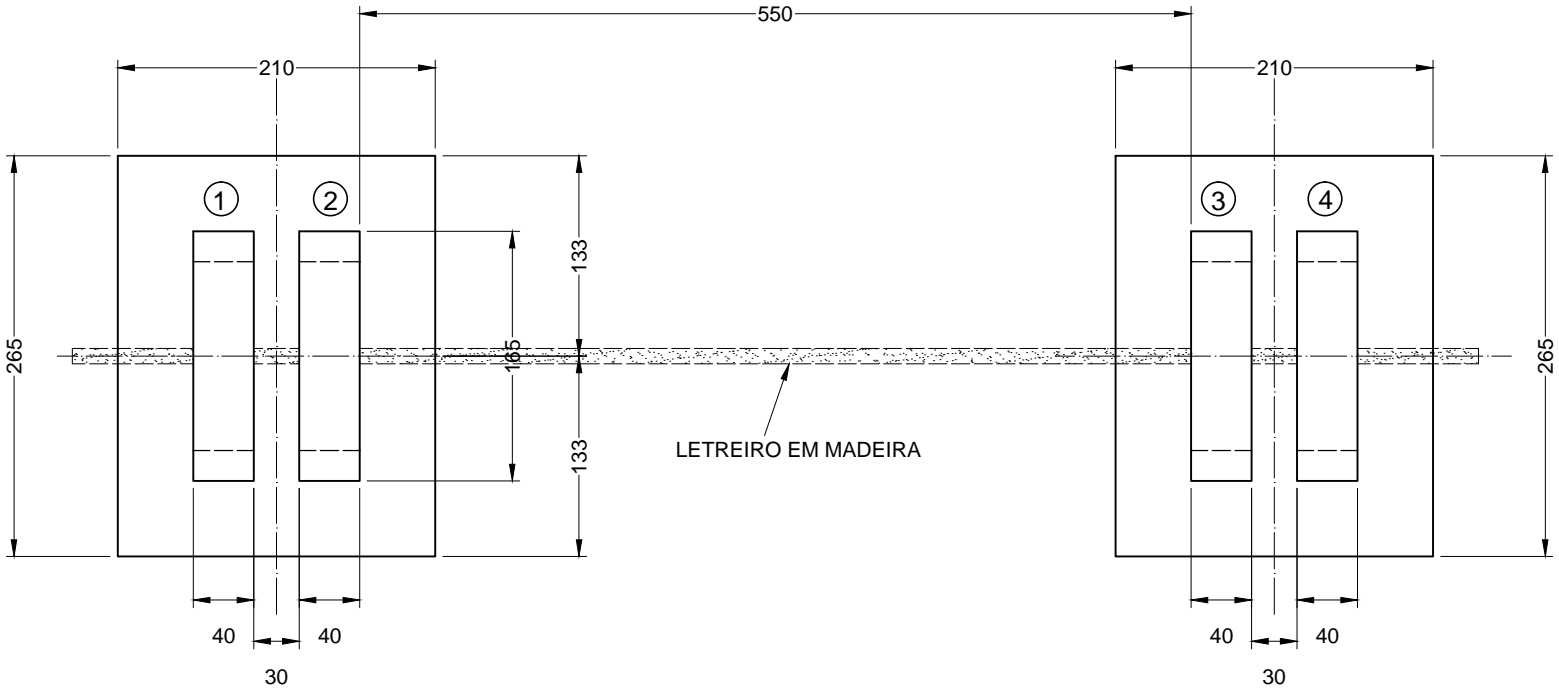
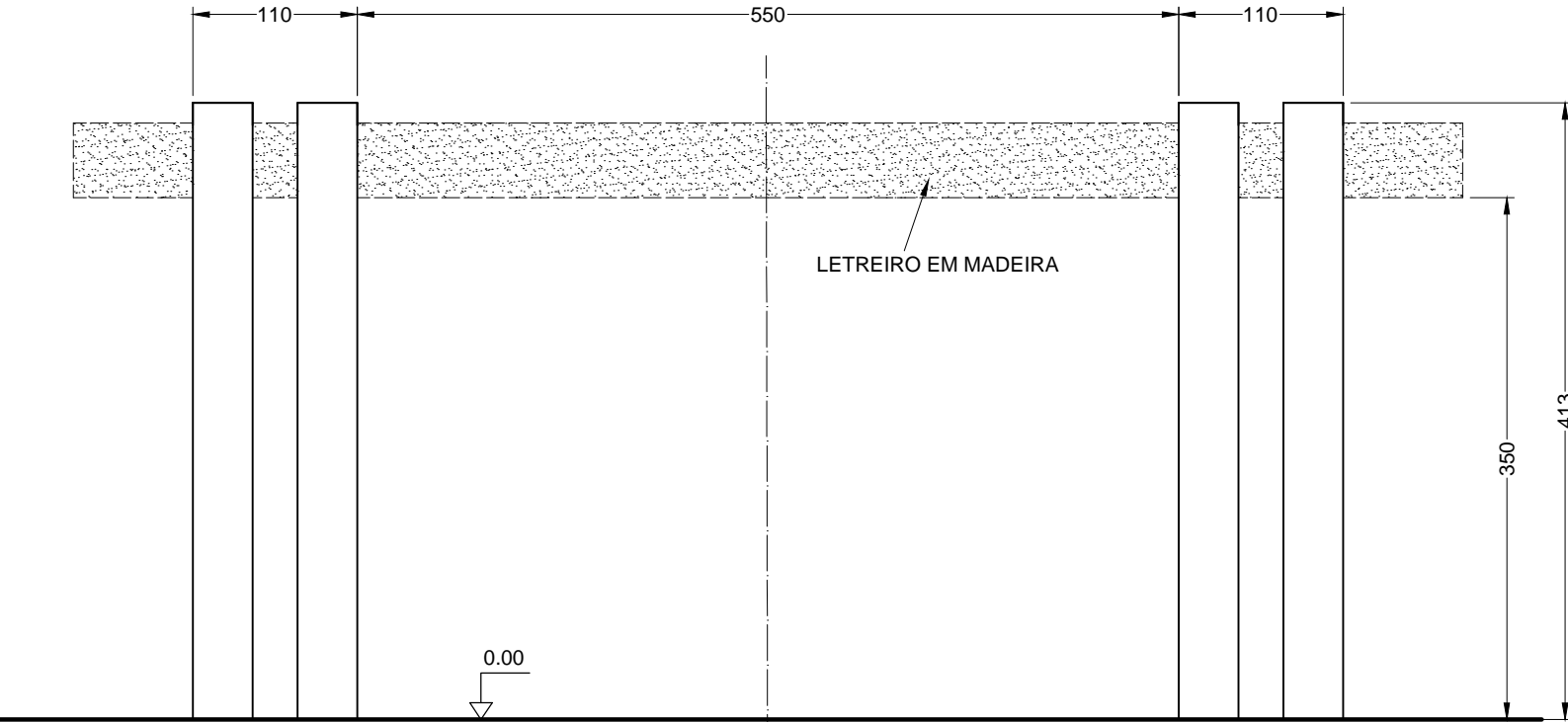


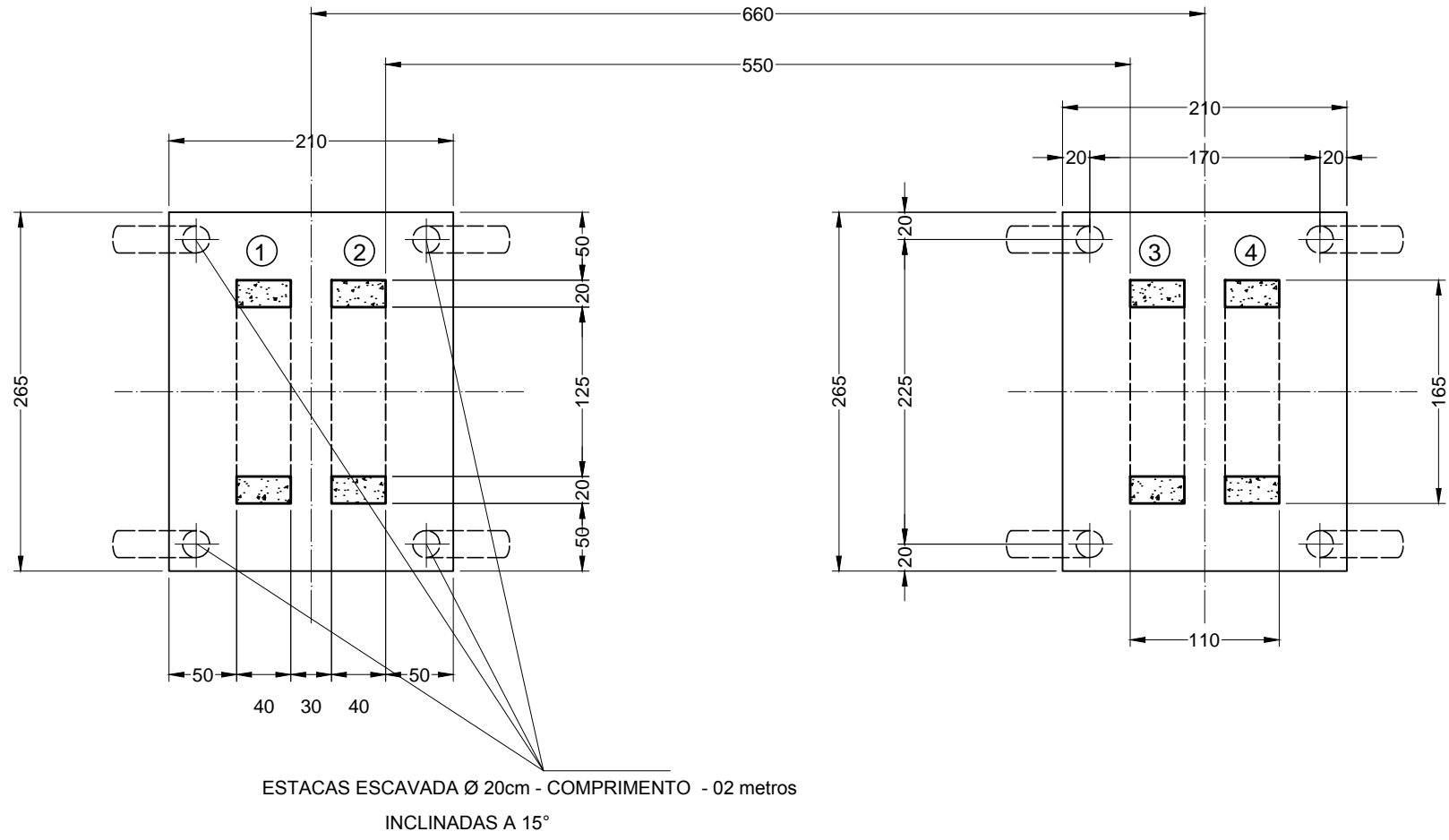
PLANTA SUPERIOR
ESC. 1:50



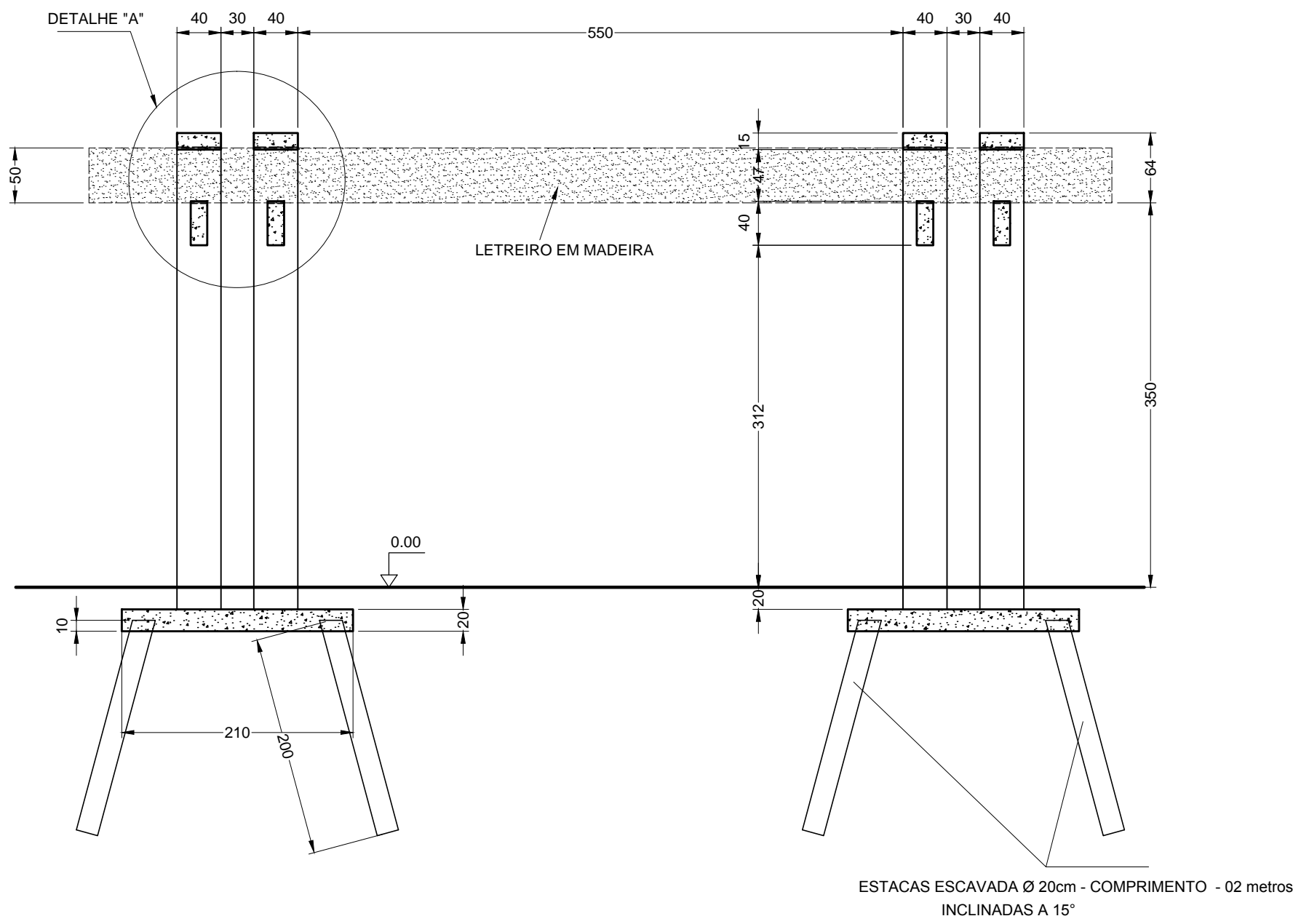
VISTA FRONTAL DO PORTAL
ESC. 1:50



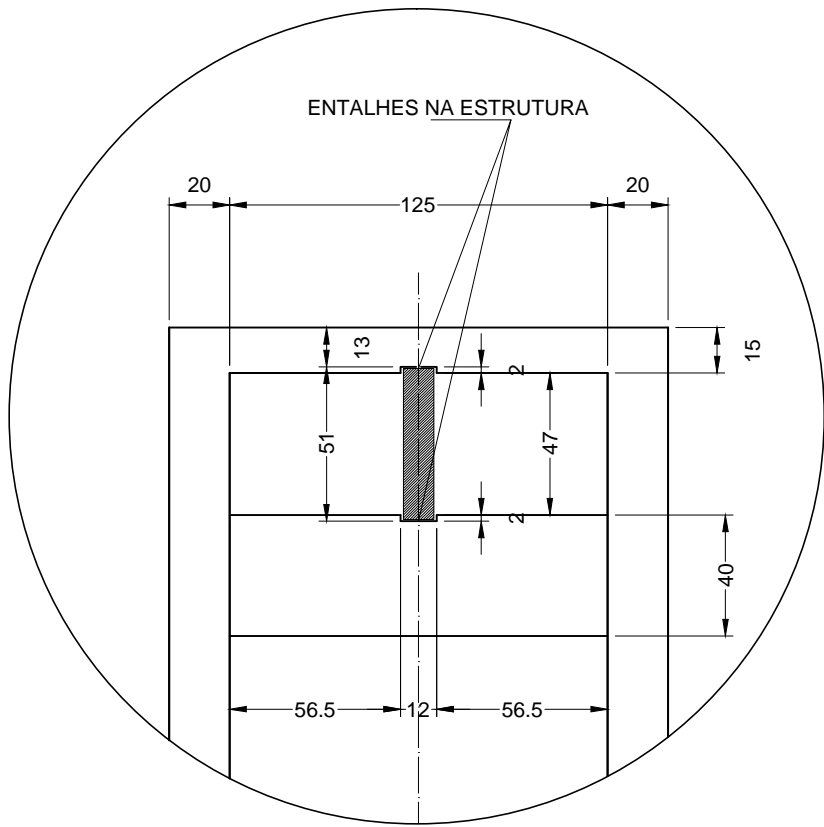
PLANTA DA FUNDAÇÃO
ESC. 1:50



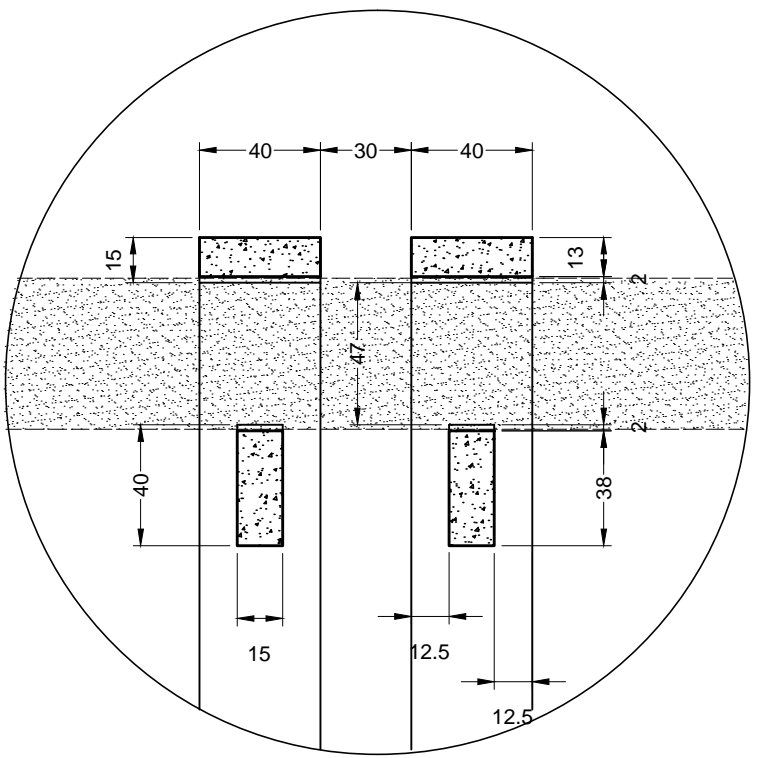
SEÇÃO LONGITUDINAL
ESC. 1:50



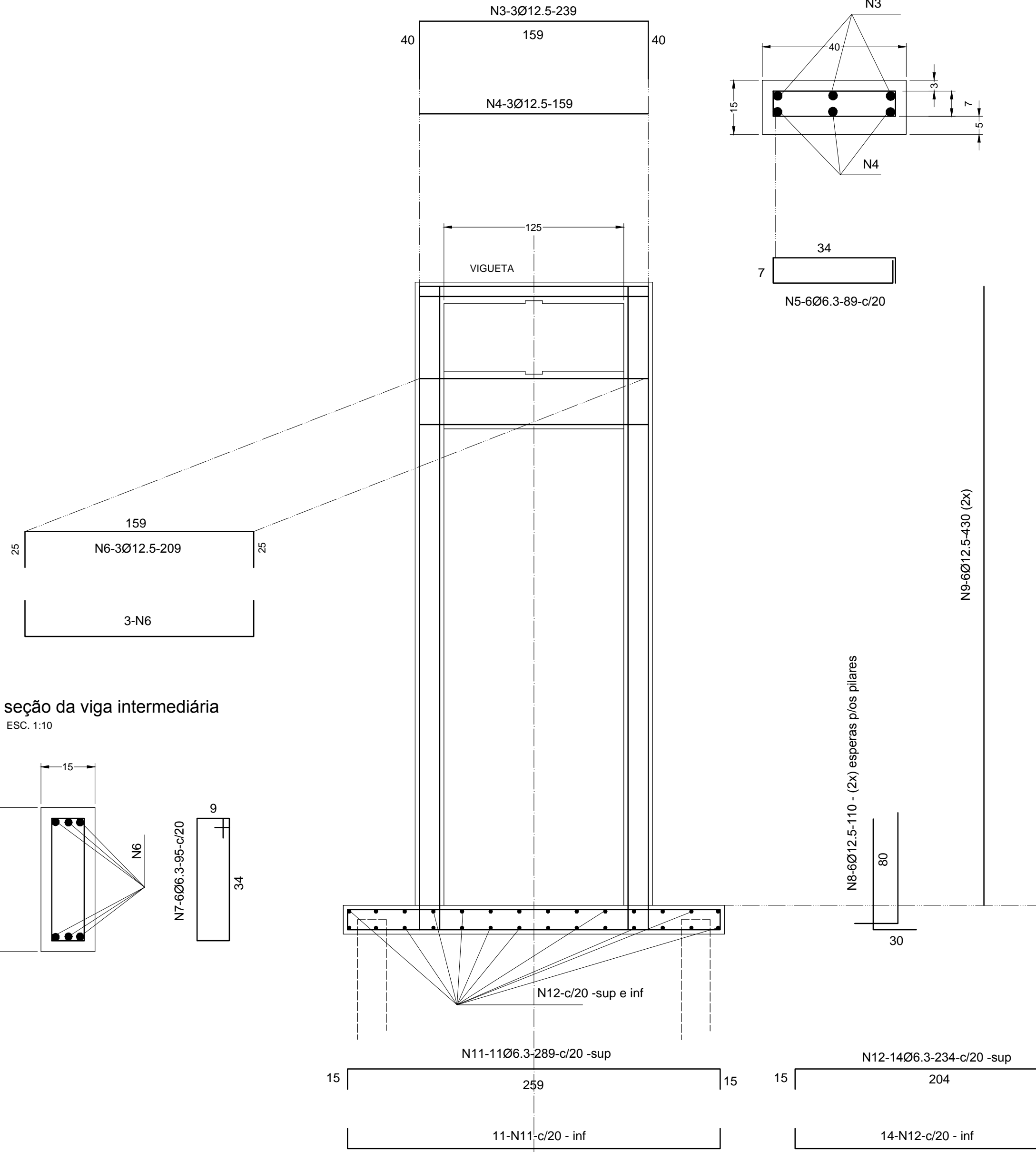
DETALHE "B"
ESC. 1:25



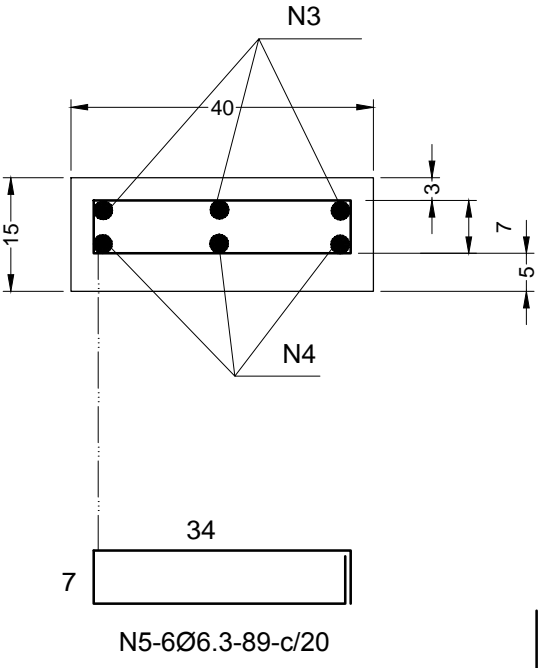
DETALHE "A"
ESC. 1:25



ARMADURAS DO PORTAL (4x)
ESC. 1:25



seção da vigaeta
ESC. 1:10



seção do pilar
ESC. 1:10

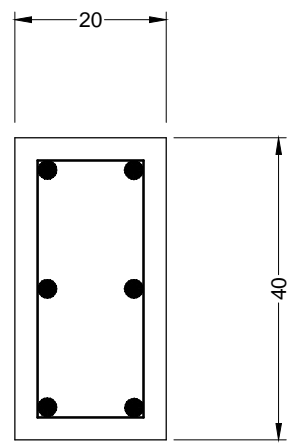
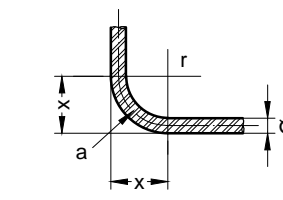


TABELA DAS ARMADURAS				
Nº	Ø	QUANT.	COMPRIMENTOS	
			UNITÁRIO (cm)	TOTAL (m)
1	12.5	32	235	75.20
2	6.3	64	60	38.40
3	12.5	12	239	28.68
4	12.5	12	159	19.08
5	6.3	24	89	21.36
6	12.5	24	209	50.16
7	6.3	24	95	22.80
8	12.5	48	110	52.80
9	12.5	48	430	206.40
10	6.3	168	110	184.80
11	6.3	44	289	127.16
12	6.3	56	234	131.04

RESUMO AÇOS CA-50			
Ø	COMPRIMENTO (m)	PESO(kg/m)	PESO PARCIAL
6.3	525.66	0.245	128.76
12.5	432.32	0.963	416.32
PESO TOTAL (kgf) =			545.08

CURVATURA DO AÇO CA - 50			
			
Ø	r (mm)	x (cm)	a (cm)
12.5	31.5	4.4	6

RESUMO DE MATERIAL		
Material	Un.	Quant.
Escavação	m³	5.90
Lastro de Concreto Magro	m²	11.13
Área de Formas	m²	35.27
Concreto Estrutural	m³	5.60

NOTAS GERAIS

- MEDIDAS EM CENTÍMETROS
- VERIFICAR MEDIDAS NA OBRA
- COBRIMENTO DOS FERROS = 3cm (exeto onde indicado)

CONCRETO: Fck = 35 MPa



INSTITUTO DAS ÁGUAS DO PARANÁ

PROJETO
NESTOR COSTIN - ENGENHARIA E FOTOGRAMETRIA
RESPONSÁVEL TÉCNICO
ENL: CIVIL NESTOR COSTIN ORLA PR 44884-0
DATA : 22/11/2019

PROGRAMA PARQUES URBANOS

PORTAL 3

PROJETO
DE ENGENHARIA

PLANTAS - VISTA - CORTES - ARMADURAS

FOLHA
Única