



NYC Department of Buildings  
280 Broadway, New York, NY 10007  
Patricia Lancaster, FAIA, Commissioner  
(212) 566-5000, TTY: (212) 566-4769

## Report of Materials and Equipment Acceptance Division

Pursuant to Administrative Code Section 27-131, the following equipment or material has been found acceptable for use subject to the terms and conditions contained herein.

### MEA 241-98-M Vol. III

**Manufacturer:** Georgia-Pacific Corporation, 310 Cypress Road, Ocala, FL.

**Trade Name(s):** Wood I-Beam® Series Joist, WI 40, WI 60, WI 80, WI 80A and WI 85.

**Product:** Prefabricated Wood I-Joist.

**Pertinent Code Section(s):** 27-133, 27-617 through 27-624, Subchapter 10 and Reference Standard RS 10.

**Prescribed Test(s):** Bending and Shear, ASTM D5055.

**Laboratory:** APA - Engineered Wood Systems.

**Test Report(s):** Georgia-Pacific Corporation Report(s):

1. Shear Performance of WIF Series Joist with Web Holes, dated March 19, 1999.
2. WIF Series Joist Vertical Load-Carrying Capacity, dated May 5, 1999.
3. WIF Series Joist Shear, End Reaction and Intermediate Reaction Properties, ELP Report No. 0513-99, issued May 13, 1999, revised February 1, 2001.
4. WIF Series Joist Flexural Properties, ELP Report No. 0315-99, issued June 10, 1999, revised February 1, 2001.
5. WI 40 and 80 Series Joist Flexural and Creep Properties, ELP Report No. 0719-00, issued July 19, 2000, revised February 1, 2001.
6. WI 40 Series Joist Vertical Load-Carrying Capacity, ELP Report No. 0609-00, issued June 9, 2000.
7. WI 40 and 80 Series Joist Shear, End Reaction and Intermediate Reaction Properties, ELP Report No. 0928-00, issued September 28, 2000, revised February 1, 2001.

8. Shear Performance of WI 40 and 80 Series Joist with Web Holes, ELP Report No. 0614-00, issued June 14, 2000, revised July 2, 2002.
9. WI Series Joist Re-Qualification Test Report Using New Truss Method Calculated Moment Capacities, ELP Report No. 1118-03, issued November 18, 2003.

By: Joseph H. Kaiserlik, P.E. - Colorado License No. 35663.  
The extrapolation of tables was sealed by Paul M. Wehner, P.E. - N.Y. License No. 75012.

**Description** - Georgia-Pacific Corporation's Wood I-Beam Series joists are manufactured with several combinations of wood flanges and an OSB web as described in Tables 1 and 2. Web sections are 4 feet long with face flake orientation vertical and a web-to-web joint consisting of a modified tongue and groove. A web-to-flange connection is made by inserting the machined web edge into a machined groove in the center of the flange wide face. All Wood I-Beam Series joists are manufactured to a constant depth.

Flanges: Wood I-Beam Series joist flanges for the WI 40, 9-1/2" to 16" are fabricated with a 2 x 3, machine stress rated (MSR) 1650f-1.5E flange which uses a proprietary set of design values. WI 60, 9-1/2" to 16" joist use a 2 x 3, MSR, 2100f-1.8E or better flange. The WI 80, 11-7/8" to 16" joist and the WI 80A, 18" and 20" joist use a 2 x 4, MSR, 2100f-1.8E or better flange. WI 80A, 9-1/2" to 16", WI 80, 18" and 20" and WI 85 joist use a 2 x 4, Southern Yellow Pine, Dense Select Structural (DSS) flange.

Webs: WI 40, 60, 80 and 80A Wood I-Beam Series joist web material is 3/8" OSB. WI 85 Series joist use a 19/32" OSB web. Both web materials meet APA Structural I (Exposure 1) grade and the Georgia-Pacific Corporation minimum web stock performance standard.

Adhesive: Adhesives used in the manufacture of Wood I-Beam Series joist are exterior-type which comply with ASTM D2559 and the Georgia-Pacific Corporation manufacturing standards.

Wood I-Beam Series joists have been tested and assigned design properties for use in wood structural applications. They are produced under continuous, daily quality inspection including monthly third-party inspection to assure product performance. Tables 1 and 2 contain the allowable design properties for the WI series joists.

**Table 1-Wood I-Beam WI Series Joist Design Properties <sup>1, 3</sup>**

WI Series Joist- Depth	EI		Moment <sup>2</sup>	Shear	Allowable Reactions <sup>6</sup>								C (10 <sup>6</sup> ft-lbs /inch)
	1650f-1.5E  (x 10 <sup>6</sup> in. <sup>2</sup> -lbs)				End <sup>5</sup>				Intermediate				
			1-3/4" Brg. Lgth.		4" Brg. Lgth.		3-1/2" Brg. Lgth.		5-1/4" Brg. Lgth.				
			Brg. Stiffeners		Brg. Stiffeners		Brg. Stiffeners		Brg. Stiffeners				
		No	Yes	No	Yes	No	Yes	No	Yes				
		(lbs.)	(lbs.)	(lbs.)	(lbs.)	(lbs.)	(lbs.)	(lbs.)	(lbs.)				
WI 40-9.5"	193	2,765	1,200	1,110	-	1,200		2,350	2,500	2,575	3,150	0.412	
WI 40-11.875"	330	3,585	1,460	1,225	-	1,460		2,575	2,645	2,720	3,175	0.515	
WI 40-14"	482	4,315	1,715	1,250	-	1,715		2,610	2,790	2,830	3,200	0.607	
WI 40-16"	657	5,005	1,990	1,235	1,500	1,675	1,990	2,650	2,935	2,950	3,225	0.693	

<sup>1</sup>-1650f-1.5E: flange using a proprietary set of design values

**Table 2-Wood I-Beam WI Series Joist Design Properties <sup>1, 3</sup>**

WI Series Joist- Depth	EI		Moment <sup>2</sup>		Shear	Allowable Reactions <sup>6</sup>								C (10 <sup>6</sup> ft-lbs /inch)
	DSS 2100f-1.8E  (x 10 <sup>6</sup> in. <sup>2</sup> -lbs)		DSS 2100f-1.8E  (ft-lbs)			End <sup>5</sup>				Intermediate				
					1-3/4" Brg. Lgth.		4" Brg. Lgth.		3-1/2" Brg. Lgth.		5-1/4" Brg. Lgth.			
			Brg. Stiffeners		Brg. Stiffeners		Brg. Stiffeners		Brg. Stiffeners					
		No	Yes	No	Yes	No	Yes	No	Yes	No	Yes			
		(lbs.)	(lbs.)	(lbs.)	(lbs.)	(lbs.)	(lbs.)	(lbs.)	(lbs.)	(lbs.)	(lbs.)			
WI 60-9.5"	-	231	-	3,805	1,210	1,110	-	1,210	-	2,375	2,645	2,600	3,175	0.412
WI 60-11.875"	-	396	-	4,930	1,495	1,230	-	1,495	-	2,590	2,745	2,740	3,200	0.515
WI 60-14"	-	584	-	5,935	1,740	1,335	-	1,740	-	2,625	2,845	2,860	3,225	0.607
WI 60-16"	-	799	-	6,885	2,000	1,345	1,575	1,675	2,000	2,675	2,945	2,980	3,250	0.693
WI 80-11.875"	-	547	-	6,975	1,555	1,290	-	1,555	-	2,880	4,025	3,475	4,085	0.515
WI 80-14"	-	802	-	8,400	1,800	1,335	-	1,800	-	3,040	4,225	3,575	4,475	0.607
WI 80-16"	-	1,092	-	9,740	2,060	1,345	1,770	1,710	2,060	3,200	4,420	3,675	4,725	0.693
WI 80A-18"	-	1,430	-	10,930	2,200	-	2,000	-	2,200	-	4,610	-	5,000	0.780
WI 80A-20"	-	1,820	-	12,095	2,280	-	2,225	-	2,280	-	4,800	-	5,400	0.867
WI 80A-9.5"	337	-	5,635	-	1,270	1,185	-	1,270	-	3,175	3,750	3,650	3,900	0.412
WI 80A-11.875"	573	-	7,305	-	1,555	1,305	-	1,555	-	3,225	4,200	3,650	4,225	0.515
WI 80A-14"	842	-	8,800	-	1,800	1,410	-	1,800	-	3,400	4,400	3,650	4,475	0.607
WI 80A-16"	1,148	-	10,205	-	2,060	1,505	1,770	1,710	2,060	3,600	4,650	3,750	4,725	0.693
WI 80-18"	1,507	-	11,610	-	2,200	-	2,000	-	2,200	-	4,875	-	5,000	0.780
WI 80-20"	1,920	-	13,015	-	2,280	-	2,225	-	2,280	-	5,075	-	5,400	0.867
WI 85-11.25" <sup>4</sup>	504	-	6,780	-	1,675	1,480	1,520	1,600	1,675	3,290	4,100	3,340	4,125	0.649
WI 85-22"	2,419	-	14,230	-	2,640	-	2,300	-	2,640	-	5,395	-	5,495	1.236
WI 85-24"	2,962	-	15,615	-	2,825	-	2,375	-	2,825	-	5,640	-	5,750	1.346

<sup>1</sup> DSS (Dense Select Structural) is Southern Yellow Pine; 2100f-1.8E is Spruce-Pine-Fir (SPF)

$$\text{Approximate deflection (inches) from uniform load} = \frac{22.5 wL^4}{EI} + \frac{wL^2}{C}$$

$$\text{Approximate deflection (inches) at center span from concentrated load} = \frac{36 PL^3}{EI} + \frac{2PL}{C}$$

w=Uniform load (lbs/foot)  
L=Effective span (feet)  
EI=Modulus of elasticity times moment of inertia  
C=Shear deflection coefficient  
P=Concentrated load (lbs)

<sup>4</sup> Constants have been adjusted to maintain unit consistency.

**Notes to Tables 1 and 2:**

- Design properties are for dry conditions of use where in-service moisture content does not exceed 16 percent.
- Allowable moment capacity cannot be increased in repetitive member applications.
- Allowable moment and shear are for normal duration loading. Adjustments for other durations shall be in accordance with AF&PA NDS-2001 or with the code.
- For WI 85: 11-1/4", use 1465 pounds for allowable end reaction design at 1-1/2" bearing length.
- Interpolation of the end reaction between 1-3/4" and 4" bearing is permitted.
- Reactions may be further limited by the allowable bearing stress on the supporting member.



**Terms and Conditions:** That the above Wood I-Beam Series Joist be accepted on condition that all uses, locations and installations shall comply with the applicable requirements of the New York City Building Code and Technical Policy and Procedure Notice 8, 1992 dated August 19, 1992 and #2/00 dated July 24, 2000 (attached) and on further condition that:

1. Structures designed using Wood I-Beam Series Joist shall conform to the manufacturers specifications except that appropriate design load(s) deflection limitations(s) and other performance standards of the New York City Building Code shall apply.
2. When stored out of doors, or exposed to wet weather conditions during construction, be inspected by the user for flange-web separation, swelling or warping and replaced is so damaged.
3. Glue used shall not delaminate during a fire.
4. Wood I-Beam Series Joist shall be used in locations that will ultimately be protected from the weather and be marked "Exposure 1", indicating the exposure durability as defined in PS 2-92, "Performance Standards for Wood-Based Structural Use Panels".
5. The size of any cutouts in the web of the joist shall not exceed the manufacturer's recommendations.
6. The cutting of openings for ducts, pipes, conduits etc. in wood I-joists shall be subject to a controlled inspection.
7. Fire stopping shall be provided between the ceiling and the floor or roof above shall be divided into approximately equal areas not greater than 500 square feet.
8. The building permit applicant shall notify the Fire Department of the proposed installation of wood I-joists prior to the Building Department issuance of a construction permit. Evidence of such notification shall be a certifying statement submitted on Form TR-1, Technical Report, reading as follows:

I hereby state that I have mailed a copy of this statement to the Fire Department, Bureau of Fire, Technology Management Unit, as notification of the proposed installation of wood I-joists at this location.

This statement shall be placed on the reverse side of the form in the lower right-hand box.

The copy of the completed Form TR-1 shall be mailed to the address at:

Chief-In-Charge of the Bureau of Fire Prevention  
Fire Department  
Technology Management Unit  
9 MetroTech Center - 3rd Floor  
Brooklyn, New York 11201-3857

All shipments and deliveries of wood joists shall be provided with a permanent marking, suitably placed, certifying that the equipment shipped or delivered is equivalent to those tested and accepted for use, as provided for in Section 27-131 of the Building Code.

Final Acceptance August 15, 2005  
Examined by Donald [Signature]



ISSUANCE # 367

DEPARTMENT OF BUILDINGS

EXECUTIVE OFFICES

60 HUDSON STREET, NEW YORK, N.Y. 10013

RUDOLPH J. RINALDI, Commissioner

312-8100

RICHARD C. VISCONTI, A.I.A.

Assistant Commissioner  
Technical Affairs

---

TECHNICAL  
POLICY AND PROCEDURE NOTICE # 8/92

---

TO: Distribution  
FROM: Richard C. Visconti, A.I.A. *Richard Visconti*  
DATE: August 19, 1992  
SUBJECT: Laminated Wood "I" Beams

---

PURPOSE: To interpret the requirements of the Administrative Code, Sections 27-617 and 27-620, pertaining to firestopping requirements per RS 10-8 and Inspection of Methods of Construction per Table 10-2 for laminated wood "I" beams used in fire resistance rated floor/roof-ceiling assemblies.

To establish a new administrative procedure for applicant notification to the Fire Department of proposed use of laminated wood "I" beams.

SPECIFICS:

1. Firestopping

Reference Standard RS 10-8, Section 9.2.1 - General Requirements for Firestopping states that, "the space between the ceiling and the floor or roof above shall be divided by providing firestopping where ceilings are suspended below solid joists or suspended from or attached directly to the bottom of open wood floor trusses in buildings of combustible construction."

The Department now interprets the requirement to comply with the firestopping provisions of Section 9.2.1 et seq. to include laminated wood "I" beam assemblies. Therefore, the space between the ceiling and the floor or roof above shall be divided into approximately equal areas not greater than 500 square feet.

Firestopping is subject to controlled inspection pursuant to Section 27-345.

2. Inspection of Methods of Construction

Table 10-2 - Operations on Structural Elements that shall be Subject to Controlled Inspection, lists the "Fabrication of glue-laminated assemblies and of plywood components."

The Department now interprets the requirement to comply with the controlled inspection provision of Table 10-2 to include laminated wood "I" beams. Therefore, the cutting of openings for ducts, pipes, conduit, etc. in laminated wood "I" beams shall be considered fabrication and, therefore, subject to controlled inspection.

3. Notification

The applicant shall be required to notify the Fire Department of the proposed installation of laminated wood "I" beams prior to the Department issuing a construction permit. Evidence of such notification shall be a certifying statement submitted on Form TR-1, Technical Report, reading as follows:

I hereby state that I have mailed a copy of this statement to the Fire Department, Bureau of Fire Prevention, Technology Management Unit, as notification of the proposed installation of laminated wood "I" beams at this location.

This statement shall be placed on the reverse side of the form in the lower right-hand box.

The copy of the completed Form TR-1 shall be mailed to:

Chief-in-Charge of the Bureau of Fire Prevention  
Fire Department  
Bureau of Fire Prevention  
Technology Management Unit  
250 Livingston Street  
Brooklyn, NY 11201-5884

cc: Chief John Hodgens



ISSUANCE #586

DEPARTMENT OF BUILDINGS

EXECUTIVE OFFICES

60 HUDSON STREET, NEW YORK, N.Y. 10013-3394

RICHARD C. VISCONTI, R.A., Acting Commissioner

Website: [nyelink.org/buildings](http://nyelink.org/buildings)

(212) 312-8000

TTY (212) 312-8188

SATISH K. BABBAR, R.A.

Acting Deputy Commissioner

Technical Affairs

(212) 312-8324

Fax (212) 312-8319

---

TECHNICAL  
POLICY AND PROCEDURE NOTICE #2/00

---

TO: Distribution

FROM: Satish K. Babbar, R.A.

DATE: July 24, 2000

SUBJECT: Semi-Controlled Inspection for Structural Light Gage Cold-Formed Steel,  
Plate Connected Wood Floor Trusses and Laminated Wood "I" Beams

---

**EFFECTIVE:** Immediately

**SUPERCEDES:** Brooklyn Borough Memorandum by Borough Superintendent George E. Berger dated August 11, 1983.

**BACKGROUND:** There have been several structural failures involving lightweight floor construction. Professional inspection is needed during construction of buildings and other structures utilizing it in order to insure that the delivered members are not damaged or defective, the installation is proper and safeguards are taken to prevent failure.

**PURPOSE:** To set forth the requirements for the semi-controlled inspection of the construction, including size, quality, framing, erection and both temporary and permanent bracing of light gage cold-formed steel structural members, plate connected wood floor trusses and laminated wood "I" beams.

**REFERENCE:** Section 27-132(b) of the Administrative Code.

## SPECIFICS:

**REQUIREMENTS:** The plans submitted for approval/acceptance/professional certification showing these members shall be complete including member sizes, positions, locations, permanent and temporary bracing, fasteners (location, type and spacing), stiffeners, connections, etc., as needed for the proper erection of the structure.

The construction of all light gage cold-formed steel structural members, plate connected wood floor trusses and laminated wood "I" beams shall be subject to semi-controlled inspection for size, quality, framing, erection and both temporary and permanent bracing, as set forth below.

- Size** Profiles used structurally shall conform to the specified dimension. Care shall be taken not to stretch, bend, or otherwise distort parts of the sections unless such forming is in the integral part of the design.
- Quality** All materials shall be clean, straight, and undamaged. Damaged members shall be discarded. Only BSA/MEA approved laminated wood "I" beams shall be used. Glue shall completely bond all laminated wood "I" beam surfaces being joined. Quality Control for the erection of all members shall be under the supervision of the professional designated to perform the semi-controlled inspection.
- Framing** Components may be cut by slitting, shearing, sawing, or flame cutting, as appropriate, in accordance with manufacturers' instructions and the design drawings. All punched holes and sheared or flame cut edges of material in members subject to calculated stress shall be clean and free from notches and burred edges. The approved/accepted/professionally certified drawings shall be adhered to regarding member dimensions, locations, positions, beam separators, bearing surfaces and fasteners, including shear connectors, plate connectors, screws, bolts and welds, as applicable.

Erection Care shall be taken to avoid damage to members when erecting, loading, unloading and otherwise handling them.

Bracing Temporary bracing, shoring, jacks, etc. shall not be removed until the registered architect or professional engineer determines that they are no longer needed. Permanent bracing, web stiffeners, bridging, wind bracing, etc. shall be installed according to the approved/accepted/professionally certified drawings.

**INSPECTIONS AND REPORT TO BE SUBMITTED:** These inspections are to be performed by, or under the direct supervision of, licensed professional engineers or registered architects, who shall submit form(s) TR-1 indicating the following: "Semi-controlled inspection of light gauge cold-formed steel structural members, plate connected wood floor trusses or laminated wood "I" beams (as applicable) per TPPN #2/00".

SKB:NJG:ng