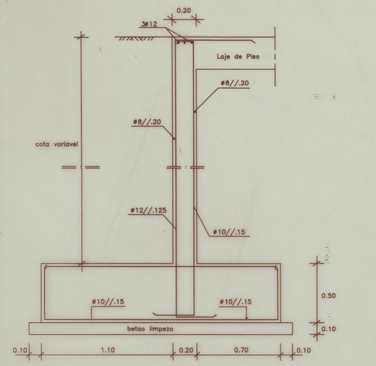
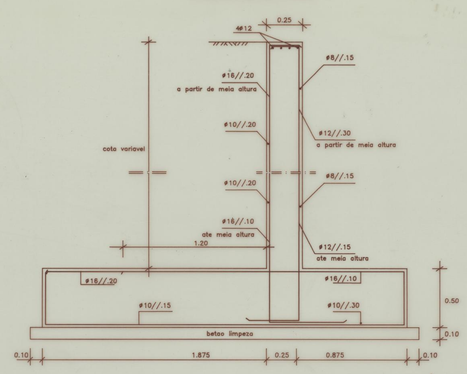
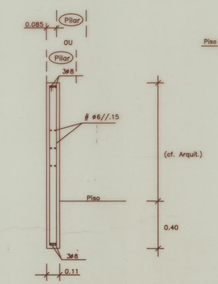
MURO DE SUPORTE MS1



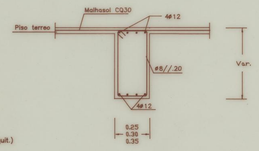
MURO DE SUPORTE MS2



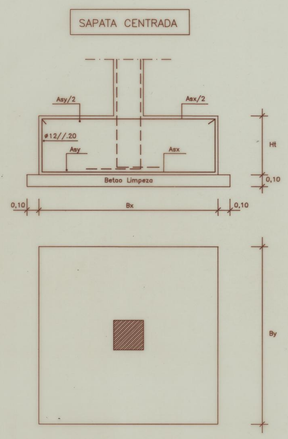
Murete – Lintel de Fundacao mLf



Lintel de Fundacao Lf



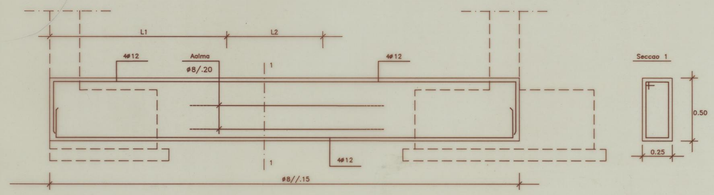
SAPATA CENTRADA



QUADRO DE SAPATAS

PILAR	Bx (m)	By (m)	Ht (m)	Asx	Asy
S1	1.20	1.20	0.50	# 12//.15	# 12//.15
S2	1.20	1.20	0.50	# 12//.15	# 12//.15
S4	1.25	1.25	0.50	# 12//.15	# 12//.15
S5	1.25	1.25	0.50	# 12//.15	# 12//.15
S6	1.25	1.25	0.50	# 12//.15	# 12//.15
S7	1.25	1.25	0.50	# 12//.15	# 12//.15
S8	1.25	1.25	0.50	# 12//.15	# 12//.15
S9	1.75	1.70	0.55	# 12//.15	# 12//.15
S10	1.50	1.50	0.50	# 12//.15	# 12//.15
S13	1.25	1.25	0.50	# 12//.15	# 12//.15
S14	1.25	1.25	0.50	# 12//.15	# 12//.15
S15	1.25	1.25	0.50	# 12//.15	# 12//.15
S17	1.25	1.25	0.50	# 12//.15	# 12//.15
S18	1.25	1.25	0.50	# 12//.15	# 12//.15
S19	1.25	1.25	0.50	# 12//.15	# 12//.15
S20	1.25	1.25	0.50	# 12//.15	# 12//.15
S21	1.50	1.50	0.50	# 12//.15	# 12//.15
S22	1.35	1.35	0.50	# 12//.15	# 12//.15
S23	1.25	1.25	0.50	# 12//.15	# 12//.15
S24	1.25	1.25	0.50	# 12//.15	# 12//.15
S25	1.35	1.30	0.50	# 12//.15	# 12//.15
S26	1.35	1.30	0.50	# 12//.15	# 12//.15
S27	1.25	1.25	0.50	# 12//.15	# 12//.15

VIGAS DE EQUILIBRIO



SAPATA EXCENTRICA

QUADRO DE SAPATAS EXCENTRICAS

PILAR	Bx (m)	By (m)	Ht (m)	Asx	Asy
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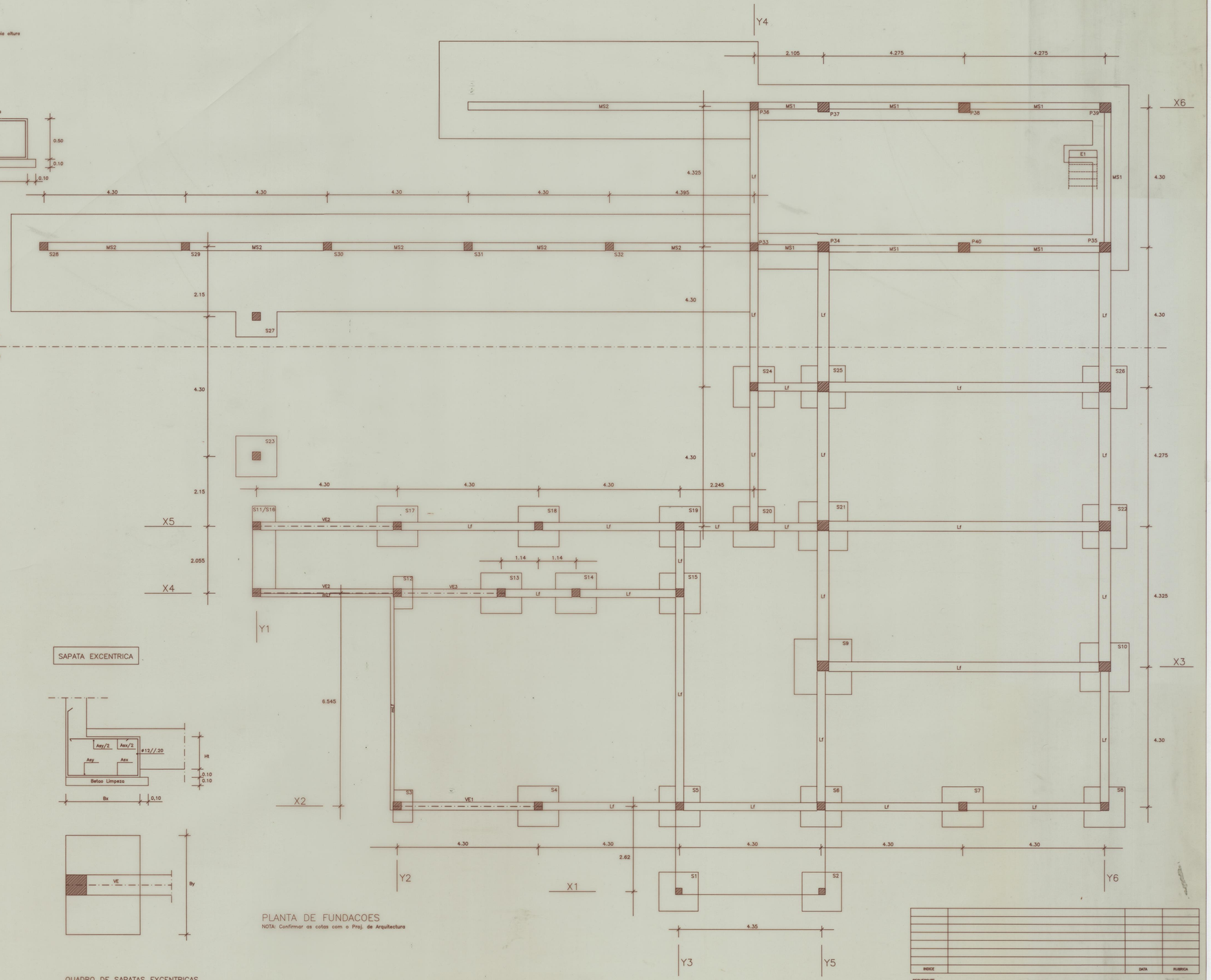
S11/S16	0.70	2.80	0.50	# 12//.15	# 12//.15
S12	0.60	1.00	0.50	# 12//.15	# 12//.15

FUNDACAO A COTA 44.00

FUNDACAO A COTA 47.00



PLANTA DE FUNDACOES

NOTA: Confirmar as cotas com o Proj. de Arquitectura

INDICE		DATA	RUBRICA

REQUERENTE
CAMARA MUNICIPAL DO PORTO

J. MOREIRA DA COSTA
ARQUITECTURA Unipessoal
RUA PADRE PACHECO DO MONTE, 70 - 1
4200 - PORTO
(351)91 2522

Ampliacao do Centro de Convivio dos Moradores do Bairro do Cerco – Porto

PROJECTO DE ESTRUTURA

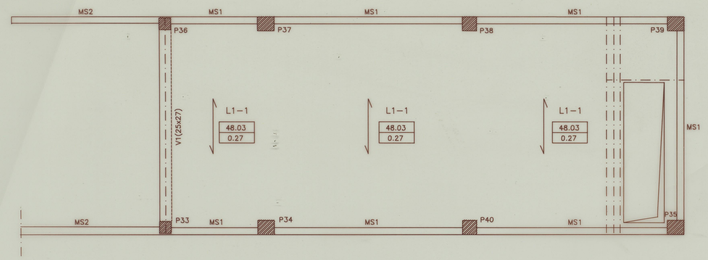
Planta de Fundacoes, Muros suportes Q. Sapatas, Pormenores Diversos.

COORDENADOR GERAL DO PROJECTO	ARQ. J. MOREIRA DA COSTA
PROJ.	ENG. JORGE F. MOREIRA DA COSTA ENG. ANA MARIA TAVAS
BETAO B25	ACO A400 ER
ESCALA 1/50 1/20	DES.
N. PROJ.	FOLHA
N. ARQ.	29

DATA: OUTUBRO 1995

SUBSTITUI

SUBSTITUIDO



PLANTA ESTRUTURAL DA CAVE

NOTA: Confirmar as cotas das Lajes com o Proj. de Arquitectura

QUADRO DE LAJES ALIGEIRADAS

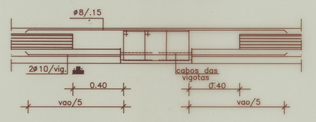
LAJE	MAPREL	Ht (m)	MSd (kN.m/m)	VSd (kN/m)	Tarugos	Adist
L1-1	1B4-33x24-27	0.27	33.80	31.44	2 ø 8//1.43	AR30
Lc-1	2B6-23x30-36	0.36	123.84	57.60	2 ø 8//1.43	AR50
Lc-2	1B3-33x24-27	0.27	5.17	9.84	2 ø 8//1.05	AR30
Lc-3	1B3-33x24-27	0.27	21.87	20.16	2 ø 8//1.43	AR30
Lc-4	2B4-33x24-27	0.27	55.53	34.17	2 ø 8//1.63	AR38
Lc-5	1B3-33x24-27	0.27	6.09	10.69	2 ø 8//1.14	AR30
Lc-6	1B3-48x12-15	0.15	6.12	9.42	2 ø 8//1.30	AR30
Lc-7	1B3-48x12-15	0.15	4.71	8.26	2 ø 8//1.14	AR30

NOTA: Podera ser utilizada Marca de lajes diferente da indicada, desde que possua Documento de Homologacao valido, devendo as alternativas, alem de garantir os ESFORCOS ESPECIFICOS, possuir Peso Proprio igual ou inferior e Altura igual.

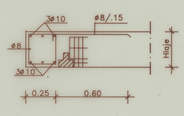
Esta opcao devera ser comunicada a Fiscalizacao e Autor do Projecto com a devida antecedencia e acompanhada dos elementos de calculo necessarios para a sua aprovacao previa.

PORMENORES GERAIS

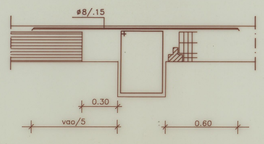
Ligacao a vigas embebidas ou invertidas



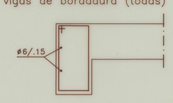
Bordos livres de lajes aligeiradas

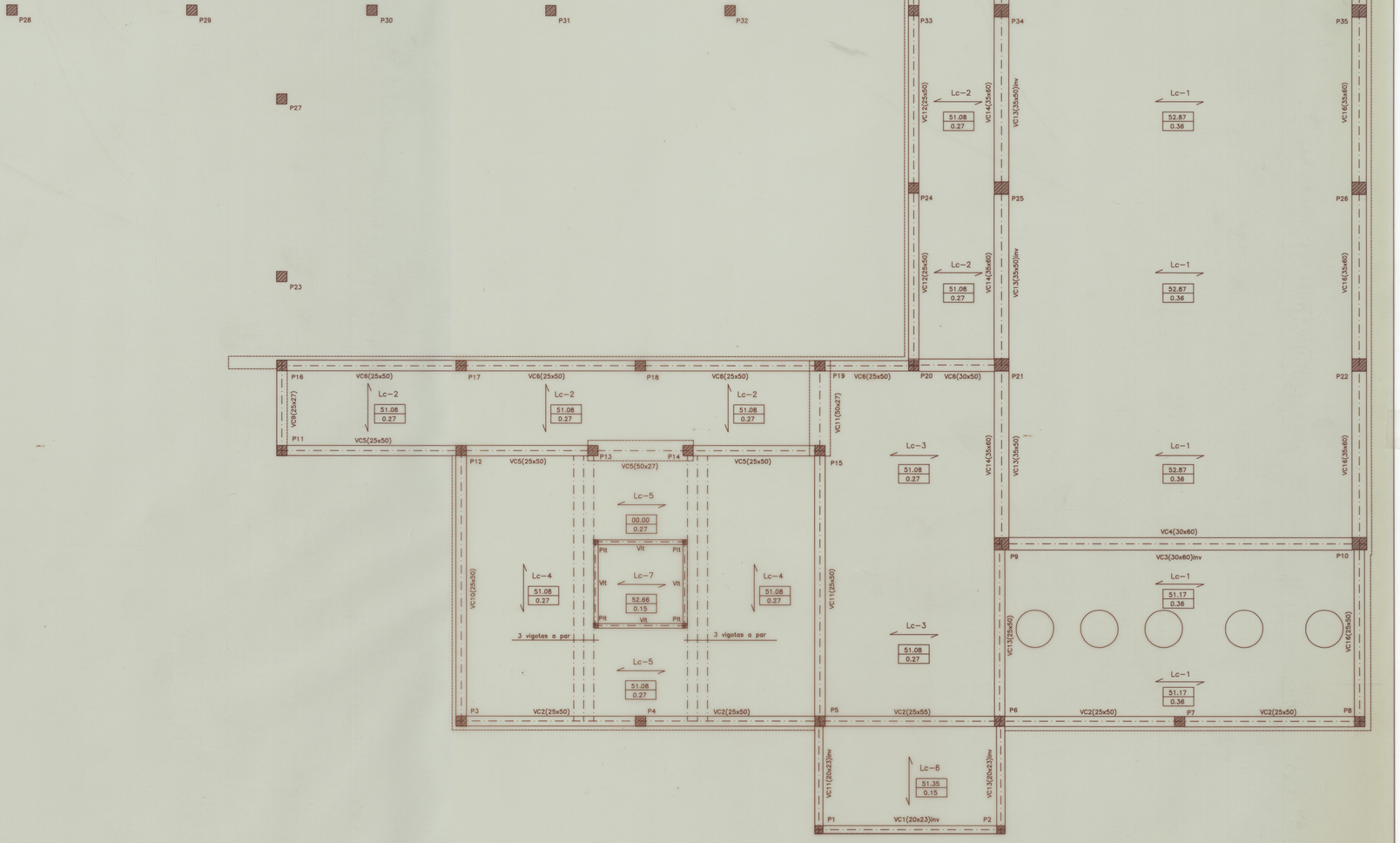


Ligacao a vigas salientes



Armadura nas faces laterais das vigas de bordadura (todas)





PLANTA ESTRUTURAL DA COBERTURA

NOTA: Confirmar as cotas das Lajes com o Proj. de Arquitectura

INDICE		DATA	RUBRICA

REQUERENTE
CAMARA MUNICIPAL DO PORTO

J. MOREIRA DA COSTA
ARQUITECTURO - ENGENHEIRO
RUA PADRE PACHECO DO MONTE, 70 - 1
4300-411 PORTO
(02)9115332

Ampliacao do Centro de Convivio dos Moradores do Bairro do Cerco - Porto

PROJECTO DE ESTRUTURA
Plantas Estruturais, Q. de Lajes
Pormenores Diversos

COORDENADOR GERAL DO PROJECTO: ARQ. J. MOREIRA DA COSTA
PROJ.: ENG. JORGE F. MOREIRA DA COSTA; ENG. ANA MARIA VIANA
BETAO 825 ACO A400 ER
ESCALA 1/50 1/20 DES.
N PREC. FOLHA 30
DATA OUTUBRO 1995 SUBSTITUI SUBSTITUIDO N ARQ.

	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13
Cobertura	4ø12+4ø10	4ø12+4ø10	4ø16+4ø12	4ø12+4ø10	4ø16+4ø12	4ø16+4ø12	4ø12+4ø10	4ø16+4ø12	8ø20	8ø20	4ø16+4ø12	4ø16+4ø12	4ø12+4ø10
	0.20 / 0.20	0.20 / 0.20	0.25 / 0.25	0.25 / 0.25	0.25 / 0.25	0.25 / 0.25	0.25 / 0.25	0.25 / 0.25	0.30 / 0.35	0.30 / 0.35	0.25 / 0.25	0.25 / 0.25	0.25 / 0.25
Fundacao	cintas: ø6//.125	cintas: ø6//.125	cintas: ø6//.125	cintas: ø6//.125	cintas: ø6//.125	cintas: ø6//.125	cintas: ø6//.125	cintas: ø6//.125	cintas: ø6//.20	cintas: ø6//.20	cintas: ø6//.125	cintas: ø6//.125	cintas: ø6//.125

	P14	P15	P16	P17	P18	P19	P20	P21	P22	P36/P33/P24	P37/P34/P25	P38/P40	P39/P35/P26
Cobertura	4ø12+4ø10	4ø16+4ø12	4ø16+4ø12	4ø12+4ø10	4ø12+4ø10	4ø12+4ø10	4ø12+4ø10	4ø16+4ø12	4ø16+4ø12	4ø12+4ø10	4ø16+4ø12	4ø16+4ø12	4ø16+4ø12
	0.25 / 0.25	0.25 / 0.25	0.25 / 0.25	0.25 / 0.25	0.25 / 0.25	0.25 / 0.25	0.25 / 0.25	0.30 / 0.35	0.30 / 0.35	0.25 / 0.25	0.30 / 0.35	0.30 / 0.35	0.30 / 0.35
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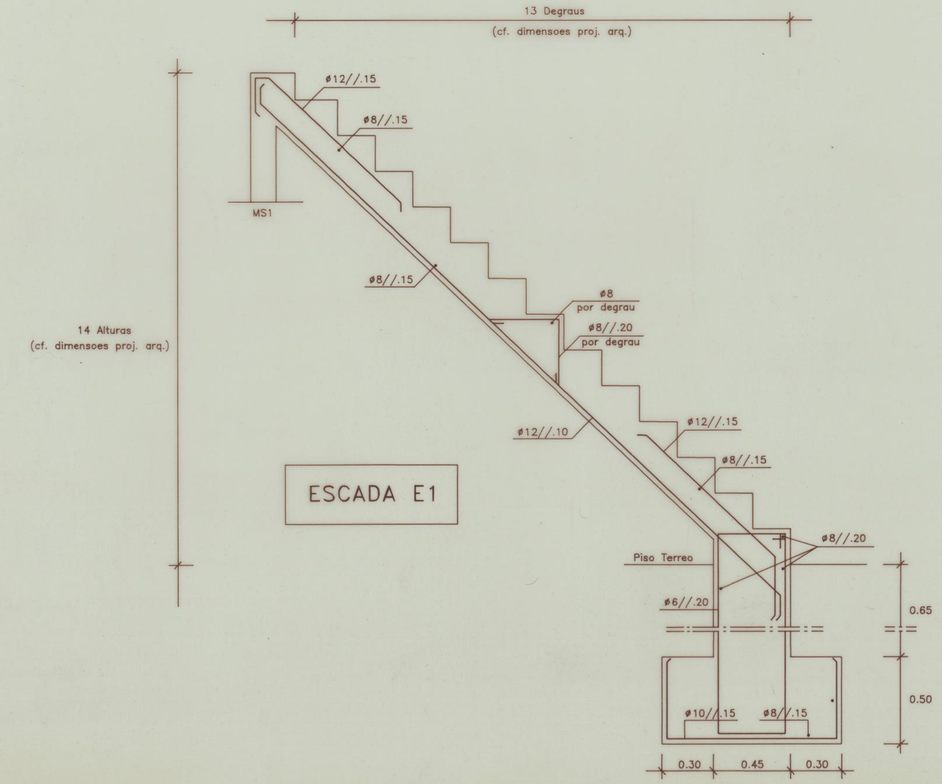
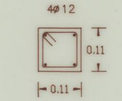
	P23, P27 a P32
Cobertura	4ø12
	0.25 / 0.25
Fundacao	cintas: ø6//.125



ESCADA E1

Plt



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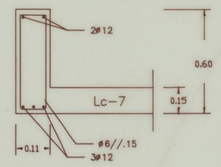

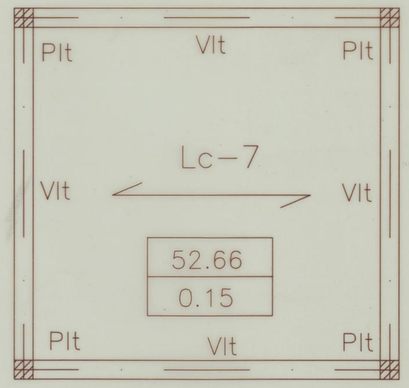

Lanternim

INDICE		DATA	RUBRICA

REQUERENTE
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4200 . PORTO
(02)612522

Ampliacao do Centro de Convivio dos Moradores do Bairro do Cerco – Porto
PROJECTO DE ESTRUTURA
Quadro de Pilares
Escada E1 – Lanternim

COORDENADOR GERAL DO PROJECTO: ARQ. J. MOREIRA DA COSTA
PROJ.: ENG. JORGE F. MOREIRA DA COSTA; ENG. ANA MARIA VIANA
BETAO: B25 | ACO: A400 ER
ESCALA: 1/20 1/10 | DES.:
N PROJ.:
N ARQ.:
FOLHA: 31
DATA: OUTUBRO 1995
SUBSTITUI
SUBSTITUIDO

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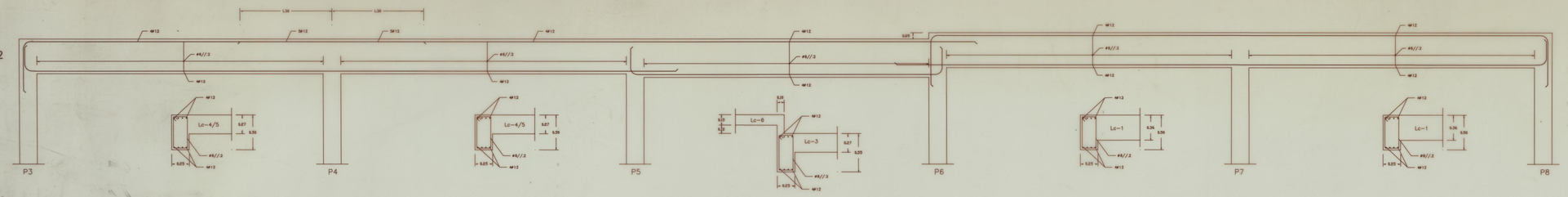

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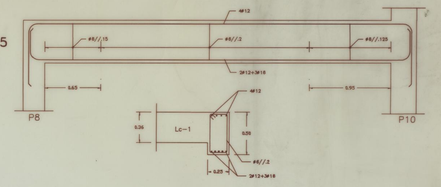

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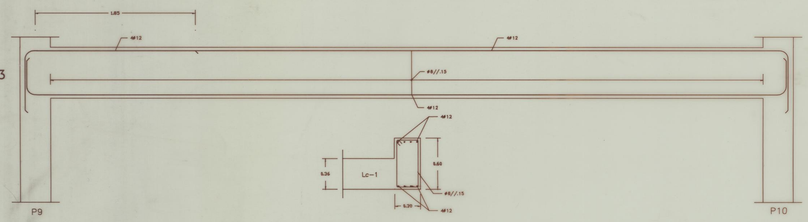

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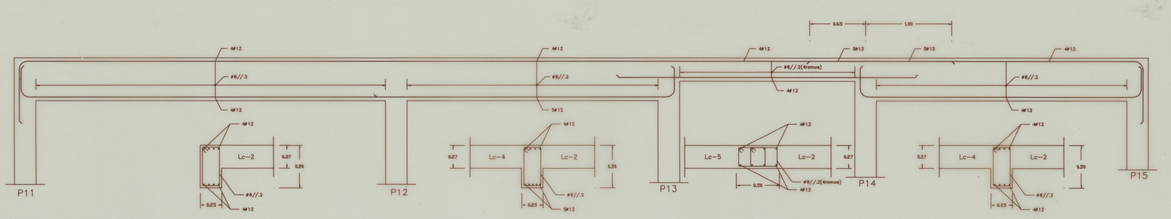

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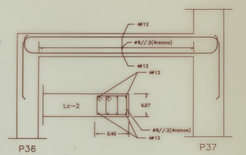

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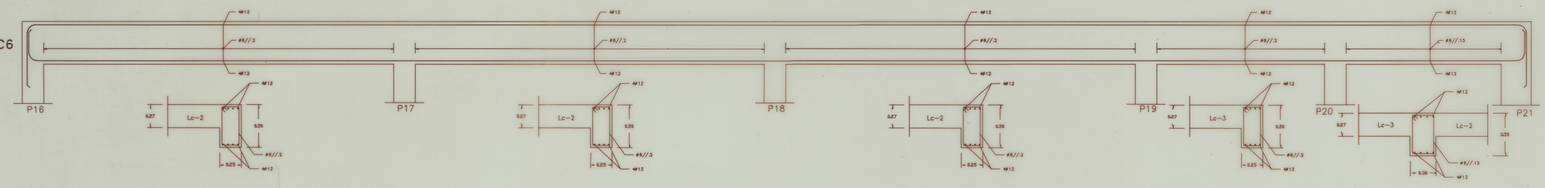

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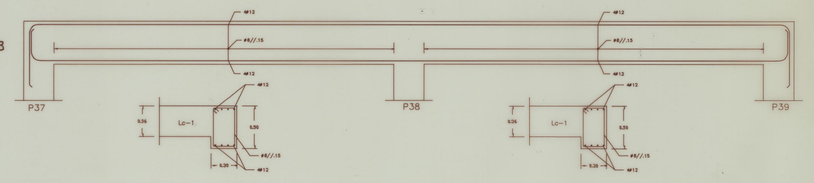

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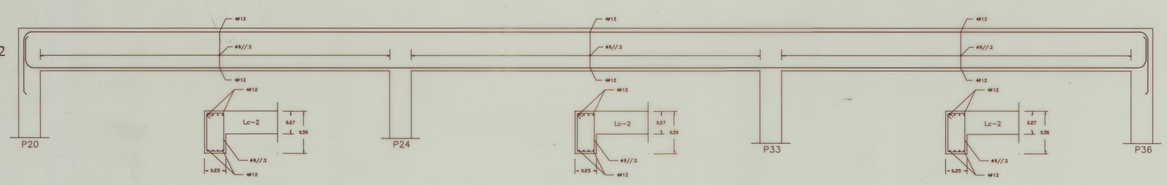

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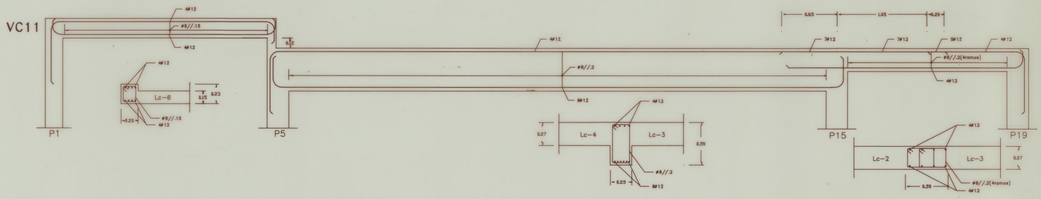

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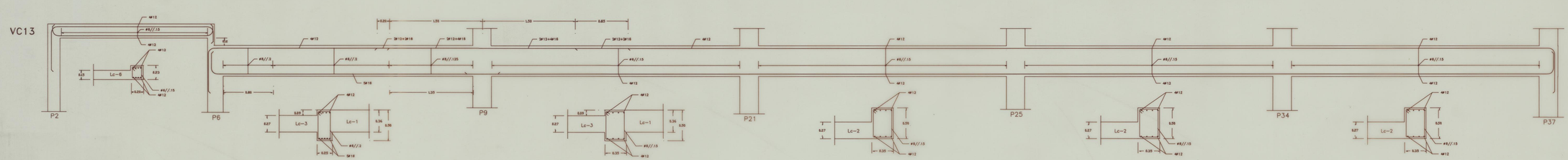

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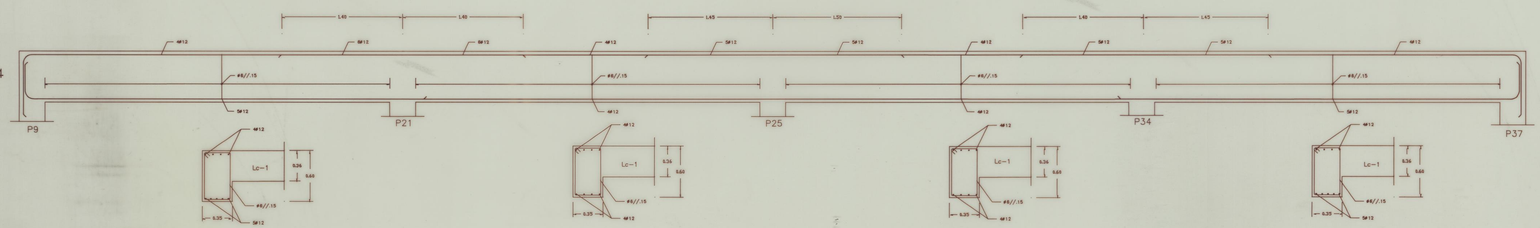

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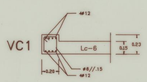

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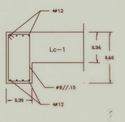

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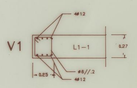

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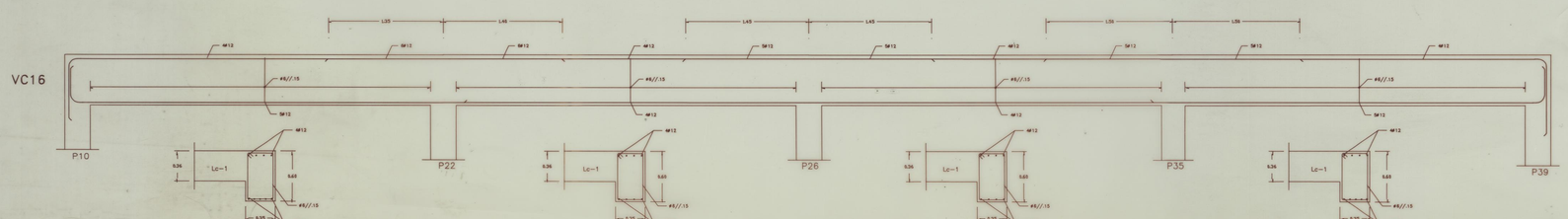

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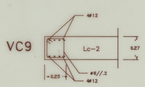

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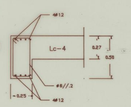

INDICE		DATA	RUBRICA

REQUERENTE
CÂMARA MUNICIPAL DO PORTO

J. MOREIRA DA COSTA
ARQUITECTURA E ENGENHARIA
RUA PADRE PADROSO DO MONTE, 70 - 1
TELEF.(02)
4200-(0000)

Ampliacao do Centro de Convivio dos Moradores do Bairro do Cerco – Porto

PROJECTO DE ESTRUTURA
Vigas: V1; VC1 a VC16

COORDENADOR GERAL DO PROJECTO	ARQ. J. MOREIRA DA COSTA
PROJ.	ENG. JORGE F. MOREIRA DA COSTA
DES.	ARQ. ANA MARIA VIANA
DETAL	ESCALA 1/25
DATA	OUTUBRO 1995
SUBSTITUI	SUBSTITUIDO
N. PROJ.	825
N. ARQ.	440
	185
FOLHA	32
	A400 ER