## **Corrections in published materials**

**Surveying Handbook** – Edited by Russell C. Brinker and Roy Minnick, Chapter 12, "Geodesy" by Earl F. Burkholder, Van Nostrand Reinhold, 1987:

- A. Page 394, third paragraph, line 6: "plum-bob" should be spelled "plumb-bob."
- B. Page 397, Table 12-3: the parameters for the Clarke Spheroid of 1866 are:

a = 6,378,206.4 m and b = 6,356,583.8 m (not 6,356,583.5 m as shown)

- C. Page 398, Figure 12-5a: The equator should be labeled as the X axis.
- D. Page 411, middle of the page: the example line for computing Clairaut's Constant is missing a "sine squared." That line should read:

$$\frac{a}{\left(1-e^2\sin^2\phi_A\right)^{1/2}}\cos\phi_A\sin\alpha_A = \frac{3,879,837.711m}{0.9984852096} = 3,885,723.768m$$

- E. Page 414 first paragraph, last word: The last word should be "element" not "elements."
- F. Page 415 middle of the page: Units for symbol *h* should be (seconds) not (meters).
- G. Page 416 equation (12-32) should have 12  $\rho^2$  in the denominator as below:

$$\Delta \alpha'' = \frac{\Delta \lambda'' \sin \phi_m}{\cos\left(\frac{\Delta \phi}{2}\right)} + (\Delta \lambda'')^3 \frac{\sin \phi_m \cos^2 \phi_m}{12\rho^2} \quad \text{where} \quad \phi_m = \frac{\phi_1 + \phi_2}{2}$$

H. Page 416, middle of the page: The cosine should not be squared in the equation for x. The equation for x should read:

$$x = \frac{\Delta \lambda'' N_2 \cos \phi_2}{\rho} = S \sin \alpha_1$$

I. Page 422, equation (12-14): The value for M should read:

$$M = \frac{a(1-e^2)}{(1-e^2\sin^2\phi)^{3/2}}$$

J. Page 423, equation (12-39) should read:

$$D_{v} = D_{0} - \frac{(k-k^{2})D_{o}^{3}}{12R_{\alpha}^{2}}$$

K. Page 429 and 431: Pictures are reversed. Picture in Figure 12-23 should be in Figure 12-24 and the picture in Figure 12-24 should be in Figure 12-23.

**Surveying Handbook Second Edition**– Edited by Russell C. Brinker and Roy Minnick, Chapter 13, "Geodesy" by Earl F. Burkholder, Van Nostrand Reinhold, 1995:

A. Page 276, Table 13-3: the parameters for the Clarke Spheroid of 1866 are:

a = 6,378,206.4 m and b = 6,356,583.8 m (not 6,356,583.5 m as shown)

- B. Page 277, Figure 13-5a: The equator should be labeled as the X axis.
- C. Page 289 equation (13-32) should have 12  $\rho^2$  in the denominator as below:

$$\Delta \alpha'' = \frac{\Delta \lambda'' \sin \phi_m}{\cos \left(\frac{\Delta \phi}{2}\right)} + (\Delta \lambda'')^3 \frac{\sin \phi_m \cos^2 \phi_m}{12\rho^2} \quad \text{where} \quad \phi_m = \frac{\phi_1 + \phi_2}{2}$$

D. Page 290, top left hand side of the page: The cosine should not be squared in the equation for x. The equation for x should read:

$$x = \frac{\Delta \lambda'' N_2 \cos \phi_2}{\rho} = S \sin \alpha_1$$

E. Page 294, equation (13-39) should read:

$$D_{v} = D_{0} - \frac{(k-k^{2})D_{o}^{3}}{12R_{\alpha}^{2}}$$