***EXAMPLES OF LARGE EQUATIONS*:**

$$M_a = A_s f_s \cdot jd \qquad \text{where} \quad jd = \left[\int_0^c z\sigma_u(z)dz\right] \Big/ \left[\int_0^c \sigma_u(z)dz\right] + d - c \qquad \text{(Eq. 1)}$$

$$\begin{aligned} f_{b,O} &= \left[\left(0.4 + \frac{c}{d_b}\right)\frac{l_s}{d_b} + 16.6 + 0.10\frac{A_{tr} f_{yt} l_s}{s_{tr} {d_b}^2 n}\right]\sqrt{f_c'} \quad (\text{MPa}) \\ &= \left[\left(4.8 + 12\frac{c}{d_b}\right)\frac{l_s}{d_b} + 200 + \frac{A_{tr} f_{yt} l_s}{125 s_{tr} {d_b}^2 n}\right]\sqrt{f_c'} \quad (\text{psi}) \end{aligned} \qquad \text{(Eq. 2)}$$

$$f(\varphi) = \begin{cases} 0 & 0{,}0 \le \varphi \le 0{,}50 \\ 100 \times \varphi - 50 & 0{,}50 < \varphi \le 0{,}51 \\ 1 & 0{,}51 < \varphi \le 0{,}65 \\ 53{,}566 \times \varphi^3 - 109{,}38 \times \varphi^2 + 68{,}158 \times \varphi - 11{,}801 & 0{,}65 < \varphi \le 0{,}85 \\ 0 & 0{,}85 < \varphi \le 1{,}0 \end{cases} \qquad (10)$$

$$\begin{aligned} \theta_p^N &= (\delta_u - \delta_e) + \left(\frac{1}{2} + \frac{\lambda' - 1}{\lambda}\right)\left(\frac{L_b}{3EI_b}\right)M^R + \left(\frac{L_r}{L_b}\right)(\delta_u - \delta_e) \\ &\ge \theta_p^S + \left(\frac{L_r}{L_b}\right)\left[\left(\delta_i^S + \delta_e\right) - \delta_e\right] \end{aligned} \qquad (9b)$$

$$\begin{aligned} \theta_p^N &= (\delta_u - \delta_e) + \left(\frac{L_b}{6EI_b}\right)\left(\frac{L_b}{L_b''}\right)M^R + \left(\frac{L_r}{L_b'}\right)(\delta_u - \delta_e) + \left(\frac{L_b - L_b'}{L_b'}\right)(\delta_u - \delta_e) \\ &= (\delta_u - \delta_e)\left(\frac{L_b + L_r}{L_b'}\right) + \left(\frac{L_b}{6EI_b}\right)\left(\frac{L_b}{L_b''}\right)M^R \ge \theta_{p\min} \end{aligned} \qquad (11b)$$

***EXAMPLES OF SMALL TABLES*:**

Table 1—Average values of concrete properties

Test	Age at testing, [days]	f_c [MPa] ([psi])	f_{ct} [MPa] ([psi])	E_c, [MPa] ([ksi])
SR2	37	43.1 (6250)	2.8 (410)	31000 (4490)
SR3	79	50.6 (7340)	3.0 (440)	31900 (4630)
SR4	102	47.5 (6900)	2.6 (370)	33100 (4790)
SR5	107	47.6 (6910)	2.6 (380)	33100 (4800)
SR6	288	52.7 (7640)	3.3 (480)	33600 (4880)
SR7	291	49.1 (7120)	3.2 (460)	32600 (4730)
SR8	299	49.2 (7130)	3.2 (460)	32600 (4730)
SR9	311	52.8 (7660)	3.3 (480)	33800 (4900)
SR10	95	42.4 (6150)	2.5 (360)	31700 (4590)
SR11	106	42.9 (6220)	2.7 (390)	31800 (4620)
SR12	121	43.5 (6310)	2.9 (420)	32100 (4650)

Table 2—Average values of flexural reinforcement properties

Test	SR2 ... SR9	SR10 … SR12
d_b, [mm] ([in])	16 (0.63)	16 (0.63)
f_y, [MPa] ([ksi])	530 (76.9)*	523 (75.9)
f_u, [MPa] ([ksi])	600 (87.0)	621 (90.1)
ε_u, [%]	5.52	10.6
f_u / f_y	1.13	1.19
Type	Cold-worked	Hot-rolled

* Yield strength at 0.2 % plastic strain

Table 3—Test results

Spec. ID	f_c [psi] (standard deviation [psi])	P_{peak} [kip]	Δ_{peak} [in]	Δ_u [in]	$\varepsilon_{bar,peak}$ [με]	$P_{bar,peak}$ [kip]	$\frac{P_{peak} - P_{bar,peak}}{f_c A_c}$ [%]	$\frac{P_{bar,peak}}{P_{peak}}$ [%]
S-16	5,413 (352)	2,818	0.262	0.357	1800	328	80.9	11.6
A-12	6,340 (307)	3,425	0.308	0.322	2890	109	90.9	3.2
B-12	5,885 (345)	2,911	0.286	0.320	2070	83.2	84.1	2.9
A-3	5,236 (204)	2,681	0.319	0.529	3000	113	86.7	4.2
B-3	4,763 (295)	2,417	0.285	0.561	2650	106	84.5	4.4

Note: 1,000 psi = 6.895 MPa; 1,000 kip = 4,448 kN; 1 in = 25.4 mm.

***EXAMPLES OF LARGE TABLES*:**

Table 2- Diffusion coefficients from theoretical approaches

Mix ID	Diffusion coefficients (m^2/sec) (ft^2/sec)x10^{-12}		
	Nernst-Plank	Nernst-Einstein	Zhang-Gjorv
100 TI	2.4 (25.7)	2.7(29.4)	4.7 (50.4)
100 TIP	1.9 (20.0)	2.1 (22.9)	3.7 (39.4)
60TI/20C/20F2	2.8 (30.4)	3.2 (34.8)	5.5 (58.6)
60TI/20F/20F2	2.5 (27.1)	2.9 (31.0)	4.9 (53.2)
75TI/20F/5SF	0.7 (8.1)	0.9 (9.3)	1.5 (15.9)
75TI/20F/5M	1.0 (10.9)	1.1 (12.5)	2.0 (21.4)
60TI/20F2/20G120S	1.4 (14.6)	1.5 (16.7)	2.7 (28.7)
75TI/20F2/5M	1.3 (14.1)	1.5 (16.1)	2.6 (27.7)
65TI/30F2/5SF	0.7 (7.9)	0.8 (9.1)	1.5 (15.7)
67TI/30F2/3SF	1.2 (13.0)	1.4 (14.8)	2.4 (25.6)
65TIP/35G120S	1.1 (12.2)	1.3 (13.9)	2.2 (23.9)
75TISM/25C	2.1 (22.5)	2.4 (25.7)	4.1 (44.1)
75TISM/25F2	1.6 (17.8)	1.9 (20.2)	3.2 (34.8)
97TISM/3SF	0.6 (6.7)	0.7 (7.5)	1.2 (13.0)
60TI/30F/10F2	2.5 (26.8)	2.8 (30.5)	4.9 (52.5)
77TI/20F/3SF	1.5 (16.5)	1.7 (18.7)	3.0 (32.3)
60TI/30C/10F2	2.7 (28.6)	3.0 (32.7)	5.2 (56.3)
60TI/30C/10F	2.9 (31.7)	3.4 (36.3)	5.8 (62.2)
80TI/20C	2.6 (28.7)	3.0 (32.7)	5.2 (56.3)
62 TI/35G120S/3SF	0.6 (6.9)	0.7 (7.9)	1.3 (13.6)
60TI/35G120S/5M	0.6 (6.3)	0.7 (7.3)	1.2 (12.5)
50TI/35G120S/15F	0.7 (7.6)	0.8 (8.7)	1.4 (15.1)
85TIP/15F	2.1 (22.1)	2.3 (25.2)	4.0 (43.1)
65TISM/35G120S	1.5 (16.6)	1.8 (18.9)	3.0 (32.5)

Table 2—Contribution of Δ_{flex}, Δ_{slip} and Δ_{shear} in total displacement, for varying reinforcement ratio

$P/A_g f_c^{'}$	Contribution in total displacement (%)				
		$\rho = 0.01$	$\rho = 0.02$	$\rho = 0.03$	$\rho = 0.04$
0	Δ_{flex}	69.9	69.6	69.3	69.0
	Δ_{slip}	29.2	29.0	28.9	28.8
	Δ_{shear}	0.9	1.4	1.8	2.2
0.1	Δ_{flex}	69.6	69.4	69.1	68.9
	Δ_{slip}	29.1	29.0	28.8	28.7
	Δ_{shear}	1.3	1.7	2.0	2.4
0.2	Δ_{flex}	69.4	69.2	69.0	68.8
	Δ_{slip}	29.0	28.9	28.8	28.7
	Δ_{shear}	1.6	1.9	2.2	2.5
0.3	Δ_{flex}	73.1	72.9	73.5	74.0
	Δ_{slip}	24.9	24.9	23.9	23.0
	Δ_{shear}	2.0	2.2	2.6	3.0
0.4	Δ_{flex}	80.8	79.6	79.2	78.1
	Δ_{slip}	16.4	17.5	17.6	18.5
	Δ_{shear}	2.8	2.9	3.2	3.4
0.5	Δ_{flex}	87.2	85.8	84.4	83.6
	Δ_{slip}	9.3	10.6	11.8	12.3
	Δ_{shear}	3.5	3.6	3.8	4.1
0.6	Δ_{flex}	93.0	91.3	89.1	87.6
	Δ_{slip}	2.9	4.4	6.5	7.8
	Δ_{shear}	4.1	4.3	4.4	4.6
0.7	Δ_{flex}	95.9	95.5	93.7	91.6
	Δ_{slip}	0.0	0.0	1.6	3.4
	Δ_{shear}	4.1	4.5	4.8	5.0
0.8	Δ_{flex}	96.4	95.9	95.3	94.8
	Δ_{slip}	0.0	0.0	0.0	0.0
	Δ_{shear}	3.6	4.1	4.7	5.2
0.9	Δ_{flex}	97.0	96.4	95.7	95.2
	Δ_{slip}	0.0	0.0	0.0	0.0
	Δ_{shear}	3.0	3.6	4.3	4.8
1	Δ_{flex}	97.6	97.0	96.2	95.6
	Δ_{slip}	0.0	0.0	0.0	0.0
	Δ_{shear}	2.4	3.0	3.8	4.4

EXAMPLES OF LARGE TABLES COUNTED AS TWO LARGE TABLES:

Table 1—Shear failure modes of RC beams

Beams	$\rho_t f_{yt} / f_c'$	F.M.	Beams	$\rho_t f_{yt} / f_c'$	F. M.	Beams	$\rho_t f_{yt} / f_c'$	F.M.	Beams	$\rho_t f_{yt} / f_c'$	F. M.
A1-1[8]	0.051	U.R	B15110[9]	0.249	O.R.	ID-2R(20)[16]	0.038	U.R.	1-6[22]	0.031	U.R.
A1-2[8]	0.053	U.R	C205D10(1)[10]	0.029	U.R	IA-2(2)[16]	0.071	U.R.	1-7[22]	0.129	U.R.
A1-3[8]	0.054	U.R	C205D20(2)[10]	0.027	U.R	IC-2(5)[16]	0.038	U.R.	1-8[22]	0.041	U.R.
A1-4[8]	0.051	U.R	C210DOA(3)[10]	0.049	U.R	IIA-2(9)[16]	0.071	U.R.	1-9[22]	0.168	O.R.
B1-1[8]	0.052	U.R	C305DO(5)[10]	0.026	U.R	IIB-2(10)[16]	0.077	U.R.	1-10[22]	0.242	O.R.
B1-2[8]	0.048	U.R	1-V1/4(1)[11]	0.043	U.R	IIC-2(12)[16]	0.034	U.R.	1-11[22]	0.243	O.R.
B1-3[8]	0.051	U.R	2-V1/4(2)[11]	0.031	U.R	IID-2(13)[16]	0.034	U.R.	1-12[22]	0.566	O.R.
B1-4[8]	0.052	U.R	2-V3/8(8)[11]	0.032	U.R	210-19[17]	0.057	U.R.	3-2[22]	0.023	U.R.
B1-5[8]	0.049	U.R	1a-V1/4(13)[11]	0.036	U.R	210-40[17]	0.119	U.R.	3-4[22]	0.031	U.R.
B2-1[8]	0.105	U.R	1a-V3/8(14)[11]	0.043	U.R	210-59[17]	0.186	O.R.	A2[23]	0.023	U.R.
C1-3[8]	0.048	U.R	S21-40[12]	0.165	O.R.	210-89[17]	0.280	O.R.	A3[23]	0.048	U.R.
C3-1[8]	0.081	U.R	S21-59[12]	0.245	O.R.	210-118[17]	0.372	O.R.	A4[23]	0.095	U.R.
C3-2[8]	0.083	U.R	S21-89[12]	0.337	O.R.	360-19[17]	0.035	U.R.	A5[23]	0.165	U.R.
C3-3[8]	0.082	U.R	S36-40[12]	0.119	O.R.	360-89[17]	0.175	O.R.	B3[23]	0.052	U.R.
C4-1[8]	0.047	U.R	S36-59[12]	0.153	O.R.	360-118[17]	0.232	O.R.	C2[23]	0.024	U.R.
D1-6[8]	0.055	U.R	S36-89[12]	0.257	O.R.	570-89[17]	0.041	U.R.	E2[23]	0.044	U.R.
D1-7[8]	0.054	U.R	B21060[13]	0.201	O.R.	B90-041[18]	0.099	U.R.	E3[23]	0.106	U.R.
D1-8[8]	0.055	U.R	B21074[13]	0.304	O.R.	E30-041[18]	0.024	U.R.	E4[23]	0.203	U.R.
D2-6[8]	0.069	U.R	B21092[13]	0.483	O.R.	G30-041[18]	0.024	U.R.	E5[23]	0.254	U.R.
D2-7[8]	0.071	U.R	B21011[13]	0.695	O.R.	B-1[19]	0.021	U.R.	G3[23]	0.073	U.R.
D2-8[8]	0.078	U.R	B36041[13]	0.059	U.R.	B-2[19]	0.140	U.R.	G4[23]	0.107	U.R.
D4-1[8]	0.059	U.R	B36051[13]	0.093	U.R.	B-3[19]	0.018	U.R.	G5[23]	0.183	U.R.
D4-2[8]	0.063	U.R	B36060[13]	0.117	U.R.	B-4[19]	0.016	U.R.	H2[23]	0.051	U.R.
D4-3[8]	0.073	U.R	B36074[13]	0.177	O.R.	B-5[19]	0.122	U.R.	J3[24]	0.047	U.R.
D5-1[8]	0.044	U.R	B36092[13]	0.282	O.R.	B-1[20]	0.029	U.R.	J5[24]	0.133	U.R.
D5-2[8]	0.042	U.R	B36011[13]	0.406	O.R.	B-4[20]	0.117	O.R.	T4[24]	0.017	U.R.
D5-3[8]	0.045	U.R	B57041[13]	0.037	U.R.	B-5[20]	0.285	O.R.	T6[24]	0.087	U.R.
B30046[9]	0.048	U.R.	B57060[13]	0.074	U.R.	B-6[20]	0.032	U.R.	T7[24]	0.021	U.R.
B30121[9]	0.107	U.R.	B57074[13]	0.112	U.R.	B-7[20]	0.098	U.R.	T8[24]	0.018	U.R.
B60030[9]	0.044	U.R.	B57092[13]	0.178	O.R.	SH-1[21]	0.034	U.R.	T9[24]	0.057	U.R.
B60059[9]	0.099	U.R.	R8[14]	0.021	U.R	SH-2[21]	0.068	O.R.	T10[24]	0.013	U.R.
B80019[9]	0.050	U.R.	R11[14]	0.022	U.R	SH-3[21]	0.102	O.R.	T11[24]	0.031	U.R.
B80022[9]	0.054	U.R.	R12[14]	0.017	U.R	SH-4[21]	0.128	O.R.	T12[24]	0.019	U.R.
B80046[9]	0.122	U.R.	R14[14]	0.013	U.R	2-3[22]	0.022	U.R.	T13[24]	0.044	U.R.
B80058[9]	0.145	U.R.	R15[14]	0.038	U.R	2-4[22]	0.022	U.R.	T14[24]	0.067	U.R.
B80059[9]	0.157	U.R.	R16[14]	0.036	U.R	2-5[22]	0.117	U.R.	T15[24]	0.017	U.R.
B80110[9]	0.261	O.R.	R24[14]	0.018	U.R	2-6[22]	0.117	U.R.	T16[24]	0.012	U.R.
B80121[9]	0.321	O.R.	R25[14]	0.018	U.R	2-7[22]	0.044	U.R.	T19[24]	0.019	U.R.
B120019[9]	0.059	U.R.	R28[14]	0.071	U.R	2-8[22]	0.044	U.R.	T32[24]	0.081	U.R.
B120030[9]	0.090	U.R.	C4S2.0[15]	0.027	U.R.	2-11[22]	0.060	U.R.	T34[24]	0.017	U.R.
B120059[9]	0.180	O.R.	C4S3.0[15]	0.018	U.R.	2-13[22]	0.091	U.R.	T35[24]	0.017	U.R.
B120121[9]	0.370	O.R.	C4S3.5[15]	0.018	U.R.	2-15[22]	0.061	U.R.	T36[24]	0.048	U.R.
B15019[9]	0.068	U.R.	C4S4.0[15]	0.018	U.R.	1-2[22]	0.023	U.R.	T37[24]	0.070	U.R.
B15022[9]	0.052	U.R.	IA-2R(17)[16]	0.071	U.R.	1-3[22]	0.094	U.R.			
B15058[9]	0.137	U.R.	IC-2R(19)[16]	0.038	U.R.	1-4[22]	0.094	U.R.			

(F.M. : failure modes; U.R.: under reinforced shear failure; O.R.: over-reinforced shear failure)

Table 1–Test results

Series	Specimen ID	$\frac{c}{d_b}$	$\frac{A_{tr}}{ns_{tr}d_b}$	f'_c MPa (ksi)	Failure Mode*	P_e kN (kips)	$f_{sc,e}$ MPa (ksi)	$f_{brg,e}$ MPa (ksi)	$f_{b,e}$ MPa (ksi)
D22C40-series	S0.75-HO	0.75	0	48.9 (7.09)	FS	2,404 (540)	399 (57.9)	NA	NA
	S0.75-HO-1			48.9 (7.09)	FS	2,835 (637)	407 (59.0)	127 (18.4)	280 (40.6)
	S0.75-HE		0.015	48.9 (7.09)	PS+Ec	2,587 (582)	337 (48.9)	128 (18.6)	209 (30.3)
	S0.75-HE-1			48.9 (7.09)	PS+Ec	2,886 (649)	365 (52.9)	131 (19.0)	234 (33.9)
	S0.75-HW		0.044	48.9 (7.09)	PS+En	2,791 (627)	465 (67.4)	141 (20.4)	325 (47.1)
	S0.75-HW-1			48.9 (7.09)	PS+En	2,982 (670)	423 (61.3)	133 (19.3)	291 (42.2)
	S1.25-HO	1.25	0	48.9 (7.09)	Ec	2,832 (637)	307 (44.5)	111 (16.1)	196 (28.4)
	S1.25-HO-1			48.9 (7.09)	PS	2,920 (656)	322 (46.7)	85 (12.3)	237 (34.4)
	S1.25-HE		0.015	48.9 (7.09)	PS	2,947 (662)	386 (56.0)	130 (18.9)	256 (37.1)
	S1.25-HE-1			48.9 (7.09)	PS+Ec	3,115 (700)	415 (60.2)	140 (20.3)	275 (39.9)
	S1.25-HW		0.044	48.9 (7.09)	PS+En	2,852 (641)	423 (61.3)	114 (16.5)	309 (44.8)
	S1.25-HW-1			48.9 (7.09)	FS	3,090 (695)	457 (66.3)	NA	NA
	S1.50-HO	1.50	0	48.9 (7.09)	PS	3,183 (716)	325 (47.1)	127 (18.4)	198 (28.7)
	S1.50-HO-1			48.9 (7.09)	PS	3,126 (703)	315 (45.7)	117 (17.0)	197 (28.6)
	S1.50-HE		0.015	48.9 (7.09)	PS+Ec	3,218 (723)	341 (49.4)	112 (16.2)	228 (33.1)
	S1.50-HE-1			48.9 (7.09)	FS	3,423 (769)	382 (55.4)	121 (17.5)	262 (38.0)
	S1.50-HW		0.044	48.9 (7.09)	PS+C	3,218 (723)	381 (55.2)	121 (17.5)	261 (37.8)
	S1.50-HW-1			48.9 (7.09)	PS+C	3,482 (783)	454 (65.8)	133 (19.3)	321 (46.5)
D22C60-series	S0.75-HO	0.75	0	70.2 (10.2)	PS+Ec	3,357 (755)	486 (70.5)	125 (18.1)	361 (52.3)
	S0.75-HO-1			70.0 (10.2)	PS	3,388 (762)	469 (68.0)	148 (21.5)	321 (46.5)
	S0.75-HE		0.015	70.2 (10.2)	PS+Ec	3,348 (753)	487 (70.6)	209 (30.3)	279 (40.5)
	S0.75-HE-1			70.0 (10.2)	PS+Ec	3,577 (804)	452 (65.5)	151 (21.9)	301 (43.6)
	S0.75-HW		0.044	70.2 (10.2)	Ec+En	3,156 (709)	449 (65.1)	133 (19.3)	316 (45.8)
	S0.75-HW-1			70.0 (10.2)	En	3,164 (711)	463 (67.1)	NA	NA
	S1.25-HO	1.25	0	70.1 (10.2)	FS	3,667 (824)	443 (64.2)	139 (20.2)	304 (44.1)
	S1.25-HO-1			69.9 (10.1)	FS	3,853 (866)	496 (71.9)	150 (21.8)	345 (50.0)
	S1.25-HE		0.015	70.1 (10.2)	FS	3,649 (820)	455 (66.0)	144 (20.9)	310 (45.0)
	S1.25-HE-1			70.0 (10.2)	FS	3,820 (859)	502 (72.8)	123 (17.8)	379 (55.0)
	S1.25-HW		0.044	70.1 (10.2)	En	3,525 (792)	453 (65.7)	117 (17.0)	336 (48.7)
	S1.25-HW-1			70.0 (10.2)	Ec	3,455 (777)	417 (60.5)	122 (17.7)	295 (42.8)
	S1.50-HO	1.50	0	68.5 (9.9)	PS+Ec	3,920 (881)	424 (61.5)	112 (16.2)	312 (45.2)
	S1.50-HO-1			69.9 (10.1)	FS	4,227 (950)	504 (73.1)	141 (20.4)	364 (52.8)
	S1.50-HE		0.015	70.1 (10.2)	PS+C	3,847 (865)	514 (74.5)	131 (19.0)	383 (55.5)
	S1.50-HE-1			71.4 (10.4)	Ec	4,051 (911)	426 (61.8)	125 (18.1)	300 (43.5)
	S1.50-HW		0.044	70.1 (10.2)	Ec	3,802 (855)	466 (67.6)	134 (19.4)	332 (48.1)
	S1.50-HW-1			71.4 (10.4)	Ec	4,157 (934)	478 (69.3)	131 (19.0)	347 (50.3)
D29C40-series	S0.75-HO	0.75	0	54.4 (7.89)	FS+C	3,784 (851)	471 (68.3)	121 (17.5)	350 (50.8)
	S0.75-HO-1			64.5 (9.35)	FS	3,577 (804)	435 (63.1)	159 (23.1)	277 (40.2)
	S0.75-HE		0.008	54.4 (7.89)	PS+Ec	3,727 (838)	463 (67.1)	155 (22.5)	309 (44.8)
	S0.75-HE-1			64.7 (9.38)	Ec	3,321 (747)	392 (56.8)	114 (16.5)	278 (40.3)
	S0.75-HW		0.025	55.4 (8.03)	En	3,657 (822)	388 (56.3)	132 (19.1)	256 (37.1)
	S0.75-HW-1			64.5 (9.35)	PS+Ec	3,414 (767)	455 (66.0)	125 (18.1)	330 (47.9)
D29C60-series	S0.75-HO	0.75	0	71.9 (10.4)	FS	4,193 (943)	461 (66.8)	150 (21.8)	311 (45.1)
	S0.75-HO-1			73.7 (10.7)	PS+En	3,776 (849)	436 (63.2)	136 (19.7)	300 (43.5)
	S0.75-HE		0.008	72.1 (10.5)	FS	3,840 (863)	471 (68.3)	172 (24.9)	300 (43.5)
	S0.75-HE-1			73.7 (10.7)	FS	3,713 (835)	451 (65.4)	132 (19.1)	319 (46.3)
	S0.75-HW		0.025	72.1 (10.5)	Ec	3,793 (853)	448 (65.0)	142 (20.6)	306 (44.4)
	S0.75-HW-1			73.7 (10.7)	Ec	3,799 (854)	449 (65.1)	142 (20.6)	307 (44.5)

* C = compression failure; FS = fully splitting failure; PS = partial splitting failure; Ec = premature failure due to eccentricity; and En = premature failure due to end failure.

***EXAMPLES OF SMALL FIGURES*:**

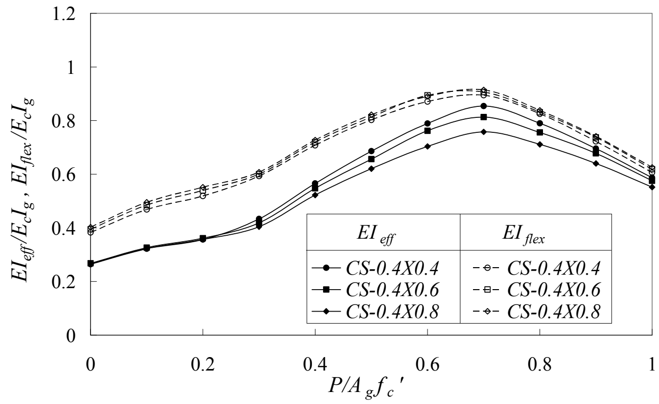
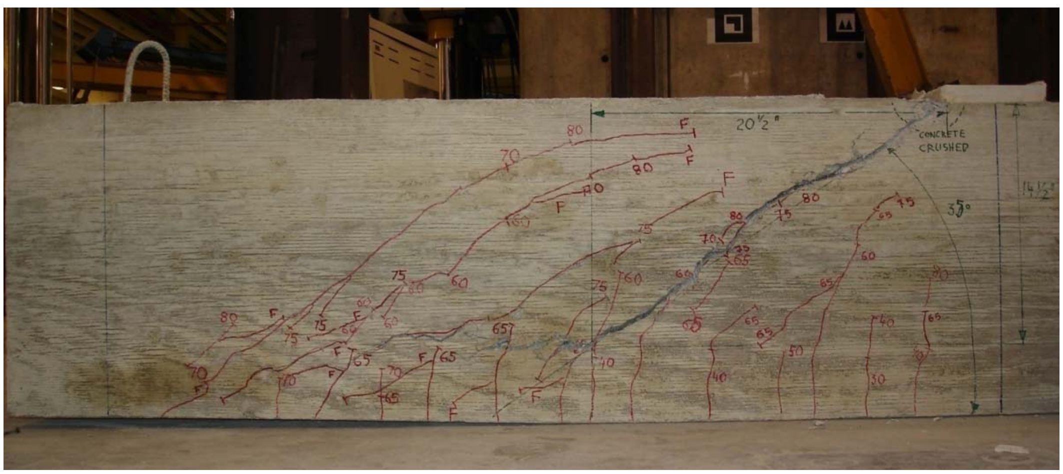


Fig. 1—Variation of flexural and effective stiffness ratios with axial load ratio for different depths of member (CS denotes cross-section size in m, 1 m = 39.37 in)

a) Beam B18-0a (regular concrete and no stirrups)



b) Beam B18-1a (SFRC with 0.75% volume fraction of Type 1 fibers)

Fig. 2—Cracking pattern in RC versus SFRC Beams

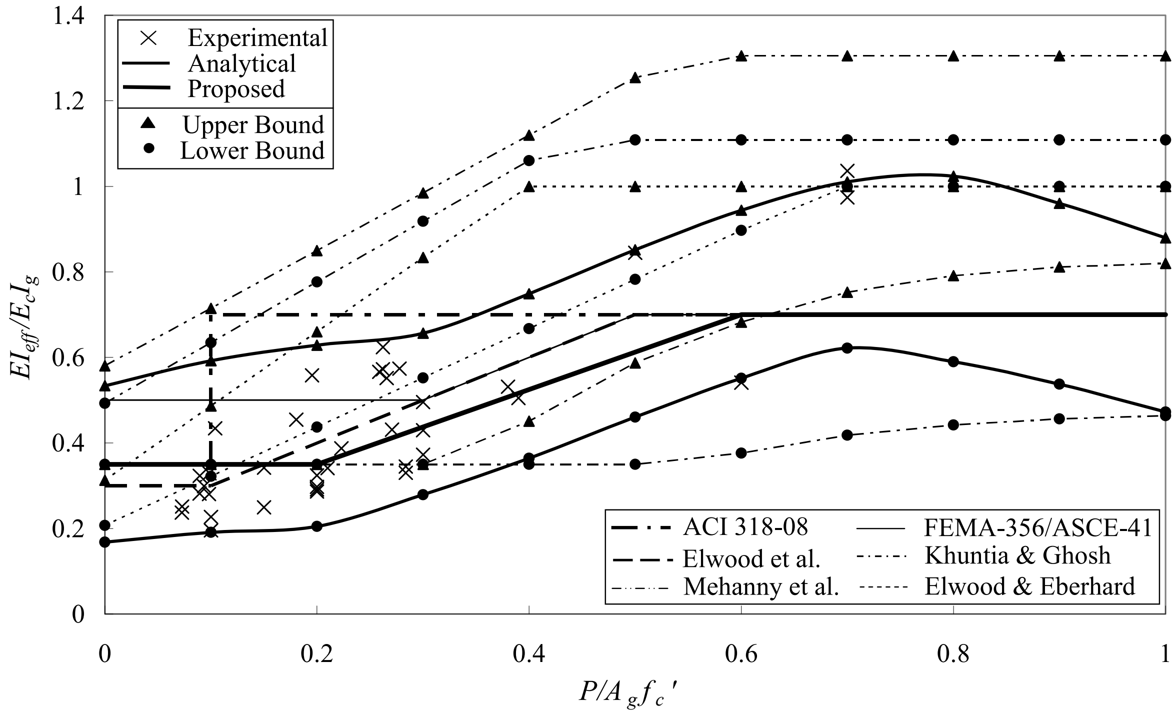


Fig. 3—Comparison of different models of effective stiffness with analytical and experimental estimates for normal strength concrete

EXAMPLES OF LARGE FIGURES:

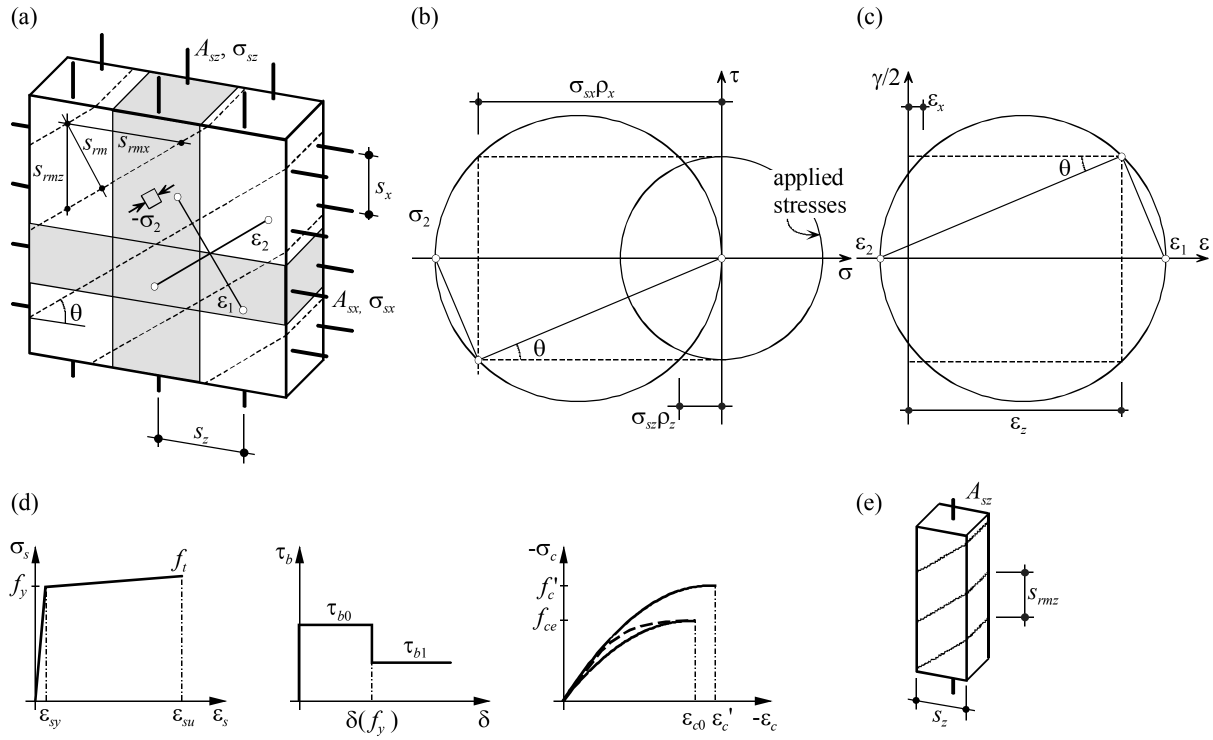


Fig. 2 – Cracked membrane in pure shear: (a) stresses in concrete and steel; (b) Mohr's circle of stresses and (c) strains; (d) constitutive laws for steel, bond shear stress-slip and concrete; (e) equivalent tension chord with stirrup reinforcement.

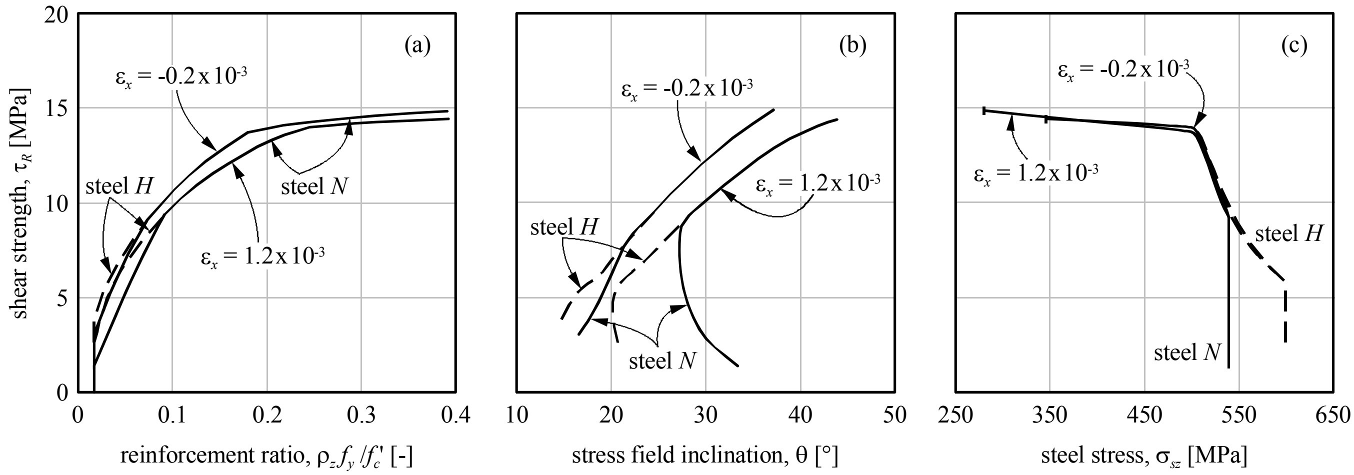


Fig. 3 – Results for membrane elements with f_c' = 50 MPa and f_y = 500 MPa, longitudinal strains ε_x = -0.2 10^{-3} and 1.2 10^{-3} and reinforcing steel *N* and *H* with f_t/f_y = 1.08 and 1.2 and ε_{su} = 0.05 and 0.10 (1 MPa = 145 psi).

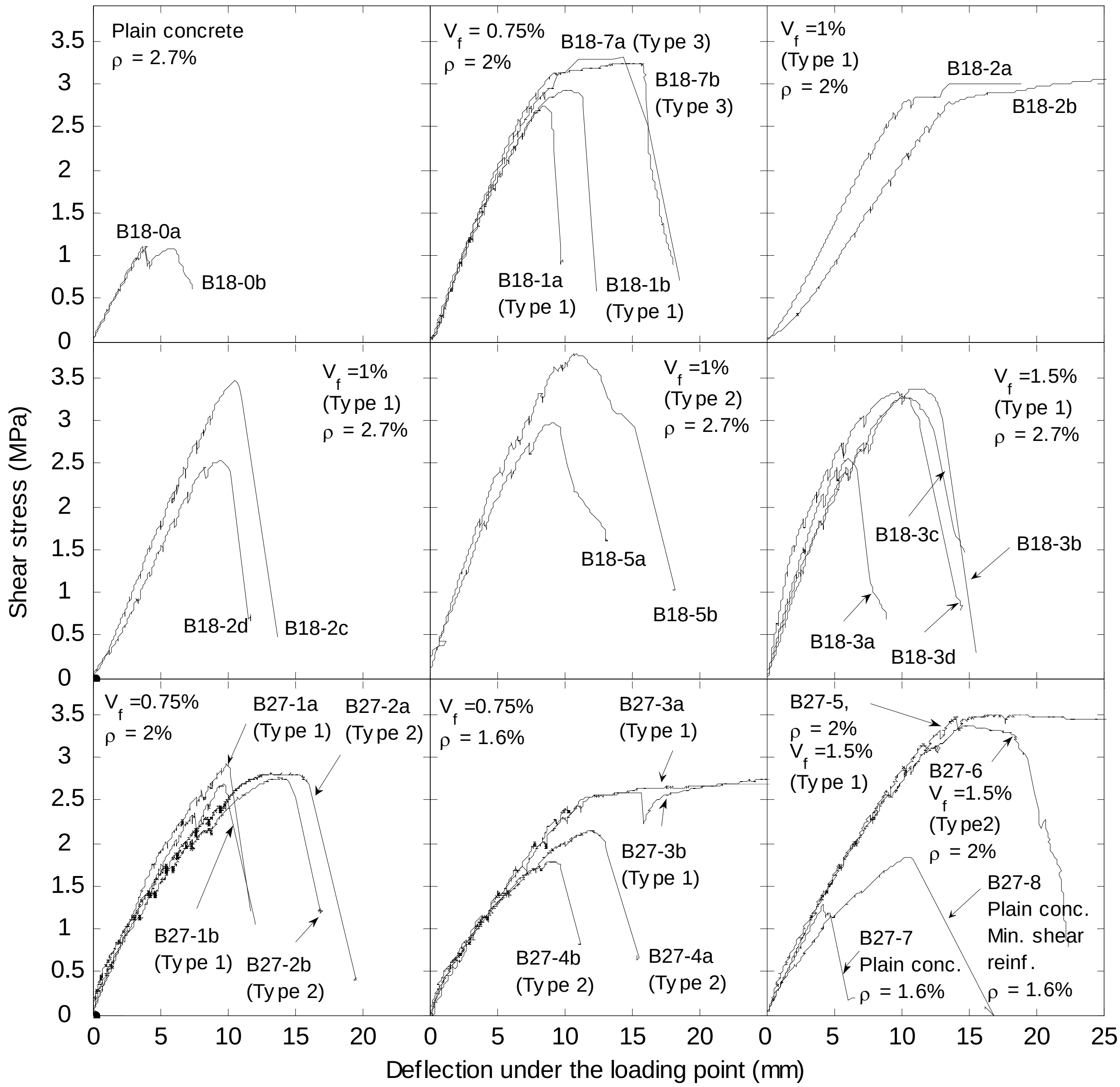
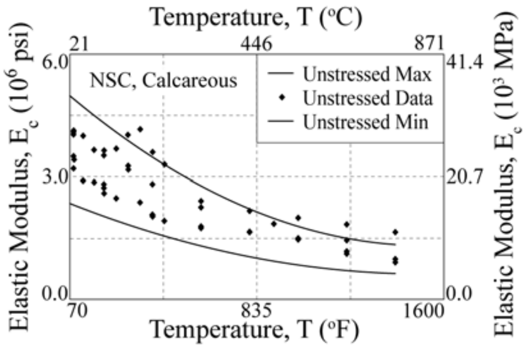
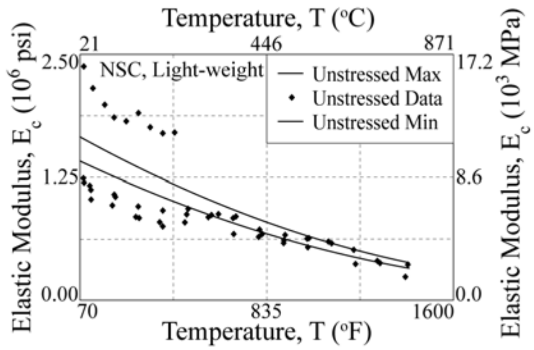


Fig. 1—Average shear stress versus displacement response

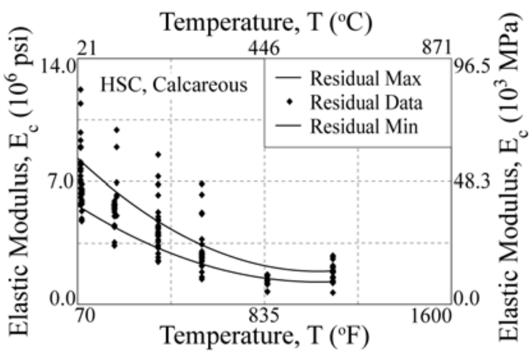
EXAMPLES OF FIGURES COUNTED AS TWO LARGE FIGURES:



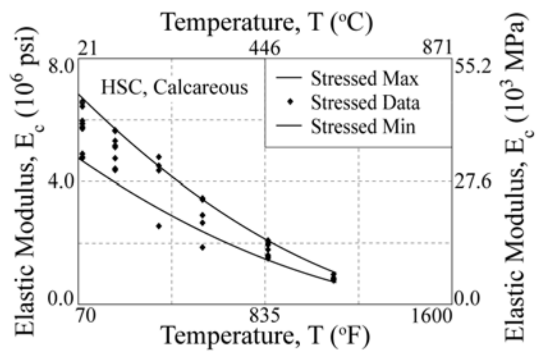
(a)



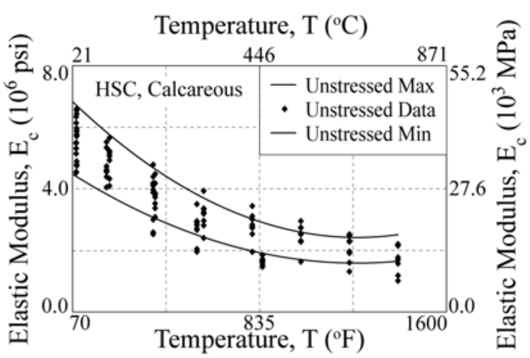
(b)



(c)

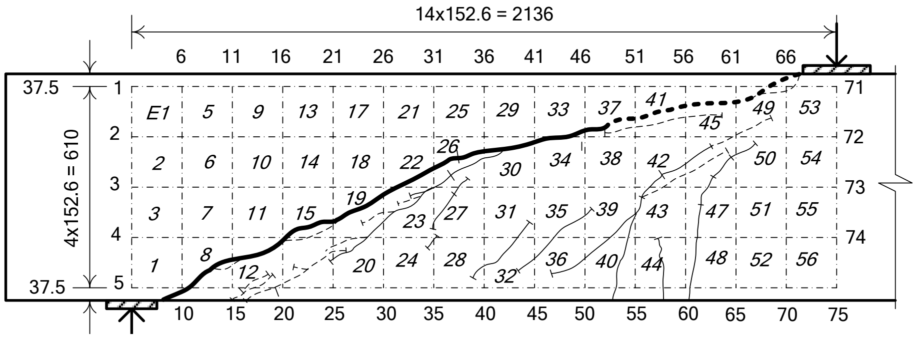


(d)

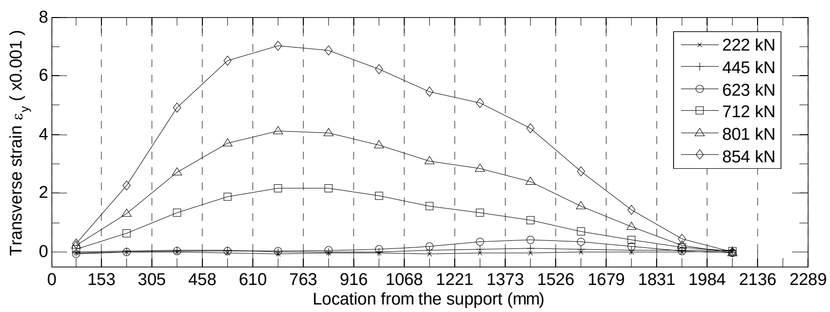


(e)

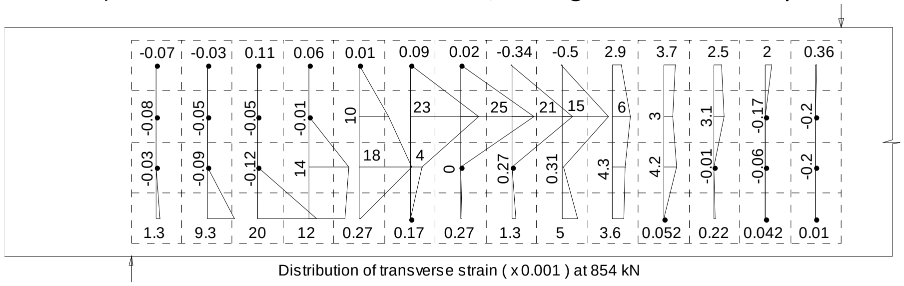
Figure 1 – Proposed E_c model prediction bands: (a) NSC, calcareous, unstressed; (b) NSC, light-weight, unstressed; (c) HSC, calcareous, residual; (d) HSC, calcareous, stressed; (e) HSC, calcareous, unstressed.



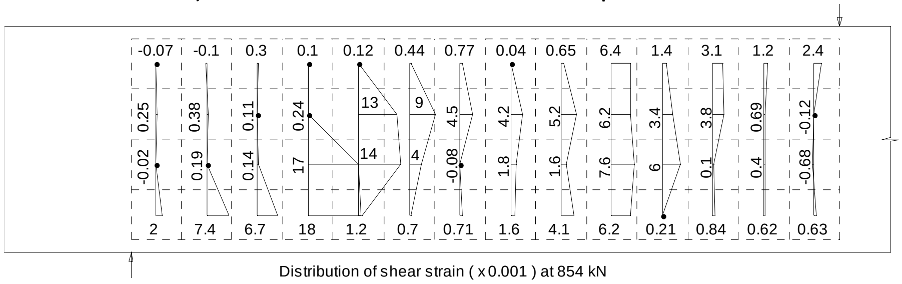
a) Element and marker numbering



b) Vertical strains at various loads, averaged over beam depth



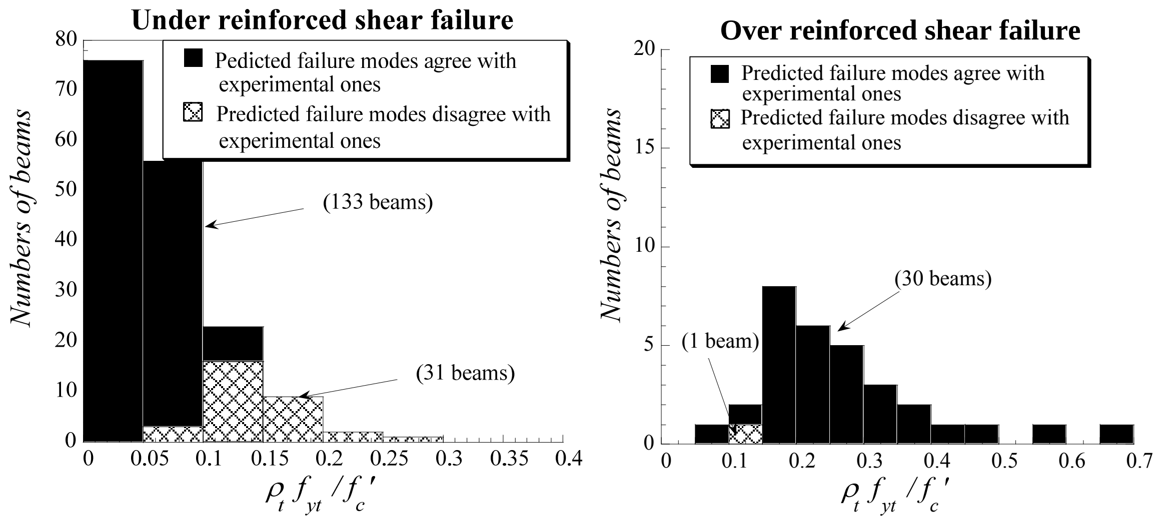
c) Distribution of vertical strains at peak load



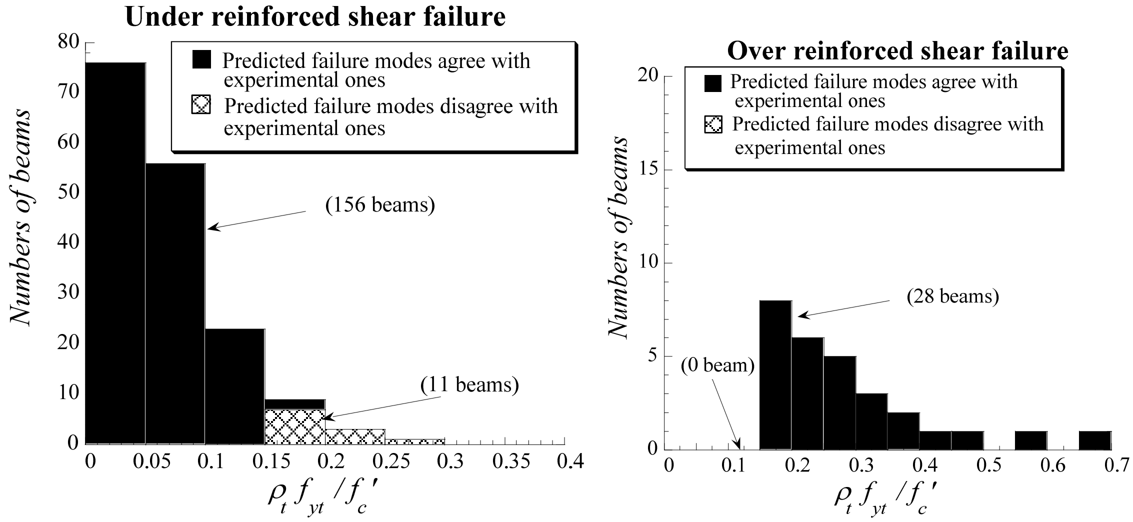
d) Distribution of shear strains at peak load

1 kN = 0.225 kips; 1 mm = 0.0394 in.

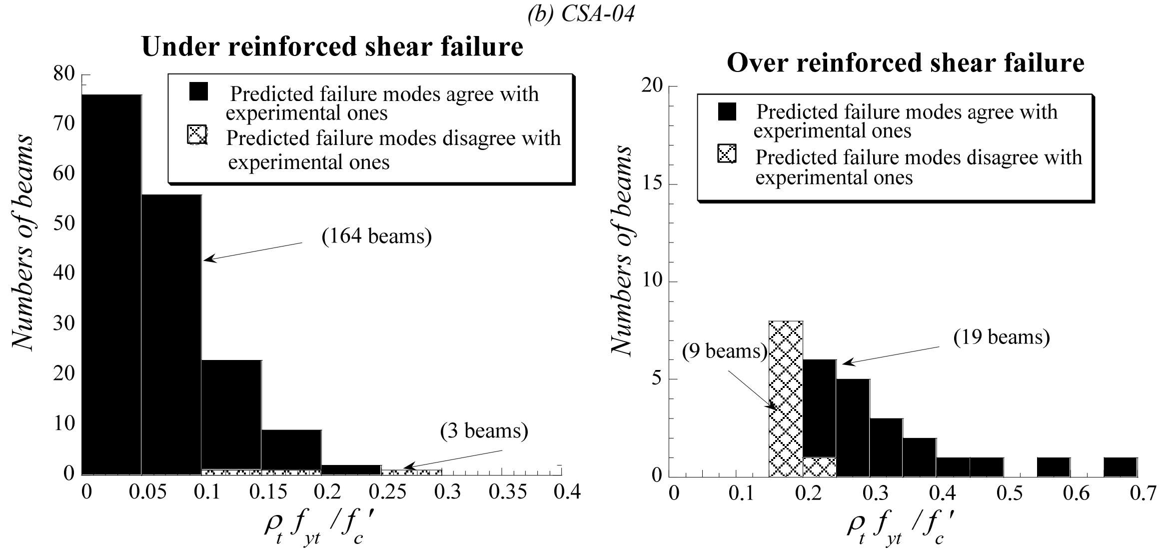
Fig. 2—Strain distribution for Beam B27-2b



ACI 318-08



(b) CSA-04



(c) EC2-02

Fig. 1—Comparisons between predicted and observed shear failure modes.

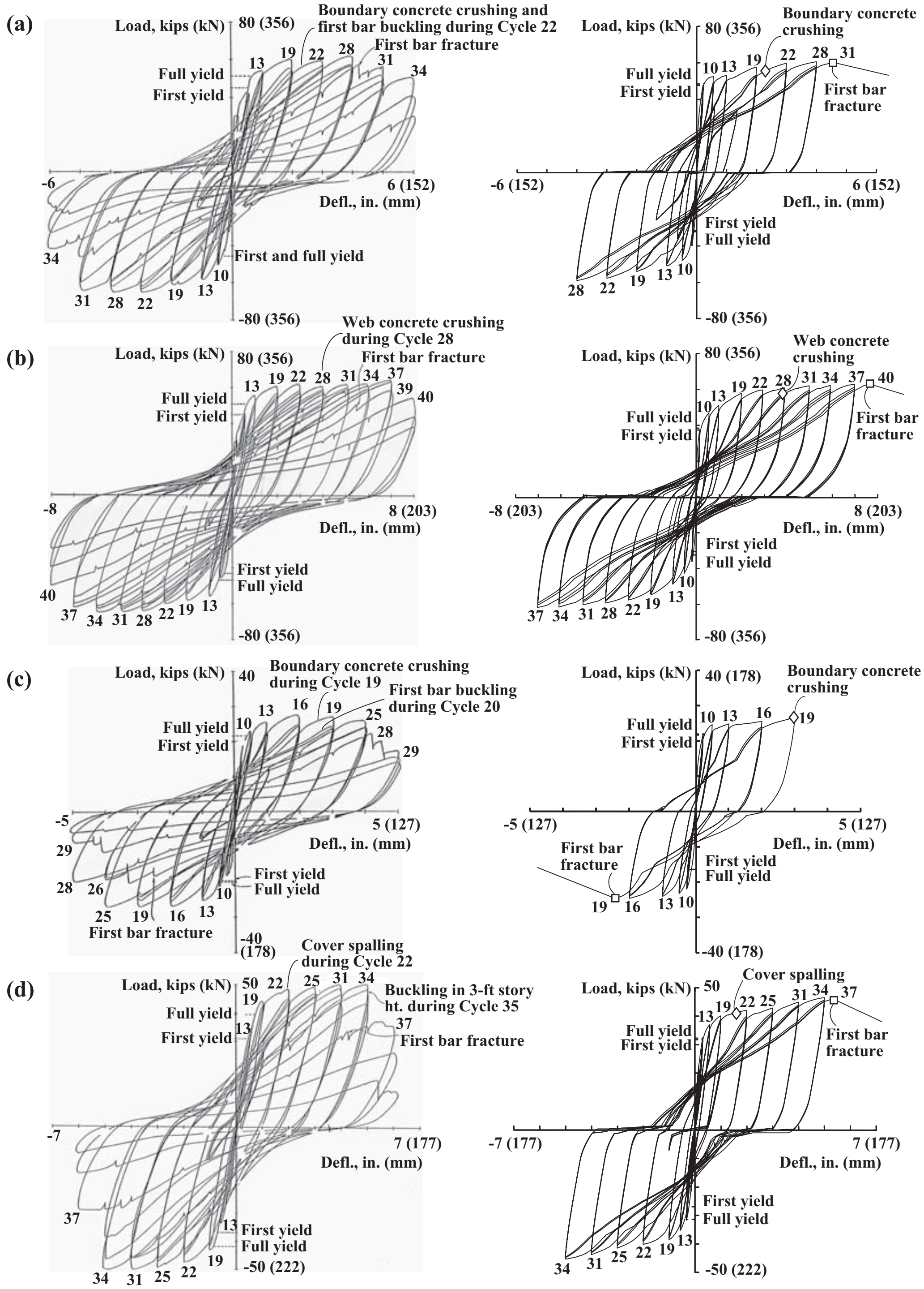


Fig. 2—Estimated (right) and measured (left, from Oesterle et al. 1976, 1979) lateral load versus deflection behaviors: (a) Wall B1; (b) Wall B3; (c) Wall R1; (d) Wall R2.