



Coastal Construction Manual

FORMULA CALCULATOR

12.3 Overturning Moment

building weight:		Righting Moment =	ft-lb
distance from center of gravity to pivot point:			
factor of safty:			
		Overturing Moment =	ft-lb
wind force1:		distance from line of wind force to pivot point1:	
wind force2:		distance from line of wind force to pivot point2:	
wind force3:		distance from line of wind force to pivot point3:	
wind force4:		distance from line of wind force to pivot point4:	
flood force1:		distance from line of flood force to pivot point1:	
flood force2:		distance from line of flood force to pivot point2:	
flood force3:		distance from line of flood force to pivot point3:	
flood force4:		distance from line of flood force to pivot point4:	

For equilibrium: Righting Moment - Overturing Moment > 0

Righting Moment = (building weight)(distance from center of gravity to pivot point)(factor of safety)

Overturing Moment = Σ [(wind forces)(distances from line of force to pivot point) + 1.5(flood forces)(distances from line of force to pivot point)]