

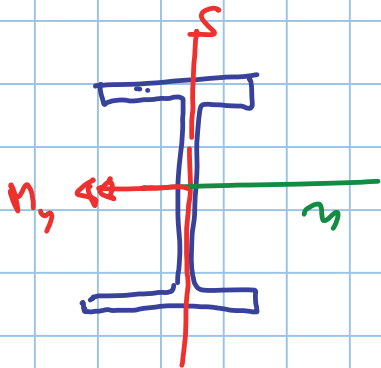
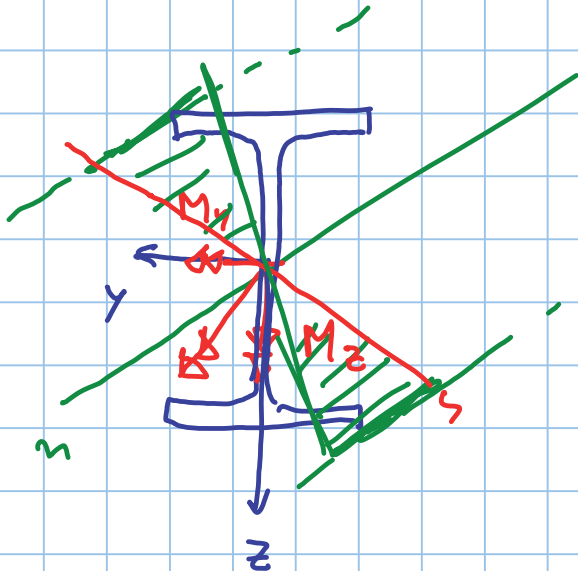
in campo elastico

$$\sigma = \frac{M_y}{I_y} z - \frac{M_z}{I_z} y$$

$$|\sigma_{max}| = \frac{|M_y|}{I_y} \frac{b}{2} + \frac{|M_z|}{I_z} \frac{b}{2} = \frac{|M_y|}{W_y} + \frac{|M_z|}{W_z}$$

$$W_y = \frac{I_y}{b/2}$$

$$W_z = \frac{I_z}{b/2}$$



SEZIONE di classe 3

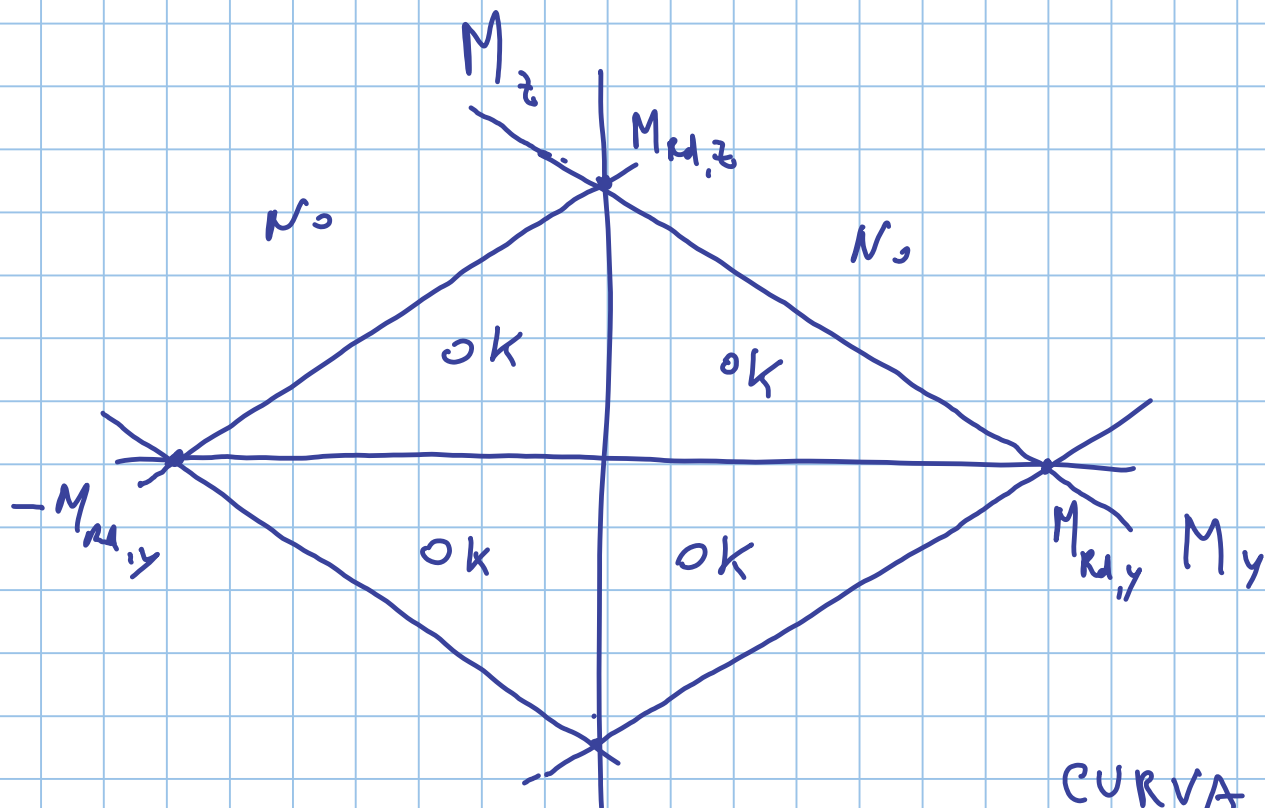
$$M_{Rd} = W_{el} \frac{f_y}{\gamma_{M0}}$$

$$\sigma_{max} = \frac{|M_1|}{W_1} + \frac{|M_2|}{W_2} \leq \frac{f_y}{\gamma_{M0}}$$

$$\frac{|M_{Ed,y}|}{W_y \cdot \frac{f_y}{\gamma_{M0}}} + \frac{|M_{Ed,z}|}{W_z \cdot \frac{f_y}{\gamma_{M0}}} \leq 1$$

$M_{Rd,y}$ $M_{Rd,z}$

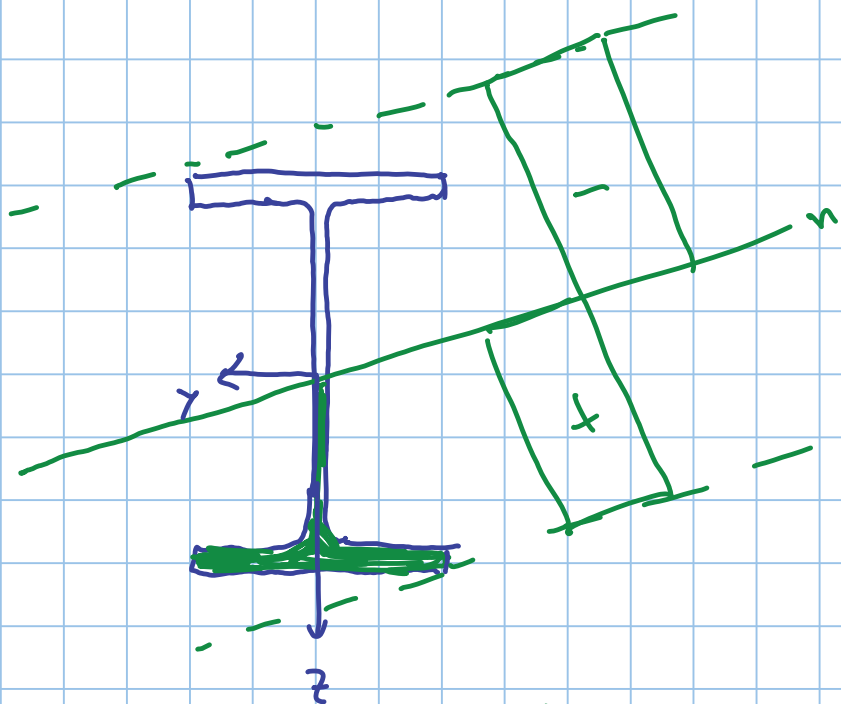
$$\left| \frac{M_{Ed,y}}{M_{Rd,y}} \right| + \left| \frac{M_{Ed,z}}{M_{Rd,z}} \right| \leq 1$$



$$\left| \frac{M_{Ed,y}}{M_{Rd,y}} \right| + \left| \frac{M_{Ed,z}}{M_{Rd,z}} \right| \leq 1$$

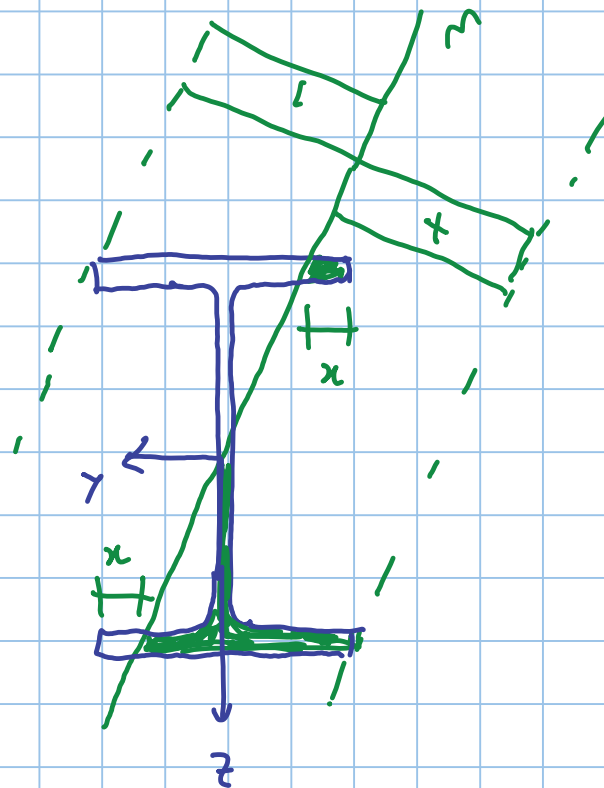
CURVA DI INTERAZIONE $M_y - M_z$

DOMINIO DI RESISTENZA $M_y - M_z$



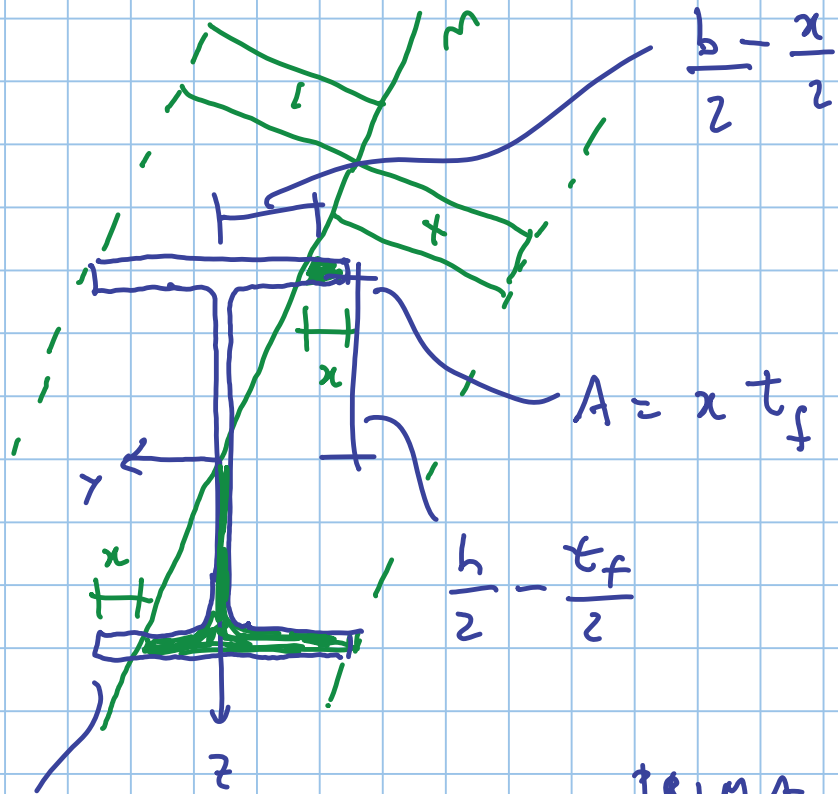
$$M_{x,y}$$

$$M_z \approx 0$$



$$M_y$$

$$M_z$$



$$A = x t_f$$

$$\Delta \sigma = -f_y \quad \text{e} \quad \sigma = +f_y$$

$$\Delta \sigma = 2 f_y$$

$$\Delta N = \Delta \sigma \cdot A = x t_f 2 f_y$$

TRIM A

ORA

$$\Delta N = -x t_f 2 f_y$$

$$M_y = M_{R,y}$$

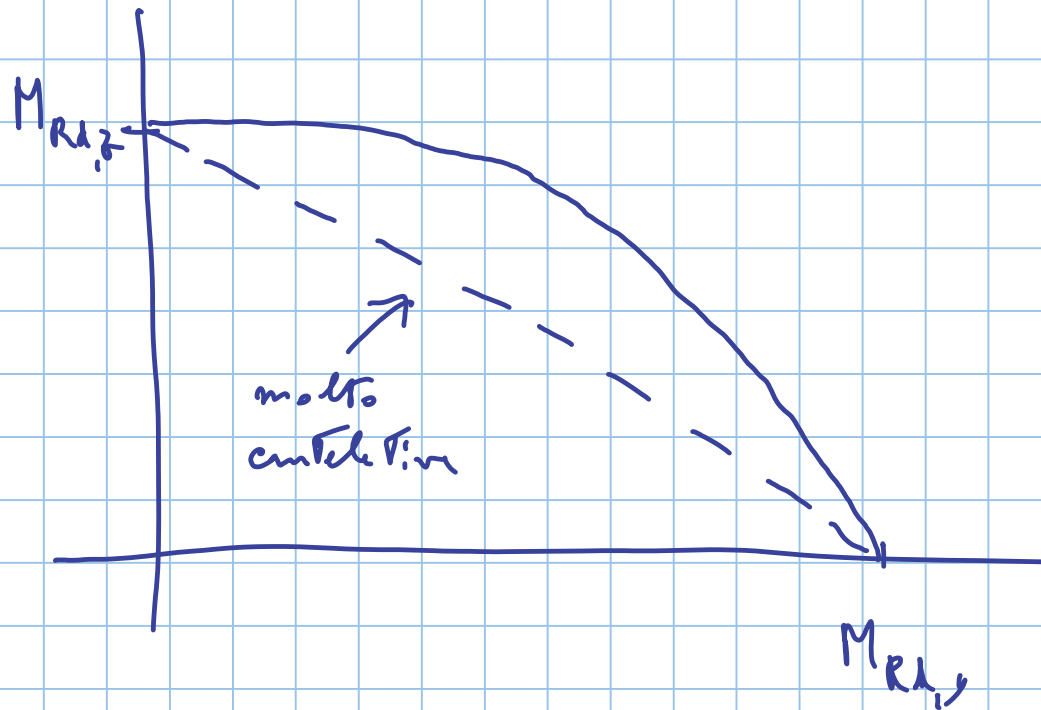
$$M_z = 0$$

$$M_y = M_{R,y} - x t_f \cdot 2 f_y \left(\frac{b}{2} - \frac{x}{2} \right) \cdot 2$$

$$M_z = 0 + x t_f 2 f_y \left(\frac{b}{2} - \frac{x}{2} \right) z$$

$$M_y = M_{R,y} - x t_f \cdot 2 f_y \left(\frac{h}{2} - \frac{t_f}{2} \right) \cdot 2 = M_{R,y} - 2 x t_f (h - t_f) f_y / y_n.$$

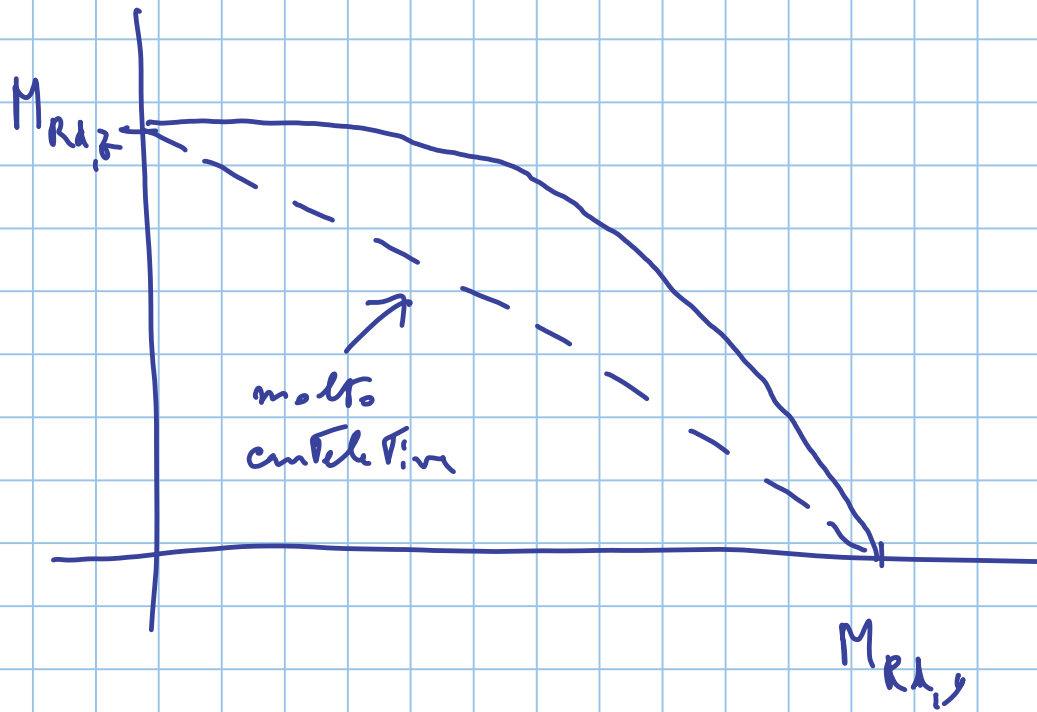
$$M_z = 0 + x t_f 2 f_y \left(\frac{b}{2} - \frac{x}{2} \right) \cdot 2 = 2 x t_f (b - x) f_y / y_n.$$



$$0 \leq x \leq \frac{b}{2}$$

$$\text{of } \frac{b}{2} - \frac{t_w}{2}$$

$$\left| \frac{M_y}{M_{R,y}} \right| + \left| \frac{M_z}{M_{R,z}} \right| \leq 1$$

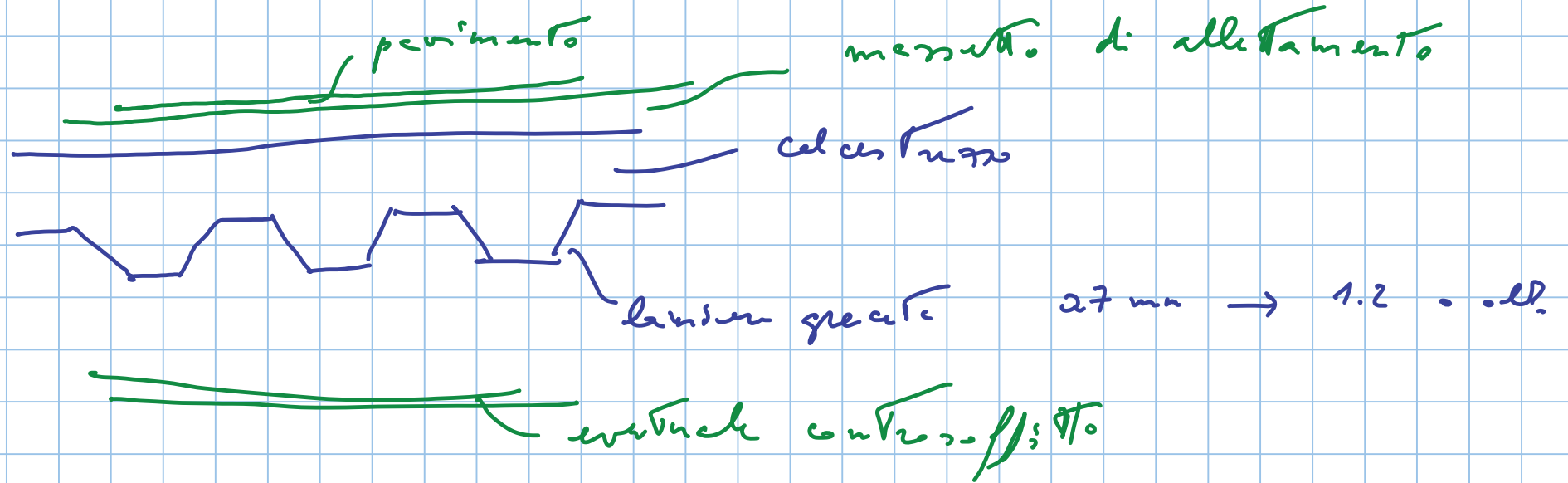


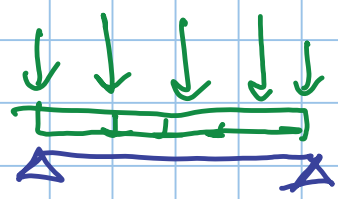
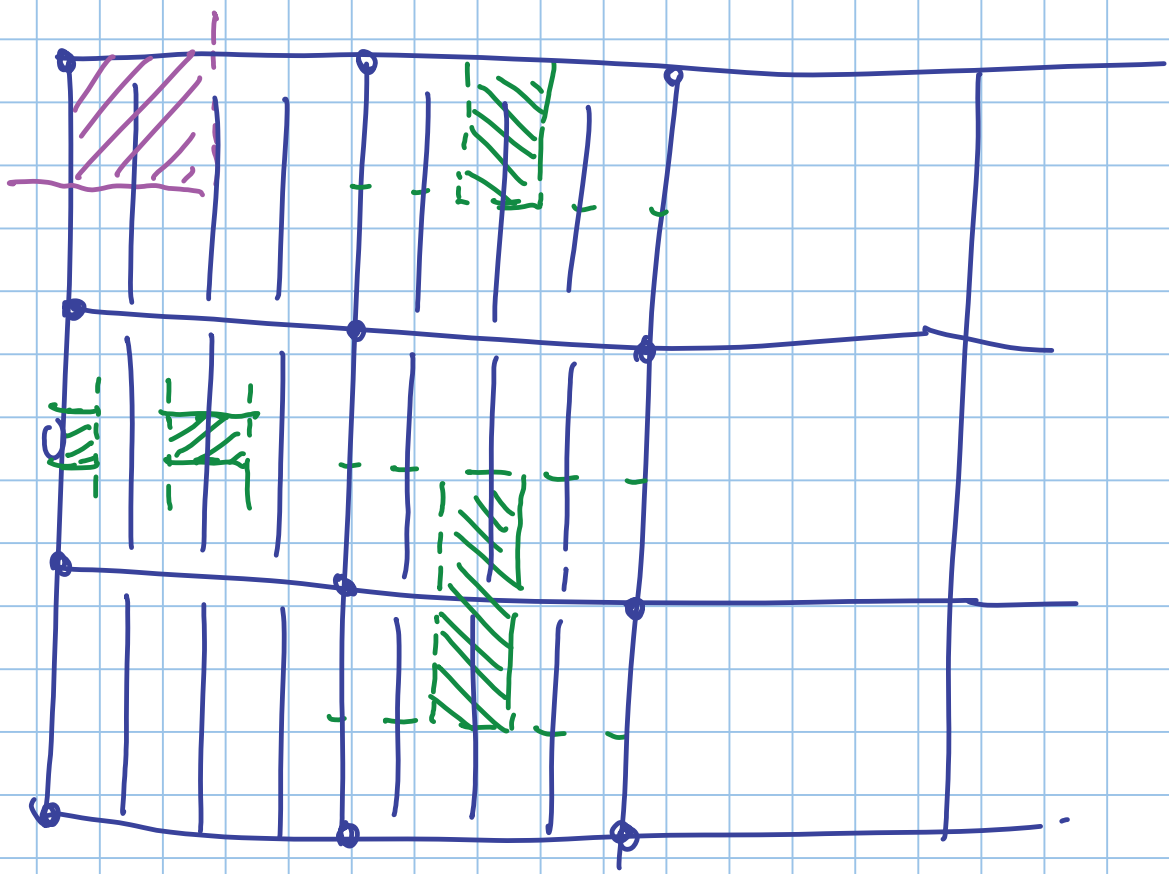
$$\left(\frac{M_y}{M_{R1,y}} \right)^2 + \left(\frac{M_z}{M_{R1,z}} \right) \leq 1$$

$$M_z \leq \left[1 - \left(\frac{M_y}{M_{R1,y}} \right)^2 \right] M_{R1,z}$$

...

PROGETTO





$g_A + q_A$	N_{Ed}	
175.7	175.7	
404.3	580.0	
404.3	984.3	
404.3	1388.6	
404.3	1792.9	kN

