |
| End Shear             | 1243 lbs        | 1830 lbs               | 67.9%                 | 1    | 00-02-06 |
| Total Load Deflection | L/650 (0.257")  | n\a                    | 36.9%                 | 4    | 06-10-13 |
| Live Load Deflection  | L/932 (0.179")  | n\a                    | 38.6%                 | 5    | 06-08-09 |
| Max Defl.             | 0.257"          | n\a                    | 25.7%                 | 4    | 06-10-13 |
| Span / Depth          | 17.6            |                        |                       |      |          |

| Bearing | g Supports | Dim. (LxW)      | Demand   | Demand/<br>Resistance<br>Support | Demand/<br>Resistance<br>Member | Material        |
|---------|------------|-----------------|----------|----------------------------------|---------------------------------|-----------------|
| B1      | Wall/Plate | 2-3/8" x 2-1/2" | 1276 lbs | 34.9%                            | 77.2%                           | Spruce-Pine-Fir |
| B2      | Hanger     | 2" x 2-1/2"     | 548 lbs  | 21.7%                            | 34.5%                           | LF259           |



Hanger LF259 requires (10) 10d face nails, (1) #8x1.25 joist nails. Header for the hanger LF259 is a Double 1-3/4" x 9-1/2" LVL beam



ADPROFESSIONAL

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| Discipline    | Reviewer   | BCIN  | Date       |
|---------------|------------|-------|------------|
| Building Code | H. Authier | 43236 | 2021-02-03 |
| Sewage System |            |       |            |
| Zoning        |            |       |            |



City, Province, Postal Code:

# Single 9-1/2" AJS® 20

#### F16-B



**BC CALC® Member Report** Dry | 1 span | No cant. December 17, 2020 14:53:05

**Build 7364** 

Customer:

Job name: Address: **GREENPARK HOMES** 

TRINA...L, EAST GWILLIMBURY, ON

C:\Data\SAUMIL\GREENP...GLENWAY 12A EL-2).isl File name:

Description: Level - Ground Floor

Specifier: Designer: SB

READ ALL NOTES ON THIS PAGE AND ON

NOTE PAGE IS AN INTEGRAL PART OF THIS

CONTAINS SPECIFICATIONS AND CRITERIA

USED IN THE DESIGN OF THIS COMPONENT.

ENGINEERING NOTE PAGE ENP-2. THIS

CALCULATION SUMMARY PAGE AS IT

Code reports: CCMC 12787-R Company:

### **Notes**

Design meets Code minimum (L/240) Total load deflection criteria.

Design meets Code minimum (L/360) Live load deflection criteria.

Design meets User specified (1") Maximum Total load deflection criteria.

Design meets User specified (0.72") Maximum live load deflection criteria.

Calculations assume member is fully braced. Hanger Manufacturer: Simpson Strong-Tie, Inc.

Resistance Factor phi has been applied to all presented results per CSA O86.

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA O86.

Design based on Dry Service Condition. Importance Factor: Normal Part code: Part 9

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Completeness and accuracy of input must be review qualified engine East Gwillimbury

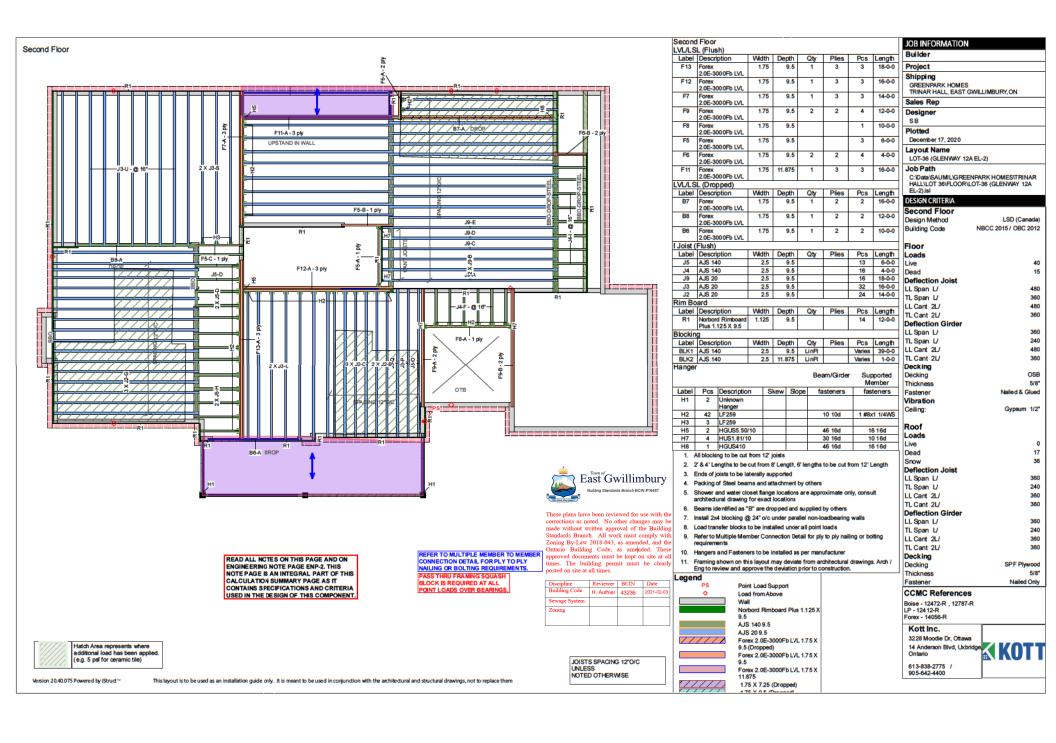
qualified engine expert to assur 🗟 engineered wo

anyone relying These plans have been reviewed for use with the evidence of sui corrections as noted. No other changes may be made without written approval of the Building application. The Standards Branch. All work must comply with building code—a Coming By-Law 2018-043, as amended, and the properties and i approved documents must be kept on site at all times. The building permit must be clearly Installation of B posted on site at all times.

| motamation of D     |               |            |       |            |
|---------------------|---------------|------------|-------|------------|
| engineered woo      | Discipline    | Reviewer   | BCIN  | Date       |
|                     | Building Code | H. Authier | 43236 | 2021-02-03 |
| accordance wit      | Sewage System |            |       |            |
| Guide and appl      | Zoning        |            |       |            |
| obtain Installation |               |            |       |            |

questions, please call (800)232-0788 before installation.

BC CALC®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BCI®, BOISE GLULAM™, BC FloorValue®, VERSA-LAM®, VERSA-RIM PLUS®,





Project:

Address: **GREENPARK HOMES** 

TRINAR HALL, EAST GWILLIMBURY, ON

Date: 12/17/2020 Input by:

Job Name: LOT-36 (GLENWAY 12A EL-2)

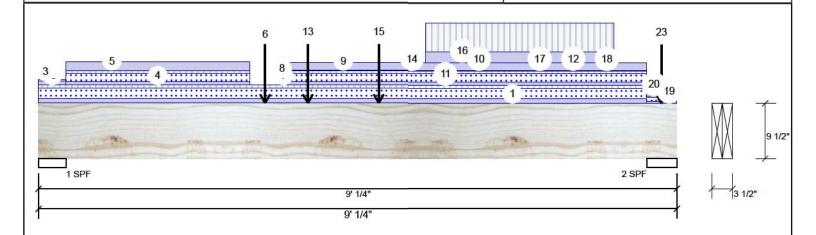
Project #:

Forex 2.0E-3000Fb LVL

1.750" X 9.500"

2-Ply - PASSED

Level: Second Floor



| Type:              | Girder  | Application:   | Floor (Residential)  | В |
|--------------------|---------|--|----------------------|---|
| Plies:             | 2       | Design Method:   | LSD                  |   |
| Moisture Condition | on: Dry | Building Code:   | NBCC 2015 / OBC 2012 |   |
| Deflection LL:     | 360     | Load Sharing:  | No                   |   |
| Deflection TL:     | 240     | Deck:  | Not Checked          |   |
| Importance:        | Normal  | Vibration:   | Not Checked          |   |
| General Load       |         | 324.00° 1.00 |                      | - |
| Floor Live:        | 40 PSF  |  |                      | E |
| Dead:              | 15 PSF  |  |                      | Г |
|                    |         |  |                      |   |

| Unfactored Reaction | UNPATTERNED Ib | (Uplift) |
|---------------------|----------------|----------|
|---------------------|----------------|----------|

| Brg | Live | Dead | Snow | Wind |
|-----|------|------|------|------|
| 1   | 1403 | 1256 | 816  | 0    |
| 2   | 1638 | 1290 | 794  | 0    |

# Bearings and Factored Reactions

| Bearing Length | Cap. React D/L lb | Total Ld. Case | Ld. Comb.        |
|----------------|-------------------|----------------|------------------|
| 1 - SPF 4.625" | 45% 1570 / 2920   | 4490 L         | 1.25D+1.5L<br>+S |
| 2 - SPF 5.125" | 44% 1612 / 3251   | 4863 L         | 1.25D+1.5L<br>+S |

# Analysis Results

Member Information

| Analysis      | Actual         | Location   | Allowed       | Capacity    | Comb.            | Case    |
|---------------|----------------|------------|---------------|-------------|------------------|---------|
| Moment        | 11028 ft-lb    | 3'10 3/16" | 22724 ft-lb   | 0.485 (49%) | 1.25D+1.5L<br>+S | L       |
| Unbraced      | 11028 ft-lb    | 3'10 3/16" | 21352 ft-lb   | 0.516 (52%) | 1.25D+1.5L<br>+S | L       |
| Shear         | 4020 lb        | 1'1 3/8"   | 9277 lb       | 0.433 (43%) | 1.25D+1.5L<br>+S | L       |
| Perm Defl in. | 0.082 (L/1226) | 4'5"       | 0.278 (L/360) | 0.290 (29%) | D                | Uniform |
| LL Defl inch  | 0.130 (L/770)  | 4'5"       | 0.278 (L/360) | 0.470 (47%) | L+0.5S           | L       |
| TL Defl inch  | 0.211 (L/473)  | 4'5"       | 0.417 (L/240) | 0.510 (51%) | D+L+0.5S         | L       |

READ ALL NOTES ON THIS PAGE AND ON ENGINEERING NOTE PAGE ENP-2. THIS NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH **BLOCK IS REQUIRED AT ALL** POINT LOADS OVER BEARINGS.



Page 1 of 24

#### **Design Notes**

- 1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 4.5.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.
- 5 Top braced at bearings.
- 6 Bottom braced at bearings.
- 7 Lateral slenderness ratio based on full section width.

| nt Gwillimbury |
|----------------|

| ID                | Load Type     | Location        | Trib Width | Side | Dead   | Live   | Snow    | Wind  | Comments The        |
|-------------------|---------------|-----------------|------------|------|--------|--------|---------|-------|---------------------|
| 1                 | Part. Uniform | 0-0-0 to 8-7-2  |            | Тор  | 45 PLF | 31 PLF | 104 PLF | 0 PLF | mae<br>Sta          |
| 2                 | Part. Uniform | 0-0-0 to 0-4-10 |            | Тор  | 40 PLF | 0 PLF  | 0 PLF   | 0 PLF | Wall Self Weigh Ont |
| 3                 | Tapered Start | 0-0-0           |            | Тор  | 4 PLF  | 9 PLF  | 0 PLF   | 0 PLF | tim<br>pos          |
|                   | End           | 0-4-10          |            |      | 4 PLF  | 9 PLF  | 0 PLF   | 0 PLF | Di<br>Bu            |
| Continued on page | 2             |                 |            |      |        |        |         |       | Se                  |

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| riscipinie    | Keviewei   | BCIN  | Date       |
|---------------|------------|-------|------------|
| Building Code | H. Authier | 43236 | 2021-02-03 |
| iewage System |            |       |            |
| Coning        |            |       |            |
|               | 1          |       |            |

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design orineria 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.

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

Handling & Installation

LVL beams must not be cut or drilled
 Refer to manufacturer's product inforegarding installation requirements,

approvals
Damaged Beams must not be used Daniaged beams must not be used Design assumes top edge is laterally restrained Provide lateral support at bearing points to avoid lateral displacement and rotation

APA: PR-L318

3228 Moodie Dr. Ottawa, Untario 613-838-2775 / 905-642-4400



This design is valid until 4/24/2023

Manufacturer Info

isDesign

Client:

Project:

Address: **GREENPARK HOMES**  Date: 12/17/2020 Input by:

Job Name: LOT-36 (GLENWAY 12A EL-2)

Project #:

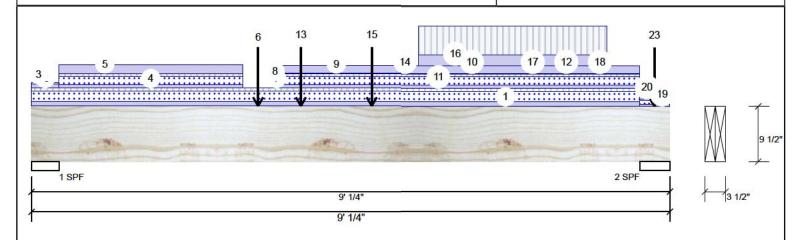
Forex 2.0E-3000Fb LVL **B6-A** 

1.750" X 9.500"

TRINAR HALL, EAST GWILLIMBURY, ON

2-Ply - PASSED

Level: Second Floor



| .Continued | from page 1   |                   |            |      |         |         |        |       |                                       |
|------------|---------------|-------------------|------------|------|---------|---------|--------|-------|---------------------------------------|
| ID         | Load Type     | Location          | Trib Width | Side | Dead    | Live    | Snow   | Wind  | Comments                              |
| 4          | Part. Uniform | 0-4-10 to 2-11-12 |            | Тор  | 37 PLF  | 25 PLF  | 85 PLF | 0 PLF |                                       |
| 5          | Part. Uniform | 0-4-10 to 2-11-12 |            | Тор  | 88 PLF  | 0 PLF   | 0 PLF  | 0 PLF | Wall Self Weight                      |
| 6          | Point         | 3-2-6             |            | Тор  | 557 lb  | 1056 lb | 41 lb  | 0 lb  | F13                                   |
| 7          | Part. Uniform | 3-5-0 to 3-6-0    |            | Тор  | 18 PLF  | 12 PLF  | 42 PLF | 0 PLF |                                       |
| 8          | Part. Uniform | 3-5-0 to 3-6-0    |            | Тор  | 40 PLF  | 0 PLF   | 0 PLF  | 0 PLF | Wall Self Weight                      |
| 9          | Tapered Start | 3-5-0             |            | Тор  | 0 PLF   | 1 PLF   | 0 PLF  | 0 PLF |                                       |
|            | End           | 4-9-10            |            |      | 0 PLF   | 1 PLF   | 0 PLF  | 0 PLF |                                       |
| 10         | Tapered Start | 3-5-0             |            | Тор  | 0 PLF   | 1 PLF   | 0 PLF  | 0 PLF |                                       |
|            | End           | 8-7-2             |            |      | 0 PLF   | 1 PLF   | 0 PLF  | 0 PLF |                                       |
| 11         | Part. Uniform | 3-6-0 to 8-7-2    |            | Тор  | 37 PLF  | 25 PLF  | 85 PLF | 0 PLF |                                       |
| 12         | Part. Uniform | 3-6-0 to 8-7-2    |            | Тор  | 80 PLF  | 0 PLF   | 0 PLF  | 0 PLF | Wall Self Weight                      |
| 13         | Point         | 3-9-10            |            | Тор  | 92 lb   | 244 lb  | 0 lb   | 0 lb  | J3                                    |
| 14         | Tapered Start | 4-9-10            |            | Тор  | 0 PLF   | 1 PLF   | 0 PLF  | 0 PLF |                                       |
|            | End           | 6-1-10            |            |      | 0 PLF   | 1 PLF   | 0 PLF  | 0 PLF |                                       |
| 15         | Point         | 4-9-10            |            | Тор  | 127 lb  | 338 lb  | 0 lb   | 0 lb  | J3                                    |
| 16         | Part. Uniform | 5-5-10 to 8-1-10  |            | Тор  | 109 PLF | 290 PLF | 0 PLF  | 0 PLF |                                       |
| 17         | Tapered Start | 6-1-10            |            | Тор  | 0 PLF   | 1 PLF   | 0 PLF  | 0 PLF |                                       |
|            | End           | 7-5-10            |            |      | 0 PLF   | 1 PLF   | 0 PLF  | 0 PLF |                                       |
| 18         | Tapered Start | 7-5-10            |            | Тор  | 0 PLF   | 1 PLF   | 0 PLF  | 0 PLF |                                       |
|            | End           | 8-7-2             |            |      | 0 PLF   | 1 PLF   | 0 PLF  | 0 PLF |                                       |
| 19         | Part. Uniform | 8-7-2 to 9-0-4    |            | Тор  | 18 PLF  | 12 PLF  | 42 PLF | 0 PLF |                                       |
| 20         | Part. Uniform | 8-7-2 to 9-0-4    |            | Тор  | 40 PLF  | 0 PLF   | 0 PLF  | 0 PLF | Wall Self Weight .                    |
| 23         | Point         | 8-9-10            |            | Тор  | 57 lb   | 151 lb  | 0 lb   | 0 lb  | J3 East Gwillimbur                    |
|            | Self Weight   |                   |            |      | 8 PLF   |         |        |       | Building Standards Branch BCIN #16487 |

READ ALL NOTES ON THIS PAGE AND ON ENGINEERING NOTE PAGE ENP-2. THIS NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT. REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS

These plans have been reviewed for use with the These plans have been reviewed for use with the corrections as noted. No other changes may be made without written approval of the Building Standards Branch. All work must comply with Zoning By-Law 2018-043, as amended, and the Ontario Building Code, as amehided. These approved documents must be kept on site at all times. The building permit must be clearly posted on site at all times.

Page 2 of 24

 Discipline
 Reviewer
 BCIN
 Date

 Building Code
 H. Authier
 43236
 2021-02-03

### Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design orineria 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.

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

# Handling & Installation

1. IVI, beams must not be out or drilled
2. Refer to manufacturer's product informating regarding installation requirements, multifastening details, beam strength values, and co approvals
3. Damaged Beams must not be used

Design assumes top edge is laterally restrained Provide lateral support at bearing points to avoid lateral displacement and rotation 4. 5.

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

APA: PR-L318

3228 Moodie Dr, Ottawa, Ontario 613-838-2775 / 905-642-4400



This design is valid until 4/24/2023

Kott



Project:

Address: **GREENPARK HOMES** 

TRINAR HALL, EAST GWILLIMBURY, ON

Date: 12/17/2020

Input by:

Job Name: LOT-36 (GLENWAY 12A EL-2)

Project #:

Forex 2.0E-3000Fb LVL

1.750" X 9.500"

2-Ply - PASSED

Level: Second Floor



| Member Infor       | mation |                          |                      | Unfactore  | d Reacti | ions UNPATTERNE   |
|--------------------|--------|--------------------------|----------------------|------------|----------|-------------------|
| Type:              | Girder | Application:             | Floor (Residential)  | Brg        | Live     | Dead              |
| Plies:             | 2      | Design Method:           | LSD                  | 1          | 725      | 1167              |
| Moisture Condition | n: Dry | Building Code:           | NBCC 2015 / OBC 2012 | 2          | 15       | 72                |
| Deflection LL:     | 360    | Load Sharing:            | No                   | -          |          |                   |
| Deflection TL:     | 240    | Deck:                    | Not Checked          |            |          |                   |
| Importance:        | Normal | Vibration:               | Not Checked          |            |          |                   |
| General Load       |        | 24.144 (22.41.261.00.25) |                      |            |          |                   |
| Floor Live:        | 40 PSF |                          |                      | Bearings a | nd Fact  | ored Reactions    |
| Dead:              | 15 PSF |                          |                      | Bearing Le | ength    | Cap. React D/L lb |
|                    |        |                          |                      | 1 - SPF 2. | 750"     | 91% 1459 / 2964   |
|                    |        |                          |                      | 1          |          |                   |

| Ana | lysis | Resu | lts |
|-----|-------|------|-----|
|     |       |      |     |

| Analysis      | Actual             | Location   | Allowed       | Capacity   | Comb.      | Case    |
|---------------|--------------------|------------|---------------|------------|------------|---------|
| Moment        | 633 ft-lb          | 3'8 13/16" | 20224 ft-lb   | 0.031 (3%) | 1.25D+1.5L | L       |
| Unbraced      | 633 ft-lb          | 3'8 13/16" | 17052 ft-lb   | 0.037 (4%) | 1.25D+1.5L | L       |
| Shear         | 730 lb             | 11 1/2"    | 8256 lb       | 0.088 (9%) | 1.25D+1.5L | L       |
| Perm Defl in. | 0.028 (L/6395)     | 7'3 5/8"   | 0.503 (L/360) | 0.060 (6%) | D          | Uniform |
| LL Defl inch  | 0.013<br>(L/13939) | 6'5 5/16"  | 0.503 (L/360) | 0.030 (3%) | L+0.5S     | L       |
| TL Defl inch  | 0.041 (L/4397)     | 7' 9/16"   | 0.755 (L/240) | 0.050 (5%) | D+L+0.5S   | L       |

### **Design Notes**

- 1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 4.5.
- 2 Fill all hanger nailing holes.
- 3 Girders are designed to be supported on the bottom edge only.
- 4 Multiple plies must be fastened together as per manufacturer's details.
- 5 Top loads must be supported equally by all plies.
- 6 Top braced at bearings.
- 7 Bottom braced at bearings.

| Unfactored | Reactions | UNPATTERN | ED lb (Uplift) |
|------------|-----------|-----------|----------------|
|------------|-----------|-----------|----------------|

| Brg      | Live | Dead | Snow | Wind |
|----------|------|------|------|------|
| Brg<br>1 | 725  | 1167 | 1493 | 0    |
| 2        | 15   | 72   | 3    | 0    |

| Bearing       | Length | Cap. | React D/L lb | Total | Ld. Case | Ld. Comb.        |  |
|---------------|--------|------|--------------|-------|----------|------------------|--|
| 1 - SPF       | 2.750" | 91%  | 1459 / 2964  | 4423  | L        | 1.25D+1.5S<br>+L |  |
| 2 -<br>Hanger | 4.000" | 1%   | 101 / 0      | 101   | Uniform  | 1.4D             |  |

READ ALL NOTES ON THIS PAGE AND ON ENGINEERING NOTE PAGE ENP-2. THIS NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT. REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY

NAILING OR BOLTING REQUIREMENTS. PASS THRU FRAMING SQUASH **BLOCK IS REQUIRED AT ALL** POINT LOADS OVER BEARINGS.



Page 3 of 24

8 Lateral slenderness ratio based on full section width.





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| Jiscipiine    | Reviewer   | BCIN  | Date       |
|---------------|------------|-------|------------|
| Building Code | H. Authier | 43236 | 2021-02-03 |
| Sewage System |            |       |            |
| Coning        |            |       |            |
|               |            |       |            |

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.

- Handling & Installation
- LVL beams must not be cut or drilled
   Refer to manufacturer's product regarding installation requirement fastening details, beam strength value
- naged Beams must not be used

Manufacturer Info

APA: PR-L318

613-838-2775 / 905-642-4400

3228 Moodie Dr. Ottawa, Untario

CSD DESIGN

Daniaged beams must not be used Design assumes top edge is laterally restrained Provide lateral support at bearing points to avoid lateral displacement and rotation Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corre



Project:

Address: **GREENPARK HOMES** 

TRINAR HALL, EAST GWILLIMBURY, ON

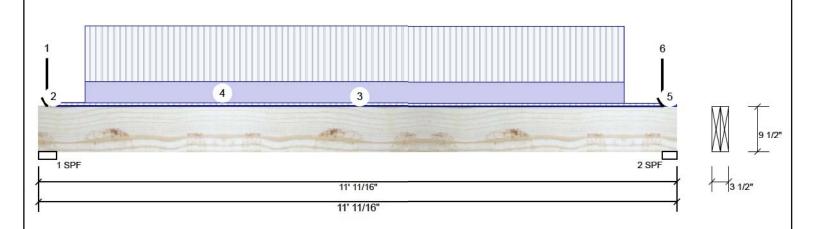
Date: 12/17/2020 Input by:

Job Name: LOT-36 (GLENWAY 12A EL-2)

Project #:

Forex 2.0E-3000Fb LVL

1.750" X 9.500" 2-Ply - PASSED Level: Second Floor



| Member Inforn       | nation |   |                      | Unfactore | ed Reaction                             | ons UNPATTERNE                          | D lb (Uplift)  |            |
|---------------------|--------|---|----------------------|-----------|---|---|----------------|------------|
| Type:               | Girder | Application:  | Floor (Residential)  | Brg       | Live                                    | Dead                                    | Snow           | Wind       |
| Plies:              | 2      | Design Method:  | LSD                  | 1         | 1638                                    | 654                                     | 0              | 0          |
| Moisture Condition: | Dry    | Building Code:  | NBCC 2015 / OBC 2012 | 2         | 1591                                    | 638                                     | 0              | 0          |
| Deflection LL:      | 360    | Load Sharing:   | No                   | 35.7      |   |   |                |            |
| Deflection TL:      | 240    | Deck:   | Not Checked          |           |   |   |                |            |
| Importance:         | Normal | Vibration:  | Not Checked          |           |   |   |                |            |
| General Load        |        | 554 A 5 A 1 (\$2.00 C \$200 C \$2.00 C \$2 |                      |           | 1 F 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | 150000000000000000000000000000000000000 |                |            |
| Floor Live:         | 40 PSF |   |                      | Bearings  | and Facto                               | ored Reactions                          |                |            |
| Dead:               | 15 PSF |   |                      | Bearing L | Length                                  | Cap. React D/L lb                       | Total Ld. Case | Ld. Comb.  |
|                     |        |   |                      | 1 - SPF 3 | 3.688"                                  | 41% 818 / 2457                          | 3275 L         | 1.25D+1.5L |
|                     |        |   |                      | 2 - SPF 3 | 3.000"                                  | 49% 798 / 2387                          | 3185 L         | 1.25D+1.5L |

#### Analysis Results

| Analysis      | Actual         | Location   | Allowed       | Capacity    | Comb.      | Case    |
|---------------|----------------|------------|---------------|-------------|------------|---------|
| Moment        | 8549 ft-lb     | 5'6 9/16"  | 22724 ft-lb   | 0.376 (38%) | 1.25D+1.5L | L       |
| Unbraced      | 8549 ft-lb     | 5'6 9/16"  | 20494 ft-lb   | 0.417 (42%) | 1.25D+1.5L | L       |
| Shear         | 2783 lb        | 10' 15/16" | 9277 lb       | 0.300 (30%) | 1.25D+1.5L | L       |
| Perm Defl in. | 0.075 (L/1698) | 5'6 11/16" | 0.354 (L/360) | 0.210 (21%) | D          | Uniform |
| LL Defl inch  | 0.188 (L/678)  | 5'6 11/16" | 0.354 (L/360) | 0.530 (53%) | L          | L       |
| TL Defl inch  | 0.263 (L/484)  | 5'6 11/16" | 0.531 (L/240) | 0.500 (50%) | D+L        | L       |

### **Design Notes**

- 1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 4.5.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.
- 5 Top braced at bearings.
- 6 Bottom braced at bearings.
- 7 Lateral slenderness ratio based on full section width.

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PASS THRU FRAMING SQUASH **BLOCK IS REQUIRED AT ALL** POINT LOADS OVER BEARINGS.



Page 4 of 24

ID Trib Width Load Type Location Side Dead Live Snow Wind Comments Point 0-1-11 64 lb 172 lb 0 lb 0 lb .13 1 Top 0 PLF 0 PLF 2 Tapered Start 3 PLF 7 PLF 0-2-7 Top Fnd 3 PLF 7 PLF 0 PLF 0 PLF 0 - 3 - 11Tapered Start 0-3-11 Top 5 PLF **14 PLF** 0 PLF 0 PLF 3 10-9-11 5 PLF **13 PLF** 0 PLF 0 PLF Continued on page 2...



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|      | Building Code | H. Authier | 43236 | 2021-02-03 |
|------|---------------|------------|-------|------------|
|      | Sewage System |            |       |            |
|      | Zoning        |            |       |            |
| Kott |               |            |       |            |
| 322  | Moodie L      | r, Otta    | wa, O | ntario     |

Manufacturer Info APA: PR-L318 613-838-2775 / 905-642-4400

Carculated Structural adequacy of this component based on 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.

Notes

- Dry service conditions, unless noted otherwise
   LVL not to be treated with fire retardant or corre
- Handling & Installation
- LVL beams must not be cut or drilled
   Refer to manufacturer's product regarding installation requirement fastening details, beam strength value
- naged Beams must not be used Daniaged beams must not be used Design assumes top edge is laterally restrained Provide lateral support at bearing points to avoid lateral displacement and rotation



isDesign

Continued from page 1

Client:

Project:

Address: **GREENPARK HOMES** 

TRINAR HALL, EAST GWILLIMBURY, ON

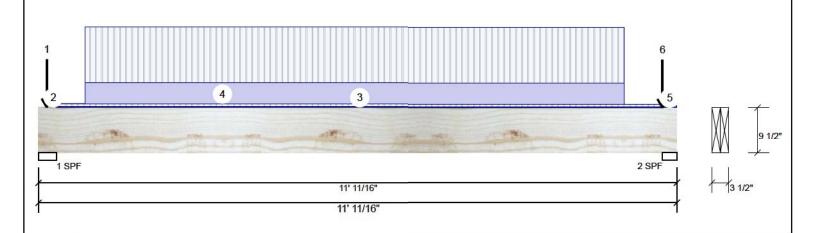
Date: 12/17/2020 Input by:

Job Name: LOT-36 (GLENWAY 12A EL-2)

Project #:

Forex 2.0E-3000Fb LVL **B8-A** 

1.750" X 9.500" 2-Ply - PASSED Level: Second Floor



| ID | Load Type     | Location          | Trib Width | Side | Dead    | Live    | Snow  | Wind  | Comments |
|----|---------------|-------------------|------------|------|---------|---------|-------|-------|----------|
| 4  | Part. Uniform | 0-9-11 to 10-1-11 |            | Тор  | 110 PLF | 294 PLF | 0 PLF | 0 PLF |          |
| 5  | Tapered Start | 10-9-11           |            | Тор  | 3 PLF   | 7 PLF   | 0 PLF | 0 PLF |          |
|    | End           | 11-0-11           |            |      | 3 PLF   | 7 PLF   | 0 PLF | 0 PLF |          |
| 6  | Point         | 10-9-11           |            | Тор  | 64 lb   | 169 lb  | 0 lb  | 0 lb  | J3       |
|    | Self Weight   |                   |            |      | 8 PLF   |         |       |       |          |

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REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH **BLOCK IS REQUIRED AT ALL** POINT LOADS OVER BEARINGS.



Page 5 of 24

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|                                 | Discipline    | Reviewer   | BCIN  | Date       |  |  |  |  |
|---------------------------------|---------------|------------|-------|------------|--|--|--|--|
|                                 | Building Code | H. Authier | 43236 | 2021-02-03 |  |  |  |  |
|                                 | Sewage System |            |       |            |  |  |  |  |
|                                 | Zoning        |            |       |            |  |  |  |  |
| Kott                            |               |            |       |            |  |  |  |  |
| 3228 Moodie Dr, Ottawa, Ontario |               |            |       |            |  |  |  |  |

### Notes

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

Handling & Installation

1. LVL beams must not be out or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastering 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

APA: PR-L318

Manufacturer Info

613-838-2775 / 905-642-4400



Project:

Address: **GREENPARK HOMES** 

TRINAR HALL, EAST GWILLIMBURY, ON

Date: 12/17/2020

Input by:

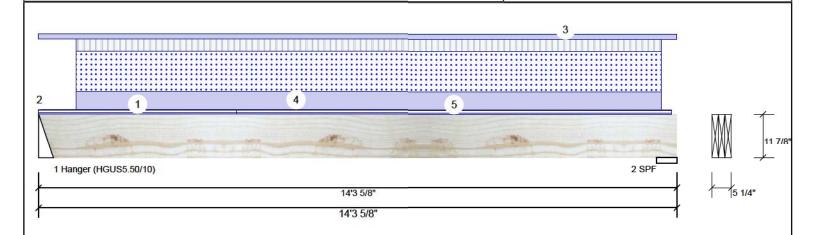
Job Name: LOT-36 (GLENWAY 12A EL-2)

Project #:

F11-A Forex 2.0E-3000Fb LVL

1.750" X 11.875" 3-Ply - PASSED

Level: Second Floor



| Type:              | Girder  | Application:   | Floor (Residential)  | Ī |
|--------------------|---------|--|----------------------|---|
| Plies:             | 3       | Design Method:   | LSD                  | l |
| Moisture Condition | on: Dry | Building Code:   | NBCC 2015 / OBC 2012 | l |
| Deflection LL:     | 360     | Load Sharing:  | Yes                  | ١ |
| Deflection TL:     | 240     | Deck:  | Not Checked          | ١ |
| Importance:        | Normal  | Vibration:   | Not Checked          | ١ |
| General Load       |         | 22 - 12 m (20 m (2) m (20 m (2) m (20 m (2) m (20 m (2) m (2 |                      | ŀ |
| Floor Live:        | 40 PSF  |  |                      | ١ |
| Dead:              | 15 PSF  |  |                      | Ì |
|                    |         |  |                      |   |
|                    |         | 1  |                      | 1 |

| Unfactored | Reactions | UNPAT | TERNED | lb | (Uplift) |
|------------|-----------|-------|--------|----|----------|
|------------|-----------|-------|--------|----|----------|

| Brg | Live | Dead | Snow | Wind |
|-----|------|------|------|------|
| 1   | 1175 | 2333 | 3931 | 0    |
| 2   | 1277 | 2490 | 4269 | 0    |

| Bearings | and F | actored | Reaction | ns    |
|----------|-------|---------|----------|-------|
| _ ·      | 1 0   |         | D4D      | /I II |

| Bearing Leng        | th Cap. | React D/L lb | Total | Ld. Case | Ld. Comb.        |  |
|---------------------|---------|--------------|-------|----------|------------------|--|
| 1 - 4.000<br>Hanger | " 64%   | 2916 / 7071  | 9987  | L        | 1.25D+1.5S<br>+L |  |
| 2 - SPF 5.500       |         | 3113 / 7681  | 10793 | L        | 1.25D+1.5S       |  |

# Analysis Results

Member Information

| Analysis     | Actual          | Location  | Allowed       | Capacity    | Comb.            | Case    |
|--------------|-----------------|-----------|---------------|-------------|------------------|---------|
| Moment       | 36306 ft-lb     | 7'1 3/16" | 53447 ft-lb   | 0.679 (68%) | 1.25D+1.5S<br>+L | L       |
| Unbraced     | 36306 ft-lb     | 7'1 3/16" | 50564 ft-lb   | 0.718 (72%) | 1.25D+1.5S<br>+L | L       |
| Shear        | 9148 lb         | 1'3 1/8"  | 17394 lb      | 0.526 (53%) | 1.25D+1.5S<br>+L | L       |
| Perm Defl in | . 0.205 (L/798) | 7'1 1/8"  | 0.455 (L/360) | 0.450 (45%) | D                | Uniform |
| LL Defl inch | 0.409 (L/400)   | 7'1 1/8"  | 0.455 (L/360) | 0.900 (90%) | S+0.5L           | L       |
| TL Defl inch | 0.614 (L/267)   | 7'1 1/8"  | 0.682 (L/240) | 0.900 (90%) | D+S+0.5L         | L       |

READ ALL NOTES ON THIS PAGE AND ON ENGINEERING NOTE PAGE ENP-2. THIS NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

Manufacturer Info

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH **BLOCK IS REQUIRED AT ALL** POINT LOADS OVER BEARINGS.



Page 6 of 24

#### **Design Notes**

- 1 Fill all hanger nailing holes.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.
- 5 Top braced at bearings.
- 6 Bottom braced at bearings.
- 7 Lateral slenderness ratio based on full section width.

|  | ID               | Load Type     | Location          | Trib Width | Side | Dead    | Live    | Snow    | Wind  | Comments        |
|--|------------------|---------------|-------------------|------------|------|---------|---------|---------|-------|-----------------|
|  | 1                | Part. Uniform | 0-0-0 to 4-5-3    |            | Тор  | 12 PLF  | 12 PLF  | 42 PLF  | 0 PLF |                 |
|  | 2                | Part. Uniform | 0-0-0 to 0-0-6    |            | Тор  | 78 PLF  | 0 PLF   | 0 PLF   | 0 PLF | Wall Self Weigh |
|  | 3                | Part. Uniform | 0-0-0 to 14-3-10  |            | Тор  | 78 PLF  | 0 PLF   | 0 PLF   | 0 PLF | Wall Self Weigh |
|  | 4                | Part. Uniform | 0-10-1 to 13-11-6 |            | Тор  | 254 PLF | 174 PLF | 580 PLF | 0 PLF | i               |
|  | Continued on pag | je 2          |                   |            |      |         |         |         |       |                 |



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|                                 | Discipline    | Reviewer   | BCIN  | Date       |  |  |  |  |
|---------------------------------|---------------|------------|-------|------------|--|--|--|--|
|                                 | Building Code | H. Authier | 43236 | 2021-02-03 |  |  |  |  |
|                                 | Sewage System |            |       |            |  |  |  |  |
|                                 | Zoning        |            |       |            |  |  |  |  |
| Kott                            |               |            |       |            |  |  |  |  |
| 3228 Moodie Dr, Ottawa, Ontario |               |            |       |            |  |  |  |  |

Notes

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

## Handling & Installation

 LVL beams must not be cut or drilled
 Refer to manufacturer's product info regarding installation requirements, re-LVL beams must not be cut or drillee Refer to manufacturer's prod regarding installation requirem fastening details, beam strength v approvals Damaged Beams must not be used

Daniaged beams must not be used Design assumes top edge is laterally restrained Provide lateral support at bearing points to avoid lateral displacement and rotation

APA: PR-L318



isDesign

Client:

Project:

Address:

**GREENPARK HOMES** TRINAR HALL, EAST GWILLIMBURY, ON Date: 12/17/2020 Input by:

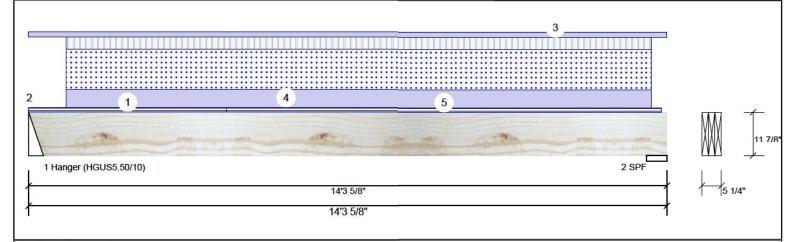
Job Name: LOT-36 (GLENWAY 12A EL-2)

Project #:

F11-A Forex 2.0E-3000Fb LVL

1.750" X 11.875" 3-Ply - PASSED

Level: Second Floor



.Continued from page 1

ID **Load Type** Location Trib Width Side Wind Comments Dead Live Snow 5 12 PLF 12 PLF 42 PLF 0 PLF Part. Uniform 4-5-3 to 14-2-4 Top

> Self Weight 14 PLF

> > READ ALL NOTES ON THIS PAGE AND ON ENGINEERING NOTE PAGE ENP-2. THIS NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

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PASS THRU FRAMING SQUASH **BLOCK IS REQUIRED AT ALL** POINT LOADS OVER BEARINGS.



Page 7 of 24

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Discipline Reviewer BCIN Date
Building Code H. Authier 43236 2021-02-03 3228 Moodie Dr, Ottawa, Ontario

Notes

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

Handling & Installation

1. LVI, beams must not be out or drilled
2. Refer to manufacturer's product informati regarding installation requirements, multi-fastening details, beam strength values, and co approvals
3. Damaged Beams must not be used

Daniaged beams must not be used Design assumes top edge is laterally restrained Provide lateral support at bearing points to avoid lateral displacement and rotation 4. 5.

Manufacturer Info

APA: PR-L318

613-838-2775 / 905-642-4400

This design is valid until 4/24/2023

Kott



Project:

Address: **GREENPARK HOMES** 

TRINAR HALL, EAST GWILLIMBURY, ON

Date: 12/17/2020

Input by:

Job Name: LOT-36 (GLENWAY 12A EL-2)

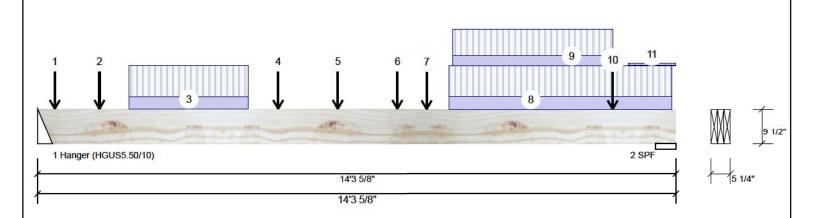
Project #:

Forex 2.0E-3000Fb LVL

1.750" X 9.500"

3-Ply - PASSED

Level: Second Floor



| Member Infor       | ember Information |  |                      | Unfactored Reactions UNPATTERNED lb (Uplift) |                 |                   |                |            |
|--------------------|-------------------|--|----------------------|--|-----------------|-------------------|----------------|------------|
| Type:              | Girder            | Application:   | Floor (Residential)  | Brg  | Live            | Dead              | Snow           | Wind       |
| Plies:             | 3                 | Design Method:   | LSD                  | 1  | 2151            | 902               | 0              | 0          |
| Moisture Condition | n: Dry            | Building Code:   | NBCC 2015 / OBC 2012 | 2  | 2682            | 1152              | 0              | 0          |
| Deflection LL:     | 360               | Load Sharing:  | Yes                  | -  |                 |                   |                |            |
| Deflection TL:     | 240               | Deck:  | Not Checked          |  |                 |                   |                |            |
| Importance:        | Normal            | Vibration:   | Not Checked          |  |                 |                   |                |            |
| General Load       |                   | 22 - 12 ° 12 (22 ) - 12 (23 ) - 1 |                      |  |                 |                   |                |            |
| Floor Live:        | 40 PSF            |  |                      | Bearing                                      | s and Fact      | tored Reactions   |                |            |
| Dead:              | 15 PSF            |  |                      | Bearing                                      | Length          | Cap. React D/L lb | Total Ld. Case | Ld. Comb.  |
|                    |                   |  |                      | 1-   | 4.000"          | 28% 1127 / 3227   | 4354 L         | 1.25D+1.5L |
|                    |                   |  |                      | Hanger                                       |                 |                   |                |            |
| nalysis Results    |                   |  | 2 - SPF              | 5.500"                                       | 31% 1440 / 4023 | 5463 L            | 1.25D+1.5L     |            |

| ш |               |                |            |               |             |            |         |
|---|---------------|----------------|------------|---------------|-------------|------------|---------|
| Г | Analysis      | Actual         | Location   | Allowed       | Capacity    | Comb.      | Case    |
|   | Moment        | 15680 ft-lb    | 8' 5/8"    | 35449 ft-lb   | 0.442 (44%) | 1.25D+1.5L | L       |
|   | Unbraced      | 15680 ft-lb    | 8' 5/8"    | 34225 ft-lb   | 0.458 (46%) | 1.25D+1.5L | L       |
|   | Shear         | 4797 lb        | 13'1 3/8"  | 13915 lb      | 0.345 (34%) | 1.25D+1.5L | L       |
|   | Perm Defl in. | 0.154 (L/1062) | 7'2 15/16" | 0.455 (L/360) | 0.340 (34%) | D          | Uniform |
|   | LL Defl inch  | 0.365 (L/448)  | 7'2 13/16" | 0.455 (L/360) | 0.800 (80%) | L          | L       |
|   | TL Defl inch  | 0.519 (L/315)  | 7'2 7/8"   | 0.682 (L/240) | 0.760 (76%) | D+L        | L       |

ENGINEERING NOTE PAGE ENP-2. THIS NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

READ ALL NOTES ON THIS PAGE AND ON

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH **BLOCK IS REQUIRED AT ALL** POINT LOADS OVER BEARINGS.



Page 8 of 24

# **Design Notes**

- 1 Fill all hanger nailing holes.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.
- 5 Top braced at bearings.
- 6 Bottom braced at bearings.
- 7. Lateral slenderness ratio based on full section width

| 7 Lateral Sichae  | These ratio based of | riuli Scellori Widir. |            |           |         |         |       |       |          |
|-------------------|----------------------|-----------------------|------------|-----------|---------|---------|-------|-------|----------|
| ID                | Load Type            | Location              | Trib Width | Side      | Dead    | Live    | Snow  | Wind  | Comments |
| 1                 | Point                | 0-4-10                |            | Near Face | 86 lb   | 229 lb  | 0 lb  | 0 lb  | J3       |
| 2                 | Point                | 1-4-10                |            | Near Face | 125 lb  | 332 lb  | 0 lb  | 0 lb  | J3       |
| 3                 | Part. Uniform        | 2-0-10 to 4-8-10      |            | Near Face | 107 PLF | 285 PLF | 0 PLF | 0 PLF |          |
| 4                 | Point                | 5-4-10                |            | Near Face | 141 lb  | 375 lb  | 0 lb  | 0 lb  | J3       |
| 5                 | Point                | 6-8-10                |            | Near Face | 137 lb  | 366 lb  | 0 lb  | 0 lb  | J3       |
| 6                 | Point                | 8-0-10                |            | Near Face | 103 lb  | 275 lb  | 0 lb  | 0 lb  | J2       |
| Continued on page | 2                    |                       |            |           |         |         |       |       |          |



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|      | Discipline                      | Reviewer   | BCIN  | Date       |  |  |  |  |  |  |
|------|---------------------------------|------------|-------|------------|--|--|--|--|--|--|
|      | Building Code                   | H. Authier | 43236 | 2021-02-03 |  |  |  |  |  |  |
|      | Sewage System                   |            |       |            |  |  |  |  |  |  |
|      | Zoning                          |            |       |            |  |  |  |  |  |  |
| Kott |                                 |            |       |            |  |  |  |  |  |  |
| 322  | 3228 Moodie Dr, Ottawa, Ontario |            |       |            |  |  |  |  |  |  |

Notes

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- 1. IVI beams must not be out or drilled
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  3. Damaged Beams must not be used
- Daniaged beams must not be used Design assumes top edge is laterally restrained Provide lateral support at bearing points to avoid lateral displacement and rotation 4. 5.

This design is valid until 4/24/2023

APA: PR-L318

Manufacturer Info

613-838-2775 / 905-642-4400

CSD DESIGN

isDesign

Client:

Project:

Address: **GREENPARK HOMES**  Date: 12/17/2020 Input by:

Job Name: LOT-36 (GLENWAY 12A EL-2)

Project #:

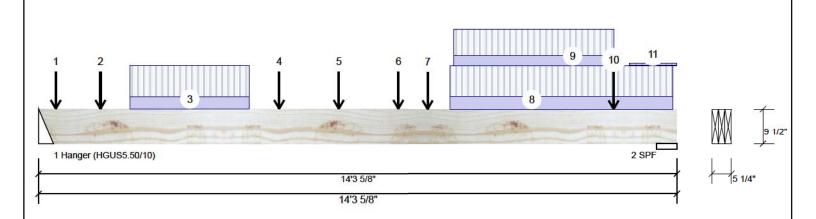
F12-A Forex 2.0E-3000Fb LVL

1.750" X 9.500"

TRINAR HALL, EAST GWILLIMBURY, ON

3-Ply - PASSED

Level: Second Floor



| Ì | Continued from | page 1        |                    |            |           |         |         |       |       |          |
|---|----------------|---------------|--------------------|------------|-----------|---------|---------|-------|-------|----------|
|   | ID             | Load Type     | Location           | Trib Width | Side      | Dead    | Live    | Snow  | Wind  | Comments |
|   | 7              | Point         | 8-8-10             |            | Near Face | 93 lb   | 229 lb  | 0 lb  | 0 lb  | J2       |
|   | 8              | Part. Uniform | 9-2-10 to 14-2-10  |            | Near Face | 115 PLF | 275 PLF | 0 PLF | 0 PLF |          |
|   | 9              | Part. Uniform | 9-3-10 to 12-10-10 |            | Тор       | 90 PLF  | 240 PLF | 0 PLF | 0 PLF |          |
|   | 10             | Point         | 12-10-10           |            | Far Face  | 16 lb   | 14 lb   | 0 lb  | 0 lb  | F5       |
|   | 11             | Tie-In        | 13-2-12 to 14-3-10 | 0-5-0      | Тор       | 15 PSF  | 40 PSF  | 0 PSF | 0 PSF |          |
|   |                | Self Weight   |                    |            |           | 11 PLF  |         |       |       |          |

READ ALL NOTES ON THIS PAGE AND ON ENGINEERING NOTE PAGE ENP-2. THIS NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

Manufacturer Info

APA: PR-L318

PASS THRU FRAMING SQUASH **BLOCK IS REQUIRED AT ALL** POINT LOADS OVER BEARINGS.



Page 9 of 24

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Discipline Reviewer BCIN Date
Building Code H. Authier 43236 2021-02-03

3228 Moodie Dr, Ottawa, Ontario

Notes

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- Handling & Installation
- 1. LVL beams must not be out or drilled
  2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastering 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 4/24/2023



613-838-2775 / 905-642-4400

Kott



Project:

Address: **GREENPARK HOMES** 

TRINAR HALL, EAST GWILLIMBURY, ON

Date: 12/17/2020 Input by:

Job Name: LOT-36 (GLENWAY 12A EL-2)

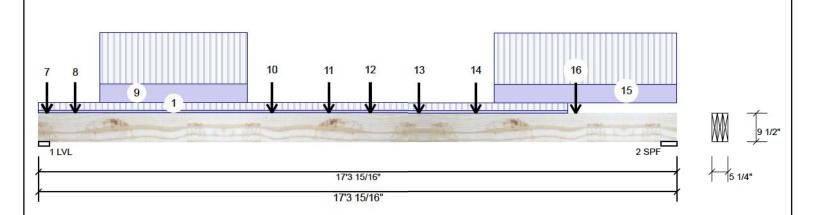
Project #:

Forex 2.0E-3000Fb LVL

1.750" X 9.500"

3-Ply - PASSED

Level: Second Floor



| Member Infori      | mation |                |                      | Unfacto  | red React | tions U | NPATTERNI    | ED lb (U | Jplift)  |                  |
|--------------------|--------|----------------|----------------------|----------|-----------|---------|--------------|----------|----------|------------------|
| Type:              | Girder | Application:   | Floor (Residential)  | Brg      | Live      |         | Dead         | Snow     | ı        | Wind             |
| Plies:             | 3      | Design Method: | LSD                  | 1        | 1056      |         | 557          | 41       |          | 0                |
| Moisture Condition | n: Dry | Building Code: | NBCC 2015 / OBC 2012 | 2        | 2626      |         | 1164         | 0        | )        | 0                |
| Deflection LL:     | 360    | Load Sharing:  | Yes                  |          |           |         |              |          |          |                  |
| Deflection TL:     | 240    | Deck:          | Not Checked          |          |           |         |              |          |          |                  |
| Importance:        | Normal | Vibration:     | Not Checked          |          |           |         |              |          |          |                  |
| General Load       |        |                |                      |          |           |         |              |          |          |                  |
| Floor Live:        | 40 PSF |                |                      | Bearings | s and Fac | tored R | leactions    |          |          |                  |
| Dead:              | 15 PSF |                |                      | Bearing  | Length    | Сар.    | React D/L lb | Total    | Ld. Case | Ld. Comb.        |
|                    |        |                |                      | 1 - LVL  | 3.500"    | 17%     | 696 / 1626   | 2322     | L        | 1.25D+1.5L<br>+S |

L

| •             |                |             |               |             |            |         |
|---------------|----------------|-------------|---------------|-------------|------------|---------|
| Analysis      | Actual         | Location    | Allowed       | Capacity    | Comb.      | Case    |
| Moment        | 13010 ft-lb    | 11'10 7/16" | 35449 ft-lb   | 0.367 (37%) | 1.25D+1.5L | L       |
| Unbraced      | 13010 ft-lb    | 11'10 7/16" | 33607 ft-lb   | 0.387 (39%) | 1.25D+1.5L | L       |
| Shear         | 5193 lb        | 16'2"       | 13915 lb      | 0.373 (37%) | 1.25D+1.5L | L       |
| Perm Defl in. | 0.198 (L/1011) | 9'1 5/8"    | 0.558 (L/360) | 0.360 (36%) | D          | Uniform |
| LL Defl inch  | 0.433 (L/464)  | 9'2 5/16"   | 0.558 (L/360) | 0.780 (78%) | L+0.5S     | L       |
|               |                |             |               |             |            |         |

**Design Notes** 

Analysis Results

1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 4.5.

9'2 1/16" 0.836 (L/240) 0.750 (75%) D+L+0.5S

- 2 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.
- 5 Top braced at bearings.

TL Defl inch 0.631 (L/318)

- 6 Bottom braced at bearings.

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Manufacturer Info

APA: PR-L318

32%

1455 / 3939

5394 L

NAILING OR BOLTING REQUIREMENTS. PASS THRU FRAMING SQUASH **BLOCK IS REQUIRED AT ALL** POINT LOADS OVER BEARINGS.

2 - SPF 5.196"



1.25D+1.5L

Page 10 of 24

| / Lateral siende  | erness rado based on i | uli section width. |            |      |        |        |       |       |                     |
|-------------------|------------------------|--------------------|------------|------|--------|--------|-------|-------|---------------------|
| ID                | Load Type              | Location           | Trib Width | Side | Dead   | Live   | Snow  | Wind  | Comments            |
| 1                 | Tie-In                 | 0-0-0 to 14-4-6    | 0-3-10     | Тор  | 15 PSF | 40 PSF | 0 PSF | 0 PSF |                     |
| 2                 | Point                  | 0-2-12             |            | Тор  | 2 lb   | 1 lb   | 4 lb  | 0 lb  | The<br>cor<br>ma    |
| 3                 | Point                  | 0-2-12             |            | Тор  | 3 lb   | 0 lb   | 0 lb  | 0 lb  | Wall Self Weigh Sta |
| 4                 | Point                  | 0-2-12             |            | Тор  | 12 lb  | 8 lb   | 28 lb | 0 lb  | On<br>app<br>tim    |
| 5                 | Point                  | 0-2-12             |            | Тор  | 26 lb  | 0 lb   | 0 lb  | 0 lb  | Wall Self Weigh pos |
| Continued on page | 2                      |                    |            |      |        |        |       |       | Di<br>Bu            |

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East Gwillimbury

Discipline Reviewer BCIN Date
Building Code H. Authier 43236 2021-02-03

### Notes

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- Handling & Installation
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   Refer to manufacturer's product inforegarding installation requirements,
- approvals

  Damaged Beams must not be used Daniaged beams must not be used Design assumes top edge is laterally restrained Provide lateral support at bearing points to avoid lateral displacement and rotation

This design is valid until 4/24/2023

3228 Moodie Dr, Ottawa, Ontario 613-838-2775 / 905-642-4400





Kott

isDesign

Client:

Project:

Address:

**GREENPARK HOMES** TRINAR HALL, EAST GWILLIMBURY, ON Date: 12/17/2020 Input by:

Job Name: LOT-36 (GLENWAY 12A EL-2)

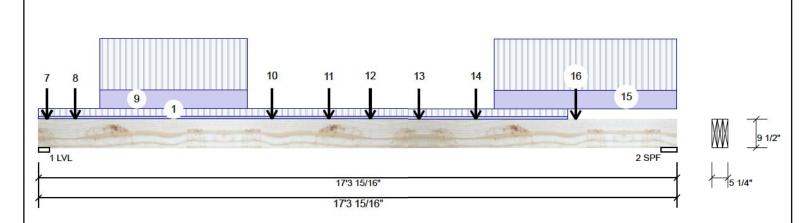
Project #:

F13-A Forex 2.0E-3000Fb LVL

1.750" X 9.500"

3-Ply - PASSED

Level: Second Floor



| 1 | Continued from p | age 1         |                   |            |           |        |         |       |       |                  |
|---|------------------|---------------|-------------------|------------|-----------|--------|---------|-------|-------|------------------|
| ı | ID               | Load Type     | Location          | Trib Width | Side      | Dead   | Live    | Snow  | Wind  | Comments         |
| ı | 6                | Point         | 0-2-12            |            | Тор       | 4 lb   | 3 lb    | 9 lb  | 0 lb  |                  |
| ı | 7                | Point         | 0-2-12            |            | Тор       | 9 lb   | 0 lb    | 0 lb  | 0 lb  | Wall Self Weight |
| ı | 8                | Point         | 0-11-15           |            | Far Face  | 28 lb  | 75 lb   | 0 lb  | 0 lb  | J4               |
| ı | 9                | Part. Uniform | 1-7-15 to 5-7-15  |            | Far Face  | 30 PLF | 81 PLF  | 0 PLF | 0 PLF |                  |
| ı | 10               | Point         | 6-3-15            |            | Far Face  | 43 lb  | 116 lb  | 0 lb  | 0 lb  | J5               |
| ı | 11               | Point         | 7-10-7            |            | Far Face  | 40 lb  | 107 lb  | 0 lb  | 0 lb  | J5               |
| ı | 12               | Point         | 8-11-15           |            | Far Face  | 37 lb  | 99 lb   | 0 lb  | 0 lb  | J5               |
| ı | 13               | Point         | 10-3-15           |            | Far Face  | 43 lb  | 116 lb  | 0 lb  | 0 lb  | J5               |
| ı | 14               | Point         | 11-10-7           |            | Far Face  | 40 lb  | 107 lb  | 0 lb  | 0 lb  | J5               |
| ı | 15               | Part. Uniform | 12-4-6 to 17-3-15 |            | Far Face  | 30 PLF | 81 PLF  | 0 PLF | 0 PLF |                  |
| ı | 16               | Point         | 14-7-0            |            | Near Face | 902 lb | 2151 lb | 0 lb  | 0 lb  | F12              |
| ı |                  | Self Weight   |                   |            |           | 11 PLF |         |       |       |                  |

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PASS THRU FRAMING SQUASH **BLOCK IS REQUIRED AT ALL** POINT LOADS OVER BEARINGS.



Page 11 of 24

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Discipline Reviewer BCIN Date
Building Code H. Authier 43236 2021-02-03

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5. Provide lateral support at bearing points to avoid lateral displacement and rotation

This design is valid until 4/24/2023

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

APA: PR-L318

Kott 3228 Moodie Dr, Ottawa, Ontario 613-838-2775 / 905-642-4400





Project:

Address: GREENPARK HOMES

TRINAR HALL, EAST GWILLIMBURY,ON

Date: 12/17/2020

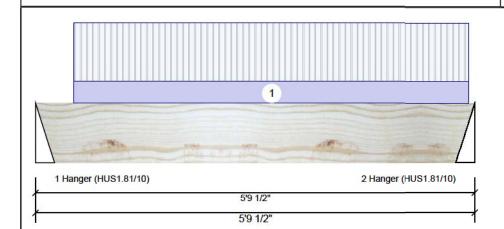
Input by: SB

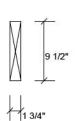
Job Name: LOT-36 (GLENWAY 12A EL-2)

Project #:

# F5-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" - PASSED

Level: Second Floor





Page 12 of 24

# Member Information Type: Girder

| Type:               | Girder | Application:               | Floor (Residential)  |
|---------------------|--------|----------------------------|----------------------|
| Plies:              | 1      | Design Method:             | LSD                  |
| Moisture Condition: | Dry    | Building Code:             | NBCC 2015 / OBC 2012 |
| Deflection LL:      | 360    | Load Sharing:              | No                   |
| Deflection TL:      | 240    | Deck:                      | Not Checked          |
| Importance:         | Normal | Vibration:                 | Not Checked          |
| General Load        |        | Sp. Advis Grant Street St. |                      |
| Floor Live:         | 40 PSE |                            |                      |

### **Unfactored Reactions UNPATTERNED lb (Uplift)**

| Brg | Live | Dead | Snow | Wind |
|-----|------|------|------|------|
| 1   | 14   | 16   | 0    | 0    |
| 2   | 17   | 17   | 0    | 0    |

# Analysis Results

15 PSF

Dead:

| • | mary one reco |               |             |               |            |            |      |  |
|---|---------------|---------------|-------------|---------------|------------|------------|------|--|
|   | Analysis      | Actual        | Location    | Allowed       | Capacity   | Comb.      | Case |  |
|   | Moment        | 60 ft-lb      | 2'10 13/16" | 11135 ft-lb   | 0.005 (1%) | 1.25D+1.5L | L    |  |
|   | Unbraced      | 60 ft-lb      | 2'10 13/16" | 6882 ft-lb    | 0.009 (1%) | 1.25D+1.5L | L    |  |
|   | Shear         | 32 lb         | 11 3/4"     | 4546 lb       | 0.007 (1%) | 1.25D+1.5L | L    |  |
|   | Perm Defl in. | 0.000 (L/999) | 0           | 999.000 (L/0) | 0.000 (0%) |            |      |  |
|   | LL Defl inch  | 0.000 (L/999) | 0           | 999.000 (L/0) | 0.000 (0%) |            |      |  |
|   | TL Defl inch  | 0.000 (L/999) | 0           | 999.000 (L/0) | 0.000 (0%) |            |      |  |

## Bearings and Factored Reactions

| Bearing Le        | ngth Cap. | React D/L lb | Total | Ld. Case | Ld. Comb.  |
|-------------------|-----------|--------------|-------|----------|------------|
| 1 - 3.0<br>Hanger | 000" 1%   | 20 / 21      | 42    | L        | 1.25D+1.5L |
| 2 - 3.0<br>Hanger | 000" 1%   | 22 / 25      | 47    | L        | 1.25D+1.5L |

### **Design Notes**

- 1 Fill all hanger nailing holes.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Top braced at bearings.
- 4 Bottom braced at bearings

READ ALL NOTES ON THIS PAGE AND ON ENGINEERING NOTE PAGE ENP-2. THIS NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

REFER TO MULTIPLE MEMBER TO MEMBER

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

Manufacturer Info

APA: PR-L318

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.



| ID | Load Type   | Location       | Trib Width | Side | Dead   | Live   | Snow  | Wind  | Comments |
|----|-------------|----------------|------------|------|--------|--------|-------|-------|----------|
| 1  | Tie-In      | 0-6-1 to 5-8-9 | 0-1-12     | Тор  | 15 PSF | 40 PSF | 0 PSF | 0 PSF |          |
|    | Self Weight |                |            |      | 4 PLF  |        |       |       |          |



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|                                 | Discipline    | Reviewer   | BCIN  | Date       |  |  |  |  |
|---------------------------------|---------------|------------|-------|------------|--|--|--|--|
|                                 | Building Code | H. Authier | 43236 | 2021-02-03 |  |  |  |  |
|                                 | Sewage System |            |       |            |  |  |  |  |
|                                 | Zoning        |            |       |            |  |  |  |  |
| Kott                            |               |            |       |            |  |  |  |  |
| 3228 Moodie Dr, Ottawa, Ontario |               |            |       |            |  |  |  |  |

### Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design orineria 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

- Dry service conditions, unless noted otherwise
   LVL not to be treated with fire retardant or corrosive
- Handling & Installation
- IVI beams must not be cut or drilled
   Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
   Damaged Beams must not be used
- Design assumes top edge is laterally restrained
   Provide lateral support at bearing points to avoid lateral displacement and rotation
  - d avoid

This design is valid until 4/24/2023

KOTT

613-838-2775 / 905-642-4400





Project:

Address: **GREENPARK HOMES** 

TRINAR HALL, EAST GWILLIMBURY, ON

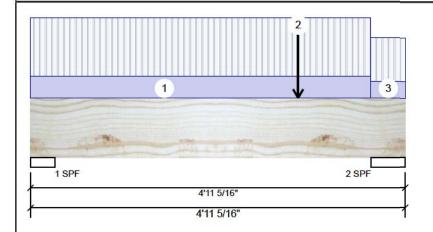
Date: 12/17/2020 Input by:

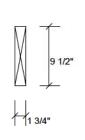
Job Name: LOT-36 (GLENWAY 12A EL-2)

Project #:

#### 1.750" X 9.500" - PASSED Forex 2.0E-3000Fb LVL F5-B

Level: Second Floor





Page 13 of 24

#### Member Information Type: Plies: 1 Moisture Condition: Dry Deflection LL: 360 Deflection TL: 240 Importance: Normal General Load

40 PSF 15 PSF Application: Floor (Residential) Design Method: **Building Code:** NBCC 2015 / OBC 2012 Load Sharing: No Deck: Not Checked Vibration: Not Checked

| Unfactored Reactions UNPATTERNED Ib (Uplift) |      |      |      |      |  |  |  |  |  |  |
|--|------|------|------|------|--|--|--|--|--|--|
| Brg  | Live | Dead | Snow | Wind |  |  |  |  |  |  |
| 1  | 52   | 31   | 0    | 0    |  |  |  |  |  |  |
| 2  | 61   | 41   | 0    | 0    |  |  |  |  |  |  |
|  |      |      |      |      |  |  |  |  |  |  |
|  |      |      |      |      |  |  |  |  |  |  |

#### **Bearings and Factored Reactions** Bearing Length Cap. React D/L lb Total Ld. Case Ld. Comb. 1 - SPF 3.813" 3% 39 / 78 117 L 1.25D+1.5L 2 - SPF 5.500" 2% 51 / 92 143 I 1.25D+1.5L

### **Analysis Results**

Floor Live:

Dead:

| Analysis      | Actual             | Location   | Allowed       | Capacity   | Comb.      | Case |
|---------------|--------------------|------------|---------------|------------|------------|------|
| Moment        | 127 ft-lb          | 2'7 13/16" | 11362 ft-lb   | 0.011 (1%) | 1.25D+1.5L | L    |
| Unbraced      | 127 ft-lb          | 2'7 13/16" | 8454 ft-lb    | 0.015 (1%) | 1.25D+1.5L | L    |
| Shear         | 95 lb              | 3'9 1/16"  | 4638 lb       | 0.021 (2%) | 1.25D+1.5L | L    |
| Perm Defl in. | 0.000 (L/999)      | 0          | 999.000 (L/0) | 0.000 (0%) |            |      |
| LL Defl inch  | 0.001<br>(L/46174) | 2'5 7/8"   | 0.143 (L/360) | 0.010 (1%) | L          | L    |
| TL Defl inch  | 0.002<br>(L/28142) | 2'6 1/8"   | 0.215 (L/240) | 0.010 (1%) | D+L        | L    |

READ ALL NOTES ON THIS PAGE AND ON ENGINEERING NOTE PAGE ENP-2. THIS NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

Wind

0 PSF

0 PSF

0 lb

Comments

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

Snow

0 PSF

0 PSF

0 lb

Manufacturer Info

APA: PR-L318

PASS THRU FRAMING SQUASH **BLOCK IS REQUIRED AT ALL** POINT LOADS OVER BEARINGS

Live

17 lb

40 PSF

40 PSF



#### Design Notes

- 1 Girders are designed to be supported on the bottom edge only.
- 2 Top braced at bearings.
- 3 Bottom braced at bearings

| ID | Load Type   | Location         | Trib Width | Side      | Dead   |
|----|-------------|------------------|------------|-----------|--------|
| 1  | Tie-In      | 0-0-0 to 4-5-13  | 0-6-0      | Тор       | 15 PSF |
| 2  | Point       | 3-6-5            |            | Near Face | 17 lb  |
| 3  | Tie-In      | 4-5-13 to 4-11-5 | 0-4-8      | Тор       | 15 PSF |
|    | Self Weight |                  |            |           | 4 PLF  |



These plans have been reviewed for use with the corrections as noted. No other changes may be made without written approval of the Building Standards Branch. All work must comply with Zoning By-Law 2018-043, as amended, and the Ontario Building Code, as amépaded. These approved documents must be kept on site at all litters. The building code, is times. The building permit must be clearly posted on site at all times.

|                                 | Discipline    | Reviewer   | BCIN  | Date       |  |  |  |  |
|---------------------------------|---------------|------------|-------|------------|--|--|--|--|
|                                 | Building Code | H. Authier | 43236 | 2021-02-03 |  |  |  |  |
|                                 | Sewage System |            |       |            |  |  |  |  |
|                                 | Zoning        |            |       |            |  |  |  |  |
| Kott                            |               |            |       |            |  |  |  |  |
| 3228 Moodie Dr, Ottawa, Ontario |               |            |       |            |  |  |  |  |

### Notes

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

Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corn

### **Handling & Installation**

- LVL beams must not be cut or drilled
   Refer to manufacturer's product regarding installation requiremen naged Beams must not be us
- Daniaged beams must not be used Design assumes top edge is laterally restrained Provide lateral support at bearing points to avoid lateral displacement and rotation





Project:

Address: **GREENPARK HOMES** 

TRINAR HALL, EAST GWILLIMBURY, ON

Date: 12/17/2020

Input by:

Job Name: LOT-36 (GLENWAY 12A EL-2)

Project #:

Brg

1

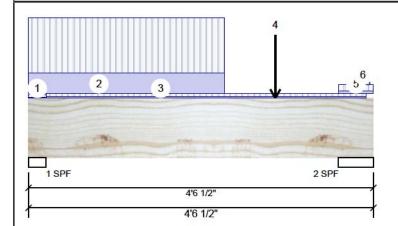
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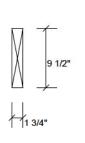
2 - SPF 5.500"

Live

#### 1.750" X 9.500" - PASSED F5-C Forex 2.0E-3000Fb LVL

Level: Second Floor





Wind

0 0

1.25D+1.5L

0

0

1125 L

Comments

J3

Wind

Page 14 of 24

## Member Information

| Type:               | Girder | Application:   | Floor (Residential)  |
|---------------------|--------|--|----------------------|
| Plies:              | 1      | Design Method:   | LSD                  |
| Moisture Condition: | Dry    | Building Code:   | NBCC 2015 / OBC 2012 |
| Deflection LL:      | 360    | Load Sharing:  | No                   |
| Deflection TL:      | 240    | Deck:  | Not Checked          |
| Importance:         | Normal | Vibration:   | Not Checked          |
| General Load        |        | Supplied to the supplied to th |                      |
| Floor Live:         | 40 PSF |  |                      |
| Dead:               | 15 PSF |  |                      |

## Unfactored Reactions UNPATTERNED lb (Uplift)

Dead

258

221

Live

669

566

| Bearings and Factored Reactions |                |                   |                |            |  |  |  |  |  |
|---------------------------------|----------------|-------------------|----------------|------------|--|--|--|--|--|
|                                 | Bearing Length | Cap. React D/L lb | Total Ld. Case | Ld. Comb.  |  |  |  |  |  |
|                                 | 1 - SPF 2.750" | 45% 323 / 1004    | 1327 L         | 1.25D+1.5L |  |  |  |  |  |

276 / 849

#### Analysis Results

| Γ | Analysis      | Actual             | Location   | Allowed       | Capacity    | Comb.      | Case    |
|---|---------------|--------------------|------------|---------------|-------------|------------|---------|
|   | Moment        | 1203 ft-lb         | 2'1 9/16"  | 11362 ft-lb   | 0.106 (11%) | 1.25D+1.5L | L       |
|   | Unbraced      | 1203 ft-lb         | 2'1 9/16"  | 8860 ft-lb    | 0.136 (14%) | 1.25D+1.5L | L       |
|   | Shear         | 1501 lb            | 3'4 1/4"   | 4638 lb       | 0.324 (32%) | 1.25D+1.5L | L       |
|   | Perm Defl in. | 0.004<br>(L/11055) | 2'1 13/16" | 0.133 (L/360) | 0.030 (3%)  | D          | Uniform |
|   | LL Defl inch  | 0.011 (L/4270)     | 2'1 13/16" | 0.133 (L/360) | 0.080 (8%)  | L          | L       |
|   | TL Defl inch  | 0.016 (L/3080)     | 2'1 13/16" | 0.199 (L/240) | 0.080 (8%)  | D+L        | L       |

READ ALL NOTES ON THIS PAGE AND ON ENGINEERING NOTE PAGE ENP-2. THIS NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

19%

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

Snow

PASS THRU FRAMING SQUASH **BLOCK IS REQUIRED AT ALL** POINT LOADS OVER BEARINGS



### **Design Notes**

ID

- 1 Girders are designed to be supported on the bottom edge only.
- 2 Top braced at bearings.
- 3 Bottom braced at bearings.

Load Type

| 1 | Tie-In        | 0-0-0 to 0-2-12  | 0-4-0              | Тор      | 15 PSF  | 40 PSF  | 0 PSF | 0 PSF |
|---|---------------|------------------|--------------------|----------|---------|---------|-------|-------|
| 2 | Part. Uniform | 0-0-0 to 2-7-0   |                    | Far Face | 111 PLF | 297 PLF | 0 PLF | 0 PLF |
| 3 | Tie-In        | 0-2-12 to 4-5-6  | 0-5-4              | Тор      | 15 PSF  | 40 PSF  | 0 PSF | 0 PSF |
| 4 | Point         | 3-3-0            |                    | Far Face | 138 lb  | 369 lb  | 0 lb  | 0 lb  |
| 5 | Tie-In        | 4-1-0 to 4-6-8   | 0-10-6             | Тор      | 15 PSF  | 40 PSF  | 0 PSF | 0 PSF |
| 6 | S Tie-In      | 4-3-12 to 4-5-15 | 0-11-4 to<br>0-8-9 | Тор      | 15 PSF  | 40 PSF  | 0 PSF | 0 PSF |
|   | Self Weight   |                  |                    |          | 4 PLF   |         |       |       |

Side



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| uscipline    | Reviewer   | BCIN  | Date       |
|--------------|------------|-------|------------|
| uilding Code | H. Authier | 43236 | 2021-02-03 |
| ewage System |            |       |            |
| oning        |            |       |            |
|              |            |       |            |

### Notes

Saturdural 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.

- Dry service conditions, unless noted otherwise
   LVL not to be treated with fire retardant or corrosive
- Handling & Installation
- LVL beams must not be cut or drilled
   Refer to manufacturer's product regarding installation requirement fastening details, beam strength value

Location Trib Width

Daniaged beams must not be used Design assumes top edge is laterally restrained Provide lateral support at bearing points to avoid lateral displacement and rotation

naged Beams must not be used

This design is valid until 4/24/2023

Dead

Manufacturer Info APA: PR-L318

3228 Moodie Dr. Ottawa, Untario 613-838-2775 / 905-642-4400







Client: Project:

Address:

**GREENPARK HOMES** TRINAR HALL, EAST GWILLIMBURY, ON Date: 12/17/2020 Input by:

Job Name: LOT-36 (GLENWAY 12A EL-2)

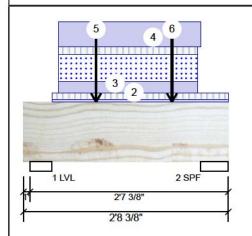
Project #:

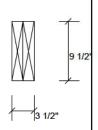
Brg

1

2 - SPF 4.375"

1.750" X 9.500" Forex 2.0E-3000Fb LVL 2-Ply - PASSED Level: Second Floor





Wind

0

n

73

82

1009 L

Page 15 of 24

| Member Information  |        |                                |                      |  |  |  |  |
|---------------------|--------|--------------------------------|----------------------|--|--|--|--|
| Type:               | Girder | Application:                   | Floor (Residential)  |  |  |  |  |
| Plies:              | 2      | Design Method:                 | LSD                  |  |  |  |  |
| Moisture Condition: | Dry    | Building Code:                 | NBCC 2015 / OBC 2012 |  |  |  |  |
| Deflection LL:      | 360    | Load Sharing:                  | No                   |  |  |  |  |
| Deflection TL:      | 240    | Deck:                          | Not Checked          |  |  |  |  |
| Importance:         | Normal | Vibration:                     | Not Checked          |  |  |  |  |
| General Load        |        | Sp. AAP (19) Levi derroot (2). |                      |  |  |  |  |
| Floor Live:         | 40 PSF |                                |                      |  |  |  |  |
| Doad:               | 15 DCE |                                |                      |  |  |  |  |

| 2                               | 070    | ,    | 230          |       | _        | Ü          |  |  |  |
|---------------------------------|--------|------|--------------|-------|----------|------------|--|--|--|
|                                 |        |      |              |       |          |            |  |  |  |
| Bearings and Factored Reactions |        |      |              |       |          |            |  |  |  |
| Bearing                         | Length | Сар. | React D/L lb | Total | Ld. Case | Ld. Comb.  |  |  |  |
| 1 - LVL                         | 3.500" | 9%   | 314 / 545    | 860   | L        | 1.25D+1.5L |  |  |  |

367 / 643

Unfactored Reactions UNPATTERNED lb (Uplift)

314

373

Dead

252

293

# Analysis Results

| Analysis      | Actual               | Location  | Allowed           | Capacity   | Comb.            | Case    |
|---------------|----------------------|-----------|-------------------|------------|------------------|---------|
| Moment        | 580 ft-lb            | 11 7/16"  | 22724 ft-lb       | 0.026 (3%) | 1.25D+1.5L<br>+S | _L      |
| Unbraced      | 580 ft-lb            | 11 7/16"  | 22724 ft-lb       | 0.026 (3%) | 1.25D+1.5L<br>+S | _L      |
| Shear         | 764 lb               | 1'7 1/4"  | 9277 lb           | 0.082 (8%) | 1.25D+1.5L<br>+S | _L      |
| Perm Defl in. | 0.001<br>(L/30600)   | 1'2 5/8"  | 0.072 (L/360)     | 0.010 (1%) | D                | Uniform |
| LL Defl inch  | 0.001<br>(L/21417)   | 1'1 9/16" | 0.072 (L/360)     | 0.020 (2%) | L+0.5S           | LL      |
| TL Defl inch  | 0.002<br>(L/12612)   | 1'2 1/16" | 0.108 (L/240)     | 0.020 (2%) | D+L+0.5S         | LL      |
| LL Cant       | -0.000<br>(2L/40376) | Lt Cant   | 0.200<br>(2L/480) | 0.000 (0%) | L+0.5S           | LL      |
| TL Cant       | -0.000<br>(2L/23806) | Lt Cant   | 0.300<br>(2L/360) | 0.000 (0%) | D+L+0.5S         | LL      |

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Manufacturer Info

APA: PR-L318

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH **BLOCK IS REQUIRED AT ALL** POINT LOADS OVER BEARINGS.



+S

+S

1.25D+1.5L



- 1 Girders are designed to be supported on the bottom edge only.
- 2 Multiple plies must be fastened together as per manufacturer's details.
- 3 Top loads must be supported equally by all plies.
- 4 Top braced at bearings.
- 5 Bottom braced at bearings.
- 6 Lateral slenderness ratio based on full section width.



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| Discipline    | Reviewer   | BCIN  | Date       |  |
|---------------|------------|-------|------------|--|
| Building Code | H. Authier | 43236 | 2021-02-03 |  |
| Sewage System |            |       |            |  |
| Zoning        |            |       |            |  |
|               |            |       |            |  |

Notes

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- Dry service conditions, unless noted otherwise
   LVL not to be treated with fire retardant or corrosive
- Handling & Installation
- LVL beams must not be cut or drilled
   Refer to manufacturer's product regarding installation requirement fastening details, beam strength value
- approvals
  Damaged Beams must not be used Daniaged beams must not be used Design assumes top edge is laterally restrained Provide lateral support at bearing points to avoid lateral displacement and rotation
  - - This design is valid until 4/24/2023

3228 Moodie Dr. Ottawa, Ontario 613-838-2775 / 905-642-4400







Project:

Address: **GREENPARK HOMES** 

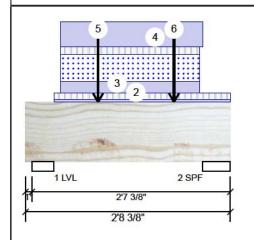
TRINAR HALL, EAST GWILLIMBURY, ON

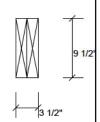
Date: 12/17/2020 Input by:

Job Name: LOT-36 (GLENWAY 12A EL-2)

Project #:

1.750" X 9.500" Forex 2.0E-3000Fb LVL 2-Ply - PASSED Level: Second Floor





Page 16 of 24

| ID | Load Type     | Location       | Trib Width | Side      | Dead   | Live   | Snow   | Wind  | Comments         |
|----|---------------|----------------|------------|-----------|--------|--------|--------|-------|------------------|
| 2  | Tie-In        | 0-4-8 to 2-8-6 | 0-6-6      | Тор       | 15 PSF | 40 PSF | 0 PSF  | 0 PSF |                  |
| 3  | Part. Uniform | 0-5-8 to 2-3-8 |            | Тор       | 37 PLF | 25 PLF | 85 PLF | 0 PLF |                  |
| 4  | Part. Uniform | 0-5-8 to 2-4-0 |            | Тор       | 80 PLF | 0 PLF  | 0 PLF  | 0 PLF | Wall Self Weight |
| 5  | Point         | 0-11-7         |            | Near Face | 161 lb | 330 lb | 0 lb   | 0 lb  | J3               |
| 6  | Point         | 1-11-7         |            | Near Face | 127 lb | 263 lb | 0 lb   | 0 lb  | J3               |
|    | Self Weight   |                |            |           | 8 PLF  |        |        |       |                  |

READ ALL NOTES ON THIS PAGE AND ON ENGINEERING NOTE PAGE ENP-2. THIS NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH **BLOCK IS REQUIRED AT ALL** POINT LOADS OVER BEARINGS.



These plans have been reviewed for use with the corrections as noted. No other changes may be made without written approval of the Building Standards Branch. All work must comply with Zoning By-Law 2018-043, as amended, and the Ontario Building Code, as amépaded. These approved documents must be kept on site at all times. The building permit must be clearly posted on site at all times.

| Discipline    | Reviewer   | BCIN  | Date       |
|---------------|------------|-------|------------|
| Building Code | H. Authier | 43236 | 2021-02-03 |
| Sewage System |            |       |            |
| Zoning        |            |       |            |

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design orineria 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.

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

- Handling & Installation
- 1. LVL beams must not be out or drilled
  2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastering 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

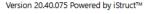
- 6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

APA: PR-L318

3228 Moodie Dr, Ottawa, Ontario 613-838-2775 / 905-642-4400







Member Information

Client: Project:

Address: **GREENPARK HOMES** 

TRINAR HALL, EAST GWILLIMBURY, ON

12/17/2020 Date: Input by:

Job Name: LOT-36 (GLENWAY 12A EL-2)

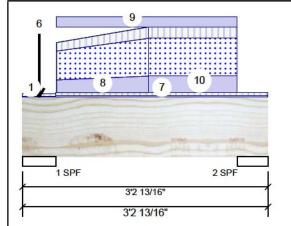
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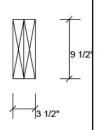
Forex 2.0E-3000Fb LVL

1.750" X 9.500"

2-Ply - PASSED

Level: Second Floor





Page 17 of 24

| viciniber innom     | lation |                                      |                      |
|---------------------|--------|--------------------------------------|----------------------|
| Type:               | Girder | Application:                         | Floor (Residential)  |
| Plies:              | 2      | Design Method:                       | LSD                  |
| Moisture Condition: | Dry    | Building Code:                       | NBCC 2015 / OBC 2012 |
| Deflection LL:      | 360    | Load Sharing:                        | No                   |
| Deflection TL:      | 240    | Deck:                                | Not Checked          |
| Importance:         | Normal | Vibration:                           | Not Checked          |
| General Load        |        | Sp. 16.4 (1) (2) (1) (3) (3) (3) (3) |                      |
| Floor Live:         | 40 PSF |                                      |                      |
| Dead:               | 15 PSF |                                      |                      |

|   | Unfac | tored Reactions | UNPATTERI | NED lb (Uplift) |      |
|---|-------|-----------------|-----------|-----------------|------|
|   | Brg   | Live            | Dead      | Snow            | Wind |
|   | 1     | 253             | 466       | 716             | 0    |
| 2 | 2     | 145             | 274       | 347             | 0    |
|   |       |                 |           |                 |      |
|   | l     |                 |           |                 |      |

Cap. React D/L lb

583 / 1327

343 / 665

#### Analysis Results Actual Location Allowed Comb Case **Analysis** Capacity 1'7 7/8" 22724 ft-lb Moment 648 ft-lb 0.029 (3%) 1.25D+1.5S L +L Unbraced 648 ft-lb 1'7 7/8" 22724 ft-lb 0.029 (3%) 1.25D+1.5S L +L Shear 400 lb 1'2" 9277 lb 0.043 (4%) 1.25D+1.5S L Perm Defl in. 0.001 1'7 3/4" 0.084 (L/360) 0.010 (1%) D Uniform (L/29897)

LL Defl inch 0.002 1'7 13/16" 0.084 (L/360) 0.020 (2%) S+0.5L (L/19475)

TL Defl inch 0.003 1'7 13/16" 0.126 (L/240) 0.020 (2%) D+S+0.5L L (L/11793)

READ ALL NOTES ON THIS PAGE AND ON ENGINEERING NOTE PAGE ENP-2. THIS NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT. REFER TO MULTIPLE MEMBER TO MEMBER

10%

**Bearings and Factored Reactions** 

Bearing Length

1 - SPF 5.250"

2 - SPF 4.813"

PASS THRU FRAMING SQUASH **BLOCK IS REQUIRED AT ALL** POINT LOADS OVER BEARINGS.

CONNECTION DETAIL FOR PLY TO PLY

NAILING OR BOLTING REQUIREMENTS.



Ld. Comb.

1.25D+1.5S +L

1.25D+1.5S

+L

Total Ld. Case

1910 I

1008 L

### Design Notes

- 1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 4.5.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.
- 5 Top braced at bearings.
- 6 Bottom braced at bearings.
- 7 Lateral slenderness ratio based on full section width.



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|                                 | Discipline    | Reviewer   | BCIN  | Date       |  |  |  |  |
|---------------------------------|---------------|------------|-------|------------|--|--|--|--|
|                                 | Building Code | H. Authier | 43236 | 2021-02-03 |  |  |  |  |
|                                 | Sewage System |            |       |            |  |  |  |  |
|                                 | Zoning        |            |       |            |  |  |  |  |
| Kott                            |               |            |       |            |  |  |  |  |
| 3228 Moodie Dr, Ottawa, Ontario |               |            |       |            |  |  |  |  |

### Notes

Carculated Structural adequacy of this component based on 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.

Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corro

### **Handling & Installation**

LVL beams must not be cut or drilled
 Refer to manufacturer's product regarding installation requirement

naged Beams must not be used Daniaged beams must not be used Design assumes top edge is laterally restrained Provide lateral support at bearing points to avoid lateral displacement and rotation

Manufacturer Info

APA: PR-L318





Project:

Address: **GREENPARK HOMES**  Date: 12/17/2020 Input by:

Job Name: LOT-36 (GLENWAY 12A EL-2)

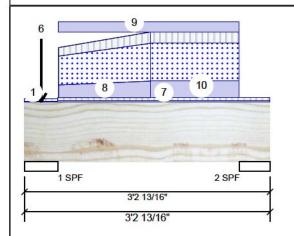
Project #:

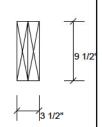
Forex 2.0E-3000Fb LVL F6-B

1.750" X 9.500" 2-Ply - PASSED

TRINAR HALL, EAST GWILLIMBURY, ON

Level: Second Floor





Page 18 of 24

| ID | Load Type     | Location         | Trib Width | Side | Dead    | Live   | Snow    | Wind  | Comments         |
|----|---------------|------------------|------------|------|---------|--------|---------|-------|------------------|
| 1  | Tie-In        | 0-0-0 to 0-5-4   | 0-5-15     | Тор  | 15 PSF  | 40 PSF | 0 PSF   | 0 PSF |                  |
| 2  | Point         | 0-2-10           |            | Тор  | 13 lb   | 9 lb   | 30 lb   | 0 lb  |                  |
| 3  | Point         | 0-2-10           |            | Тор  | 14 lb   | 0 lb   | 0 lb    | 0 lb  | Wall Self Weight |
| 4  | Point         | 0-2-10           |            | Тор  | 166 lb  | 106 lb | 355 lb  | 0 lb  | F1 F1            |
| 5  | Point         | 0-2-10           |            | Тор  | 5 lb    | 3 lb   | 11 lb   | 0 lb  |                  |
| 6  | Point         | 0-2-10           |            | Тор  | 6 lb    | 0 lb   | 0 lb    | 0 lb  | Wall Self Weight |
| 7  | Tie-In        | 0-5-4 to 3-2-13  | 0-7-9      | Тор  | 15 PSF  | 40 PSF | 0 PSF   | 0 PSF |                  |
| 8  | Tapered Start | 0-5-6            |            | Тор  | 100 PLF | 68 PLF | 228 PLF | 0 PLF |                  |
|    | End           | 1-7-15           |            |      | 131 PLF | 90 PLF | 299 PLF | 0 PLF |                  |
| 9  | Part. Uniform | 0-5-6 to 2-9-14  |            | Тор  | 80 PLF  | 0 PLF  | 0 PLF   | 0 PLF | Wall Self Weight |
| 10 | Part. Uniform | 1-7-15 to 2-9-14 |            | Тор  | 131 PLF | 90 PLF | 299 PLF | 0 PLF |                  |
|    | Self Weight   |                  |            |      | 8 PLF   |        |         |       |                  |

READ ALL NOTES ON THIS PAGE AND ON ENGINEERING NOTE PAGE ENP-2. THIS NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH **BLOCK IS REQUIRED AT ALL** POINT LOADS OVER BEARINGS.



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|                                 | Discipline    | Reviewer   | BCIN  | Date       |  |  |  |  |
|---------------------------------|---------------|------------|-------|------------|--|--|--|--|
|                                 | Building Code | H. Authier | 43236 | 2021-02-03 |  |  |  |  |
|                                 | Sewage System |            |       |            |  |  |  |  |
|                                 | Zoning        |            |       |            |  |  |  |  |
| Kott                            |               |            |       |            |  |  |  |  |
| 3228 Moodie Dr, Ottawa, Ontario |               |            |       |            |  |  |  |  |

### Notes

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- Dry service conditions, unless noted otherwise
   LVL not to be treated with fire retardant or corrosive
- Handling & Installation
- 1. LVL beams must not be out or drilled
  2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastering 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 4/24/2023

Manufacturer Info

APA: PR-L318

613-838-2775 / 905-642-4400

CSD DESIGN



Project:

Address: **GREENPARK HOMES** 

TRINAR HALL, EAST GWILLIMBURY, ON

Date: 12/17/2020

Input by:

Job Name: LOT-36 (GLENWAY 12A EL-2)

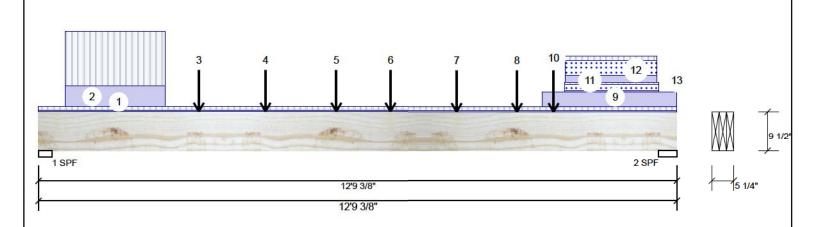
Project #:

Forex 2.0E-3000Fb LVL

1.750" X 9.500"

3-Ply - PASSED

Level: Second Floor



| Member Info       | rmation |   |                      | Unfactor  | ed Reacti | ons U  | NPATTERNE    | D lb ( | Uplift)  |
|-------------------|---------|---|----------------------|-----------|-----------|--------|--------------|--------|----------|
| Type:             | Girder  | Application:  | Floor (Residential)  | Brg       | Live      |        | Dead         | Snov   | v        |
| Plies:            | 3       | Design Method:  | LSD                  | 1         | 1921      |        | 1151         | 71     | 3        |
| Moisture Conditio | on: Dry | Building Code:  | NBCC 2015 / OBC 2012 | 2         | 2248      |        | 2729         | 344    | 2        |
| Deflection LL:    | 360     | Load Sharing:   | Yes                  | -         |           |        |              |        |          |
| Deflection TL:    | 240     | Deck:   | Not Checked          |           |           |        |              |        |          |
| Importance:       | Normal  | Vibration:  | Not Checked          |           |           |        |              |        |          |
| General Load      |         | 54 14 C (\$2 C))))))))])]))]))))))))))))))))))))))) |                      |           |           |        |              |        |          |
| Floor Live:       | 40 PSF  |   |                      | Bearings  | and Fact  | ored R | leactions    |        |          |
| Dead:             | 15 PSF  |   |                      | Bearing I | _ength    | Cap.   | React D/L lb | Total  | Ld. Case |
|                   |         |   |                      | 1 - SPF 3 | 3.250"    | 48%    | 1439 / 3595  | 5034   | L        |
|                   |         |   |                      | ╛         |           |        |              |        |          |

| Analysis Results |
|------------------|
|------------------|

| Analysis      | Actual        | Location   | Allowed       | Capacity    | Comb.            | Case    |
|---------------|---------------|------------|---------------|-------------|------------------|---------|
| Moment        | 22427 ft-lb   | 10'3 3/4"  | 35449 ft-lb   | 0.633 (63%) | 1.25D+1.5S<br>+L | L       |
| Unbraced      | 22427 ft-lb   | 10'3 3/4"  | 35449 ft-lb   | 0.633 (63%) | 1.25D+1.5S<br>+L | L       |
| Shear         | 10677 lb      | 11'8 1/4"  | 13915 lb      | 0.767 (77%) | 1.25D+1.5S<br>+L | L       |
| Perm Defl in. | 0.202 (L/729) | 6'10 9/16" | 0.409 (L/360) | 0.490 (49%) | D                | Uniform |
| LL Defl inch  | 0.352 (L/418) | 6'8 7/16"  | 0.409 (L/360) | 0.860 (86%) | L+0.5S           | L       |
| TL Defl inch  | 0.554 (L/266) | 6'9 3/16"  | 0.614 (L/240) | 0.900 (90%) | D+L+0.5S         | L       |

# D

- 3 Top loads must be supported equally by all plies.
- 4 Top braced at bearings.
- 5 Bottom braced at bearings.
- 6 Lateral clanderness ratio based on full section width

| Perm Defl in.   | 0.202 (L/729) | 6'10 9/16" | 0.409 (L/360) | 0.490 (49%) D        | Unifo |  |  |  |
|---|---------------|------------|---------------|----------------------|-------|--|--|--|
| LL Defl inch  | 0.352 (L/418) | 6'8 7/16"  | 0.409 (L/360) | 0.860 (86%) L+0.5S   | L     |  |  |  |
| TL Defl inch  | 0.554 (L/266) | 6'9 3/16"  | 0.614 (L/240) | 0.900 (90%) D+L+0.5S | L     |  |  |  |
| Design Notes  |               |            |               |                      |       |  |  |  |
| 1 Girders are designed to be supported on the bottom edge only.           |               |            |               |                      |       |  |  |  |
| 2 Multiple plies must be fastened together as per manufacturer's details. |               |            |               |                      |       |  |  |  |

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77% 3411 / 7411 10822 L

PASS THRU FRAMING SQUASH **BLOCK IS REQUIRED AT ALL** POINT LOADS OVER BEARINGS.

2 - SPF 4.375"



Wind 0 0

. Case Ld. Comb. 1.25D+1.5L +S

+L

1.25D+1.5S

Page 19 of 24

| 6 Lateral Sieri    | uerriess railo baseu i | on full section width. |            |           |         |         |       |       |          |   |
|--------------------|------------------------|------------------------|------------|-----------|---------|---------|-------|-------|----------|---|
| ID                 | Load Type              | Location               | Trib Width | Side      | Dead    | Live    | Snow  | Wind  | Comments | _ |
| 1                  | Tie-In                 | 0-0-0 to 12-9-6        | 0-6-6      | Тор       | 15 PSF  | 40 PSF  | 0 PSF | 0 PSF |          |   |
| 2                  | Part. Uniform          | 0-6-7 to 2-6-7         |            | Near Face | 114 PLF | 303 PLF | 0 PLF | 0 PLF |          |   |
| 3                  | Point                  | 3-2-7                  |            | Near Face | 131 lb  | 350 lb  | 0 lb  | 0 lb  | J3       |   |
| 4                  | Point                  | 4-6-7                  |            | Near Face | 144 lb  | 385 lb  | 0 lb  | 0 lb  | J3       |   |
| 5                  | Point                  | 5-11-7                 |            | Near Face | 131 lb  | 350 lb  | 0 lb  | 0 lb  | J3       |   |
| ontinued on page 2 |                        |                        |            |           |         |         |       |       |          |   |



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| Discipline    | Reviewer   | BCIN  | Date       |
|---------------|------------|-------|------------|
| Building Code | H. Authier | 43236 | 2021-02-03 |
| Sewage System |            |       |            |
| Zoning        |            |       |            |

3228 Moodie Dr. Ottawa, Untario 613-838-2775 / 905-642-4400

Notes

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

Handling & Installation

1. IVI, beams must not be out or drilled
2. Refer to manufacturer's product inforegarding installation requirements, in fastening details, beam strength values, an approvals
3. Damaged Beams must not be used

Daniaged beams must not be used Design assumes top edge is laterally restrained 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 4/24/2023

APA: PR-L318

Manufacturer Info



isDesign

Client:

Project:

Address: **GREENPARK HOMES**  Date: 12/17/2020 Input by:

Job Name: LOT-36 (GLENWAY 12A EL-2)

Project #:

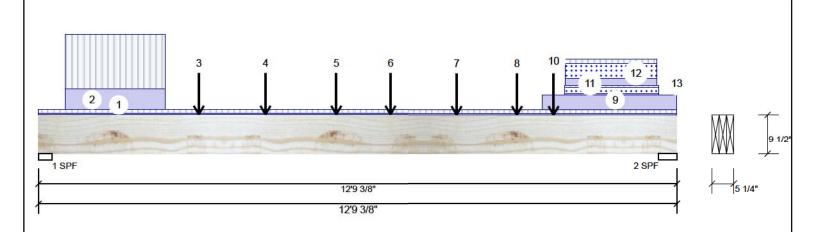
Forex 2.0E-3000Fb LVL

1.750" X 9.500"

TRINAR HALL, EAST GWILLIMBURY, ON

3-Ply - PASSED

Level: Second Floor



| .Continued | from page 1   |                  |            |           |         |         |         |       |                  |
|------------|---------------|------------------|------------|-----------|---------|---------|---------|-------|------------------|
| ID         | Load Type     | Location         | Trib Width | Side      | Dead    | Live    | Snow    | Wind  | Comments         |
| 6          | Point         | 7-0-7            |            | Near Face | 127 lb  | 339 lb  | 0 lb    | 0 lb  | J3               |
| 7          | Point         | 8-4-7            |            | Near Face | 134 lb  | 356 lb  | 0 lb    | 0 lb  | J3               |
| 8          | Point         | 9-6-15           |            | Near Face | 102 lb  | 272 lb  | 0 lb    | 0 lb  | J3               |
| 9          | Part. Uniform | 10-1-0 to 12-9-6 |            | Тор       | 80 PLF  | 0 PLF   | 0 PLF   | 0 PLF | Wall Self Weight |
| 10         | Point         | 10-3-12          |            | Near Face | 2333 lb | 1175 lb | 3931 lb | 0 lb  | F11              |
| 11         | Part. Uniform | 10-6-6 to 12-5-0 |            | Тор       | 10 PLF  | 10 PLF  | 36 PLF  | 0 PLF |                  |
| 12         | Part. Uniform | 10-6-8 to 12-4-8 |            | Тор       | 37 PLF  | 25 PLF  | 85 PLF  | 0 PLF |                  |
| 13         | Part. Uniform | 12-9-6 to 12-9-6 |            | Тор       | 80 PLF  | 0 PLF   | 0 PLF   | 0 PLF | Wall Self Weight |
|            | Self Weight   |                  |            |           | 11 PLF  |         |         |       |                  |
|            |               |                  |            |           |         |         |         |       |                  |

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CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH **BLOCK IS REQUIRED AT ALL** POINT LOADS OVER BEARINGS.



Page 20 of 24

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|                                 | Discipline    | Reviewer   | BCIN  | Date       |  |  |  |
|---------------------------------|---------------|------------|-------|------------|--|--|--|
|                                 | Building Code | H. Authier | 43236 | 2021-02-03 |  |  |  |
|                                 | Sewage System |            |       |            |  |  |  |
|                                 | Zoning        |            |       |            |  |  |  |
| Kott                            |               |            |       |            |  |  |  |
| 3228 Moodie Dr, Ottawa, Ontario |               |            |       |            |  |  |  |

### Notes

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

Handling & Installation

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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

APA: PR-L318

613-838-2775 / 905-642-4400



Project:

Address: GREENPARK HOMES

TRINAR HALL, EAST GWILLIMBURY,ON

Date: 12/17/2020

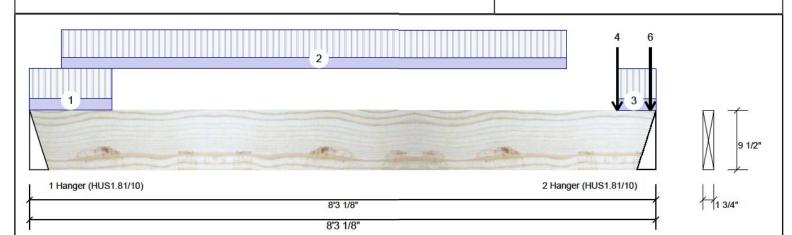
Input by: SB

Job Name: LOT-36 (GLENWAY 12A EL-2)

Level: Second Floor

Project #:

# F8-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" - PASSED



#### Unfactored Reactions UNPATTERNED lb (Uplift) Member Information Brg Dead Type: Application: Floor (Residential) Live Snow Plies: 1 Design Method: LSD 319 136 0 1 Moisture Condition: Dry **Building Code:** NBCC 2015 / OBC 2012 349 273 158 2 Deflection LL: 360 Load Sharing: No Deflection TL: 240 Deck: Not Checked Importance: Vibration: Not Checked Normal General Load Bearings and Factored Reactions Floor Live: 40 PSF 15 PSF Dead: Bearing Length Cap. React D/L lb Total Ld. Case 170 / 479 1\_ 3.000" 649 L Hanger

#### **Analysis Results**

| Analysis      | Actual         | Location  | Allowed       | Capacity    | Comb.      | Case    |
|---------------|----------------|-----------|---------------|-------------|------------|---------|
| Moment        | 1070 ft-lb     | 4' 13/16" | 11362 ft-lb   | 0.094 (9%)  | 1.25D+1.5L | L       |
| Unbraced      | 1070 ft-lb     | 4' 13/16" | 4727 ft-lb    | 0.226 (23%) | 1.25D+1.5L | L       |
| Shear         | 612 lb         | 7'3 3/8"  | 4638 lb       | 0.132 (13%) | 1.25D+1.5L | L       |
| Perm Defl in. | 0.012 (L/8016) | 4'1 5/16" | 0.263 (L/360) | 0.040 (4%)  | D          | Uniform |
| LL Defl inch  | 0.027 (L/3487) | 4'1 1/4"  | 0.263 (L/360) | 0.100 (10%) | L+0.5S     | L       |
| TL Defl inch  | 0.039 (L/2430) | 4'1 5/16" | 0.394 (L/240) | 0.100 (10%) | D+L+0.5S   | L       |

### **Design Notes**

- 1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 4.5.
- 2 Fill all hanger nailing holes.
- 3 Girders are designed to be supported on the bottom edge only.
- 4 Top braced at bearings.
- 5 Rottom braced at bearings.

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REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY

26%

341 / 682

1023 L

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

NAILING OR BOLTING REQUIREMENTS.

3.000"

Hanger



Wind

0

0

Ld. Comb.

1.25D+1.5L

1.25D+1.5L +S

Page 21 of 24

| 3 BOROTT DIACE | u at bearings. |                |            |          |        |        |        |       |                |                         |
|----------------|----------------|----------------|------------|----------|--------|--------|--------|-------|----------------|-------------------------|
| ID             | Load Type      | Location       | Trib Width | Side     | Dead   | Live   | Snow   | Wind  | Comments       |                         |
| 1              | Tie-In         | 0-0-0 to 1-1-0 | 1-9-12     | Тор      | 15 PSF | 40 PSF | 0 PSF  | 0 PSF |                |                         |
| 2              | Part. Uniform  | 0-5-0 to 7-1-0 |            | Far Face | 25 PLF | 66 PLF | 0 PLF  | 0 PLF |                | Ę                       |
| 3              | Tie-In         | 7-9-0 to 8-3-2 | 1-9-12     | Тор      | 15 PSF | 40 PSF | 0 PSF  | 0 PSF |                | TI                      |
| 4              | Point          | 7-9-0          |            | Far Face | 25 lb  | 66 lb  | 0 lb   | 0 lb  | J4             | m:<br>St                |
| 5              | Point          | 8-2-4          |            | Тор      | 69 lb  | 47 lb  | 158 lb | 0 lb  |                | Zo<br>Or                |
| 6              | Point          | 8-2-4          |            | Тор      | 74 lb  | 0 lb   | 0 lb   | 0 lb  | Wall Self Weig | ap<br>gh <sup>tir</sup> |
|                | Self Weight    |                |            |          | 4 PI F |        |        |       |                | Γ                       |



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| Discipline    | Reviewer   | BCIN  | Date       |
|---------------|------------|-------|------------|
| Building Code | H. Authier | 43236 | 2021-02-03 |
| Sewage System |            |       |            |
| Zoning        |            |       |            |
|               |            |       |            |

Notes

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#### Lumber

- Dry service conditions, unless noted otherwise
   LVL not to be treated with fire retardant or corrosiv
- Handling & Installation
- LVL beams must not be cut or drilled
   Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code
- Damaged Beams must not be used
   Design assumes top edge is laterally restrained
   Provide lateral support at bearing points to avoid lateral displacement and rotation

APA: PR-L318

Manufacturer Info

3228 Moodie Dr, Ottawa, Ontario 613-838-2775 / 905-642-4400





Project:

Address: **GREENPARK HOMES** 

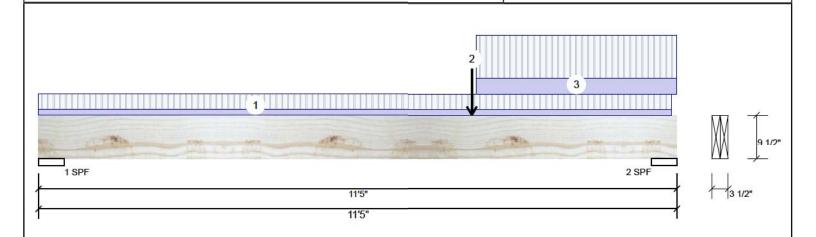
TRINAR HALL, EAST GWILLIMBURY, ON

Date: 12/17/2020 Input by:

Job Name: LOT-36 (GLENWAY 12A EL-2)

Project #:

1.750" X 9.500" Forex 2.0E-3000Fb LVL 2-Ply - PASSED Level: Second Floor



| Member Inform       | Member Information |                     |                      |           | Unfactored Reactions UNPATTERNED lb (Uplift) |   |                |            |  |
|---------------------|--------------------|---------------------|----------------------|-----------|--|---|----------------|------------|--|
| Type:               | Girder             | Application:        | Floor (Residential)  | Brg       | Live   | Dead  | Snow           | Wind       |  |
| Plies:              | 2                  | Design Method:      | LSD                  | 1         | 160  | 109   | 0              | 0          |  |
| Moisture Condition: | Dry                | Building Code:      | NBCC 2015 / OBC 2012 | 2         | 346  | 185   | 0              | 0          |  |
| Deflection LL:      | 360                | Load Sharing:       | No                   | 33.7      |  |   |                |            |  |
| Deflection TL:      | 240                | Deck:               | Not Checked          |           |  |   |                |            |  |
| Importance:         | Normal             | Vibration:          | Not Checked          |           |  |   |                |            |  |
| General Load        |                    | SACTOR DOUBLE STORY |                      |           | 1 8 8 8 8 9 9 9 9 1 9 8 9 8 10               | 155 Maria 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 |                |            |  |
| Floor Live:         | 40 PSF             |                     |                      | Bearings  | and Factore                                  | d Reactions                                     |                |            |  |
| Dead:               | 15 PSF             |                     |                      | Bearing L | Length Ca                                    | p. React D/L lb                                 | Total Ld. Case | Ld. Comb.  |  |
|                     |                    |                     |                      | 1 - SPF 5 | 5.500"                                       | 136 / 240                                       | 376 L          | 1.25D+1.5L |  |
|                     |                    |                     |                      | 2 - SPF 5 | 5.500"                                       | 5% 231 / 520                                    | 751 L          | 1.25D+1.5L |  |

#### Analysis Results

| Analysis      | Actual         | Location   | Allowed       | Capacity    | Comb.      | Case    |
|---------------|----------------|------------|---------------|-------------|------------|---------|
| Moment        | 1961 ft-lb     | 7'9"       | 22724 ft-lb   | 0.086 (9%)  | 1.25D+1.5L | L       |
| Unbraced      | 1961 ft-lb     | 7'9"       | 20494 ft-lb   | 0.096 (10%) | 1.25D+1.5L | L       |
| Shear         | 663 lb         | 10'2 3/4"  | 9277 lb       | 0.071 (7%)  | 1.25D+1.5L | L       |
| Perm Defl in. | 0.018 (L/6955) | 6'1 13/16" | 0.354 (L/360) | 0.050 (5%)  | D          | Uniform |
| LL Defl inch  | 0.033 (L/3860) | 6'3 5/8"   | 0.354 (L/360) | 0.090 (9%)  | L          | L       |
| TL Defl inch  | 0.051 (L/2483) | 6'2 15/16" | 0.531 (L/240) | 0.100 (10%) | D+L        | L       |

### **Design Notes**

- 1 Girders are designed to be supported on the bottom edge only.
- 2 Multiple plies must be fastened together as per manufacturer's details.
- 3 Top loads must be supported equally by all plies.
- 4 Top braced at bearings.
- 5 Bottom braced at bearings.
- 6 Lateral slenderness ratio based on full section width.

| ID | Load Type   | Location         | Trib Width | Side      | Dead   | Live   | Snow  |
|----|-------------|------------------|------------|-----------|--------|--------|-------|
| 1  | Tie-In      | 0-0-0 to 11-3-14 | 0-2-10     | Тор       | 15 PSF | 40 PSF | 0 PSF |
| 2  | Point       | 7-9-0            |            | Near Face | 136 lb | 319 lb | 0 lb  |
| 3  | Tie-In      | 7-9-14 to 11-5-0 | 0-7-6      | Тор       | 15 PSF | 40 PSF | 0 PSF |
|    | Self Weight |                  |            |           | 8 PLF  |        |       |

READ ALL NOTES ON THIS PAGE AND ON ENGINEERING NOTE PAGE ENP-2. THIS NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT. REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY

Wind

0 PSF

0 PSF

0 lb

Comments

PASS THRU FRAMING SQUASH **BLOCK IS REQUIRED AT ALL** POINT LOADS OVER BEARINGS.

NAILING OR BOLTING REQUIREMENTS.



Page 22 of 24



These plans have been reviewed for use with the corrections as noted. No other changes may be made without written approval of the Building Standards Branch. All work must comply with Zoning By-Law 2018-043, as amended, and the Ontario Building Code, as amépaded. These approved documents must be kept on site at all litters. The whitting acquiring worth has obsolid. times. The building permit must be clearly posted on site at all times.

| Jiscipiine    | Reviewer   | BCIN  | Date       |
|---------------|------------|-------|------------|
| Building Code | H. Authier | 43236 | 2021-02-03 |
| Sewage System |            |       |            |
| Coning        |            |       |            |
|               |            |       |            |

### Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design orineria 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.

- Dry service conditions, unless noted otherwise
   LVL not to be treated with fire retardant or corrosive
- Handling & Installation
- LVL beams must not be cut or drilled
   Refer to manufacturer's product inforegarding installation requirements, n fastening details, beam strength values, an approvals approvals
  Damaged Beams must not be used
- Daniaged beams must not be used Design assumes top edge is laterally restrained Provide lateral support at bearing points to avoid lateral displacement and rotation

APA: PR-L318

Manufacturer Info

3228 Moodie Dr, Ottawa, Ontario 613-838-2775 / 905-642-4400







Project:

Address: **GREENPARK HOMES** 

TRINAR HALL, EAST GWILLIMBURY, ON

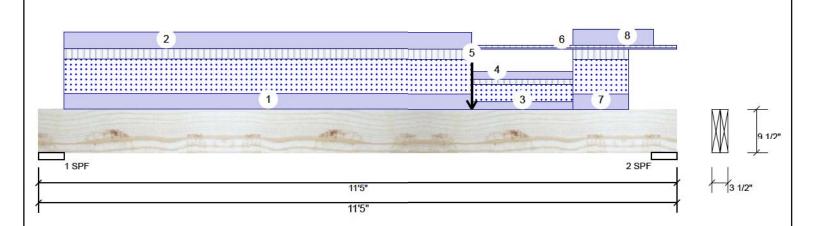
Date: 12/17/2020 Input by:

Job Name: LOT-36 (GLENWAY 12A EL-2)

Project #:

Forex 2.0E-3000Fb LVL

1.750" X 9.500" 2-Ply - PASSED Level: Second Floor



| Member Information |         |  |                      | Unfactored Reactions UNPATTERNED Ib (Uplift) |                              |   |                |                  |  |  |
|--------------------|---------|--|----------------------|--|------------------------------|---|----------------|------------------|--|--|
| Type:              | Girder  | Application:                             | Floor (Residential)  | Brg  | Live                         | Dead                                    | Snow           | Wind             |  |  |
| Plies:             | 2       | Design Method:                           | LSD                  | 1  | 371                          | 911                                     | 910            | 0                |  |  |
| Moisture Condition | on: Dry | Building Code:                           | NBCC 2015 / OBC 2012 | 2  | 494                          | 925                                     | 818            | 0                |  |  |
| Deflection LL:     | 360     | Load Sharing:                            | No                   | 3331   |                              |   |                |                  |  |  |
| Deflection TL:     | 240     | Deck:                                    | Not Checked          |  |                              |   |                |                  |  |  |
| Importance:        | Normal  | Vibration:                               | Not Checked          |  |                              |   |                |                  |  |  |
| General Load       |         | 24-13-4-13-4-13-4-13-4-13-4-13-4-13-4-13 |                      |  | F F S TS - PM ** S - S F S S | 175000000000000000000000000000000000000 |                |                  |  |  |
| Floor Live:        | 40 PSF  |  |                      | Bearings and Factored Reactions              |                              |   |                |                  |  |  |
| Dead:              | 15 PSF  |  |                      | Bearing                                      | Length                       | Cap. React D/L lb                       | Total Ld. Case | Ld. Comb.        |  |  |
|                    |         |  |                      | 1 - SPF                                      | 5.500"                       | 24% 1139 / 1735                         | 2874 L         | 1.25D+1.5S<br>+L |  |  |

**Analysis Results** 

| Analysis      | Actual         | Location  | Allowed       | Capacity    | Comb.            | Case    |
|---------------|----------------|-----------|---------------|-------------|------------------|---------|
| Moment        | 8240 ft-lb     | 6' 15/16" | 22724 ft-lb   | 0.363 (36%) | 1.25D+1.5S<br>+L | L       |
| Unbraced      | 8240 ft-lb     | 6' 15/16" | 20494 ft-lb   | 0.402 (40%) | 1.25D+1.5S<br>+L | L       |
| Shear         | 2633 lb        | 10'2 3/4" | 9277 lb       | 0.284 (28%) | 1.25D+1.5S<br>+L | L       |
| Perm Defl in. | 0.114 (L/1119) | 5'9 5/16" | 0.354 (L/360) | 0.320 (32%) | D                | Uniform |
| LL Defl inch  | 0.137 (L/929)  | 5'9 5/16" | 0.354 (L/360) | 0.390 (39%) | S+0.5L           | L       |
| TL Defl inch  | 0.251 (L/508)  | 5'9 5/16" | 0.531 (L/240) | 0.470 (47%) | D+S+0.5L         | L       |

#### **Design Notes**

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- 4 Top braced at bearings.
- 5 Bottom braced at bearings.

6 Lateral slenderness ratio based on full section width.

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24% 1156 / 1721

2877 L

NAILING OR BOLTING REQUIREMENTS. PASS THRU FRAMING SQUASH **BLOCK IS REQUIRED AT ALL** POINT LOADS OVER BEARINGS.

2 - SPF 5.500"



> 1.25D+1.5S

+L

Page 23 of 24

Trib Width ID Dead Load Type Location Side Live Snow Wind Comments Part, Uniform 0-5-8 to 7-9-0 Top 75 PLF 51 PLF 171 PLF 0 PLF 1 2 Part. Uniform 0-5-8 to 7-9-0 Top 80 PLF 0 PLF 0 PLF 0 PLF 3 Part. Uniform 7-9-0 to 9-6-12 Top 37 PLF 25 PLF 84 PLF 0 PLF Wall Self Weigh 4 Part. Uniform 7-9-0 to 9-6-12 39 PLF 0 PLF 0 PLF 0 PLF Top 5 **Point** 7-9-0 Far Face 273 lb 349 lb 158 lb 0 lb F8

These plans have been reviewed for use with the Wall Self Weigf

made without written approval of the Building

Standards Branch. All work mate comply with

Zoning By-Law 2018-043, as amended, and the Ontario Building Code, as amended. These approved documents must be kept on site at all times. The building permit must be clearly posted on site at all times.

East Gwillimbury

43236 2021-02-0

Continued on page 2...

### Notes

Carculated Structural adequacy of this scriptoristic 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.

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APA: PR-L318

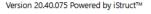
Manufacturer Info



3228 Moodie Dr, Ottawa, Ontario

613-838-2775 / 905-642-4400

This design is valid until 4/24/2023



Kott

isDesign

Client:

Project:

Address: **GREENPARK HOMES** 

TRINAR HALL, EAST GWILLIMBURY, ON

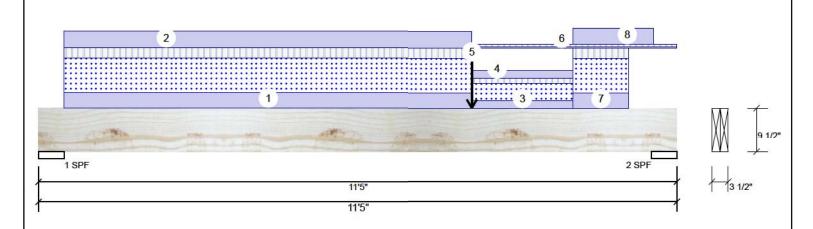
Date: 12/17/2020 Input by:

Job Name: LOT-36 (GLENWAY 12A EL-2)

Project #:

Forex 2.0E-3000Fb LVL F9-B

1.750" X 9.500" 2-Ply - PASSED Level: Second Floor



| Continued fro | om page 1     |                   |            |      |        |        |         |       |                  |
|---------------|---------------|-------------------|------------|------|--------|--------|---------|-------|------------------|
| ID            | Load Type     | Location          | Trib Width | Side | Dead   | Live   | Snow    | Wind  | Comments         |
| 6             | Tie-In        | 7-9-14 to 11-5-0  | 0-3-15     | Тор  | 15 PSF | 40 PSF | 0 PSF   | 0 PSF |                  |
| 7             | Part. Uniform | 9-6-12 to 10-6-11 |            | Тор  | 75 PLF | 51 PLF | 171 PLF | 0 PLF |                  |
| 8             | Part. Uniform | 9-6-12 to 11-0-0  |            | Тор  | 80 PLF | 0 PLF  | 0 PLF   | 0 PLF | Wall Self Weight |
|               | Self Weight   |                   |            |      | 8 PLF  |        |         |       |                  |

READ ALL NOTES ON THIS PAGE AND ON ENGINEERING NOTE PAGE ENP-2. THIS NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

Manufacturer Info

APA: PR-L318

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH **BLOCK IS REQUIRED AT ALL** POINT LOADS OVER BEARINGS.



Page 24 of 24

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Discipline Reviewer BCIN Date
Building Code H. Authier 43236 2021-02-03

3228 Moodie Dr, Ottawa, Ontario 613-838-2775 / 905-642-4400



Notes

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- Handling & Installation
- 1. IVI, beams must not be out or drilled
  2. Refer to manufacturer's product informating regarding installation requirements, multifastening details, beam strength values, and co approvals
  3. Damaged Beams must not be used
  - Design assumes top edge is laterally restrained Provide lateral support at bearing points to avoid lateral displacement and rotation
- 4. 5.
- 6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 4/24/2023

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CSD DESIGN

Kott