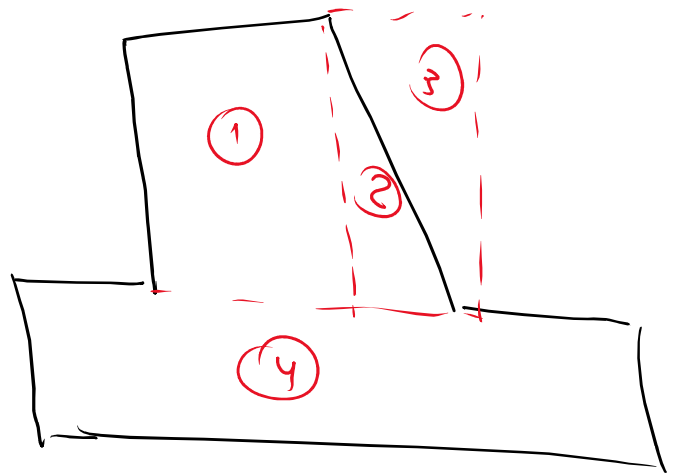


# Gravity RW

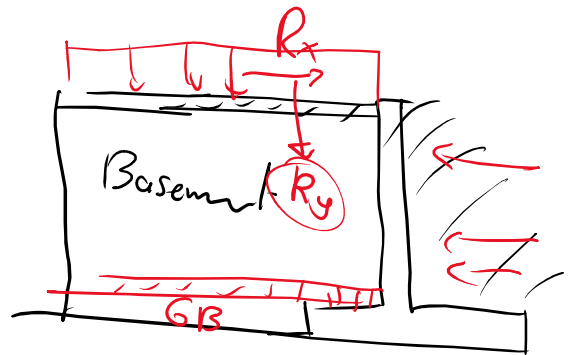
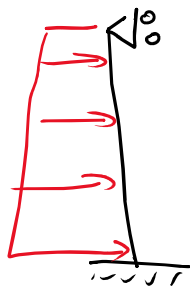
## only Stability Check

- ① overturning (same as Cantilever RW)
- ② Sliding (-----)
- ③ Bearing Capacity

	weight	arm	moment
①			
②			
③			
④			



# Basement RW



## Stability failure

- ① O.T  $\rightarrow$  X not possible.
- ② Sliding  $\rightarrow$  X not possible
- ③ bearing  $\rightarrow$   $\checkmark$

Design Same as Cantilever

but add  $R_y, R_x$   
↓ ↓  
 $M_R, W$  Changes  
 $M_R$

Strength Failure mode

(a) stem

same as C.R.W but considering  $R_x, R_y$   
↓  
reduce shear

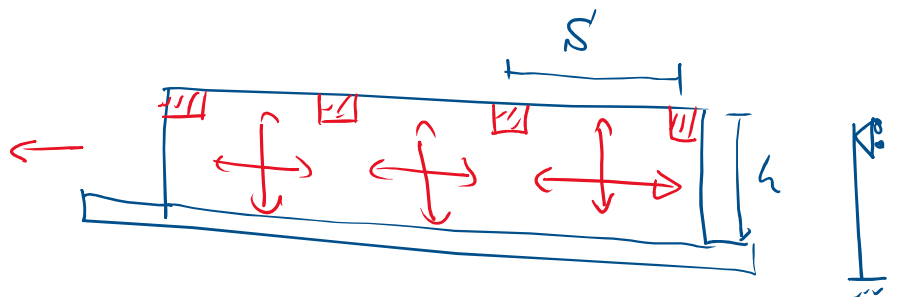
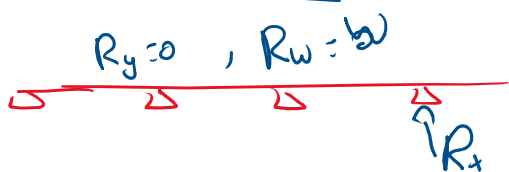
(b) for heel and toe

\* same as C.R.W

\* wall is supported against O.T, Sliding

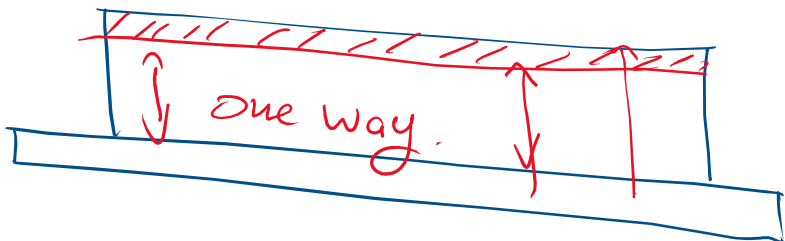
→ reduce Foot Dimension and stem.

(c) Propped RW



Basement RW

$R_y = ( ), R_x, w$



$$R_x^* = \frac{R_x}{\sum H_i} \text{ KN/m}$$

## Notes

- ① propped or Basement RW  $\rightarrow$   $K$  at rest  $K = k_0$
- ② no need to check Sliding or O.T
- ③ to check bearing  $\rightarrow$  using  $R_x^*$
- ④ Design stem for Shear and Reinforcement in propped wall same as basement
- ⑤ Check punching of beam in stem using  $R_x$  for propped RW

\* horizontal steel in stem will not be min as in Basement wall

in general Propped  , Basement 

$p_{min} = 0.002$  For horizontal steel in Walls

$p_{min} = 0.002$  For vertical steel in Walls