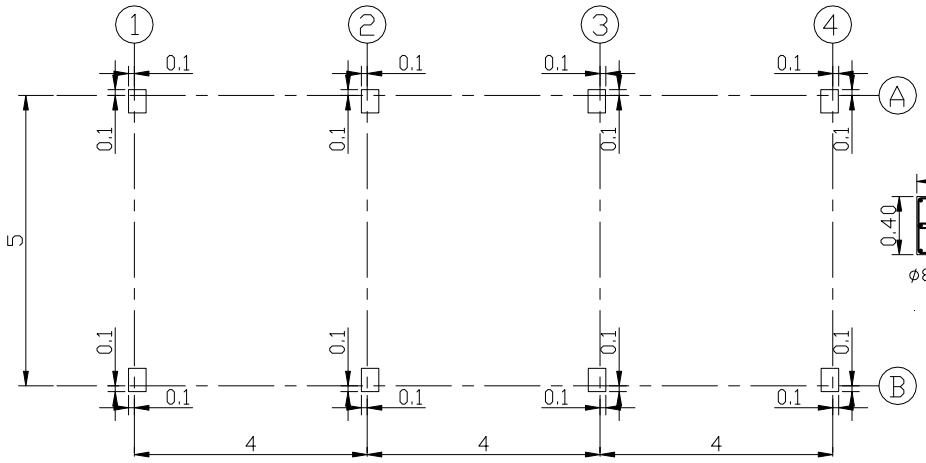
الأكاديمية العربية للعلوم والتكنولوجيا والنقل البحري
Arab Academy for Science, Technology and Maritime Transport

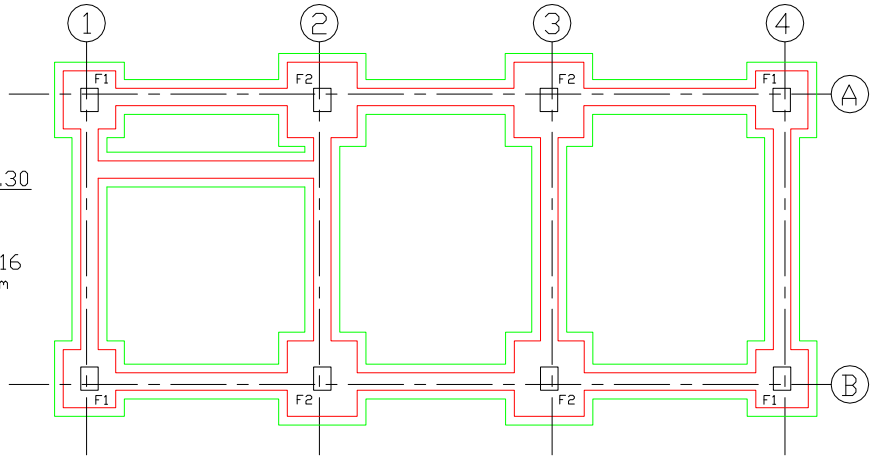
CB 415 Quantity Surveying, Cost Estimation and Specifications

Q. S. Example

Dr. Karim Helmi



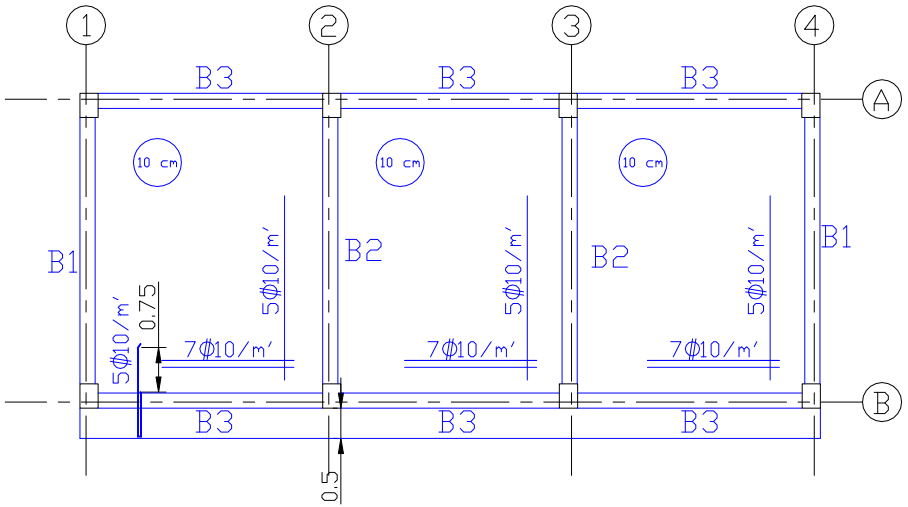
Columns and axes



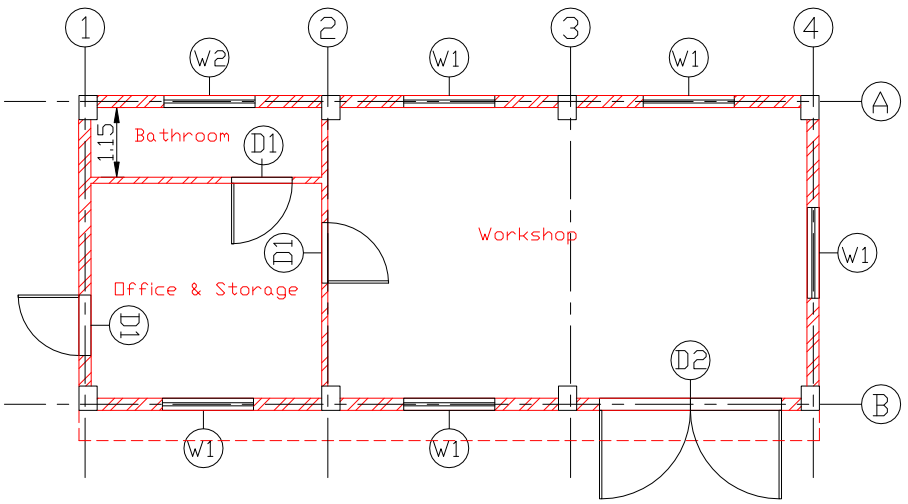
Foundations

Footing	Dimensions			Reinforcement	
	L	W	H	Long direction	Short Direction
F1	1.00	0.90	0.40	5 Φ 12	6 Φ 12
F2	1.30	1.20	0.40	7 Φ 12	8 Φ 12

Foundation level -1.10 m
Plain concrete for foundations extends 15 cm from all ends of footings and ties and have a thickness of 15 cm
All ties are 30 x 40 cm have a top and bottom reinforcement 3 16 and stirrups ϕ 8 @20 cm



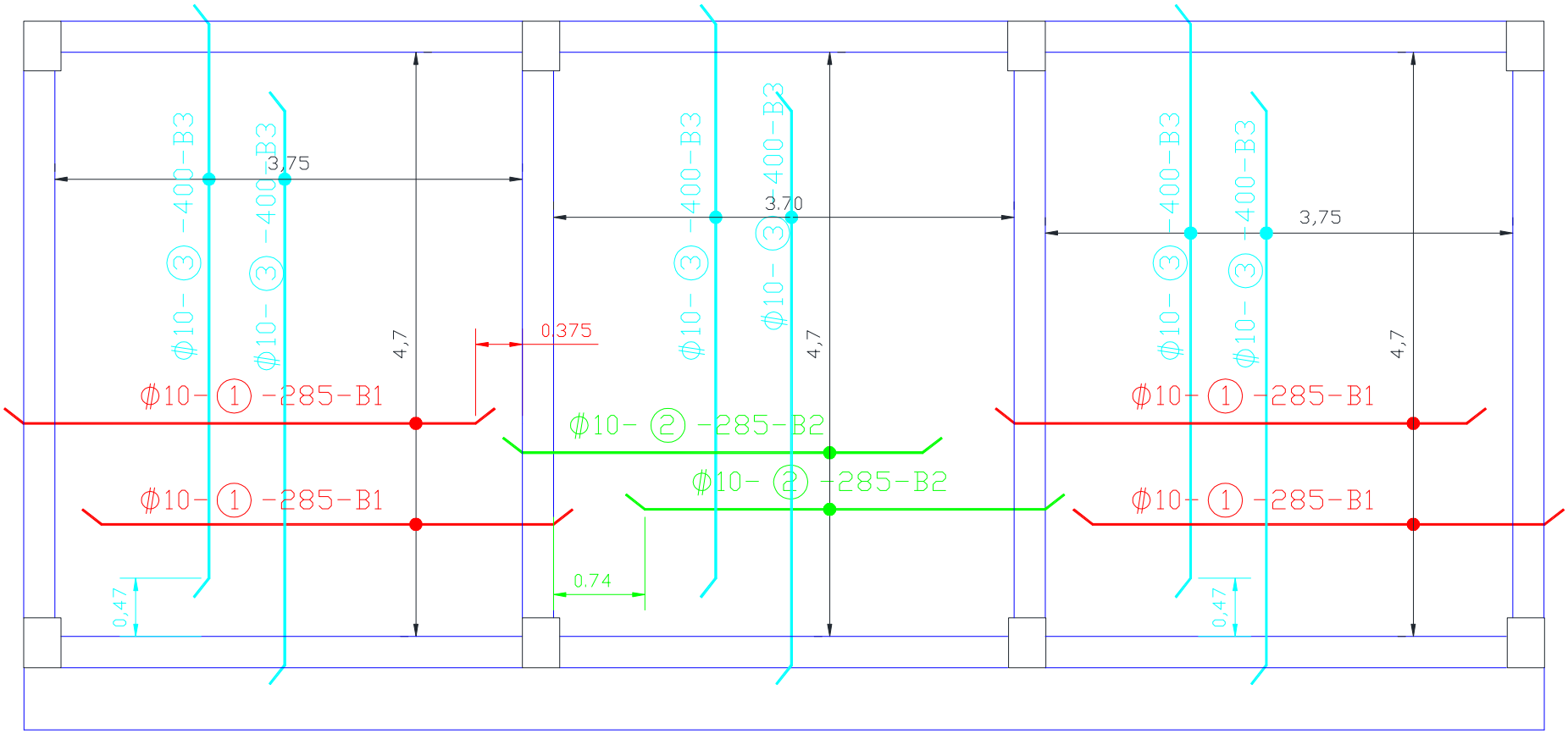
Roof rft.



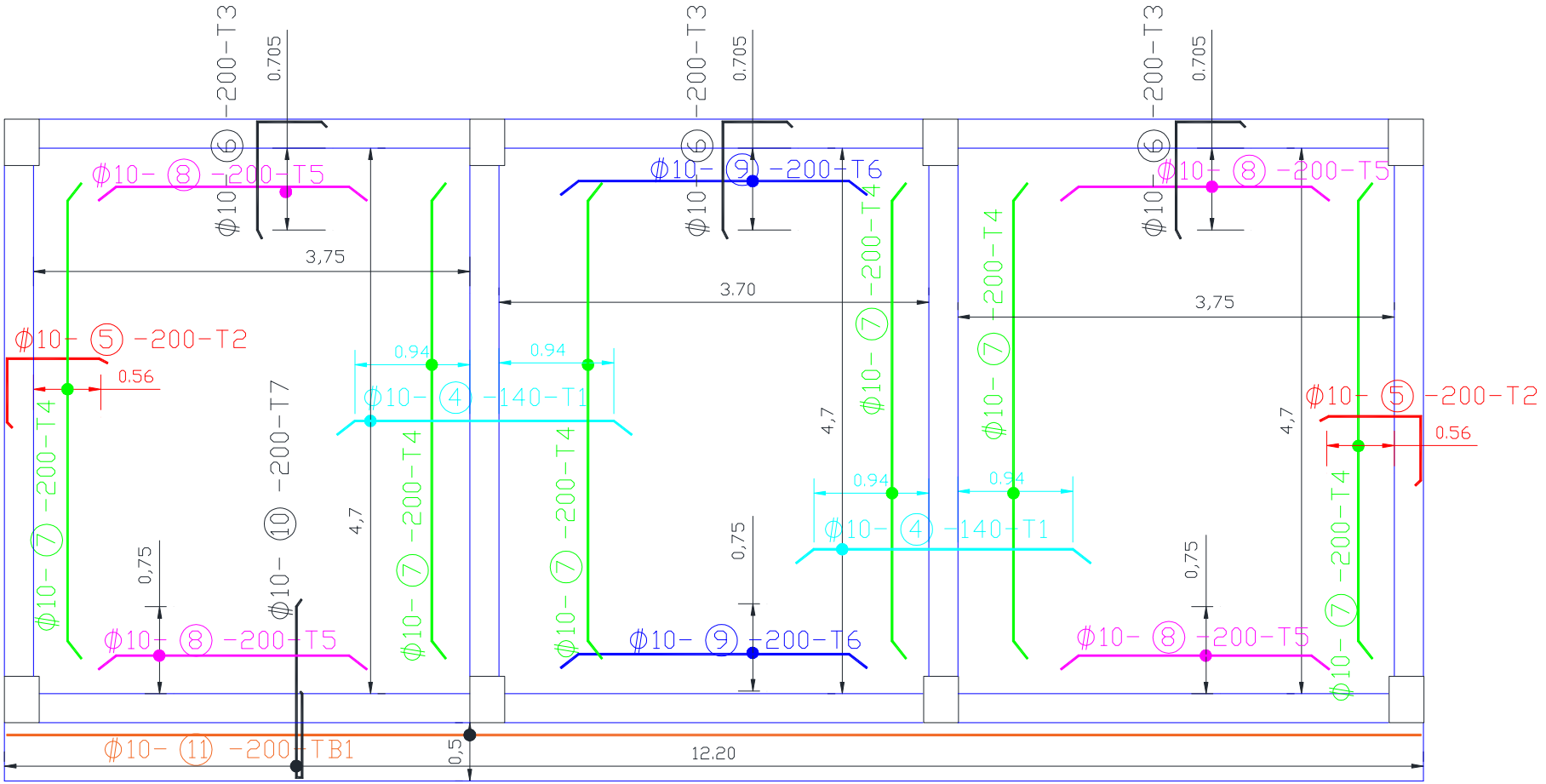
Arch. Plan

All external walls are 20 cm thick and all internal walls and parapet are 10 cm thick
Roof finishing level +3.7 m
Internal floor finishing level +0.30 m
Window W1 is 1.50 x 1.0 m
Window W2 is 1.50 x 0.5 m
Door D1 is 1.0 x 2.2 m
Door D2 is 3.0 x 2.5 m
Roof parapet height is 50 cm
Ceramic flooring is used for the bathroom and concrete flooring for the office and workshop
Ceramic tiling is used on the bathroom up to the bottom level of the beams
Plastering and painting is used for all other internal surfaces and roofs

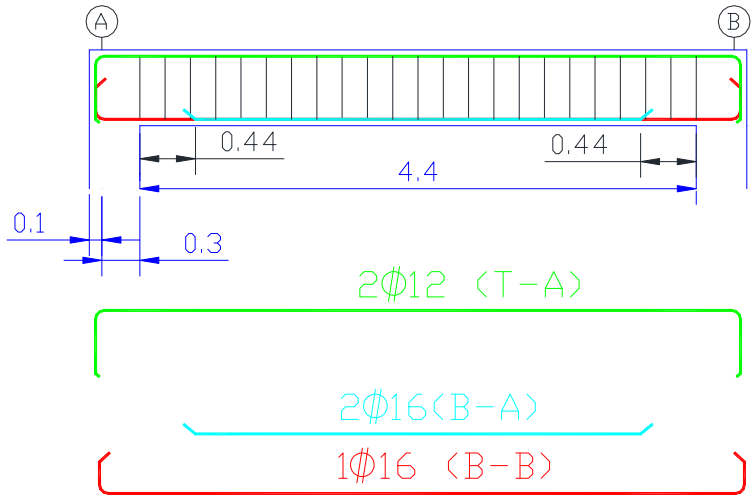
Beam	Dimensions		Reinforcement				
	W	H	Top External support	Top internal support	Bottom	Hanging	Stirrups
B1	0.25	0.60	2 ϕ12	-	3 ϕ16	2 ϕ12	Φ 8 @20 cm
B2	0.25	0.60	2 ϕ16	-	4 ϕ16	2 ϕ12	Φ 8 @20 cm
B3	0.25	0.60	2 ϕ12	2ϕ 16	2 ϕ16	2 ϕ12	Φ 8 @20 cm



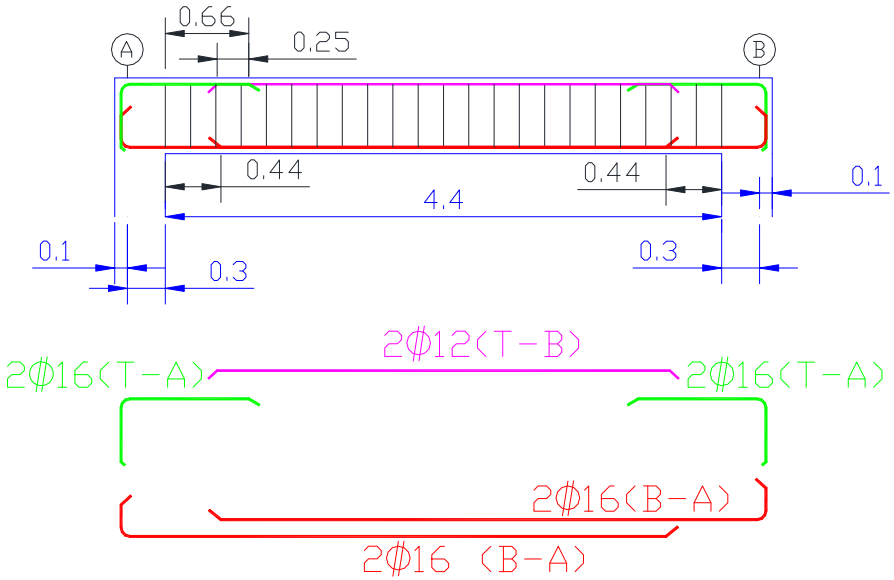
Bottom Reinforcement of Slab



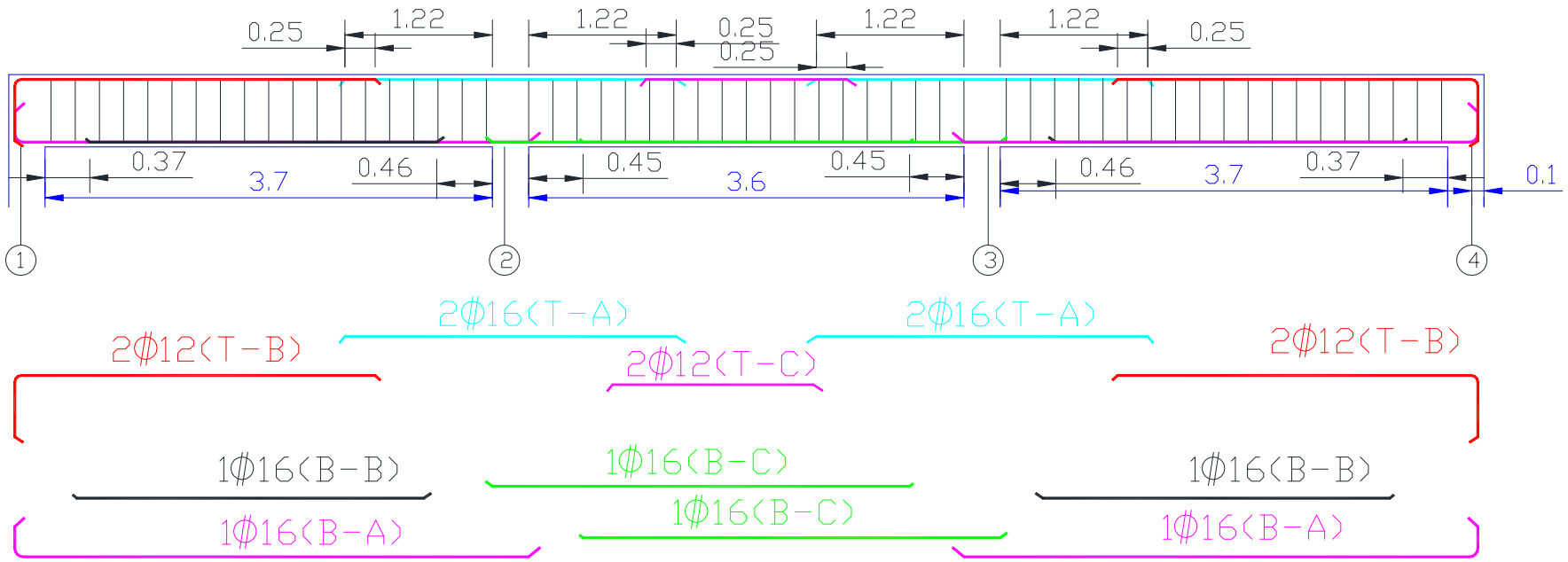
Top Reinforcement of Slab



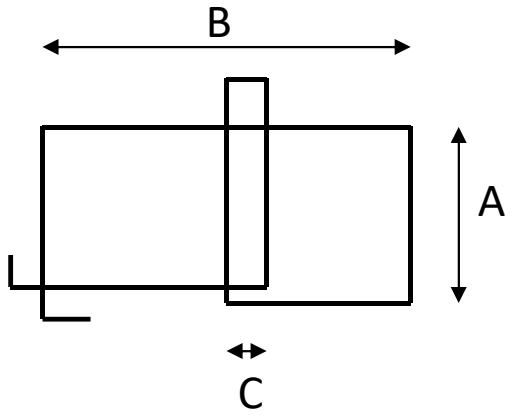
Beam B1



Beam B2



Beam B3



$L = 2(B+C+10\phi)+4A-9\phi-4.5r$