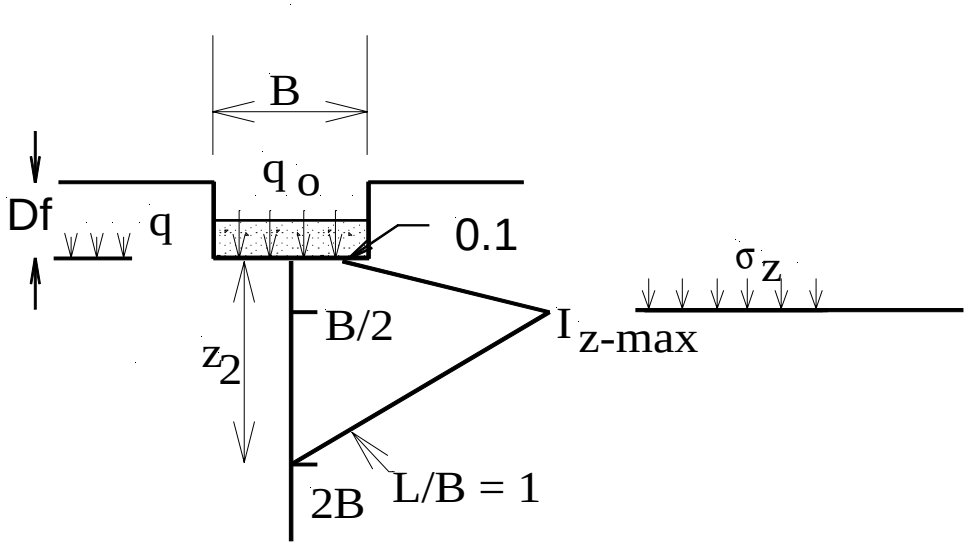
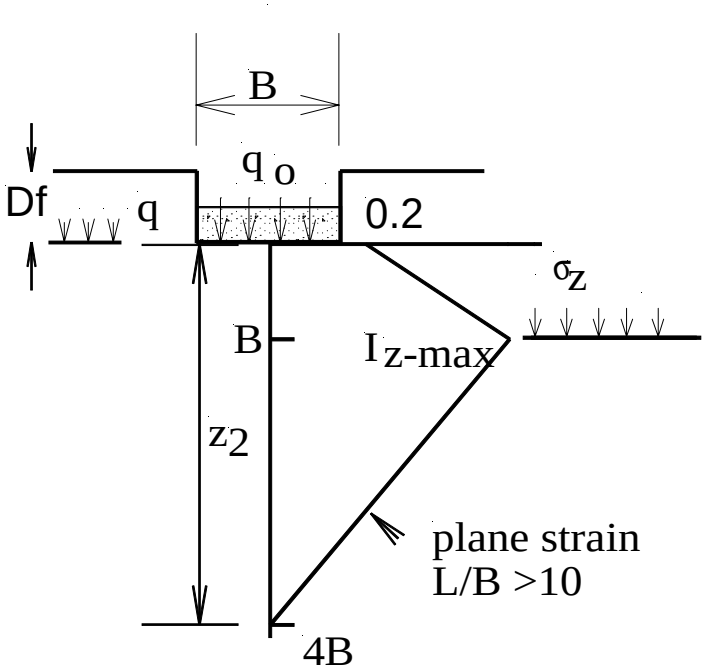
Schmertmann-Hartman method

Square or circular footing



Long narrow footing



- $S = C_1 \cdot C_2 \cdot (q_o - q') \cdot \sum_{0}^{z_2} \frac{I_z}{E_s} \cdot \Delta z$
- $I_{z\text{-max}} = 0.5 + 0.1\left(\frac{q_o - q'}{\sigma_z'}\right)^{0.5}$
- σ'_z = Effective vertical stress at $I_{z\text{-max}}$
- $C_1 = 1 - 0.5\left(\frac{q'}{(q_o - q')}\right)$
- $C_2 = 1 + 0.2\log(10 \times t)$, where 't' is the time

For $1 < L/B \leq 10$ interpolate values as follows:

- I_Z at the base between 0.1 and 0.2
- For location of $I_{z\text{-max}}$ between B/2 and B
- Depth of strain influence between 2B and 4B.