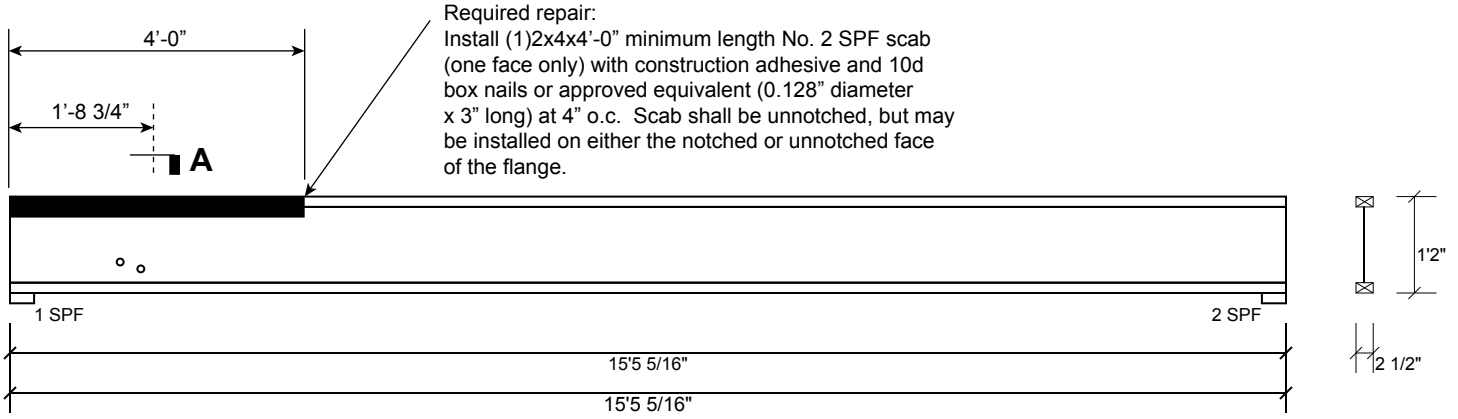
Client:	DRB Homes NC LLC	Date:	10/13/2022
Project:	120 Farm at Neills Creek	Input by:	RKW
Address:	76 Winding Creek Drive Lillington, N.C. 57546 Harnett County	Job Name:	22060003-Calc-(J16 I-Joist)-Notched
		Project #:	22060003

J16 PJI-40 14.000" - PASSED

Level: Level

Ticket: EACOM1022-183



Member Information

Type:	Joist	Application:	Floor
Spacing:	19.2" o.c.	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	494	124	0	0	0
2	Vertical	494	124	0	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	41%	124 / 494	618	L	D+L
2 - SPF	3.500"	Vert	41%	124 / 494	618	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2245 ft-lb	7'8 5/8"	4270 ft-lb	0.526 (53%)	D+L	L
Unbraced	2245 ft-lb	7'8 5/8"	2266 ft-lb	0.991 (99%)	D+L	L
Shear	599 lb	2 3/4"	1815 lb	0.330 (33%)	D+L	L
LL Defl inch	0.174 (L/1032)	7'8 11/16"	0.375 (L/480)	0.465 (47%)	L	L
TL Defl inch	0.218 (L/825)	7'8 11/16"	0.749 (L/240)	0.291 (29%)	D+L	L

Hole Analysis

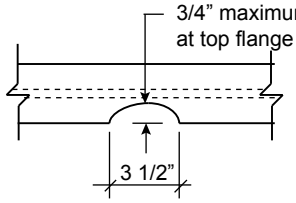
Hole Type	Location	Size	Ratio	Act Shr.	All. Shr.
Round	H1'4"	1"			
Round	H1'7"	1"			

Horizontal location H = Horiz to center

Design Notes

1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
2 Web Holes: Vertical location may vary and flanges must not be cut.Effective hole dia. <= 1.5" not analyzed.
3 Top flange must be laterally braced at a maximum of 6'2" o.c.
4 Bottom flange must be laterally braced at bearings.

ID	Load Type	Trib Width	Dead 0.9	Live 1
	Uniform	1-7-3	10 PSF	40 PSF



DETAIL A

(not to scale)

Repair is required as shown.

NORTH CAROLINA PROFESSIONAL SEAL 19035 ENGINEER J. MARK BARTEL

October 13, 2022

Notes

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

Lumber

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

Handling & Installation

1. IJoist flanges must not be cut or drilled
2. Refer to latest copy of the IJoist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
3. Damaged IJoists must not be used
4. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. Web stiffeners for point load as shown Minimum point load bearing length>= 3.5 inches
7. For flat roofs provide proper drainage to prevent ponding

This design is valid until 11/3/2024

Manufacturer Info

Eacom Timber Corporation
1100 Blvd. West, Suite 2110
Montreal, Quebec
www.eacom.ca
APA: PR-L261, ICC-ES: ESR-1262, ESR-1405

Kempsville Building Material
298 Harvey Faulk Road, N.C.
U.S.A
27332
919.775.1450

Bartel Engineering, LLC

CSD DRAW DESIGN BUILD