

APPENDIX C

EQUATIONS FOR THE DERIVATION OF PLAN CURVATURE

The plan curvature K_H is given by:

$$K_H = \frac{\left(\frac{\partial^2 z}{\partial x^2}\right)\left(\frac{\partial z}{\partial y}\right)^2 - 2\left(\frac{\partial^2 z}{\partial x \partial y}\right)\left(\frac{\partial z}{\partial x}\right)\left(\frac{\partial z}{\partial y}\right) + \left(\frac{\partial^2 z}{\partial y^2}\right)\left(\frac{\partial z}{\partial x}\right)^2}{p^{3/2}}$$

where

$$p = \left(\frac{\partial z}{\partial x}\right)^2 + \left(\frac{\partial z}{\partial y}\right)^2$$