Draw to a suitable scale the sectional plan & elevation of a circular column with details
Diameter of circular column = 500 mm
Depth below G.L = 1.0 m, P.L above G.L = 400 mm
Height of column = 3.8 m
Column Reinforcement → Main long. steel - 6 no - 20 mm ϕ
Lateral ties = 8 mm ϕ @ 300 mm c/c.
Footing details :- Size = 3.0 m x 3.0 m.
Thickness of footing = 300 mm.
Reinforcement = 12 mm ϕ @ 290 mm c/c both ways.
HYSD Fe 415 steel grade. & Prepare Bar Bending Sc

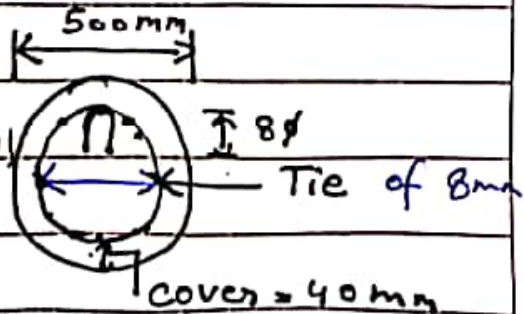
1:

) Length of one longitudinal bar = Height of column above P.L + Dis b/w P.L & G.L + Depth below G.L - End cover of foot - 2 x Dia of bar of footing + 12 ϕ + 12 ϕ.

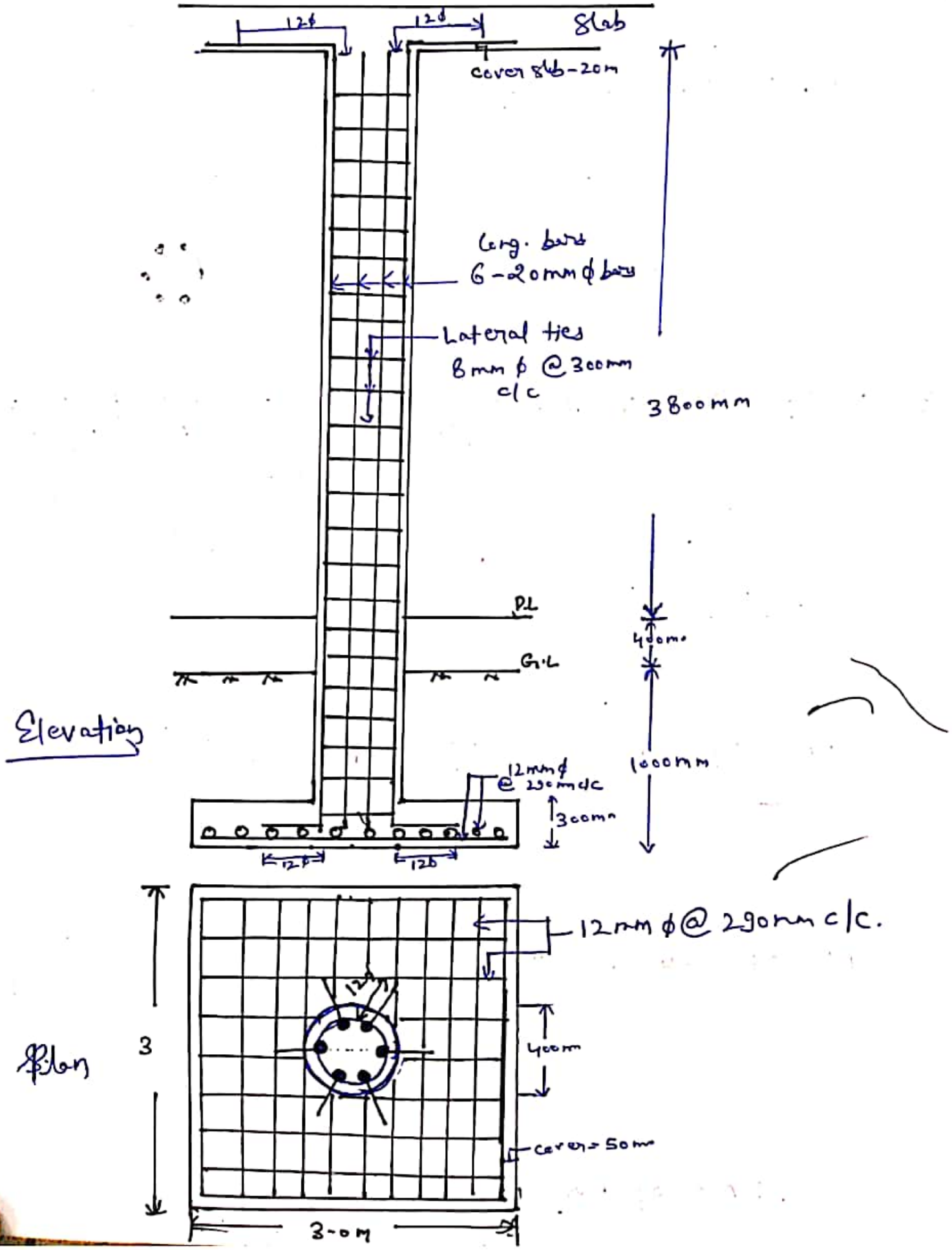
$= [3800 + 400 + 1000 - 50 - 2 \times 12] + 12 \times 20 + 12 \times 20$

$= 5606 \text{ mm} = 5.606 \text{ m}$

) Length of one circular ties.



Diameter of one tie :
= Outer dia of column - 2 x Cover
- 2x dia of tie
= 500 - 2 x 40 - 2 x 8
= 404 mm



Date : .....

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Bar - Bending Schedule

Sno	Type of bar	Dia mm	Shape	No	Length m	T. Length m	Weight per m kg/m	Total weight kg
1.	Longitudinal bars	20	L	6	5.61	33.66	2.47	83.14
2.	Circular ties	8	(77)	19	1.4	26.60	0.39	10.37
3.	footing steel	12	2300	11+11 = 22	2.9	63.8	0.89	56.78

150.29 kg.

Add 5% wastage = $\frac{5}{100} \times 150.29 = 7.52$ kg

Quantity = 150.29 + 7.52

= 157.81 kg

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