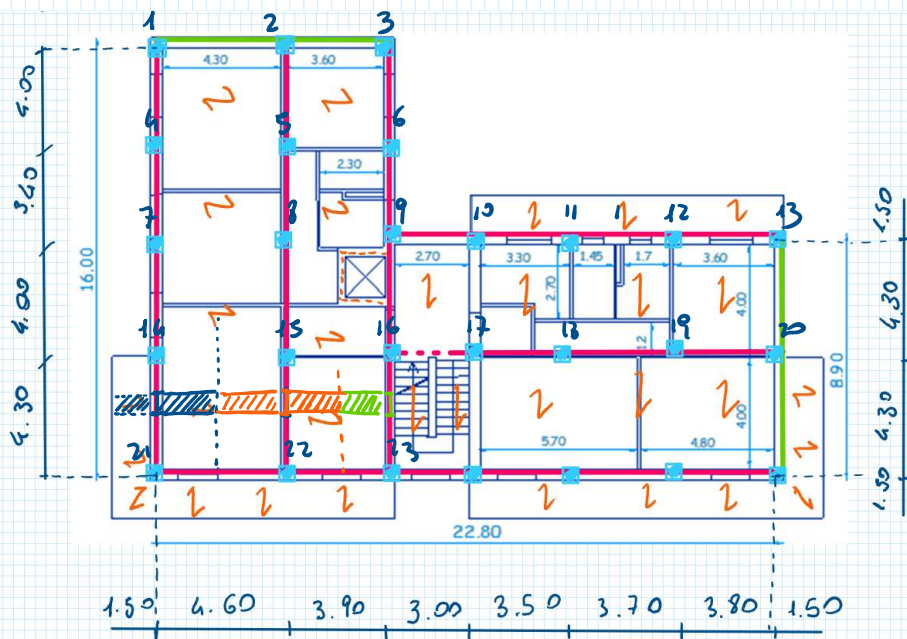


PREDIMENSIONAMENTO DELLA SEZ. TRASV. DI TRAVE EMERGENTE

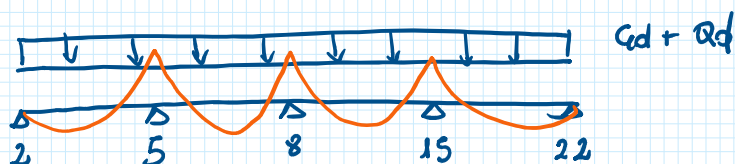


• MAX M_{ed} DI TRAVE

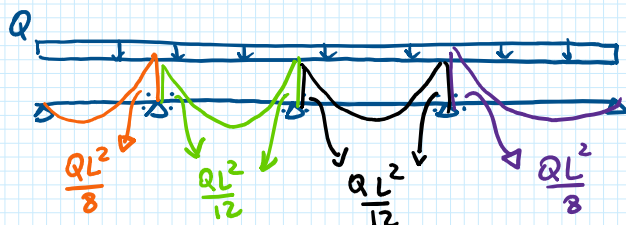
• L_{MAX}

• Q_{MAX}

=> APP. 15 MI
ASPETTO IL M_{MAX}

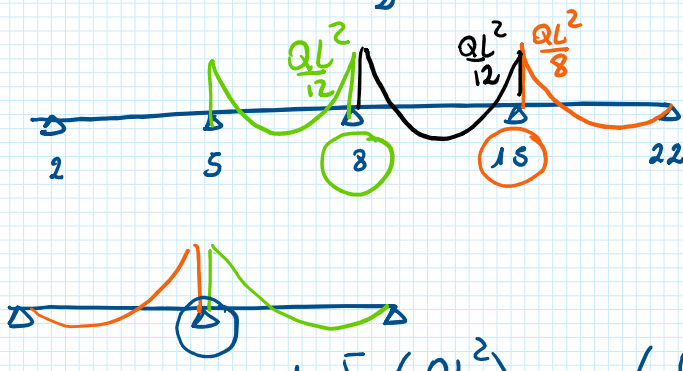


PER STIMARE M_{ed} :



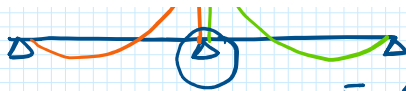
SVINCOLO ALLA ROTAZ. UN NODO INTERMEDIO:

$$M = M_{sx} + \frac{M_{dx}}{2}$$

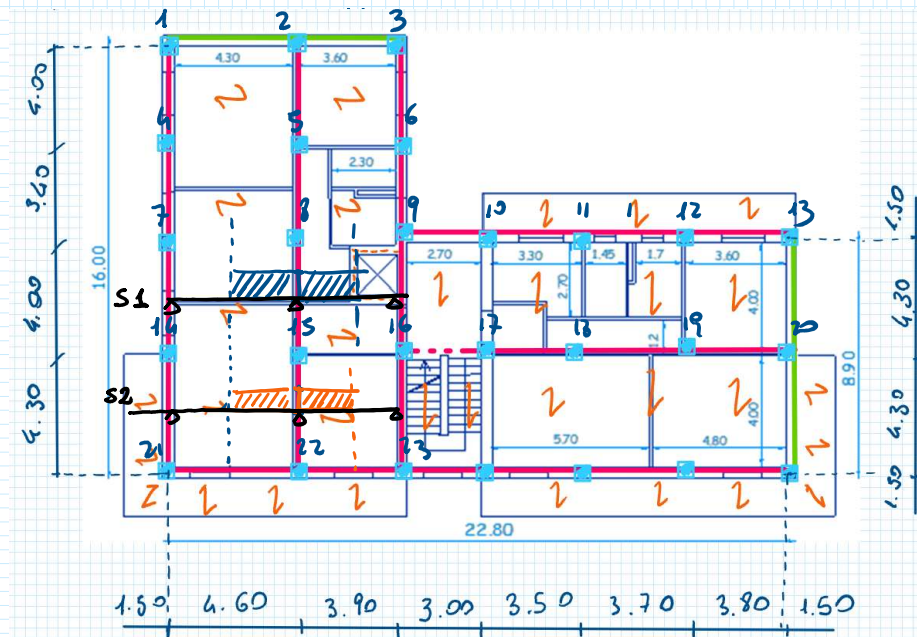


$$M_{15} = \frac{1}{2} \left[\left(\frac{qL^2}{8} \right)_{dx} + \left(\frac{qL^2}{12} \right)_{sx} \right]$$

$$M_8 = \frac{1}{2} \left[\left(\frac{qL^2}{12} \right)_{sx} + \left(\frac{qL^2}{12} \right)_{dx} \right]$$



$$\frac{1}{2} \left[\left(\frac{QL^2}{8} \right)_{sx} + \left(\frac{QL^2}{8} \right)_{dx} \right]$$



$$M_{Ed15} = \frac{1}{2} \left[\left(\frac{QL^2}{8} \right)_{22.15} + \left(\frac{QL^2}{12} \right)_{15.3} \right]$$

CAMPATA 22.15

$$L_{22.15} = 4.30 \text{ m}$$



$G_{dmax} + Q_d$

$$Q \left\{ \begin{array}{l} \text{SOLAIO} : \left[\left(\frac{4.6}{2} \times 1.1 \right) + \left(\frac{3.9}{2} \times 1.2 \right) \right] \cdot [8.40 + 3] = 55.5 \frac{\text{kN}}{\text{m}} \\ \text{P.P. TR. EM} : 1 \text{ m} \times 3.74 = 3.74 \frac{\text{kN}}{\text{m}} \end{array} \right.$$

$$59.2 \frac{\text{kN}}{\text{m}}$$

	Valori caratteristici			Valori di progetto		
	B_{1k}	B_{2k}	Q_k	B_{dmin}	B_{dmax}	Q_d
Solaio tipo	5.09	1.2	2.0	7.60	8.40	3.0
Solaio copertura	5.09	/	2.24	6.62		3.36
Balcone	4.35	/	4.24	5.66		6.36
Scala	6.9	/	4.0	8.97		6.0
Tamponatura	4.13	/	/	5.37		/
Trave 30x50	2.88	/	/	3.74		/
Trave 60x24	1.71	/	/	2.22		/

$$\left(\frac{QL^2}{8} \right)_{22.15} = \frac{59.2 \cdot 4.30^2}{8} = 136.8 \text{ kNm}$$

CAMPATA 15.3



CAMPATA 15.8



$$L_{15.8} = 4.00 \text{ m}$$

$$Q = \begin{cases} \text{SOLAIO} & \left[\left(\frac{4.6}{2} \times 1.2 \right) + \left(\frac{3.9}{2} \times 1.2 \right) \right] \times [3.40 + 3] = 58.14 \frac{\text{kN}}{\text{m}} \\ \text{P.P. TR.EM} & 1 \text{ m} \times 3.74 = 3.74 \frac{\text{kN}}{\text{m}} \end{cases}$$

$$61.9 \frac{\text{kN}}{\text{m}}$$

$$\left(\frac{QL^2}{12} \right)_{15.8} = \frac{61.9 \times 4^2}{12} = 82.5 \text{ kNm}$$

$$\text{QUINDI } M_{Ed} = \frac{1}{2} (136.8 + 82.5) = 109.7 \text{ kNm}$$

$$b = 30 \text{ cm} = 0.30$$

$$M_{Rd} = \frac{bd^2}{\gamma^2} = M_{Ed} \Rightarrow d = \gamma' \sqrt{\frac{M_{Ed}}{b}} = 0.019 \sqrt{\frac{109.7}{0.30}} = 0.36 \text{ m}$$

$$\gamma' = 0.019$$

$$h = 36 + 5 = 41 \text{ cm} \quad \text{50}$$