

CITY OF NEW YORK
DEPARTMENT OF BUILDINGS

Pursuant to Administrative Code Section 27-131, the following equipment or material has been found acceptable for use in accordance with the Report of Materials and Equipment Acceptance (MEA) Division.

Satish K. Babbar, R.A., Acting Commissioner
MEA 101-00-E Vol. II

Report of Material and Equipment Acceptance Division

Manufacturer - Louisiana-Pacific Corporation, 805 S. W. Broadway Suite 1200, Portland, OR 97205-3303.

Trade Name - LPI 20, LPI 20X1.7 and LPI 32 Series I-Joists

Product -

Additional series of prefabricated wood I-Joists (LPI 20X1.7 Series I-Joists), with flanges made of kiln-dried, solid sawn lumber and webs of oriented strand board. Confirmation test data for additional manufacturing plant locations submitted for all LPI 20 and 32 Series I-Joists. Revision to the K factors for the LPI 20 Joists. Alternate Ashland IsoSet finger-joint adhesive for LPI 20, LPI 20X1.7 and 32 Series I-Joists added.

Pertinent Code Section(s) - Article 7 Wood, Section 27-617, Reference Standards RS-10, Section 27-133 Alternate or Equivalent Material.

Tests - Flange Tension Tests, Moment Capacity Tests, Shear Capacity Tests, Minimum End Bearing Capacity Tests

Laboratory -

Testing performed in-house for the LPI 20 Series I-Joists, LPI 20X1.7 Series I-Joists and LPI 32 Series I-Joists and witnessed by PFS Corporation. Confirmation tests and Ashland IsoSet adhesive tests were performed by Louisiana-Pacific Corporation and witnessed by PFS Corporation. Extrapolation of tables were sealed by Daniel Michael McGee, New York State Professional Engineer License No. 04103.

Test Reports - Test Reports relating to confirmation testing of the LPI 20 Series I-Joists, LPI 20X1.7 Series I-Joists and LPI 32 Series I-Joists and Ashland IsoSet adhesive confirmation testing are as follows:

- Qualification Test Data for LPI 20X1.7 Series I-Joists Manufactured by LP Hines.
- Confirmation Test Data for LPI 20X1.7 Series I-Joists Manufactured by LP Wilmington.
- Confirmation Test Data for LPI 20X1.7 Series I-Joists Manufactured by Les Chantiers de Chibougamau.
- Confirmation Test Data for LPI 32 Series I-Joists Manufactured by LP Hines.
- Confirmation Test Data for LPI 32 Series I-Joists Manufactured by LP Wilmington.
- Confirmation Test Data for LPI 20X1.7 and 32 Series I-Joists, having Ashland IsoSet finger-joint adhesive, Manufactured by Les Chantiers de Chibougamau.
- Confirmation Test Data for LPI 20 Series I-Joists Manufactured by LP Hines.
- Confirmation Test Data for LPI 20 Series I-Joists Manufactured by LP Wilmington.

Description - The LPI I-Joists covered by this amendment are:

LPI 20 Series I-Joists, LPI 20X1.7 Series I-Joists and LPI 32 Series I-Joists.

LPI 20 and 32 Series I-Joists manufactured with alternate Ashland Isoset Adhesive.

The above listed LPI Series I-Joists are manufactured with kiln-dried flanges of solid sawn lumber of the designated strength with finger-jointed flanges with phenol resorcinol resin adhesive or Ashland Isoset adhesive complying with ASTM D2559.

The above listed LPI Series I-Joists are manufactured with webs of 3/8 inch thick oriented strand board (OSB) that meets the requirements of the United States Department of Commerce Products Standard PS-2-92, "Performance Standard for Wood Based Structural Use Panels."

The above listed LPI Series I-Joists will be identified in the same manner as previously accepted series by means of a stamp indicating the manufacturer's name, joist series and third-party inspection agency logo.

The LPI 20 Series I-Joists having revised K factors and the additional LPI 20X1.7 Series I-Joists shall have characteristics as described in the following tables:

TABLE 1 - DESIGN PROPERTIES

I-Joists Series	I-Joist Depth (Inches)	EI (x 10 ⁶) (in ² -lbs.)	K (x 10 ⁶) (lbs.)	Maximum Resistive Moment (ft.-lbs.)
LPI 20	9 ½	176	4.29	2600
	11 7/8	300	5.26	3406
	14	441	6.14	4200
LPI 20X1.7	9 ½	206	4.29	2600
	11 7/8	345	5.26	3406
	14	500	6.14	4200

Notes:

1. Uniform Load deflection may be approximated using the following formula:

$$\Delta = \frac{5WL^4}{384EI} + \frac{WL^2}{K} \text{ Where:}$$

W = uniform load in pounds per lineal inch

L = clear span in inches.

K = value from table above.

EI = value from table above.

2. SI Units Conversion: 1 inch = 25.4 mm; 1 foot = 305 mm; 1 PLF = 14.6 N/m; 1 lbf = 4.4 N.



TABLE 2 – DESIGN PROPERTIES (Continued)

I-Joists Series	I-Joist Depth (Inches)	Flange Width (inches)	Minimum Bearing (inches)		Maximum Allowable Reaction W/O Stiffener (lbs.)		Maximum Allowable Reaction W/ Stiffener (lbs.)	
			At End	Interior	At End	Interior	At End	Interior
LPI 20,	9 ½	2.50	1.50	3.50	950	2000	1230	2025
LPI 20X1.7	11 7/8	2.50	1.50	3.50	1025	2350	1350	2525
	14	2.50	1.50	3.50	1190	2750	1620	3495

SI Units Conversion: 1 inch = 25.4 mm; 1 foot = 305 mm; 1 PLF = 14.6 N/m; 1 lb = 4.4 N

Dimensions and weight per foot of the LPI 20X1.7 Series I-Joists are the same as the LPI 20 Series I-Joists of the same depth.

Web stiffener details are the same for both the LPI 20 Series I-Joists and the LPI 20X1.7 Series I-Joists as shown in MEA 101-00-E Vol. I.

Web hole details are the same for both the LPI 20 Series I-Joists and the LPI 20X1.7 Series I-Joists as shown in MEA 101-00-E Vol. I. The "Warning to not cut or notch flanges" applies to all LPI 20X1.7 Series I-Joists also.

All LPI 20 Series I-Joists and LPI 20X1.7 Series I-Joists are manufactured under a strict Quality Control Program outlined in the Quality Assurance Manual for Louisiana Pacific Corporation LPI 20 and LPI 20X1.7 Series I-Joists, 3rd Edition dated 2000. PFS Corporation has been engaged to perform third party inspection of equipment and finished product in accordance with the Quality Assurance Manual.

Recommendations –

That the above additional LPI 20X1.7 Series I-Joists, the revision to the K factors for the LPI 20 Series I-Joists and the alternate Ashland Isoset adhesive 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, dated August 19, 1992 (attached) and on further condition that:



1. All recommendations and requirements of MEA 101-00-E shall apply to the additional LPI Series I-Joists described herein.
2. Structure designs using wood joists shall conform to the manufacturer's specifications except that appropriate design load(s), deflection limitation(s) and other performance standards of the New York City Building Code shall apply.
3. Glue used shall not delaminate during a fire.
4. Wood I-Joists shall be used in locations that will ultimately be protected from the weather and be marked "Exposure I", indicating the exposure durability as defined in PS 2-92, "Performance Standards for Wood-Based Structural Use Panels."
5. 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 if so damaged.
6. The size of any cutouts in the web of the joist shall not exceed the manufacturer's recommendations.
7. Firestopping shall be provided between the ceiling and the floor or roof above and shall be divided into approximately equal areas not greater than 500 square feet.
8. The cutting of openings for ducts, pipes, conduits, etc. in wood I-Joists shall be subject to a controlled inspection.
9. 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 Prevention, 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 new address at:

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

All shipments and deliveries of such material shall be provided with a permanent marking suitably placed, certifying that the materials 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 3, 2001
Examined by Mark J. [Signature]



ISSUANCE # 367

DEPARTMENT OF BUILDINGS
EXECUTIVE OFFICES
60 HUDSON STREET, NEW YORK, N.Y. 10013
RUDOLPH J. RINALDI, Commissioner
J12-8100

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.
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 Hodgins