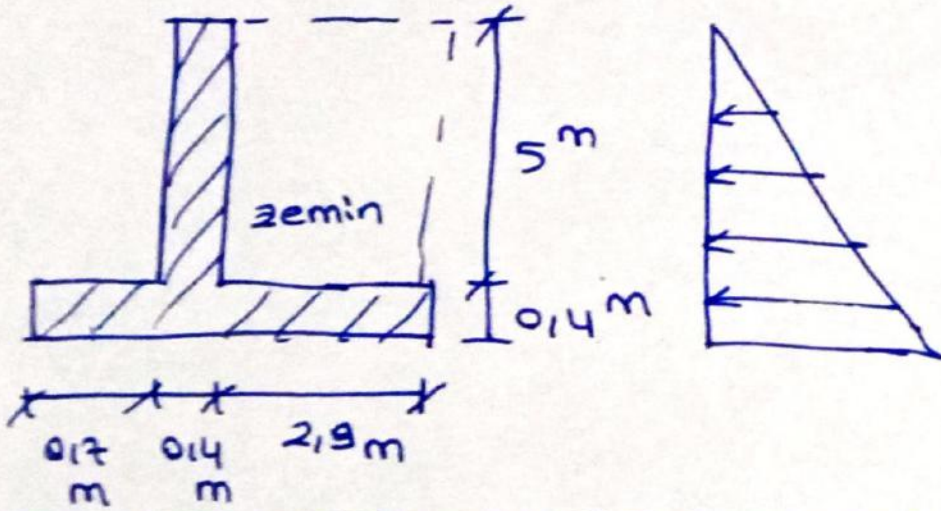


İSTİNAT DUVARLARI

Berke ARSLAN

~~Arslan~~



$$\# \gamma_{\text{zemin}} = 19 \text{ kN/m}^3$$

$$\# \phi = 30^\circ$$

$$\# \text{zemin taşıma gücü} = 120 \text{ kN/m}^2$$

$$\# \text{Sürtünme katsayısı} = 0,14$$

$$\# \sigma_{\text{beton}} = 24 \text{ kN/m}^3$$

$$K_A = \tan^2 \left(45 - \frac{\phi}{2} \right) = 0,33$$

$$P_A = \frac{1}{2} \times K_A \times \gamma \times H^2 = \frac{1}{2} \times 0,33 \times 19 \times 5,4^2$$

$$P_A = 92,24 \text{ kN/m}$$

$$\# M_{\text{deviren}} = P_A \times z \text{ netline noktası}$$

$$y = 92,24 \times \frac{5,4}{3} = 166,03 \text{ kN/m} \cdot \text{m}$$

<u>Bölüm</u>	<u>Alan (m²)</u>	<u>Ağırlık (kN/m)</u>	<u>Moment Kol (m)</u>	<u>Moment (kNm/m)</u>
Duvar	$0,14 \times 5 = 2$	$2 \times 24 = 48$	$0,17 + \frac{0,14}{2} = 0,19$	43,2
Temel	$0,14 \times 4 = 4,6$	$4,6 \times 24 = 38,4$	$\frac{4}{2} = 2$	76,8
Zemin	$2,9 \times 5 = 14,5$	$14,5 \times 19 = 275,5$	$0,17 + 0,14 + \frac{2,9}{2} = 2,55$	702,53
		$\Sigma F_v = 361,9$		$\Sigma M_{\text{deviren}} = 822,53$

Devrilme Kontrolü

$$G_s = \frac{M_{direnen}}{M_{deviren}} = \frac{822,53}{1,66,03} = 4,95 > 2 \checkmark$$

Kayma Kontrolü

$$G_s = \frac{EF_{DIRENEN}}{EF_{KAYDIRICI}} = \frac{(EF_u)(\tan(\phi_k))}{P_A \cos \alpha} = \frac{361,9 \times 0,14}{92,24} = 1,157 > 1,15 \checkmark$$

Berke ARSLAN

