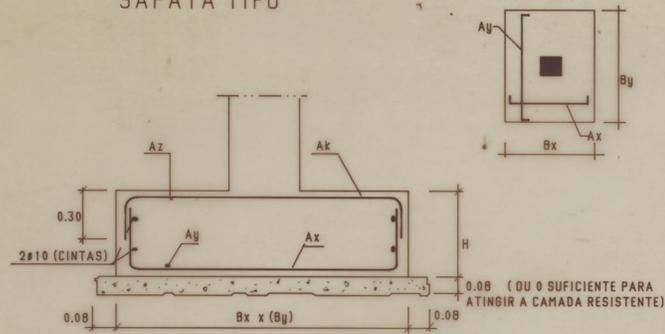
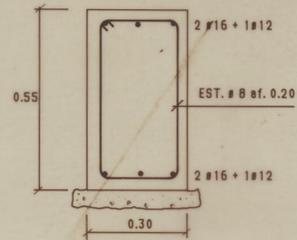


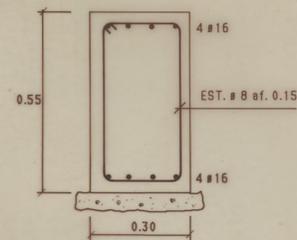
SAPATA TIPO



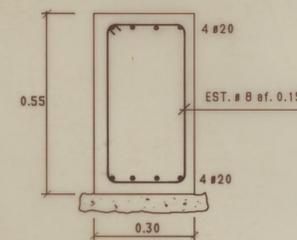
LINTEL LT1



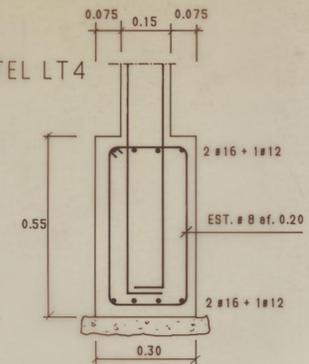
LINTEL LT2



LINTEL LT3



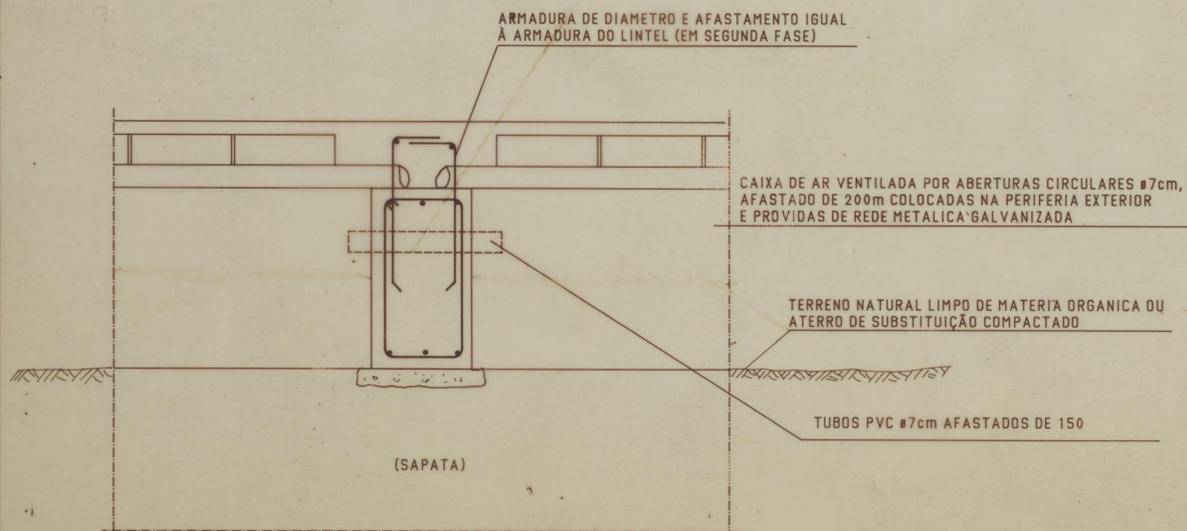
LINTEL LT4



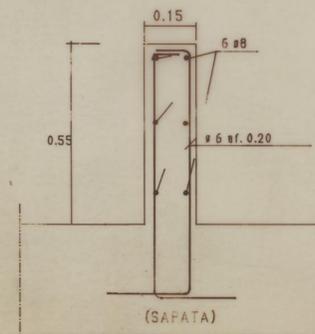
QUADRO DE SAPATAS

	DIMENSÕES SAPATAS (m)			ARMADURAS			
	B_x	B_y	H	A_z	A_k	A_x	A_y
S1	1.90	1.90	0.55	$\#10 \text{ ef. } 0.20$	$\#10 \text{ ef. } 0.20$	$10 \# 12$	$10 \# 12$
S2	1.80	1.80	0.50	$\#10 \text{ ef. } 0.20$	$\#10 \text{ ef. } 0.20$	$10 \# 12$	$10 \# 12$
S3	1.60	1.60	0.45	$\#8 \text{ ef. } 0.20$	$\#8 \text{ ef. } 0.20$	$9 \# 12$	$9 \# 12$
S4	1.30	1.30	0.40	$\#8 \text{ ef. } 0.20$	$\#8 \text{ ef. } 0.20$	$7 \# 12$	$7 \# 12$
S5	2.10	3.70	0.80	$15 \# 12$	$\#10 \text{ ef. } 0.20$	$21 \# 12$	$15 \# 12$
S6	2.40	2.60	0.80	$\#10 \text{ ef. } 0.20$	$15 \# 12$	$15 \# 12$	$14 \# 12$
S7	1.20	1.70	0.50	$\#10 \text{ ef. } 0.20$	$10 \# 12$	$9 \# 12$	$7 \# 12$

LIGACÃO DA LAJE AO LINTEL

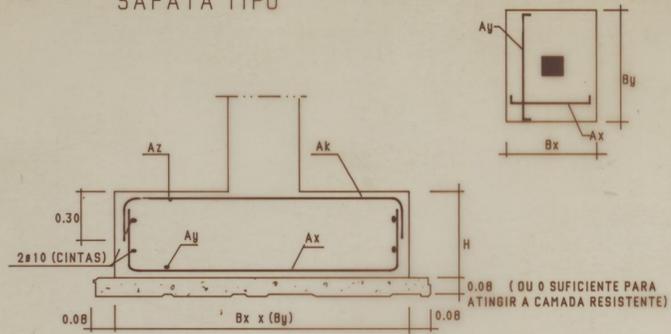


MURETE Mr1

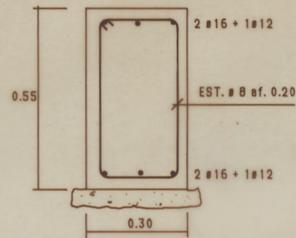


processo	1/92	CMP GRUPO DE HABITAÇÕES SOCIAIS RUA DOS CHOUPOS PORTO	DESENHO Nº BL T2 B.A. 005
PROJECTO DE EXECUÇÃO	T2	QUADRO DE SAPATAS LINTEIS E PORMENORES COMUNS	9
col. des.			20 / 10 / 92
PROJECTO DE ESTRUTURAS		GEG- GABINETE DE ESTRUTURAS E GEOTECNIA RUA DE SANTOS POUREADA 1081-1º 4000 PORTO TEL. 481114 - 481115 FAX 481115	1/20
MÁRCIO FREITAS ARQUITECTO		RUA CARLOS MALHEIRO DIAS 326 TEL 481114 - 481115 - 4200 PORTO	

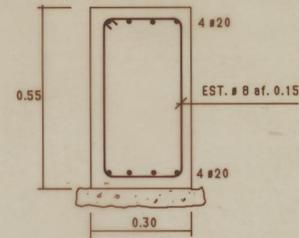
SAPATA TIPO



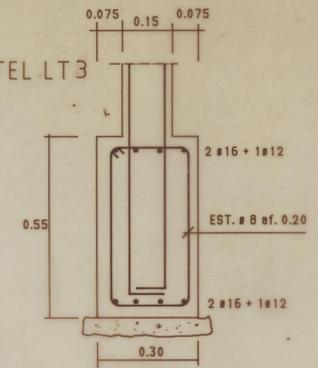
LINTEL LT1



LINTEL LT2



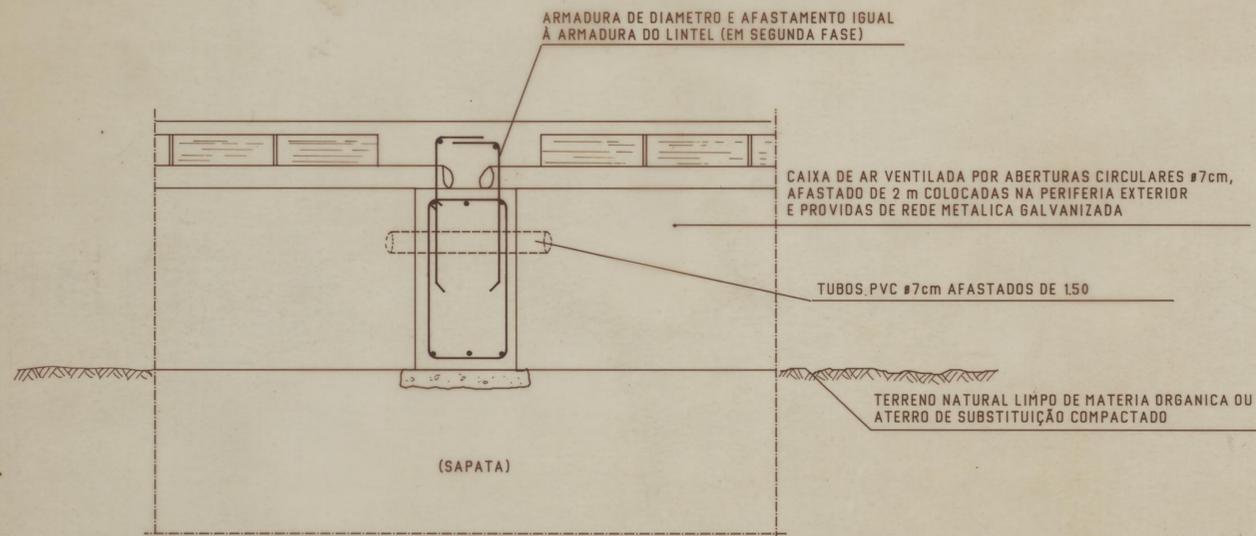
LINTEL LT3



QUADRO DE SAPATAS

	DIMENSÕES SAPATAS (m)			ARMADURAS			
	Bx	By	H	Az	Ak	Ax	Ay
S1	2.65	2.65	0.70	#10 ef 0.20	#10 ef 0.20	20 # 12	20 # 12
S2	2.10	2.10	0.55	#10 ef 0.20	#10 ef 0.20	12 # 12	12 # 12
S3	1.60	1.60	0.45	#8 ef 0.20	#8 ef 0.20	9 # 12	9 # 12
S4	1.60	3.25	0.45	12 # 12	#8 ef 0.20	18 # 12	9 # 12
S5	1.60	2.30	0.45	9 # 10	#8 ef 0.20	13 # 12	9 # 12

LIGAÇÃO DA LAJE AO LINEL



PROCESSO	1/92	CMP GRUPO DE HABITAÇÕES SOCIAIS RUA DOS CHOUPOS PORTO	DESENHO Nº BL T3 B.A. 005
PROJECTO DE EXECUÇÃO	T3	QUADRO DE SAPATAS LINTEIS E FORMENORES COMUNS	10
col.			20 / 10 / 92
des.			
PROJECTO DE ESTRUTURAS		GEG- GABINETE DE ESTRUTURAS E GEOTECNIA RUA DE SANTOS PÓLADA 109 - 1º - 4000 PORTO TEL. 481114 - 481115 - FAX 481116	1/20
MÁRCIO FREITAS ARQUITECTO		RUA CARLOS MALHEIRO DIAS 326 TEL. 481114 - 481115 - 4200 PORTO	

MAPA DE PILARES					
PISO	C4 ; D4 ; D6 ; C8 ; D8 ; F2 ; F4 ; F6 F10 ; F8	A3 ; A5 ; A9 ; A7	B1 ; E1 ; B11 ; E11	B3 ; C5 ; B9 ; C7	E2 ; E10
3º ANDAR					
2º ANDAR					
1º ANDAR					
R/C					

processo	1/92	CMP GRUPO DE HABITAÇÕES SOCIAIS RUA DOS CHOUPOS PORTO	DESENHO Nº BL T2 B.A. 006
PROJECTO DE EXECUÇÃO	T2	MAPA DE PILARES	11
col.			20 / 10 / 92
des.			1/20
PROJECTO DE ESTRUTURAS	GEG - GABINETE DE ESTRUTURAS E GEOTECNIA RUA DE SANTOS POUSSADA 1061-1º - 4000 PORTO TEL: 351 500361 - 5102955 FAX: 5102956		
MARCIO FREITAS ARQUITECTO	RUA CARLOS MALHEIRO DIAS 326 TEL 481114 - 481115 - 4200 PORTO		

B 25
A 400 NR

CONSULTAR DESENHOS DE ARQUITECTURA

MAPA DE PILARES					
PISO	A3; A5; A7; A9; B1; B11; D1; D11 E1; E11; F4; F6; F8; F11	D3 ; D9	D6	E/F 2 ; E/F 10	B3 ; B9 ; C5 ; C7
3º ANDAR					
2º ANDAR					
1º ANDAR					
R/C					

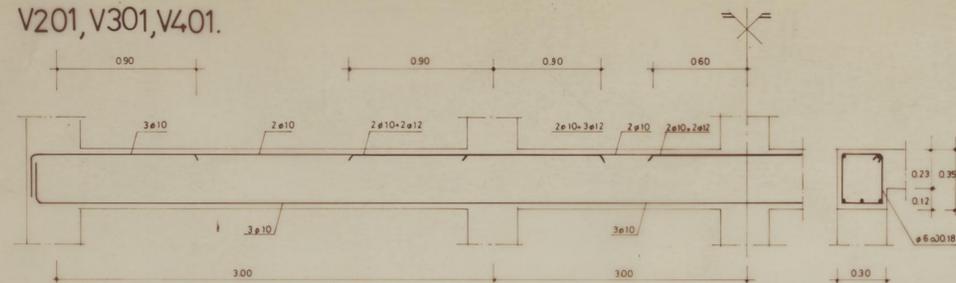
processo	1/92	CMP GRUPO DE HABITAÇÕES SOCIAIS RUA DOS CHOUPOS PORTO	DESENHO Nº BL T3 B.A. 006
PROJECTO DE EXECUÇÃO	T3	MAPA DE PILARES	12
col.			20 / 10 / 92
des.			
PROJECTO DE ESTRUTURAS	GEG GABINETE DE ESTRUTURAS E GEOTECNIA RUA DE SANTOS POUSSADA 1061-11 4000 PORTO TEL. (351) 242031 - 210265 FAX. 210262		1/20
MARCIO FREITAS ARQUITECTO	RUA CARLOS MALHEIRO DIAS 326 TEL 481114 - 481115 - 4200 PORTO		

CONSULTAR DESENHOS DE ARQUITECTURA

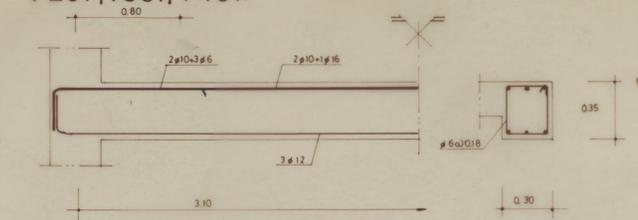
B 25
A 400 NR

24

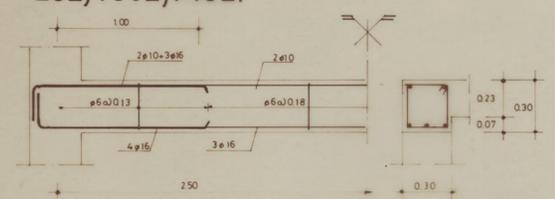
V201, V301, V401.



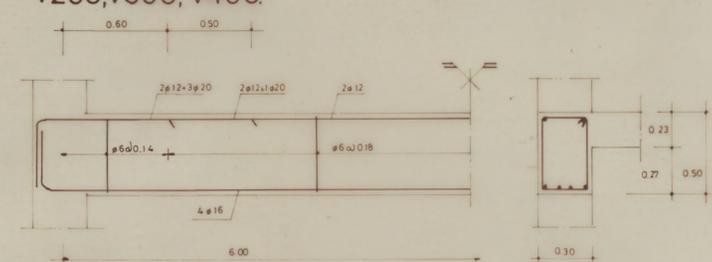
V 207, V307, V407.



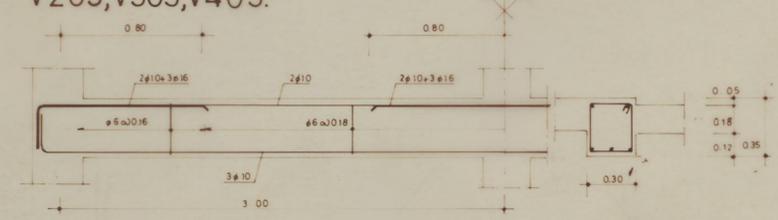
V202, V302, V402.



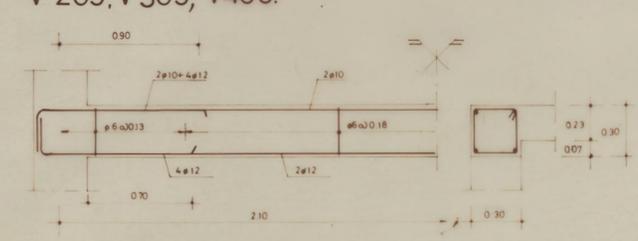
V208, V308, V408.



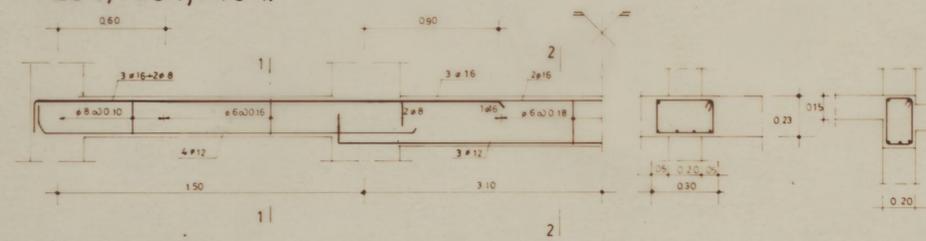
V203, V303, V403.



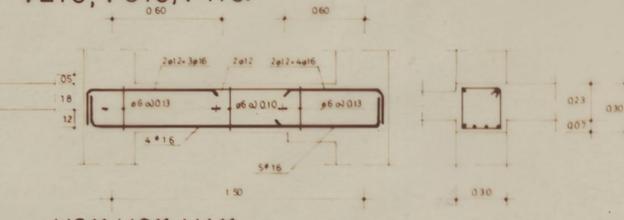
V 209, V 309, V409.



V 204, V304, V404.



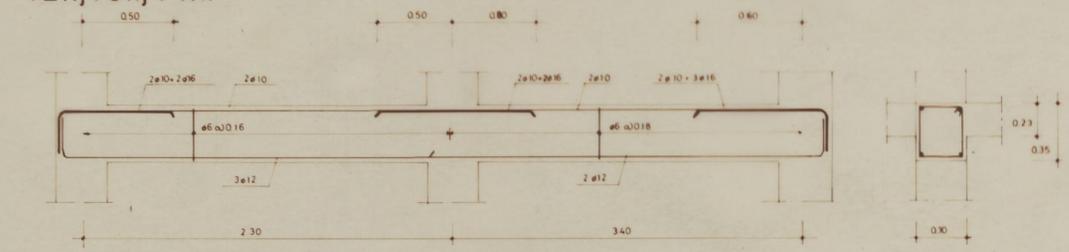
V210, V 310, V410.



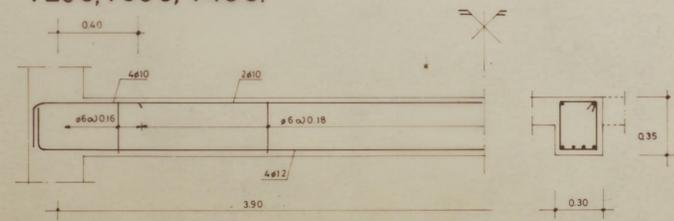
V205, V305, V405.



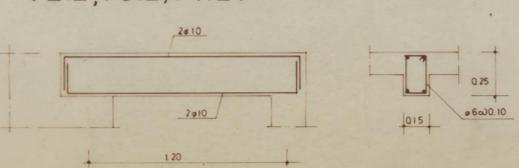
V211, V311, V411.



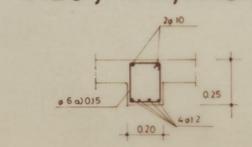
V206, V306, V406.



V212, V312, V412.



R201, R301, R401, R501

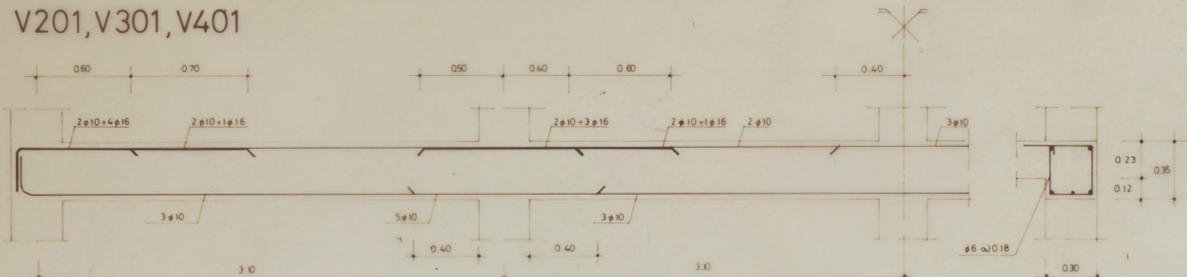


CONSULTAR DESENHOS DE ARQUITECTURA

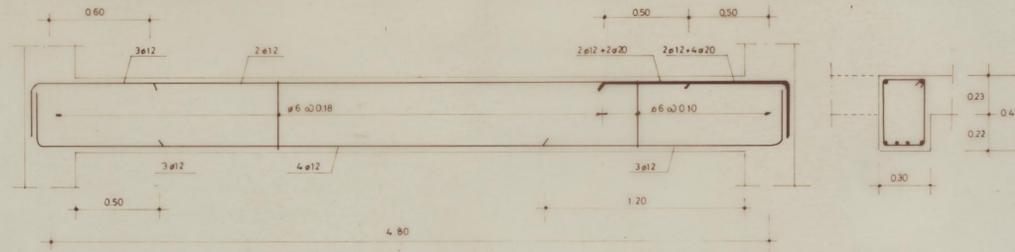
B 25
A 400 NR

PROCESSO 1/92	CMP GRUPO DE HABITAÇÕES SOCIAIS RUA DOS CHOUPOS PORTO	DESENHO Nº BL T2 B.A. 007
PROJECTO DE EXECUÇÃO	T2 VIGAS V200, V300 E V400 REFORÇOS R200, R300, R400	13
col. des.		20 / 10 / 92
PROJECTO DE ESTRUTURAS	GEQ GABINETE DE ESTRUTURAS E GEOTECNIA RUA DE SANTOS POSEADA 1081-11 4000 PORTO TEL. (351) 550301 - 510255 FAX 510250	1/20
MARCIO FREITAS ARQUITECTO	RUA CARLOS MALHEIRO DIAS 326 TEL 481114 - 481115 - 4200 PORTO	

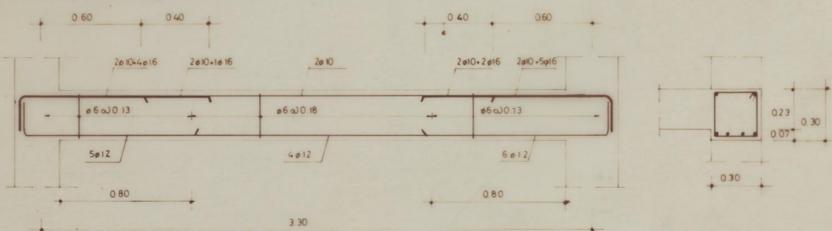
V201, V301, V401



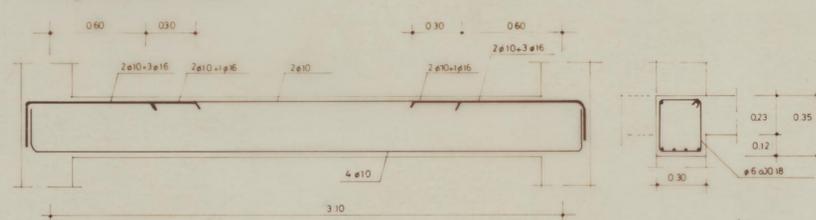
V205, V305, V405



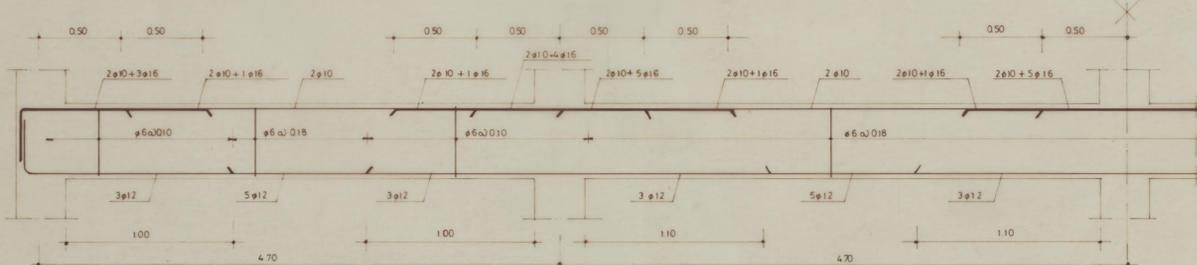
V202, V302, V402



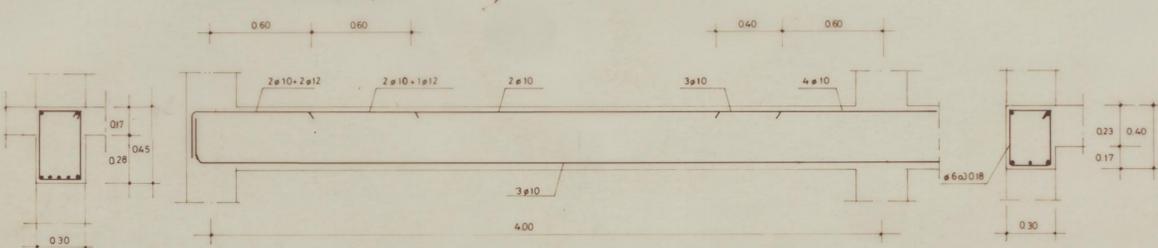
V206, V306, V406



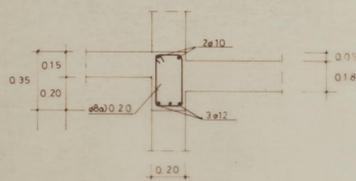
V203, V303, V403



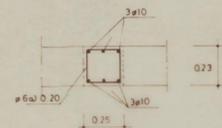
V207, V307, V407



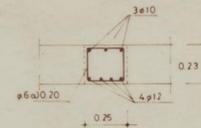
V204, V304, V404



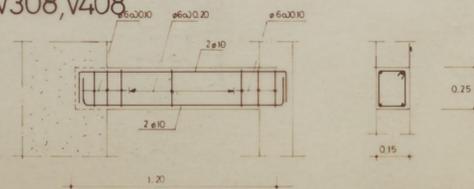
R201, R301, R401, R501



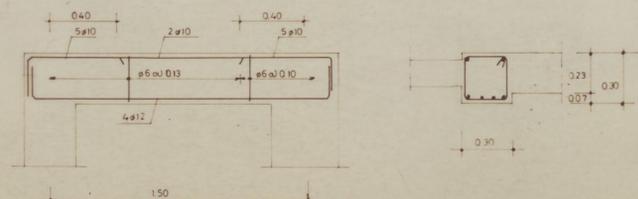
R202, R302, R402, R502



V208, V308, V408



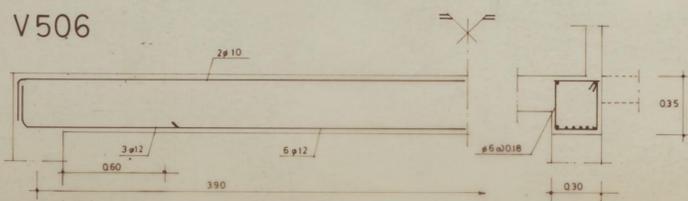
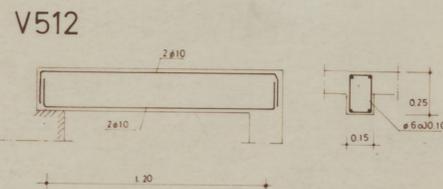
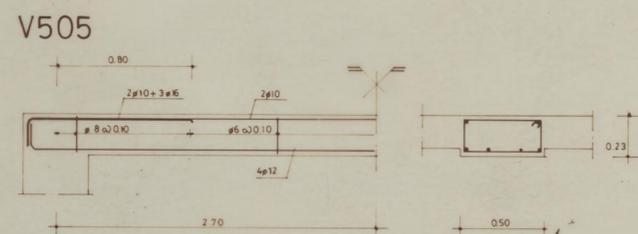
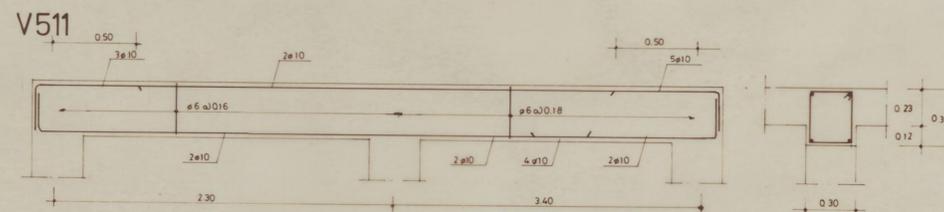
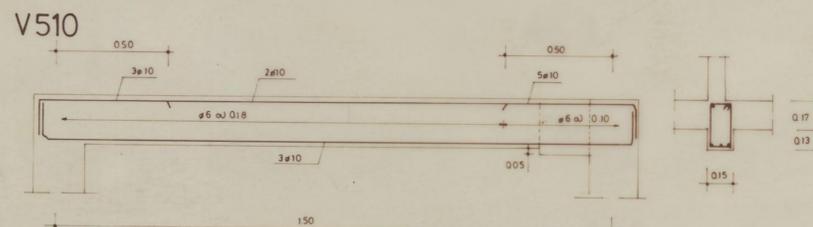
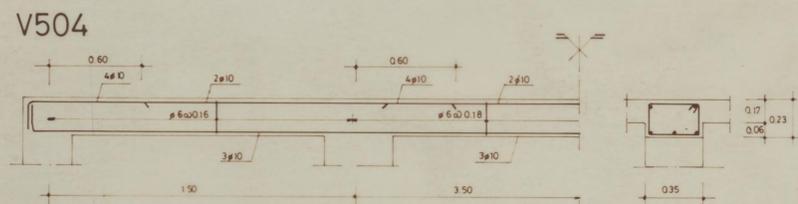
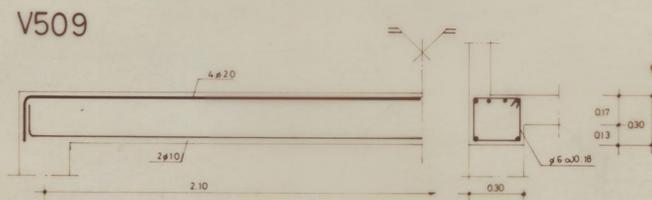
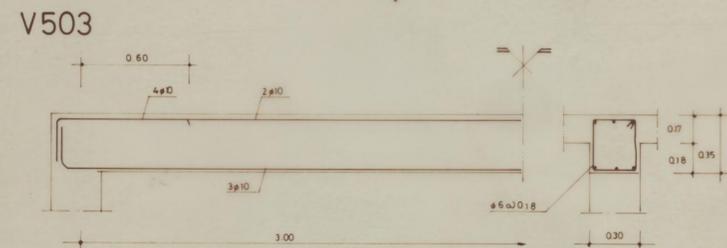
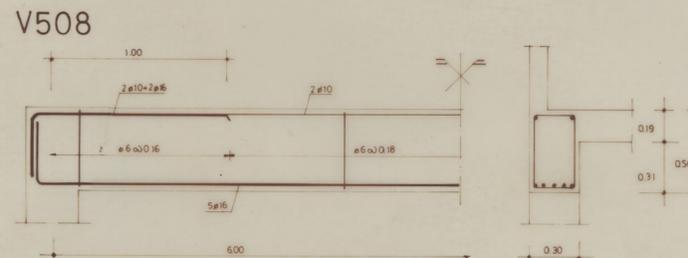
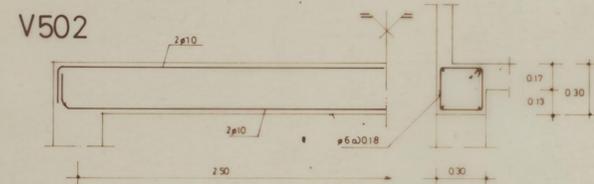
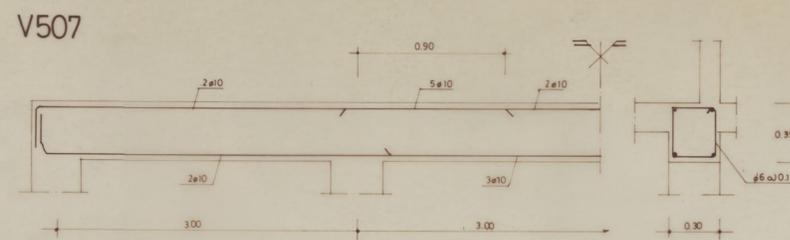
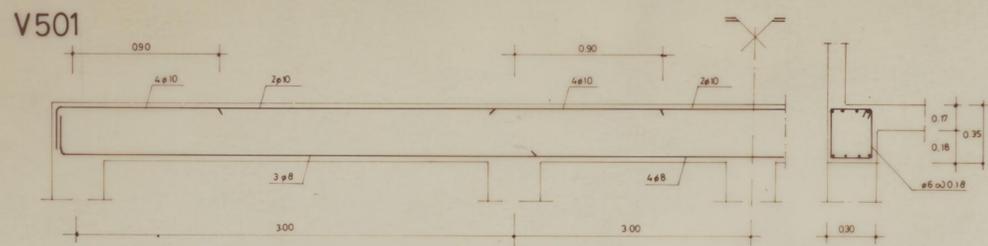
V209, V309, V409



CONSULTAR DESENHOS DE ARQUITECTURA

B 25
A 400 NR

processo 1/92	CMP GRUPO DE HABITAÇÕES SOCIAIS RUA DOS CHOUPOS PORTO	DESENHO Nº BL T3 B.A. 007
PROJECTO DE EXECUÇÃO	T3 VIGAS V200, V300 E V400 REFORÇOS R200, R300, R400	14
col. des.		20 / 10 / 92
PROJECTO DE ESTRUTURAS	GEG GABINETE DE ESTRUTURAS E GEOTECNIA RUA DE SANTOS POUREADA 1061-11 4000 PORTO TEL: 00 35091 - 510289 FAX: 510290	1/20
MARCIO FREITAS ARQUITECTO	RUA CARLOS MALHEIRO DIAS 326 TEL 481114 - 481115 - 4200 PORTO	



CONSULTAR DESENHOS DE ARQUITECTURA

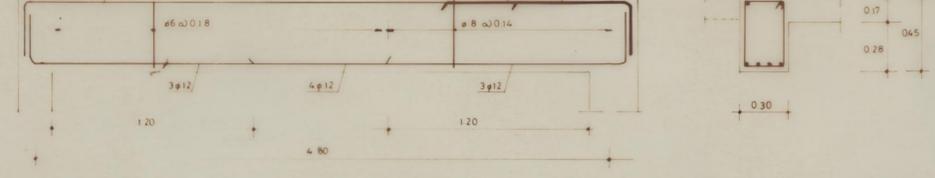
B 25
A 400 NR

PROCESSO	1/92	CMP GRUPO DE HABITAÇÕES SOCIAIS RUA DOS CHOUPOS PORTO	DESENHO Nº BL T2 B.A. 008
PROJECTO DE EXECUÇÃO	T2	VIGAS V500 REFORÇOS R500	15
col.			20 / 10 / 92
des.			1/20
PROJECTO DE ESTRUTURAS		GEG - GABINETE DE ESTRUTURAS E GEOTECNIA RUA DE SANTOS PARRALHA 1081 - 4000 PORTO TEL. 102 440001 5129566 FAX 5129565	
MARCIO FREITAS ARQUITECTO	RUA CARLOS MALHEIRO DIAS 326 TEL 481114 - 481115 - 4200 PORTO		

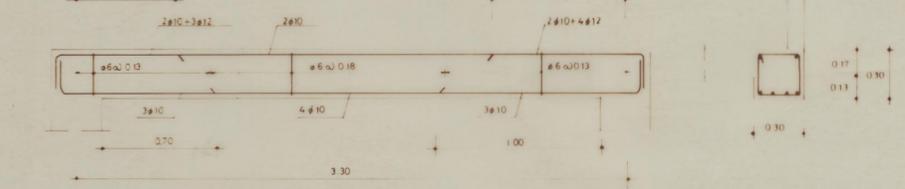
V501



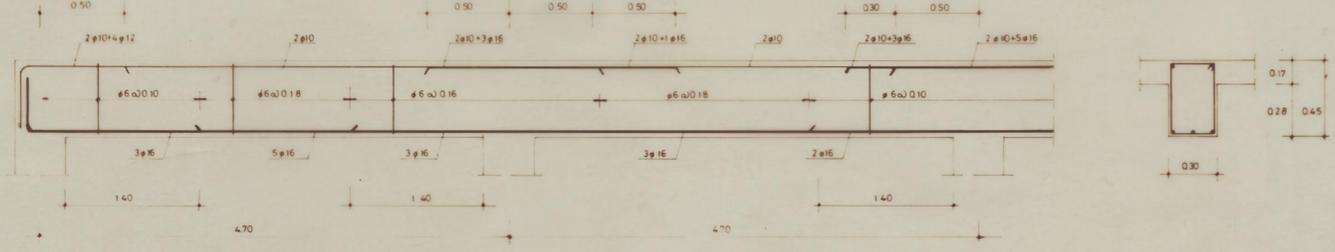
V505



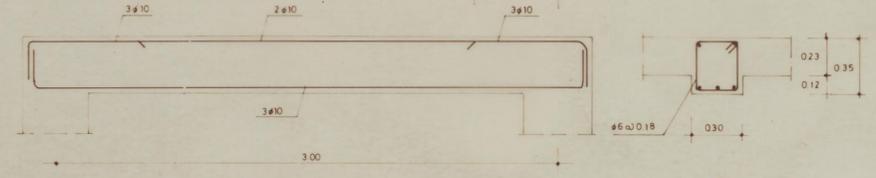
V502



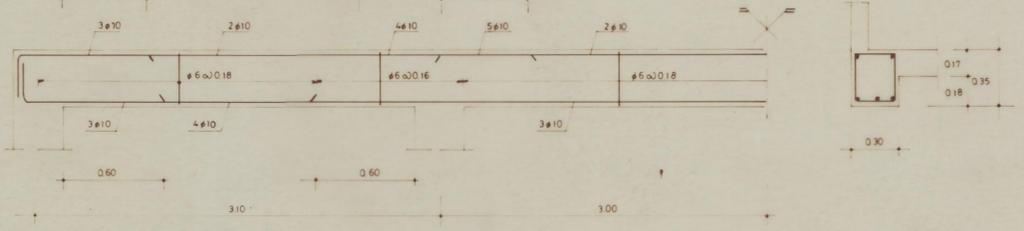
V503



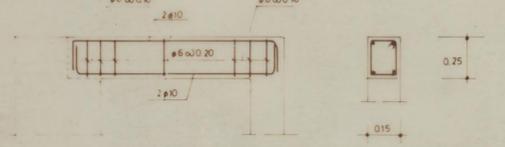
V504



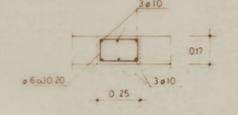
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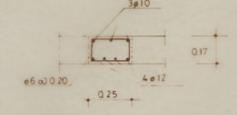
V508



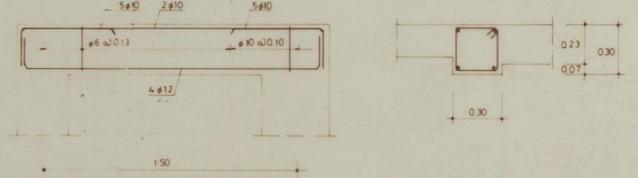
R501



R502



V509



V507



processo	1/92	CMP GRUPO DE HABITAÇÕES SOCIAIS RUA DOS CHOUPOS PORTO	DESENHO Nº BL T3 B.A. 008
PROJECTO DE EXECUÇÃO	T3	VIGAS V500 REFORÇOS R500	escala 1:6
col.			data 20 / 10 / 92
des.			1/20
PROJECTO DE ESTRUTURAS	GEG- GABINETE DE ESTRUTURAS E GEOTECNIA RUA DE SANTOS PÓDRAÇA, 1095-1º 4000 PORTO TEL. (351) 963091 - 9102955 FAX 9102955		
MARCIO FREITAS ARQUITECTO	RUA CARLOS MALHEIRO DIAS 326 TEL 481114 - 481115 - 4200 PORTO		

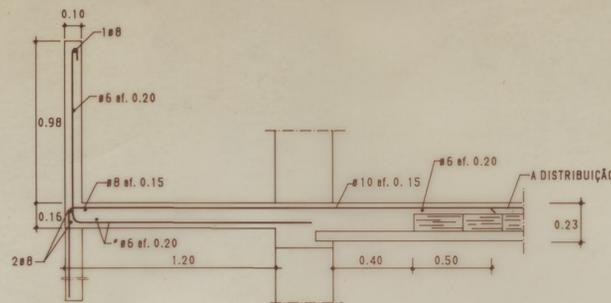
B 25
A 400 NR

CONSULTAR DESENHOS DE ARQUITECTURA

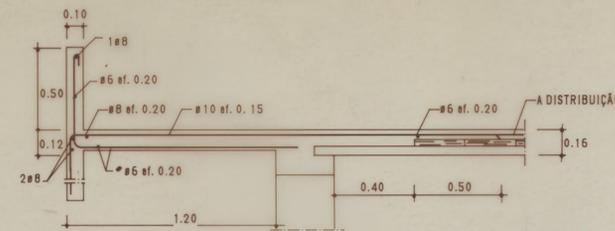
MAPA DE LAJES ALIGEIRADAS						
DESIGNAÇÃO	TIPO "MAPREL"	ESP. (m)	TARUGOS	ARMADURA DE DISTRIBUIÇÃO	ARMADURA DE CONTINUIDADE	ARMADURA DE CONTORNO
L101; 201; L301; L401	C 52	0.23	1 x 2#10	MALHASOL CQ38	#8 ef. 0.20	#6 ef. 0.20
L102; L202; L302; L402	C 55	0.23	2 x 2#10	MALHASOL DQ25	#8 ef. 0.15	#6 ef. 0.15
L103; 203; L303; L403	C 52	0.23	1 x 2#10	MALHASOL CQ38	#8 ef. 0.20	#6 ef. 0.20
L104; L204; L304; L404	C 52	0.23	1 x 2#10	MALHASOL CQ38	#8 ef. 0.20	#6 ef. 0.20
L105; 205; L305; L405	C 52	0.23	1 x 2#10	MALHASOL CQ38	#8 ef. 0.20	#6 ef. 0.20
L206; 306; L406	B 32	0.18	1 x 2#10	MALHASOL CQ38	#8 ef. 0.20	#6 ef. 0.20
L501	A 52	0.17	1 x 2#8	MALHASOL CQ38	#8 ef. 0.20	#6 ef. 0.20
L502	B 44	0.19	2 x 2#8	MALHASOL DQ25	#8 ef. 0.20	#6 ef. 0.20
L503	A 52	0.17	1 x 2#8	MALHASOL CQ38	#8 ef. 0.20	#6 ef. 0.20
L504	A 52	0.17	1 x 2#8	MALHASOL CQ38	#8 ef. 0.20	#6 ef. 0.20
L505	A 52	0.17	1 x 2#8	MALHASOL CQ38	#8 ef. 0.20	#6 ef. 0.20
L508	A 52	0.17	1 x 2#8	MALHASOL CQ38	#8 ef. 0.20	#6 ef. 0.20

OBS: NÃO EXISTE L 506

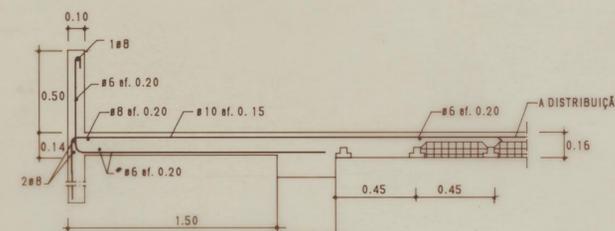
LAJE L106 ; L207 ; L307 ; L407



LAJE L507



LAJE L509

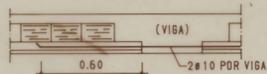


LAJES ALIGEIRADAS (PORMENORES COMUNS)

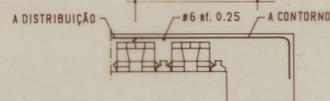
TARUGOS



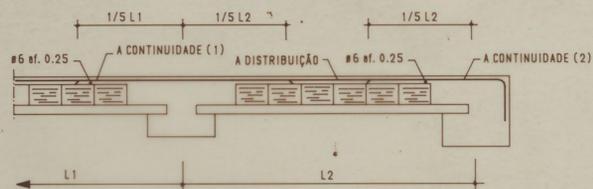
APOIO DAS LAJES EM VIGAS EMBEBIDAS



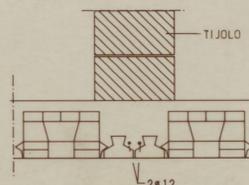
ARMADURA DE CONTORNO



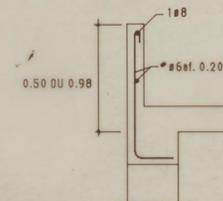
ARMADURA DE CONTINUIDADE



PORMENOR DE APOIO DOS MACIÇOS



PLATIBANDA E MURETES



CONSULTAR DESENHOS DE ARQUITECTURA

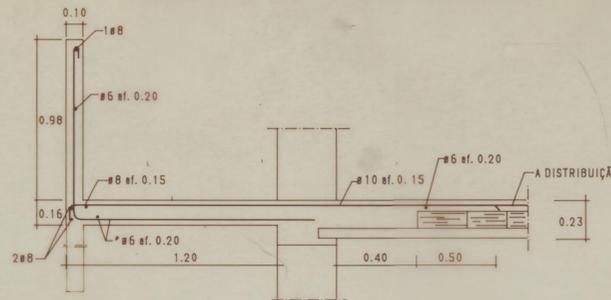
B 25
#A 400 NR

processo 1/92	CMP GRUPO DE HABITAÇÕES SOCIAIS RUA DOS CHOUPOS PORTO	DESENHO Nº BL T2 B.A. 009
PROJECTO DE EXECUÇÃO	T2 LAJES	escala 17
col. des.		data 20 / 10 / 92
PROJECTO DE ESTRUTURAS	GEG- GABINETE DE ESTRUTURAS E GEOTECNIA RUA DE SANTOS POISSADA 1001 - 4200 PORTO TELE. 100 140361 5102662 FAX 0102604	escala 1/20
MARCIO FREITAS ARQUITECTO	RUA CARLOS MALHEIRO DIAS 326 TEL. 481114 - 481115 - 4200 PORTO	

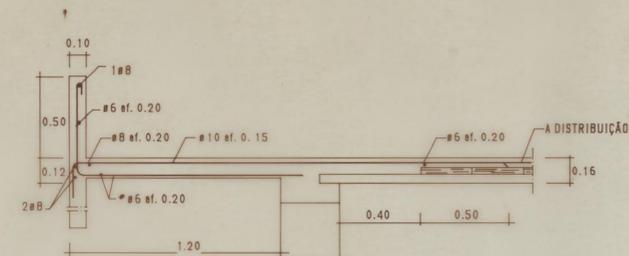
MAPA DE LAJES ALIGEIRADAS

DESIGNAÇÃO	TIPO "MAPREL"	ESP. (m)	TARUGOS	ARMADURA DE DISTRIBUIÇÃO	ARMADURA DE CONTINUIDADE	ARMADURA DE CONTORNO
L101; L201; L301; L401	C 53	0.23	1 x 2#10	MALHASOL CQ38	#8 ef. 0.20	#6 ef. 0.20
L102; L202; L302; L402	C 53	0.23	1 x 2#10	MALHASOL CQ38	#8 ef. 0.20	#6 ef. 0.20
L103; L203; L303; L403	C 52	0.23	2 x 2#10	MALHASOL CQ38	#8 ef. 0.20	#6 ef. 0.20
L104; L204; L304; L404	C 52	0.23		MALHASOL CQ38	#8 ef. 0.20	#6 ef. 0.20
L501	A 53	0.17	2 x 2#8	MALHASOL CQ38	#8 ef. 0.15	#6 ef. 0.25
L502	A 52	0.17	2 x 2#8	MALHASOL CQ38	#8 ef. 0.15	#6 ef. 0.25
L503	A 54	0.17	2 x 2#8	MALHASOL DQ25	#8 ef. 0.15	#6 ef. 0.25
L504	A 52	0.17		MALHASOL CQ38	#8 ef. 0.15	#6 ef. 0.25
L506	A 52	0.17	1 x 2#8	MALHASOL CQ38	#8 ef. 0.15	#6 ef. 0.25

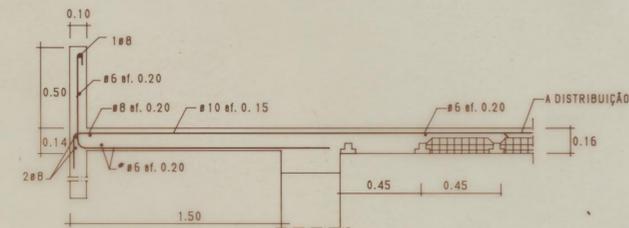
LAJES L105 ; L205 ; L305 ; L405



LAJE L505



LAJE L507

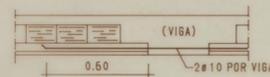


LAJES ALIGEIRADAS (PORMENORES COMUNS)

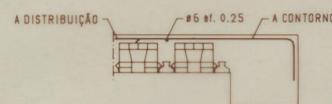
TARUGOS



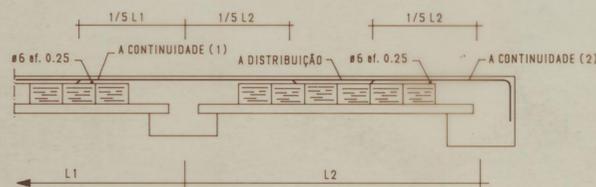
APOIO DAS LAJES EM VIGAS EMBEBIDAS



ARMADURA DE CONTORNO

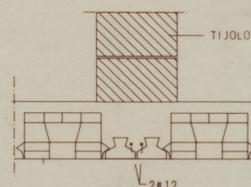


ARMADURA DE CONTINUIDADE

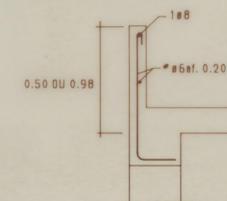


PORMENOR DOS APOIOS DOS MACICOS

ESC. 1/10



PLATIBANDAS E MURETES

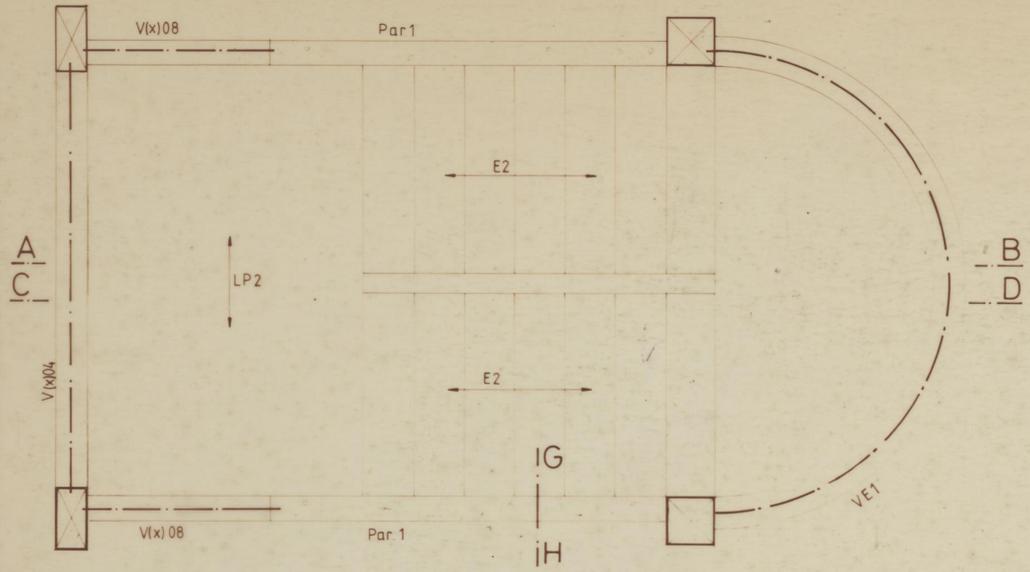


CONSULTAR DESENHOS DE ARQUITECTURA

B 25
A 400 NR

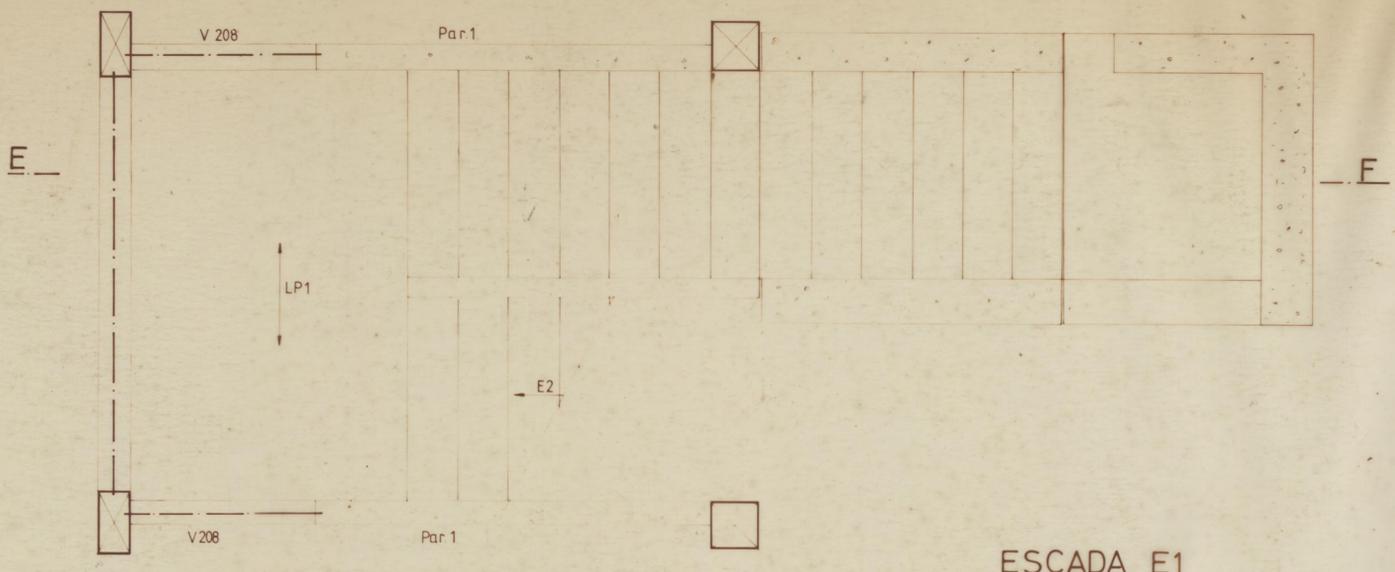
PROCESSO	1/92	CMP	GRUPO DE HABITAÇÕES SOCIAIS RUA DOS CHOUPOS PORTO	DESENHO Nº	BL T3
PROJECTO DE EXECUÇÃO	T3	LAJES			B.A. 009
col.					18
des.					20 / 10 / 92
PROJECTO DE ESTRUTURAS	GEG- GABINETE DE ESTRUTURAS E GEOTECNIA RUA DE SANTOS POUQUA 1091 - 1º - 4000 PORTO TEL. (351) 98301 - 912958 FAX 912959				1/20
MARCIO FREITAS ARQUITECTO	RUA CARLOS MALHEIRO DIAS 326 TEL. 481114 - 481115 - 4200 PORTO				

PLANTA



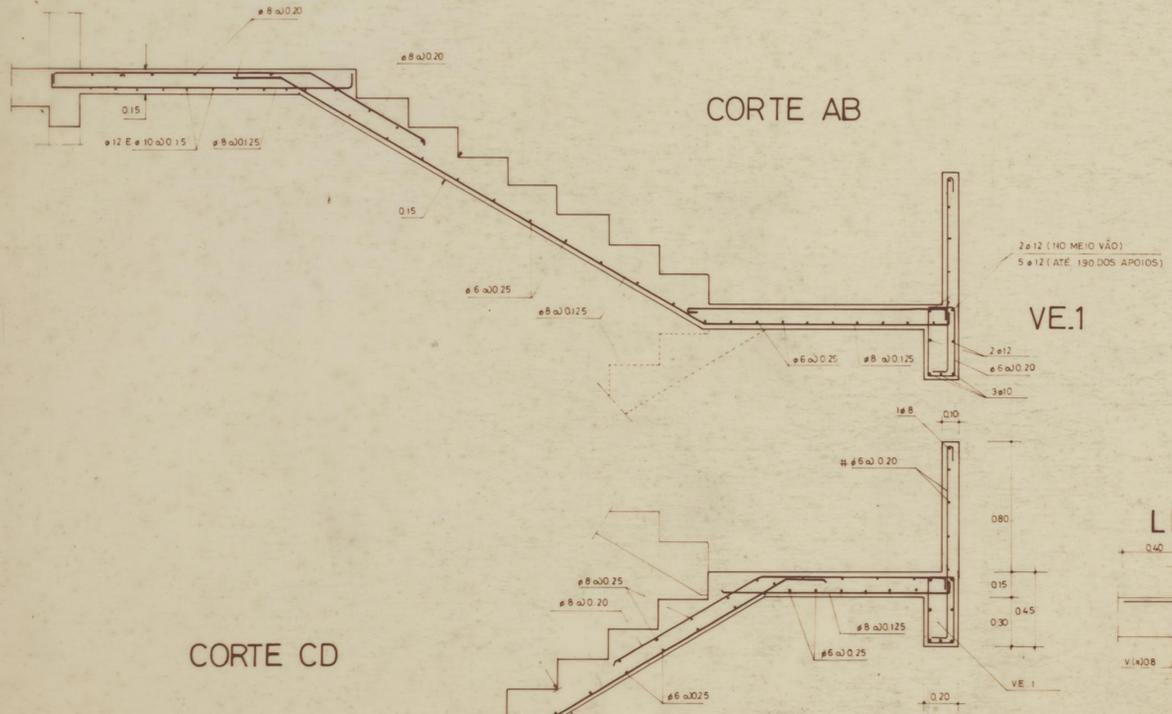
ESCADA E2

PLANTA



ESCADA E1

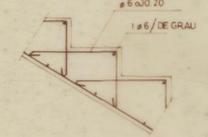
CORTE AB



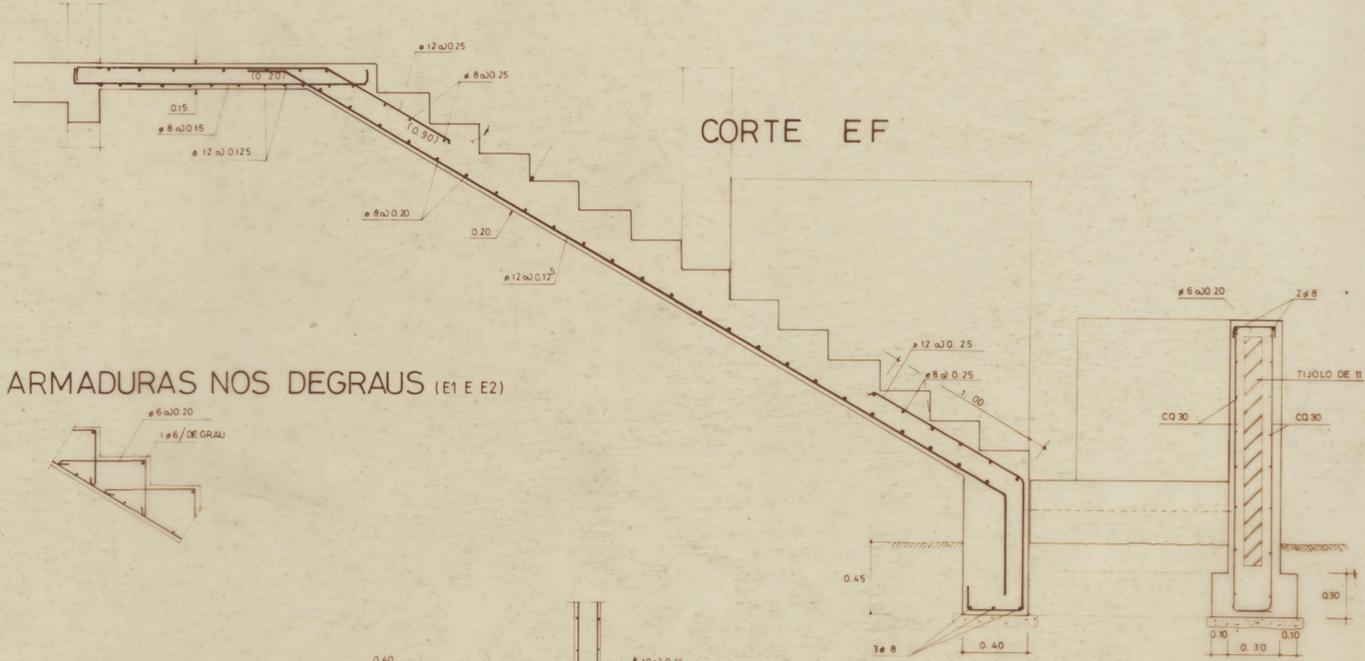
CORTE CD



ARMADURAS NOS DEGRAUS (E1 E E2)



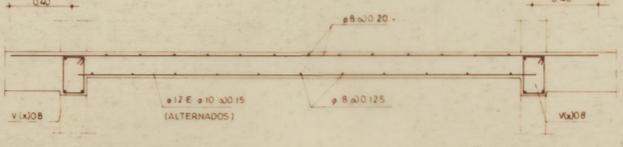
CORTE EF



CORTE GH



LP2



LP1



PROCESSO	1/92	CMP GRUPO DE HABITAÇÕES SOCIAIS RUA DOS CHOUPOS PORTO	DESENHO N° BL T2 B.A 010
PROJECTO DE EXECUÇÃO	T2	ESCADAS E1 E E2 PATAMARES LP1, LP2 - PAREDE Par 1	19
col.			20 / 10 / 92
des.			1/20
PROJECTO DE ESTRUTURAS	GEG- GABINETE DE ESTRUTURAS E GEOTECNIA RUA DE SANTOS POUQUADA, 1081-1º - 4000 PORTO TEL. 001 509071 - 510656 FAX 5102655		
MARCIO FREITAS ARQUITECTO	RUA CARLOS MALHEIRO DIAS 326 TEL. 481114 - 481115 - 4200 PORTO		

CONSULTAR DESENHOS DE ARQUITECTURA

B 25
A 400 NR

