


ESTADO DO RIO GRANDE DO SUL
PREFEITURA MUNICIPAL DE DILERMANDO DE AGUIAR

Av. Ibicuí, 1.002 - CEP 97180-000 - Fones: (55) 3612.4246
www.dilermandodeaguiar.rs.gov.br

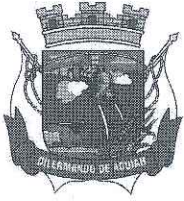


PROJETO ESTRUTURAL – PLANTAS E DETALHAMENTOS

PROJETO ESTRUTURAL


Jerson Jaguarassu Lopes Aquistapasse
Engº Civil - CREA RS 088107
Matr. 1119
M. Dilermundo de Aguiar

"Doe órgãos, Doe Sangue: Salve Vidas".



PROJETO ESTRUTURAL DETALHAMENTOS

PLANTAS CONSTRUTIVAS

EST 1/6: PLANTA LOCAÇÃO ESTACAS

EST 2/6: TABELA DE CARGAS ESTACAS

EST 3/6: PLANTA FORMAS VIGAS BALDRAME

EST 4/6: PLANTA FORMAS LAJE FORRO PAVIM. TÉRREO

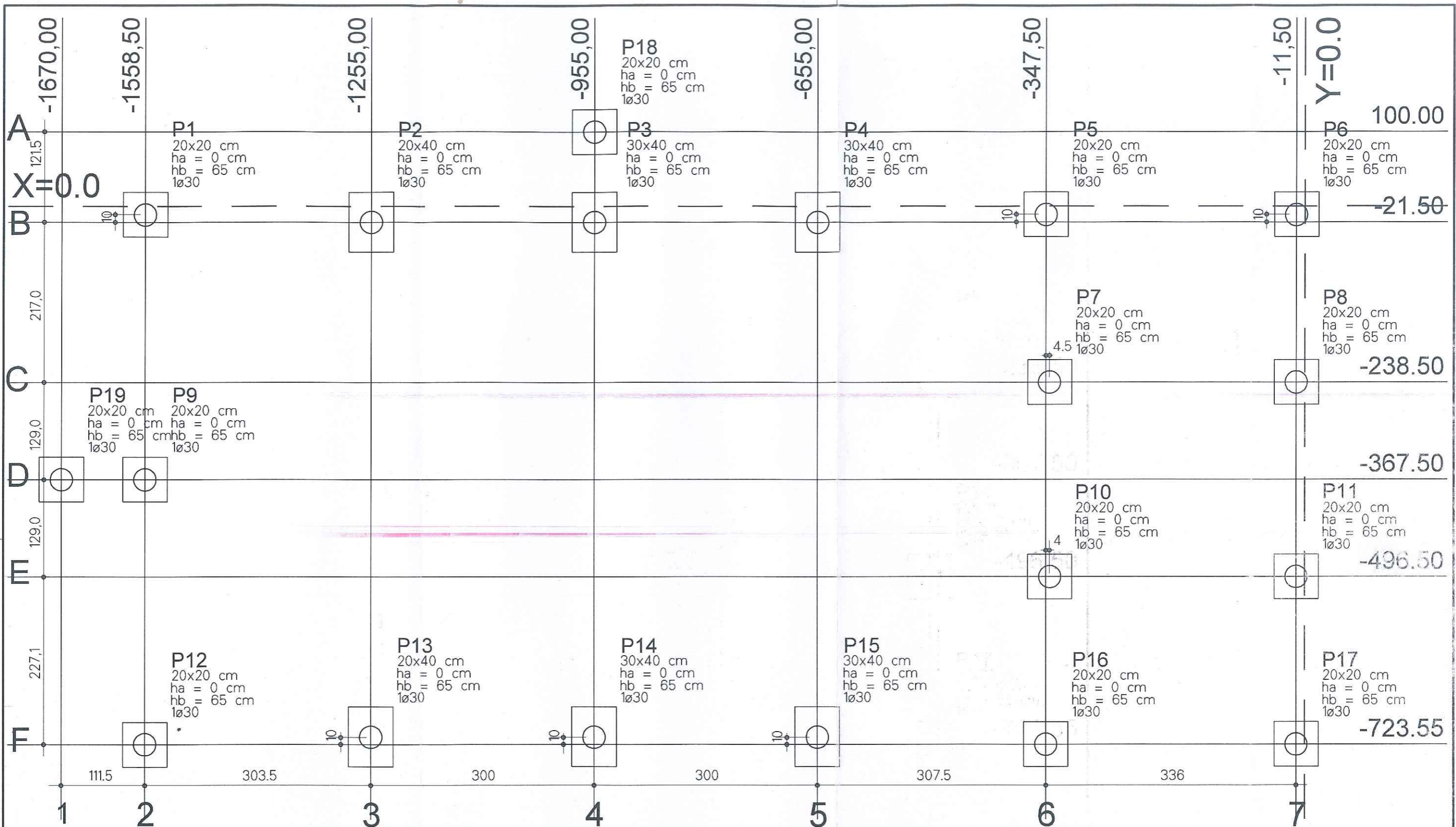
**EST 5/6: ARMADURAS POSITIVAS
LAJES FORRO PAVIMENTO TÉRREO**

**EST 6/6: ARMADURAS NEGATIVAS
LAJES FORRO PAVIMENTO TÉRREO**

**EST 7 : PLANTA FORMAS VIGAS CINTAMENTO
E RESERVATÓRIO SUPERIOR
(DETALHAMENTOS CINTAS E PILARETES)**

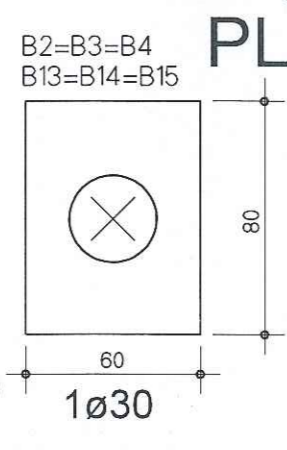
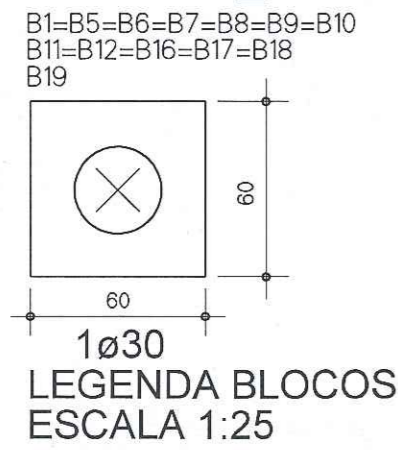

Jerson Jaguarassu Lopes Aquistapiano
Engº Civil - CREA RS 088107
Matr. 1119

P. M. Dilermando de Aguiar



PLANTA LOCAÇÃO ESTACAS

ESCALA 1:50



PRANCHA
EST 1/6

PREFEITURA MUNICIPAL DE DILERMANDO DE AGUIAR
SECRETARIA DE SAÚDE - UNIDADE BÁSICA DE SAÚDE
LOCAL: AVENIDA IBICUI, Nº 998 - BAIRRO CENTRO

PROJETO - ESTRUTURAL
PLANTA LOCAÇÃO ESTACAS

Ederson Jaguarassú Lopes Aquistapasse
EDERSON JAGUARASSÚ
LOPES AQUISTAPASSE
ENGº CIVIL - CREA RS088107

José Claiton Sauzem Ilha
JOSÉ CLAITON SAUZEM ILHA
PREFEITO MUNICIPAL

DESENHO: E.J.L.A. ESCALA: 1/50 DATA: SET/2022

PILAR					FUNDAÇÃO				BLOCO		
NOME	SEÇÃO (cm)	X (cm)	Y (cm)	CARGA (tf)	LADO (cm)	LADO H (cm)	h0/hA (cm)	h1/hb (cm)	ne	de (cm)	ca (cm)
P1	20X20	-1558,50	-11,50	5,2	60	60	0	65	1	30	-50
P2	20X40	-1255,00	-21,50	16,1	60	80	0	65	1	30	-50
P3	30X40	-955,00	-21,50	19,2	60	80	0	65	1	30	-50
P4	30X40	-655,00	-21,50	21,9	60	80	0	65	1	30	-50
P5	20X20	-347,50	-11,50	10,4	60	60	0	65	1	30	-50
P6	20X20	-11,50	-11,50	6,4	60	60	0	65	1	30	-50
P7	20X20	-343,00	-238,80	19,5	60	60	0	65	1	30	-50
P8	20X20	-11,50	-236,80	18,1	60	60	0	65	1	30	-50
P9	20X20	-1558,50	367,50	12,0	60	60	0	65	1	30	-50
P10	20X20	-343,50	-498,20	19,6	60	60	0	65	1	30	-50
P11	20X20	-11,50	-498,20	18,1	60	60	0	65	1	30	-50
P12	20X20	-1558,50	-723,55	6,8	60	60	0	65	1	30	-50
P13	20X40	-1255,00	-713,55	20,2	60	80	0	65	1	30	-50
P14	30X40	-955,00	-713,55	22,0	60	80	0	65	1	30	-50
P15	30X40	-655,00	713,55	22,0	60	80	0	65	1	30	-50
P16	20X20	-347,50	723,55	10,3	60	60	0	65	1	30	-50
P17	20X20	-11,50	-723,55	6,4	60	60	0	65	1	30	-50
P18	20X20	-955,00	100,00	2,4	60	60	0	65	1	30	-50
P19	20X20	-1670,00	-367,50	0,8	60	60	0	65	1	30	-50

ESTACAS	
de (cm)	QUANTIDADE
30	19

TABELA DE CARGAS ESTACAS



EST
PRANCHA
2/6

PREFEITURA MUNICIPAL DE DILERMANDO DE AGUIAR
SECRETARIA DE SAÚDE - UNIDADE BÁSICA DE SAÚDE
LOCAL: AVENIDA IBICUI, Nº 998 - BAIRRO CENTRO

PROJETO - ESTRUTURAL
TABELA DE CARGAS ESTACAS

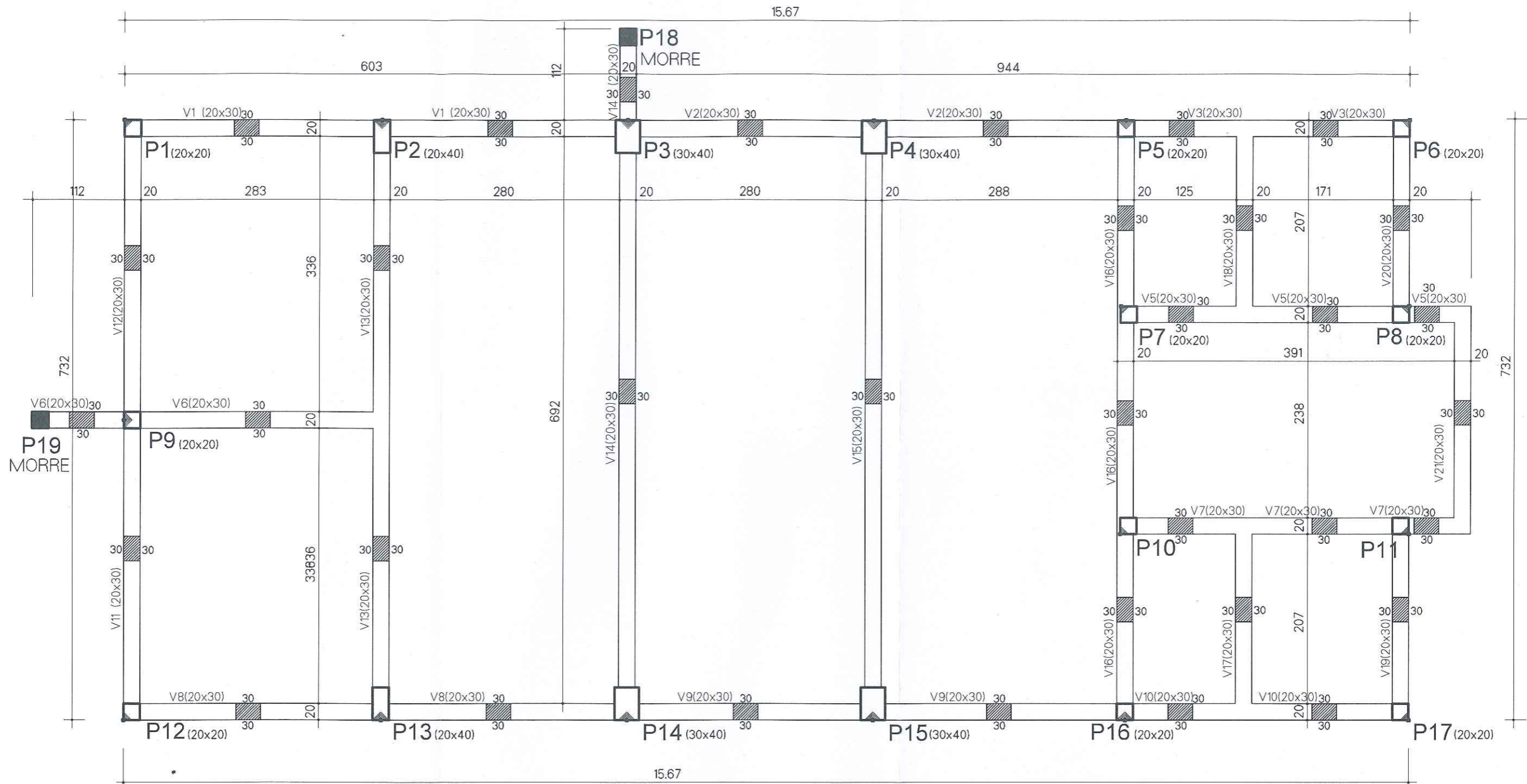

EDERSON JAGUARASSÚ
LOPES AQUISTAPASSE
ENGº CIVIL - CREA RS088107


JOSÉ CLAITON SAUZEM ILHA
PREFEITO MUNICIPAL

DESENHO: E.J.L.A.

ESCALA: 1/50

DATA: SET/2022

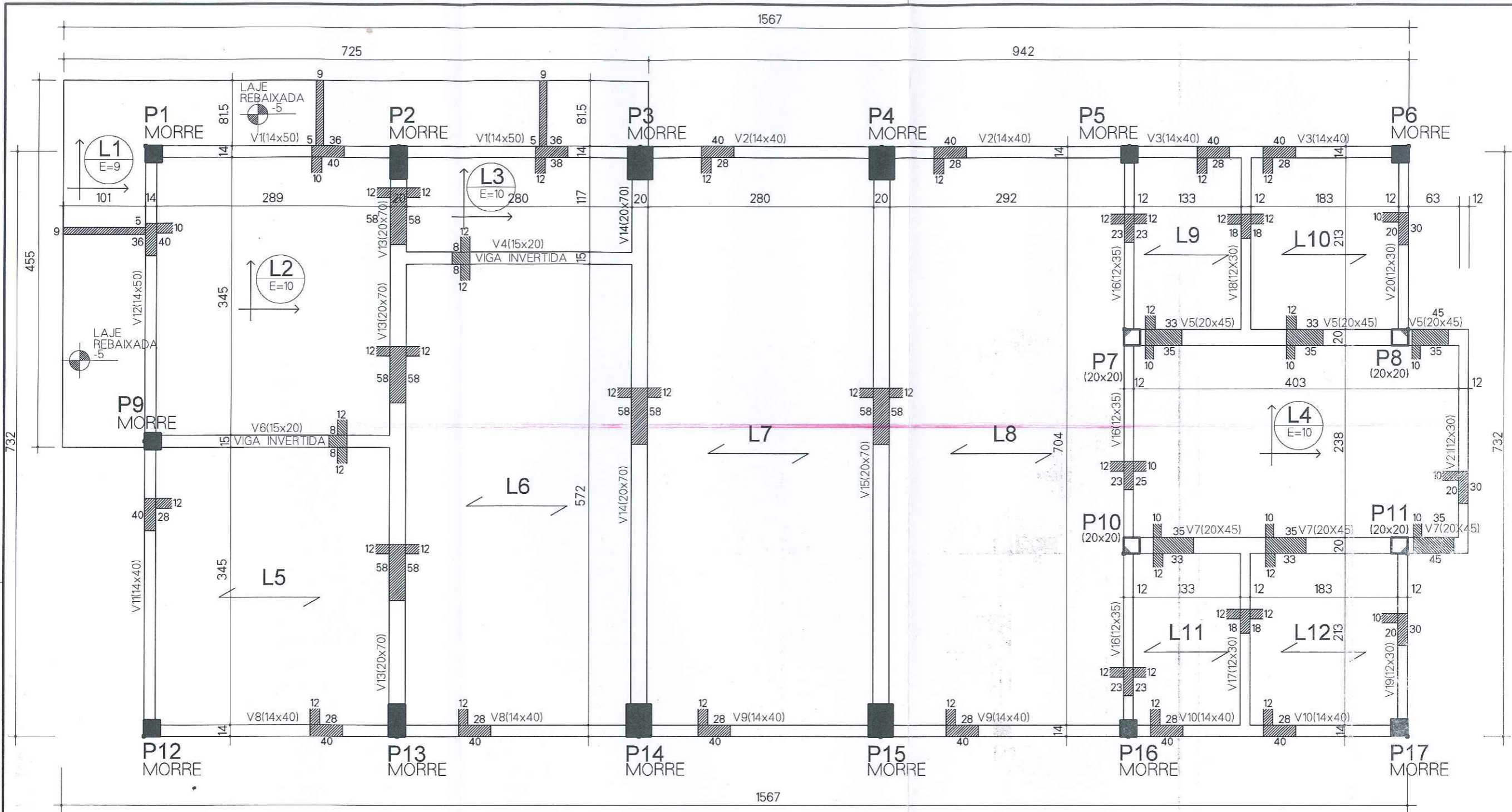


PLANTA FORMAS VIGAS BALDRAME
ESCALA 1:50



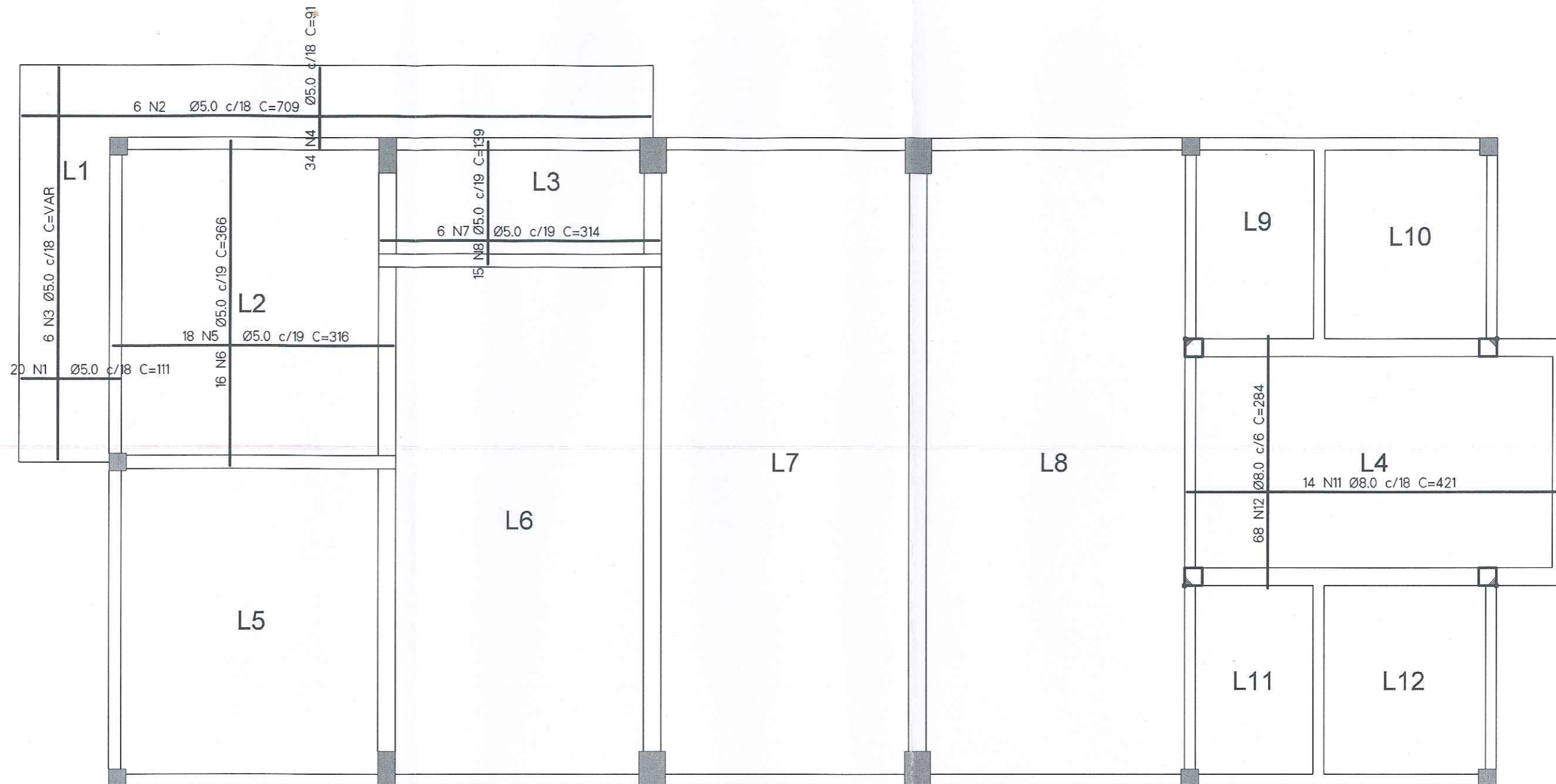
PRANCHA
EST 3/6

PREFEITURA MUNICIPAL DE DILERMANDO DE AGUIAR SECRETARIA DE SAÚDE - UNIDADE BÁSICA DE SAÚDE LOCAL: AVENIDA IBICUI, Nº 998 - BAIRRO CENTRO	
PROJETO - ESTRUTURAL PLANTA FORMAS VIGAS BALDRAME	
 EDERSON JAGUARASSU LOPES AQUISTAPASSE ENGº CIVIL - CREA RS088107	 JOSÉ CLAITON SAUZEM ILHA PREFEITO MUNICIPAL
DESENHO: E.J.L.A.	ESCALA: 1/50
DATA: SET/2022	



PLANTA FORMAS LAJES FORRO PAVIMENTO TÉRREO
ESCALA 1:50

 PRANCHA EST 4/6	PREFEITURA MUNICIPAL DE DILERMUNDO DE AGUIAR SECRETARIA DE SAÚDE - UNIDADE BÁSICA DE SAÚDE <small>LOCAL: AVENIDA IBICUI, Nº 998 - BAIRRO CENTRO</small>	
	PROJETO - ESTRUTURAL PLANTA FORMAS LAJES FORRO PAVIMENTO TÉRREO	
	 EDERSON JAGUARASSÚ LOPES AQUISTAPASSE <small>ENGº CIVIL - CREA RS088107</small>	 JOSÉ CLAITON SAUZEM ILHA <small>PREFEITO MUNICIPAL</small>
	<small>DESENHO: E.J.L.A.</small>	<small>ESCALA: 1/50</small>



ARMADURAS POSITIVAS LAJES FORRO PAVIMENTO TÉRREO
 ESCALA 1:50



EST
 PRANCHA
 5/6

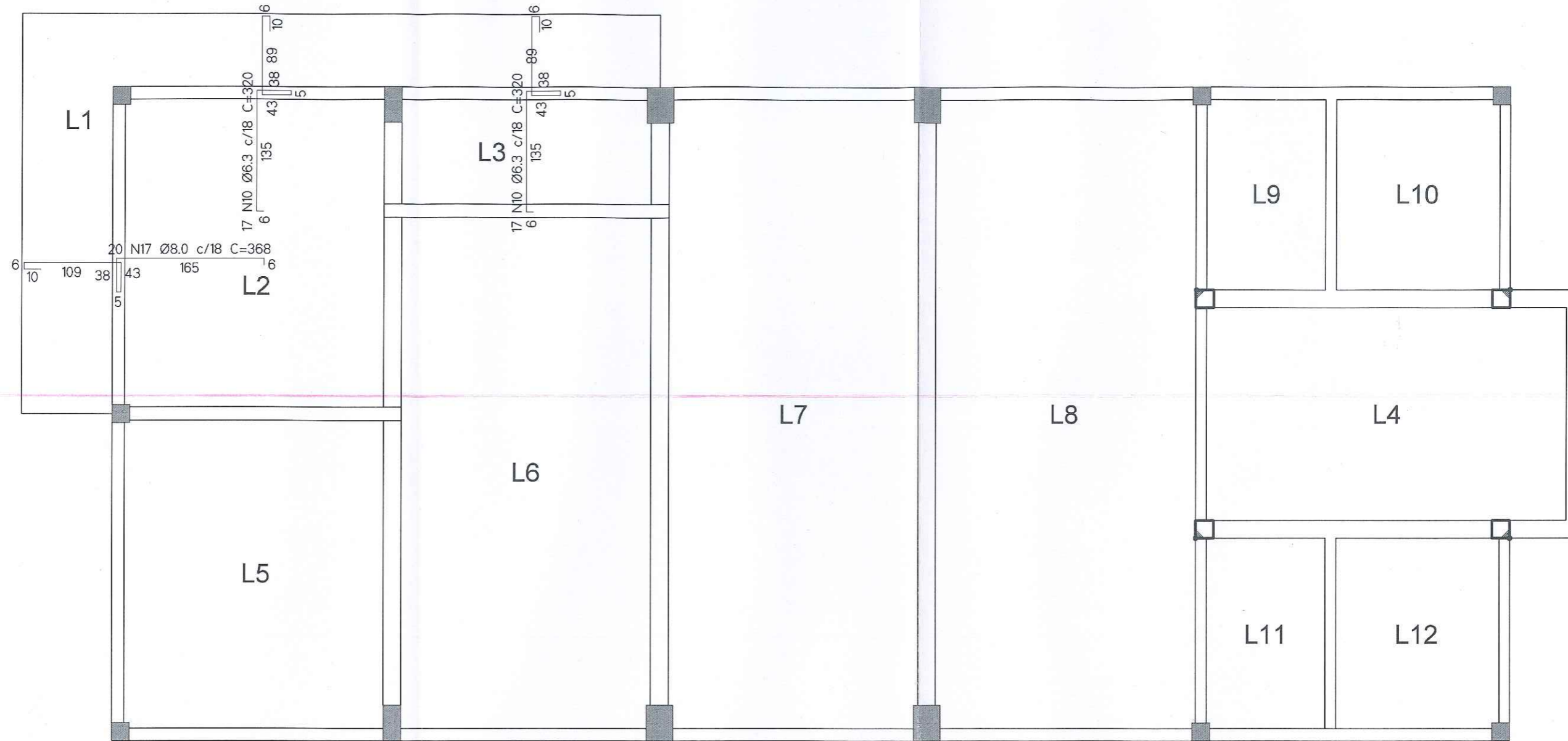
PREFEITURA MUNICIPAL DE DILERMUNDO DE AGUIAR
 SECRETARIA DE SAÚDE - UNIDADE BÁSICA DE SAÚDE
 LOCAL: AVENIDA IBICUI, Nº 998 - BAIRRO CENTRO

PROJETO - ESTRUTURAL
 ARMADURAS POSITIVAS LAJES FORRO PAV. TÉRREO

Ederson Jaguarassú
 EDERSON JAGUARASSÚ
 LOPES AQUISTAPASSE
 ENGº CIVIL - CREA RS088107

José Claiton Sauzem Ilha
 JOSÉ CLAITON SAUZEM ILHA
 PREFEITO MUNICIPAL

DESENHO: E.J.L.A. ESCALA: 1/50 DATA: SET/2022



ARMADURAS NEGATIVAS LAJES FORRO PAVIMENTO TÉRREO
 ESCALA 1:50



EST PRANCHA
 6/6

PREFEITURA MUNICIPAL DE DILERMANDO DE AGUIAR
 SECRETARIA DE SAÚDE - UNIDADE BÁSICA DE SAÚDE
 LOCAL: AVENIDA IBICUI, Nº 998 - BAIRRO CENTRO
PROJETO - ESTRUTURAL
 ARMADURAS NEGATIVAS LAJES FORRO PAV. TÉRREO

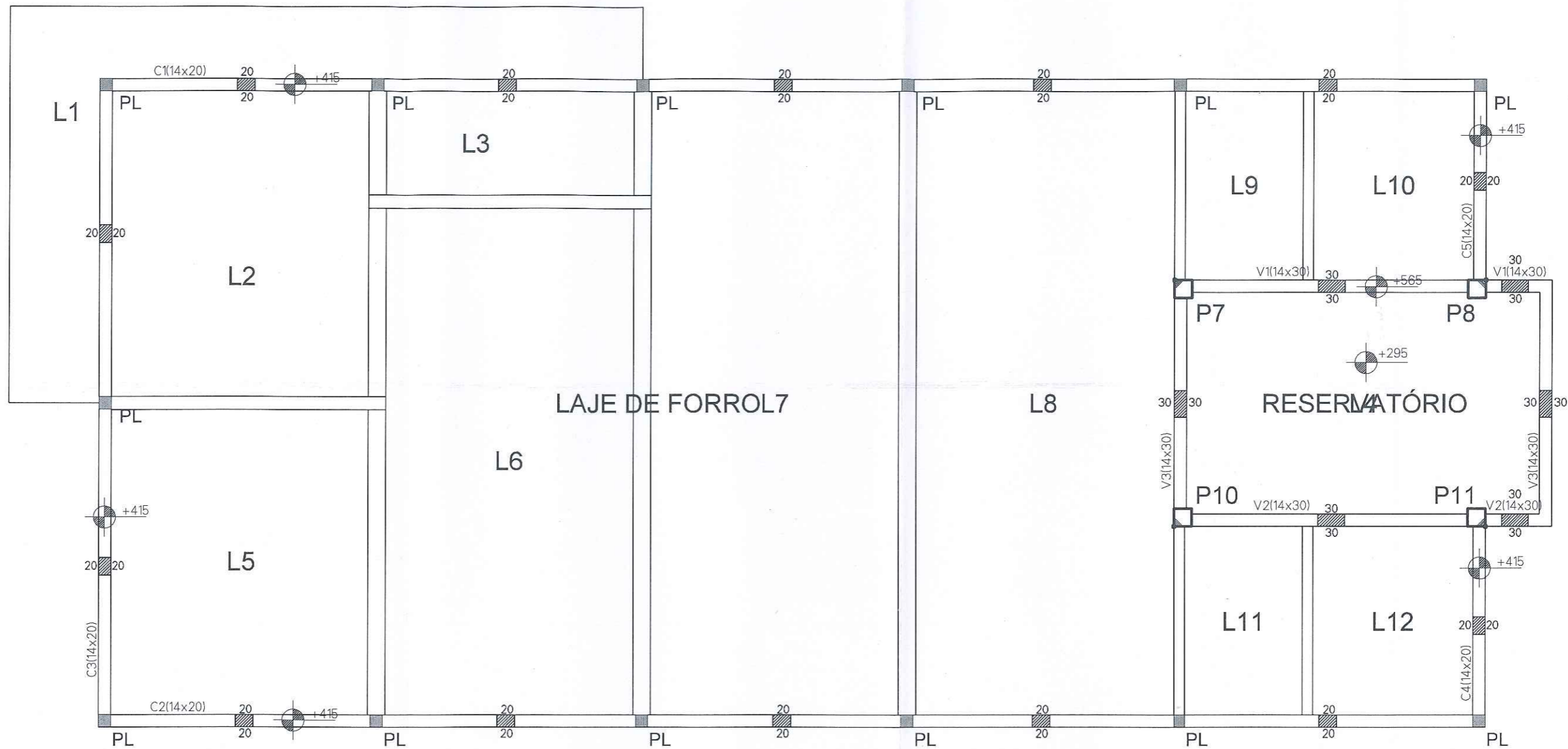
[Signature]
 EDERSON JAGUARASSÚ
 LOPES AQUISTAPASSE
 ENGº CIVIL - CREA RS088107

[Signature]
 JOSÉ CLAITON SAUZEM ILHA
 PREFEITO MUNICIPAL

DESENHO: E.J.L.A.

ESCALA: 1/50

DATA: SET/2022

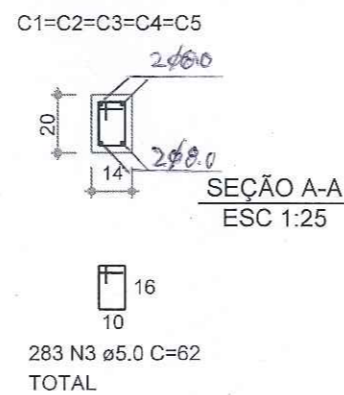


**PLATIBANDA - PLANTA FORMAS VIGAS CINTAMENTO
 DETALHAMENTOS PILARETES / VIGAS
 ESCALA 1:50**

PILARETES (13 UNIDADES)



VIGAS CINTAMENTO



**PRANCHA
7**

PREFEITURA MUNICIPAL DE DILERMANDO DE AGUIAR SECRETARIA DE SAÚDE - UNIDADE BÁSICA DE SAÚDE LOCAL: AVENIDA IBICUI, Nº 998 - BAIRRO CENTRO		
PROJETO - ESTRUTURAL PLANTA FORMAS VIGAS CINTAMENTO E RES.SUPERIOR		
 EDERSON JAGUARASSÚ LOPES AQUISTAPASSE ENGº CIVIL - CREA RS088107	 JOSÉ CLAITON SAUZEM ILHA PREFEITO MUNICIPAL	
DESENHO: E.J.L.A.	ESCALA: 1/50	DATA: SET/2022



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PROJETO ESTRUTURAL - DETALHAMENTOS

DETALHAMENTOS

BLOCOS DE FUNDAÇÕES – PILARES – VIGAS


Ederson Jaguarassa Lopes Aquistapasse
Engº Civil - CREA RS 088107
Matr. 1119
P. M. Dilermando de Aguiar

"Doe órgãos, Doe Sangue: Salve Vidas".




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BLOCOS DE FUNDAÇÕES


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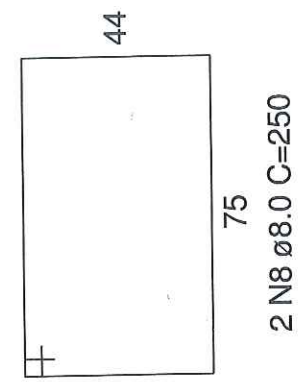
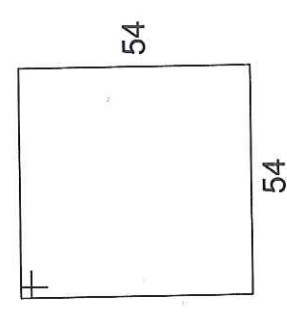
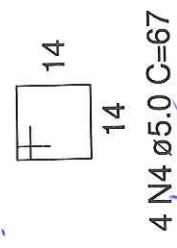
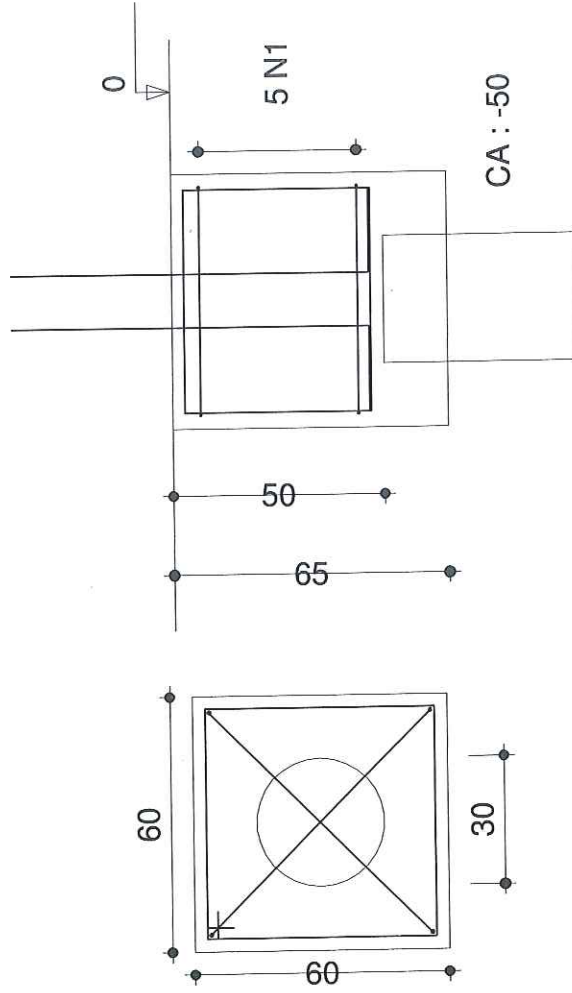
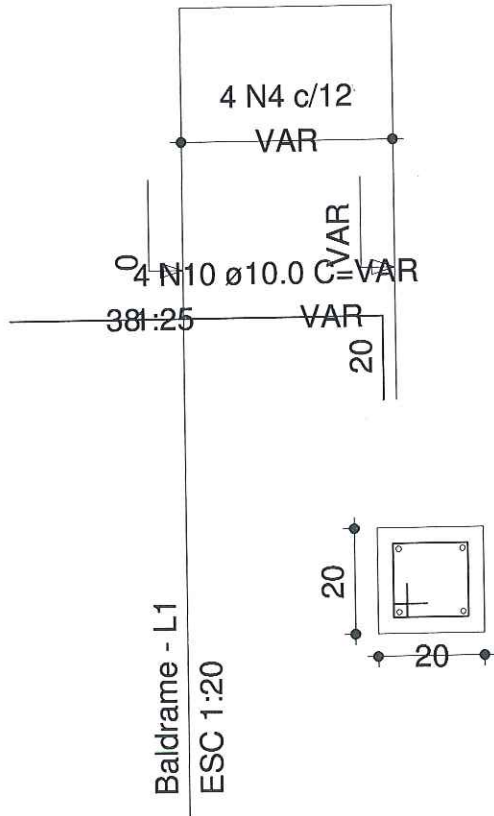
"Doe órgãos, Doe Sangue: Salve Vidas".

B11
1Ø30

Corte
ESC 1:25

Planta
ESC 1:25

P1=P5=P6=P7=P8=P9=P10=P11=P16=P17



Ederson Jaguarassu Lopes Aquistapasse
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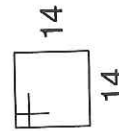
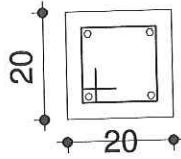
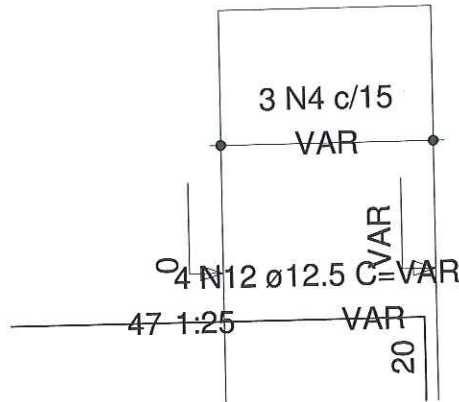
B12
1Ø30

Planta

ESC 1:25

Corte

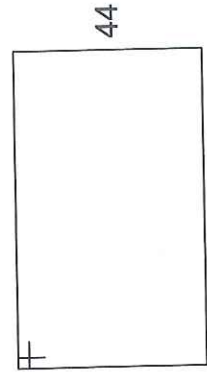
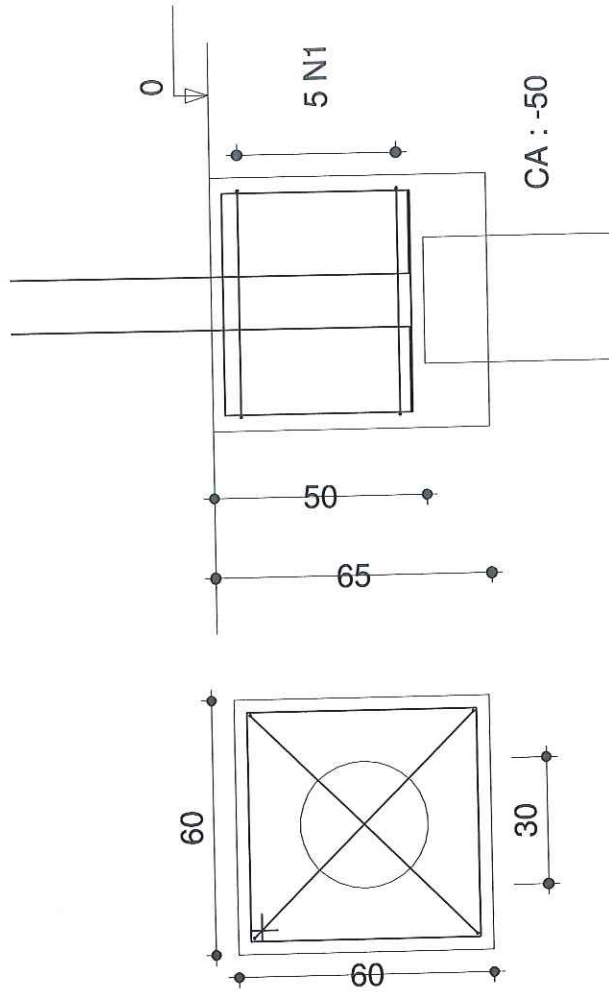
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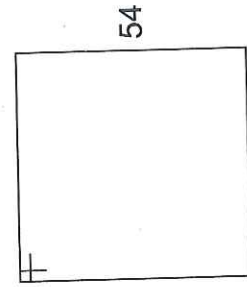
3 N4 Ø5.0 C=67

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Engº Civil - CREA RS 088107
Matr. 1119

P. M. Dilermando de Aguiar



2 N2 Ø5.0 C=249

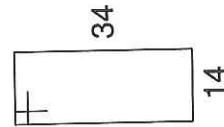
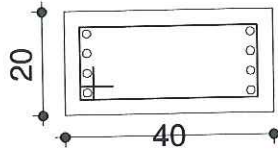
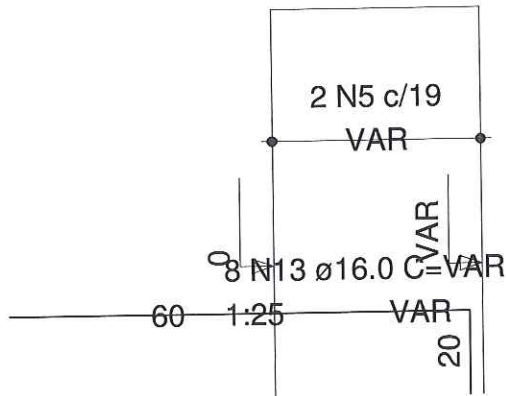


5 N1 Ø5.0 C=227

P2=P13

Baldrame - L1

ESC 1:20



2 N5 ϕ 5.0 C=107

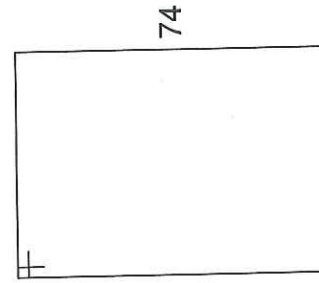
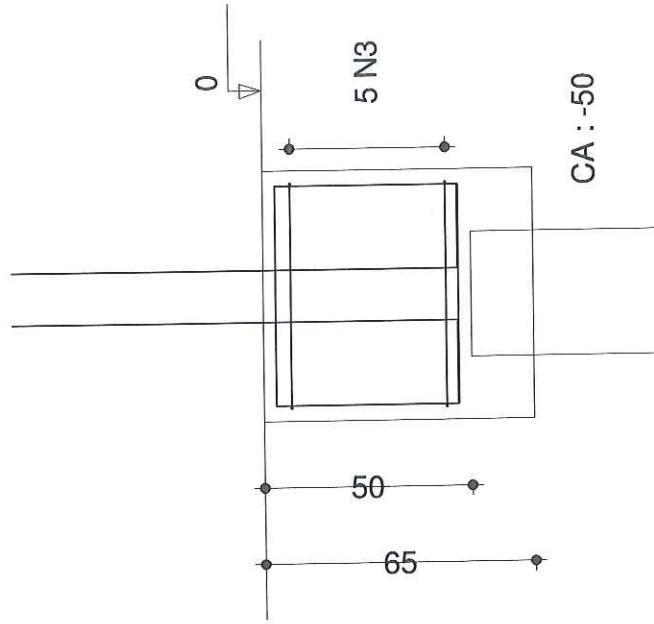
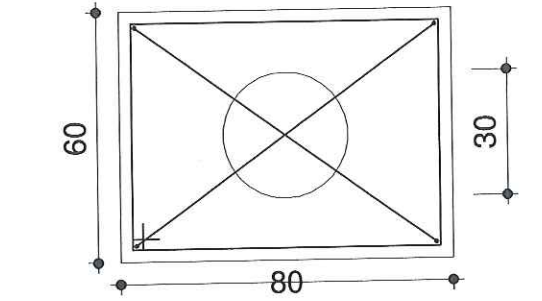
Ederson Jaguarassu Lopes Aquistapasse
Engº Civil - CREA RS 088107
Matr. 1119
P. M. Dilermando de Aguiar

B13
1 ϕ 30

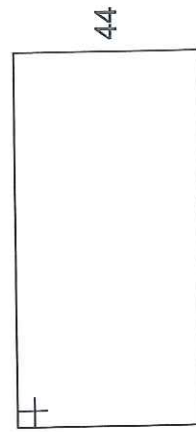
Planta

ESC 1:25

Corte
ESC 1:25



5 N3 ϕ 5.0 C=267

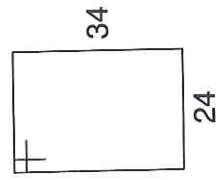
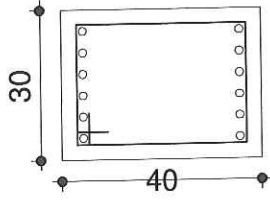
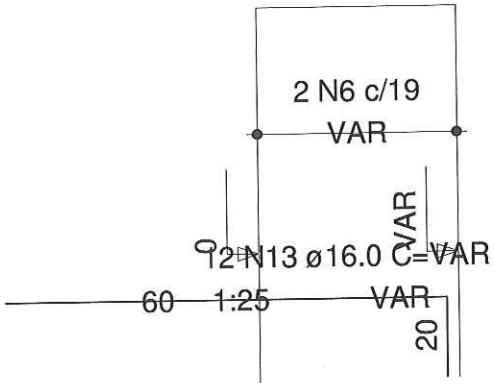


2 N9 ϕ 8.0 C=280

P3=P14

Baldrame - L1

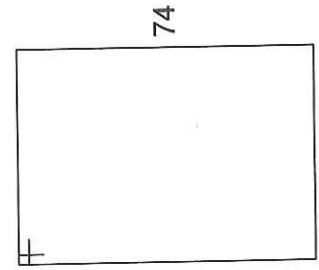
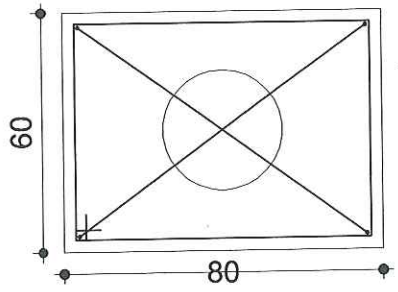
ESC 1:20



2 N6 ø5.0 C=127

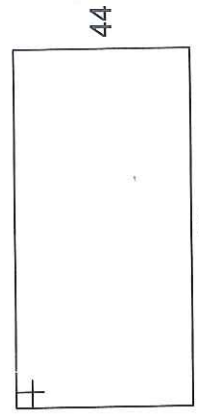
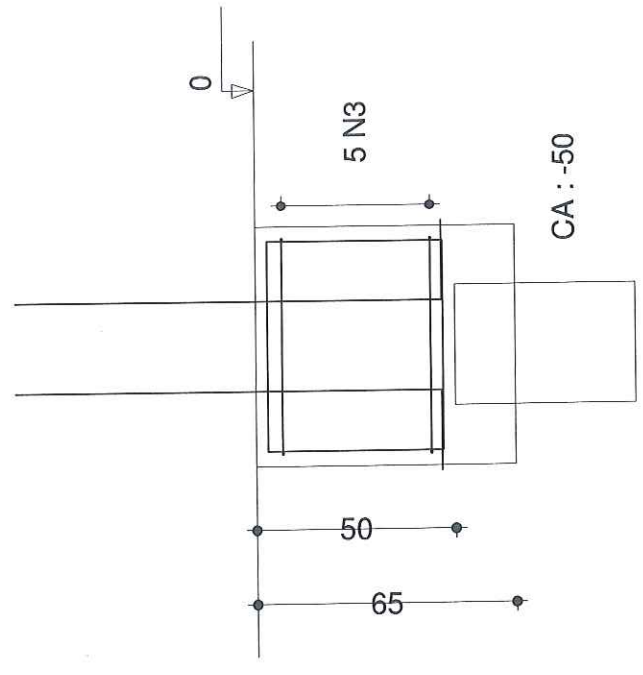
B14
1ø30

Planta
ESC 1:25



5 N3 ø5.0 C=267

Corte
ESC 1:25



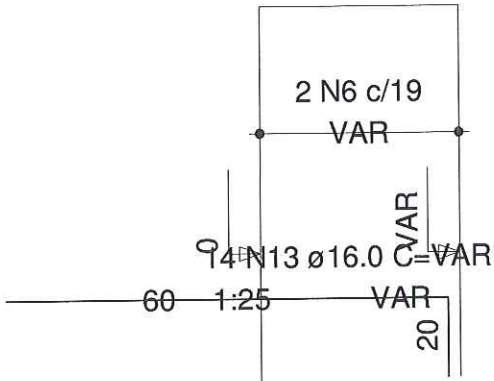
2 N9 ø8.0 C=280

Ederson Jaguarassu Lopes Aquistapasse
 Engº Civil - CREA RS 088107
 Matr. 1119
 P. M. Dilermando de Aguiar

P4=P15

Baldrame - L1

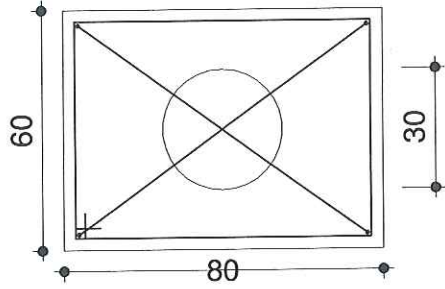
ESC 1:20



B15
1ø30

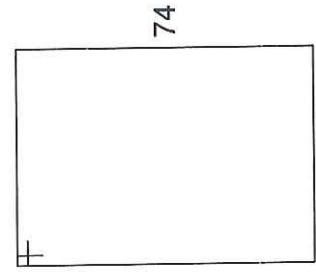
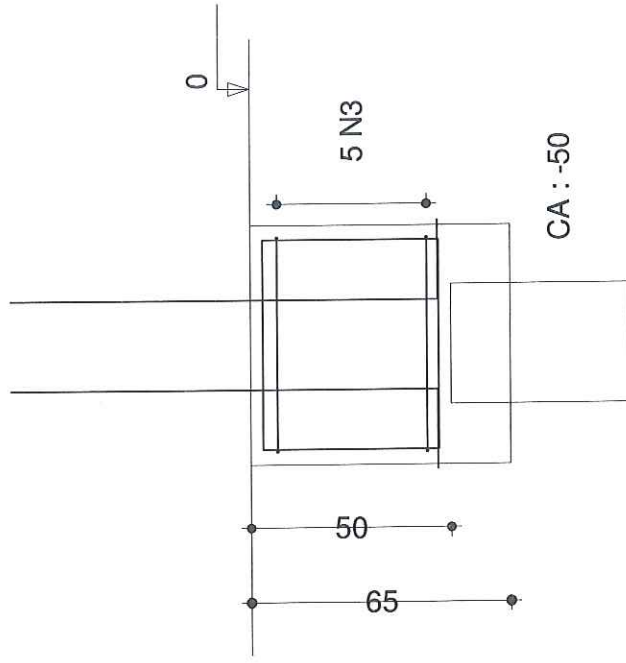
Planta

ESC 1:25



Corte

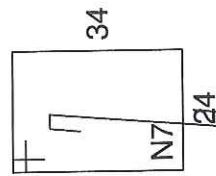
ESC 1:25



5 N3 ø5.0 C=267

54

74



2 N6 ø5.0 C=127

2 N7 ø5.0 C=49

Ederson Jaguarassu Lopes Aquistapasse
Engº Civil - CREA RS 088107
Matr. 1119

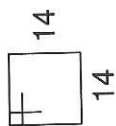
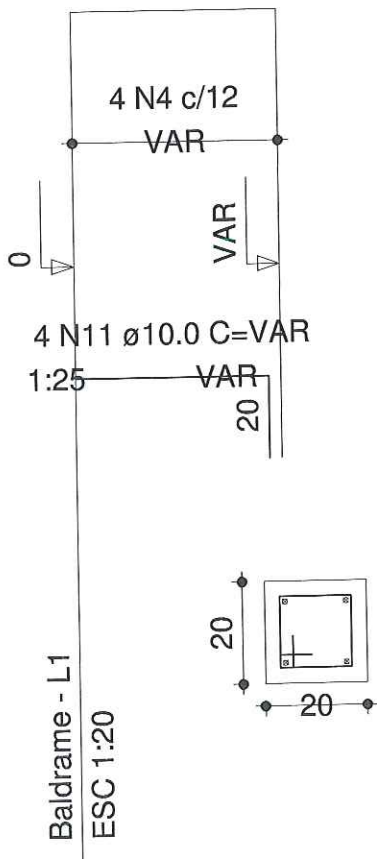
P. M. Dilermando de Aguiar

P18=P19

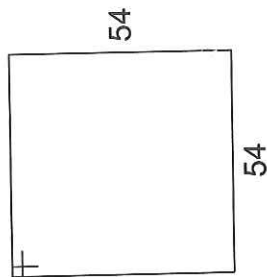
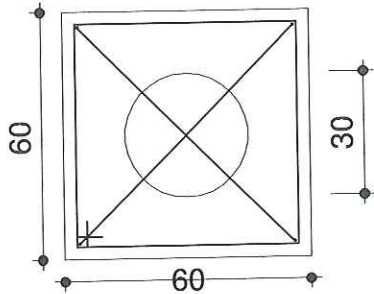
**B19
1Ø30**

Planta
ESC 1:25

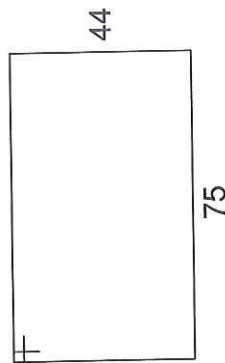
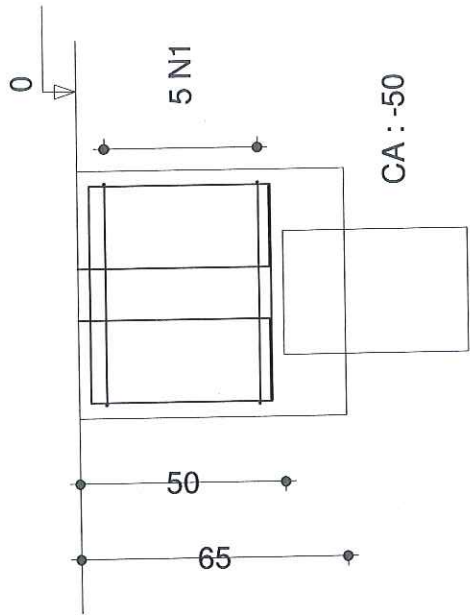
Corte
ESC 1:25



4 N4 ø5.0 C=67



5 N1 ø5.0 C=227



2 N2 ø5.0 C=249

[Signature]
Ederson Jaguariassu Lopes Aquistapasse
Engº Civil - CREA RS 088107
Matr. 1119
P. M. Dilermando de Aguiar


RELAÇÃO DO AÇO

10xB11	B12	2xB13
2xB14	2xB15	2xB19
10xP1	2xP2	2xP3
2xP4	P12	2xP18

AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
60	1	5.0	65	227	14755
	2	5.0	6	249	1494
	3	5.0	30	267	8010
	4	5.0	51	67	3417
	5	5.0	4	107	428
	6	5.0	8	127	1016
	7	5.0	4	49	196
	8	8.0	20	250	5000
	9	8.0	12	280	3360
	10	10.0	40	VAR	VAR
	11	10.0	8	VAR	VAR
	12	12.5	4	VAR	VAR
	13	16.0	68	VAR	VAR
50					

RESUMO DO AÇO

AÇO	DIAM	C.TOTAL (m)	PESO+10% (kg)
CA50	8.0	83.5	36.2
	10.0	47.5	32.2
	12.5	4.6	4.8
	16.0	85.9	149.2
CA60	5.0	294.0	49.8
PESO TOTAL			
CA50		222.4	
CA60		49.8	


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Vol. concreto total = 5.29 m³
 Área de forma total = 40.40 m²




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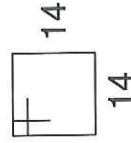
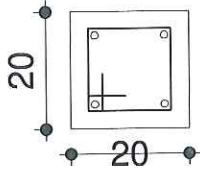
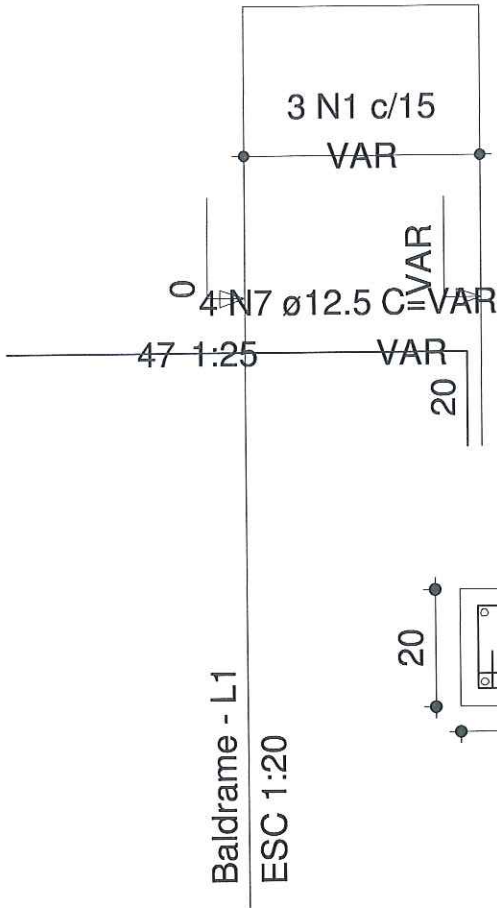
**ESPERA PARA PILARES
(BALDRAME / TÉRREO)**


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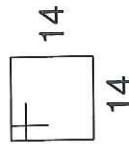
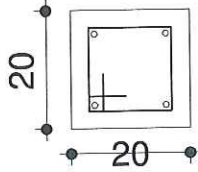
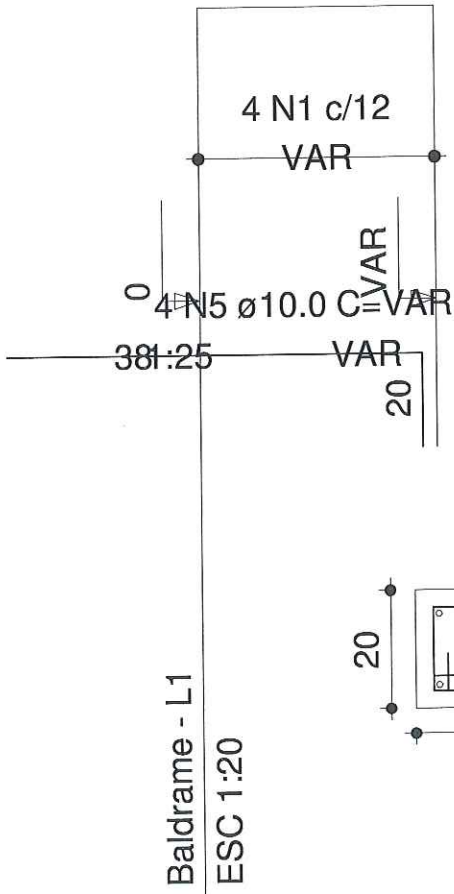
"Doe órgãos, Doe Sangue: Salve Vidas".

P12

P1=P5=P6=P7=P8=P9=P10=P11=P16=P17



3 N1 ø5.0 C=67



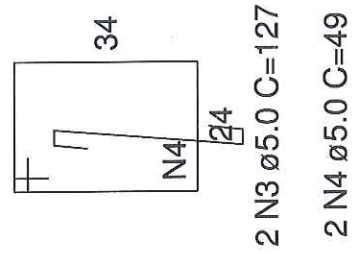
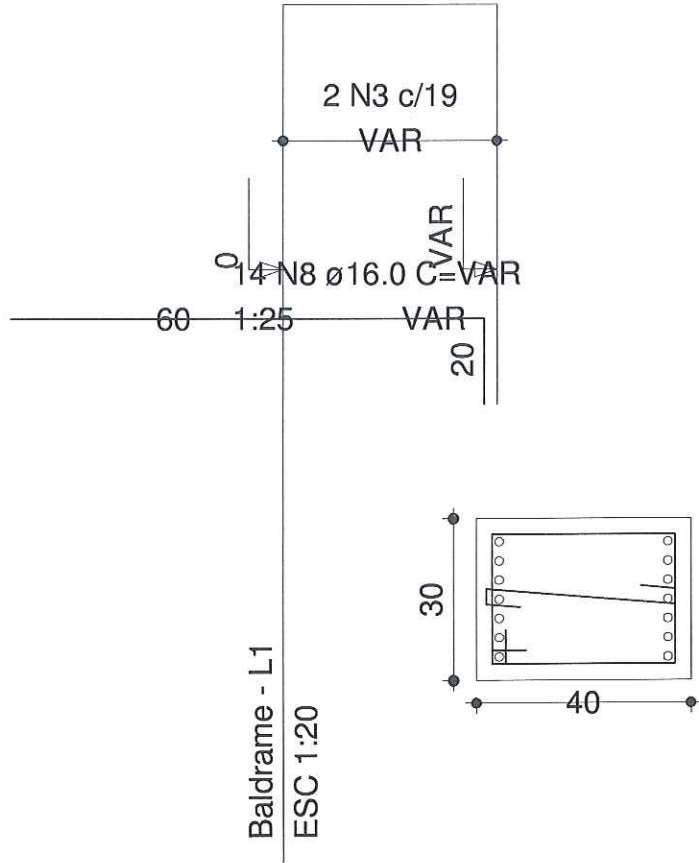
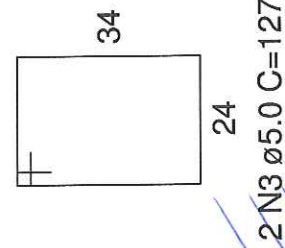
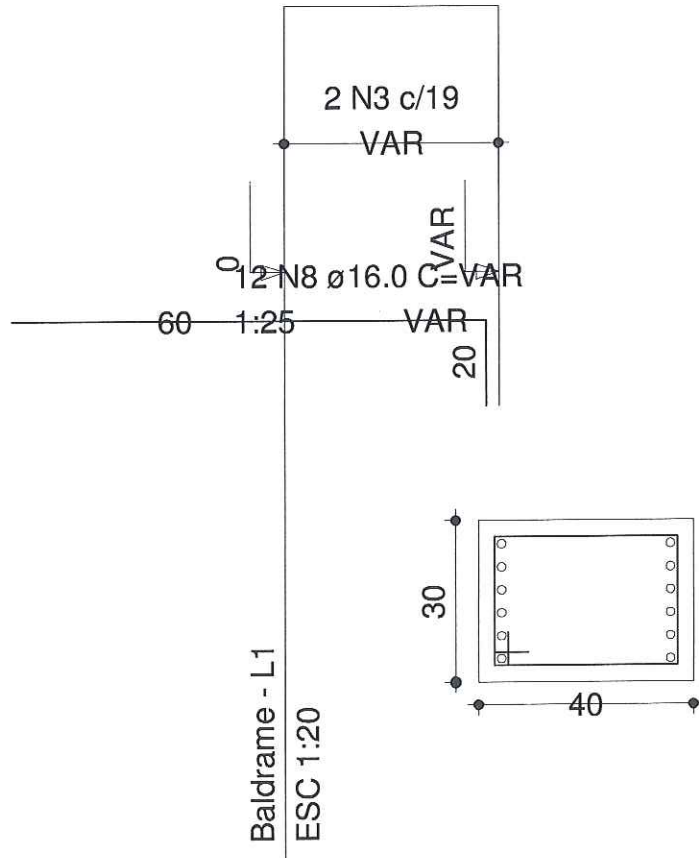
4 N1 ø5.0 C=67

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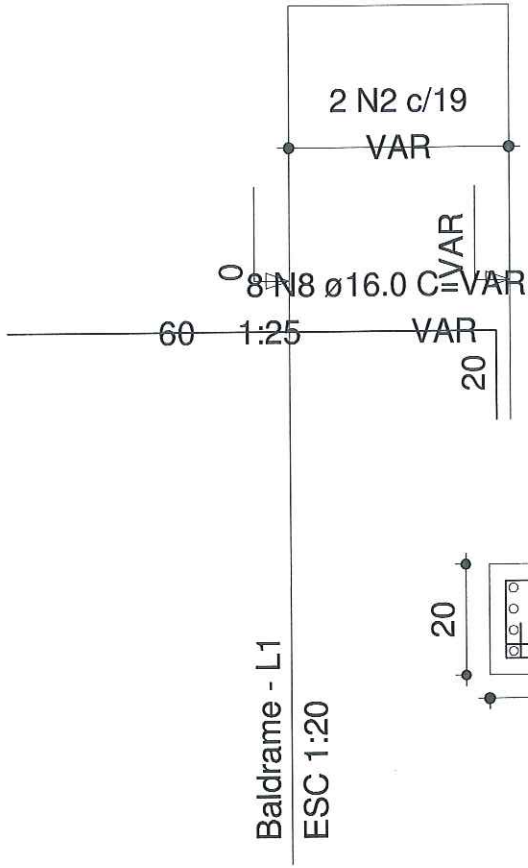
P3=P14

P4=P15

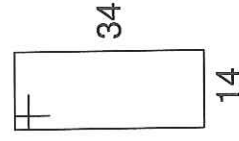
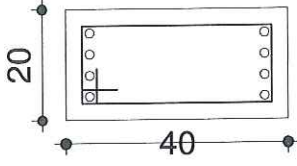


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P2=P13

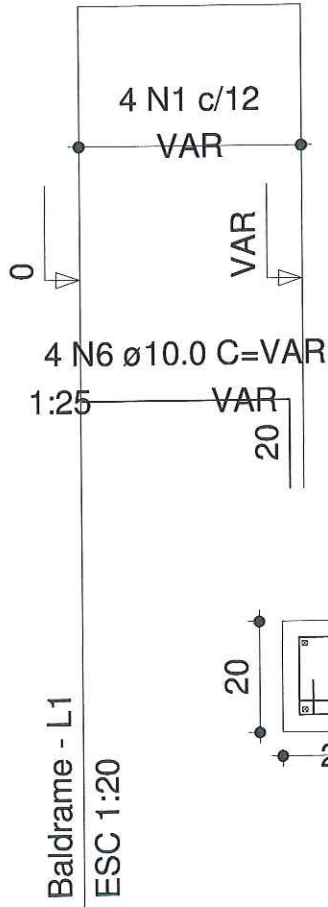


Baldrame - L1
ESC 1:20

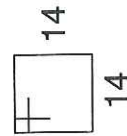
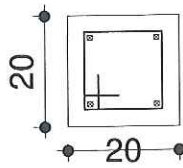


2 N2 ø5.0 C=107


P18=P19



Baldrame - L1
ESC 1:20



4 N1 ø5.0 C=67


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RELAÇÃO DO AÇO

10xP1 2xP2 2xP3
 2xP4 P12 2xP18

AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
60	1	5.0	51	67	3417
	2	5.0	4	107	428
	3	5.0	8	127	1016
	4	5.0	4	49	196
50	5	10.0	40	VAR	VAR
	6	10.0	8	VAR	VAR
	7	12.5	4	VAR	VAR
	8	16.0	68	VAR	VAR

RESUMO DO AÇO

AÇO	DIAM	C.TOTAL (m)	PESO+10% (kg)
CA50	10.0	47.5	32.2
	12.5	4.6	4.8
	16.0	85.9	149.2
CA60	5.0	50.9	8.6
PESO TOTAL			
CA50	186.2		
CA60	8.6		

Vol. concreto total = 0.58 m³
 Área de forma total = 9.20 m²



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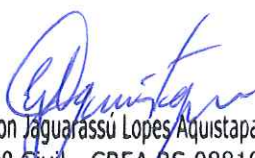


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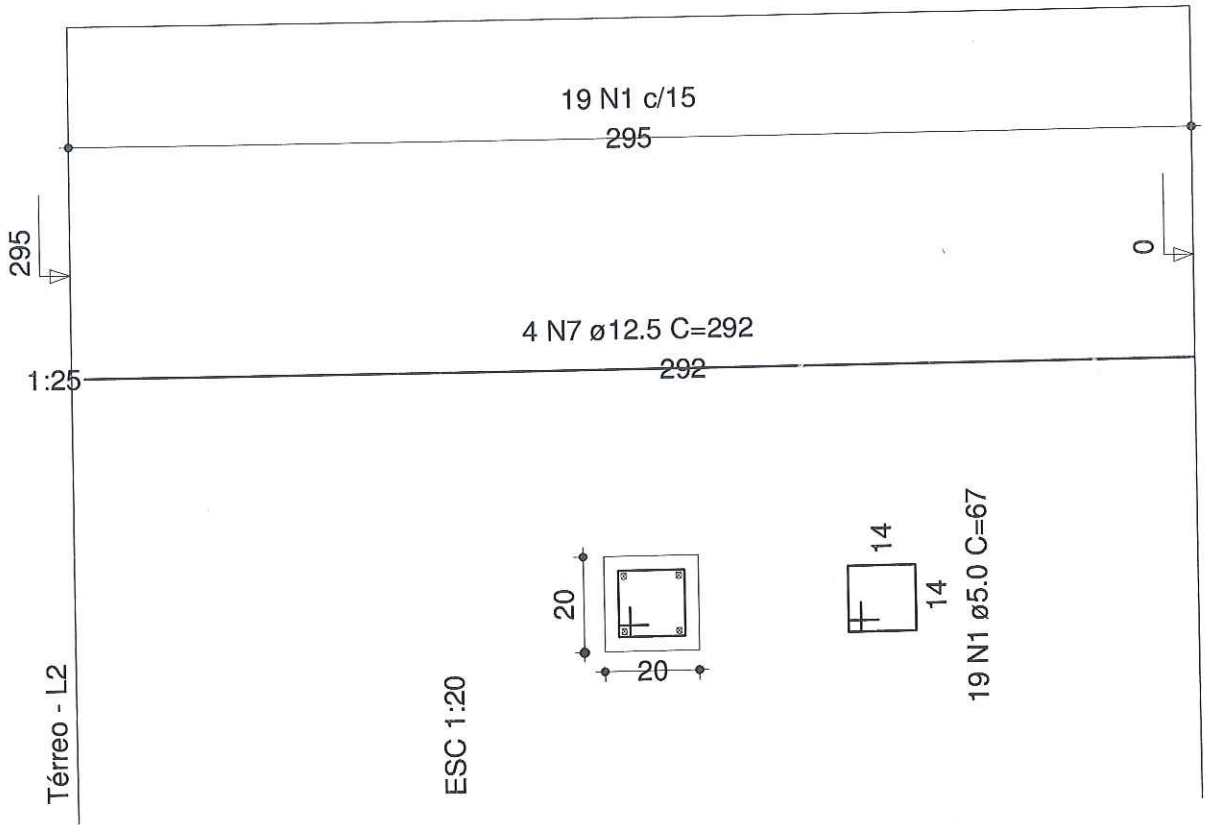
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PILARES PAVIMENTO TÉRREO

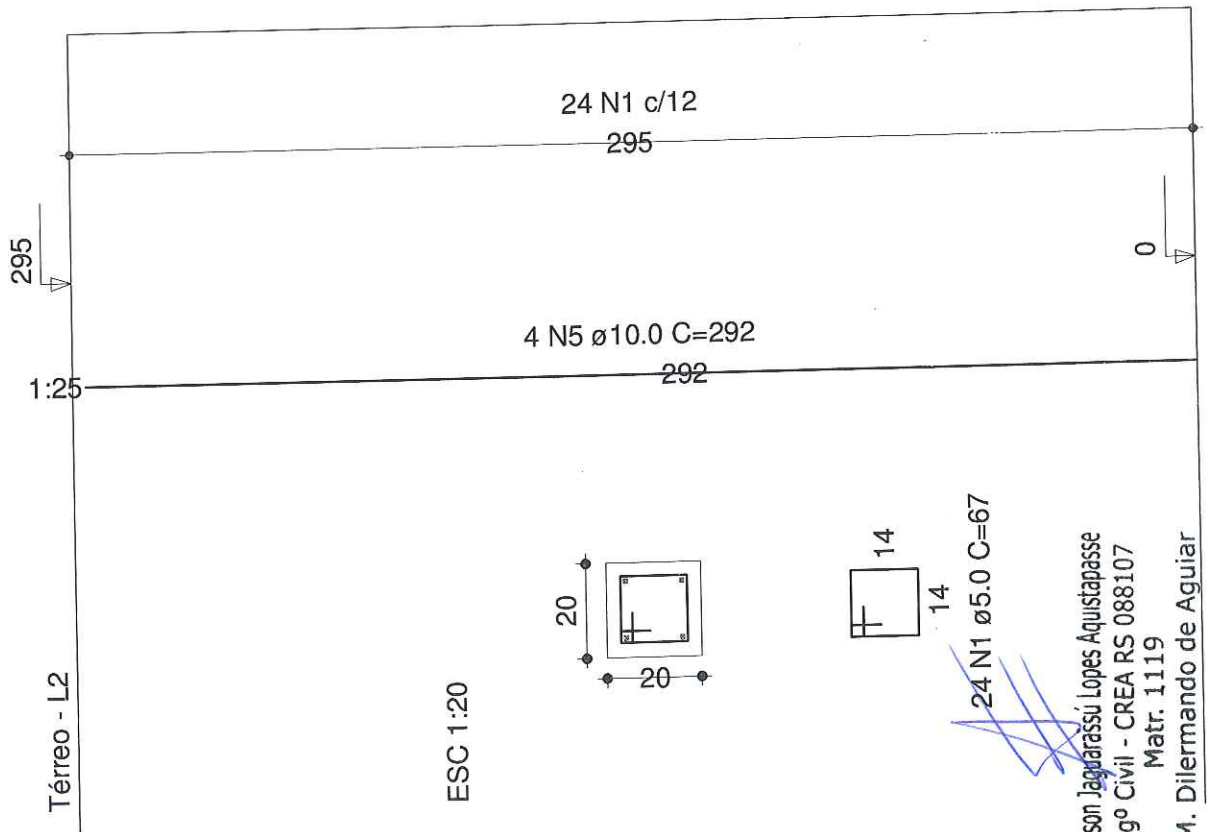

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"Doe órgãos, Doe Sangue: Salve Vidas".

P12

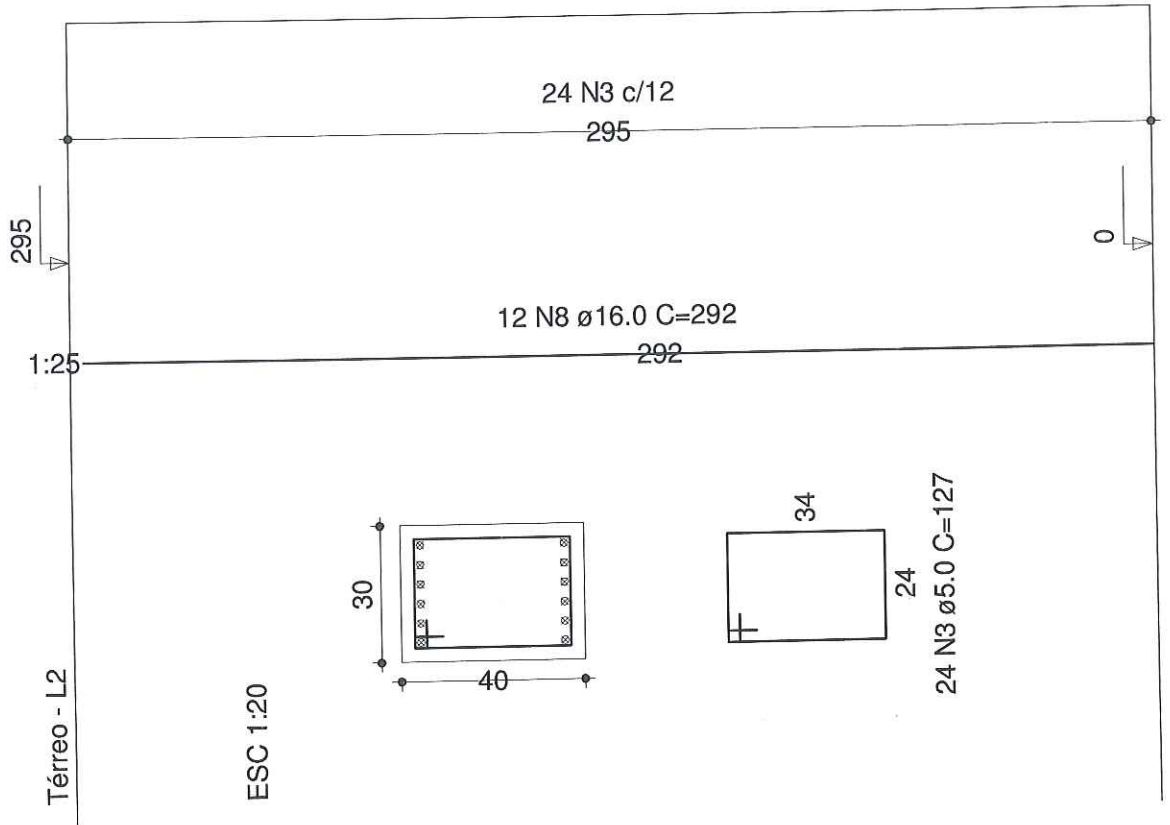


P1=P5=P6=P9=P16=P17

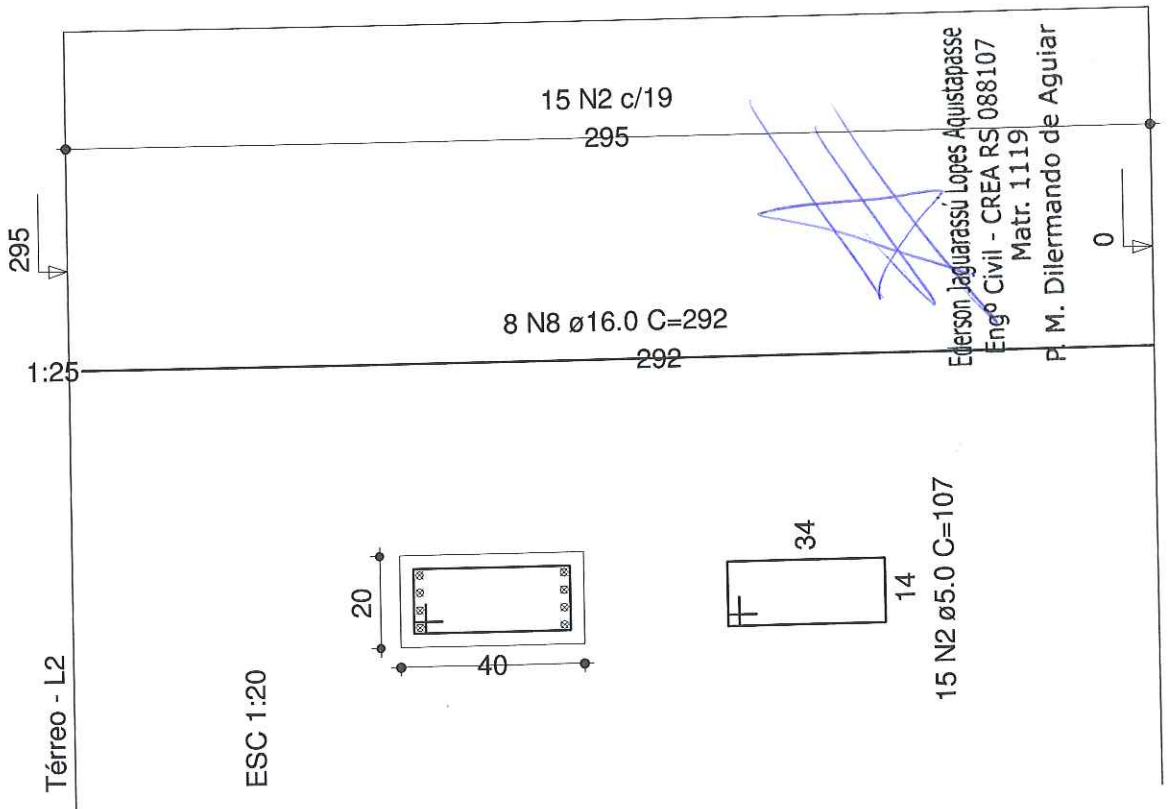


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P3=P14

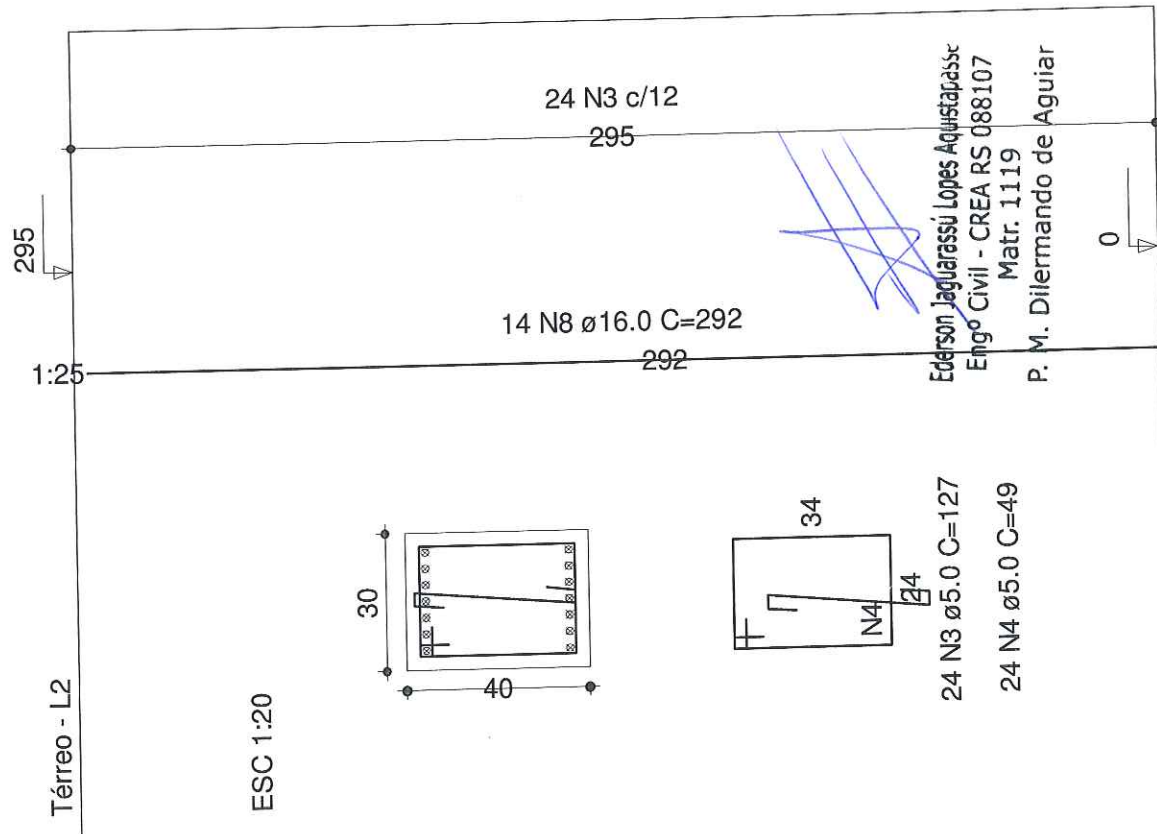
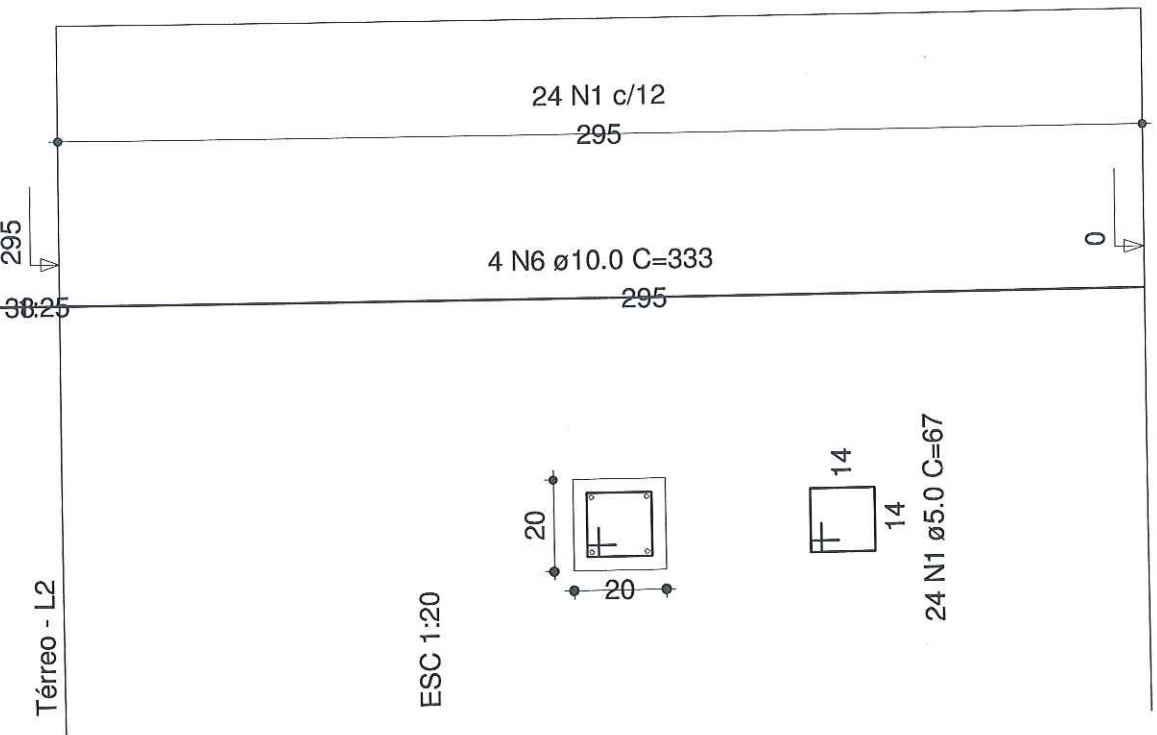


P2=P13



P4=P15

P7=P8=P10=P11



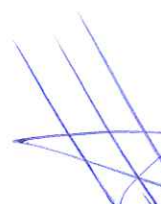
RELAÇÃO DO AÇO

6xP1 2xP2 2xP3
 2xP4 4xP7 P12

AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
60	1	5.0	259	67	17353
	2	5.0	30	107	3210
	3	5.0	96	127	12192
	4	5.0	48	49	2352
50	5	10.0	24	292	7008
	6	10.0	16	333	5328
	7	12.5	4	292	1168
	8	16.0	68	292	19856

RESUMO DO AÇO

AÇO	DIAM	C.TOTAL (m)	PESO+10% (kg)
CA50	10.0	123.4	83.7
	12.5	11.7	12.4
	16.0	198.6	344.7
CA60	5.0	353.1	59.9
PESO TOTAL			
CA50		440.8	
CA60		59.9	


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Vol. concreto total = 3.19 m³
 Área de forma total = 49.56 m²




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VIGAS BALDRAME


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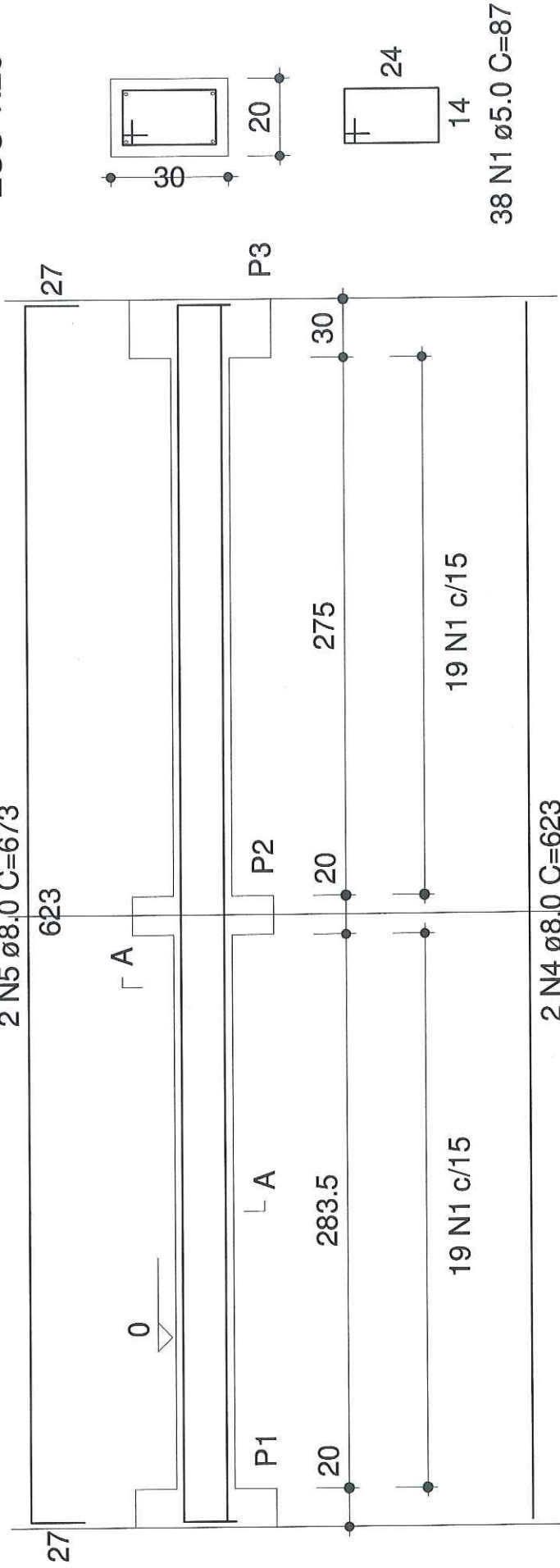
"Doe órgãos, Doe Sangue: Salve Vidas".

Baldrame

V1

1:50

SEÇÃO A-A
ESC 1:25

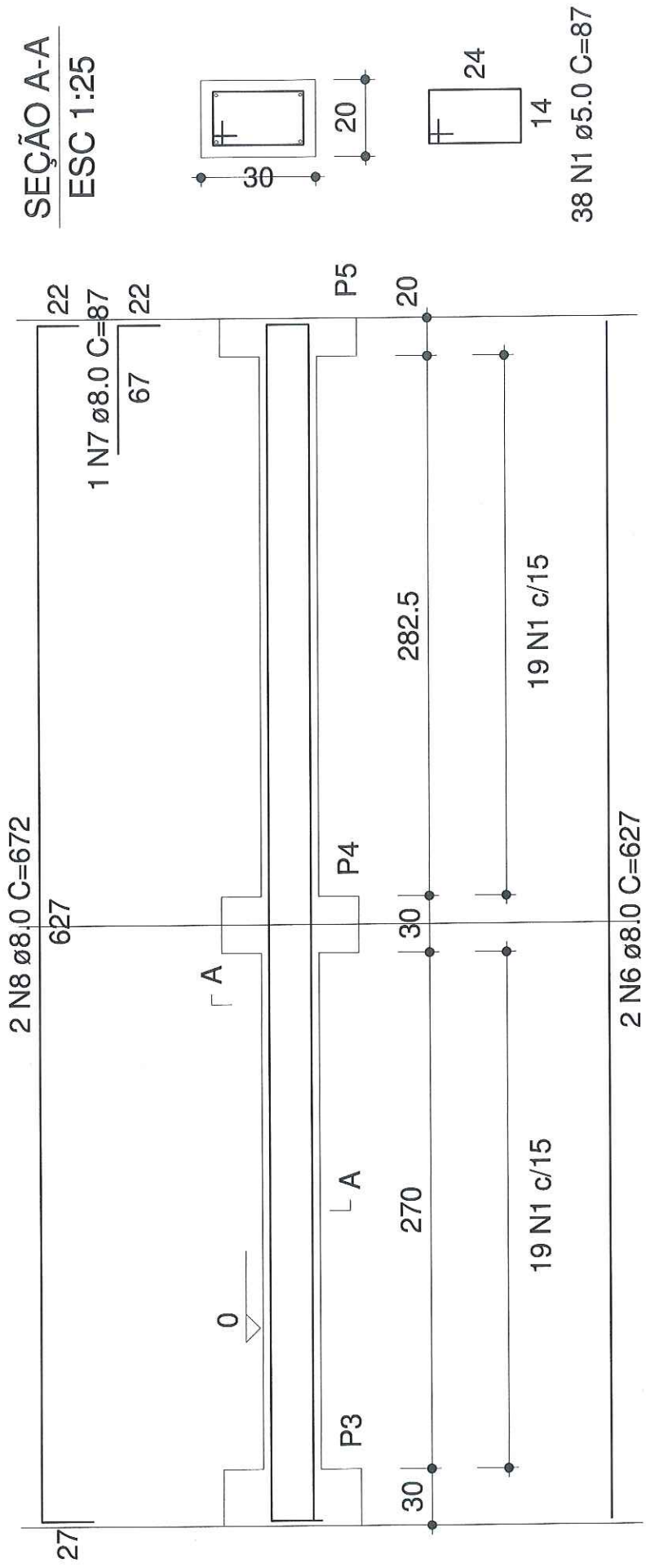



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Baldrame

V2

1:50

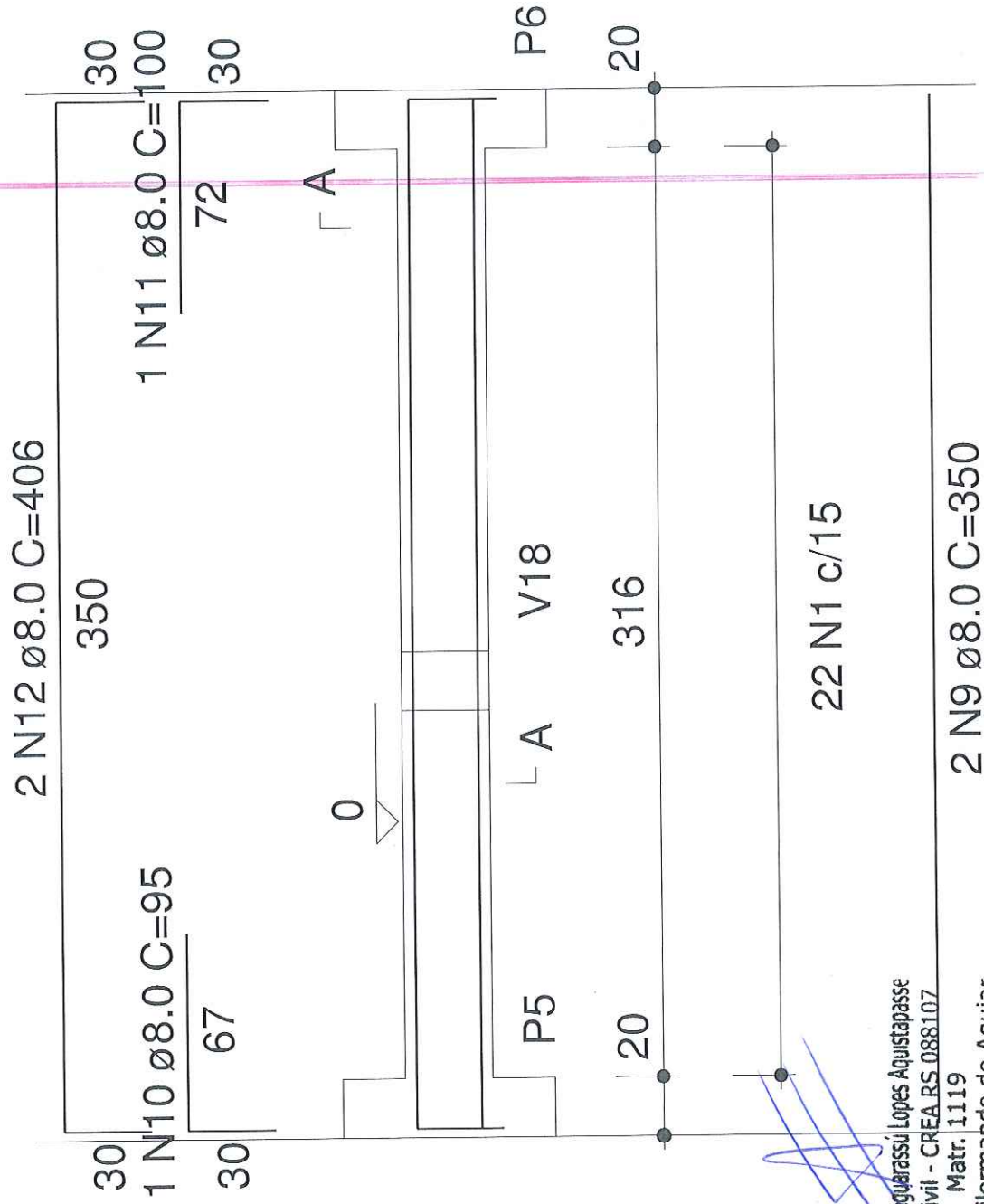


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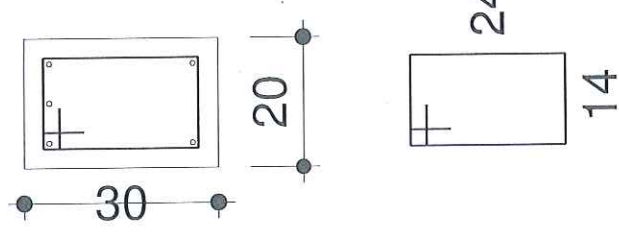
Baldrame

V3

1:50



SEÇÃO A-A
ESC 1:25



22 N1 Ø5.0 C=87

Ederson Jaguarassú Lopes Aquistapasse
Engº Civil - CREA/RS_088107

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2 N9 Ø8.0 C=350

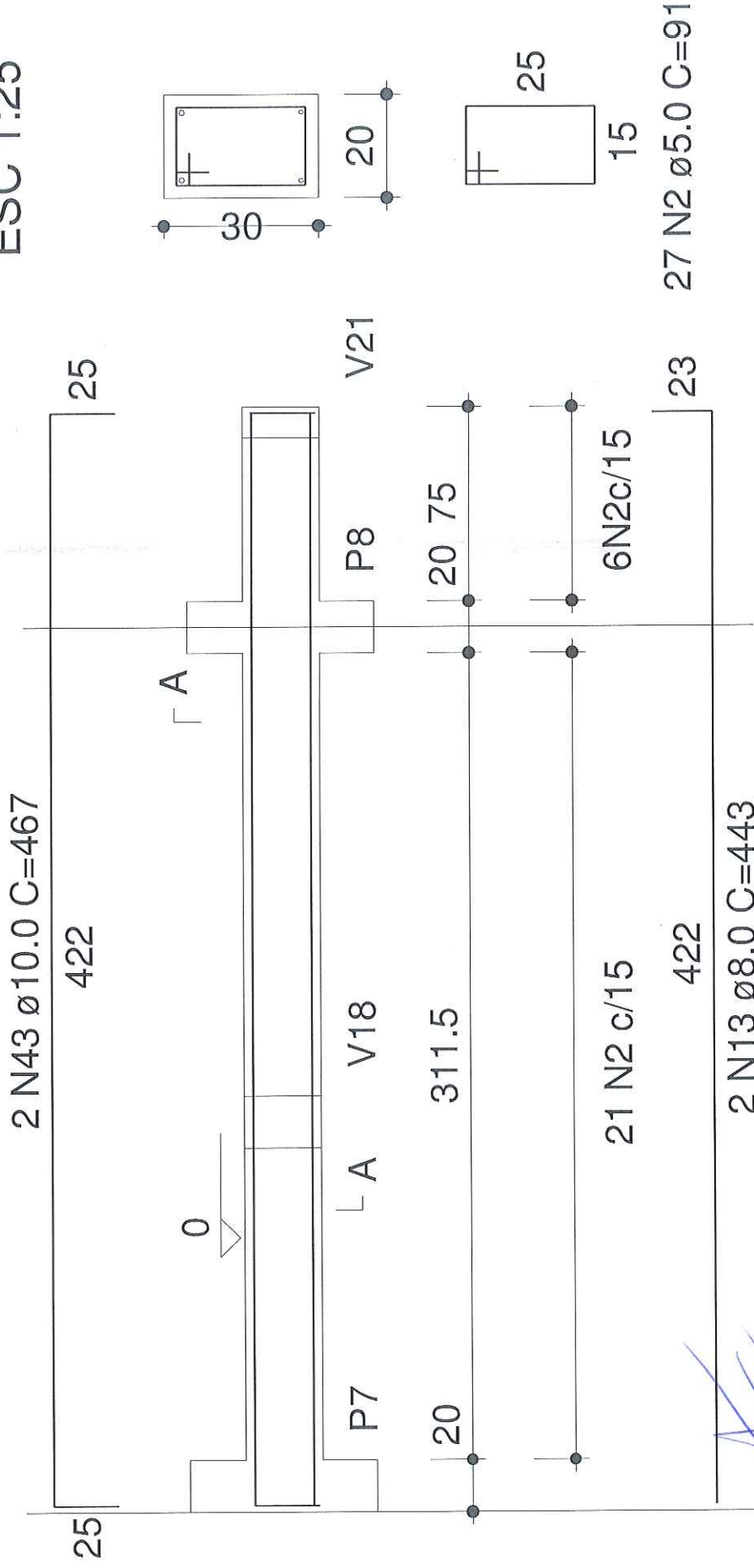
Baldrame

V5

1:50

SEÇÃO A-A

ESC 1:25



Ederson Jaguarassu Lopes Aquistapasse
Engº Civil - CREA RS 088107
Matr. 1119

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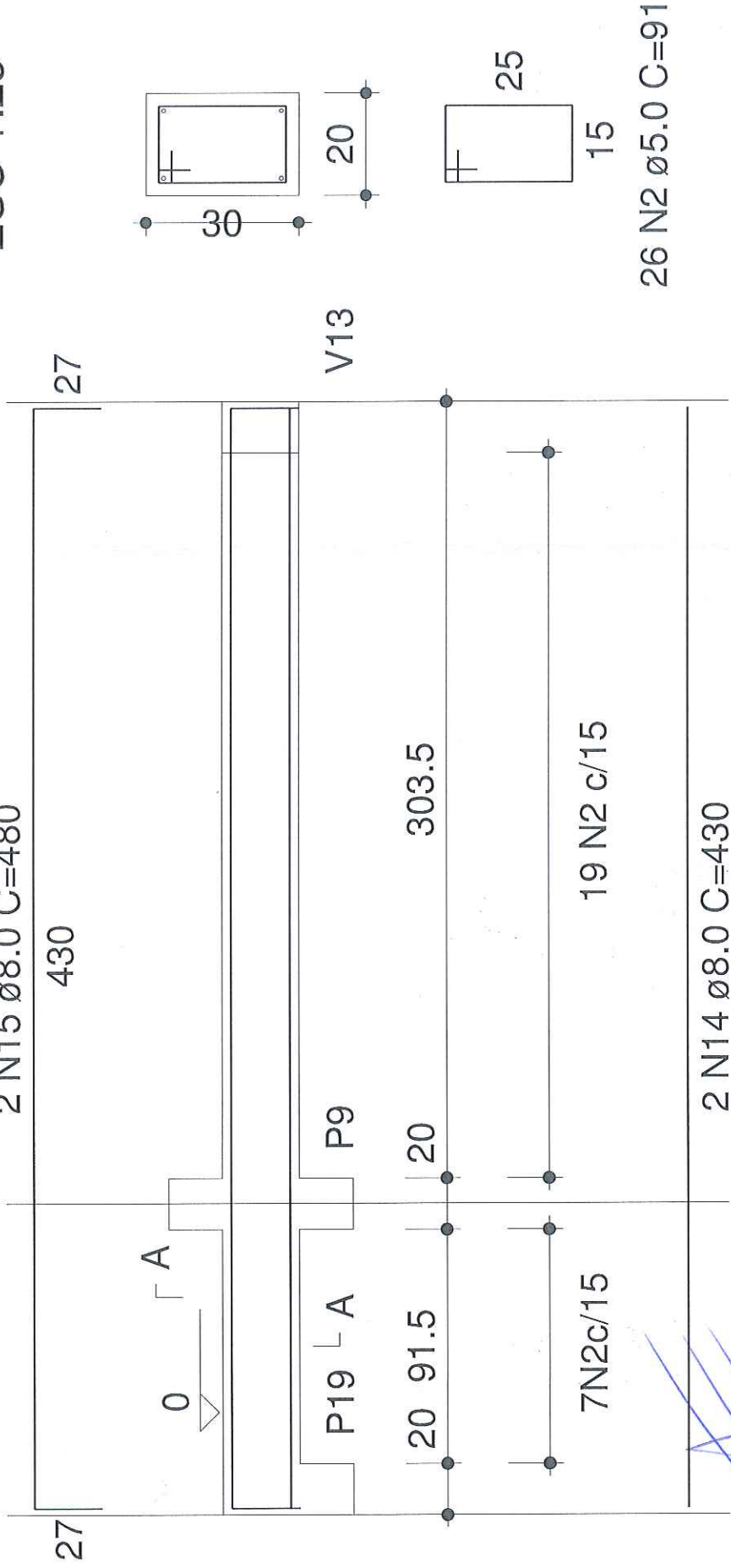
Baldrame

V6

1:50

SEÇÃO A-A

ESC 1:25



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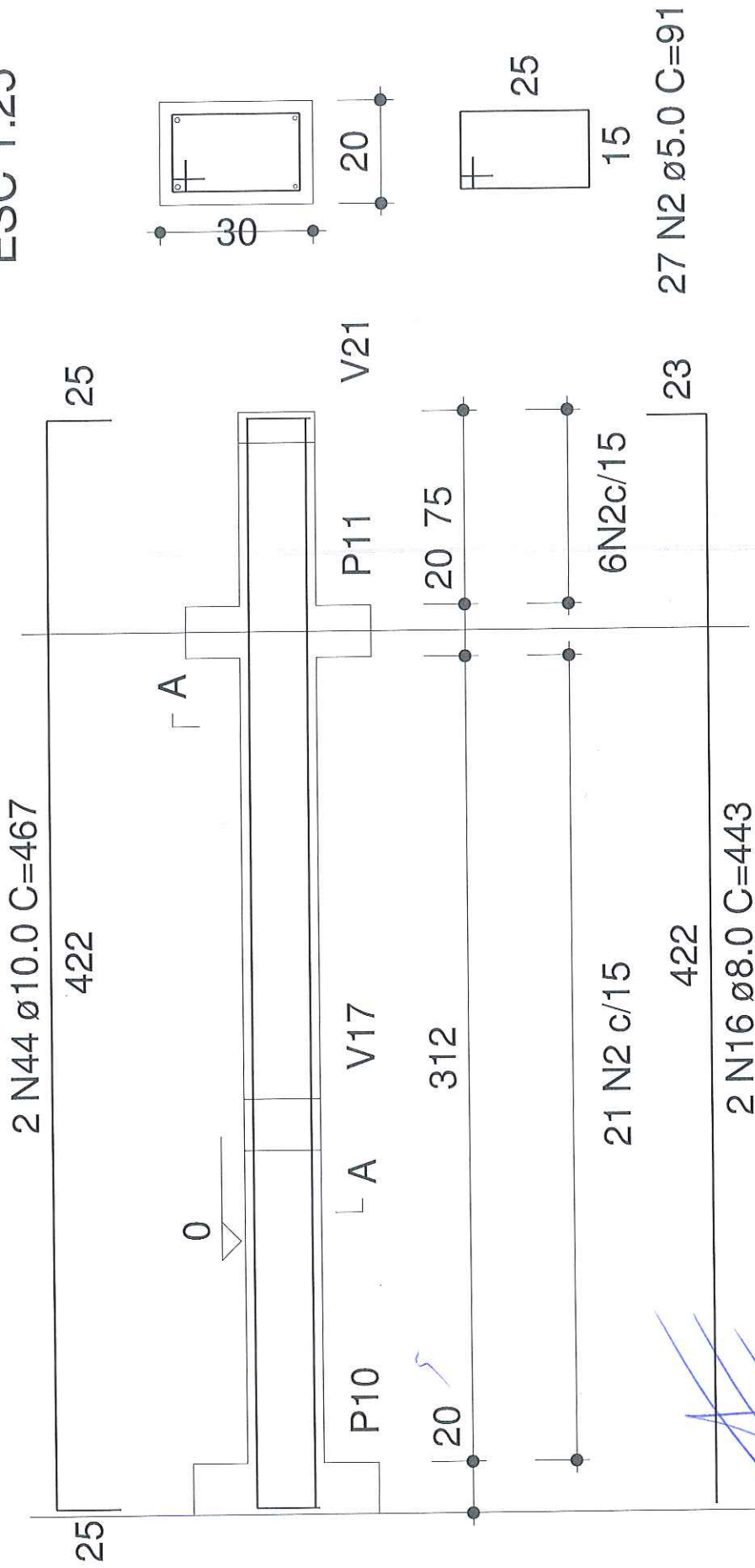
Baldrame

V7

1:50

SEÇÃO A-A

ESC 1:25



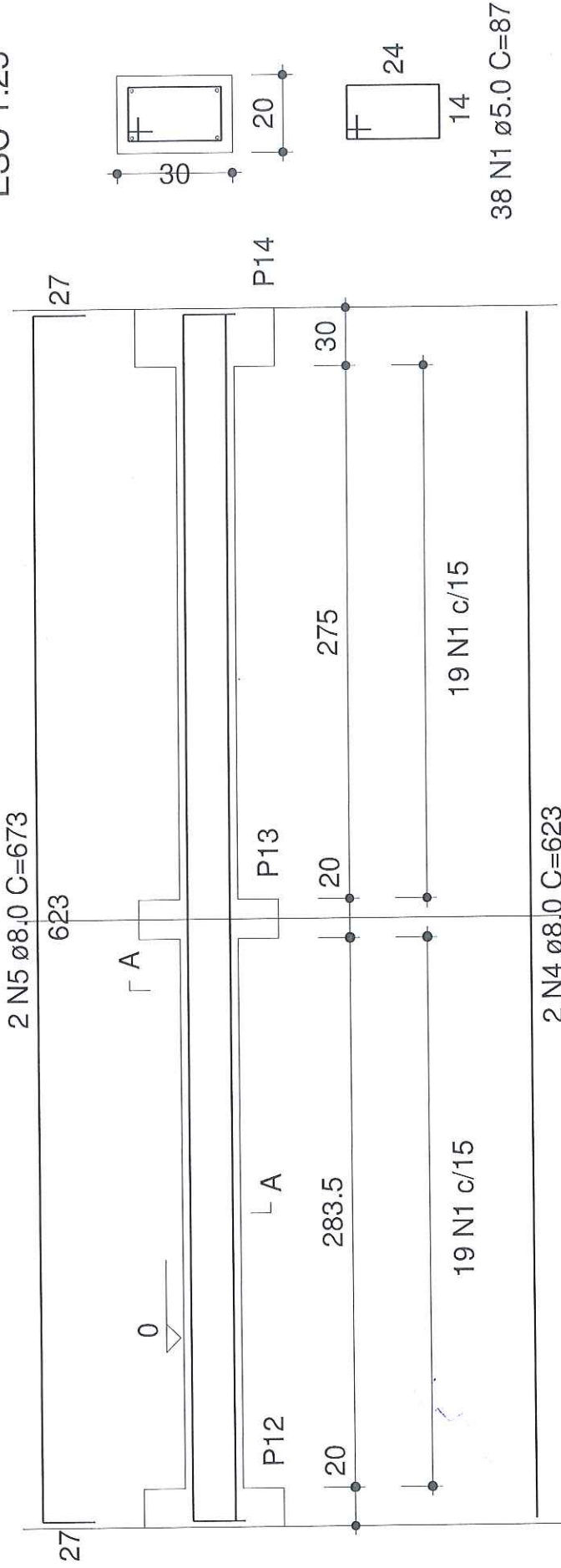
Ederson Jaguarassú Lopes Aquistapasse
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Baldrame

V8

1:50

SEÇÃO A-A
ESC 1:25



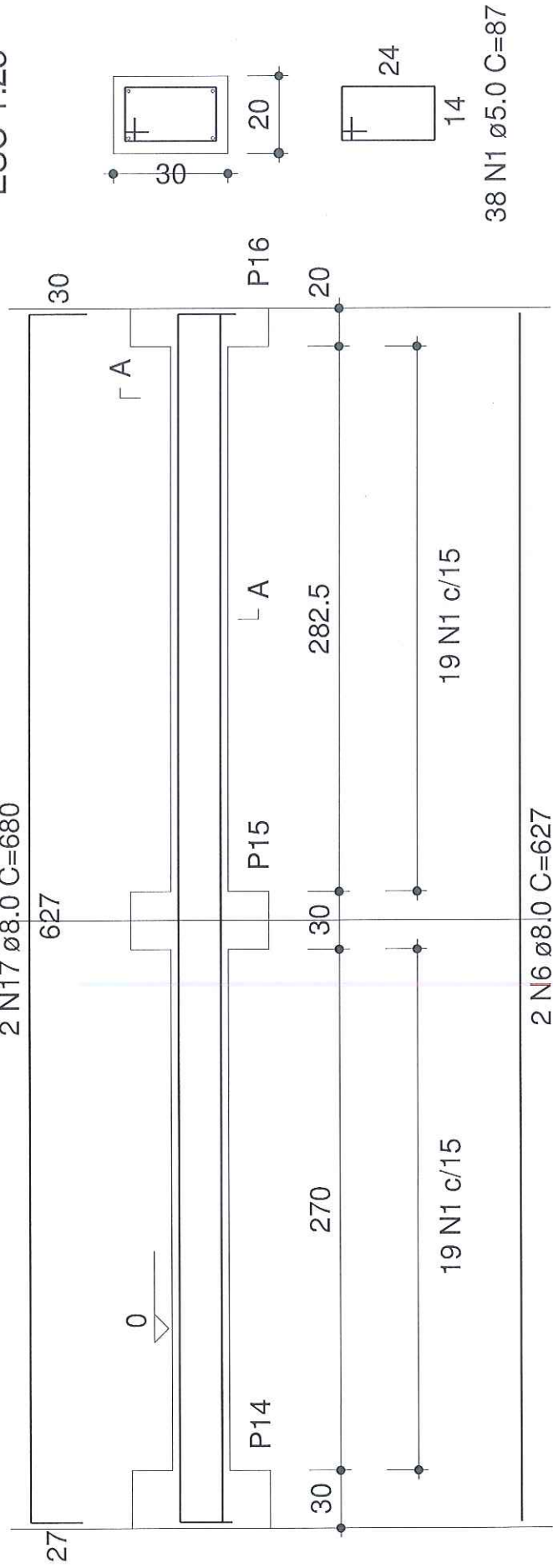
Ederson Jaguarassu Lopes Aquistapasse
Engº Civil - CREA RS 088107
Matr. 1119
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Baldrame

V9

1:50

SEÇÃO A-A
ESC 1:25

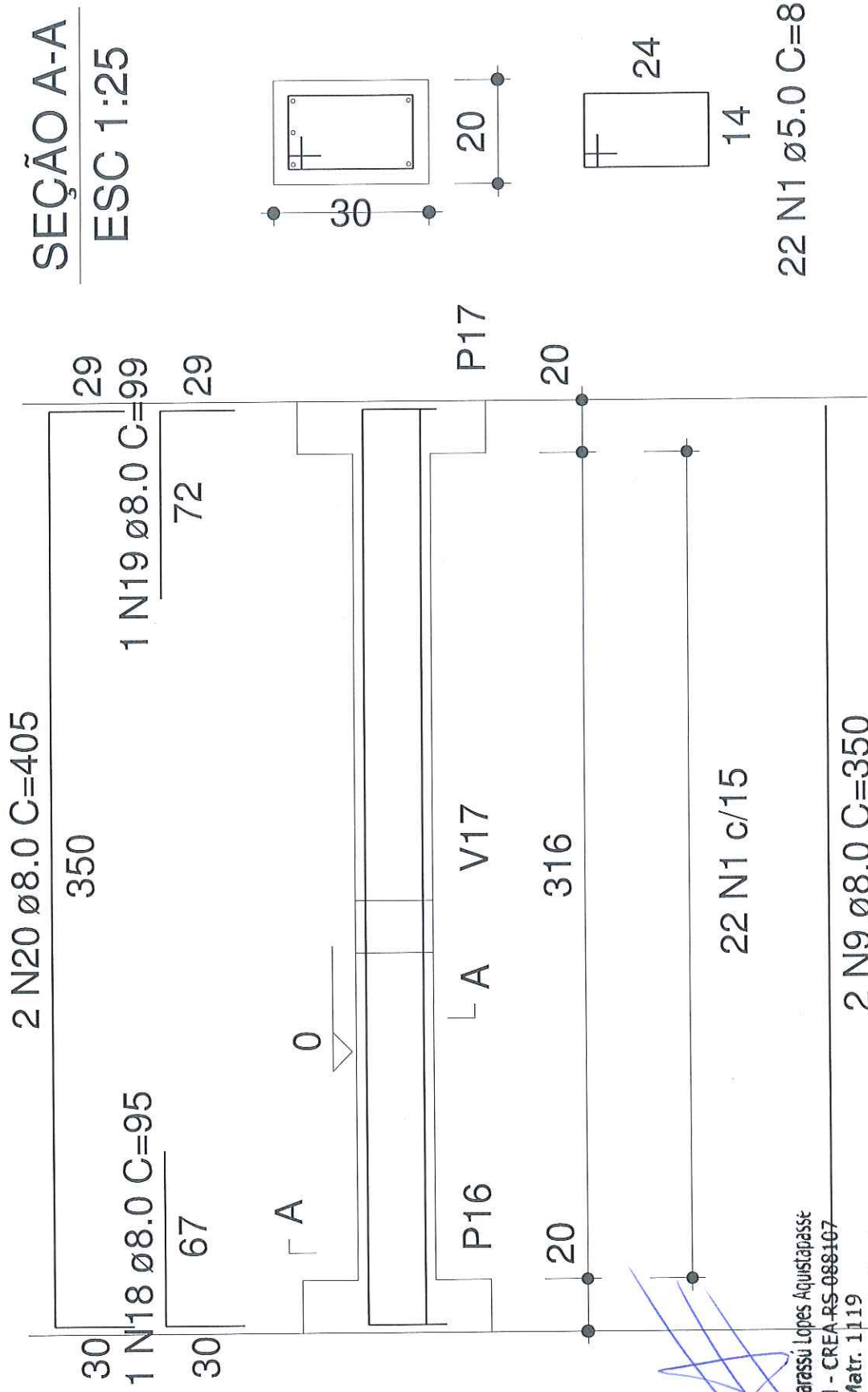



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Baldrame

V10

1:50



SEÇÃO A-A
ESC 1:25

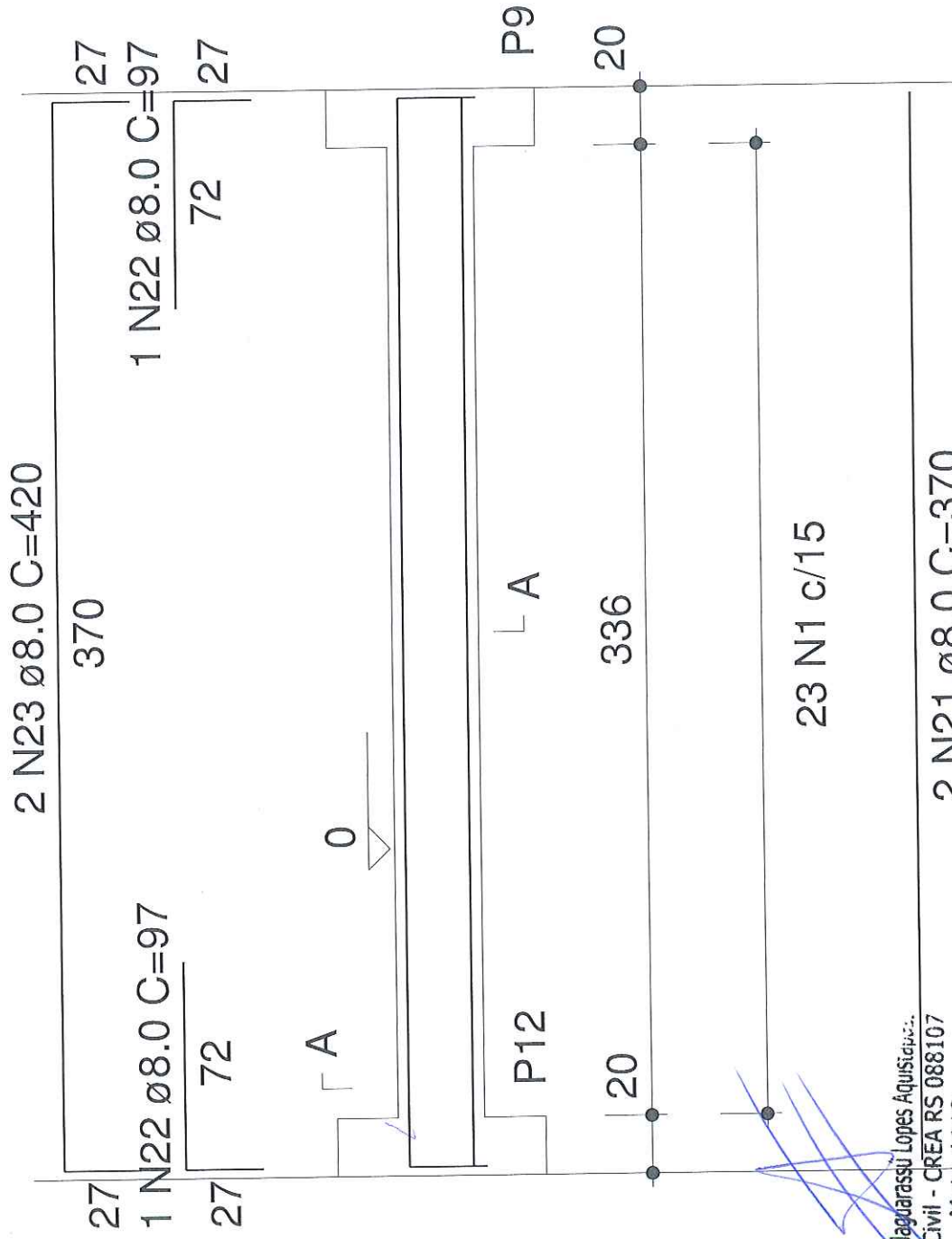
Ederson Jaguarassu Lopes Aquistapasse
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2 N9 Ø8.0 C=350

Baldrame

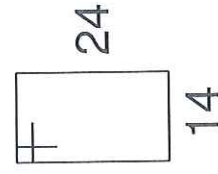
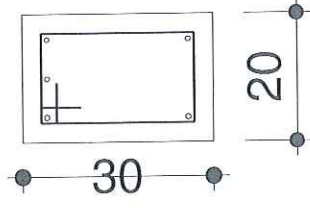
V11

1:50



SEÇÃO A-A

ESC 1:25



23 N1 Ø5.0 C=87

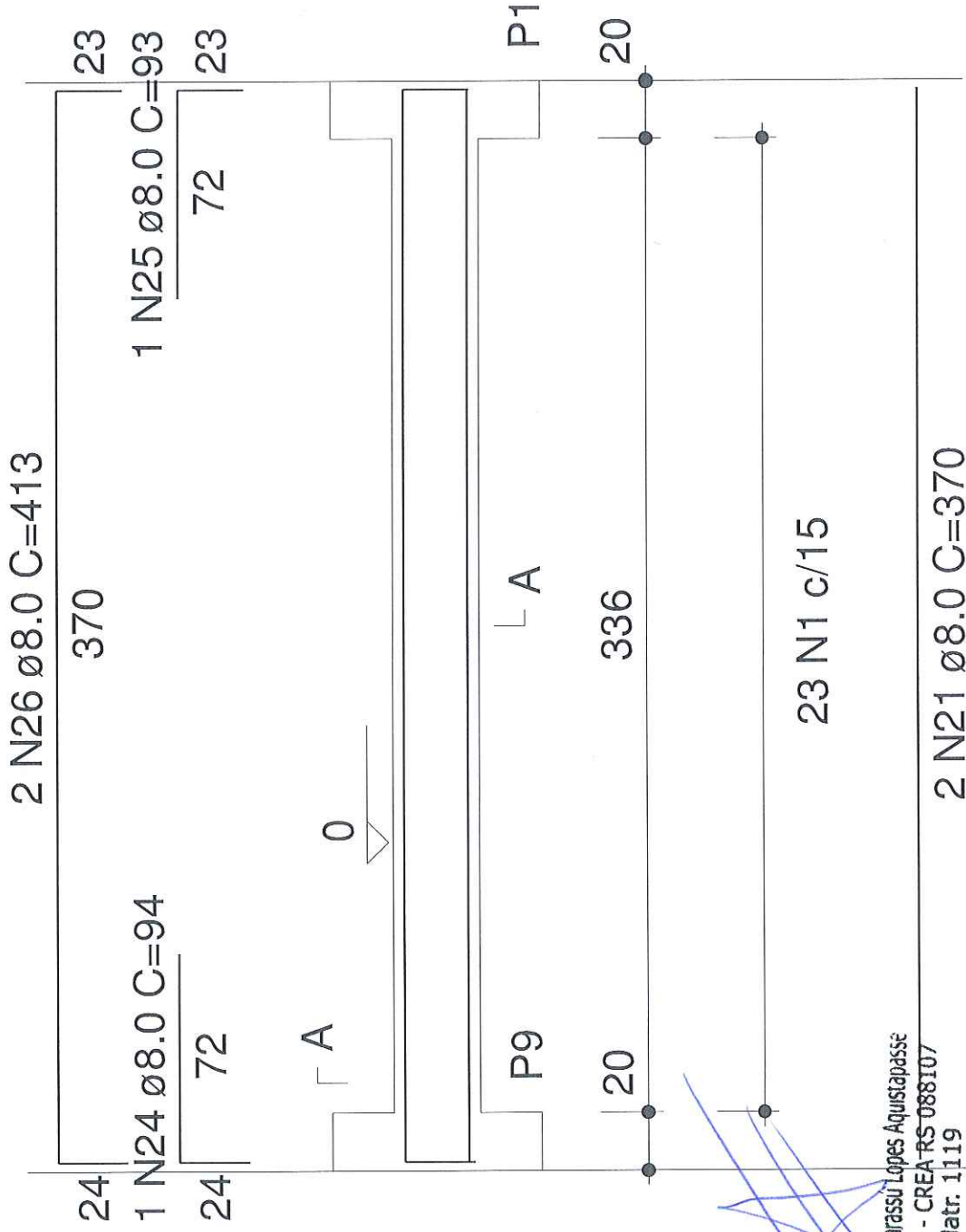
Ederson Jaguarassu Lopes Aquiscipica.
Engº Civil - CREA RS 088107
Matr. 1119
P. M. Dilermando de Aguiar

2 N21 Ø8.0 C=370

Baldrame

V12

1:50



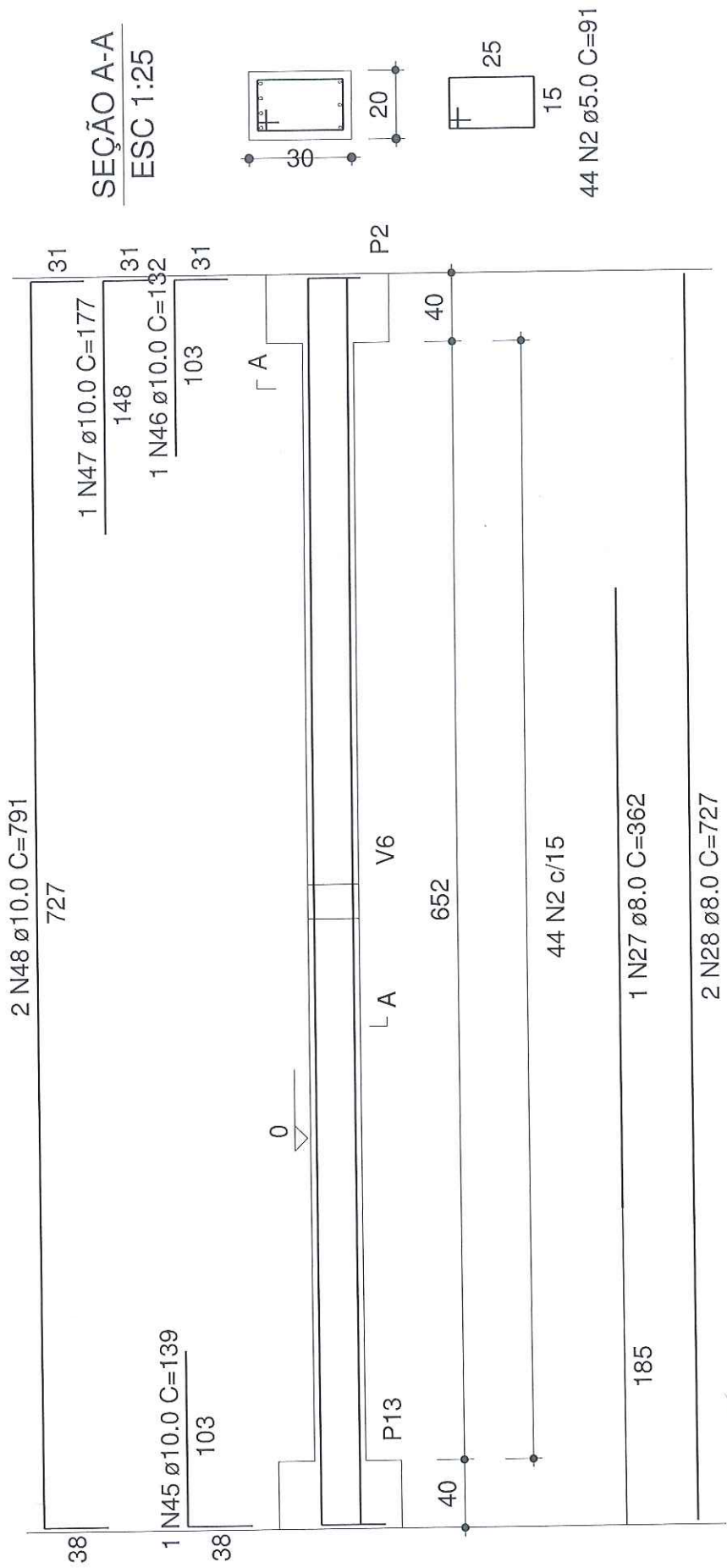
23 N1 \varnothing 5.0 C=87

Ederson Jaguarassu Lopes Aquistapasse
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Baldrame

V13

1:50

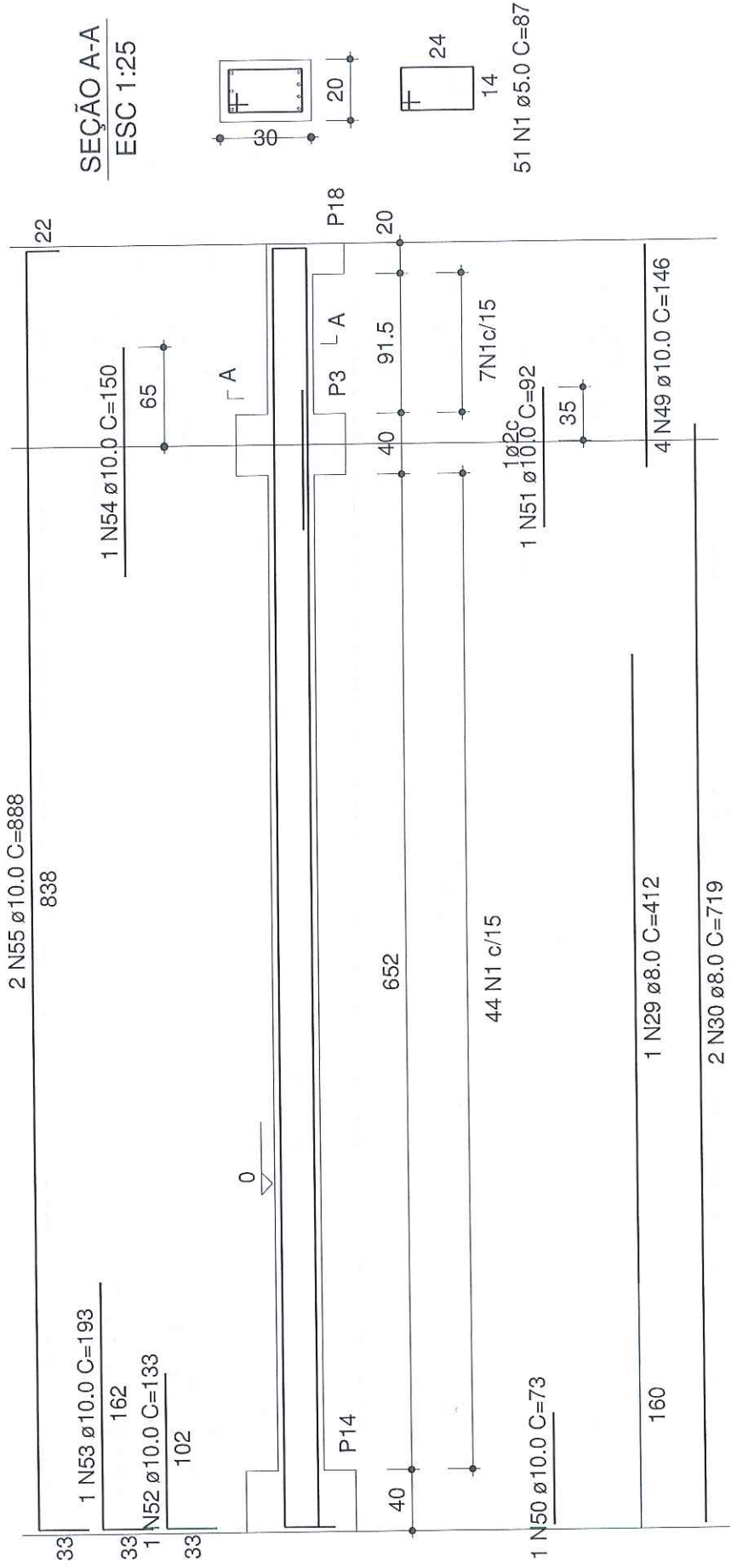


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Baldrame

V14

1:50

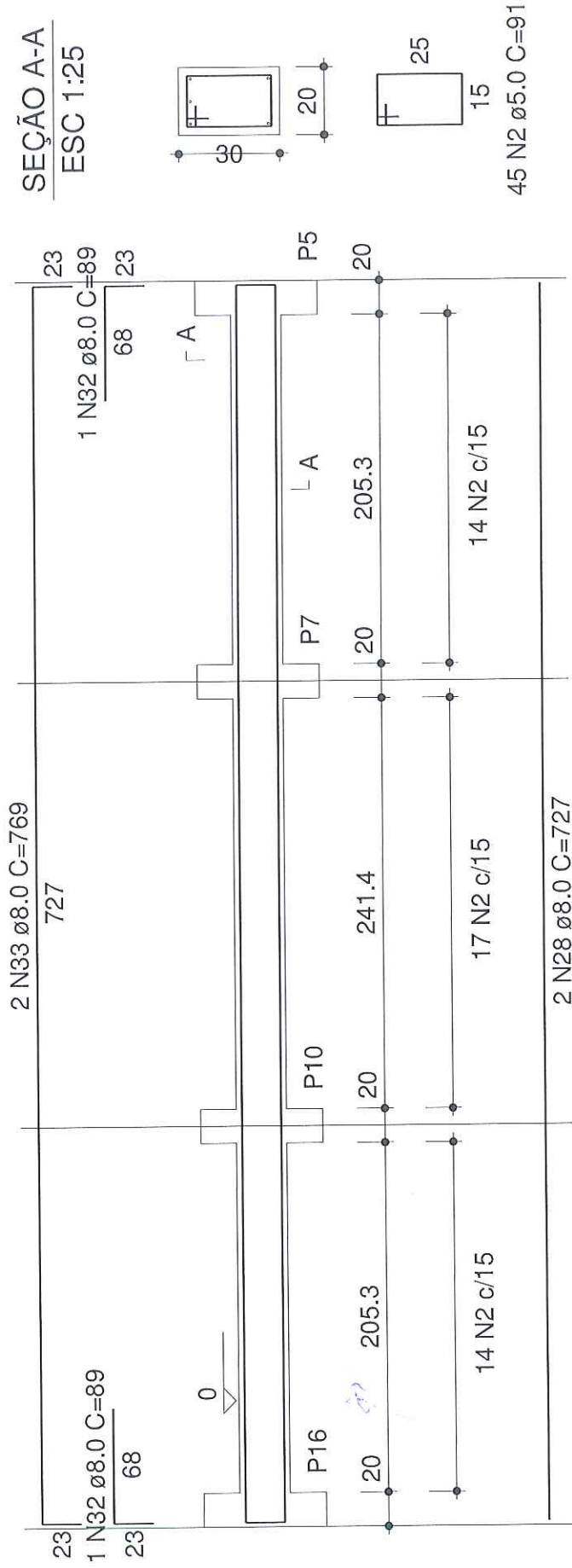


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Baldrame

V16

1:50




Ederson Jaguarassú Lopes Aquistajadas
Engº Civil - CREA RS 088107
Matr. 1119
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Baldrame

V17

1:50

SEÇÃO A-A

ESC 1:25

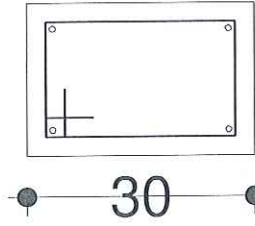
2 N35 Ø8.0 C=287

237

27

A

0



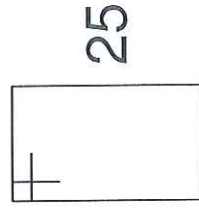
30

20

V7

V10

L A
242.3



25

15

14 N2 c/15

14 N2 Ø5.0 C=91

Ederson Jaguarassu Lopes Aquistapasse
Engº Civil - CREA RS 088107
Matr. 1119

P. M. Dilermando de Aguiar

2 N34 Ø8.0 C=237

Baldrame

V19

1:50

2 N38 \varnothing 8.0 C=287

240

27

1 N37 \varnothing 8.0 C=90

68

A

0

P17

L A

P11

20

205.3

20

14 N2 c/15

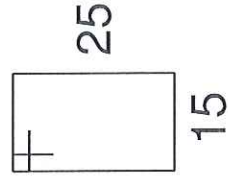
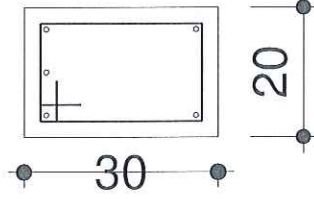
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SEÇÃO A-A

ESC 1:25



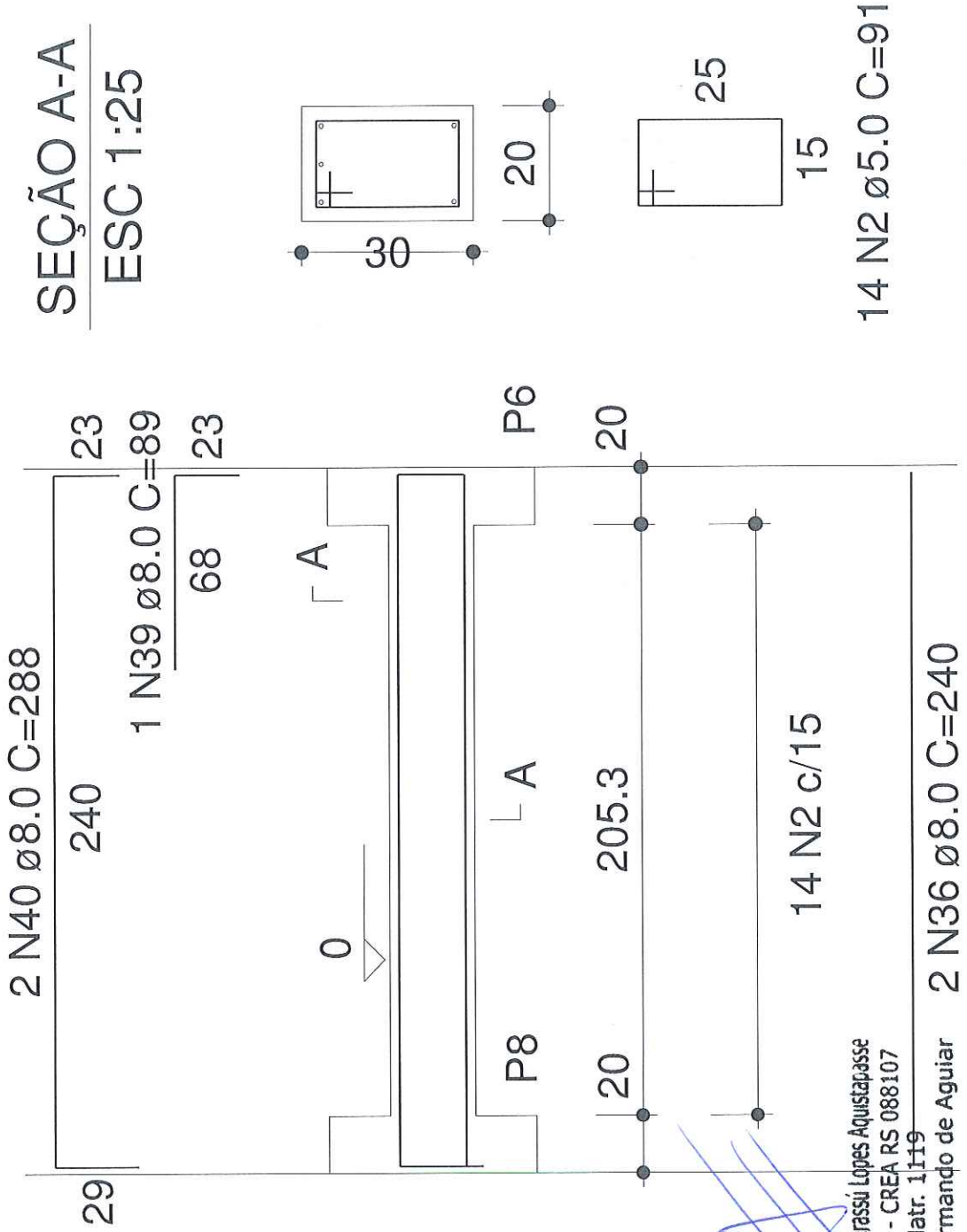
14 N2 \varnothing 5.0 C=91

2 N36 \varnothing 8.0 C=240

Baldrame

V20

1:50



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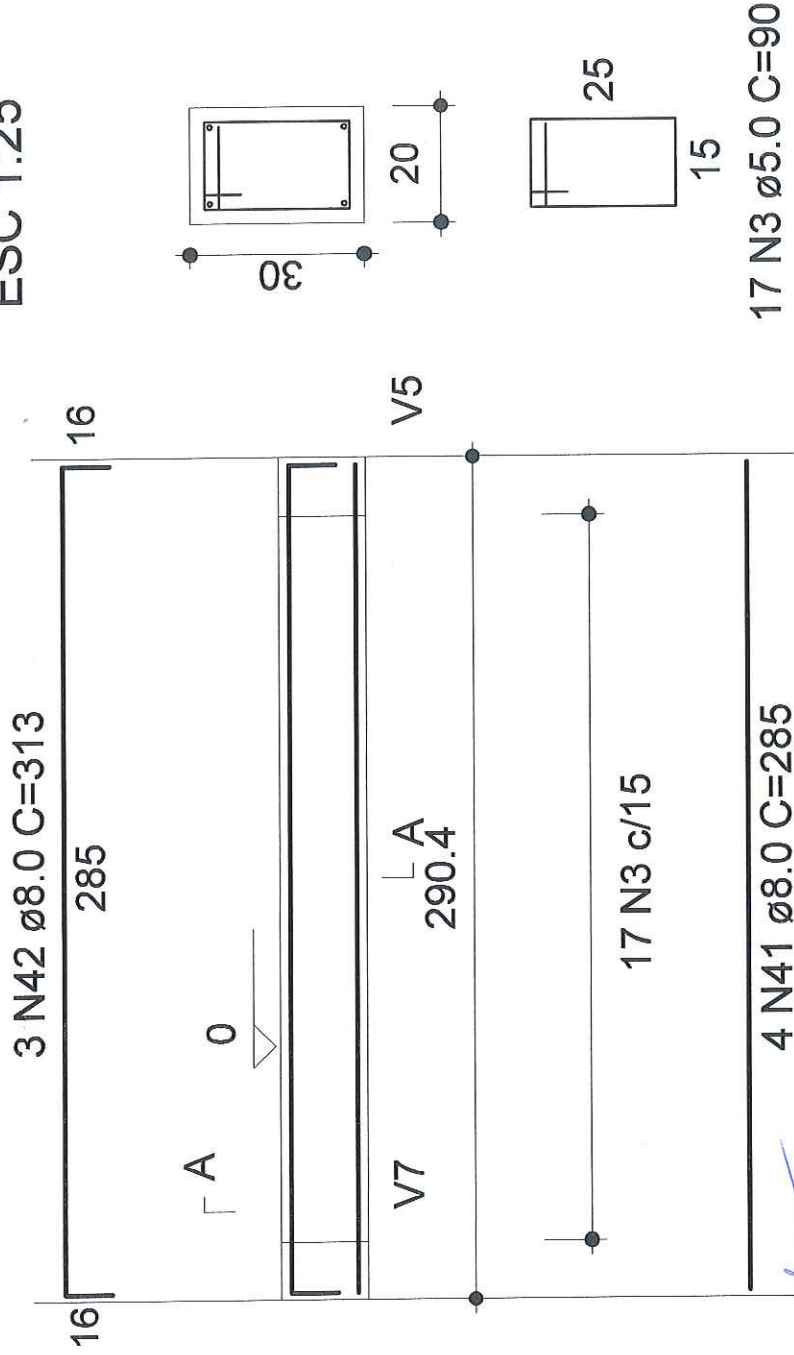
P. M. Dilermando de Aguiar 2 N36 \varnothing 8.0 C=240

Baldrame

V21

1:50

SEÇÃO A-A
ESC 1:25



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RELAÇÃO DO AÇO

- V1 V2 V3
 V5 V6 V7
 V8 V9 V10
 V11 V12 V13
 V14 V15 V16
 V17 V18 V19
 V20 V21

AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
60	1	5.0	293	87	25491
	2	5.0	259	91	24479
	3	5.0	17	75	1275
50	4	8.0	4	673	2692
	5	8.0	4	673	2692
	6	8.0	4	627	2508
	7	8.0	1	87	87
	8	8.0	2	672	1344
	9	8.0	4	350	1400
	10	8.0	1	95	95
	11	8.0	1	100	100
	12	8.0	2	406	812
	13	8.0	2	430	860
	14	8.0	2	480	960
	15	8.0	2	443	886
	16	8.0	2	680	1360
	17	8.0	1	85	85
	18	8.0	1	89	89
	19	8.0	2	405	810
	20	8.0	2	370	740
	21	8.0	4	370	1480
	22	8.0	2	420	840
	23	8.0	1	64	64
	24	8.0	1	93	93
	25	8.0	2	413	826
	26	8.0	1	362	362
	27	8.0	6	727	4362
	28	8.0	1	412	412
	29	8.0	2	719	1438
	30	8.0	1	432	432
	31	8.0	2	472	944
	32	8.0	2	769	1538
	33	8.0	4	237	948
	34	8.0	4	287	1148
	35	8.0	4	240	960
	36	8.0	1	90	90
	37	8.0	2	287	574
	38	8.0	1	89	89
	39	8.0	2	288	576
	40	8.0	2	288	576
	41	8.0	2	335	670
	42	8.0	2	335	670
	43	10.0	2	467	934
	44	10.0	2	467	934
	45	10.0	1	139	139
	46	10.0	1	132	132
	47	10.0	1	177	177
	48	10.0	2	791	1582
	49	10.0	4	146	584
	50	10.0	1	73	73
	51	10.0	1	82	82
	52	10.0	1	132	132
	53	10.0	1	193	193
	54	10.0	1	150	150
	55	10.0	2	888	1776
	56	10.0	2	74	148
	57	10.0	2	133	266
	58	10.0	2	193	386
	59	10.0	2	786	1572

RESUMO DO AÇO

AÇO	DIAM	C.TOTAL (m)	PESO+10% (kg)
CA50	8.0	353.5	153.4
CA60	10.0	92.7	62.9
CA60	5.0	515.3	87.4
PESO TOTAL			
CA50		216.3	
CA60		87.4	

Vol. concreto total = 5,68 m³
 Área de forma total = 76,41 m²

Eng.º Jaguarassu Lopes Aquistapasse
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VIGAS LAJE DE FORRO TÉRREO


Ederson Jaguarassu Lopes Aquirstap...
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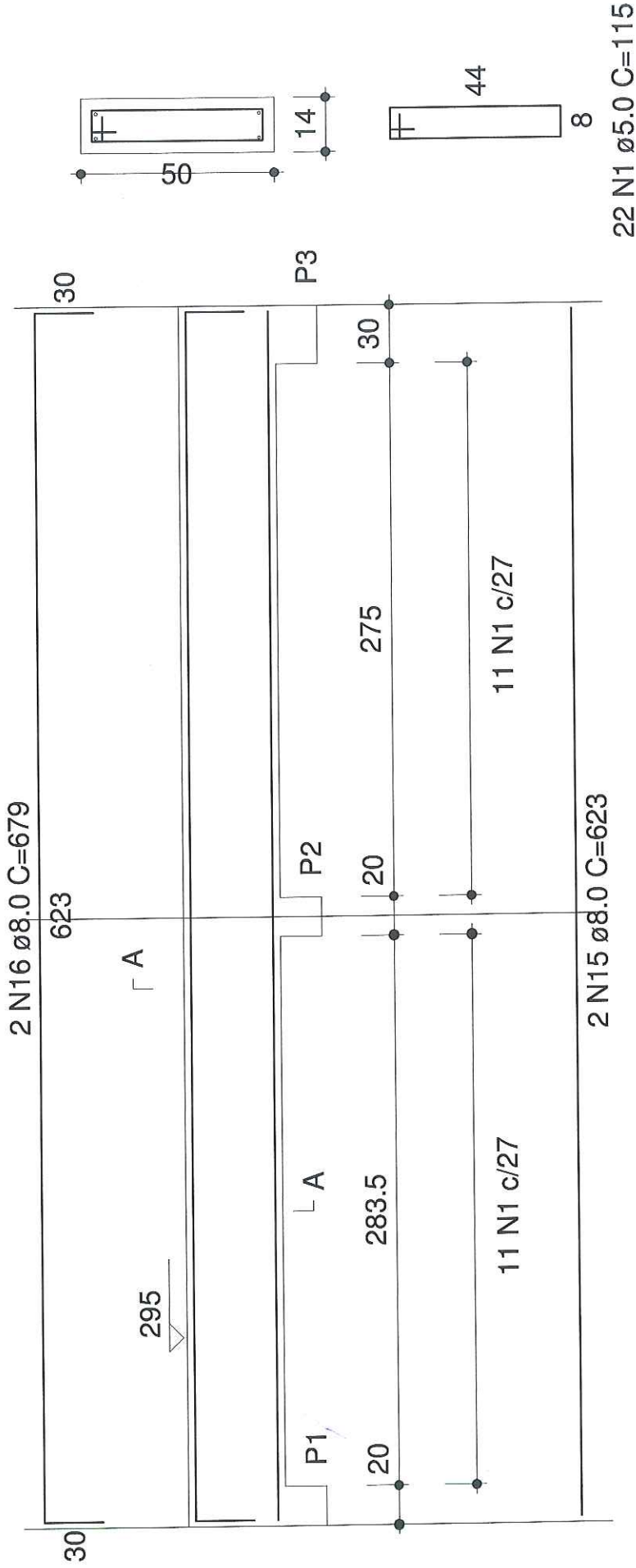
"Doe órgãos, Doe Sangue: Salve Vidas".

Térreo

V1

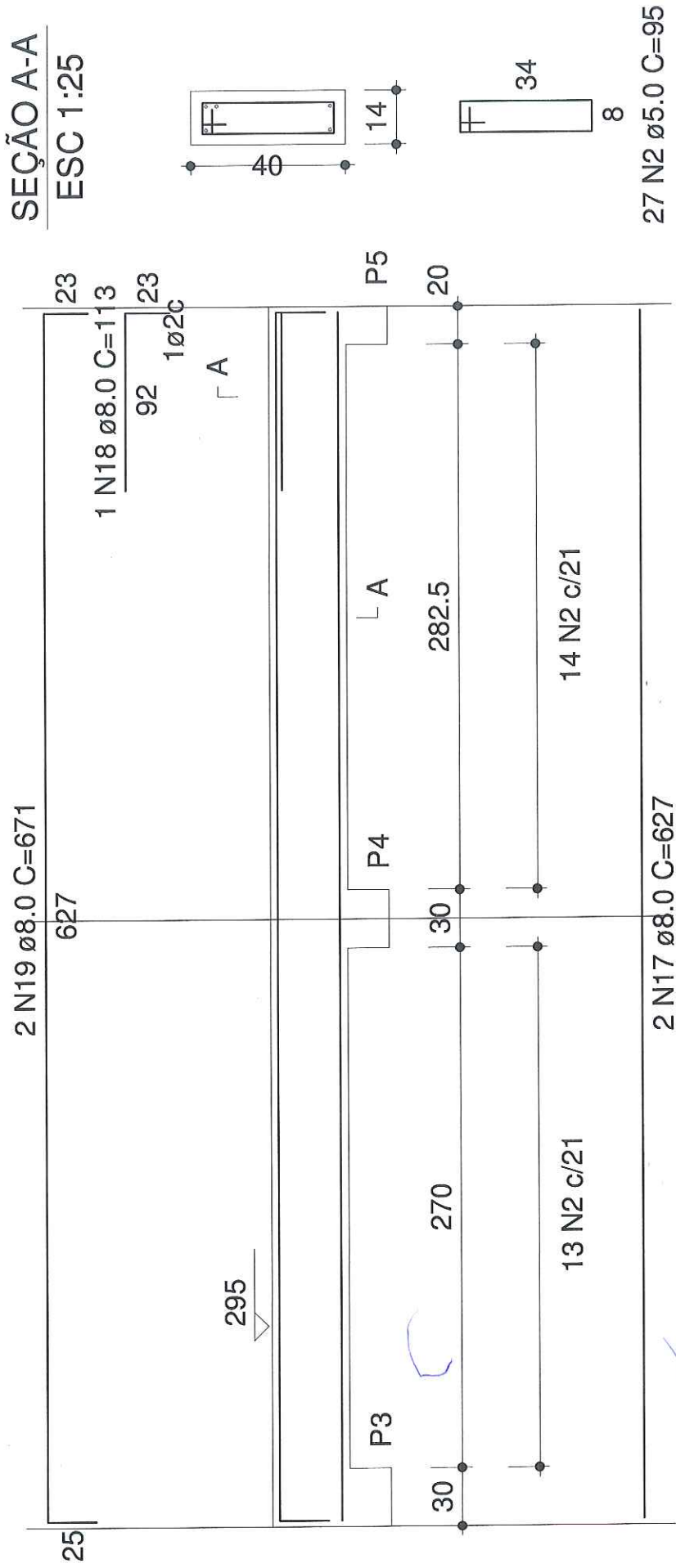
1:50

SEÇÃO A-A
ESC 1:25



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Térreo
V2
 1:50

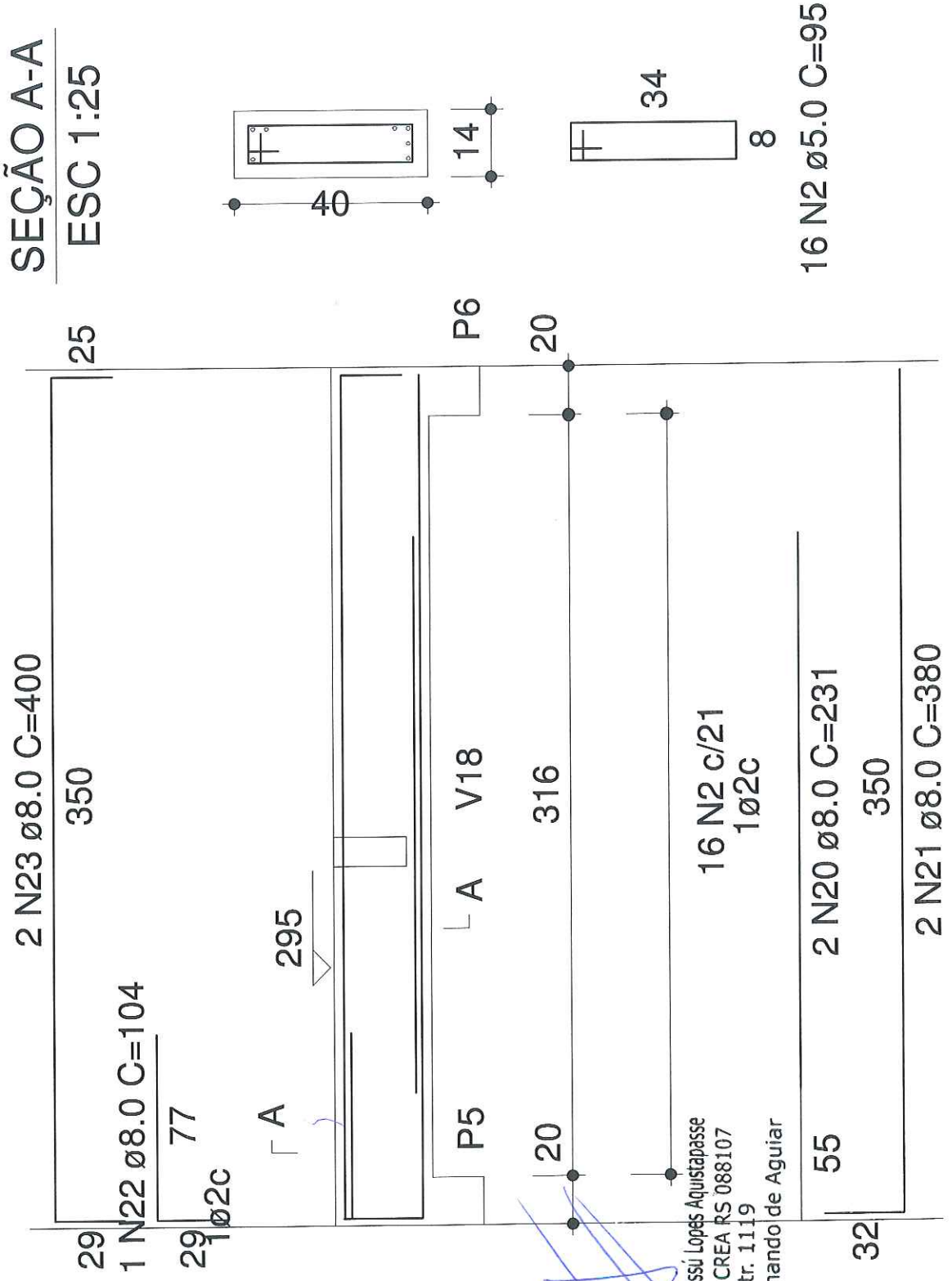


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Térreo

V3

1:50



Térreo

V4

1:50

2 N25 Ø8.0 C=64
13 | 53

2 N26 Ø8.0 C=74
63 | 13

2 N4 Ø5.0 C=220

301

A

V13

A

V14

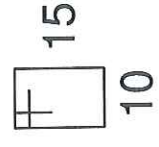
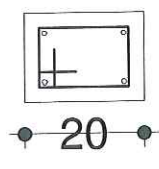
320

36 N3 c/8

2 N24 Ø8.0 C=315

SEÇÃO A-A

ESC 1:25



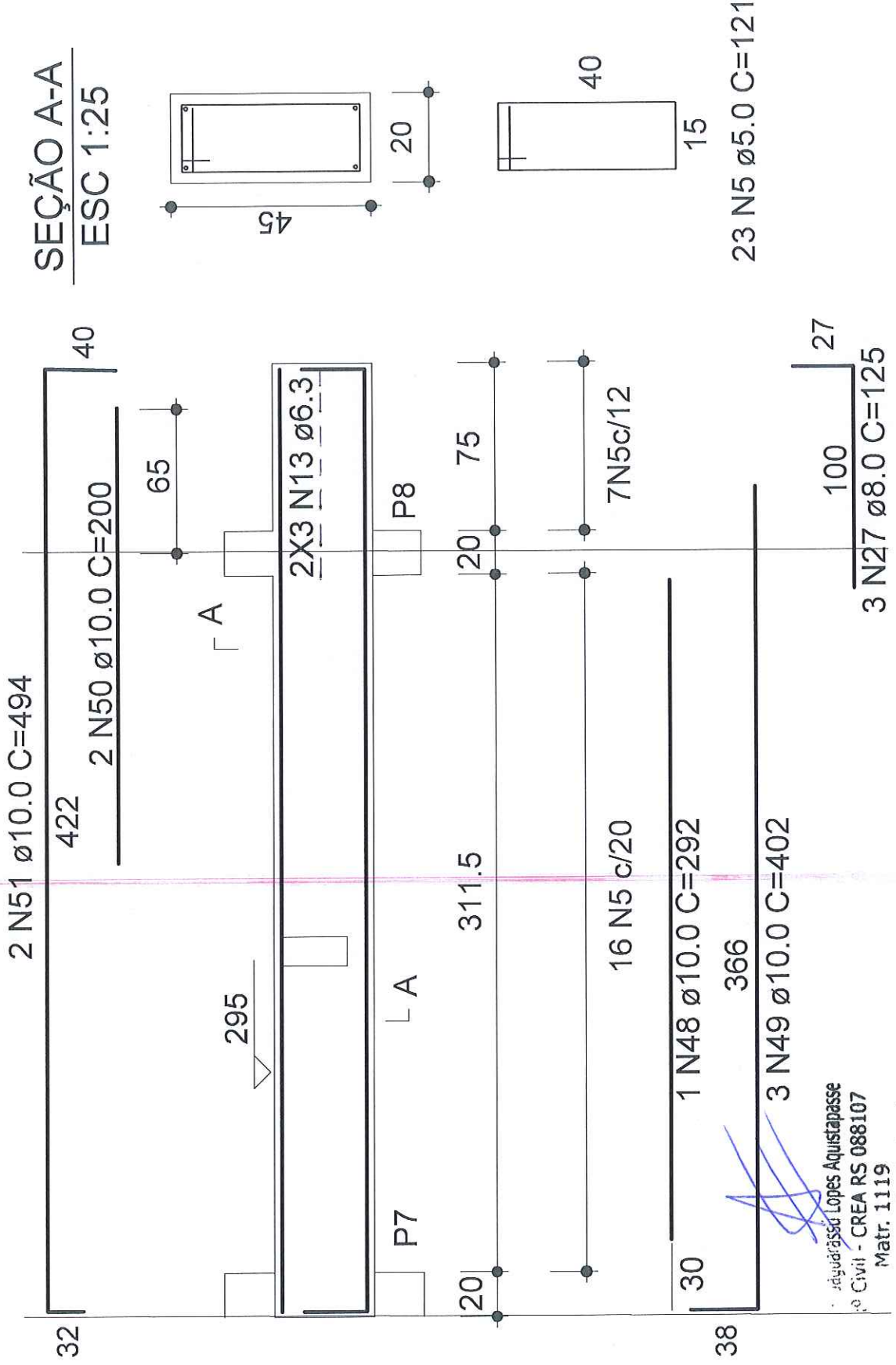
36 N3 Ø5.0 C=61

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Térreo

V5

1:50

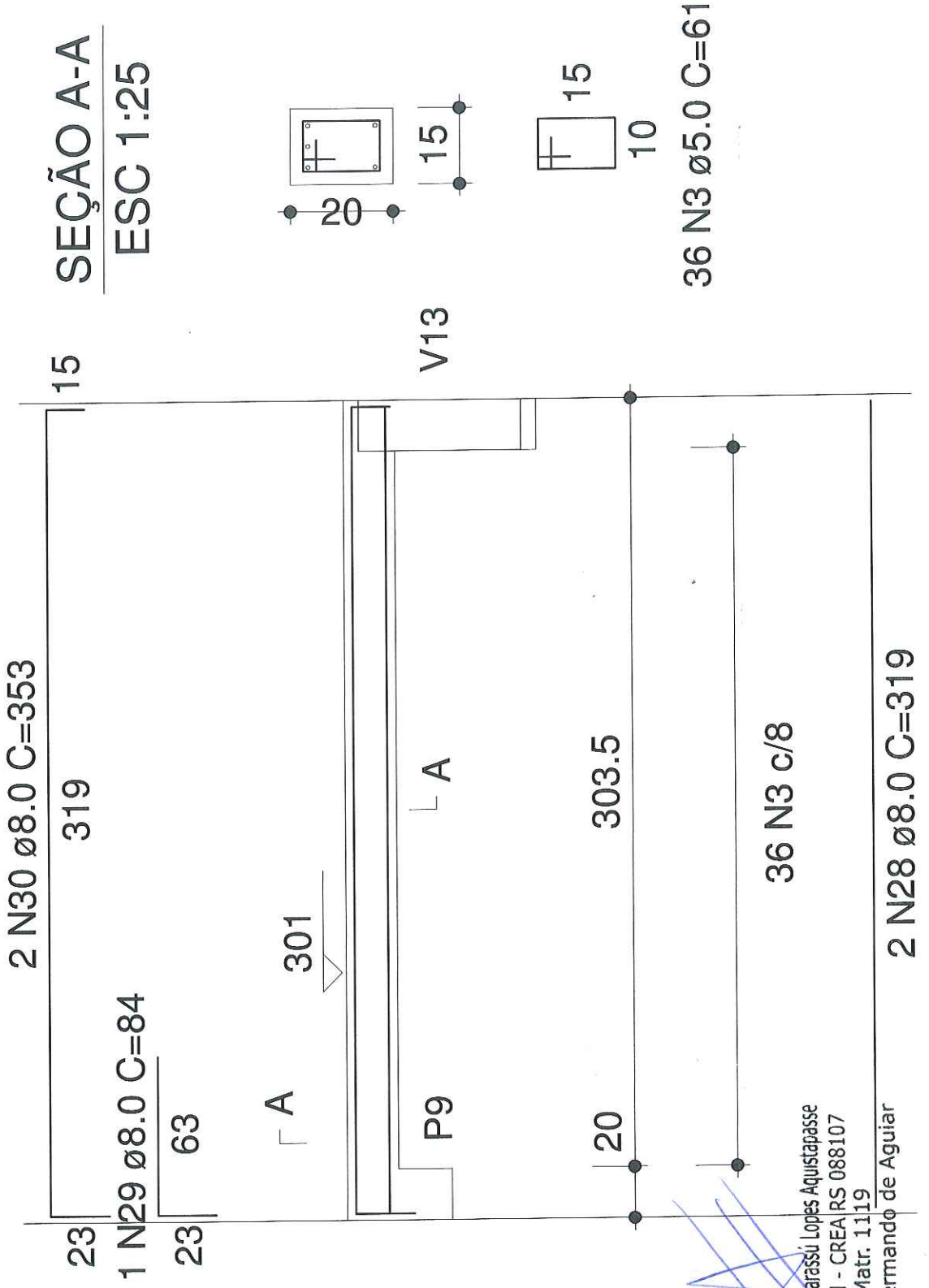


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Dilermando de Aguiar

Térreo

V6

1:50

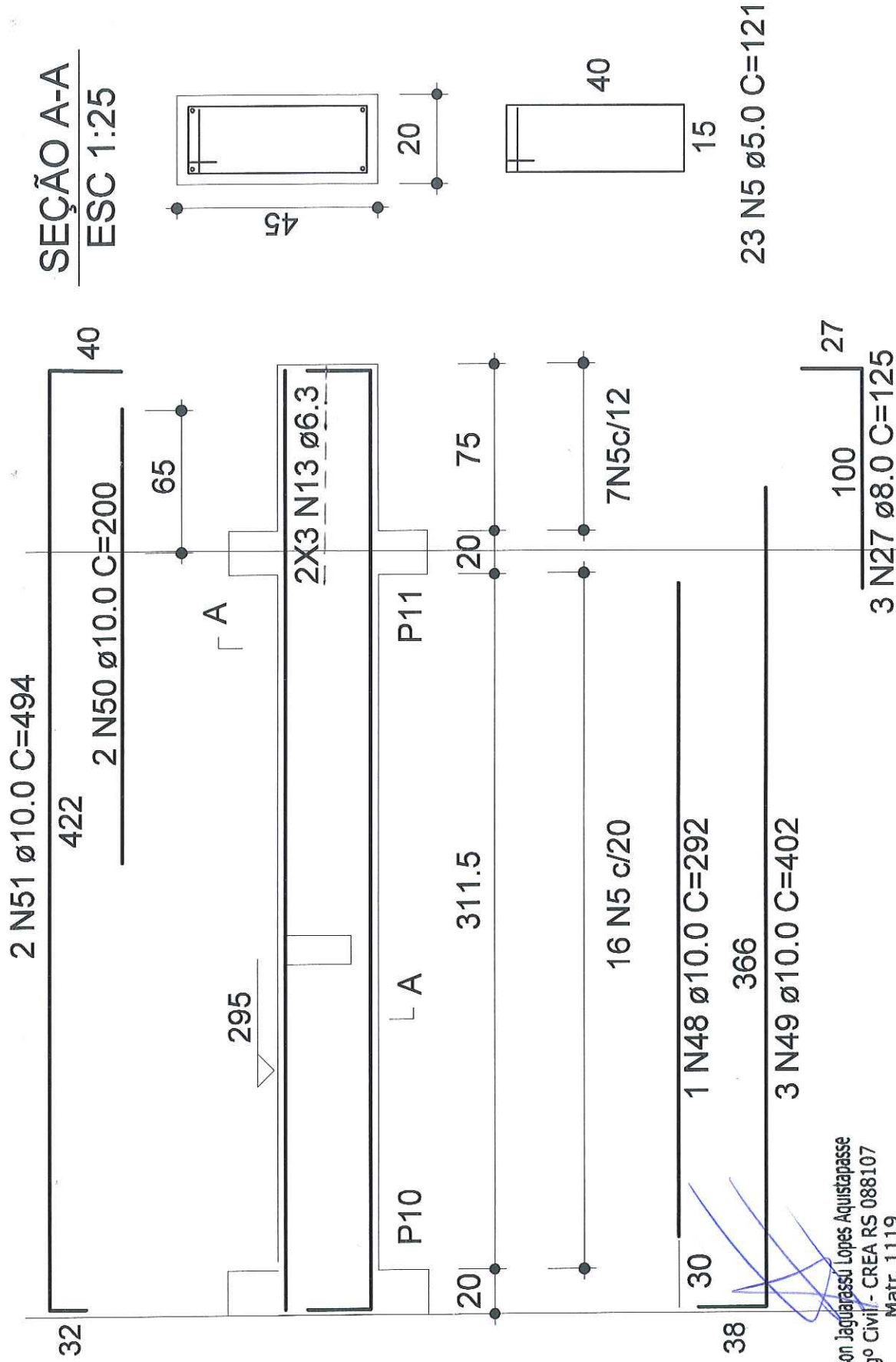


Ederson Jaguarassu Lopes Aquistapasse
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Matr. 1119

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V7

1:50



SEÇÃO A-A ESC 1:25

23 N5 ϕ 5.0 C=121

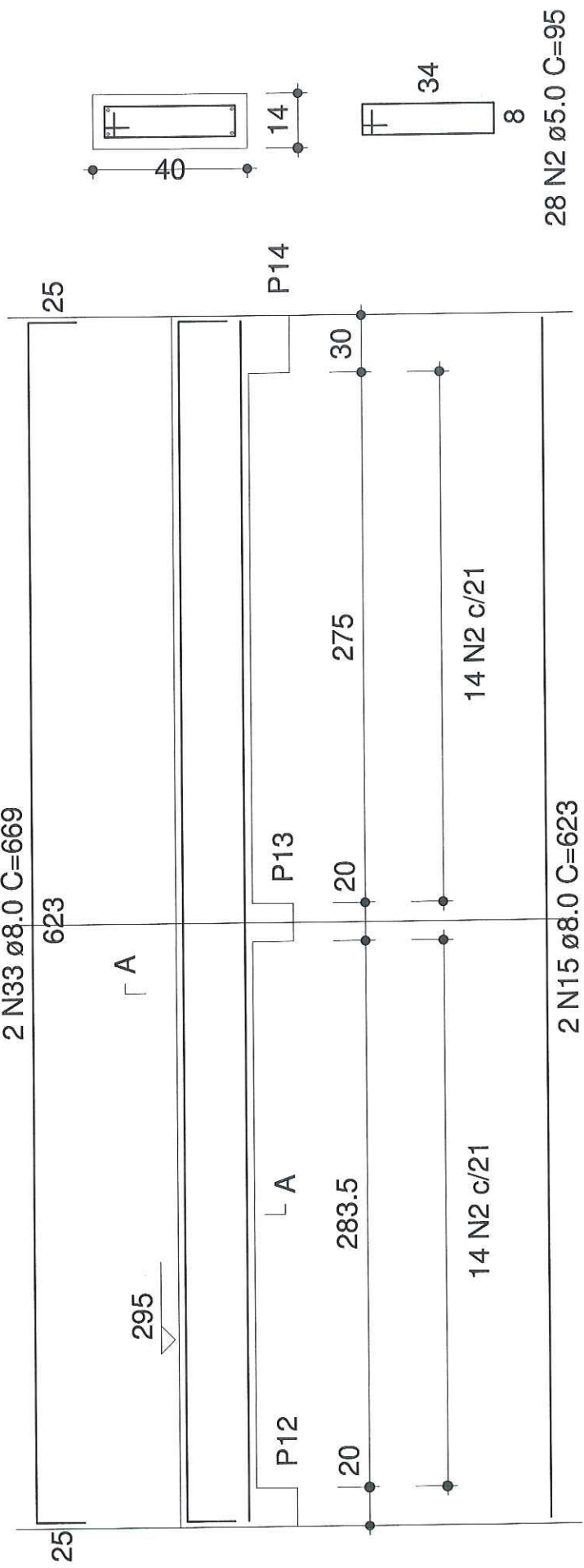
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 Matr. 1119
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Térreo

V8

1:50

SEÇÃO A-A
ESC 1:25

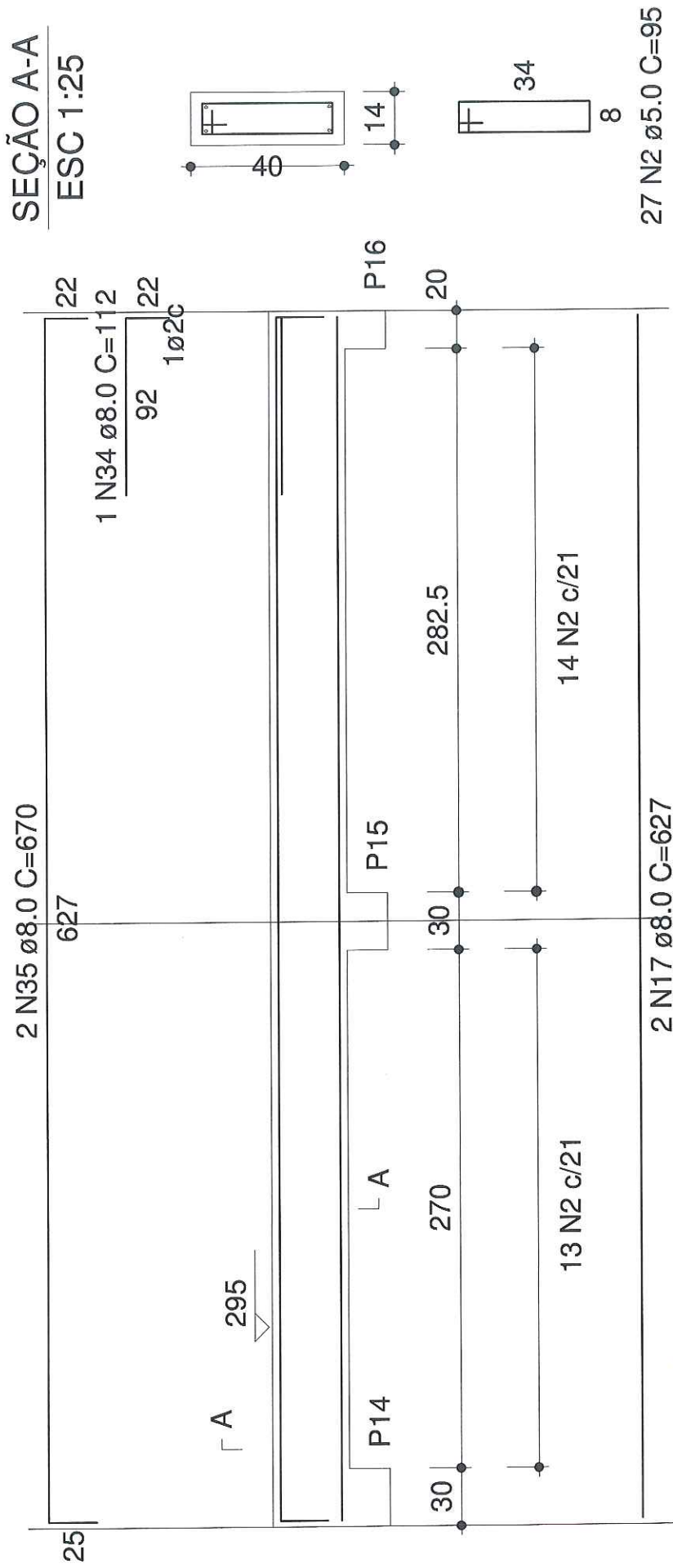


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Térreo

V9

1:50



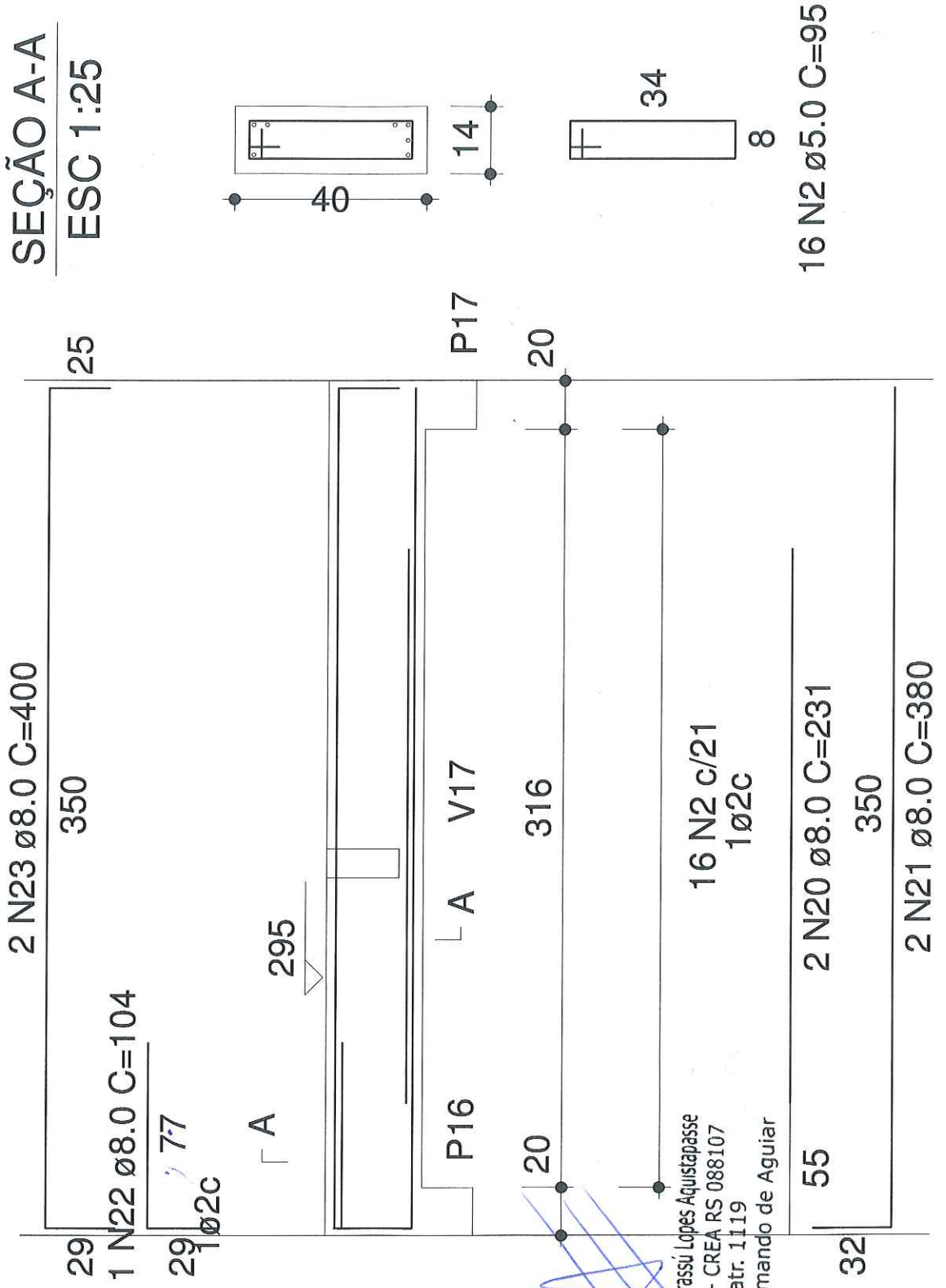
Ederson Jaguarassu Lopes Aquistapassé
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Matr. 1119

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Térreo

V10

1:50

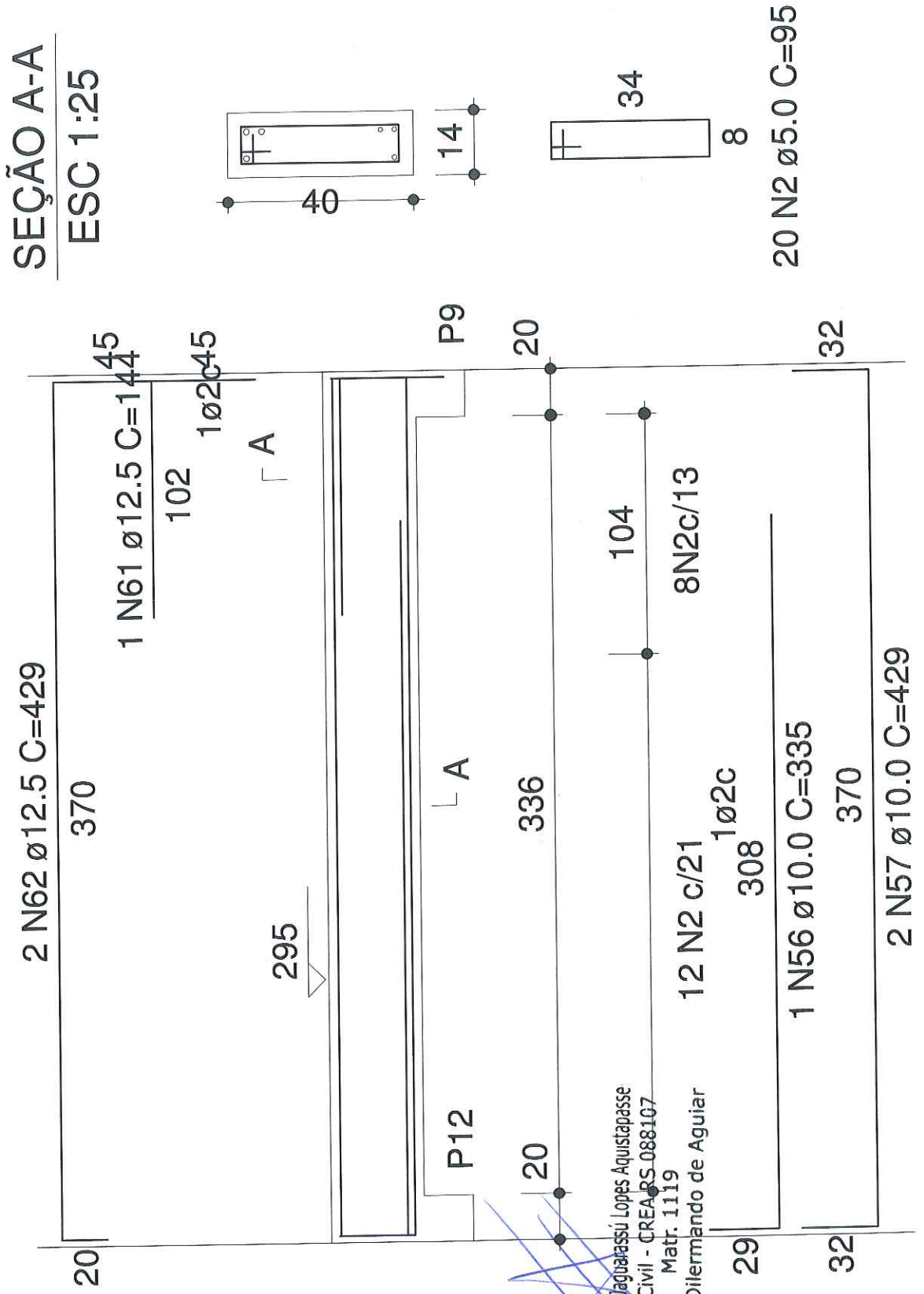


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Térreo

V11

1:50



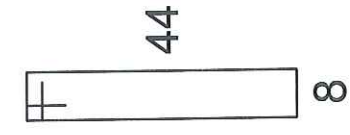
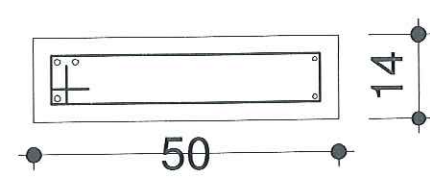
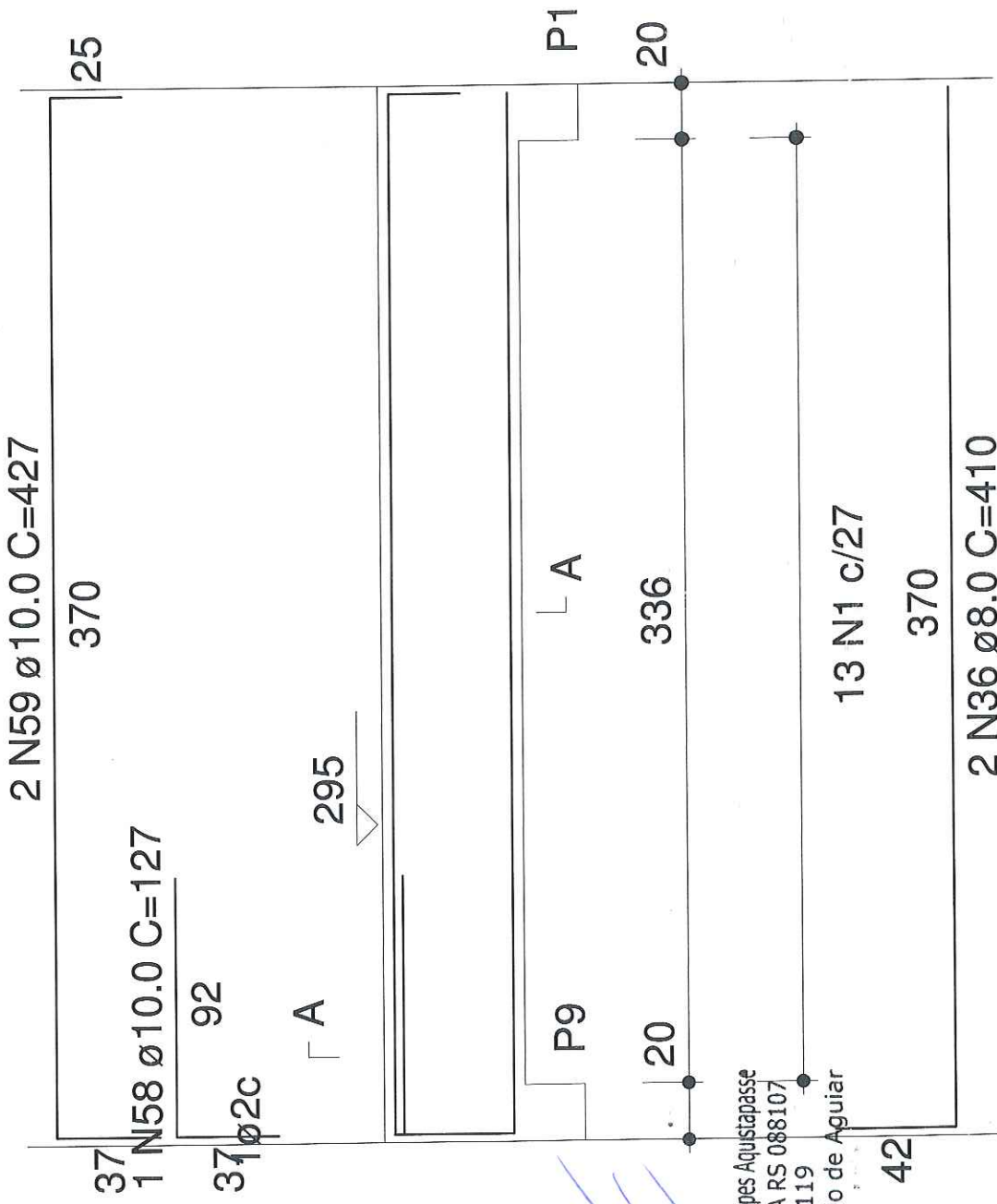
Térreo

V12

1:50

SEÇÃO A-A

ESC 1:25

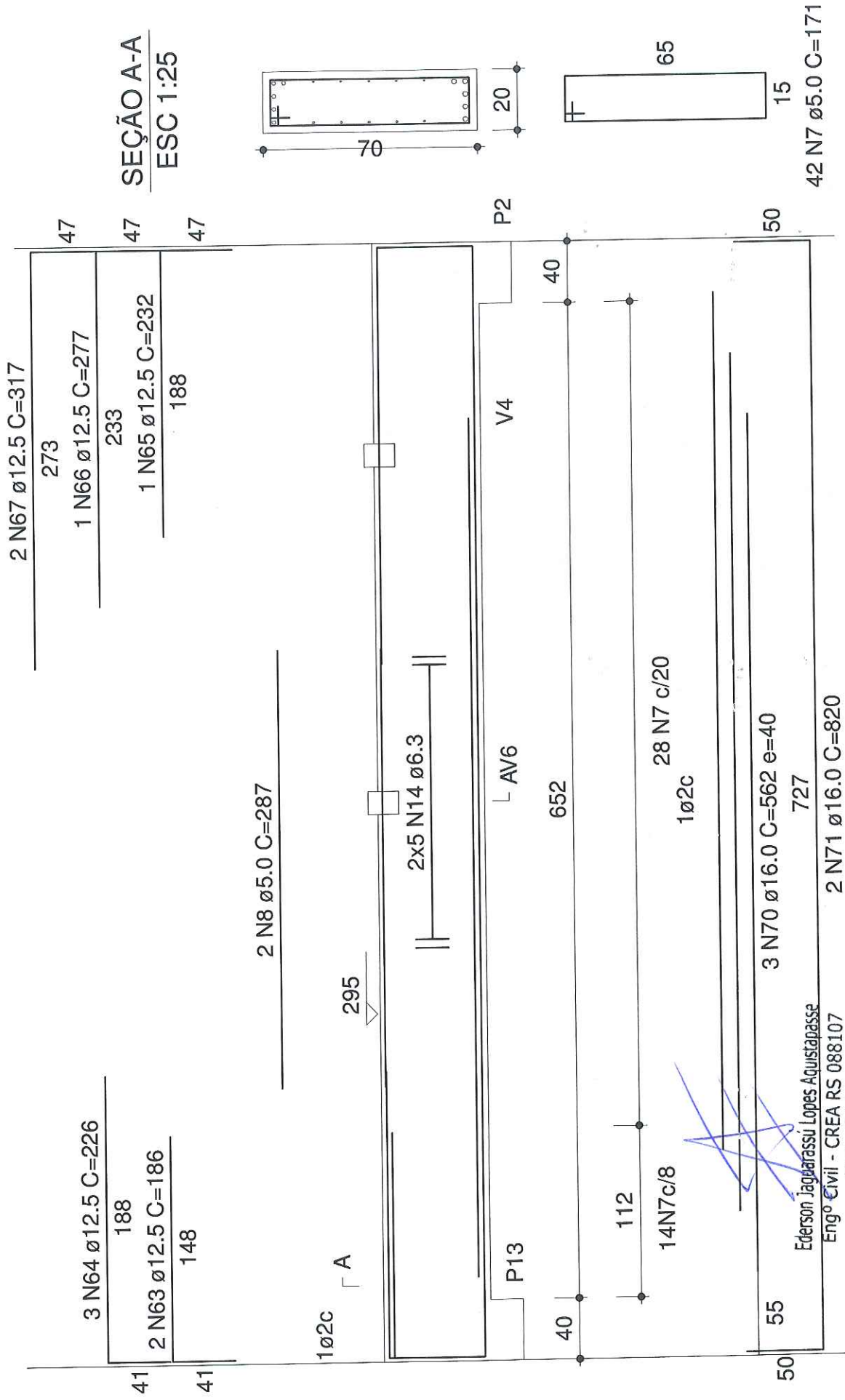


13 N1 \varnothing 5.0 C=115


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Térreo
V13

1:50



SEÇÃO A-A
ESC 1:25

42 N7 ø5.0 C=171

3 N70 ø16.0 C=562 e=40
727
2 N71 ø16.0 C=820

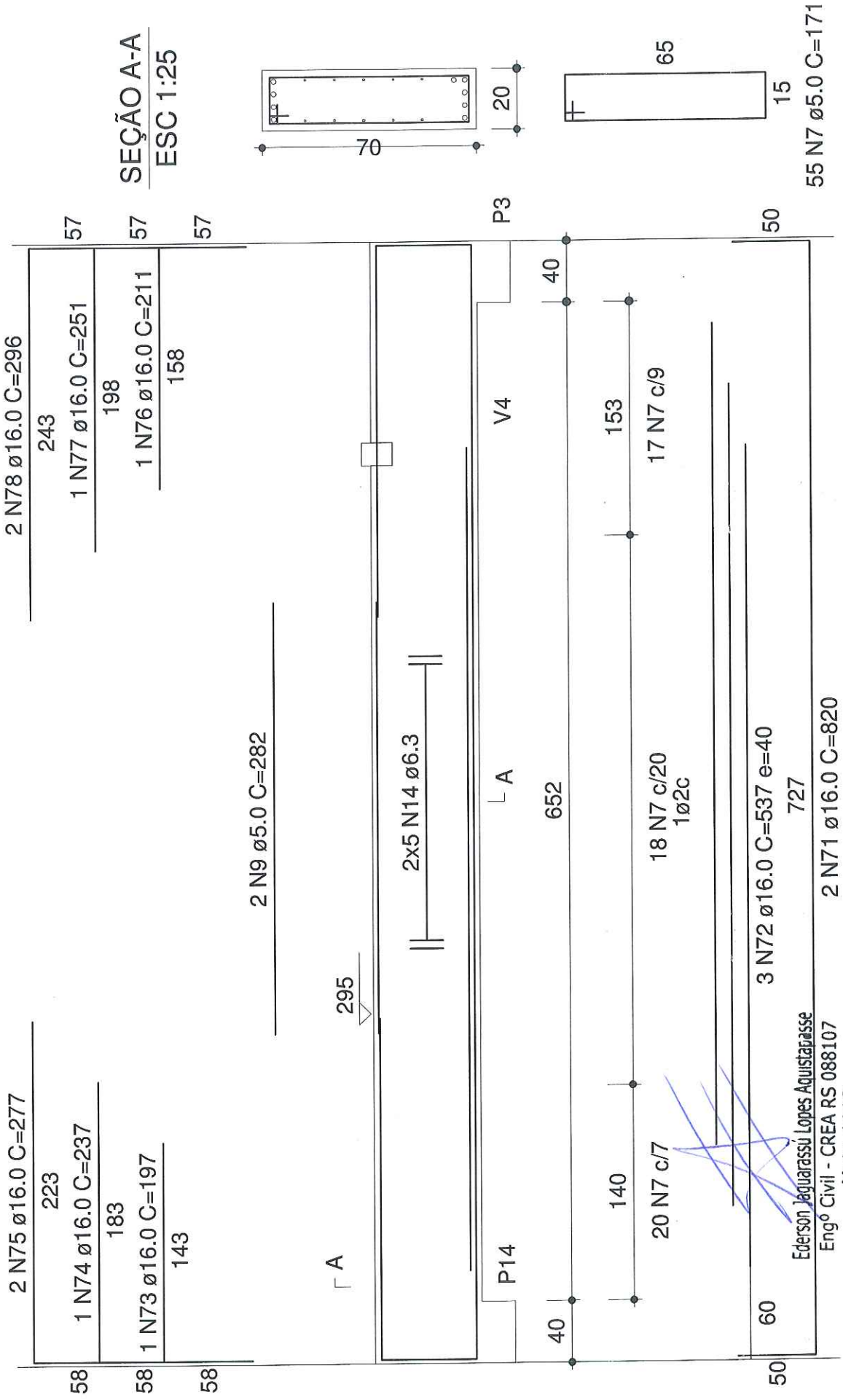
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Térreo

V14

1:50



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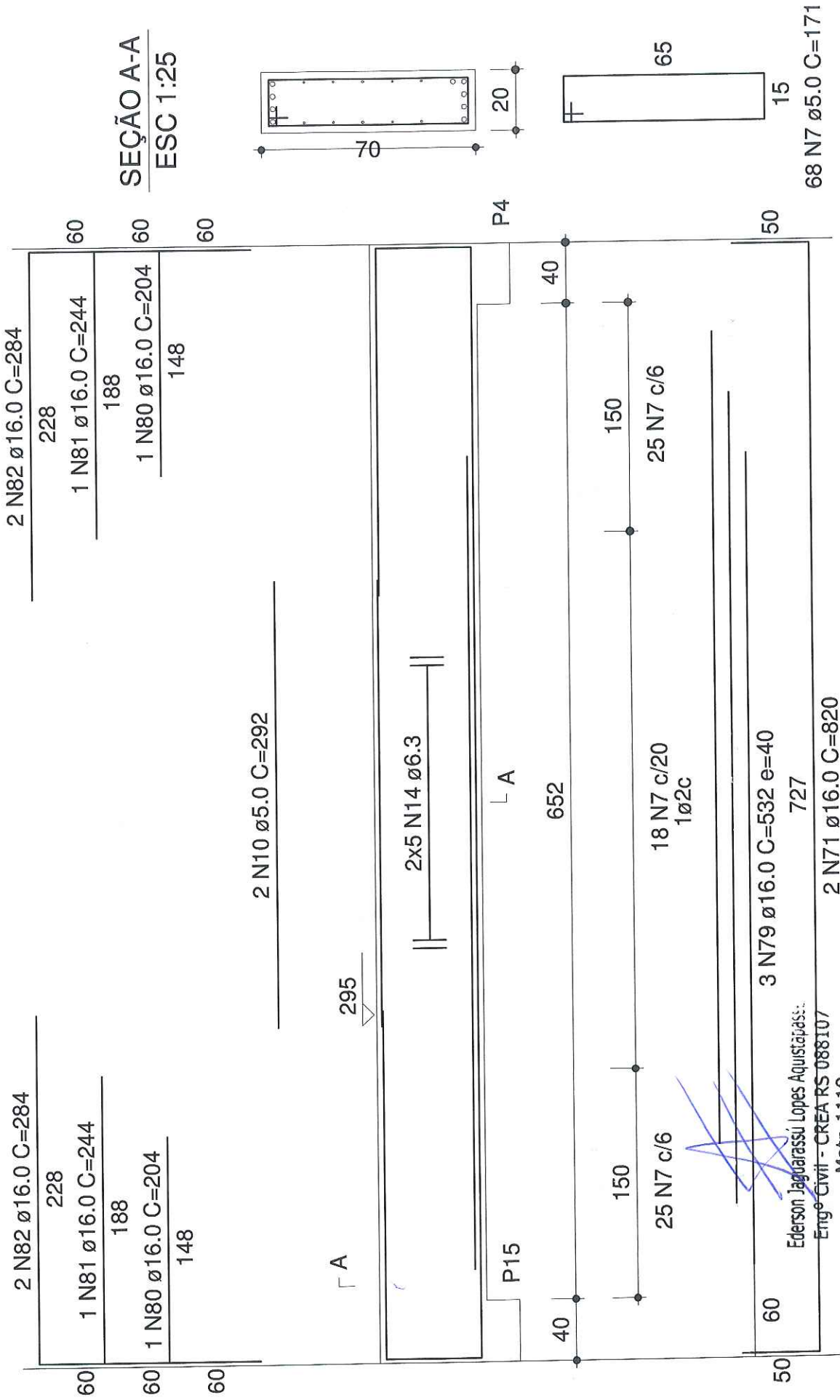
Matr. 1119

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Térreo

V15

1:50



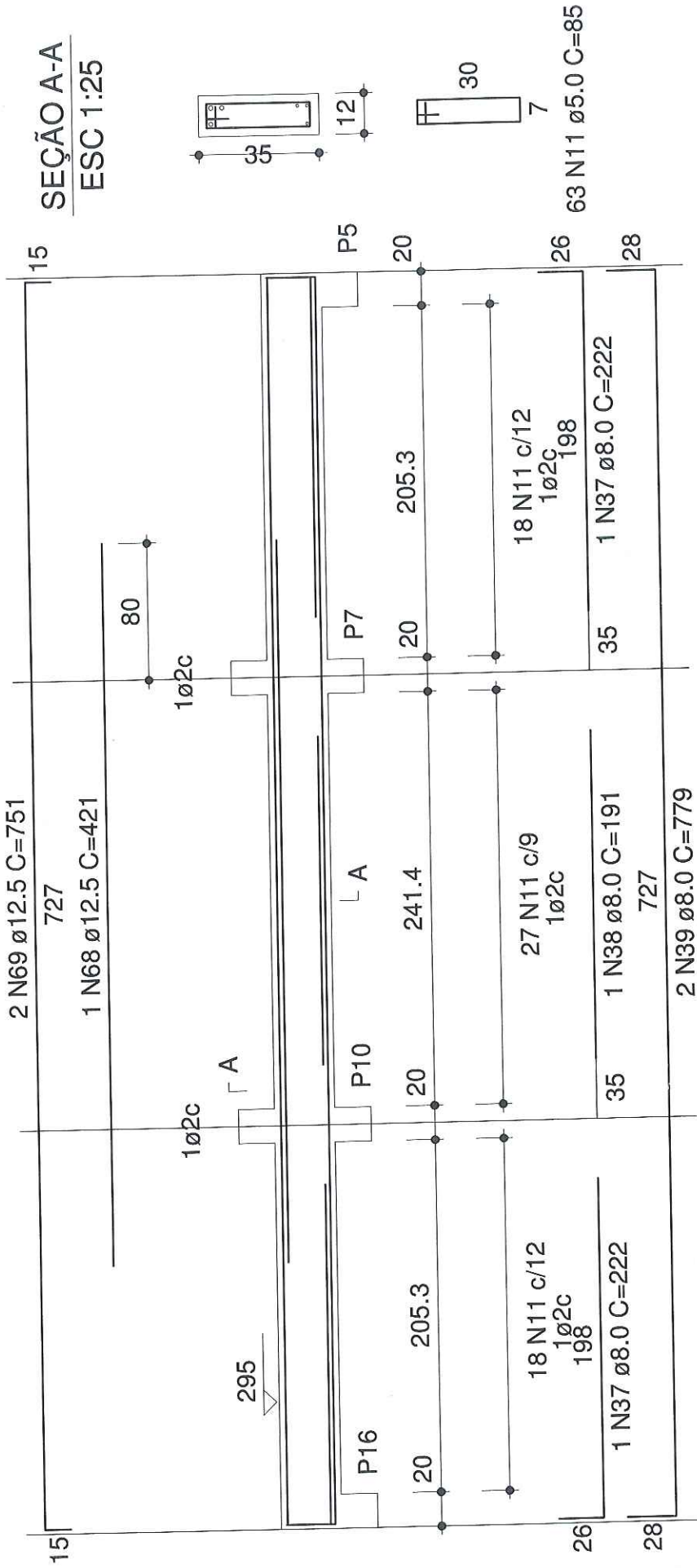
68 N7 ϕ 5.0 C=171

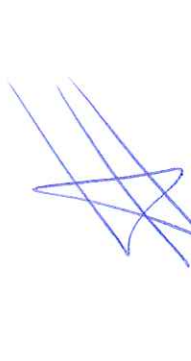
3 N79 ϕ 16.0 C=532 e=40
727

Ederson Jaguarassú Lopes Aquistapass:
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Térreo
V16
 1:50





Ederison Jaguarassú Lopes Aquistapasse
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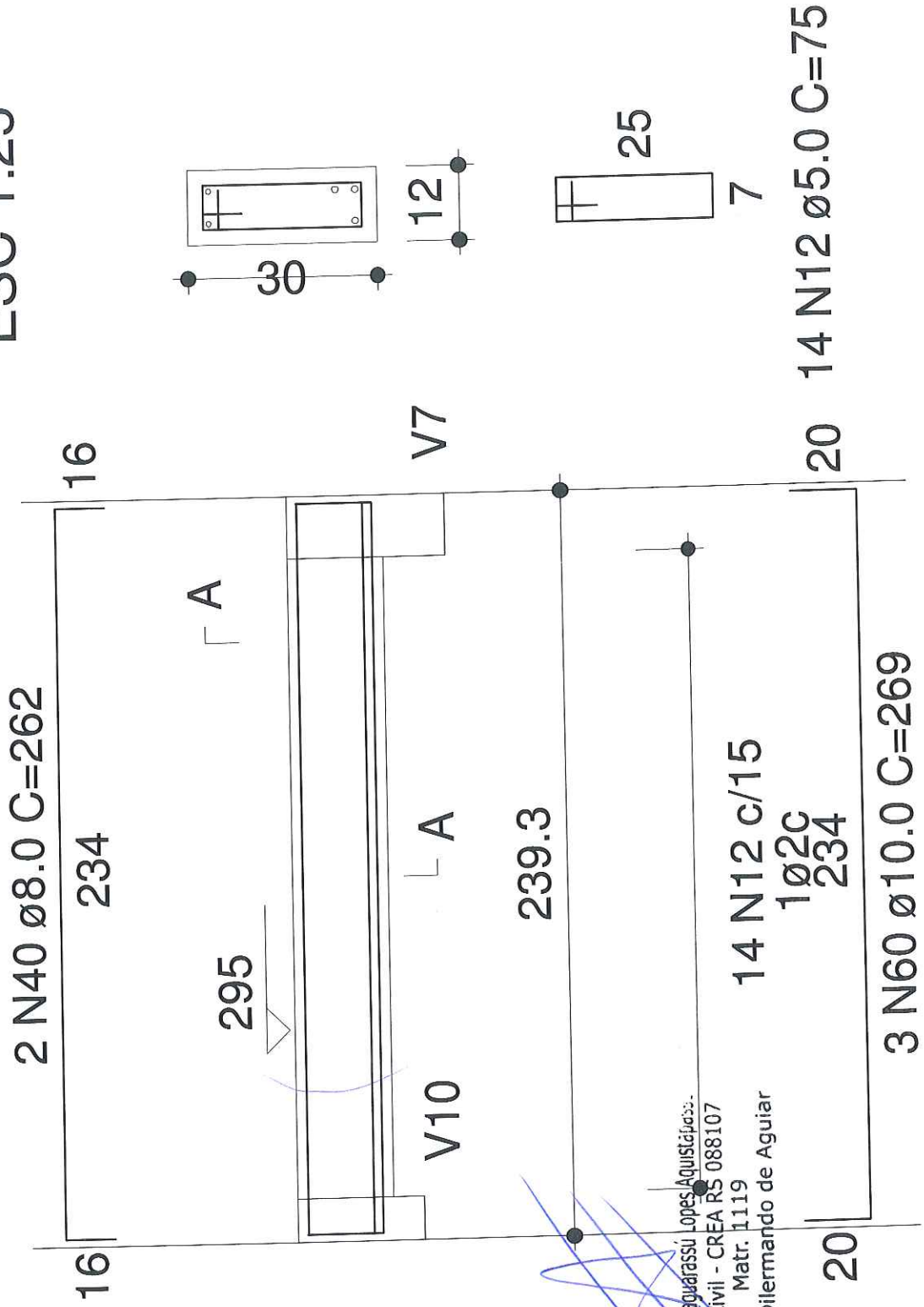
Térreo

V17

1:50

SEÇÃO A-A

ESC 1:25



Ederson Jaguarassú Lopes Aquistávia
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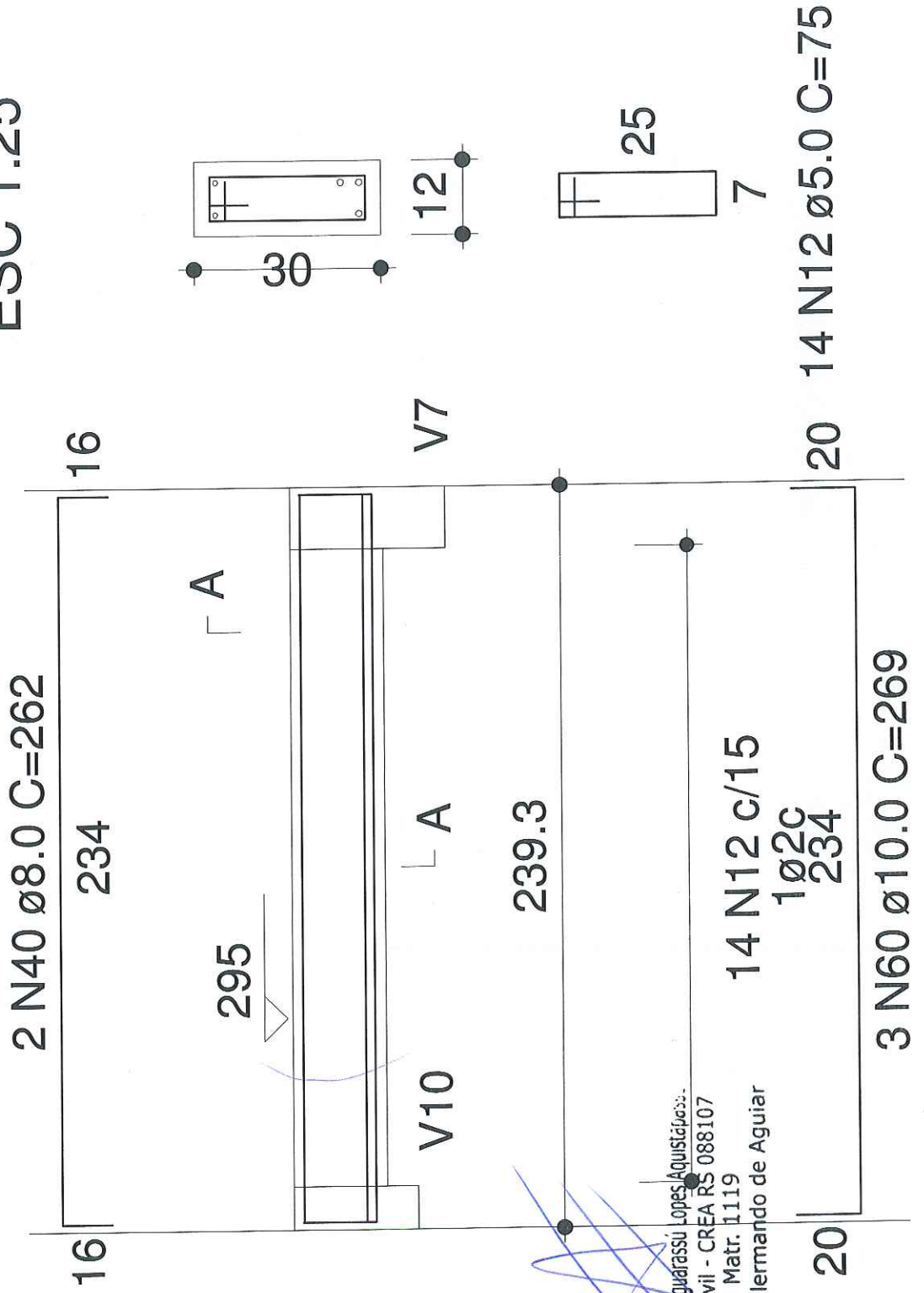
Térreo

V17

1:50

SEÇÃO A-A

ESC 1:25



Ederson Jaquarassu Lopes Aquistação
Engº Civil - CREA RS 088107
Matr. 1119
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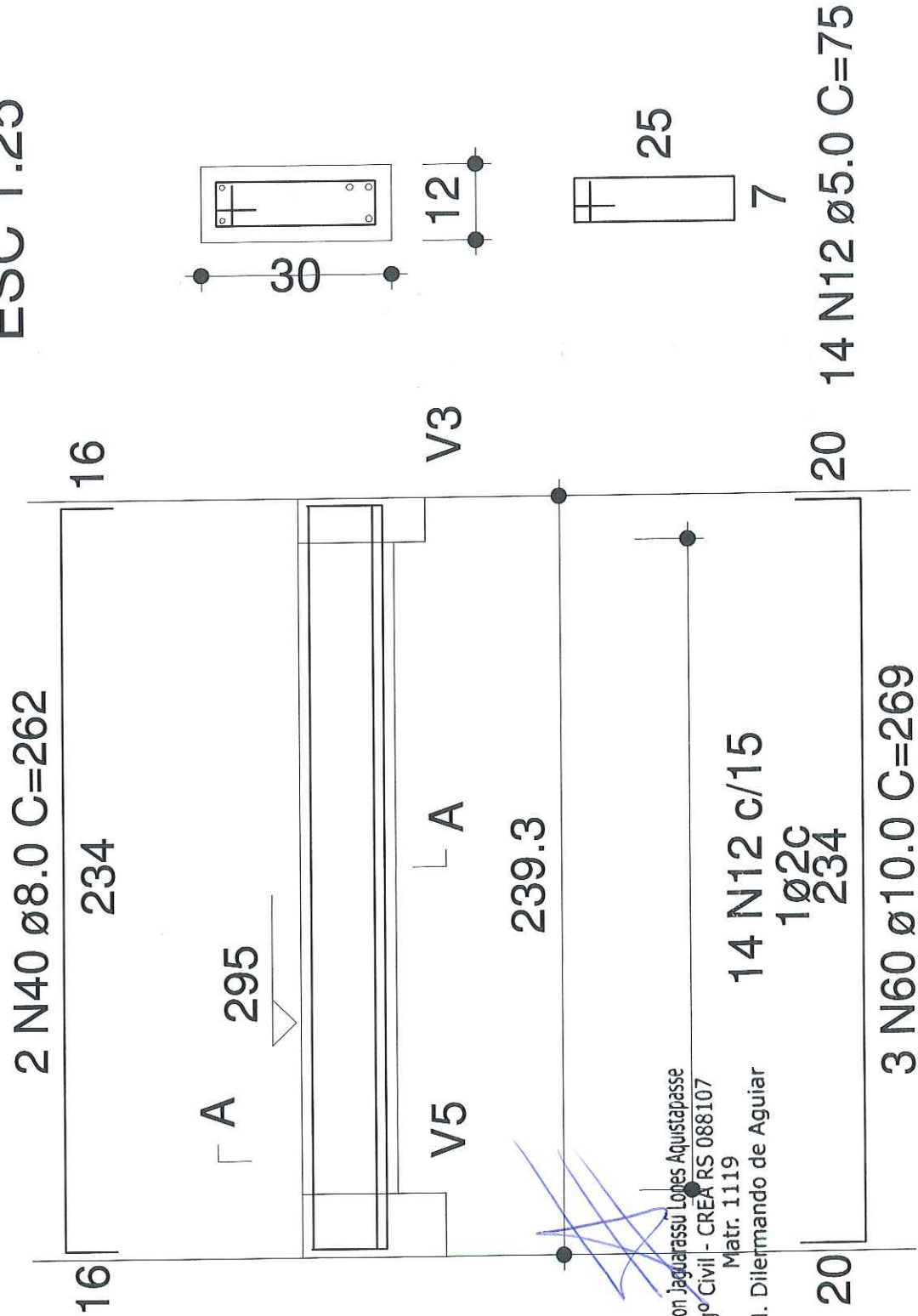
Térreo

V18

1:50

SEÇÃO A-A

ESC 1:25



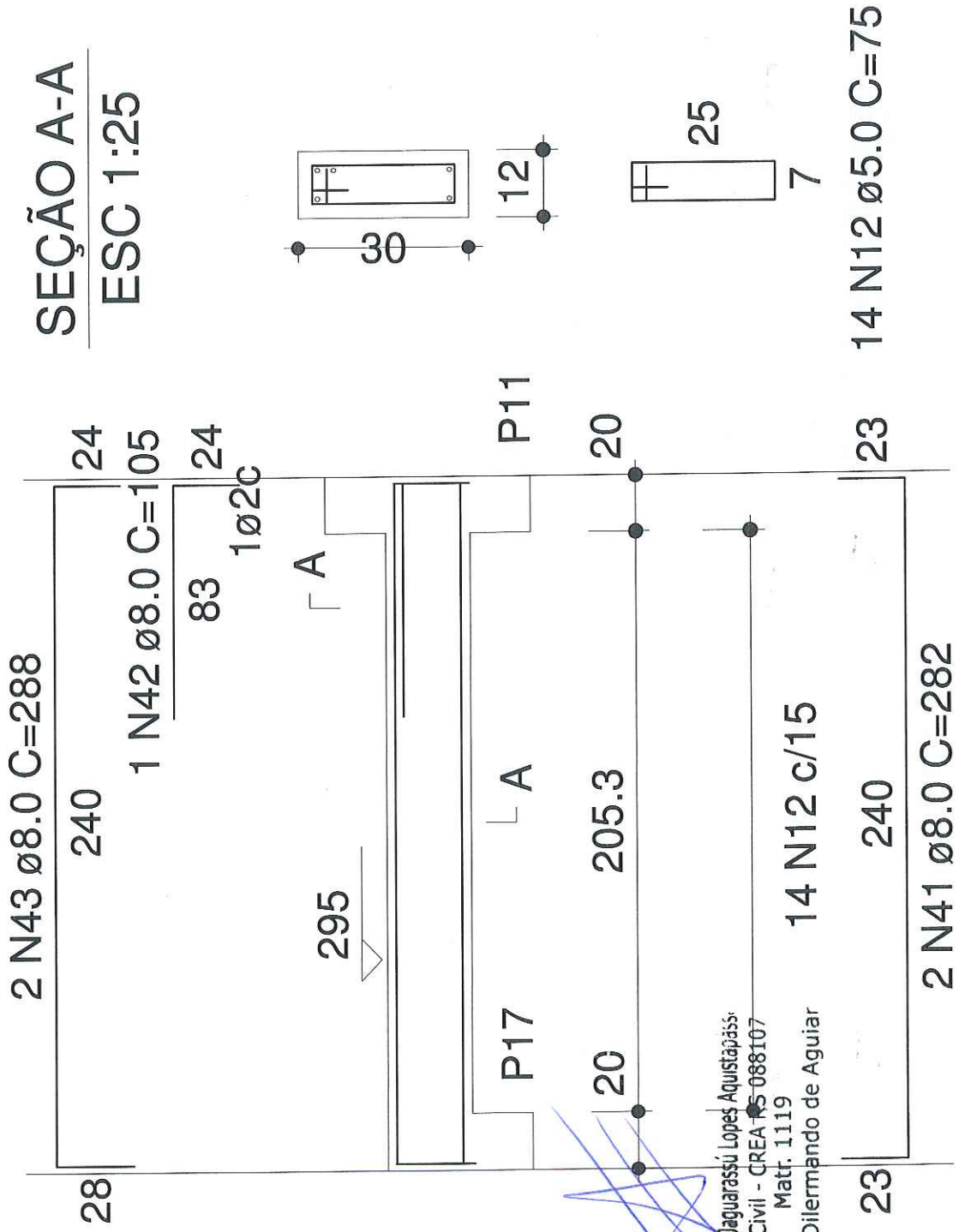
~~Ederson Jaguarassu Lopes Aquistapasse
Engº Civil - CREA RS 088107
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Térreo

V19

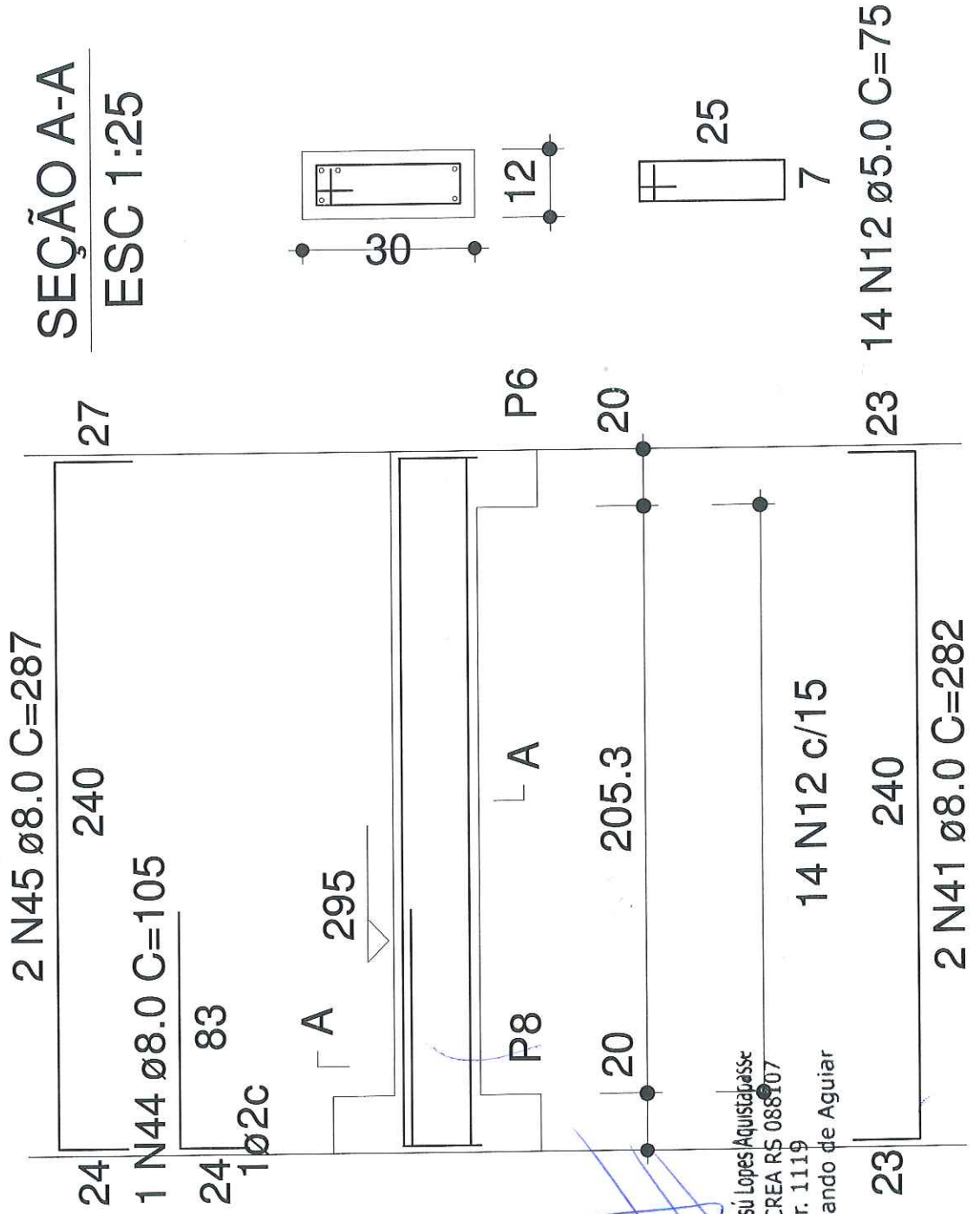
1:50



Térreo

V20

1:50



Ederson Jaguarassu Lopes Aquistabesse
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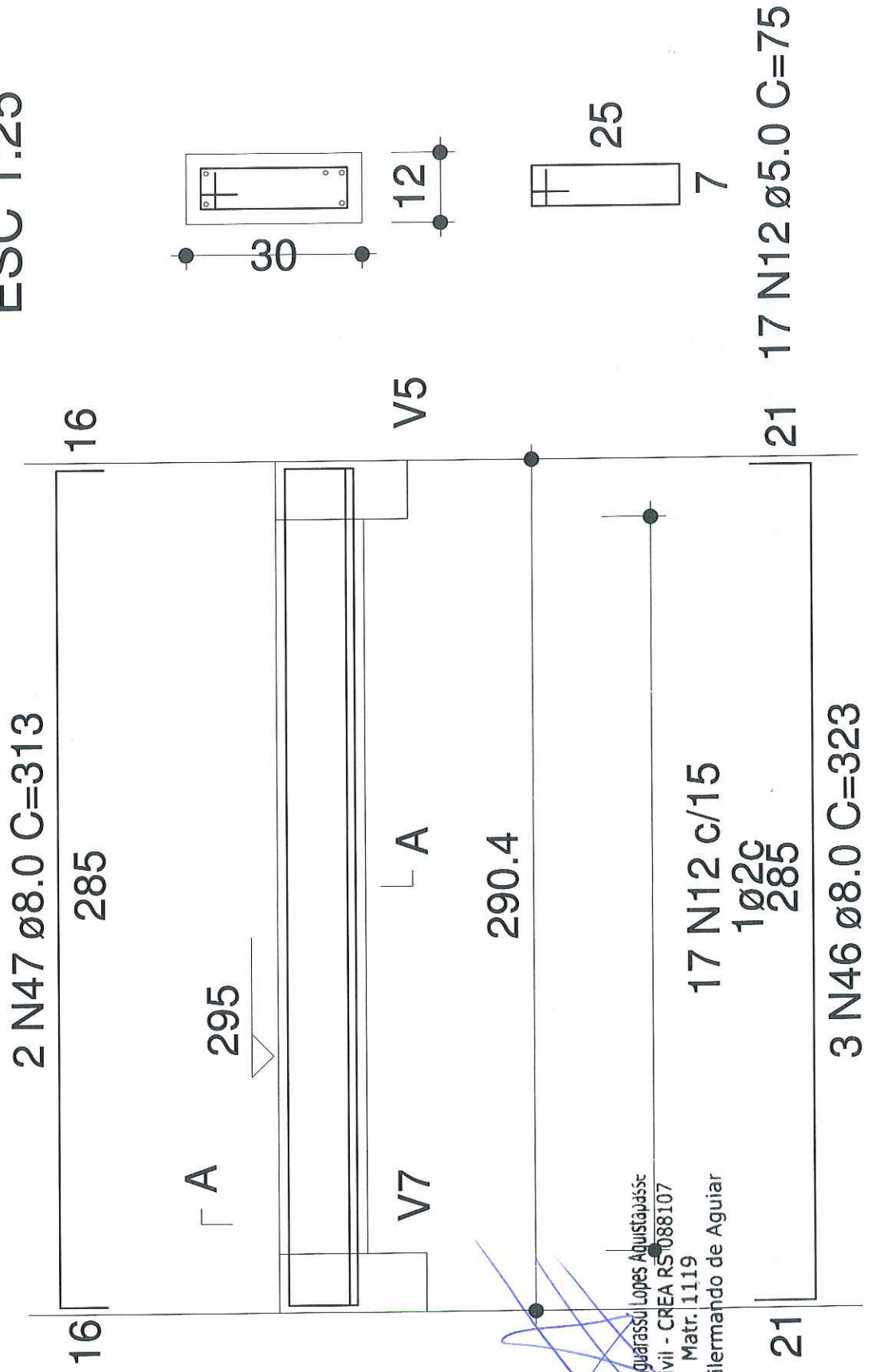
Térreo

V21

1:50

SEÇÃO A-A

ESC 1:25



Ederson Jaguarassu Lopes Abustapásc
Engº Civil - CREA RS 088107

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RELAÇÃO DO AÇO

V1
V2
V3
V4
V5
V6
V7
V8
V9
V10
V11
V12
V13
V14
V15
V16
V17
V18
V19
V20
V21

ACO	N	DIAM	O	UNIT	C/TOTAL (cm)
60	1	5.0	35	115	4025
	2	5.0	124	95	12720
	3	5.0	2	220	440
	4	5.0	2	220	440
	5	5.0	23	121	2783
	6	5.0	223	131	29013
	7	5.0	182	287	574
	8	5.0	2	282	564
	9	5.0	2	282	564
	10	5.0	62	232	584
	11	5.0	75	75	5475
	12	5.0	75	75	5475
50	13	6.3	6	cont	510
	14	6.3	30	cont	21960
	15	8.0	4	873	3492
	16	8.0	4	873	3492
	17	8.0	4	627	2508
	18	8.0	1	113	113
	19	8.0	2	271	542
	20	8.0	2	271	542
	21	8.0	4	390	1560
	22	8.0	2	104	208
	23	8.0	4	410	1640
	24	8.0	2	64	128
	25	8.0	2	74	148
	26	8.0	2	125	250
	27	8.0	3	125	375
	28	8.0	1	84	84
	29	8.0	1	84	84
	30	8.0	2	353	706
	31	8.0	4	937	3748
	32	8.0	4	937	3748
	33	8.0	2	669	1338
	34	8.0	1	112	112
	35	8.0	2	670	1340
	36	8.0	2	444	888
	37	8.0	2	222	444
	38	8.0	1	191	191
	39	8.0	2	779	1558
	40	8.0	4	282	1128
	41	8.0	4	282	1128
	42	8.0	1	105	105
	43	8.0	2	288	576
	44	8.0	2	287	574
	45	8.0	2	287	574
	46	8.0	3	323	969
	47	8.0	2	313	626
	48	10.0	3	402	1206
	49	10.0	2	200	400
	50	10.0	2	489	978
	51	10.0	2	489	978
	52	10.0	3	426	1278
	53	10.0	3	426	1278
	54	10.0	1	190	190
	55	10.0	2	498	996
	56	10.0	2	435	870
	57	10.0	2	435	870
	58	10.0	1	127	127
	59	10.0	2	427	854
	60	10.0	6	289	1734
	61	10.0	6	289	1734
	62	12.5	2	429	858
	63	12.5	2	186	372
	64	12.5	3	226	678
	65	12.5	3	226	678
	66	12.5	1	277	277
	67	12.5	2	317	634
	68	12.5	1	421	421
	69	12.5	3	552	1656
	70	16.0	3	850	2550
	71	16.0	6	850	4920
	72	16.0	3	537	1611
	73	16.0	3	537	1611
	74	16.0	1	237	237
	75	16.0	2	277	554
	76	16.0	1	211	211
	77	16.0	2	256	512
	78	16.0	2	256	512
	79	16.0	3	532	1596
	80	16.0	2	204	408
	81	16.0	2	244	488
	82	16.0	2	284	568

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RESUMO DO AÇO

ACO	DIAM	C/TOTAL (m)	PESO+10% (kg)
CA50	6.3	2247	60.5
	8.0	14652	394.4
	10.0	5895	163.4
	12.5	512	54.3
CA60	16.0	1389	241.2
PESO TOTAL	5.0	684.4	116.0
CA50		5842	
CA60		116.0	


Vol. concreto total = 7,21 m³
Área de forma total = 103,04 m²

RESUMO DO AÇO - Pilaretes/Vigas Cintamento Platibanda

Aço	Diâmetro	Comp. total (m)	Peso + 10 % (kg)
CA50	8.0	173.0	68.34
	10.0	60.84	37.54
CA60	5.0	239.94	36.95
Peso total			
(kg)			
CA50	105.88		
CA60	36.95		

Vol. concreto total = 1,65 m³

Área de forma total = 28,25 m²


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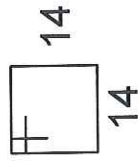
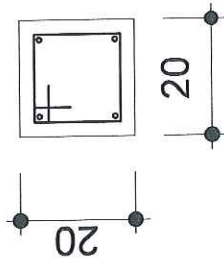
PILARES RESERVATÓRIO SUPERIOR


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"Doe órgãos, Doe Sangue: Salve Vidas".

P7=P8=P10=P11

Respaldo Vigas Reservatório



17 N3 Ø5.0 C=90

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Laje forro (Térreo)

565



17 N3 c/15

267

4 N5 Ø10.0 C=265

295






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VIGAS RESERVATÓRIO SUPERIOR


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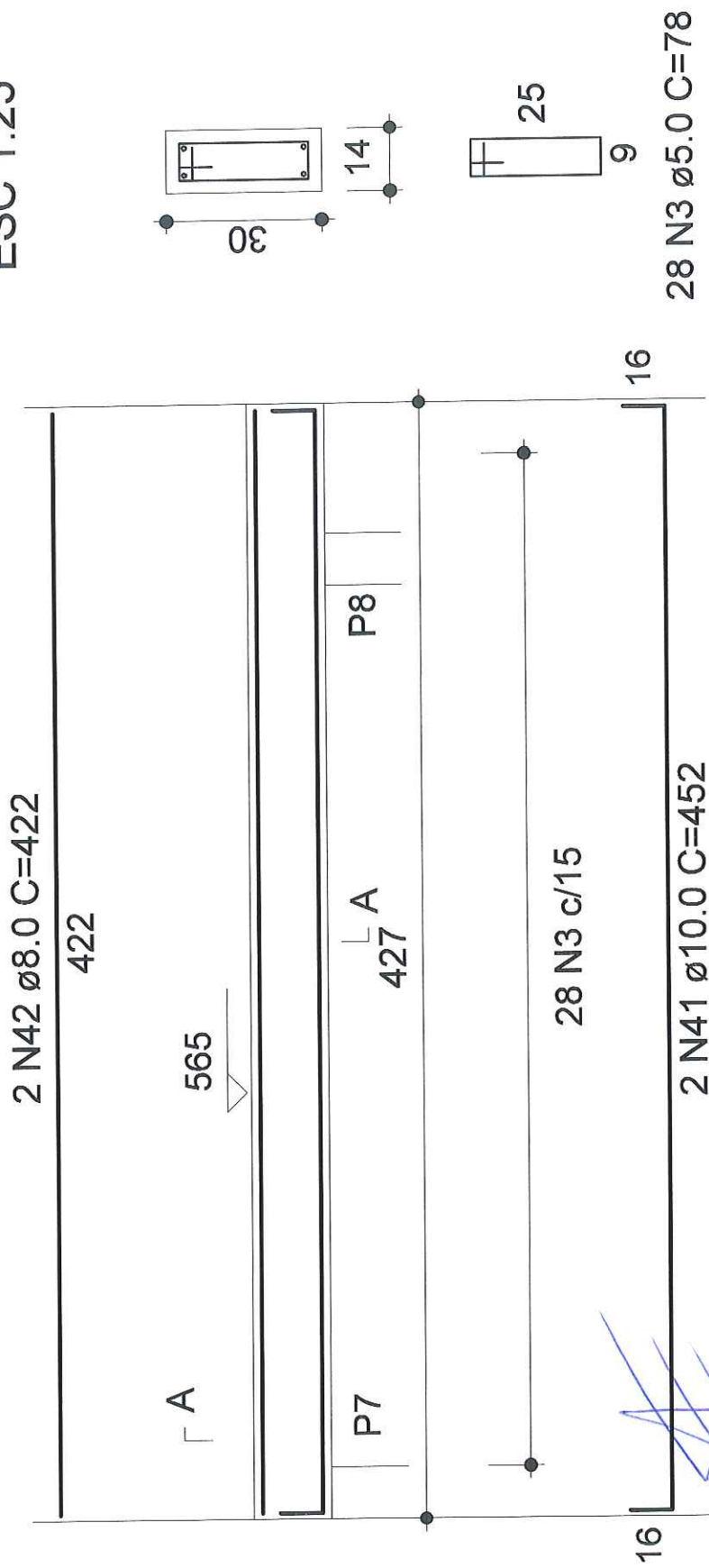
"Doe órgãos, Doe Sangue: Salve Vidas".

VIGAS RESERVATÓRIO

V1

1:50

SEÇÃO A-A
ESC 1:25




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RESUMO DO AÇO - Vigas do pavimento LajeCxDag

Aço	Diâmetro	Comp. total (m)	Peso + 10 % (kg)
CA50	8.0	71.8	31.2
	10.0	18.10	11.17
CA60	5.0	75.3	12.8
Peso total (kg)			
CA50	31.2		
CA60	12.8		

Vol. concreto total = 0.68 m³

Área de forma total = 13.14 m²


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