

The London County Council's Code compares very favorably with any of the American by-laws, and no doubt there are a number of places in Toronto's proposed new code where we may adopt certain regulations given in the London County Council's Code.

Following is a detailed comparison of the London and Toronto by-laws, the numbers in parentheses indicating

the number of the section of the by-law to which reference is made, for instance (108 Sub 2) meaning sub-section 2 of section 108 of the Toronto by-law, and (30-31) meaning sections 30 and 31 of the London by-law:—

[NOTE—Acknowledgment is due Mr. W. A. M. Cook, formerly of the Toronto City Architect's Department, for valuable assistance in comparing the two codes.—Author.]

### REQUIREMENTS OF TORONTO BY-LAW

### REQUIREMENTS OF LONDON BY-LAW

#### Effective Span

(108 Sub 2)	Clear span and effective depth or length c. to c. of supports.	(30-31)	Same as Toronto.
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#### Bending Moments for Uniform Loads

(109 Sub 1)	WL/8 for non-continuous beams and slabs.	(34)	Same as Toronto.
(109 Sub 2)	$\pm$ WL/10 for beams and slabs continuous over two or more supports.	(35)	+ WL/10 near middle end span. — WL/10 support next to end support. + WL/12 at middle of interior spans. — WL/10 other interior supports.
(109 Sub 3)	WL/9 for beams and slabs continuous over one support only.	(35)	WL/10 at support next to end support (WL/9 for L. L. and WL/10 for D. L.)- WL/10 near middle of span (WL/10 for L. L. and WL/12 for D. L.).
		(36)	Also beams may be designed for exact theoretical moments.

#### Rectangular Slabs Reinforced in Both Directions

(109 Sub 5)	Steel may be reduced 25% from $\frac{1}{4}$ point to support. Load on longer supports = $L^4/(L^4 + B^4)$ . Load on shorter supports = $B^4/(L^4 + B^4)$ . Length of slab not greater than $1\frac{1}{2}$ times width. No provision made.	(37 Sub b)	No reduction provided for. Same as Toronto. Same as Toronto. Length of slab not greater than two times width.
	No provision made.	(39)	Beams and slabs to be designed for worst possible conditions of loading.
	No provision made.	(41)	Reinforcements to be carried past point of inflexion a length equal to $\frac{1}{2}$ effective depth of beams.

#### Working Stresses

(110)	Concrete 1:2:4.	(42 Sub a)	Concrete 1:2:4.
(110 Sub 3a)	Extreme fibre stress 600 lbs.		Same as Toronto.
(110 Sub 3b)	Direct compressive stress 450 lbs.		Direct compressive stress 600 lbs.
(110 Sub 3c)	Shearing stress 40 lbs.		Shearing stress 60 lbs.
(110 Sub 3g)	Bond stress 60 lbs. for plain rods.		100 lbs. for rods hooked at both ends.
(110 Sub 3h)	Bond stress 100 lbs. for deformed rods. $N = E_s/E_c$ .		60 lbs. for rods anchored at ends.
	Compressive stress in steel N times stress in concrete.	(43)	Same as Toronto.
	Tensile stress in steel 16,000 lbs.		Same as Toronto.
(110 Sub 5)	Provision to be made for eccentric loading.	(44)	Same as Toronto.
	Combined stress not greater than allowable working stress.	(46)	Same as Toronto.
	Hooks or anchorage not required. No provision made for hooks. $N = 15$ for 1:2:4 concrete. No value given for other mixes.	(54)	All reinforcement to be hooked. Bond stress in stirrups neglected if hooked. Value of $N = 9,000$ divided by working stress in compression.

#### Spacing of Rods in Beams and Slabs

(106 Sub 14)	$2\frac{1}{2}$ times diameter. No maximum.	(58 and 75)	1" clear horizontally and $\frac{1}{2}$ " vertically.
		(59)	Maximum vertical spacing 6" clear for tensile reinforcement.

#### Hooped Cores in Beams

No provision made.	(63)	Where concrete in compression is hooped at ends of beam allowable stress same as in hoop column.
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