

Topographic Factor, K_{zt} – Method 2

Figure 6-4 (cont'd)

Equations:

$$K_{zt} = (1 + K_1 K_2 K_3)^2$$

K_1 determined from table below

$$K_2 = \left(1 - \frac{|x|}{\mu L_h}\right)$$

$$K_3 = e^{-\gamma z/L_h}$$

Parameters for Speed-Up Over Hills and Escarpments

| Hill Shape | $K_1/(H/L_h)$ | | | γ | μ | |
|---------------------------------------------------------------------------|---------------|------|------|----------|-----------------|-------------------|
| | Exposure | | | | Upwind of Crest | Downwind of Crest |
| | B | C | D | | | |
| 2-dimensional ridges (or valleys with negative H in $K_1/(H/L_h)$) | 1.30 | 1.45 | 1.55 | 3 | 1.5 | 1.5 |
| 2-dimensional escarpments | 0.75 | 0.85 | 0.95 | 2.5 | 1.5 | 4 |
| 3-dimensional axisym. hill | 0.95 | 1.05 | 1.15 | 4 | 1.5 | 1.5 |