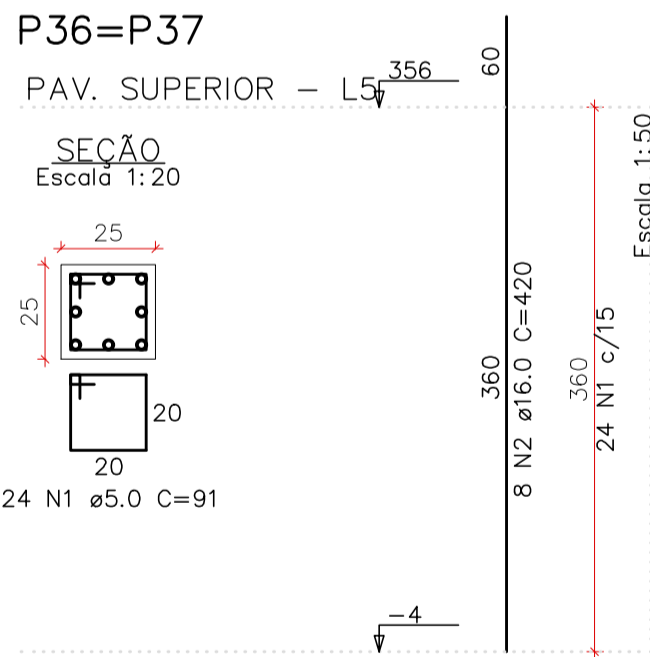
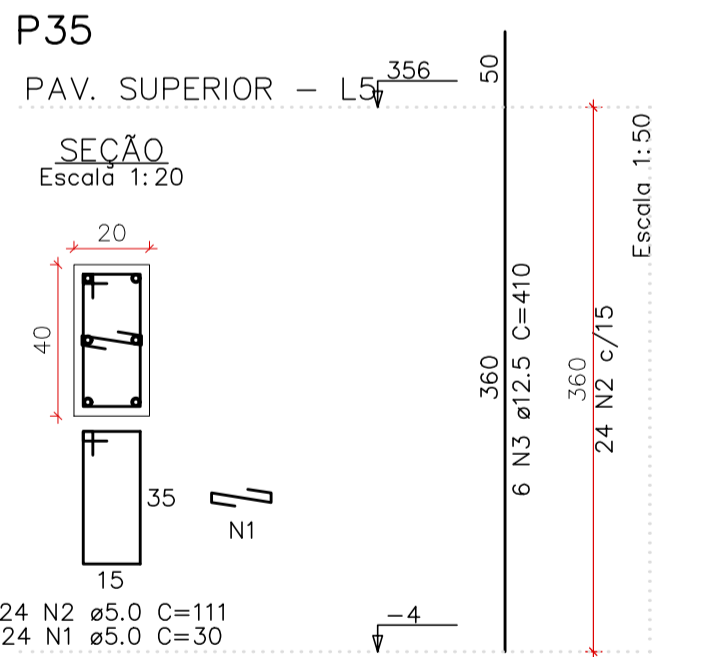
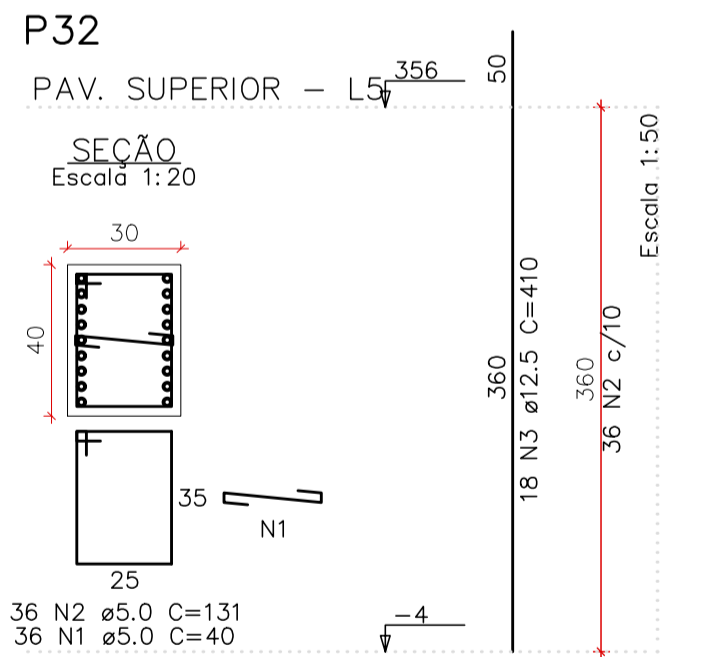
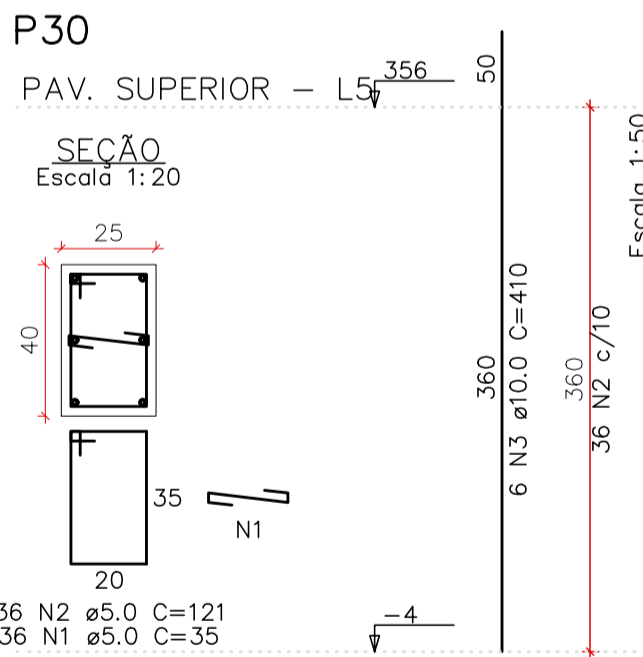
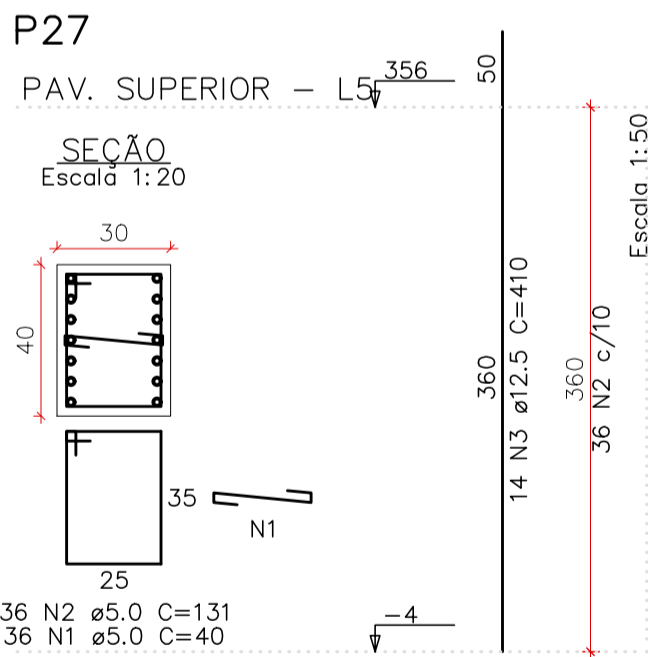
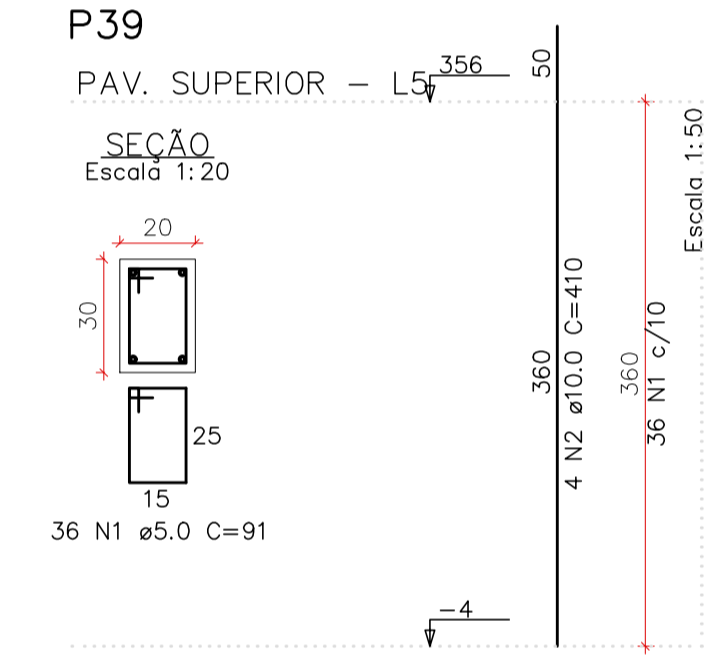
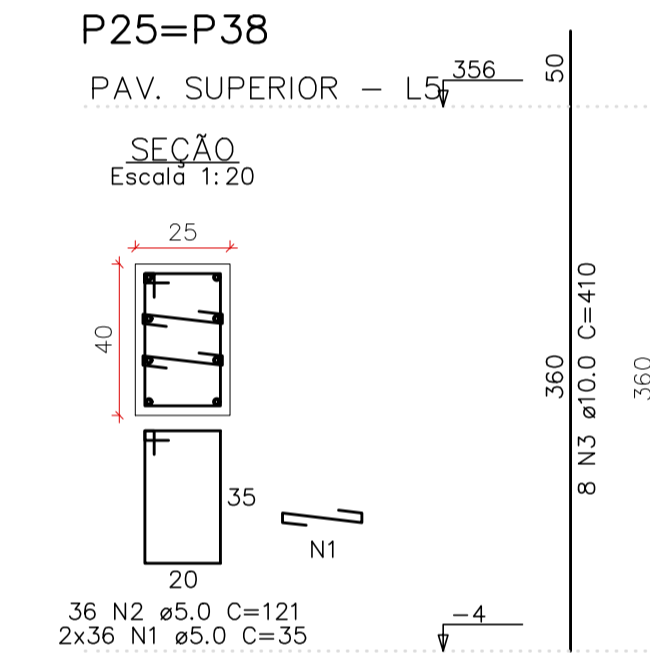
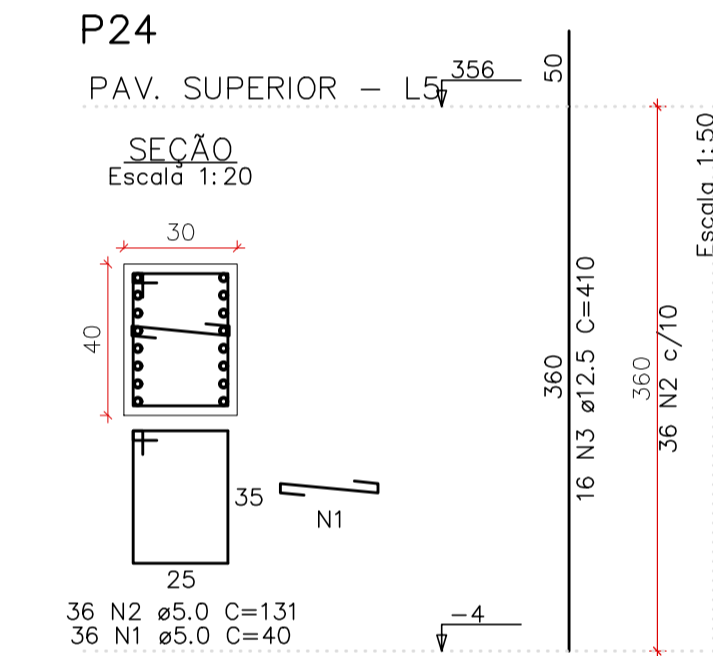
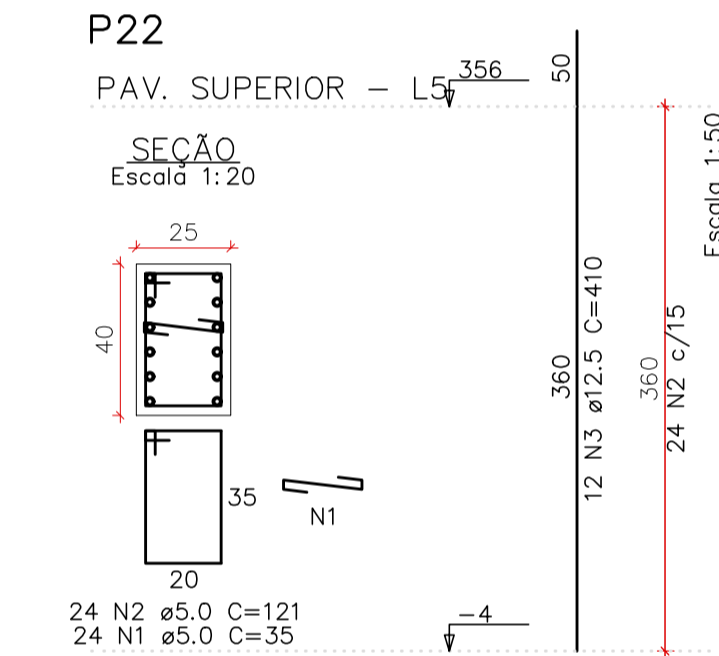
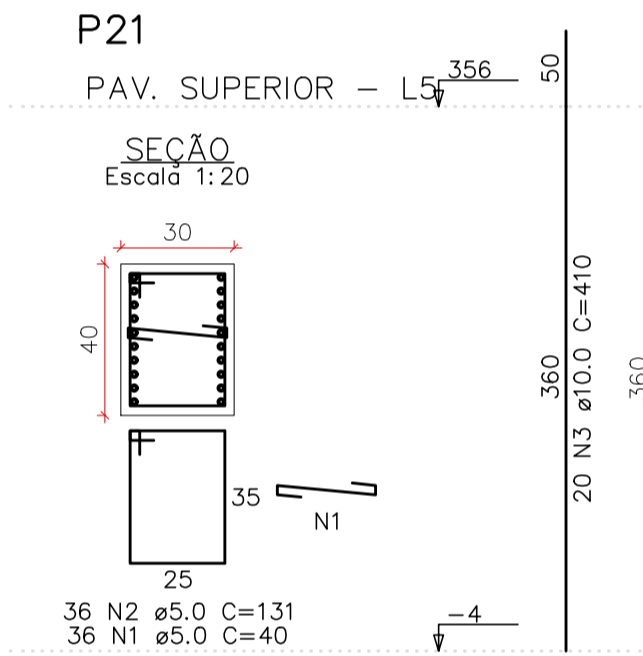
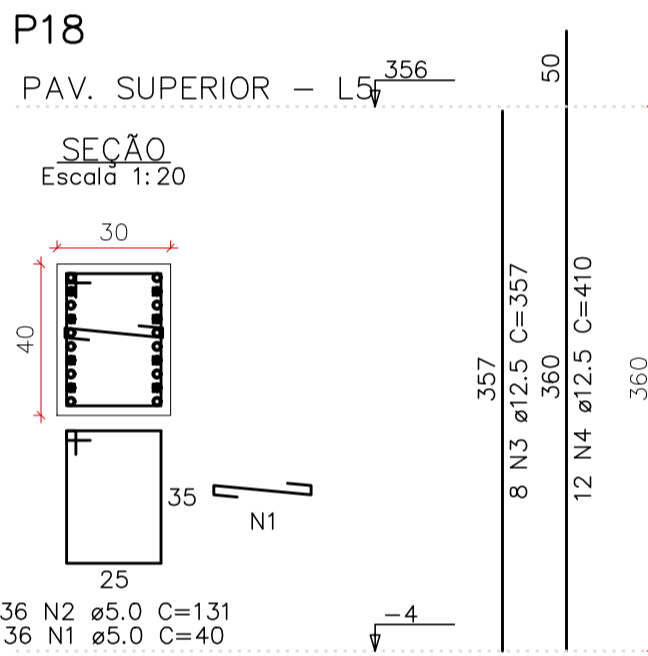
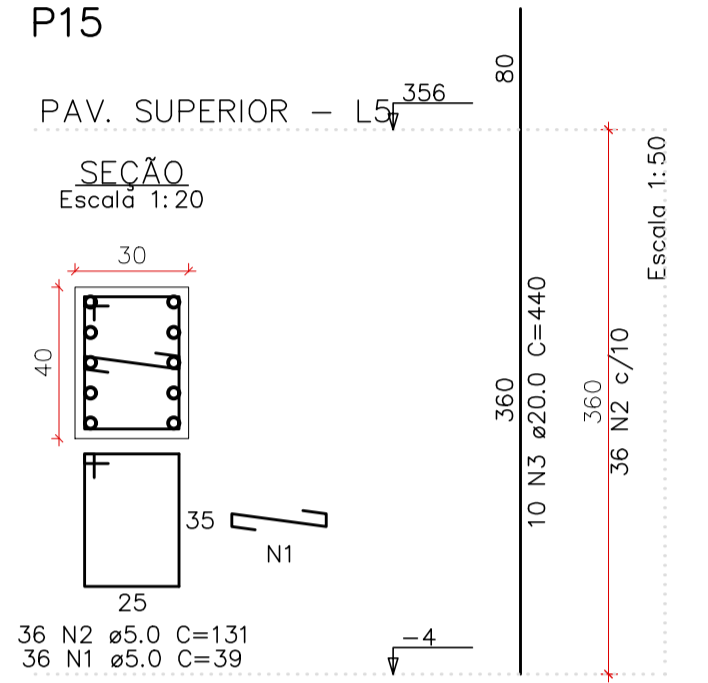
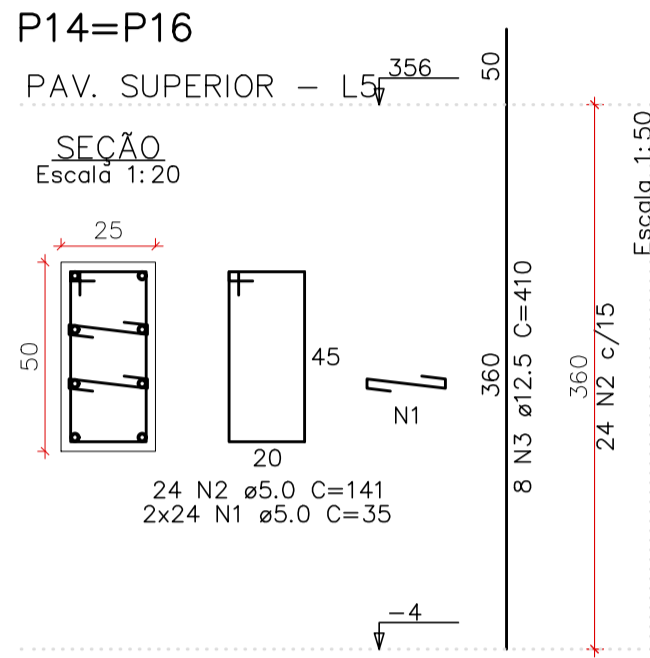
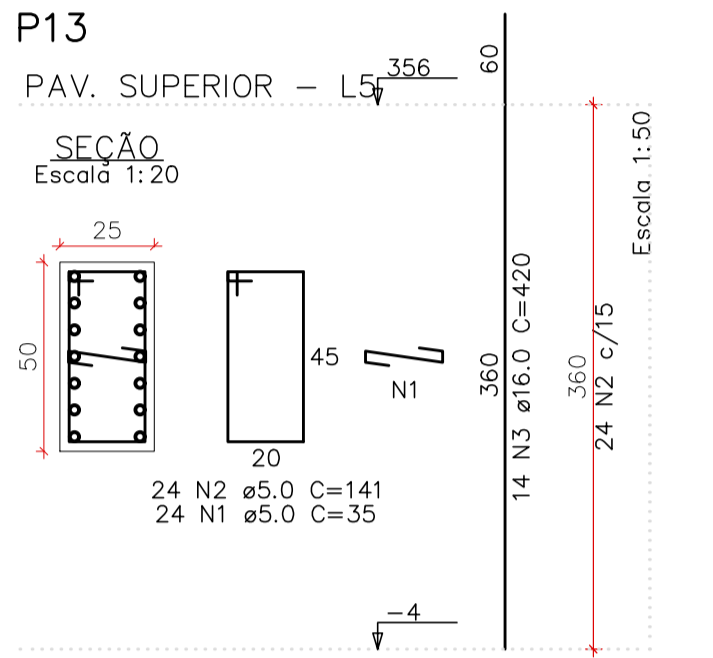
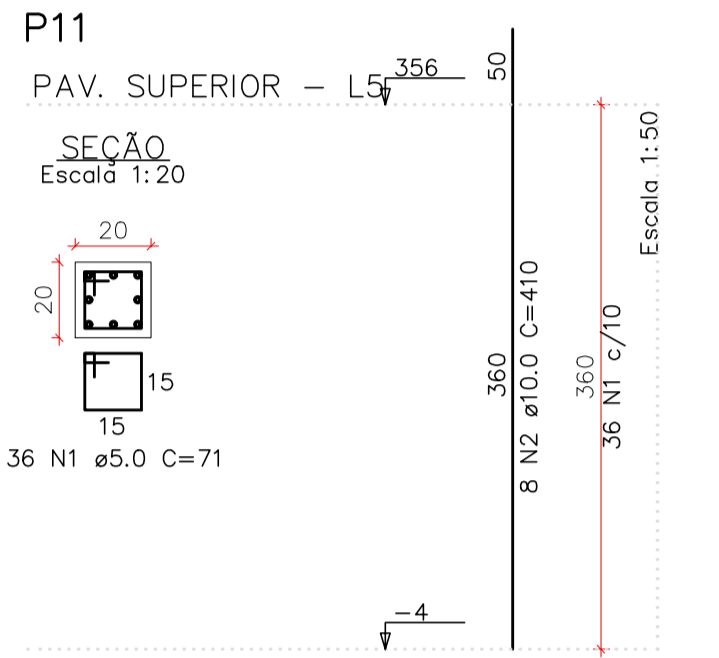
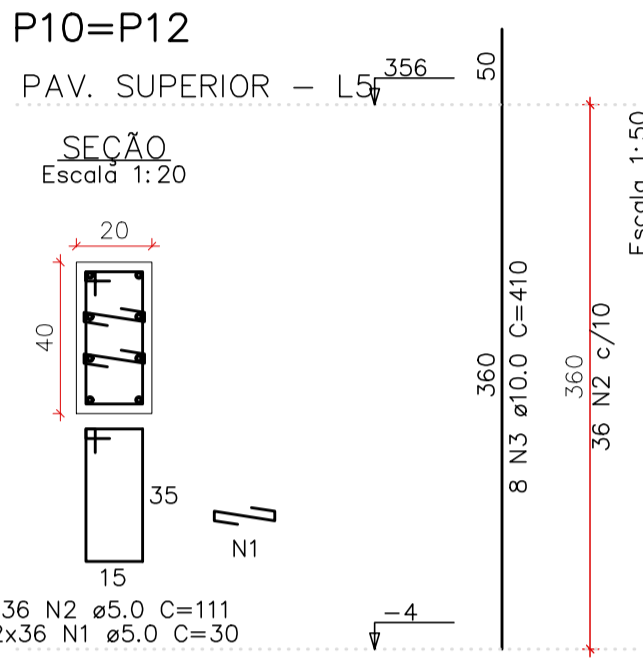
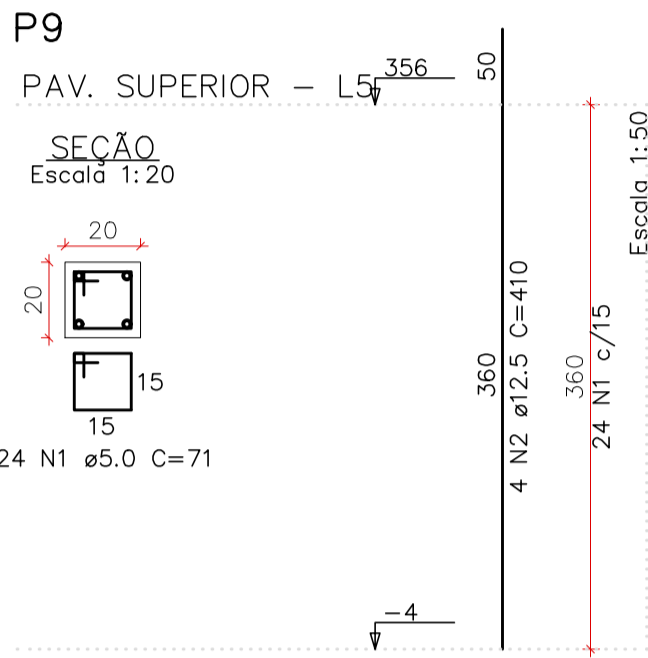
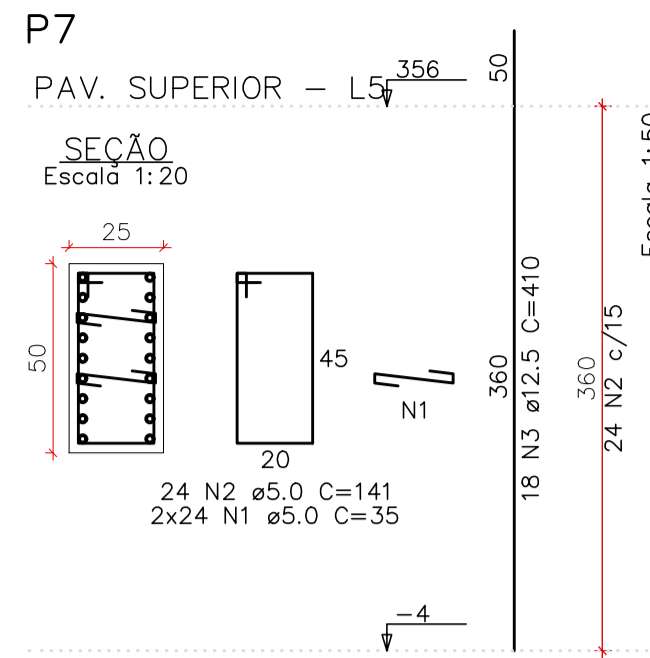
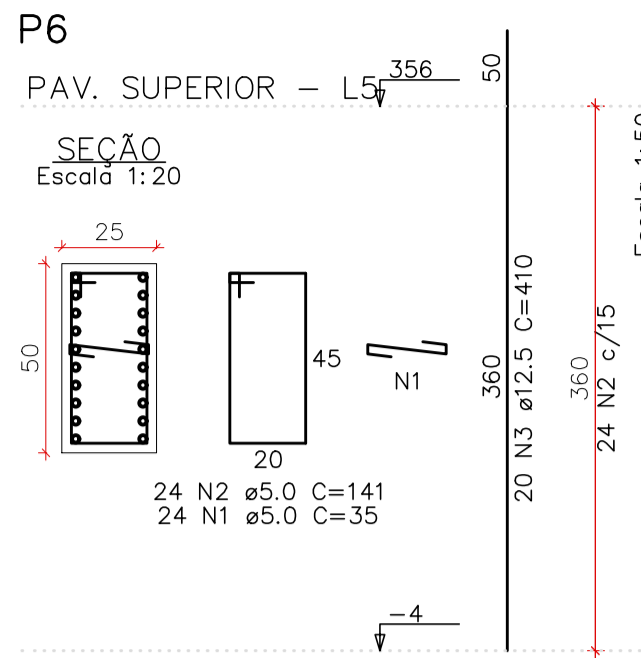
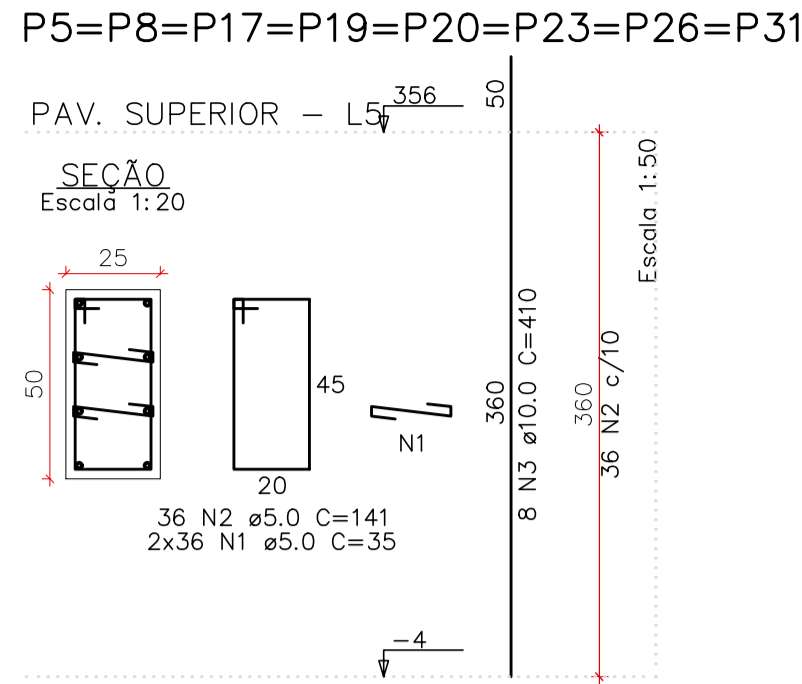
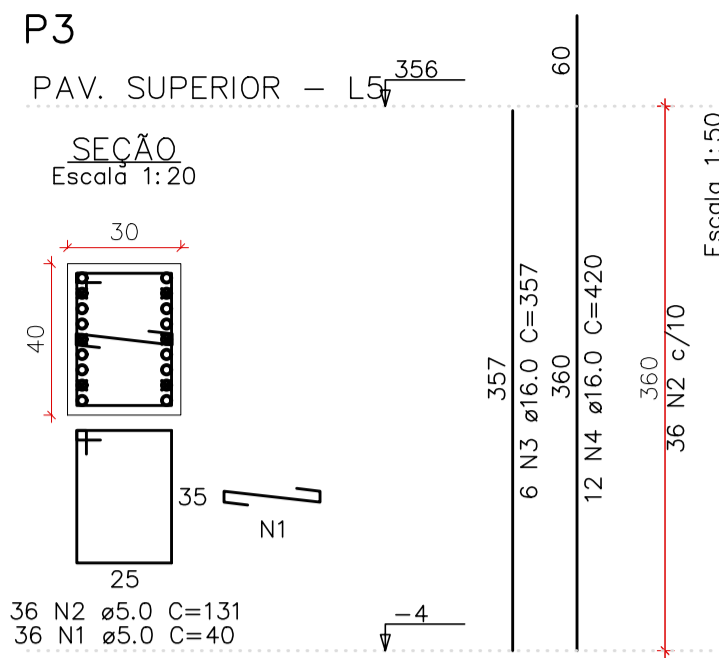
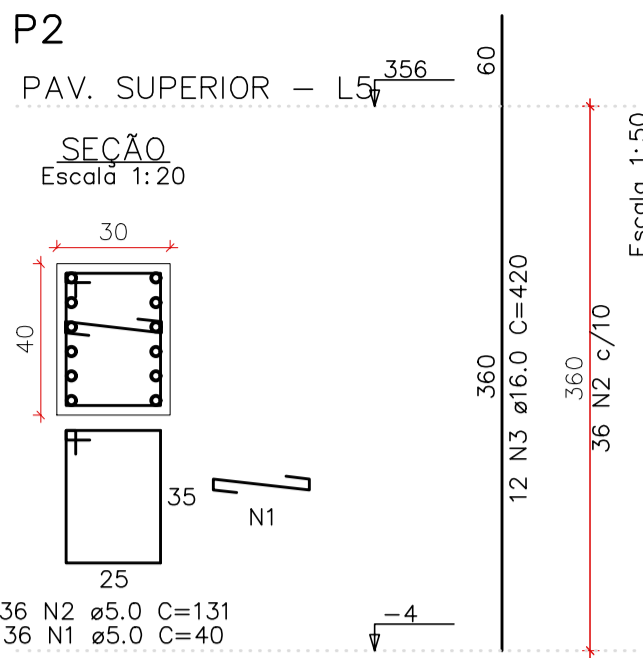
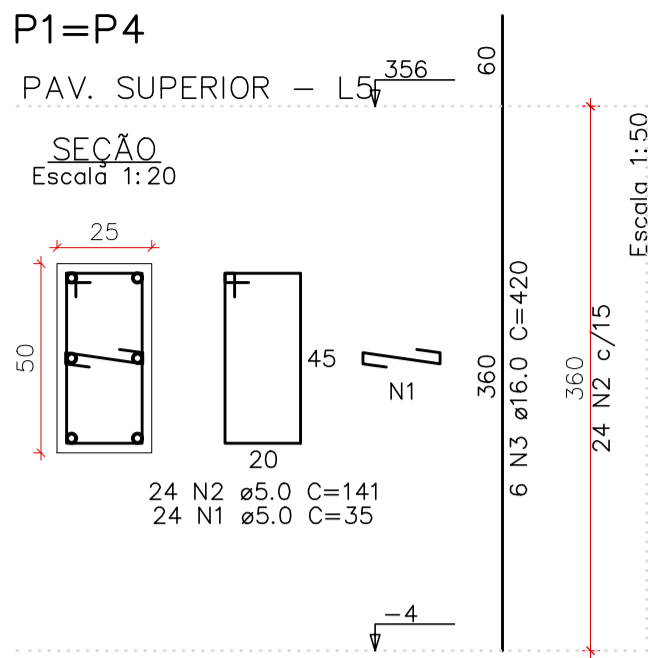


CONSTRUÇÃO DO HUB DE EMPREENDEDORISMO DE POUSO ALEGRE
ESCALA INDICADA



RELAÇÃO DO AÇO

ELEMENTO	AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
2xP1	CA50	1	5,0	48	35	1680
	CA60	2	5,0	48	141	6768
	CA50	3	16,0	12	420	5040
P2	CA50	1	5,0	36	40	1440
	CA60	2	5,0	36	131	4716
	CA50	3	16,0	12	420	5040
P3	CA50	1	5,0	36	40	1440
	CA60	2	5,0	36	131	4716
	CA50	3	16,0	12	420	5040
8xP5	CA50	4	16,0	12	420	5040
	CA60	1	5,0	576	35	20160
	CA60	2	5,0	288	141	40608
P6	CA50	3	10,0	64	410	26240
	CA60	1	5,0	24	35	840
	CA50	3	12,5	20	410	8200
P7	CA60	1	5,0	48	35	1680
	CA60	2	5,0	24	141	3384
	CA50	3	12,5	18	410	7380
P9	CA60	1	5,0	24	71	1704
	CA50	2	12,5	4	410	1640
	CA60	1	5,0	144	30	4320
2xP10	CA60	2	5,0	72	111	7992
	CA50	3	10,0	16	410	6560
	CA60	1	5,0	36	71	2556
P11	CA50	2	10,0	8	410	3280
	CA60	1	5,0	24	35	840
	CA60	2	5,0	24	141	3384
2xP14	CA50	3	16,0	14	420	5880
	CA60	1	5,0	96	35	3360
	CA60	2	5,0	48	141	6768
P15	CA50	3	12,5	16	410	6560
	CA60	1	5,0	36	39	1404
	CA50	2	5,0	36	131	4716
P18	CA50	3	20,0	10	440	4400
	CA60	1	5,0	36	40	1440
	CA60	2	5,0	36	131	4716
P21	CA50	3	12,5	8	357	2856
	CA60	4	12,5	12	410	4920
	CA60	1	5,0	36	40	1440
P22	CA60	1	5,0	36	131	4716
	CA60	2	5,0	24	35	840
	CA50	3	12,5	12	410	4920
P24	CA60	1	5,0	36	40	1440
	CA60	2	5,0	36	131	4716
	CA50	3	12,5	16	410	6560
2xP25	CA60	1	5,0	144	35	5040
	CA50	3	12,5	16	410	6560
	CA60	2	5,0	72	121	8712
P27	CA50	3	10,0	16	410	6560
	CA60	1	5,0	36	40	1440
	CA60	2	5,0	36	131	4716
P30	CA50	3	12,5	14	410	5740
	CA60	1	5,0	36	35	1260
	CA60	2	5,0	36	121	4356
P32	CA50	3	10,0	6	410	2460
	CA60	1	5,0	36	40	1440
	CA60	2	5,0	36	131	4716
P35	CA50	3	12,5	18	410	7380
	CA60	1	5,0	24	30	720
	CA60	2	5,0	24	111	2664
2xP36	CA50	3	12,5	6	410	2460
	CA60	1	5,0	48	91	4368
	CA50	2	16,0	16	420	6720
P39	CA60	1	5,0	36	91	3276
	CA50	2	10,0	4	410	1640

RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 10% (Barras)	PESO + 10% (kg)
CA50	10,0	549,4	51	372,6
	12,5	586,2	54	621,1
	16,0	298,6	28	518,5
	20,0	44	5	119,4
CA60	5,0	1927,8	177	326,9
PESO TOTAL (kg)				
CA50		1631,6		
CA60		326,9		
Volume de concreto (C=30) = 13,46 m³				
Área de forma = 169,56 m²				

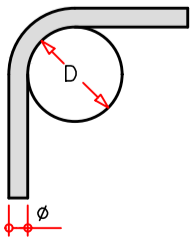
DETALHE DE DOBRAS
SEM ESCALA

DIÂMETRO MÍNIMO DOS PINOS DE DOBRAMENTO DAS BARRAS:

ESTRIBOS	Ø (mm)	D (mm)
	5,0	15,0
	6,3	18,9
	8,0	24,0
	10,0	30,0
	12,5	62,5
	16,0	80,0
	>= 20,0	8xø

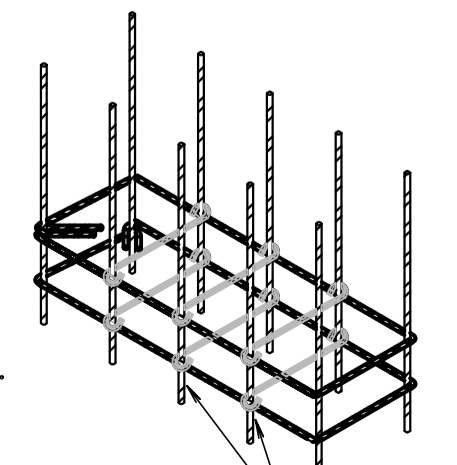
BARRAS DE TRAÇÃO	Ø (mm)	D (mm)
	5,0	30,0
	6,3	31,5
	8,0	40,0
	10,0	50,0
	12,5	62,5
	16,0	80,0
	>= 20,0	8xø

GANCHO DOS ESTRIBOS:



NOTA: gancho em ângulo de 45°

POSICIONAMENTO DOS GANCHOS
SEM ESCALA

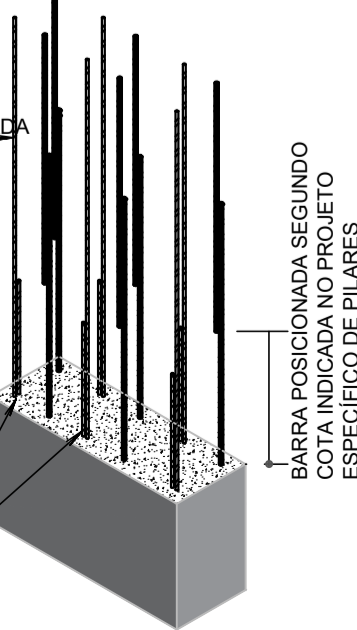


GANCHOS "ABRACAM" APENAS A ARMADURA LONGITUDINAL DO PILAR, SEM ENVOLVER O ESTRIBO.

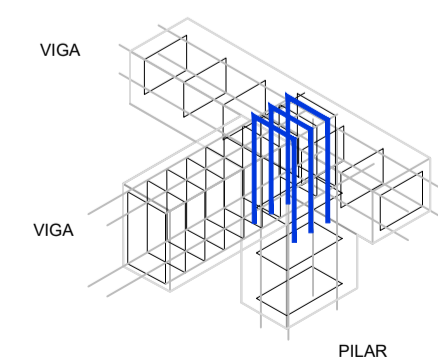
MONTAGEM DE ARMADURAS ALTERNADAS NOS PILARES
SEM ESCALA

INÍCIO DA BARRA A SER POSICIONADA NO FIM DA ÚLTIMA CONCRETAGEM

INTERCALAR EMENDAS ENTRE FACES, EM PILARES COM EMENDAS ALTERNADAS



GRAMPOS DE ANCORAGEM
SEM ESCALA



IMPORTANTE: OS GRAMPOS VERTICAIS DEVEM AMARRAR OS FERROS PRINCIPAIS DOS PILARES COM OS FERROS HORIZONTAIS DAS VIGAS. A QUANTIDADE DE GRAMPOS DEVE SER VERIFICADA NO DETALHAMENTO DO ÚLTIMO LANCE DO PILAR.

LEGENDA DAS BARRAS DOS PILARES

- BARRA QUE NASCE
- BARRA QUE MORRE
- BARRA QUE PASSA



Prefeitura Municipal
de Pouso Alegre

PROJETO



Rua Miguel Vianna, nº 81, 2º Andar
Bairro Morro Chic
CEP: 37500-080 - Itajubá / MG
Tel: (35) 3623-8846
www.dacengenharia.com.br

COORDENAÇÃO

ALOISIO CAETANO FERREIRA

RESPONSÁVEL TÉCNICO E AUTOR

ENG. CIVIL FLÁVIA BARBOSA

CREA: MG-187.842/D

EMPREENHAMENTO

HUB DE EMPREENDEDORISMO DE POUSO ALEGRE

ENDEREÇO

RUA GERALDO COUTINHO DE SOUZA, JARDIM VERGANI
POUSO ALEGRE - MINAS GERAIS

ASSUNTO

PROJETO ESTRUTURAL EM CONCRETO ARMADO
DETALHAMENTO DOS PILARES DO PAV. SUPERIOR
LISTA DE MATERIAIS

DISCIPLINA

ESTRUTURAL

FASE DO PROJETO

EXECUTIVO

FOLHA Nº

17/49

DATA INICIAL

30/05/2023

ESCALA

INDICADA

REVISÃO

R01

ARQUIVO

DAC-PMPA-HUB-PE-EST-R01.dwg