

18

Ilmo. Snr. Prefeito Municipal

44

V.º 44
 Vol.º 44
 Dist.º 44
 X.º 44
 Doc.º 44

ADOTADO 00019
 NA D.I.D. AN

Antônio Carlos da Silva proprietário
 do terreno à *rua Visconde de Fervor*
 junto ao prélio n.º *722* desejando construir, conforme plantas
 anexas vem pedir a V. S.ª a respectiva licença.

O requerente reside à *rua Getúlio Vargas* n.º *1227*

Nestes termos

P. deferimento.

Pôrto Alegre, *31* de *Dezembro* de 19*63*

Antônio Carlos da Silva

Diretoria de Inspeções
 Domiciliares
 de
 Água e Esgoto
 PROTOCOLO
 14 - DEZ 1963
 Fls. *134*
 Nos *4*

Formulário: CONSTRUÇÃO

DIRETORIA
 DE
 OBRAS
 2ª SEÇÃO
 Data *19.1.54*
 Protocolo

7875115 - J. 722

18

PLANTA DE ESGOTO FICA
NA D.I.D.

Em 5/1/54

[Signature]

[Signature]

[Signature]

... não nada tem a opor
quanto a sua visconde do
... no ...
causa

11/1/54
[Signature]

S. G. URBANISMO
Nada temos a opor

[Signature]

Porto Alegre

DIRETORIA
DE
SERV. DE
S. SEC. DE

DEFOV

Processo nº 12.104
12/1
12/1
12/1

Formulário CONSTRUÇÃO

[Handwritten notes and signatures]

1875118 - 7.132

00020

Autorizo ao Sr. engenheiro civil Osvaldo
Lopes da Silva a Construir no terreno
 de minha propriedade, sito a rua Vis-
 conde do Alvaes, junto ao prédio n.º 722
 Conforme planta que se encontra
 nessa Prefeitura.

P. Alegre, 31 de Dezembro de 1953
Antônio Carlos da Costa

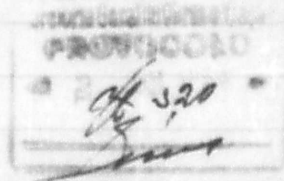
De acordo. Osvaldo Lopes da Silva
 P. Alegre 31 de dezembro de 1953

Reconheço as duas assinaturas
 supra indicadas

Em testemunho AB da verdade
 Porto Alegre, 31 de dezembro de 1953

O Substituto do Tabelião

Osvaldo Arruda
 1340



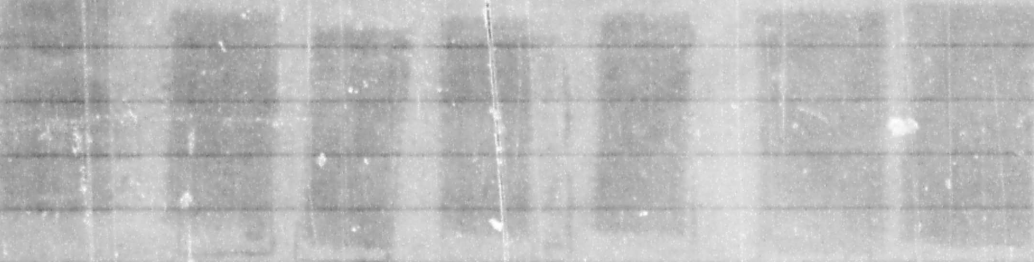
1860

Received of the
Hon. Secy of the
Treasury
the sum of \$1000
for the purchase of
land in the
State of Ohio
for the purpose of
establishing a
National Academy
of Music

Witness my hand
at Washington
this 10th day of
April 1860



Very respectfully
Your obedient servant
John P. Kennedy
Secretary



1860

Memorial descritivo do prédio a ser construído à rua Visconde do Herval,
de propriedade do Sr. Castano Cailar da Motta.

- a) A construção será de alvenaria simples com entrepiso de concreto armado e escadas de concreto armado. O teto será de uma laje de concreto ou tijolo armado.
- b) O acabamento do prédio é fino. Os quartos de banho e cozinha terão as paredes revestidas de azulejo branco com arremate de chanfrado de côr. Os hall das escadas terá as paredes revestidas de azulejo de côr. Os pisos dos quartos, living, salas, hall internos serão de parquet. Os pisos das cozinhas, quarto de banhos, despensas, W.C. e terraços serão de mosaicos hidráulicos. A fachada principal será revestida de granito e as secundárias com reboco grosso e por cima reboco fino alisado.
- c) A pintura será comum porém toda de primeira qualidade. Calafetagem com cola e côr internamente e da mesma forma externamente levando porém impermeabilizante. As aberturas serão pintadas com tinta e l/ a óleo interna e externamente.

Porto Alegre 31 de dezembro de 1953

Oswaldo Lopes da Silva

RECEBIDO

[Assinatura]

Material descrito no trabalho - ser consultado à rua Visconde de Herval.

de propriedade de Sr. Casiano Galvão e da Mãe.

[illegible]

0 acabamento do prédio é fino. Os painéis de madeira e colinas feitas de
paredas revestidas de estufo branco com acentos de chumbo de cor
Os hall das escadas são as paredes revestidas de estufo de cor. Os
pisos dos corredores, living, salas, hall inferiores são de madeira, os
pisos das cozinhas, quarto de banhos, despensas, W.C. e varandas so-
no de mosaicos hidráulicos. A fachada principal está revestida de
pedra e as secundárias com reboco grosso e por cima reboco fino ali-
nada.

1) A primeira será com o nome de primeira unidade. Cópia com o nome
e o endereço da mesma. Também será fornecida uma cópia para o
dono da unidade, com o nome e o endereço da mesma.

Porto Alegre 21 de dezembro de 1953

Wm. J. W.



PROCESSO Nº 044/54

AS PLANTAS E DESENHOS
QUE ULTRAPASSARAM A MEDI-
DA PADRÃO, CONSTANTES DES-
TE PROCESSO, ESTÃO MICRO-
FILMADAS NO MICROFILME DE 35 mm:

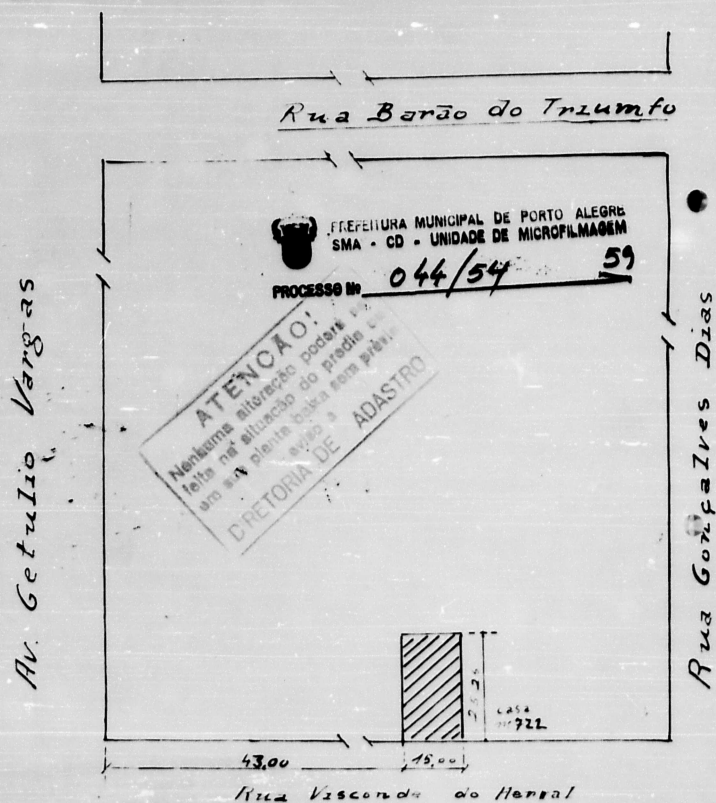
FLASH 2	NÚMERO 275
IMAGEM DE <u>59</u> A <u>66</u>	

QUANT DE DOC. 8

PREPARADOR

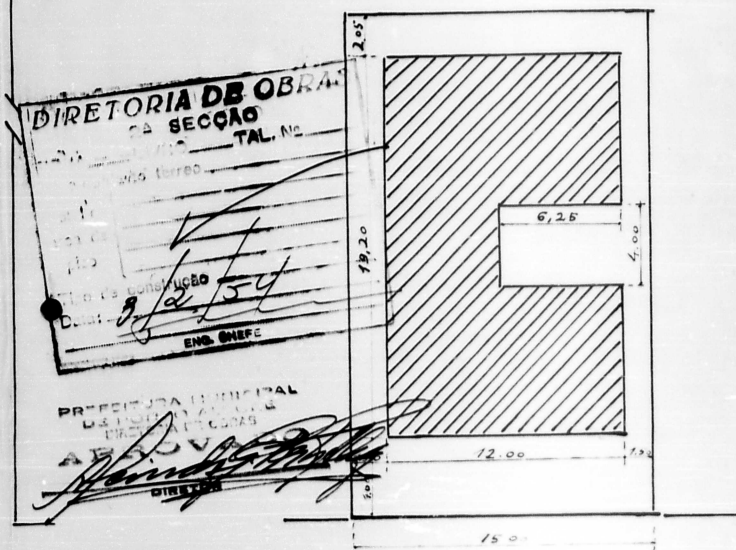
044/54

SITUAÇÃO DO TERRENO A RUA VISCONDE DO HERVAL, AO LADO DA CASA Nº 722, DE PROPRIEDADE DO Sr CAETANO CAILAR DA MOTA



SITUAÇÃO DO TERRENO - ESC. 1:1000

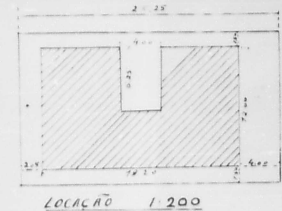
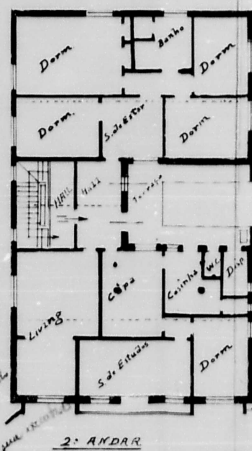
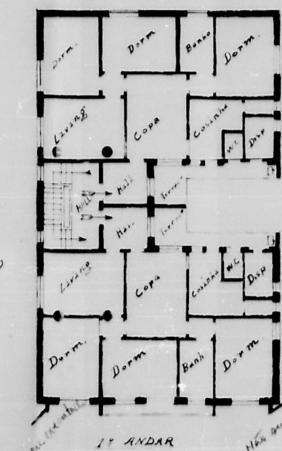
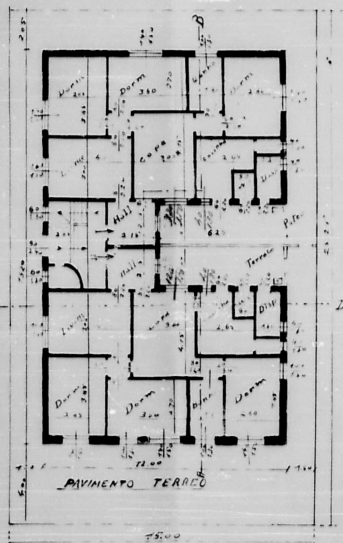
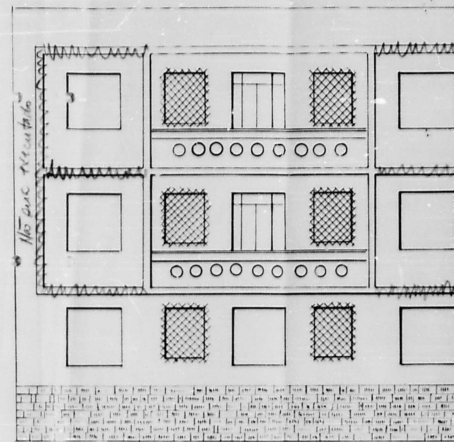
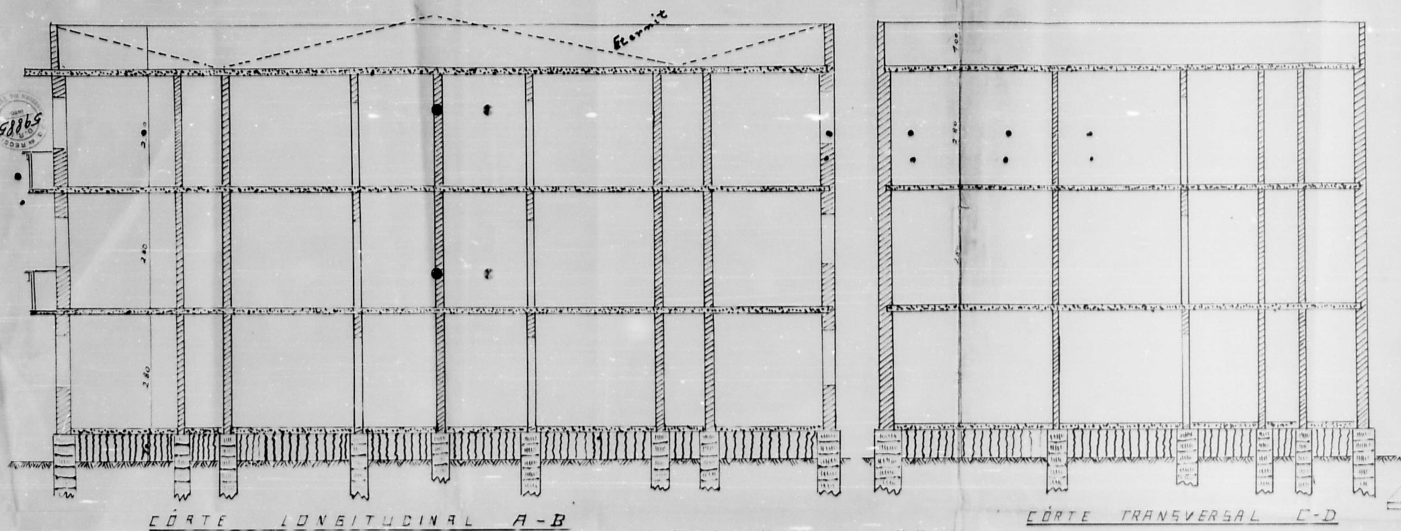
Proprietário: *Caetano Cailar da Mota*
 Construtor: *Caetano Lys de Abreu*
 Reg. no CREA 483



LOCALIZAÇÃO DA CASA - ESC. 1:200

044/54

PROJETO DE EDIFICIO DE APARTAMENTOS A CONSTRUIR A RUA VISCONDE DO HERVAL PARA O SR. CAETANO CAIAR DA MOTTA



DIRETORIA DE OBRAS	
ZONA	1º ZONA
Área de obra	205,70 m²
Total da obra	205,70 m²
Área de construção	16,20 m²
Área de estacionamento	14,50 m²
Área de circulação	14,50 m²
Área de estacionamento	14,50 m²
Área de circulação	14,50 m²
Área de estacionamento	14,50 m²
Área de circulação	14,50 m²

Proprietário: *Caetano Caiar da Motta*

Construtor: *Condição de 1.º*

Ry. no CREFI 483

PREFEITURA MUNICIPAL DE PORTO ALEGRE

SIA - CD - UNIDADE DE MICROFILMAGEM

PROCESSO Nº 044/54 61

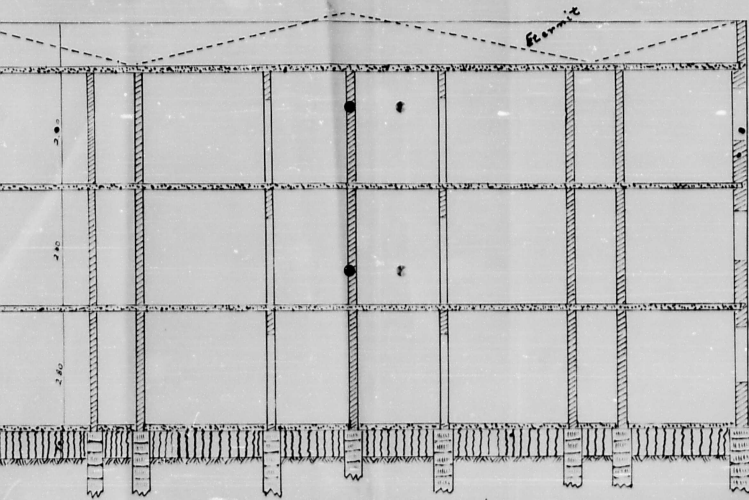
PREFEITURA MUNICIPAL DE PORTO ALEGRE

SIA - CD - UNIDADE DE MICROFILMAGEM

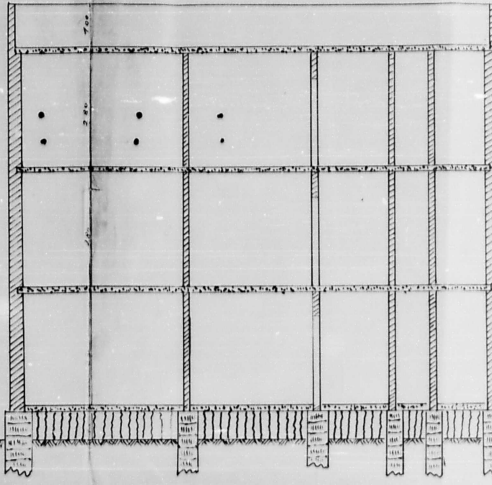
PROCESSO Nº 044/54 62

04/54

DE EDIFICIO DE APARTAMENTOS A CONSTRUIR A RUA VISCONDE DO HERVAL PARA O Sr. CAETANO CAILAR DA MOTTA

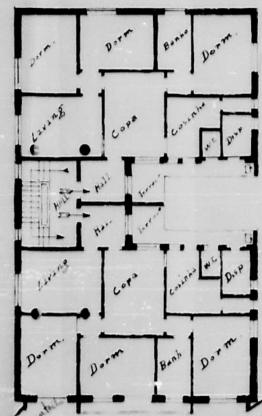
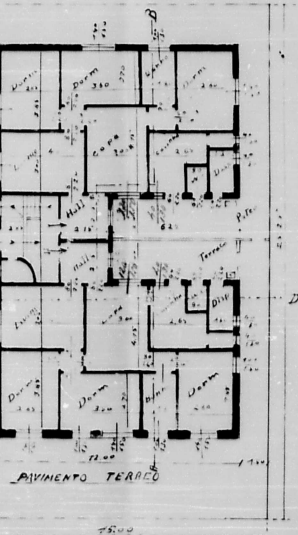
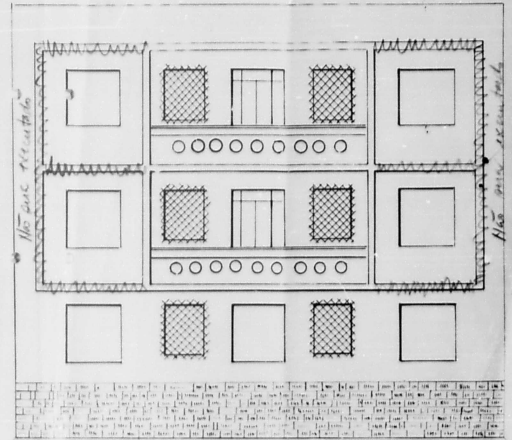


CORTE LONGITUDINAL A-B

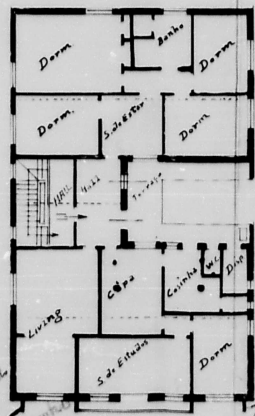


CORTE TRANSVERSAL C-D

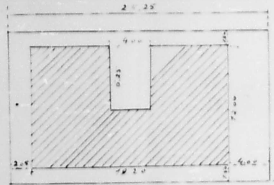
ESCALA 1:50



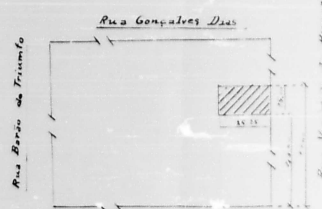
1º ANDAR
PREFEITURA MUNICIPAL DE PORTO ALEGRE
SMA - CD - UNIDADE DE MICROPLANEJAMENTO
PROCESSO Nº 064/54 61



2º ANDAR
ESCALA 1:100



LOCALIZAÇÃO 1:200



SITUAÇÃO 1:1.000

DIRETORIA DE OBRAS	
ZONA	1 - 2
Área de projeto	205,40 m²
Totais de	1.200
Área de	8.162,00
plano	1/100
Tipos de projeto	1/100
Data	3/2/54

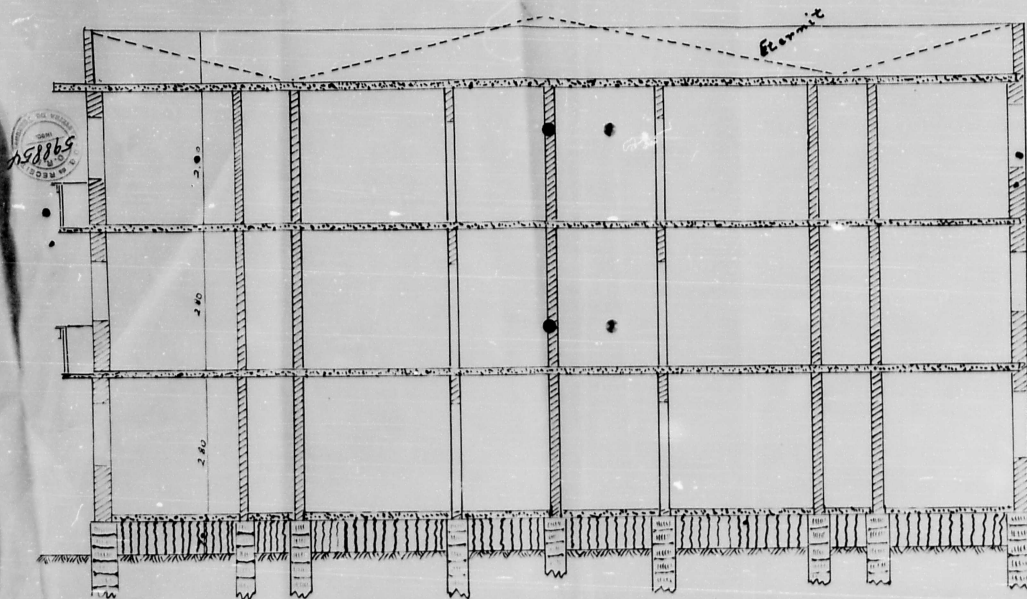
Proprietário: Caetano Cailar da Motta
Construtor: Camilo Lopes de Faria
Reg. no CREM 683

6000	
6000	6000

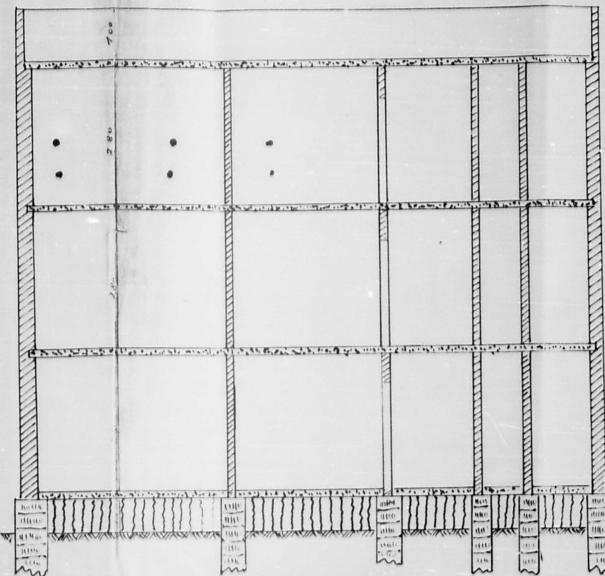
PREFEITURA MUNICIPAL DE PORTO ALEGRE
SMA - CD - UNIDADE DE MICROPLANEJAMENTO
PROCESSO Nº 064/54 62

PROJETO DE EDIFICIO DE APARTAMENTOS A CONSTRUIR A RUA VISCONDE DO HERVAL PARA O Sr. CAETANO

044/54

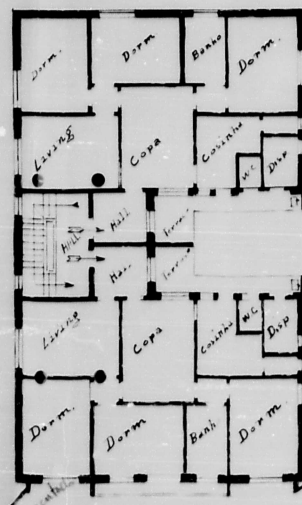
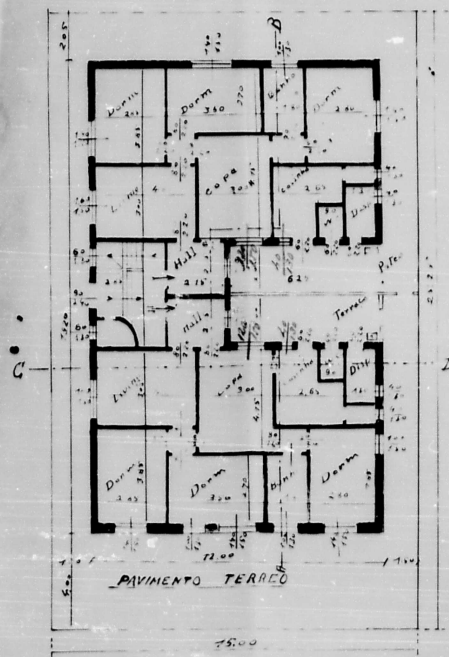


CORTE LONGITUDINAL A-B

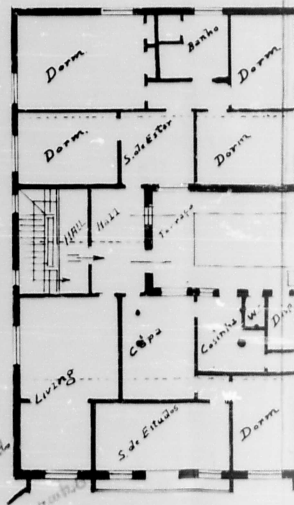


CORTE TRANSVERSAL C-D

ESCALA 1:50

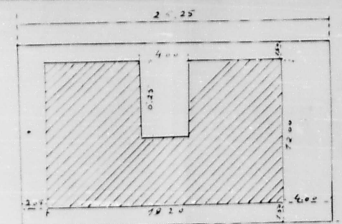


1º ANDAR



2º ANDAR

ESCALA 1:100



LOCAÇÃO 1:200



Av. GETULIO VARGAS

SITUAÇÃO 1:1.000

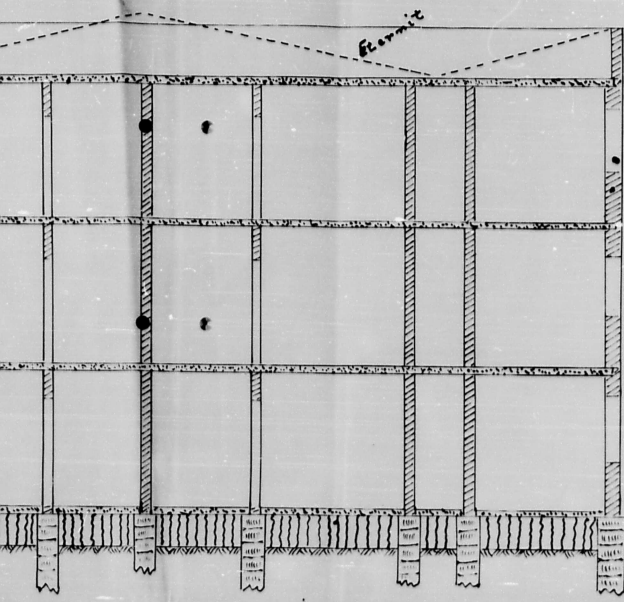


PREFEITURA MUNICIPAL DE PORTO ALEGRE
SMA - CU - UNIDADE DE MICROPLANEJAMENTO

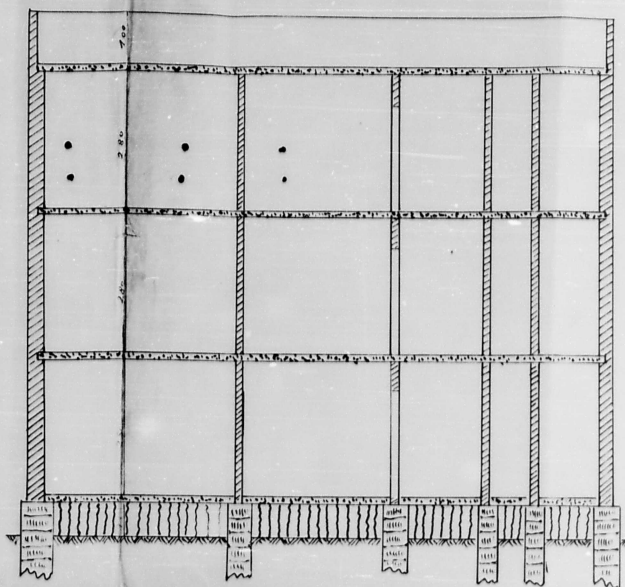
PROCESSO Nº 044/54 61

044/64

DE APARTAMENTOS À CONSTRUIR A RUA VISCONDE DO HERVAL PARA O SR. CAETANO CAILAR DA MOTTA

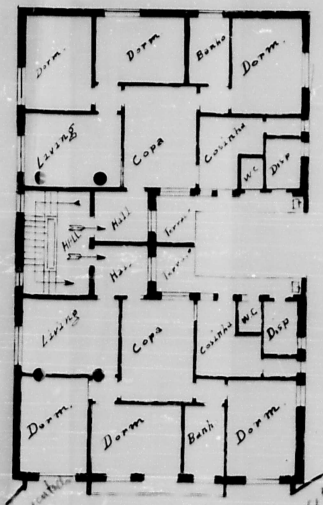
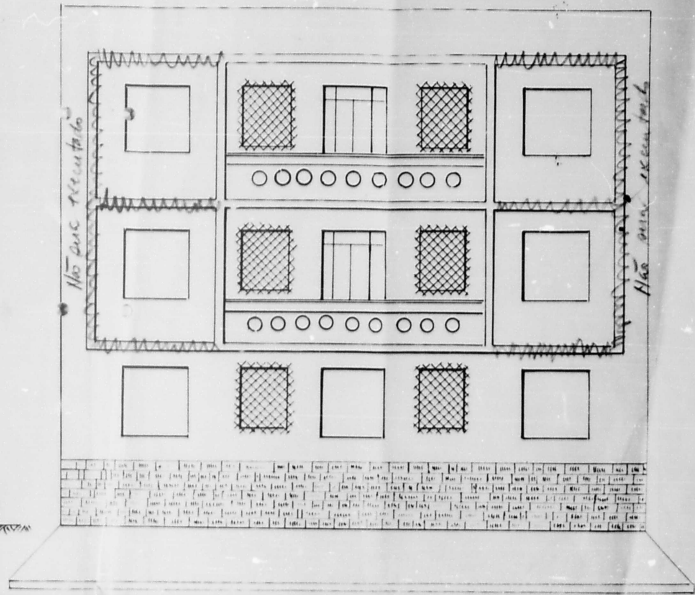


SEÇÃO LONGITUDINAL A-B

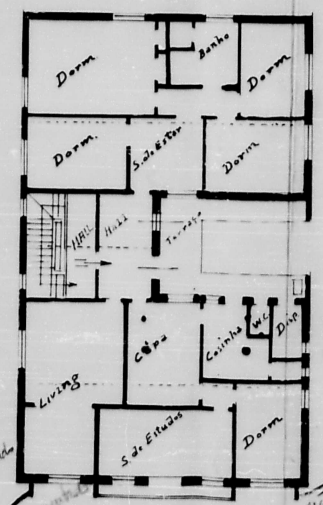


CORTE TRANSVERSAL C-D

ESCALA 1:50

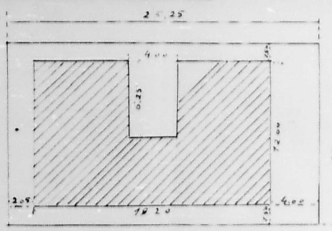


1º ANDAR

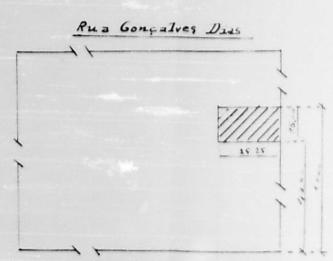


2º ANDAR

ESCALA 1:100



LOCAÇÃO 1:200



AV. GETULIO VARGAS

SITUAÇÃO 1:1.000

DIRETORIA DE OBRAS	
ZONA	2ª SECÇÃO
Área de projeto	503,40
Total da área do piso	616,80
Tipo de construção	3/2/1/4
Data	3/2/64

Proprietário: *Caetano Cailar da Motta*

Construtor: *Com. L. Lopes de F. Silva*
 Ky. no CREM 483

Documento autenticado em
 Registro Municipal
 6000



EDIFÍCIO DE APARTAMENTOS

RUA VISCONDE DO HENRIQUE

044/54

2º TETO

La. jcs

Li



d. 8

$$\begin{aligned} G &= \frac{2,85 \times 1,46}{2,90} = 1,42 \\ G &= 1,40 \times 1,56 = 2,18 \\ M_x &= \frac{4,40 \times 2,22}{2,90} = 3,37 \\ M_y &= \frac{C}{2,90} = 8,9 \\ X_c &= \frac{C}{1,46} = 1,31 \\ Y_c &= \frac{C}{1,42} = 1,36 \end{aligned}$$



d. 8

$$\begin{aligned} X_c &= \frac{1}{2} \times 4,40 \times 1,56 = 3,37 \\ M_x &= \frac{1}{2} \times 4,40 \times 1,56 = 3,37 \\ G &= 2,8 \end{aligned}$$



d. 8



d. 8

$$\begin{aligned} G &= \frac{2,85 \times 1,46}{1,85} = 2,18 \\ G &= 6,00 \times 0,82 = 4,96 \\ M_x &= \frac{6,00 \times 1,46}{1,85} = 4,76 \\ M_y &= \frac{C}{1,85} = 6,7 \end{aligned}$$



d. 8

$$\begin{aligned} G &= \frac{2,85 \times 1,46}{2,90} = 1,42 \\ M_x &= \frac{4,40 \times 2,22}{2,90} = 3,37 \\ M_y &= \frac{C}{2,90} = 8,9 \\ X_c &= \frac{C}{1,46} = 1,31 \end{aligned}$$



d. 8

$$\begin{aligned} G &= \frac{2,85 \times 1,46}{4,05} = 1,04 \\ G &= 3,00 \times 0,58 = 1,74 \\ M_x &= \frac{3,00 \times 1,46}{4,05} = 1,04 \end{aligned}$$



d. 8



d. 8



d. 7



d. 8



d. 8



d. 9

$$\begin{aligned} M_y &= \frac{C}{2,90} = 8,9 \\ X_c &= \frac{C}{1,49} = 1,34 \\ Y_c &= \frac{C}{1,61} = 1,24 \\ G &= \frac{4,40 \times 1,32}{3,65} = 1,32 \\ M_x &= \frac{4,40 \times 2,22}{3,65} = 2,62 \\ M_y &= \frac{C}{3,65} = 2,3 \\ X_c &= \frac{C}{1,32} = 1,32 \\ Y_c &= \frac{C}{3,65} = 2,3 \end{aligned}$$

$$\begin{aligned} G &= \frac{3,10 \times 1,46}{2,10} = 2,10 \\ M_x &= \frac{4,40 \times 2,22}{2,10} = 4,3 \\ M_y &= \frac{C}{2,10} = 4,2 \\ X_c &= \frac{C}{1,46} = 1,31 \\ Y_c &= \frac{C}{2,10} = 4,2 \end{aligned}$$

$$\begin{aligned} X_c &= \frac{1}{2} \times 4,40 \times 1,56 = 3,37 \\ M &= \frac{1}{2} \times 4,40 \times 1,56 = 3,37 \end{aligned}$$

$$\begin{aligned} X_c &= \frac{1}{2} \times 4,40 \times 2,22 = 4,76 \\ M &= \frac{1}{2} \times 4,40 \times 2,22 = 4,76 \\ G &= 4,4 \end{aligned}$$

$$\begin{aligned} M &= \frac{1}{2} \times 4,40 \times 1,56 = 3,37 \\ G &= 2,8 \\ X_c &= \frac{1}{2} \times 4,40 \times 1,56 = 3,37 \\ G &= 2,8 \end{aligned}$$



d. 8



d. 9



d. 10

$$\begin{aligned} G &= \frac{2,85 \times 1,46}{1,35} = 1,35 \\ M_x &= \frac{4,40 \times 2,22}{1,35} = 7,2 \\ M_y &= \frac{C}{1,35} = 8,8 \\ X_c &= \frac{C}{1,35} = 8,8 \\ Y_c &= \frac{C}{1,35} = 8,8 \end{aligned}$$

$$\begin{aligned} M_x &= \frac{4,40 \times 2,22}{1,35} = 7,2 \\ M_y &= \frac{C}{1,35} = 8,8 \\ X_c &= \frac{C}{1,35} = 8,8 \\ Y_c &= \frac{C}{1,35} = 8,8 \end{aligned}$$

$$\begin{aligned} M_x &= \frac{4,40 \times 2,22}{1,35} = 7,2 \\ M_y &= \frac{C}{1,35} = 8,8 \\ X_c &= \frac{C}{1,35} = 8,8 \\ Y_c &= \frac{C}{1,35} = 8,8 \end{aligned}$$

$$\begin{aligned} M_x &= \frac{4,40 \times 2,22}{1,35} = 7,2 \\ M_y &= \frac{C}{1,35} = 8,8 \\ X_c &= \frac{C}{1,35} = 8,8 \\ Y_c &= \frac{C}{1,35} = 8,8 \end{aligned}$$

12

10



EDIFÍCIO DE APARTAMENTOS

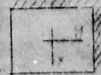
RUA VISCONDE DO HERVAL

044/54

2º TETO

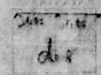
Lc 1,20

L1



$G = \frac{2,85 \times 1,26}{2,70} = 1,26$ $q = 440$
 $q = 440 \times 1,26 = 554$
 $M_x = \frac{440 \times 2,70^2}{8} = 399$ $G = 23$ $St = 1,61 - 2/16 C. 16$
 $M_y = \frac{C}{8} = 87$ $G = 24$ $St = 2,98 - 5/16 C. 17$
 $X_c = \frac{C}{16} = 131$ $G = 38$ $St = 2,43 - 1/4 C. 13$
 $X_y = \frac{C}{16} = 131$ $G = 38$ $St = 2,43 - 1/4 C. 14$

DIRETORIA DE OBRAS	
ZONA	L2-VISCONDE DO HERVAL
Área de planta	1,26
Torção	1,26
Pré-lim.	1,26
Piso	1,26
Tipos de construção	1,26
Data	1,26
Eng. Civil	1,26



$X = \frac{1}{2} \times 440 \times 1,80 = 396$
 $M = \frac{1}{2} \times 440 \times 1,80^2 = 702$
 $G = 28$ $St = 2,98 - 5/16 C. 17$



$G = \frac{2,85 \times 1,26}{1,80} = 1,57$ $q = 600$
 $q = 600 \times 1,26 = 756$
 $M_x = \frac{600 \times 2,70^2}{8} = 540$ $G = 29$ $St = 1,70 - 2/16 C. 11$
 $M_y = \frac{C}{8} = 67$ $G = 20$ $St = 2,98 - 5/16 C. 17$



$G = \frac{2,85 \times 1,26}{2,70} = 1,26$ $q = 440$
 $q = 440 \times 1,26 = 554$
 $M_x = \frac{440 \times 2,70^2}{8} = 399$ $G = 28$ $St = 1,61 - 2/16 C. 16$
 $M_y = \frac{C}{8} = 87$ $G = 34$ $St = 2,02 - 1/4 C. 16$
 $X_c = \frac{C}{16} = 131$ $G = 49$ $St = 2,43 - 1/4 C. 8$



$G = \frac{2,85 \times 1,26}{2,70} = 1,26$ $q = 440$
 $q = 440 \times 1,26 = 554$
 $M_x = \frac{440 \times 2,70^2}{8} = 399$ $G = 28$ $St = 1,61 - 2/16 C. 16$
 $M_y = \frac{C}{8} = 87$ $G = 34$ $St = 2,02 - 1/4 C. 16$
 $X_c = \frac{C}{16} = 131$ $G = 49$ $St = 2,43 - 1/4 C. 8$



-2-

$M_y = \frac{C}{8} + 700 \times 0,60 = 172 + 420 = 592$
 $X_c = \frac{C}{16} = 129$ $G = 25$ $St = 1,45 - 2/16 C. 14$
 $X_y = \frac{C}{16} = 129$ $G = 25$ $St = 1,45 - 2/16 C. 15$
 $X_c = \frac{C}{16} = 129$ $G = 25$ $St = 1,45 - 2/16 C. 16$



$G = \frac{4,20 \times 1,30}{2,70} = 2,04$ $q = 440$
 $q = 440 \times 1,30 = 572$
 $M_x = \frac{440 \times 2,70^2}{8} = 399$ $G = 25$ $St = 1,45 - 2/16 C. 14$
 $M_y = \frac{C}{8} = 87$ $G = 18$ $St = 0,58 - 1/16 C. 20$
 $X_c = \frac{C}{16} = 129$ $G = 41$ $St = 2,43 - 1/4 C. 11$
 $X_y = \frac{C}{16} = 129$ $G = 24$ $St = 1,45 - 2/16 C. 16$



$G = \frac{3,10 \times 1,30}{2,70} = 1,50$ $q = 440$
 $q = 440 \times 1,30 = 572$
 $M_x = \frac{440 \times 2,70^2}{8} = 399$ $G = 22$ $St = 0,58 - 1/16 C. 19$
 $M_y = \frac{C}{8} = 42$ $G = 16$ $St = 0,45 - 2/16 C. 20$
 $X_c = \frac{C}{16} = 129$ $G = 35$ $St = 2,02 - 1/4 C. 15$
 $X_y = \frac{C}{16} = 129$ $G = 22$ $St = 0,42 - 1/16 C. 19$



$X = \frac{1}{2} \times 440 \times 1,20 = 264$ $G = 23$ $St = 0,84 - 3/16 C. 17$
 $M = \frac{1}{2} \times 440 \times 1,20^2 = 316$ $G = 20$ $St = 0,68 - 3/16 C. 14$



$X = \frac{1}{2} \times 440 \times 2,20 = 484$
 $M = \frac{1}{2} \times 440 \times 2,20^2 = 1056$
 $G = 41$ $St = 2,02 - 1/4 C. 11$
 $M = \frac{1}{2} \times 440 \times 2,20^2 = 1056$ $G = 34$ $St = 2,02 - 1/4 C. 16$
 $Rafina$ $M = \frac{1}{2} \times 700 \times 2,20^2 = 1672$
 $G = 41$ $St = 2,02 - 1/4 C. 11$



$M = \frac{1}{2} \times 440 \times 1,20^2 = 316$ $G = 28$ $St = 1,44 - 3/16 C. 11$



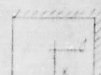
$X = \frac{1}{2} \times 440 \times 1,20 = 264$ $G = 22$ $St = 0,42 - 1/16 C. 10$



-3-

L1-L2

L2



$G = \frac{4,20 \times 1,30}{2,70} = 2,04$ $q = 440$
 $q = 440 \times 1,30 = 572$
 $M_x = \frac{440 \times 2,70^2}{8} = 399$ $G = 25$ $St = 1,45 - 2/16 C. 14$
 $M_y = \frac{C}{8} = 87$ $G = 23$ $St = 0,42 - 1/16 C. 19$
 $X_c = \frac{C}{16} = 129$ $G = 48$ $St = 2,43 - 1/4 C. 11$
 $X_y = \frac{C}{16} = 129$ $G = 34$ $St = 2,02 - 1/4 C. 15$



$G = \frac{4,20 \times 1,30}{2,70} = 2,04$ $q = 440$
 $q = 440 \times 1,30 = 572$
 $M_x = \frac{440 \times 2,70^2}{8} = 399$ $G = 22$ $St = 0,42 - 1/16 C. 19$
 $M_y = \frac{C}{8} = 87$ $G = 28$ $St = 0,87 - 3/16 C. 20$
 $X_c = \frac{C}{16} = 129$ $G = 37$ $St = 2,38 - 1/4 C. 13$
 $X_y = \frac{C}{16} = 129$ $G = 32$ $St = 1,78 - 1/4 C. 16$



$G = \frac{4,20 \times 1,30}{2,70} = 2,04$ $q = 440$
 $q = 440 \times 1,30 = 572$
 $M_x = \frac{440 \times 2,70^2}{8} = 399$ $G = 29$ $St = 2,90 - 2/16 C. 20$
 $M_y = \frac{C}{8} = 119$ $G = 30$ $St = 1,33 - 5/16 C. 14$
 $X_c = \frac{C}{16} = 129$ $G = 65$ $St = 2,42 - 3/8 C. 10$
 $X_y = \frac{C}{16} = 129$ $G = 45$ $St = 2,70 - 3/8 C. 18$



$G = \frac{4,20 \times 1,30}{2,70} = 2,04$ $q = 440$
 $q = 440 \times 1,30 = 572$
 $M_x = \frac{440 \times 2,70^2}{8} = 399$ $G = 41$ $St = 2,70 - 2/16 C. 8$
 $M_y = \frac{C}{8} = 202$ $G = 29$ $St = 1,26 - 5/16 C. 16$
 $X_c = \frac{C}{16} = 920$ $G = 27$ $St = 2,45 - 3/8 C. 18$
 $X_y = \frac{C}{16} = 438$ $G = 41$ $St = 3,60 - 3/8 C. 18$



SECRETARIA MUNICIPAL DE PORTO ALEGRE
SMA - CD - UNIDADE DE MICROFILMAGEM

PROCESSO Nº 044/54

63





EDIFÍCIO DE APARTAMENTOS

Rua Visconde DO HERVAL

044/54

2º FÉTO

La 103

L1

$G = \frac{2.55}{370} = 1.06$ max 335 min 144 q=440
 $q = 1140 \times 0.56 = 294$ max 314 min 142
 $q = 440 - 294 = 146$ max 335 min 144
 $M_x = 440 \times 2.2 = 968$ q=23 St=1.81-2-3/16 c.16
 $M_y = \frac{C}{14.9} = 59$ q=24 St=2.48-3-3/16 c.20
 $X = \frac{C}{14.9} = 131$ q=38 St=2.43-1/4 c.12
 $X_y = \frac{C}{14.9} = 205$ q=38 St=2.43-1/4 c.12
 $X_y = \frac{C}{14.9} = 205$ q=38 St=2.43-1/4 c.12

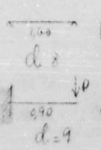
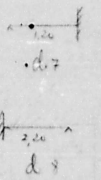
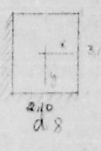
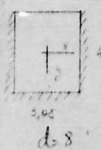
DIRETOR DE OBRAS	
ZONA	TAL. No
Área de	
Torção	
Área do	
piso	
Tipo de construção	
Data	
ENG. OLAVO	

$X = \frac{1}{11} \times 440 \times 1.85 = 72$
 $M = \frac{1}{11} \times 440 \times 1.85 = 72$
 $q = 28$ St=

$G = \frac{2.55}{370} = 1.06$ max 335 min 144 q=600
 $q = 600 \times 0.22 = 132$ max 314 min 142
 $q = 600 - 132 = 468$ max 335 min 144
 $M_x = 600 \times 1.54 = 924$ q=29 St=1.50-2-3/16 c.11
 $M_y = \frac{C}{81.0} = 67$ q=20 St=2.73-3-3/16 c.20

$G = \frac{2.55}{370} = 1.06$ max 335 min 144 q=440
 $M_x = 440 \times 3.92 = 1725$ q=28 St=1.47-2-3/16 c.13
 $M_y = \frac{C}{24.2} = 193$ q=34 St=2.02-1/4 c.16
 $X = \frac{C}{14.9} = 314$ q=49 St=2.43-1/4 c.8

$G = \frac{2.55}{370} = 1.06$ max 335 min 144 q=390
 $q = 390 \times 0.56 = 218$ max 314 min 142
 $q = 390 - 218 = 172$ max 335 min 144
 $M_x = 390 \times 1.54 = 601$ q=26 St=1.81-2-3/16 c.16



$M_y = \frac{C}{14.9} = 59$ q=50 St=1.47-2-3/16 c.10
 $X = \frac{C}{14.9} = 129$ q=55 St=1.43-3/8 c.15
 $X_y = \frac{C}{14.9} = 207$ q=53 St=1.43-3/8 c.16

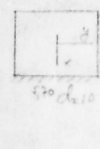
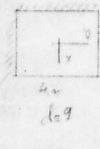
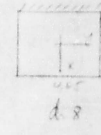
$G = \frac{2.55}{370} = 1.06$ max 335 min 144 q=390
 $M_x = 390 \times 2.62 = 1022$ q=25 St=1.19-2-3/16 c.14
 $M_y = \frac{C}{14.9} = 53$ q=18 St=1.43-3/8 c.20
 $X = \frac{C}{14.9} = 264$ q=41 St=2.18-1/4 c.11
 $X_y = \frac{C}{14.9} = 207$ q=24 St=1.43-3/8 c.16

$G = \frac{2.55}{370} = 1.06$ max 335 min 144 q=440
 $M_x = 440 \times 2.2 = 968$ q=22 St=1.43-3/8 c.19
 $M_y = \frac{C}{14.9} = 42$ q=16 St=1.43-3/8 c.12
 $X = \frac{C}{14.9} = 200$ q=35 St=2.09-1/4 c.15
 $X_y = \frac{C}{14.9} = 92$ q=22 St=1.43-3/8 c.19

$X = \frac{1}{9} \times 440 \times 1.20 = 58$ q=23 St=1.84-3/16 c.14
 $M = \frac{1}{11} \times 440 \times 1.20 = 58$ q=20 St=1.43-3/8 c.14

$X = \frac{1}{8} \times 440 \times 2.20 = 121$ q=41 St=2.40-1/4 c.11
 $M = \frac{1}{11} \times 440 \times 2.20 = 121$ q=34 St=2.02-1/4 c.16
 $Rafina: M = \frac{1}{11} \times 440 \times 2.20 = 121$ q=44 St=2.40-1/4 c.11
 $G = \frac{2.55}{370} = 1.06$ max 335 min 144 q=440

$X = \frac{1}{11} \times 440 \times 1.04 = 41$ q=28 St=1.47-3/16 c.11
 $X = \frac{1}{11} \times 440 \times 0.91 = 36$ q=22 St=1.43-3/8 c.10



$G = \frac{2.55}{370} = 1.06$ max 335 min 144 q=390
 $M_x = 390 \times 1.54 = 601$ q=22 St=1.43-3/8 c.19
 $M_y = \frac{C}{14.9} = 51$ q=22 St=1.43-3/8 c.20
 $X = \frac{C}{14.9} = 224$ q=37 St=2.38-1/4 c.13
 $X_y = \frac{C}{14.9} = 170$ q=32 St=1.43-3/8 c.16

$G = \frac{2.55}{370} = 1.06$ max 335 min 144 q=440
 $M_x = 440 \times 3.92 = 1725$ q=22 St=1.43-3/8 c.19
 $M_y = \frac{C}{14.9} = 51$ q=22 St=1.43-3/8 c.20
 $X = \frac{C}{14.9} = 224$ q=37 St=2.38-1/4 c.13
 $X_y = \frac{C}{14.9} = 170$ q=32 St=1.43-3/8 c.16

$G = \frac{2.55}{370} = 1.06$ max 335 min 144 q=440
 $M_x = 440 \times 3.92 = 1725$ q=22 St=1.43-3/8 c.19
 $M_y = \frac{C}{14.9} = 51$ q=22 St=1.43-3/8 c.20
 $X = \frac{C}{14.9} = 224$ q=37 St=2.38-1/4 c.13
 $X_y = \frac{C}{14.9} = 170$ q=32 St=1.43-3/8 c.16

$G = \frac{2.55}{370} = 1.06$ max 335 min 144 q=390
 $M_x = 390 \times 3.92 = 1539$ q=41 St=2.40-1/4 c.11
 $M_y = \frac{C}{14.9} = 51$ q=22 St=1.43-3/8 c.20
 $X = \frac{C}{14.9} = 224$ q=37 St=2.38-1/4 c.13
 $X_y = \frac{C}{14.9} = 170$ q=32 St=1.43-3/8 c.16

ILLEGÍVEL

ARQUITETURA MUNICIPAL DE PORTO ALEGRE
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 PROCESSO No 044/54 63





- Vigas -



$$M = \frac{1}{8} \times 600 \times 4,40^2 + 1160 \times 0,5$$

$$= 7593 + 580 = 8173$$

$$S_c = 28 \quad S_t = 4,30 = 24 \frac{1}{2} + 17 \frac{1}{2}$$

Lu = 270
Punch = 240
P = 150
Q = 600
Q = 1160

P = 1000
L = 310
L = 440
Punch = 500
P = 150
Q = 1500

2,85
b = 10
d = 30

$$M = \frac{1}{8} \times 1200 \times 3,50^2 = 1720$$

$$S_c = 21 \quad S_t = 3,50 = 3 \frac{1}{2}$$

3,00
b = 35
d = 38

$$M = \frac{1}{8} \times 1500 \times 3,50^2 = 1720$$

$$S_c = 21 \quad S_t = 3,50 = 3 \frac{1}{2}$$

1,25
b = 10
d = 33

$$M = \frac{1}{8} \times 1200 \times 2,85^2 = 1262$$

$$S_c = 23 \quad S_t = 2,45 = 24 \frac{1}{2} + 14 \frac{1}{2}$$

4,00
b = 50
d = 32

$$M = \frac{1}{8} \times 1200 \times 4,40^2 + \frac{1}{8} \times 600 \times 4,40^2 + 260 = 2475$$

$$S_c = 33 \quad S_t = 5,00 = 24 \frac{1}{2} + 14 \frac{1}{2}$$

L = 350
L = 240
P = 150
Q = 250

0,60
b = 30
d = 30

$$M = \frac{1}{8} \times 1200 \times 2,60^2 = 928$$

$$S_c = 23 \quad S_t = 2,60 = 24 \frac{1}{2} + 14$$

L = 350
L = 240
P = 150
Q = 250

- ESCADA -

$$10 = 34 \text{ lances}$$

$$d = 10 \quad M = \frac{1}{8} \times 1200 \times 1,50^2 = 485$$

$$S_c = 44 \quad S_t = 4,00 = 24 \frac{1}{2} + 16$$

Q = 1200

$$2 = 2 \text{ lances}$$

$$d = 10 \quad M = \frac{1}{8} \times 600 \times 2,20^2 = 352$$

$$S_c = 34 \quad S_t = 2,20 = 24 \frac{1}{2} + 11$$

Q = 600

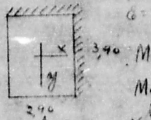


- 5 -

- 1º TETO -

- L = 103 -

- L = 1 -



$$G = \frac{390}{290} \times 1,34 \quad m = 1,34 \quad n = 1,34$$

$$M_z = \frac{4400 \times 290^2}{23,4} = 158 \quad S_c = 30 \quad S_t = 1,34$$

$$M_y = \frac{4400 \times 290^2}{23,4} = 88 \quad S_c = 23 \quad S_t = 1,34$$

$$X_c = \frac{4400}{158} = 352 \quad S_c = 44 \quad S_t = 1,34$$

$$X_y = \frac{4400}{88} = 196 \quad S_c = 34 \quad S_t = 1,34$$

- L = 1 -

$$G = \frac{220}{315} \times 0,97 \quad m = 0,97 \quad n = 0,97$$

$$M_z = \frac{4400 \times 315^2}{72,1} = 27 \quad S_c = 22 \quad S_t = 0,97 = 5 \frac{1}{2} + 20$$

$$M_y = \frac{4400 \times 315^2}{72,1} = 113 \quad S_c = 25 \quad S_t = 1,15 = 5 \frac{1}{2} + 17$$

$$X_c = \frac{4400}{27} = 191 \quad S_c = 34 \quad S_t = 2,00 = 14 \text{ c. 15}$$

$$X_y = \frac{4400}{113} = 241 \quad S_c = 34 \quad S_t = 2,54 = 14 \text{ c. 12}$$

$$G = \frac{275}{455} \times 1,18 \quad m = 1,18 \quad n = 1,18$$

$$M_z = \frac{4400 \times 455^2}{12,1} = 7 \quad S_c = 16 \quad S_t = 1,18 = 5 \frac{1}{2} + 20$$

$$M_y = \frac{4400 \times 455^2}{12,1} = 20 \quad S_c = 17 \quad S_t = 1,18 = 5 \frac{1}{2} + 17$$

$$X_c = \frac{4400}{7} = 114 \quad S_c = 25 \quad S_t = 1,18 = 5 \frac{1}{2} + 17$$

$$X_y = \frac{4400}{20} = 40 \quad S_c = 14 \quad S_t = 0,40 = 3 \frac{1}{2} + 20$$

$$G = \frac{390}{255} \times 1,32 \quad m = 1,32 \quad n = 1,32$$

$$M_z = \frac{4400 \times 255^2}{25,1} = 134 \quad S_c = 27 \quad S_t = 1,32 = 5 \frac{1}{2} + 16$$

$$M_y = \frac{4400 \times 255^2}{25,1} = 77 \quad S_c = 22 \quad S_t = 0,94 = 5 \frac{1}{2} + 16$$

$$X_c = \frac{4400}{134} = 299 \quad S_c = 44 \quad S_t = 0,94 = 5 \frac{1}{2} + 16$$

$$X_y = \frac{4400}{77} = 171 \quad S_c = 32 \quad S_t = 1,78 = 14 \text{ c. 11}$$

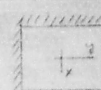
L = 103
L = 103

ILEGÍVEL



- 6 -

- 1 -



$$G = \frac{220}{215} \times 1,17 \quad m = 1,17 \quad n = 1,17$$

$$M_z = \frac{4400 \times 215^2}{21,5} = 51 \quad S_c = 16 \quad S_t = 1,17$$

$$M_y = \frac{4400 \times 215^2}{21,5} = 27 \quad S_c = 23 \quad S_t = 1,17$$

$$X_c = \frac{4400}{51} = 104 \quad S_c = 44 \quad S_t = 1,17$$

$$X_y = \frac{4400}{27} = 81 \quad S_c = 34 \quad S_t = 1,17$$

$$X_c = \frac{4400}{104} = 104 \quad S_c = 30 \quad S_t = 1,17 = 5 \frac{1}{2} + 16$$

$$M_z = \frac{4400 \times 215^2}{21,5} = 104 \quad S_c = 24 \quad S_t = 1,17 = 5 \frac{1}{2} + 16$$

$$G = \frac{275}{455} \times 1,18 \quad m = 1,18 \quad n = 1,18$$

$$M_z = \frac{4400 \times 455^2}{12,1} = 25 \quad S_c = 20 \quad S_t = 1,18 = 5 \frac{1}{2} + 20$$

$$M_y = \frac{4400 \times 455^2}{12,1} = 17 \quad S_c = 25 \quad S_t = 1,18 = 5 \frac{1}{2} + 17$$

$$X_c = \frac{4400}{25} = 151 \quad S_c = 33 \quad S_t = 1,18 = 5 \frac{1}{2} + 16$$

$$X_y = \frac{4400}{17} = 118 \quad S_c = 25 \quad S_t = 1,18 = 5 \frac{1}{2} + 17$$

- Vigas -

$$M = \frac{1}{8} \times 1200 \times 2,85^2 = 117$$

$$S_c = 44 \quad S_t = 2,85 = 24 \frac{1}{2} + 14 \frac{1}{2}$$

$$M = \frac{1}{8} \times 1200 \times 3,50^2 = 3120$$

$$S_c = 32 \quad S_t = 3,50 = 24 \frac{1}{2} + 16$$

$$H = \frac{100}{6245} = 0,016$$

$$S_c = 36 \quad S_t = 3,50 = 24 \frac{1}{2} + 16$$

$$M = \frac{1}{8} \times 1200 \times 3,50^2 = 912$$

$$S_c = 20 \quad S_t = 3,50 = 24 \frac{1}{2} + 16$$

PREFEITURA MUNICIPAL DE PORTO ALEGRE
CD - UNIDADE DE MICROFILMAGEM
044/54

64
CREA - 273



251

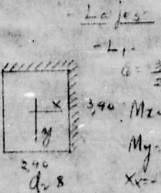
- Vigas -
- V₁ -

$M = \frac{1}{8} \times 1355 \times 2,85^2 = 1375$
 $G = 32 \text{ St} = 3,56 - 3 \text{ c. } 1/2$

$L = 270$
 $P = 240$
 $R = 500$
 $Q = 1355$

EWALDO BOECKEL
Engenheiro Civil
RUA OLAVO BILAC, 251
PORTO ALEGRE

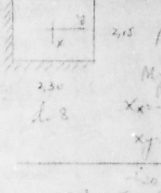
- 5 -
- L₁ -



$M = \frac{1}{8} \times 440 \times 2,90^2 = 158$
 $G = 23 \text{ St} = 4,84 - 5 \text{ c. } 20$
 $M = \frac{1}{8} \times 440 \times 2,90^2 = 158$
 $G = 23 \text{ St} = 4,84 - 5 \text{ c. } 20$

EWALDO BOECKEL
Engenheiro Civil
RUA OLAVO BILAC, 251
PORTO ALEGRE

- 6 -
- L₁ -



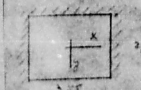
$M = \frac{1}{8} \times 440 \times 2,90^2 = 158$
 $G = 23 \text{ St} = 4,84 - 5 \text{ c. } 20$
 $M = \frac{1}{8} \times 440 \times 2,90^2 = 158$
 $G = 23 \text{ St} = 4,84 - 5 \text{ c. } 20$

044/54

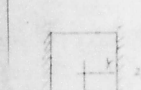
- V₂ -

$M = \frac{1}{8} \times 1355 \times 2,85^2 = 1375$
 $G = 32 \text{ St} = 3,56 - 3 \text{ c. } 1/2$

$L = 270$
 $P = 240$
 $R = 500$
 $Q = 1355$



$M = \frac{1}{8} \times 440 \times 2,90^2 = 158$
 $G = 23 \text{ St} = 4,84 - 5 \text{ c. } 20$
 $M = \frac{1}{8} \times 440 \times 2,90^2 = 158$
 $G = 23 \text{ St} = 4,84 - 5 \text{ c. } 20$



$M = \frac{1}{8} \times 440 \times 2,90^2 = 158$
 $G = 23 \text{ St} = 4,84 - 5 \text{ c. } 20$
 $M = \frac{1}{8} \times 440 \times 2,90^2 = 158$
 $G = 23 \text{ St} = 4,84 - 5 \text{ c. } 20$

- V₃ -

$M = \frac{1}{8} \times 1355 \times 2,85^2 = 1375$
 $G = 32 \text{ St} = 3,56 - 3 \text{ c. } 1/2$

$L = 270$
 $P = 240$
 $R = 500$
 $Q = 1355$



$M = \frac{1}{8} \times 440 \times 2,90^2 = 158$
 $G = 23 \text{ St} = 4,84 - 5 \text{ c. } 20$
 $M = \frac{1}{8} \times 440 \times 2,90^2 = 158$
 $G = 23 \text{ St} = 4,84 - 5 \text{ c. } 20$

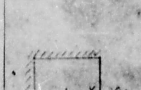


$M = \frac{1}{8} \times 440 \times 2,90^2 = 158$
 $G = 23 \text{ St} = 4,84 - 5 \text{ c. } 20$
 $M = \frac{1}{8} \times 440 \times 2,90^2 = 158$
 $G = 23 \text{ St} = 4,84 - 5 \text{ c. } 20$

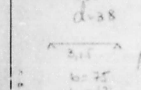
- V₄ -

$M = \frac{1}{8} \times 1355 \times 2,85^2 = 1375$
 $G = 32 \text{ St} = 3,56 - 3 \text{ c. } 1/2$

$L = 270$
 $P = 240$
 $R = 500$
 $Q = 1355$



$M = \frac{1}{8} \times 440 \times 2,90^2 = 158$
 $G = 23 \text{ St} = 4,84 - 5 \text{ c. } 20$
 $M = \frac{1}{8} \times 440 \times 2,90^2 = 158$
 $G = 23 \text{ St} = 4,84 - 5 \text{ c. } 20$



$M = \frac{1}{8} \times 440 \times 2,90^2 = 158$
 $G = 23 \text{ St} = 4,84 - 5 \text{ c. } 20$
 $M = \frac{1}{8} \times 440 \times 2,90^2 = 158$
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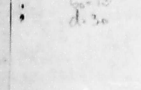
- ESCADA -

$M = \frac{1}{8} \times 1355 \times 2,85^2 = 1375$
 $G = 32 \text{ St} = 3,56 - 3 \text{ c. } 1/2$

$L = 270$
 $P = 240$
 $R = 500$
 $Q = 1355$



$M = \frac{1}{8} \times 440 \times 2,90^2 = 158$
 $G = 23 \text{ St} = 4,84 - 5 \text{ c. } 20$
 $M = \frac{1}{8} \times 440 \times 2,90^2 = 158$
 $G = 23 \text{ St} = 4,84 - 5 \text{ c. } 20$



$M = \frac{1}{8} \times 440 \times 2,90^2 = 158$
 $G = 23 \text{ St} = 4,84 - 5 \text{ c. } 20$
 $M = \frac{1}{8} \times 440 \times 2,90^2 = 158$
 $G = 23 \text{ St} = 4,84 - 5 \text{ c. } 20$

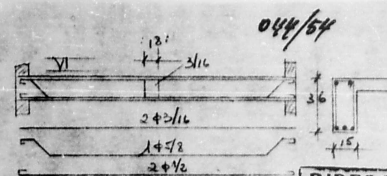
ILEGÍVEL

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044/54

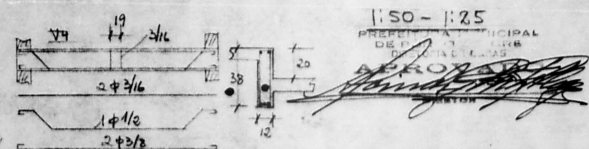
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CREA - 2734

12

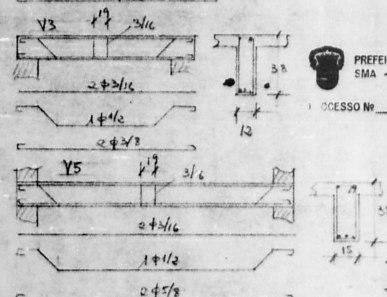
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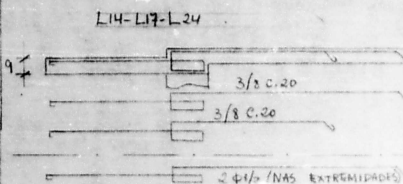
EDIFÍCIO DE APARTAMENTOS
RUA VISCONDE DO HERVAL
2º TÉTO



 PREFEITURA MUNICIPAL DE PORTO ALEGRE
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PROCESSO Nº 044/34 65



ILEGÍVEL



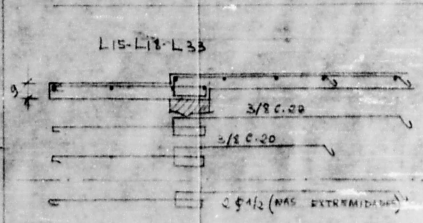
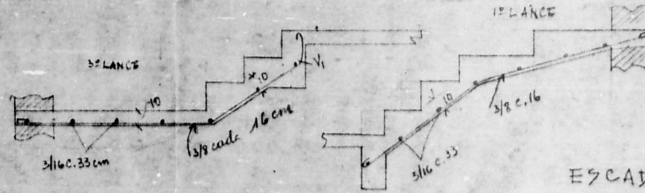
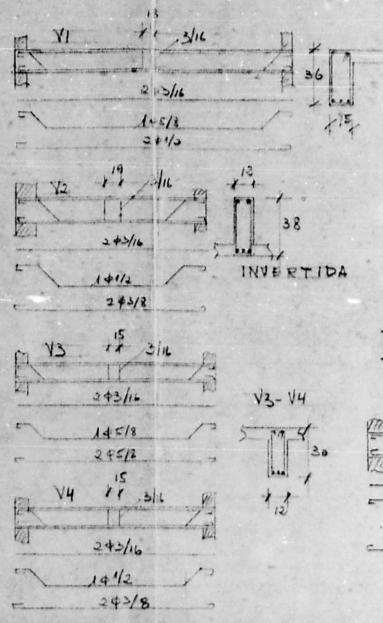
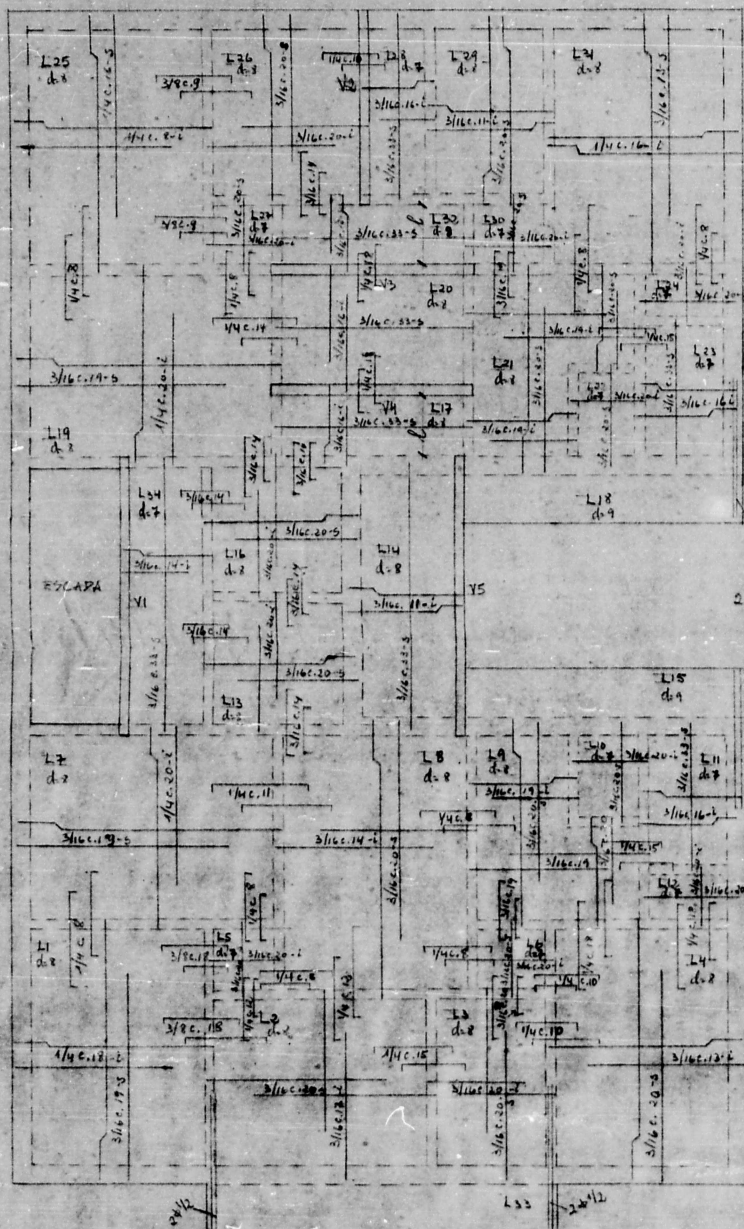
Enclosed
is
CREA-2734

ORIS- L= FERRO POSITIVO INFERIOR
S= " " SUPERIOR
LAJES REBAIXADA?
L13-L15= 20 cm
L14-L17-L18-L24= 5 cm



2

16



CBS- L: FERRO. POSITIVO INFERIOR.
S: " " SUPERIOR.
LAJES REBAIXADAS:
L10-L29: 20cm
L14-L15-L18-L23: 5cm.

