CONCRETE DESIGN HANDBOOK, 4TH EDITION

Errata No. 1

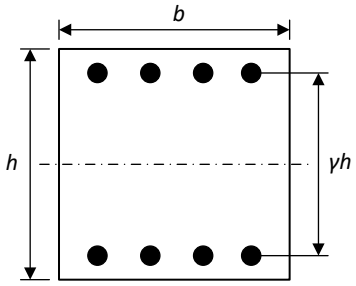
This errata contains corrections to both the First and Second Printing of the Concrete Design Handbook (CDH), 4th Edition. Refer to page ii of the CDH to determine your printing edition.

The corrections noted in the table below pertain to the First Printing of the Concrete Design Handbook, 4th Edition.

Page	Location	Correction
1 – 8	3rd paragraph under section 1.1.4.1	Replace "ϕ_s = structural steel" with "ϕ_a = structural steel".
6 – 7	Below Table 6.2(b)	Replace: $I_e = I_{cr} + \left(I_g - I_{cr}\right)\left(\frac{M_a}{M_{cr}}\right)^3 \leq I_g$ With: $I_e = I_{cr} + \left(I_g - I_{cr}\right)\left(\frac{M_{cr}}{M_a}\right)^3 \leq I_g$
6 – 10	In the paragraph under the heading "Discretize Member and Compute Moment, I_e and Curvature for each Segment"	Replace: $I_e = I_{cr} + \left(I_g - I_{cr}\right)\left(\frac{M_a}{M_{cr}}\right)^4 \leq I_g$ With: $I_e = I_{cr} + \left(I_g - I_{cr}\right)\left(\frac{M_{cr}}{M_a}\right)^4 \leq I_g$
7 – 19	Table 7.3, bottom portion of the Table	Replace "Cover to Principal Reinforcement for Corrosion Protection based on CSA A23.1#" with "Cover Applicable to Both Principal and Confinement Reinforcement in Columns for Corrosion Protection based on CSA A23.1#"
8 – 18	Table 8.2	Replace Table 8.2 with attached Table 8.2.
9 – 25	In Example 9.74, under "Service loads:"	Replace "D_s = 3800 kN" with "D_s = 3648 kN"

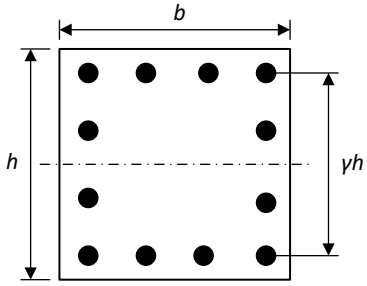
9 – 25	In Example 9.74, under "1. Column design loads:"	Replace: ULS: P_f = 1.25(3800) + 1.5(600) + 0.5(380) = 5840 kN SLS: P_f = 1.00(3800) + 1.00(600) = 4400 kN With: ULS: P_f = 1.25(3648) + 1.5(600) + 1.0(380) = 5840 kN SLS: P_f = 1.00(3648) + 1.00(600) = 4248 kN
9 – 25	In Example 9.74, under "2. Required footing area:"	Replace: SLS: A_f = 4400/480 = 9.17 m^2, b_f = 3.02 m With: SLS: A_f = 4248/480 = 8.85 m^2, b_f = 2.98 m

Table 8.2 Moment of inertia of reinforcement about sectional centroid



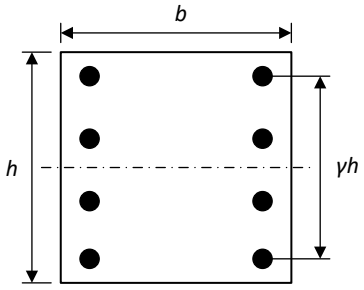
$I_{st} = 0.25\rho_t bh^3\gamma^2$

(a) Bars in two end faces



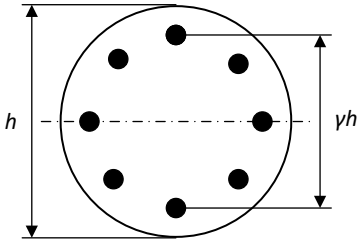
$I_{st} = 0.187\rho_t bh^3\gamma^2$ 8 bars (3 per face)
$I_{st} = 0.176\rho_t bh^3\gamma^2$ 12 bars (4 per face)
$I_{st} = 0.172\rho_t bh^3\gamma^2$ 16 bars (5 per face)

(b) Equal reinforcement on four sides



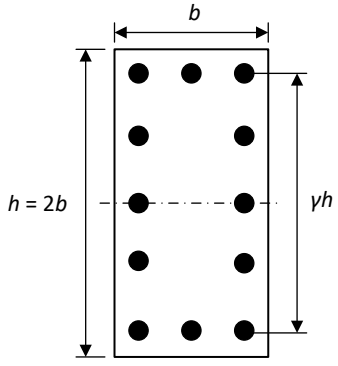
$I_{st} = 0.167\rho_t bh^3\gamma^2$ (3 bars per face)
$I_{st} = 0.117\rho_t bh^3\gamma^2$ (6 bars per face)

(c) Bars in two side faces



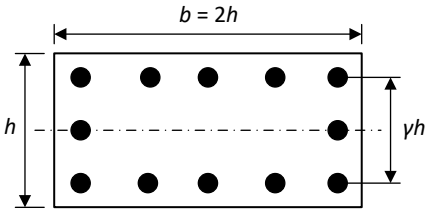
$I_{st} = 0.098\rho_t h^4\gamma^2$

(d) Uniformly distributed reinforcement



$I_{st} = 0.128\rho_t bh^3\gamma^2$ (for 16 bars as shown)

(e) Bars uniformly spaced on all sides



$I_{st} = 0.219\rho_t bh^3\gamma^2$

(f) Bars uniformly spaced on all sides

Note: This table is based on Table 12-1 of Wight, J.K. and MacGregor, J.G., Reinforced Concrete: Mechanics and Design, Sixth Edition, Pearson Education, Upper Saddle River, New Jersey, 2012

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Page	Location	Correction
17 (CSA Standard)	Preface, item (i), line 15	Add missing clause reference as underlined in the excerpt below. "… design requirements for two new types of reinforced concrete SFRS — moderately ductile coupled walls and moderately ductile partially coupled walls — have been added in Clause 21.5.8. The requirements for squat shear walls in Clause 21.5.10 have been relaxed where the walls are longer…"
26 (CSA Standard)	Clause 3.1, definition for moderately ductile coupling beam	Add missing clause reference as underlined in the text below. "**Moderately ductile coupling beam** — a coupling beam that dissipates energy by yielding of longitudinal or diagonal reinforcement and complies with Clauses 21.2 and 21.5.8."
172 (CSA Standard)	Clause 21.5.1.3	Add missing clause references as underlined in the text below. "A wall with large openings at multiple levels shall be designed in accordance with the additional requirements of Clause 21.5.8 unless the openings are limited to a small portion of the wall height and the solid wall segment(s) above and below the openings, that connect the vertical wall piers, have sufficient strength and stiffness for the wall assembly to act as a single cantilever wall. **Note:** *The intent of this Clause is to ensure that any wall that may act as a coupled or partially coupled wall satisfies all the requirements for one of the four systems in Clause 21.5.8."*
13 – 39	Figure top right-hand side of page	Replace height of "9800" in the figure with "9000".