

**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 the Materials and Equipment Acceptance (MEA) Division.

Satish K. Babbar, R.A., Acting Commissioner

**MEA 300-00-E
Report of Material and Equipment Acceptance Division**

Manufacturer - Open Joist 2000 Inc. (Distribution) 1970 St Maurice Nord, Ste Marthe du Cap, Canada Quebec (QC) G8V 1V9.

Trade Name - OPEN JOIST 2000

Product - Open Joist 2000 is a joist made of solid sawn lumber top and bottom chord and web members. The top and bottom chords are connected by a series of diagonal web members, finger joined into the chords and glued with a resorcinol adhesive.

Top and bottom chords are made of 2 x 3 or 2 x 4 spruce-pine-fir No. 2 and better, SPF MSR 2100f – 1.8E, or SPF MSR 2400f – 2.0E lumber.

Diagonal webs are made of 2 x 2, 2 x 3 or 2 x 4 visually graded lumber per the manufacturer's quality control manual.

Both ends of the joist are closed by vertical web members made of 2 x 8 SPF No.2 and better sawn lumber or a laminated wood member manufactured with SPF sawn lumber meeting the requirements of the Open Joist 2000's QA manual. This permits a maximum adjustment of 5½ inches at each end by cutting to the desired length.

Joists are manufactured to depths of 9 3/8, 11 7/8, 13 or 16 inches depending on design requirements.

Finger joints, when placed at a minimum distance of 24 inches apart, are permitted anywhere in the chords for continuity.

Pertinent Code Sections – Article 7 Wood, Section 27-617; Reference Standards RS-10; Section 27-133 acceptance requirements.

Tests - Full scale testing based on code requirements was done by Intertek Testing Services in order to evaluate all loading possibilities as shown on the enclosed published load tables.
All manufactured Open Joist 2000 over 10'-0" is individually tested to 2.1 times the published load capacity before storage.

Delamination tests are performed quarterly by an independent qualified laboratory.

Joint testing to failure is performed on a weekly basis.

At every 10,000 linear foot of product, failure tests are performed and recorded..

Laboratory - In-house testing performed by Open Joist 2000 (Distribution), witnessed by Intertek Testing Services; Extrapolation of enclosed tables was sealed and certified by Kevin M. Finn, P.E. License No. 070718 State of New York.

Test Reports - Report of tests on Open Joist 2000 prepared by Guylaine Maltais, P.E. dated February 1993 .

Report of tests on Open Joist 2000 prepared by Tiberiu Pepelea, P.E. dated November 1989.

Report of instantaneous tests on Open Joist 2000 prepared by Tiberiu Pepelea, P.E.

Report of tests on the strength of joints between diagonals and chords for Open Joist 2000 prepared by Tiberiu Pepelea, P.E.

Results of comparative tests prepared by Guylaine Maltais, P.E. dated June 1992.

CCMC Evaluation Report No. 12118-R, indicating compliance with Part 9 on the NBC dated April 1990 and revised April 1993.

Load test Procedure for floor Framing Systems for Houses and Small Building. Canada Mortgage and Housing Corporation. ME 8309

NLGA Special Products Standards for finger-joined Structural Lumber. NLGA SPS 1.

Facsimile of stamp placed on each joist leaving plant.

Certification report of wood glued open joist, prepared by Jacques St.Denis, Technical Report No. 199-9081-T2 dated March, 1994

Letter dated July, 1994 prepared by A.L. DeBonis, Ph.D., with attachments which included the results of full-scale bending tests witnessed by Warnock Hershey International.

Manufacturer's in-plant quality control manual, dated April, 1996

Letter prepared by Inchcape Testing Services along with test results certifying load tables for shorted spans, dated Marc, 1996, signed by Jacques St.Denis and Claude Pelland.

Report of qualification testing of the 11 7/8-inch (301.6 mm) deep joists, prepared by Inchcape Testing Services, dated March 1996, signed by Jacques St.Denis and Claude Pelland.

Report on bearing testing, prepared by Intertek Testing Services, dated September 1997, signed by Jacques St.Denis and Claude Pelland, P.E.

Analysis of bearing tests, dated September 1997, signed and sealed by Sylvain Dumais, P.E.

Certification reports on licensee manufacturing facilities, prepared by Inchcape Testing Services.

Letter prepared by Intertek Testing Services concerning placement of finger joints, dated October 1997, signed by Jacques St.Denis and Claude Pelland.

Report of qualification testing of laminated vertical end members, prepared by Inchcape Testing services, Report No. 199-9250-A, dated September 1997, signed by Jacques St.Denis.

Description - All Open Joist 2000 is manufactured under a strict quality Assurance Program as outlined in "In-Plant Quality Control Procedure per Operation for Open Joist 2000 " dated April 1996. Intertek Testing Services has been engaged to perform third party inspection of equipment, materials and finished product in accordance with the Quality Control Manual. The following locations manufacturer Open Joist 2000 under license from Distribution Open Joist 2000 Inc. and are supervised by the same third party inspection agency.

Consolidated Building Components
100 River Road
Parker, PA 16049

Banks Lumber Company
54693 County Road 17 South
Elkhart, IN 46517

Universal Forest Products Inc.
8712 East Highway 7
Grandview, TX 76050

Atlantic Structures, Inc
1522 Twin Bridges Road
Everetts, NC 27825



TABLE 1 - ALLOWABLE LIVE LOAD (PSF) FOR OPEN JOIST 2000 ⁽¹⁾⁽⁴⁾

TABLE 1a $\Delta L = L/360$ $\Delta I = L/240$ ⁽³⁾

JOIST DEPTH : 9 3/8"			DEAD LOAD = 15				DEAD LOAD = 20				DEAD LOAD = 25				DEAD LOAD = 30			
CHORDS		MANUF LENGTH	SPACING o.c.				SPACING o.c.				SPACING o.c.				SPACING o.c.			
SIZE	SPECIES / GRADE		12"	16"	19.2"	24"	12"	16"	19.2"	24"	12"	16"	19.2"	24"	12"	16"	19.2"	24"
3 x 2	SPF #2	10'-0"	200	163	126	87	204	148	120	82	160	143	115	87	164	128	110	82
3 x 2	SPF #2	11'-0"	185	154	109	84	178	129	104	78	173	124	99	74	168	119	94	69
3 x 2	SPF #2	12'-0"	147	110	82	73	147	110	90	68	147	107	85	63	146	102	80	58
3 x 2	SPF #2	13'-0"	115	86	72	58	115	86	72	58	115	86	72	55	115	86	70	50
3 x 2	SPF #2	14'-0"	84	71	58	47	94	71	59	47	94	71	58	46	94	71	58	40
3 x 2	SPF #2	15'-0"	77	58	48	38	77	58	48	38	77	58	48	37	77	58	48	32
3 x 2	SPF #2	16'-0"	64	48	40	32	64	48	40	32	64	48	40	31	64	48	40	26
4 x 2	SPF #2	17'-0"	70	53	44	36	70	53	44	36	70	53	44	31	70	53	40	28
4 x 2	SPF 2100F-1.8E	18'-0"	72	54	45	36	72	54	45	36	72	54	45	31	72	54	40	26
4 x 2	SPF 2100F-1.8E	19'-0"	61	48	38	30	61	48	38	30	61	48	37	28	61	44	32	20
4 x 2	SPF 2100F-1.8E	20'-0"	53	40	33	26	63	40	33	26	63	40	33	23	63	40	30	18

4 x 2	SPF 2100F-1.8E	18'-0"	72	54	45	36	72	54	45	36	72	54	45	31	72	54	40	26
4 x 2	SPF 2100F-1.8E	19'-0"	61	48	38	30	61	48	38	30	61	48	37	28	61	44	32	20
4 x 2	SPF 2100F-1.8E	20'-0"	53	40	33	26	63	40	33	26	63	40	33	23	63	40	30	18

TABLE 1b $\Delta L = L/480$ $\Delta I = L/240$ ⁽³⁾

JOIST DEPTH : 9 3/8"			DEAD LOAD = 18				DEAD LOAD = 20				DEAD LOAD = 25				DEAD LOAD = 30			
CHORDS		MANUF LENGTH	SPACING o.c.				SPACING o.c.				SPACING o.c.				SPACING o.c.			
SIZE	SPECIES / GRADE		12"	16"	19.2"	24"	12"	16"	19.2"	24"	12"	16"	19.2"	24"	12"	16"	19.2"	24"
3 x 2	SPF #2	10'-0"	178	134	112	80	179	134	112	80	179	134	112	87	178	134	110	82
3 x 2	SPF #2	11'-0"	139	104	87	70	139	104	87	70	139	104	87	70	139	104	87	69
3 x 2	SPF #2	12'-0"	110	83	69	55	110	83	68	55	110	83	68	55	110	83	68	55
3 x 2	SPF #2	13'-0"	86	65	54	43	86	65	54	43	86	65	54	43	86	58	54	43
3 x 2	SPF #2	14'-0"	70	53	44	35	70	53	44	35	70	53	44	35	70	53	44	35
4 x 2	SPF #2	16'-0"	78	58	49	39	78	58	49	39	78	58	49	39	78	58	49	36
4 x 2	SPF #2	16'-0"	66	49	41	33	66	48	41	33	66	49	41	33	66	49	41	32
4 x 2	SPF 2100F-1.8E	17'-0"	66	49	41	33	66	49	41	33	66	49	41	33	66	48	41	30
4 x 2	SPF 2100F-1.8E	18'-0"	54	41	34	27	54	41	34	27	54	41	34	27	54	41	34	26
4 x 2	SPF 2100F-1.8E	19'-0"	48	35	29	23	46	35	29	23	46	35	29	23	46	35	29	20
4 x 2	SPF 2100F-1.8E	20'-0"	40	30	25	20	40	30	25	20	40	30	25	20	40	30	25	18

- (1) Table is based on the assumption multiple joists (repetitive members) are installed in a floor or roof system with minimum 5/8-inch sheathing attached to the top flanges. No increase in allowable load for repetitive member use or duration of load allowed.
- (2) Allowable load values in the table shall be reduced if repetitive member conditions are not met (20 percent for 3x2 and 13 percent for 4x2)
- (3) Loads noted in the table are limited by five load deflection (ΔL) and total load deflection (ΔI)
- (4) " Manufactured length " refers to overall length which includes the possibility of a 5 1/2-inch bearing on both ends. To compute the allowable " clear span " subtract 11 inches



TABLE 3 - ALLOWABLE LIVE LOAD (PSF) FOR OPEN JOIST 2000 ^{(1) (4)}

TABLE 3a $\Delta L = L / 360$ $\Delta t = L / 240$ ⁽³⁾

JOIST DEPTH : 11 7/8"			DEAD LOAD = 15				DEAD LOAD = 20				DEAD LOAD = 25				DEAD LOAD = 30			
CHORDS		MANUF LENGTH	SPACING o.c.				SPACING o.c.				SPACING o.c.				SPACING o.c.			
SIZE	SPECIES / GRADE		12"	18"	19.2"	24"	12"	18"	19.2"	24"	12"	18"	19.2"	24"	12"	18"	19.2"	24"
3x2	SPF #2	10'-0"	241	177	145	113	236	172	140	108	231	167	135	103	226	162	130	98
3x2	SPF #2	11'-0"	212	153	127	99	207	150	122	94	202	146	117	89	197	140	112	84
3x2	SPF #2	12'-0"	186	137	112	87	183	132	107	82	178	127	102	77	173	122	97	72
3x2	SPF #2	13'-0"	164	119	97	75	158	114	92	70	154	109	87	65	149	104	82	60
3x2	SPF #2	14'-0"	145	106	85	65	140	100	80	60	135	95	75	55	130	80	70	50
3x2	SPF #2	15'-0"	120	90	75	67	120	88	70	52	119	83	68	47	114	78	60	42
3x2	SPF #2	16'-0"	102	77	64	49	102	76	60	44	102	71	56	39	98	68	50	34
3x2	SPF #2	17'-0"	88	66	55	43	88	66	52	38	88	61	47	33	85	56	42	28
4x2	SPF #2	18'-0"	97	69	55	41	92	64	50	35	87	59	45	31	82	54	40	28
4x2	SPF #2	19'-0"	84	59	47	36	79	54	42	30	74	48	37	28	69	44	32	20
4x2	SPF 2100F-1.8E	20'-0"	83	70	66	43	83	66	53	38	82	63	48	33	87	66	43	29
4x2	SPF 2100F-1.8E	21'-0"	78	59	49	38	78	59	47	34	78	55	42	29	77	60	37	24
4x2	SPF 2100F-1.8E	22'-0"	87	50	42	34	87	50	42	30	87	49	37	25	87	44	32	20
4x2	SPF 2100F-1.8E	23'-0"	59	44	37	30	69	44	37	26	69	44	35	23	69	42	30	18

TABLE 3b $\Delta L = L / 480$ $\Delta t = L / 240$ ⁽³⁾

JOIST DEPTH : 11 7/8"			DEAD LOAD = 15				DEAD LOAD = 20				DEAD LOAD = 25				DEAD LOAD = 30			
CHORDS		MANUF LENGTH	SPACING o.c.				SPACING o.c.				SPACING o.c.				SPACING o.c.			
SIZE	SPECIES / GRADE		12"	18"	19.2"	24"	12"	18"	19.2"	24"	12"	18"	19.2"	24"	12"	18"	19.2"	24"
3x2	SPF #2	10'-0"	241	177	145	113	236	172	140	108	231	167	135	103	228	162	130	98
3x2	SPF #2	11'-0"	212	153	127	99	207	150	122	94	202	146	117	89	197	140	112	84
3x2	SPF #2	12'-0"	179	134	112	87	178	132	107	82	178	127	102	77	173	122	97	72
3x2	SPF #2	13'-0"	141	106	88	70	141	108	88	70	141	108	87	65	141	104	82	60
3x2	SPF #2	14'-0"	115	86	72	55	115	86	72	58	115	86	72	55	115	86	70	50
3x2	SPF #2	15'-0"	90	67	56	45	90	67	56	46	90	67	56	46	90	67	56	42
3x2	SPF #2	16'-0"	77	58	48	36	77	58	48	38	77	58	48	38	77	58	48	34
3x2	SPF #2	17'-0"	66	49	41	32	66	49	41	33	66	49	41	33	66	49	41	28
4x2	SPF #2	18'-0"	78	59	49	39	78	59	49	38	78	59	46	31	79	54	40	28
4x2	SPF #2	18'-0"	87	50	42	34	87	50	42	30	87	49	37	25	87	44	32	20
4x2	SPF 2100F-1.8E	20'-0"	70	53	44	35	70	53	44	35	70	53	44	33	70	53	43	28
4x2	SPF 2100F-1.8E	21'-0"	59	44	37	30	59	44	37	30	59	44	37	29	59	44	37	24
4x2	SPF 2100F-1.8E	22'-0"	51	38	32	26	51	38	32	26	51	38	32	25	51	38	32	20
4x2	SPF 2100F-1.8E	23'-0"	45	34	28	22	45	34	28	22	45	34	28	22	45	34	28	18

(1) Table is based on the assumption multiple joists (repetitive members) are installed in a floor or roof system with minimum 5/8-inch sheathing attached to the top flanges.

No increase in allowable load for repetitive member use or duration of load allowed.

(2) Allowable load values in the table shall be reduced if repetitive member conditions are not met (20 percent for 3x2 and 13 percent for 4x2)

(3) Loads noted in the table are limited by live load deflection (ΔL) and total load deflection (Δt)

(4) " Manufactured length " refers to overall length which includes the possibility of a 5 1/2-inch bearing on both ends. To compute the allowable " clear span " subtract 11 inches from the tabulated manufactured length.

(5) SI conversions: 1 inch = 25.4 mm 1 foot = 304.8 mm 1 psf = 47.9 N/m²



ENGINEERING CERTIFICATION BY:
 KEVIN M. FINN, P.E.
 2811 WOODMERE LANE
 GOSHEN, IN 46528



TABLE 4 - ALLOWABLE LIVE LOAD (PSF) FOR OPEN JOIST 2000 ^{(1) (4)}

TABLE 4a $\Delta L = L/360$ $\Delta t = L/240^{(2)}$

JOIST DEPTH : 13"			DEAD LOAD = 18				DEAD LOAD = 20				DEAD LOAD = 28				DEAD LOAD = 30				
SIZE	CHORDS		MANUF LENGTH	SPACING o.c.				SPACING o.c.				SPACING o.c.				SPACING o.c.			
	SIZE	SPECIES / GRADE		12"	16"	19.2"	24"	12"	16"	19.2"	24"	12"	16"	19.2"	24"	12"	16"	19.2"	24"
3x2	SPF #2	10'-0"	273	201	165	129	268	196	160	124	263	191	155	119	258	186	150	114	
3x2	SPF #2	11'-0"	241	177	145	113	236	172	140	108	231	167	135	103	226	162	130	98	
3x2	SPF #2	12'-0"	212	155	127	99	207	150	122	94	202	145	117	89	197	140	112	84	
3x2	SPF #2	13'-0"	185	137	112	87	183	132	107	82	178	127	102	77	173	122	97	72	
3x2	SPF #2	14'-0"	160	123	100	77	164	118	95	72	159	113	90	67	154	108	85	62	
3x2	SPF #2	15'-0"	140	108	88	67	145	104	83	62	140	99	78	57	136	94	73	52	
3x2	SPF #2	16'-0"	126	93	76	57	124	88	70	52	119	83	65	47	114	78	60	42	
3x2	SPF #2	17'-0"	106	79	65	48	106	78	60	44	103	71	55	39	98	66	50	34	
3x2	SPF #2	18'-0"	91	68	57	43	91	66	52	38	90	61	47	33	85	56	42	28	
4x2	SPF #2	18'-0"	102	73	68	43	97	68	53	38	92	65	48	33	87	58	43	28	
4x2	SPF #2	20'-0"	91	64	51	38	86	59	46	33	81	54	41	28	78	49	36	23	
4x2	SPF #2	21'-0"	80	56	47	35	79	54	42	30	74	49	37	25	69	44	32	20	
4x2	SPF 2100F-1.8E	22'-0"	83	62	52	38	83	62	48	34	83	57	43	29	79	52	38	24	
4x2	SPF 2100F-1.8E	23'-0"	74	55	46	35	74	55	44	31	74	52	39	26	72	47	34	21	
4x2	SPF 2100F-1.8E	24'-0"	64	48	40	32	64	48	40	28	64	47	38	23	64	42	30	18	
4x2	SPF 2100F-1.8E	25'-0"	58	43	36	28	58	43	36	26	58	43	32	21	58	38	27	16	

TABLE 4b $\Delta L = L/480$ $\Delta t = L/240^{(2)}$

JOIST DEPTH : 13"			DEAD LOAD = 16				DEAD LOAD = 20				DEAD LOAD = 28				DEAD LOAD = 30				
SIZE	CHORDS		MANUF LENGTH	SPACING o.c.				SPACING o.c.				SPACING o.c.				SPACING o.c.			
	SIZE	SPECIES / GRADE		12"	16"	19.2"	24"	12"	16"	19.2"	24"	12"	16"	19.2"	24"	12"	16"	19.2"	24"
3x2	SPF #2	10'-0"	273	201	165	129	268	196	160	124	263	191	155	119	258	186	150	114	
3x2	SPF #2	11'-0"	241	177	145	113	236	172	140	108	231	167	135	103	226	162	130	98	
3x2	SPF #2	12'-0"	212	155	127	99	207	150	122	94	202	145	117	89	197	140	112	84	
3x2	SPF #2	13'-0"	171	128	107	86	171	128	107	82	171	127	102	77	171	122	97	72	
3x2	SPF #2	14'-0"	142	107	89	71	142	107	89	71	142	107	89	67	142	107	85	62	
3x2	SPF #2	15'-0"	114	88	71	57	114	85	71	57	114	85	71	57	114	85	71	52	
3x2	SPF #2	16'-0"	96	72	60	48	96	72	60	48	96	72	60	47	96	72	60	42	
3x2	SPF #2	17'-0"	80	60	50	40	80	60	50	40	80	60	50	39	80	60	50	34	
3x2	SPF #2	18'-0"	69	52	43	34	69	52	43	34	69	52	43	29	69	52	42	28	
4x2	SPF #2	18'-0"	80	60	50	40	80	60	50	38	80	60	48	33	80	58	43	28	
4x2	SPF #2	20'-0"	69	52	43	34	69	52	43	32	69	52	41	28	69	48	36	23	
4x2	SPF 2100F-1.8E	21'-0"	72	54	46	36	72	54	46	36	72	54	46	33	72	54	43	28	
4x2	SPF 2100F-1.8E	22'-0"	64	48	40	32	64	48	40	32	64	48	40	29	64	48	38	24	
4x2	SPF 2100F-1.8E	23'-0"	56	42	36	28	56	42	36	28	56	42	33	26	56	42	34	21	
4x2	SPF 2100F-1.8E	24'-0"	48	36	30	24	48	36	30	24	48	36	30	23	48	36	30	18	
4x2	SPF 2100F-1.8E	25'-0"	43	32	27	22	43	32	27	22	43	32	27	21	43	32	27	16	

- (1) Table is based on the assumption multiple joists (repetitive members) are installed in a floor or roof system with minimum 5/8-inch sheathing attached to the top flanges. No increase in allowable load for repetitive member use or duration of load allowed.
- (2) Allowable load values in the table shall be reduced if repetitive member conditions are not met (20 percent for 3x2 and 13 percent for 4x2)
- (3) Loads noted in the table are limited by live load deflection (ΔL) and total load deflection (Δt)
- (4) " Manufactured length " refers to overall length which includes the possibility of a 5 1/2-inch bearing on both ends. To compute the allowable " clear span " subtract 11 inches from the tabulated manufactured length.
- (5) SI conversions : 1 inch = 25.4 mm 1 foot = 304.8 mm 1 per = 47.9 m²/m²



ENGINEERING CERTIFICATION BY:
 KEVIN M. FINN, P.E.
 2811 WOODMERE LANE
 GOSHEN, IN 46528



TABLE 5 - ALLOWABLE LIVE LOAD (PSF) FOR OPEN JOIST 2000 ^{(1) (4)}

TABLE 5a $\Delta L = L / 360$ $\Delta I = L / 240$ ⁽³⁾

JOIST DEPTH : 18"			DEAD LOAD = 18				DEAD LOAD = 20				DEAD LOAD = 25				DEAD LOAD = 30			
SIZE	CHORDS		SPACING o.c.				SPACING o.c.				SPACING o.c.				SPACING o.c.			
	SPECIES / GRADE	MANUF LENGTH	12"	16"	19.2"	24"	12"	16"	19.2"	24"	12"	16"	19.2"	24"	12"	16"	19.2"	24"
3x2	SPP #2	10'-0"	261	207	170	133	276	202	166	128	271	197	160	123	266	192	155	118
3x2	SPP #2	11'-0"	241	177	145	113	236	172	140	108	231	167	136	103	226	162	130	98
3x2	8PF #2	12'-0"	212	156	127	99	207	160	122	94	202	148	117	89	197	140	112	84
3x2	SPP #2	18'-0"	188	137	112	87	183	132	107	82	178	127	102	77	173	122	97	72
3x2	SPP #2	14'-0"	169	123	100	77	164	118	95	72	160	113	90	67	154	108	85	62
3x2	SPP #2	15'-0"	183	111	90	68	148	106	85	64	143	101	80	59	138	98	76	54
3x2	8PF #2	16'-0"	145	105	85	63	140	100	80	60	135	95	75	56	130	90	70	50
3x2	SPP #2	17'-0"	142	103	83	63	137	98	78	58	132	93	73	53	127	88	68	48
4x2	SPP #2	16'-0"	168	123	100	77	164	118	95	72	160	113	90	67	154	108	85	62
4x2	SPP #2	19'-0"	161	117	96	73	158	112	80	68	151	107	85	63	148	102	80	58
4x2	SPP #2	20'-0"	154	112	91	70	149	107	86	65	144	102	81	60	139	97	78	58
4x2	SPP #2	21'-0"	148	107	87	67	143	102	82	62	138	97	77	57	133	92	72	52
4x2	8PF #2	22'-0"	137	99	80	61	132	94	73	56	127	89	70	51	122	84	65	46
4x2	SPP 2100F-1.8E	23'-0"	127	91	74	56	122	86	69	51	117	81	64	48	112	76	59	41
4x2	SPP 2100F-1.8E	24'-0"	104	76	65	52	102	78	64	47	94	70	59	42	86	64	54	37
4x2	SPP 2100F-1.8E	26'-0"	96	72	60	47	92	69	58	42	84	63	53	37	76	57	48	32
4x2	SPP 2100F-1.8E	28'-0"	83	62	52	42	81	61	51	37	73	55	45	32	65	49	41	27
4x2	SPP 2400F-2.0E	27'-0"	83	62	52	42	81	61	51	37	73	55	45	32	65	49	41	27
4x2	SPP 2400F-2.0E	28'-0"	78	60	47	38	73	55	46	34	66	49	41	29	60	45	38	24
4x2	8PF 2400F-2.0E	29'-0"	64	48	40	32	64	48	40	32	64	48	40	27	56	42	35	22
4x2	8PF 2400F-2.0E	30'-0"	58	42	35	28	58	42	35	28	56	42	35	28	48	36	30	18

TABLE 5b $\Delta L = L / 480$ $\Delta I = L / 240$ ⁽³⁾

JOIST DEPTH : 18"			DEAD LOAD = 18				DEAD LOAD = 20				DEAD LOAD = 25				DEAD LOAD = 30			
SIZE	CHORDS		SPACING o.c.				SPACING o.c.				SPACING o.c.				SPACING o.c.			
	SPECIES / GRADE	MANUF LENGTH	12"	16"	19.2"	24"	12"	16"	19.2"	24"	12"	16"	19.2"	24"	12"	16"	19.2"	24"
3x2	SPP #2	10'-0"	261	207	170	133	276	202	166	128	271	197	160	123	266	192	155	118
3x2	SPP #2	11'-0"	241	177	145	113	236	172	140	108	231	167	135	103	226	162	130	98
3x2	8PF #2	12'-0"	212	155	127	99	207	150	122	94	202	148	117	89	197	140	112	84
3x2	SPP #2	15'-0"	188	137	112	87	183	132	107	82	178	127	102	77	173	122	97	72
3x2	SPP #2	14'-0"	168	123	100	77	164	118	95	72	160	113	90	67	154	108	85	62
3x2	SPP #2	15'-0"	183	111	90	68	148	106	85	64	143	101	80	59	138	98	76	54
3x2	SPP #2	16'-0"	145	105	85	63	140	100	80	60	135	95	75	55	130	90	70	50
3x2	SPP #2	17'-0"	142	103	83	63	137	98	78	58	132	93	73	53	127	88	68	48
4x2	SPP #2	16'-0"	168	123	100	77	164	118	95	72	160	113	90	67	154	108	85	62
4x2	SPP #2	19'-0"	144	108	90	73	144	108	90	68	139	103	85	63	134	98	80	58
4x2	SPP #2	20'-0"	128	96	80	64	128	96	80	64	128	96	80	60	123	91	75	55
4x2	SPP #2	21'-0"	112	84	70	56	112	84	70	56	112	84	70	56	112	84	70	52
4x2	8PF #2	22'-0"	88	68	56	44	88	68	56	44	88	68	56	44	88	68	56	44
4x2	SPP 2100F-1.8E	23'-0"	80	60	50	40	80	60	50	40	80	60	50	40	80	60	50	40
4x2	SPP 2100F-1.8E	24'-0"	75	58	47	38	75	58	47	38	75	56	47	38	75	56	47	37
4x2	SPP 2100F-1.8E	25'-0"	70	52	44	35	70	52	44	35	70	52	44	35	70	52	44	32
4x2	SPP 2100F-1.8E	26'-0"	64	48	40	32	64	48	40	32	64	48	40	32	64	48	40	27
4x2	SPP 2400F-2.0E	27'-0"	60	45	38	30	60	45	38	30	60	45	38	30	60	45	38	27
4x2	SPP 2400F-2.0E	28'-0"	54	40	34	27	54	40	34	27	54	40	34	27	54	40	34	24
4x2	8PF 2400F-2.0E	29'-0"	48	36	30	24	48	36	30	24	48	36	30	24	48	36	30	22
4x2	8PF 2400F-2.0E	30'-0"	41	31	26	21	41	31	26	21	41	31	26	21	41	31	26	18

- (1) Table is based on the assumption multiple joists (repetitive members) are installed in a floor or roof system with minimum 5/8-inch sheathing attached to the top flanges. No increase in allowable load for repetitive member use or duration of load allowed.
- (2) Allowable load values in the table shall be reduced if repetitive member conditions are not met (20 percent for 3x2 and 13 percent for 4x2)
- (3) Loads noted in the table are limited by live load deflection (ΔL) and total load deflection (ΔI)
- (4) " Manufactured length " refers to overall length which includes the possibility of a 1/2" mark backing on each end. To compute the allowable " clear span " subtract 11 inches from the tabulated manufactured length.
- (5) SI conversions: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 psf = 47.88 N/m²



ENGINEERING CERTIFICATION BY:
KEVIN M. FINN, P.E.
 2811 WOODMERE LANE
 GOSHEN, IN 46528

Recommendations – that the above Open Joist 2000 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 (attached), TPPN #2, 2000 dated July 24, 2000 (attached) and on further condition that:

1. All provisions of TPPN #8, 1992 and TPPN 2, 2000 for Wood I-beams that are applicable for Open Joist 2000 shall be complied with.
2. Structure designs using Open Joist 2000 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. Open Joist 2000 shall be used indoors.
5. When stored out of doors or exposed to wet weather conditions during construction, Open Joist 2000 shall be inspected by the user for flange-web separation, swelling or warping and replaced if so damaged.
6. No cutouts are permitted in Open Joist 2000.
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 building permit applicant shall notify the Fire Department of the proposed installation of Open Joist 2000 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 Open Joist 2000 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 October 3, 2000
Examined by Mark J. Kelly



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*

BY: RICHARD C. VISCONTI, A.I.A. *Richard Visconti*

TO: DISTRIBUTION
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

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



ISSUANCE #586

DEPARTMENT OF BUILDINGS

EXECUTIVE OFFICES

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

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

Website: nyclink.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