

Technical drawing of a reinforced concrete slab (P45-P48) showing dimensions, reinforcement details, and section markers.

Dimensions:

- Overall width: 835
- Overall length: 1007
- Section markers: A-A, B-B

Reinforcement Details:

- Top reinforcement: 2 N1 Ø 12.5 C=856
- Bottom reinforcement: 2 Ø 12.5
- Top reinforcement (right side): 2 N2 Ø 12.5 C=521
- Bottom reinforcement (right side): 2 Ø 12.5
- Top reinforcement (middle): 2 N3 Ø 12.5 C=1027
- Bottom reinforcement (middle): 2 Ø 12.5
- Top reinforcement (right side): 2 N4 Ø 12.5 C=383
- Bottom reinforcement (right side): 2 Ø 12.5

Other Labels:

- 20/30
- N5 C/15 22 Ø 5
- 4 Ø 12.5
- P45, P46, P47, P48

 2 Ø 12.5
 2 Ø 12.5
 14
 24
 82 N5 Ø 5 C=91

78 N5 Ø 5 C=91

Technical drawing of a structural connection between a column and a beam.

Column Details:

- Section: 2 N1 Ø 10 C=528
- Width: 486
- Height: 21

Beam Details:

- Section: 2 N2 Ø 10 C=524
- Height: 20

Connection Details:

- Reinforcement bars: N3 C/15, 10 Ø 5, 18 Ø 5
- Stirrups: 2 Ø 10
- Section line: A-A
- Labels: P6, P1, T17

Corte A (Cross-section A-A):

- Dimensions: 2 Ø 10, 2 Ø 10

Reinforcement Bar Detail:

- Dimensions: 14, 24
- Label: 28 N3 Ø 5 C=91

Top View Details:

- Overall dimensions: 859 x 290 cm.
- Reinforcement: 2 N1 $\emptyset$ 12.5 C=890, 1 N3 $\emptyset$ 12.5 C=813, 3 N2 $\emptyset$ 12.5 C=1075.
- Section labels: 20/40 (indicating slab thickness).
- Bottom reinforcement: 6 N6 C/17.5, 26 $\emptyset$ 5, 6 $\emptyset$ 12.5, 4 $\emptyset$ 12.5, 25 $\emptyset$ 5, 3 $\emptyset$ 12.5, 16 $\emptyset$ 5, 3 $\emptyset$ 12.5.

Bottom View Details:

- Overall dimensions: 1124 x 871 cm.
- Reinforcement: 3 N4 $\emptyset$ 12.5 C=1144, 2 N5 $\emptyset$ 12.5 C=896.
- Section labels: 20/40 (indicating slab thickness).
- Bottom reinforcement: 3 $\emptyset$ 12.5, 3 $\emptyset$ 12.5, 3 $\emptyset$ 12.5, 2 $\emptyset$ 12.5, 2 $\emptyset$ 12.5.

Corte A:

- Section A-A shows a 20/40 cm slab thickness.
- Reinforcement: 2 $\emptyset$ 12.5, 3 $\emptyset$ 12.5.

 2 Ø 12.5
 3 Ø 12.5
 14
 34
 97 N6 Ø 5 C=111

Corte A

21 323 2 N1 Ø 10 C=365 21

20/30

Δ A

N3 C/15 18 Ø 5

2 Ø 10

2 Ø 10

T1 P2

20 321 2 N2 Ø 10 C=361 20

2 Ø 10

2 Ø 10

18 N3 Ø 5 C=91

74 24

Technical drawing of a reinforced concrete slab (Corte A) showing dimensions, reinforcement details, and structural elements.

Dimensions and Reinforcement:

- Top reinforcement: 3 N1 $\emptyset$ 12.5 C=829 (left), 2 N3 $\emptyset$ 12.5 C=1030 (right).
- Bottom reinforcement: 1 N2 $\emptyset$ 12.5 C=389 (left), 2 N5 $\emptyset$ 12.5 C=1037 (bottom center), 2 N6 $\emptyset$ 12.5 C=360 (bottom right).
- Vertical spacing: 798 (top), 999 (top right), 525 (bottom left), 345 (bottom right).
- Horizontal spacing: 183 (top center), 20/40 (multiple locations), 14 (right edge), 34 (right edge).

Structural Elements and Details:

- Reinforcement bars: N1, N2, N3, N4, N5, N6, N7.
- Concrete cover: C=829, C=389, C=1030, C=1037, C=360.
- Section markers: A-A, B-B, C-C, D-D, E-E, F-F, G-G, H-H, I-I, J-J, K-K, L-L, M-M, N-N, O-O, P-P, Q-Q, R-R, S-S, T-T, U-U, V-V, W-W, X-X, Y-Y, Z-Z.
- Notes: 94 N7 $\emptyset$ 5 C=111 (right edge), 3 $\emptyset$ 12.5 (multiple locations), 2 $\emptyset$ 12.5 (multiple locations), 2 $\emptyset$ 12.5 (bottom center), 2 $\emptyset$ 12.5 (bottom right).

34 14
3 Ø 12.5

94 N7 Ø 5 C=111

[illegible]

55 N3 Ø 5 C=91

Corte A-A

Top reinforcement: 2 N1 Ø 12.5 C=1083

Bottom reinforcement: 1 N2 Ø 12.5 C=687

Section width: 1041

Section height: 21

Reinforcement details:

- N4 C/15 2Ø 5
- 2 Ø 12.5
- 3 Ø 12.5
- 20 Ø 5
- 3 Ø 12.5
- 3 Ø 12.5
- 2 Ø 12.5

Dimensions:

- 184
- 20/30
- 1040
- 3 N3 Ø 12.5 C=1080

Labels: P30, P17, P9, P4

Additional note: 67 N4 Ø 5 C=91

67 N4 Ø 5 C=91

RESUMO DE AÇO			
AÇO	BIT mm	COMPR m	PESO kgf
60B	5	510	79
50A	10	36	22
50A	12.5	423	408
Peso Total		60B =	79 kgf
Peso Total		50A =	430 kgf
VOLUME DE CONCRETO =			5.95m³

COEF. DE SEGURANÇA:

	AÇO	CONCRETO
DIÂMETRO	#10.0	#12.5
RAIO (R)	2.5	3.1
COMPR. (C)	4	5

eh > DIÂMETRO DAS BARRAS
eh > 3 cm
ev > 2 cm

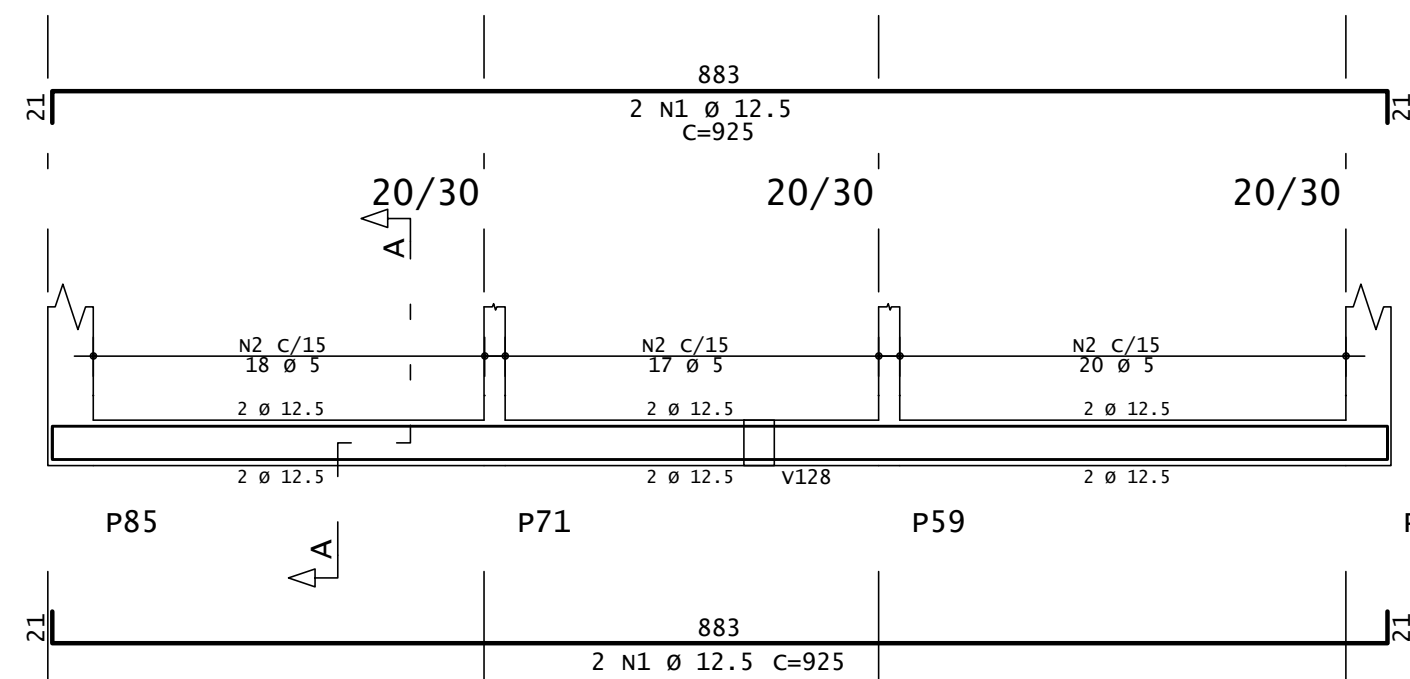
EXATA

ENGENHARIA E PROJETOS LTDA.

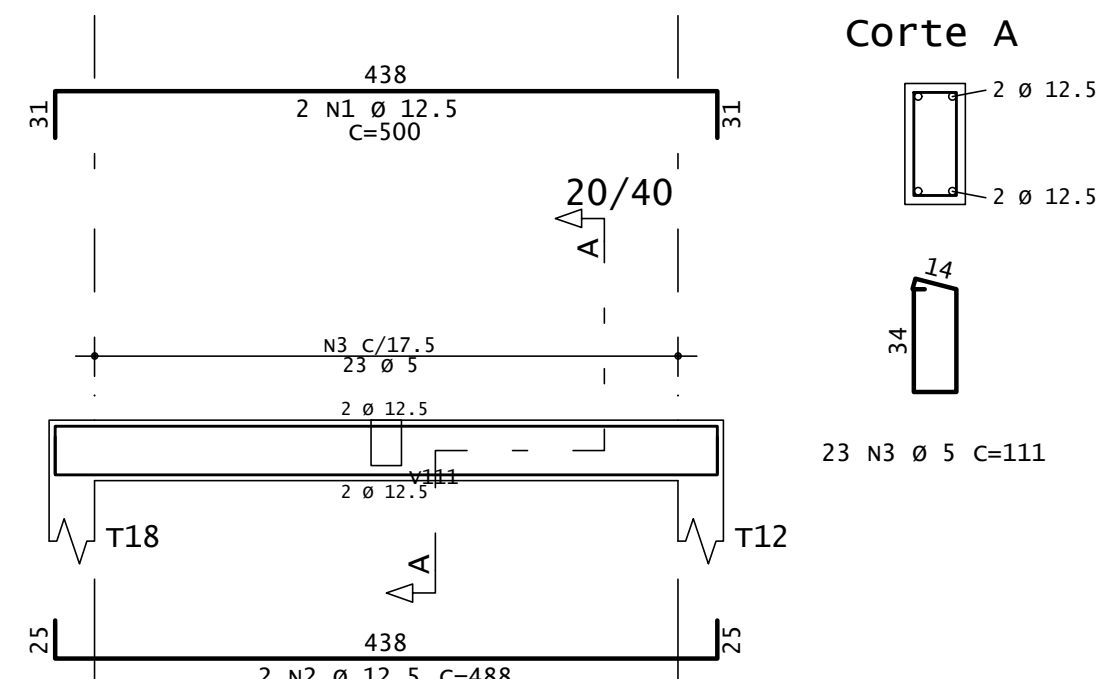
Fone: (19) 3236 - 1034
Site: www.exatacampinas.com.br
e-mail: contato@exatacampinas.com

CONTRATANTE		
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LOCAL		
UBS JARDIM AMANDA - UNIDADE BÁSICA DE SAÚDE R. Rg. Faria Lima, 280 - Jardim Amanda I - Hortolândia - SP		
OBRA	TÍTULO	FOLHA
INSTITUCIONAL	UBS JARDIM AMANDA ESTRUTURA	
Nº OBRA	DET. ARMAÇÃO DAS - V100 (BALDRAMES)	
03724-10		
Nº ART		
2620250357459		
AUTOR DO PROJETO		DATA
EXATA ENGENHARIA		05/2025
DESENHO	ESCALA	INDICADA
EXATA ENGENHARIA		

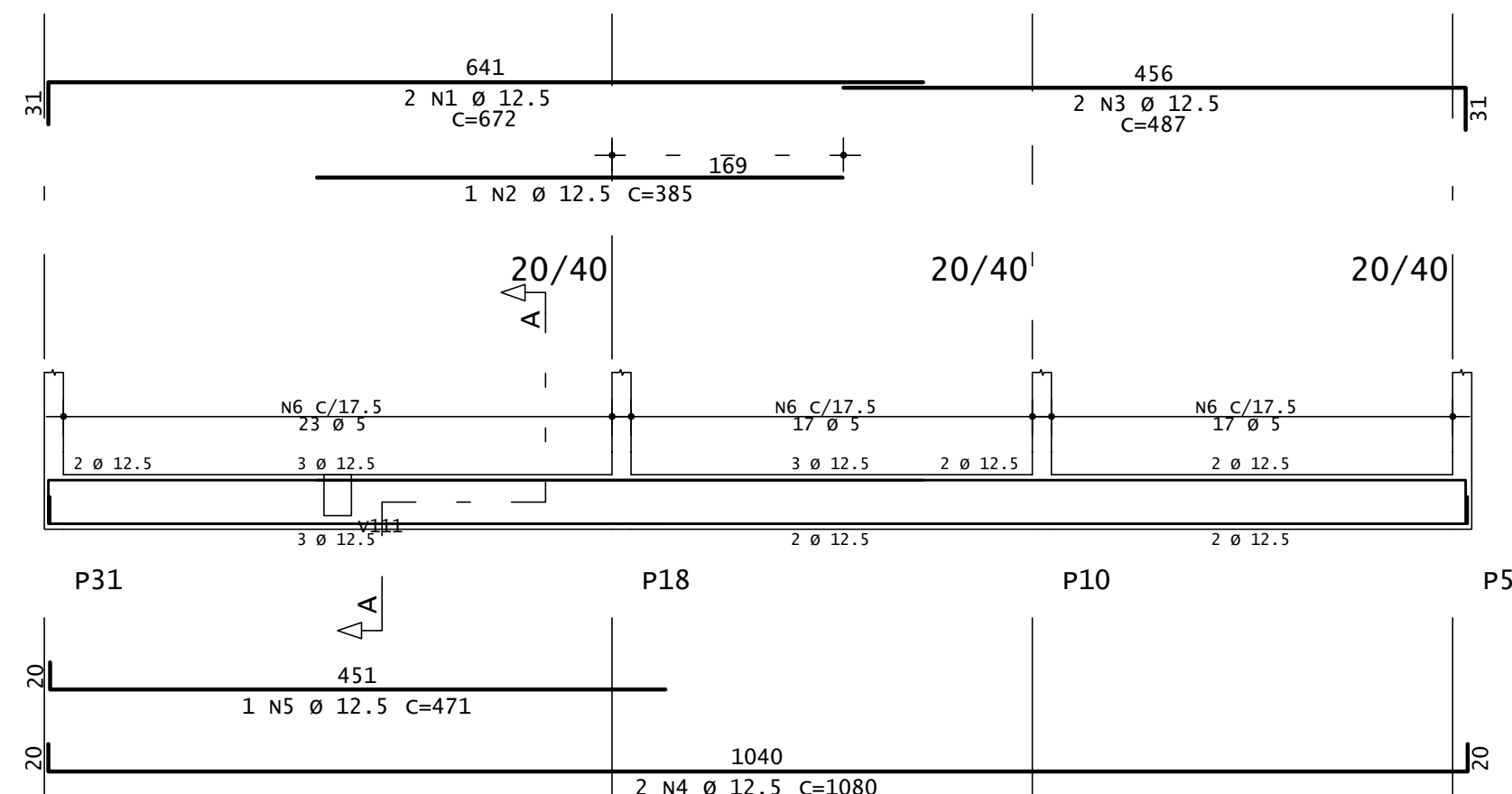
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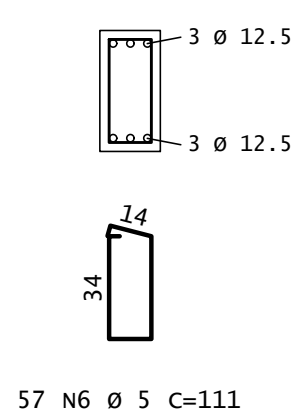
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V190



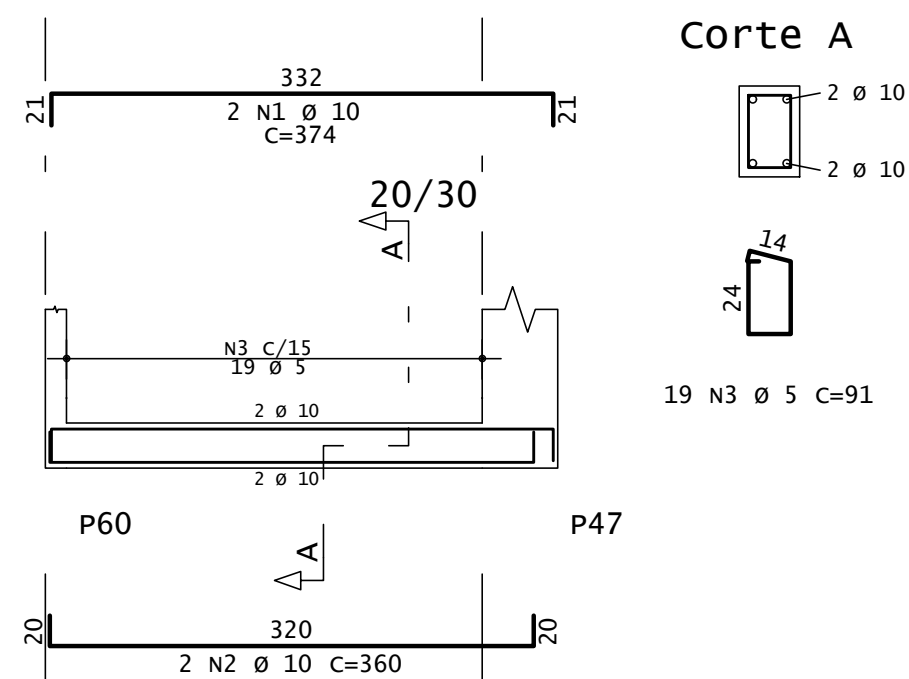
Corte A



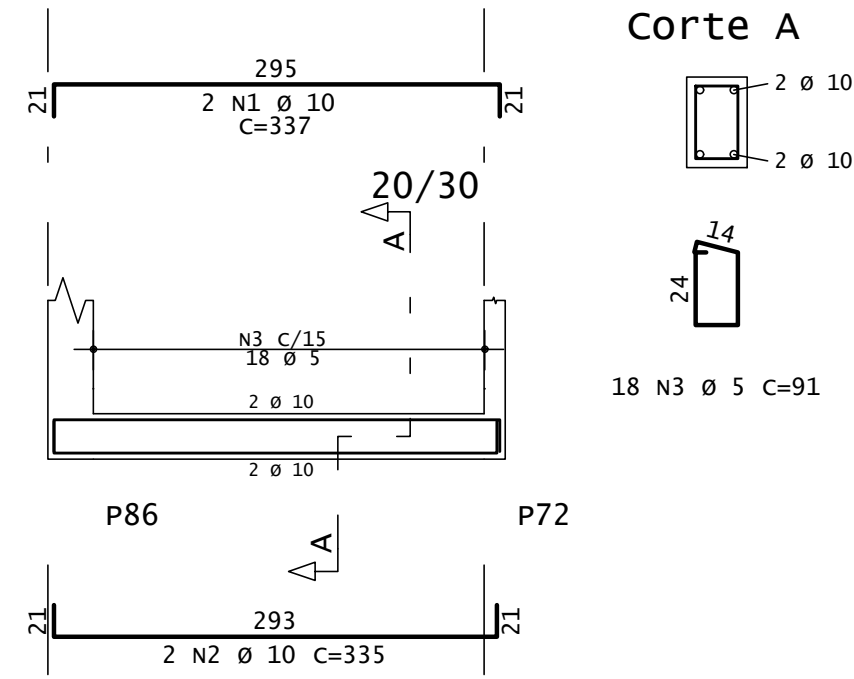
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					UNIT	TOTAL
			mm		cm	cm
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	60B	2	5	55	91	5005
V187	50A	1	12.5	2	500	1000
	60B	2	5	23	488	976
V190	50A	1	12.5	2	672	1344
	50A	2	12.5	1	385	385
	50A	3	12.5	2	487	974
	50A	4	12.5	2	1080	2160
	60B	5	5	1	471	471
V191	50A	1	10	2	374	748
	60B	3	5	19	91	1729
V192	50A	1	10	2	337	674
	60B	3	5	18	91	1638
V194	50A	1	12.5	2	465	930
	50A	2	12.5	2	462	924
	60B	3	5	24	91	2184
V195	50A	1	10	2	310	620
	50A	2	10	2	305	610
	60B	3	5	16	91	1456
V196	50A	1	12.5	2	341	682
	50A	2	12.5	2	337	674
	60B	3	5	18	91	1638
V197	50A	1	12.5	2	377	754
	50A	2	12.5	2	373	746
	60B	3	5	20	91	1820
V198	50A	1	12.5	3	468	1404
	50A	2	12.5	3	465	1395
	60B	3	5	25	91	2275
V200	50A	1	10	4	925	3700
	60B	2	5	55	91	5005
V201	50A	1	8	2	205	410
	50A	2	10	2	391	782
	60B	3	5	1	637	637

RESUMO DE AÇO			
AÇO	BIT	COMPR	PESO
	mm	m	kgf
60B	5	32,3	50
50A	8	4	2
50A	10	81	50
50A	12.5	185	178
Peso Total		60B =	50 kgf
Peso Total		50A =	230 kgf
VOLUME DE CONCRETO =		3.65m³	

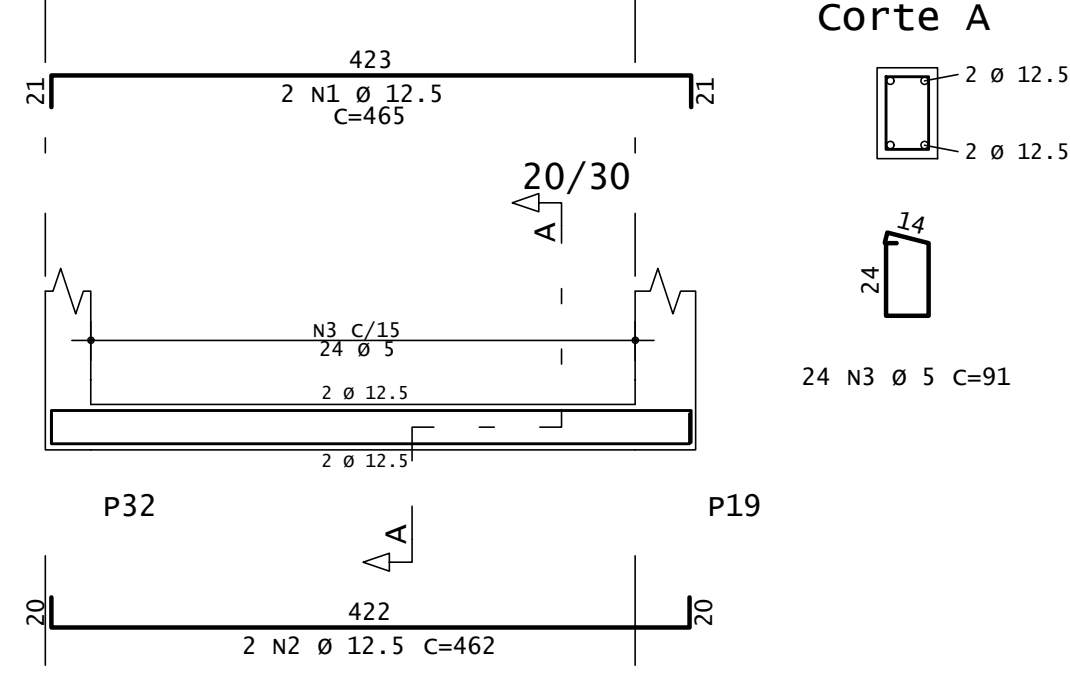
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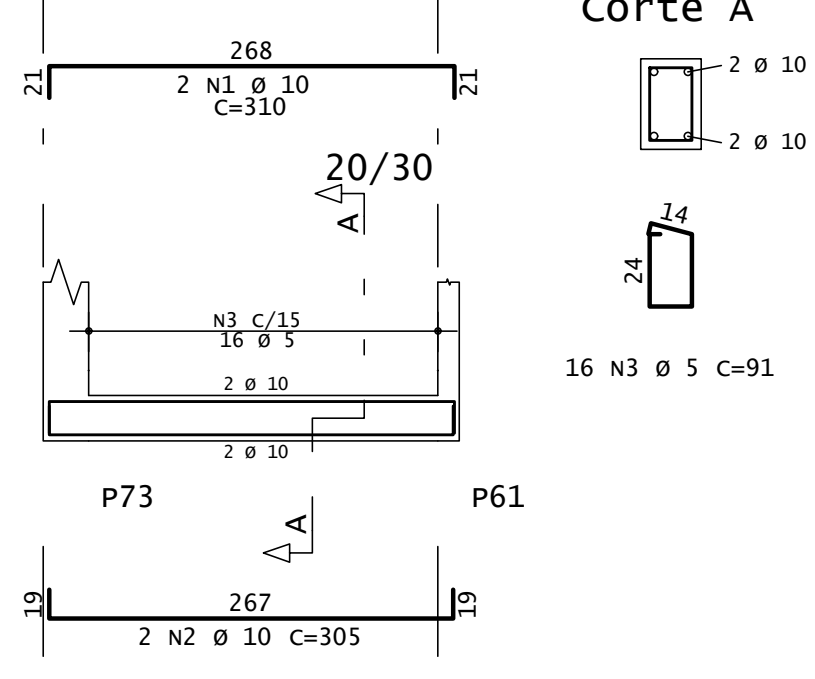
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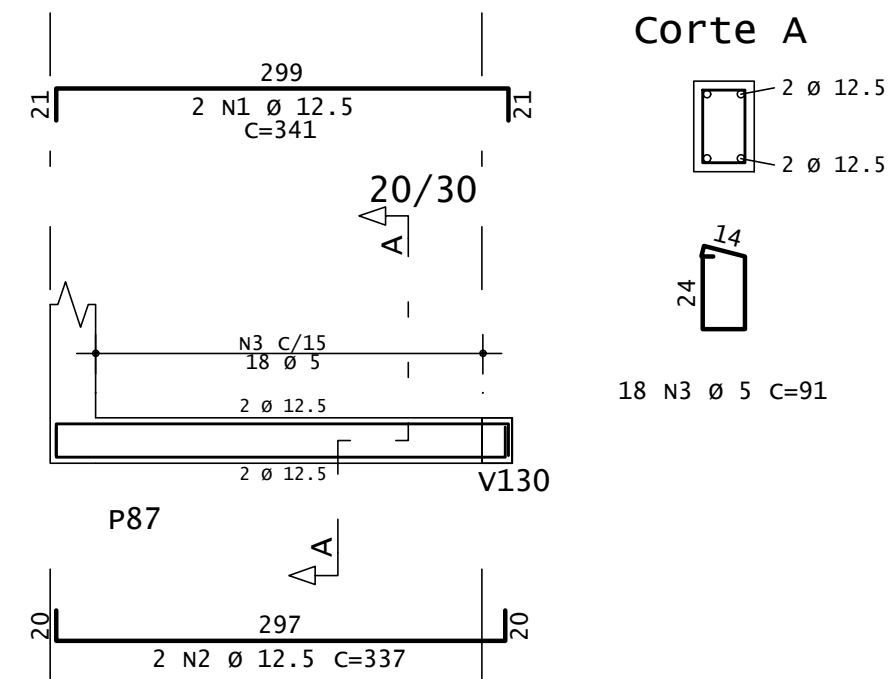
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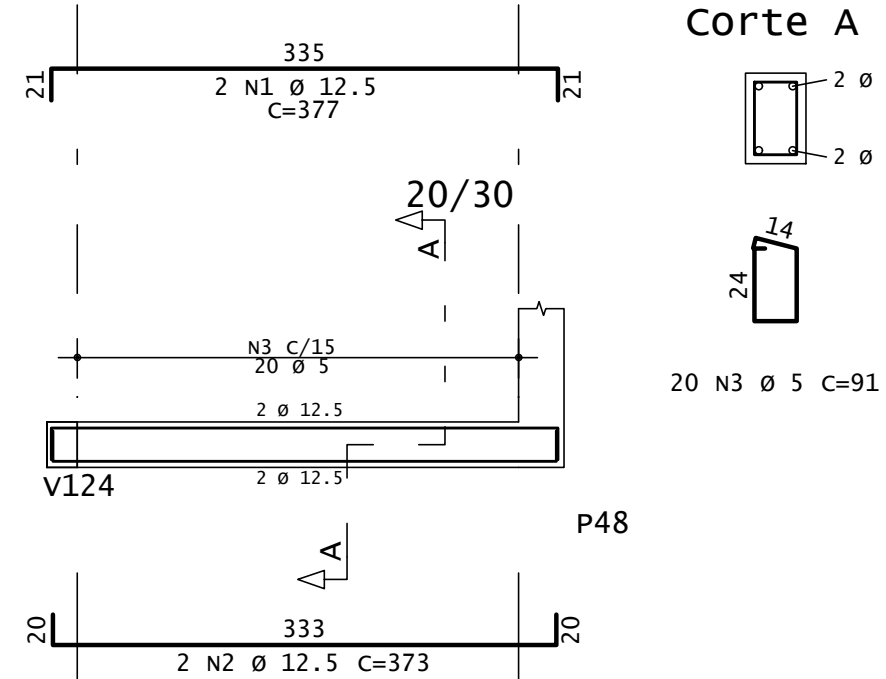
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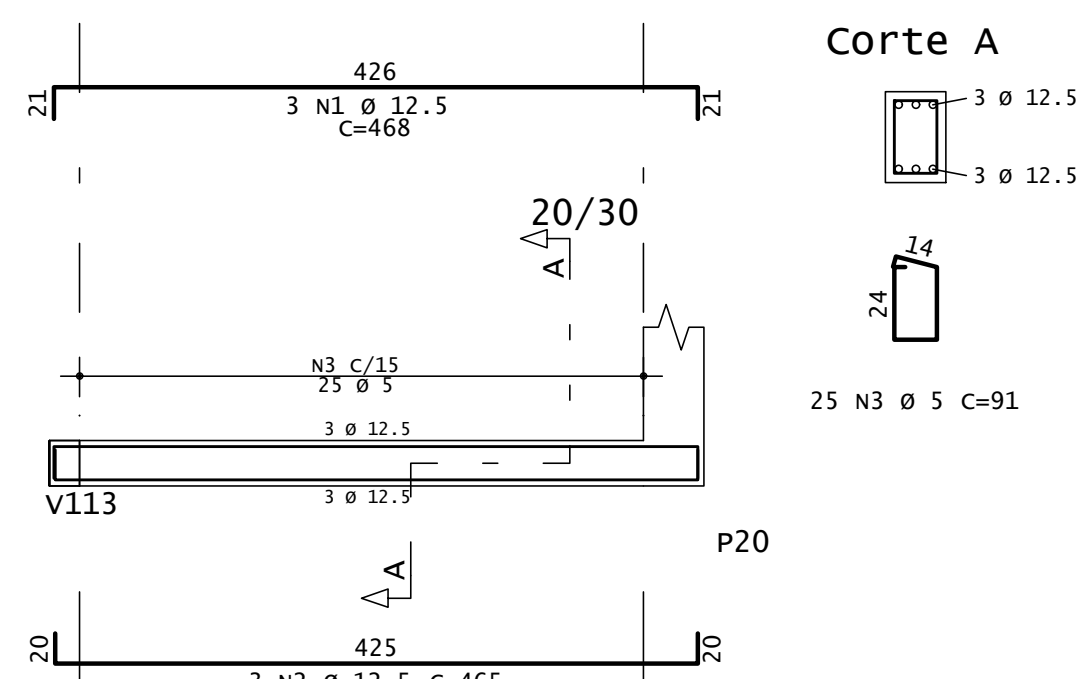
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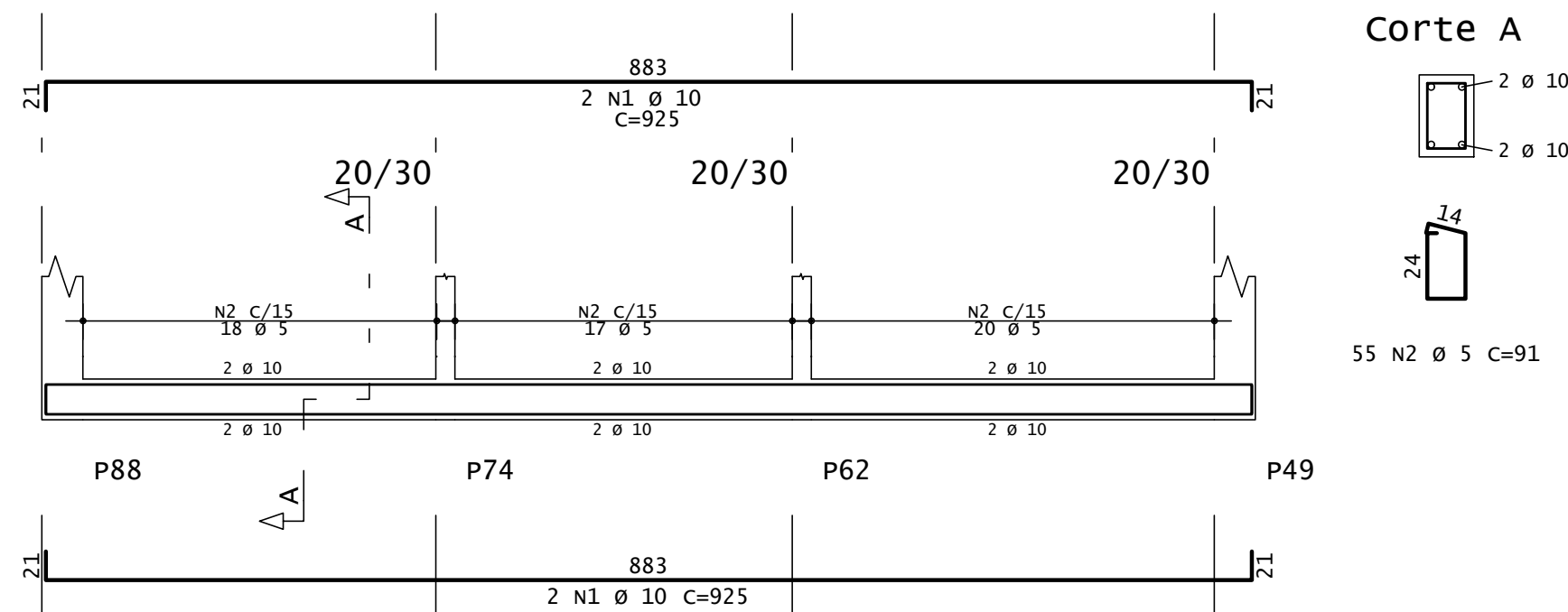
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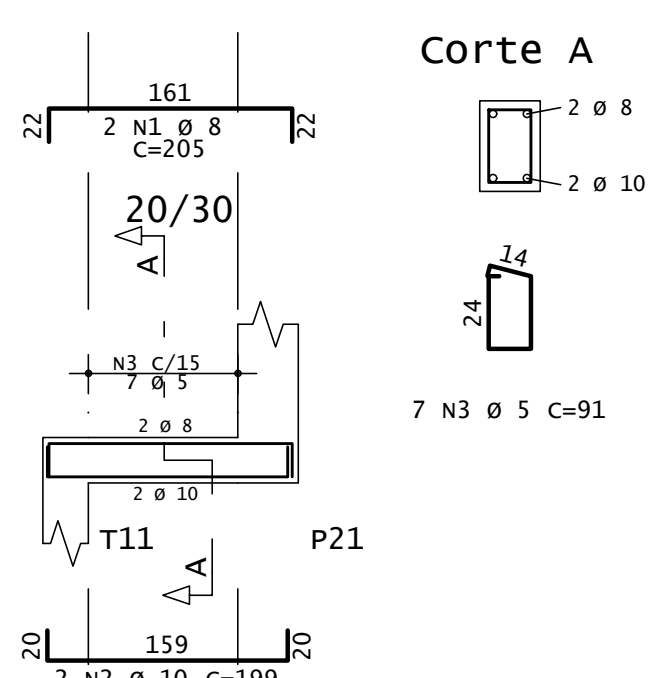
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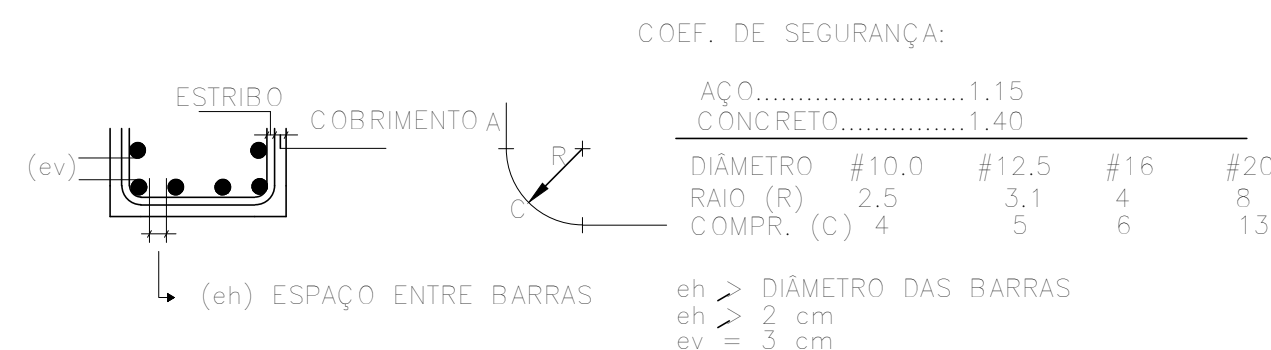
V200



V201



DOBRAS E DIST. ENTRE BARRAS

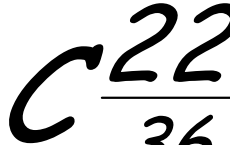


00	29/05/2025	EMISSÃO INICIAL	E.P.
REVISÃO	DATA	DESCRIÇÃO	RESP.



ENGENHARIA E PROJETOS LTDA.

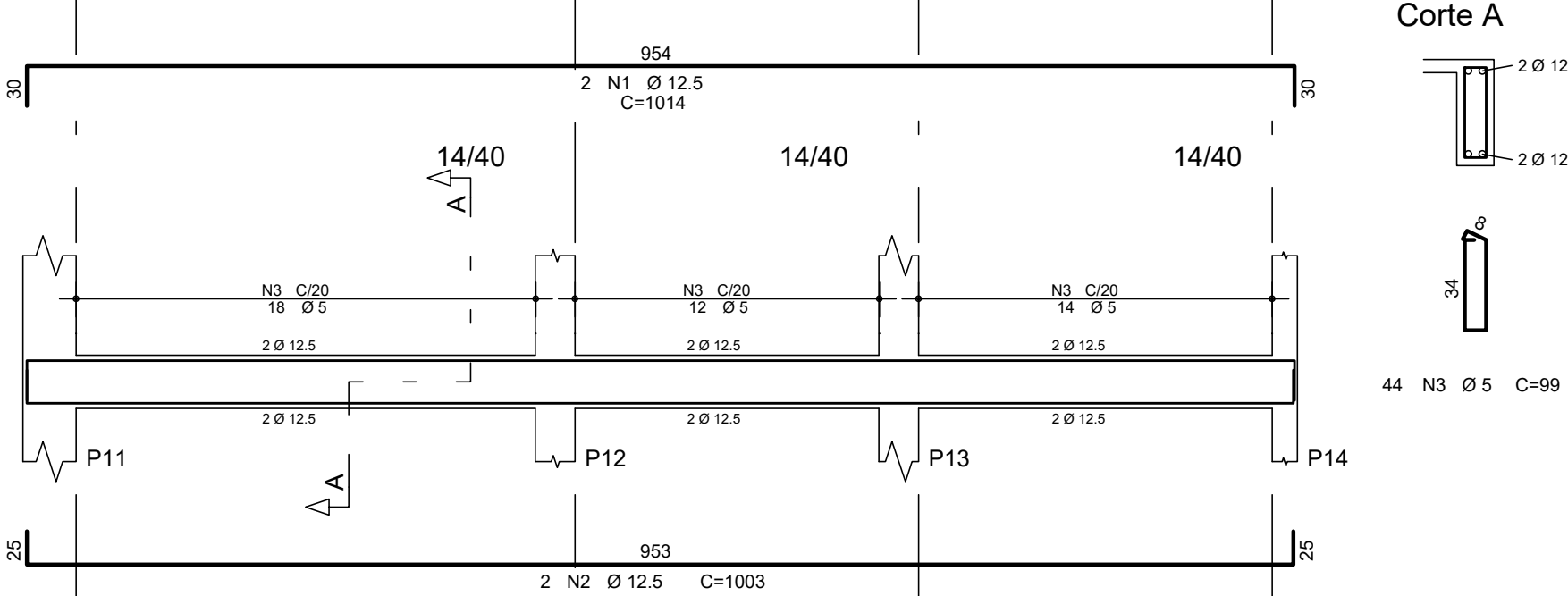
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OBRA	TÍTULO	FOLHA	
INSTITUCIONAL	UBS JARDIM AMANDA ESTRUTURA		
Nº OBRA	DET. ARMAÇÃO DAS - V100 / V200 (BALDRAMES)		
Nº ART 2620250357459			
AUTOR DO PROJETO		DATA	
EXATA ENGENHARIA		05/2025	
DESENHO	EXATA ENGENHARIA	ESCALA	INDICADA

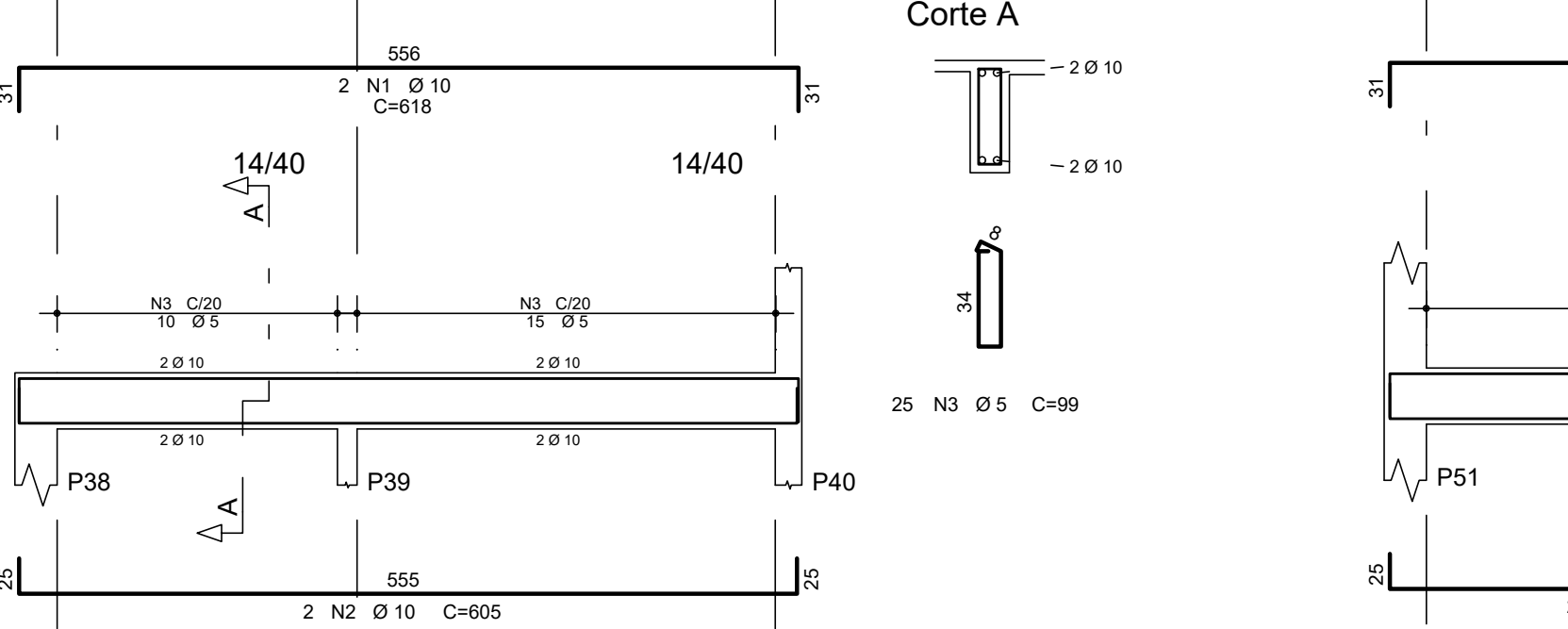
EDUARDO JOSE
BARBOZA DE
OLIVEIRA
PRATA:30924256850

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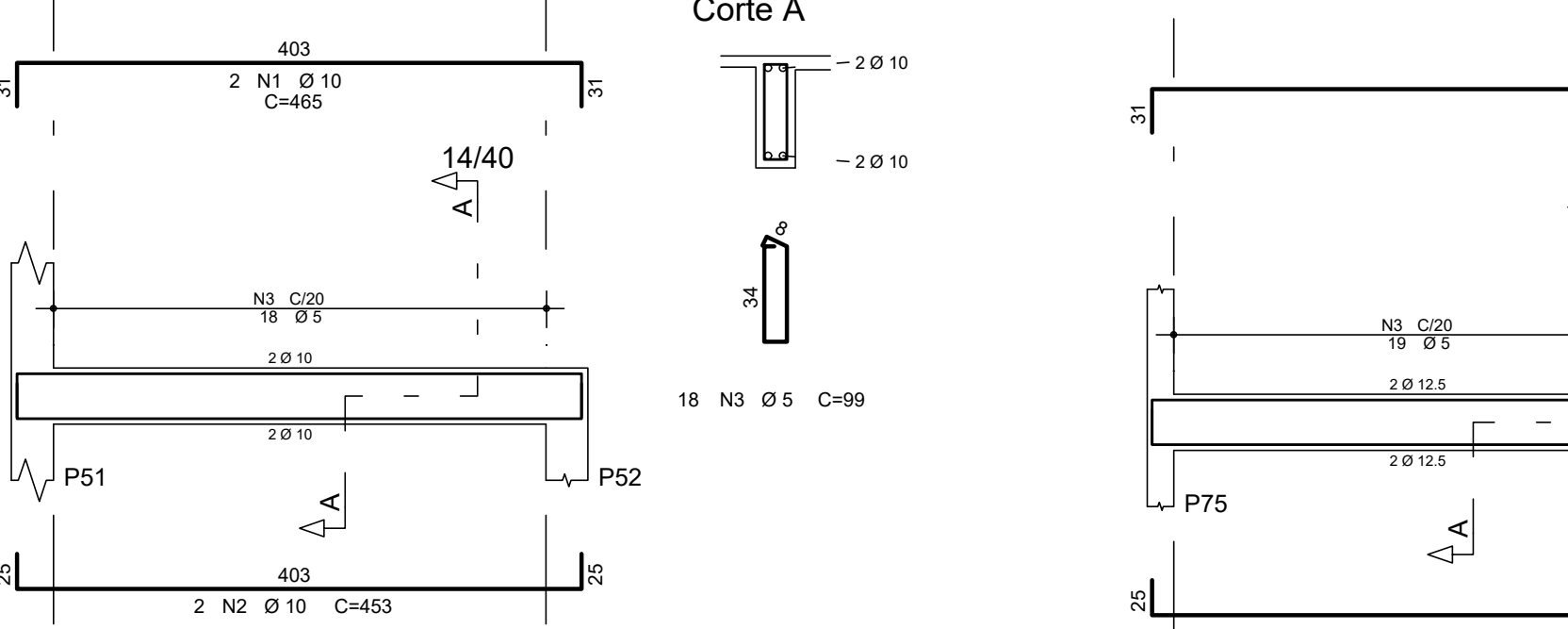
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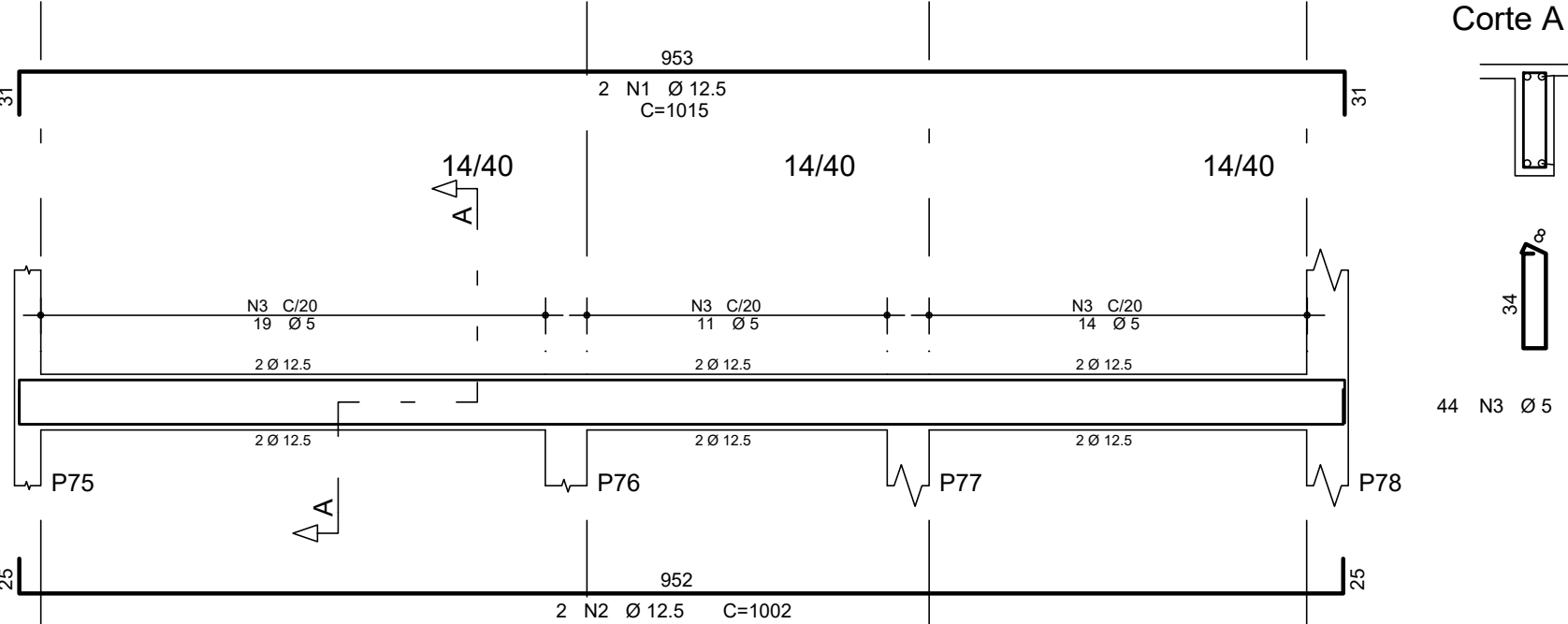
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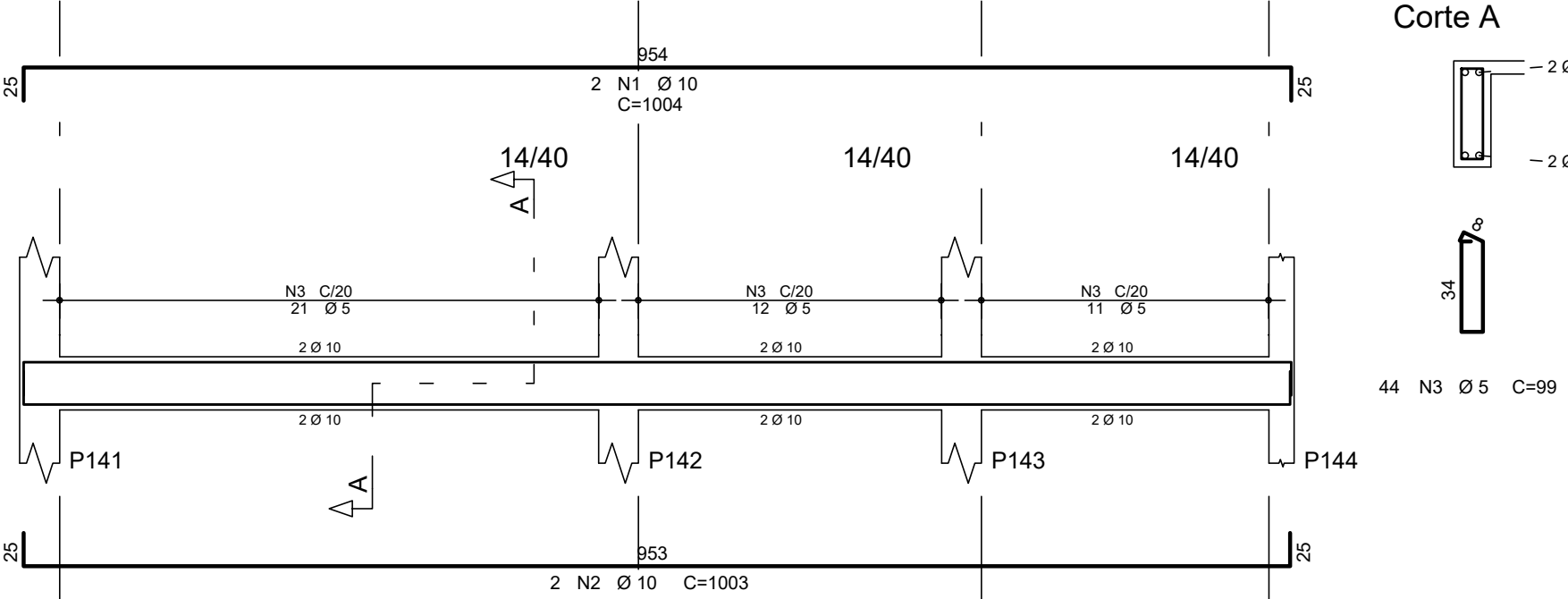
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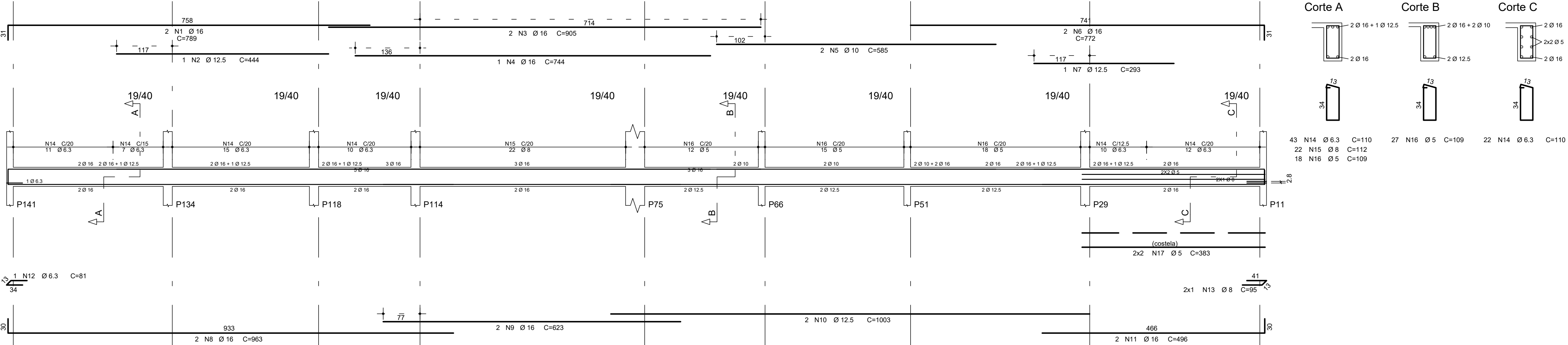
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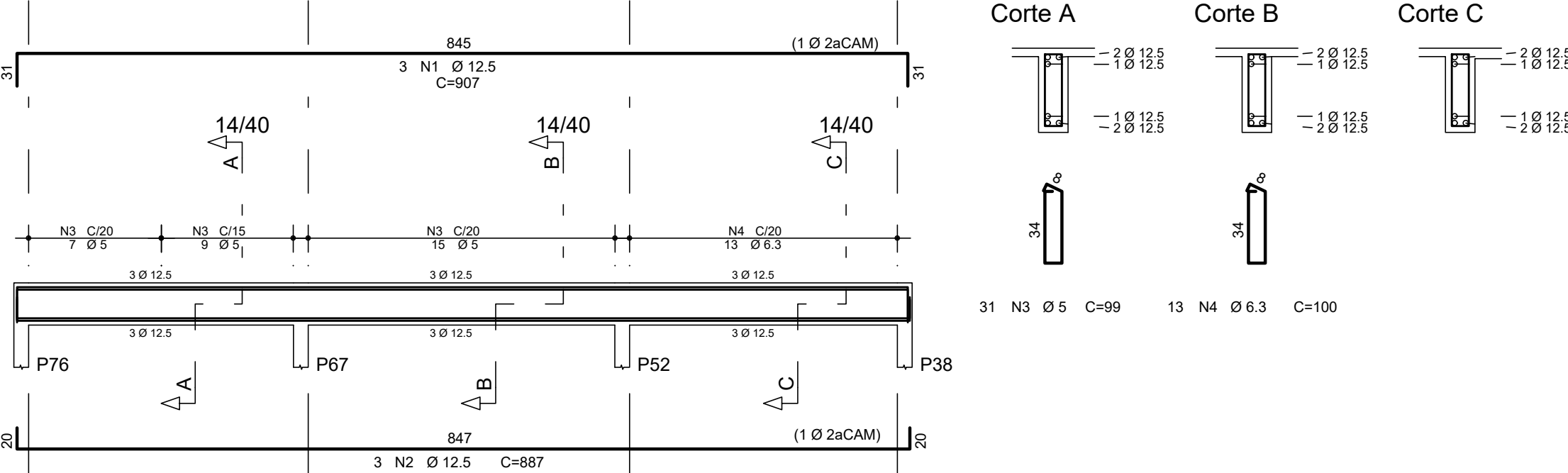
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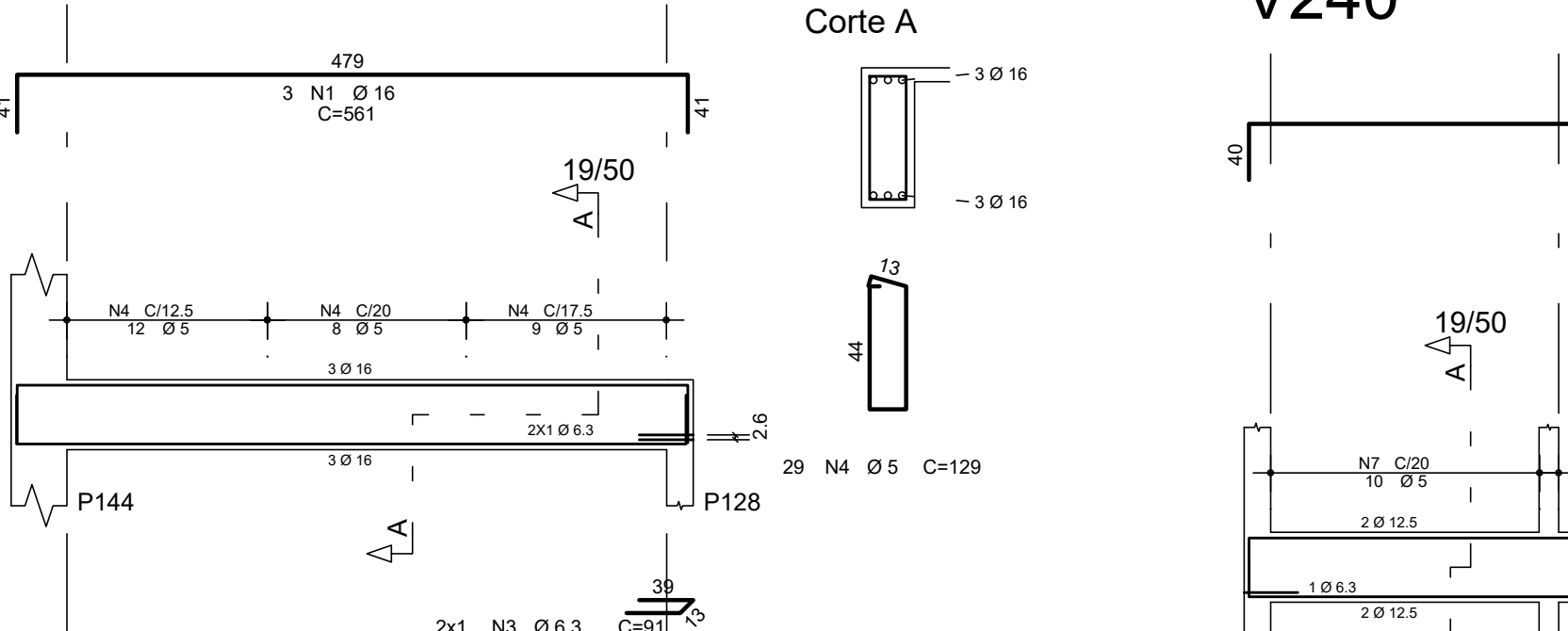
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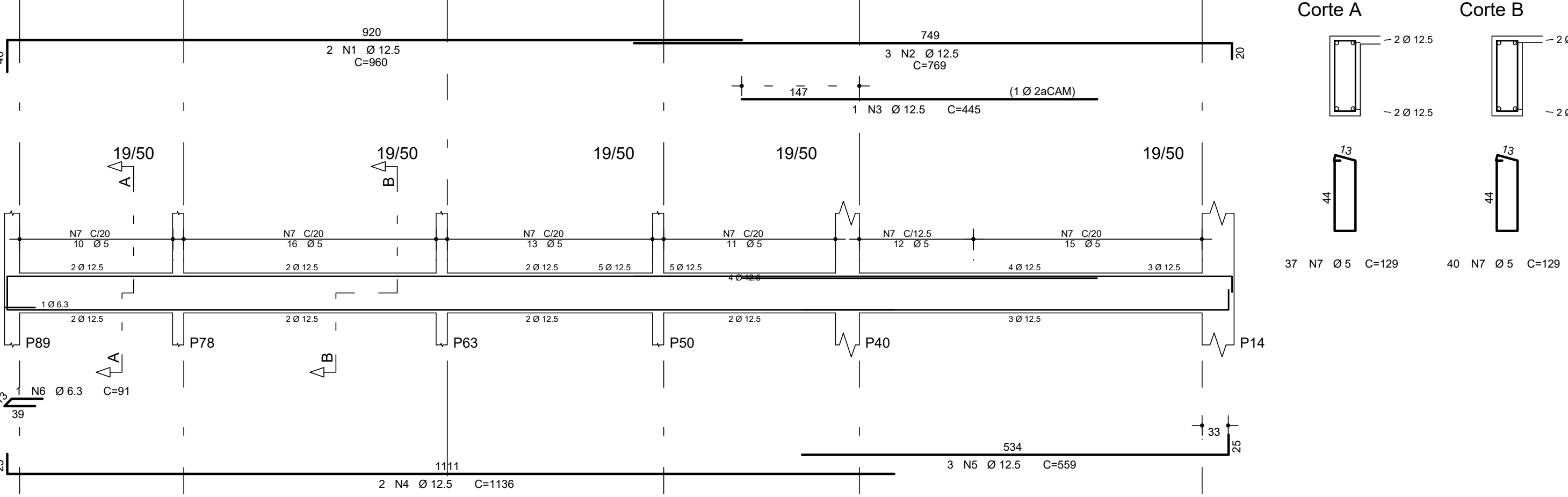
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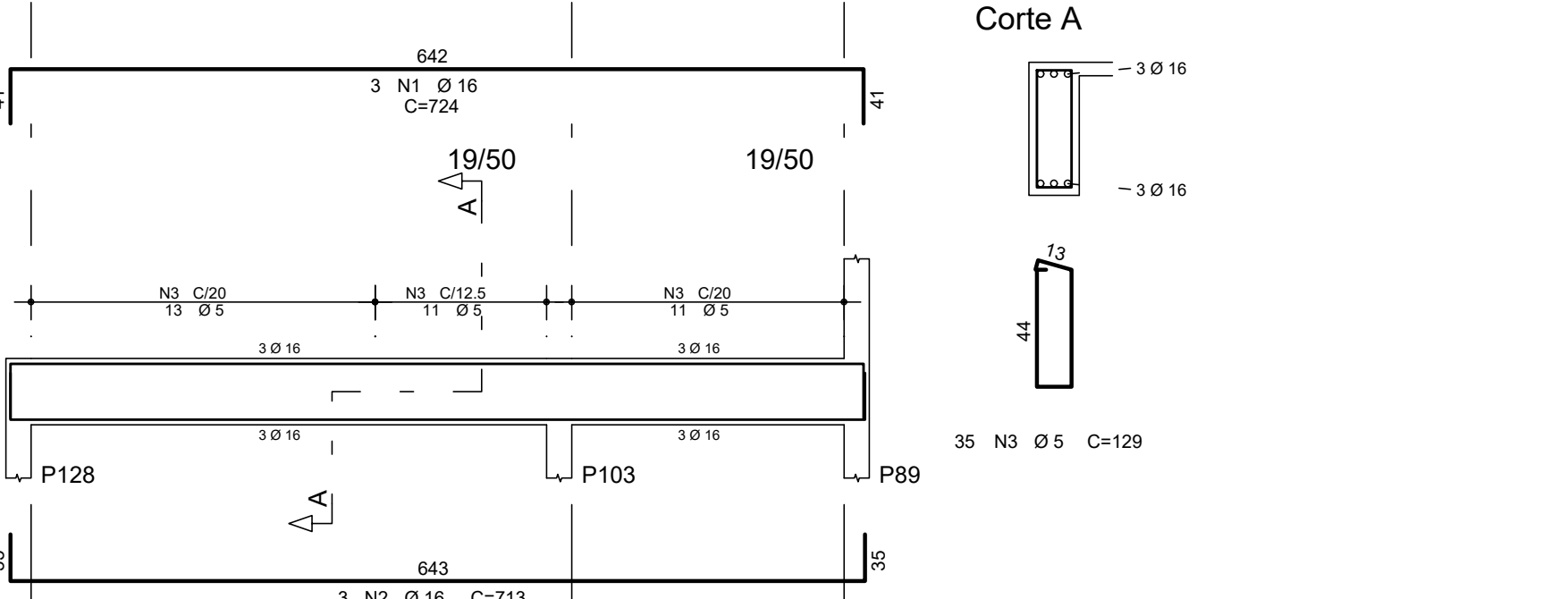
V239



V240



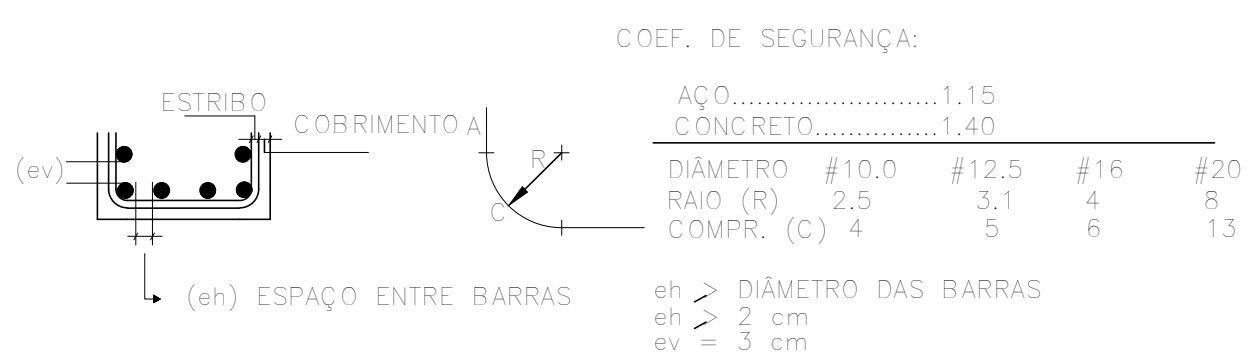
V242



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mm		mm		cm	cm	
V204						
50A	1	12,5	2	1014	2028	
50A	2	12,5	2	1003	2006	
60B	3	5	44	99	4356	
V212						
50A	1	10	2	618	1236	
50A	2	10	2	605	1210	
60B	3	5	25	99	2475	
V214						
50A	1	10	2	455	910	
50A	2	10	2	453	906	
60B	3	5	18	99	1782	
V219						
50A	1	12,5	2	1015	2030	
50A	2	12,5	2	1002	2004	
60B	3	5	44	99	4356	
V232						
50A	1	10	2	1004	2008	
50A	2	10	2	1003	2006	
60B	3	5	44	99	4356	
V237						
50A	1	16	2	789	1578	
50A	2	12,5	1	444	444	
50A	3	16	2	905	1810	
50A	4	16	1	744	744	
50A	5	16	2	985	1970	
50A	6	16	2	772	1544	
50A	7	12,5	1	293	293	
50A	8	16	2	983	1966	
50A	9	16	2	623	1246	
50A	10	12,5	2	1003	2006	
50A	11	16	2	496	992	
50A	12	6,3	1	51	51	
50A	13	8	2	95	190	
50A	14	6,3	65	110	7150	
50A	15	9	22	112	2464	
60B	16	5	45	109	4905	
60B	17	5	4	383	1532	
V238						
50A	1	12,5	3	907	2721	
50A	2	12,5	3	887	2661	
60B	3	5	31	99	3069	
50A	4	6,3	13	100	1300	
V239						
50A	1	16	3	561	1683	
50A	2	16	3	548	1644	
50A	3	6,3	2	91	182	
60B	4	5	29	129	3741	
V240						
50A	1	12,5	2	950	1900	
50A	2	12,5	3	799	2397	
50A	3	12,5	1	445	445	
50A	4	12,5	2	1156	2312	
50A	5	12,5	3	559	1677	
50A	6	6,3	1	91	91	
50A	15	17,5	1	129	129	
V242						
50A	1	16	3	724	2172	
50A	2	16	3	713	2139	
60B	3	5	35	129	4515	

RESUMO DE AÇO				
ACO	BIT	COMPR	PESO	
mm	mm	m	kgf	
60B	5	450	69	
50A	6,3	85	22	
50A	8	27	10	
50A	10	95	26	
50A	12,5	248	239	
50A	15	175	276	
Peso Total 60B =			69 kgf	
Peso Total 50A =			505 kgf	
VOLUME DE CONCRETO =			7,05m³	

DOBRAS E DIST. ENTRE BARRAS



REVISO	DATA	DESCRIÇÃO	RESP.
01	20/05/2025	REVISÃO INICIAL	E.P.

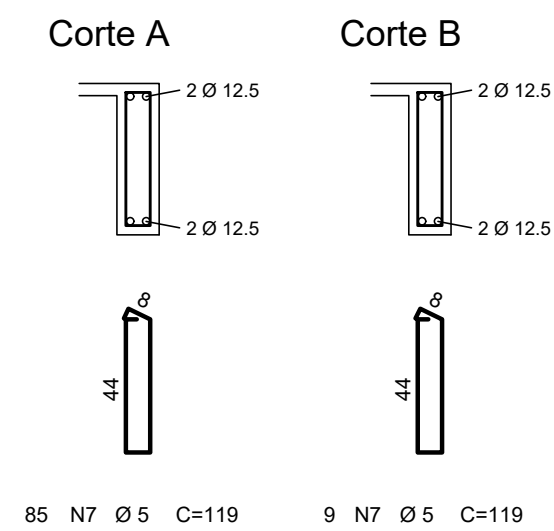
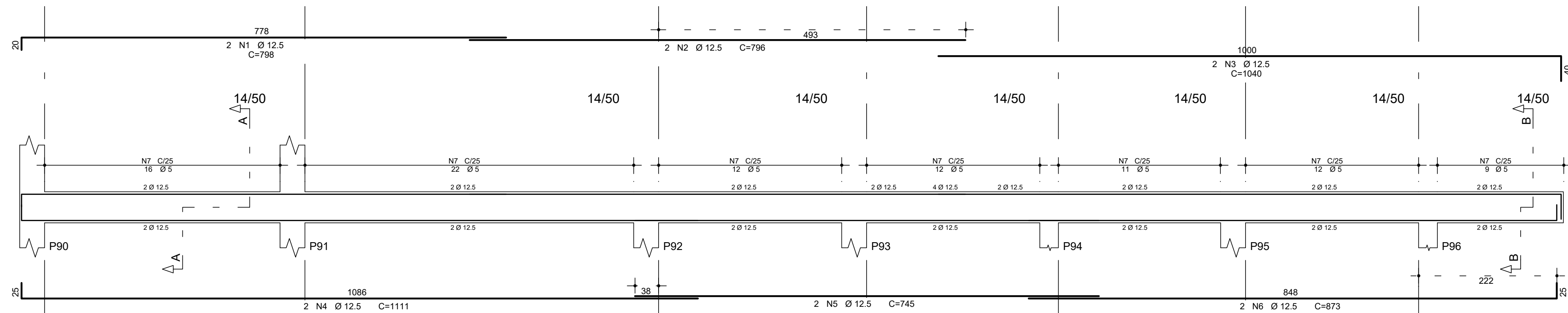
EXATA
ENGENHARIA E PROJETOS LTDA.
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Site: www.exatacompinas.com.br
e-mail: contato@exatacompinas.com.br

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LOCAL: UBS JARDIM AMANDA - UNIDADE BÁSICA DE SAÚDE R. Brq. Faria Lima, 280 - Jardim Amanda I - Hortolândia - SP		
OBRA: INSTITUCIONAL	TÍTULO: UBS JARDIM AMANDA ESTRUTURA	FOLHA: 23 36
Nº OBRA: 03724-10	DET. ARMAÇÃO DAS - V200 (COBERTURA)	
Nº ART: 2620250357459	AUTOR DO PROJETO: EXATA ENGENHARIA	DATA: 05/2025
DESENHO: EXATA ENGENHARIA	ESCALA: INDICADA	

EDUARDO JOSE
BARROZA DE
OLIVEIRA
PRATA30924256850
13/11/2025 09:07

Assinado de forma digital
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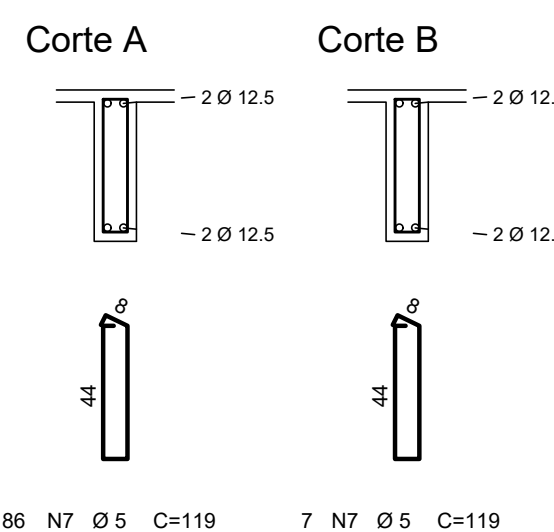
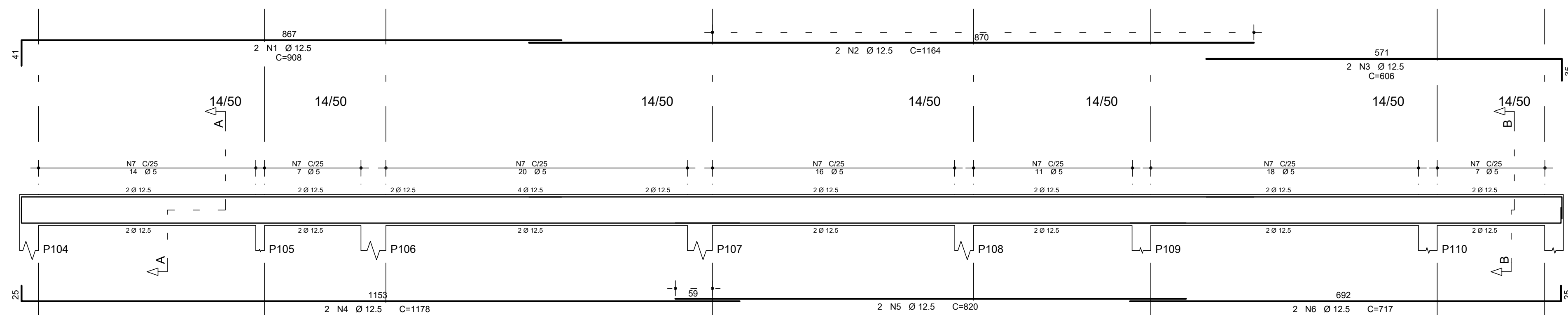
V221



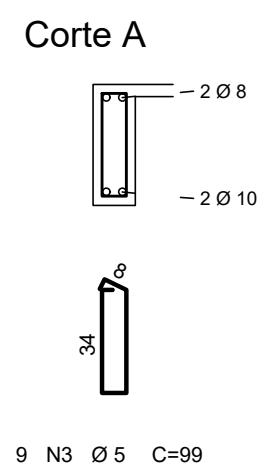
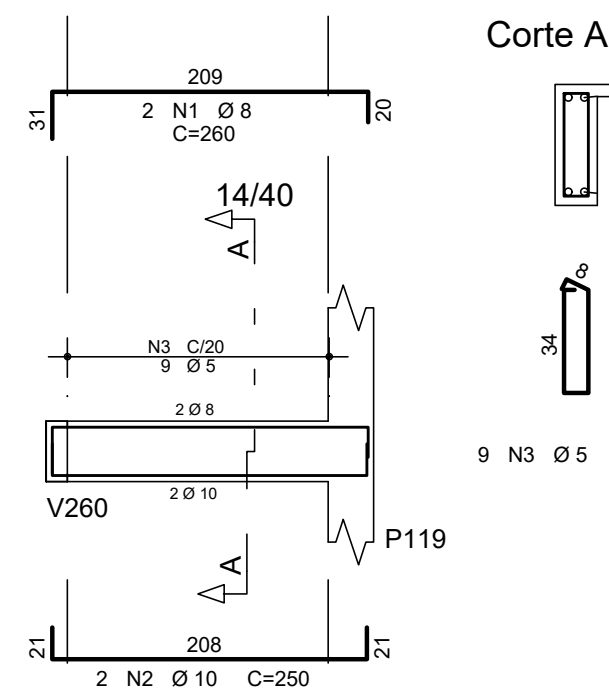
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			mm			UNIT	TOTAL
						cm	cm
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	50A	2	12,5	2	796		1592
	50A	3	12,5	2	1040		2080
	50A	4	12,5	2	1111		2222
	50A	5	12,5	2	745		1490
	60B	7	5	94	119		1746
V225	50A	1	12,5	2	908		1816
	50A	2	12,5	2	1164		2328
	50A	3	12,5	2	608		1212
	50A	4	12,5	2	1178		2356
	50A	5	12,5	2	820		1640
	60B	6	12,5	2	717		1434
V228	50A	1	8	2	260		520
	50A	2	10	2	250		500
	60B	3	5	9	99		891
V230	50A	1	10	2	509		1018
	50A	2	12,5	2	495		990
	60B	3	5	22	99		2178
V231	50A	1	12,5	2	958		1916
	50A	2	12,5	2	425		850
	50A	3	12,5	2	871		1742
	60B	4	12,5	2	544		1088
V233	50A	5	5	57	99		5643
	50A	1	10	2	656		1312
	50A	2	10	2	653		1306
	60B	3	5	27	99		2673
V235	50A	1	10	2	814		1628
	50A	2	10	2	1061		2122
	50A	3	10	2	1053		2106
	50A	4	10	2	832		1664
	60R	5	5	82	99		8118

RESUMO DE AÇO			
AÇO	BIT	COMPR	PESO
	mm	m	kgf
60B	5	418	64
50A	8	5	2
50A	10	117	72
50A	12,5	281	271
Peso Total	60B =		64 kgf
Peso Total	50A =		345 kgf
VOLUME DE CONCRETO =			5,75m³

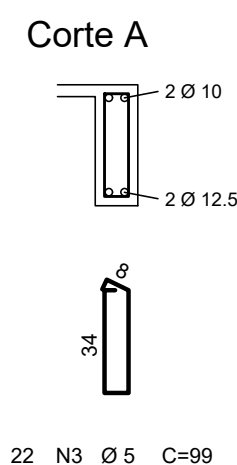
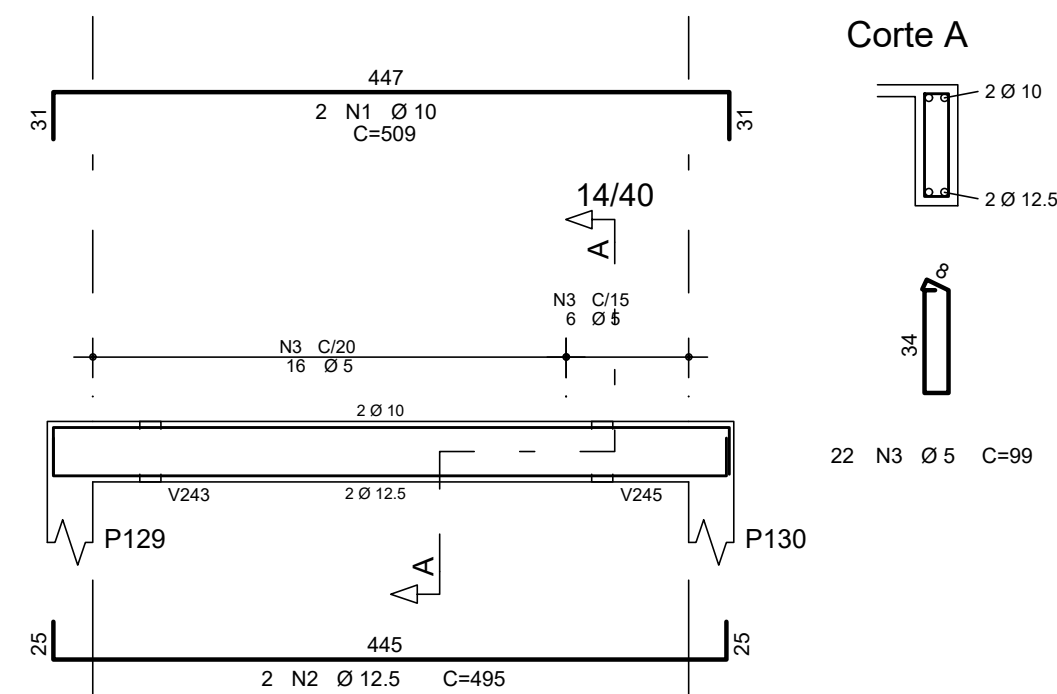
V225



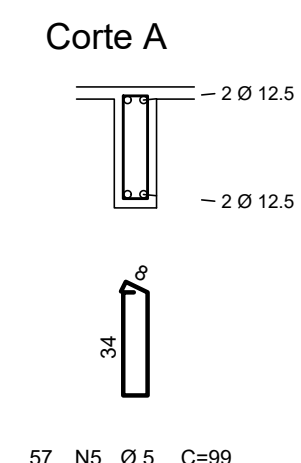
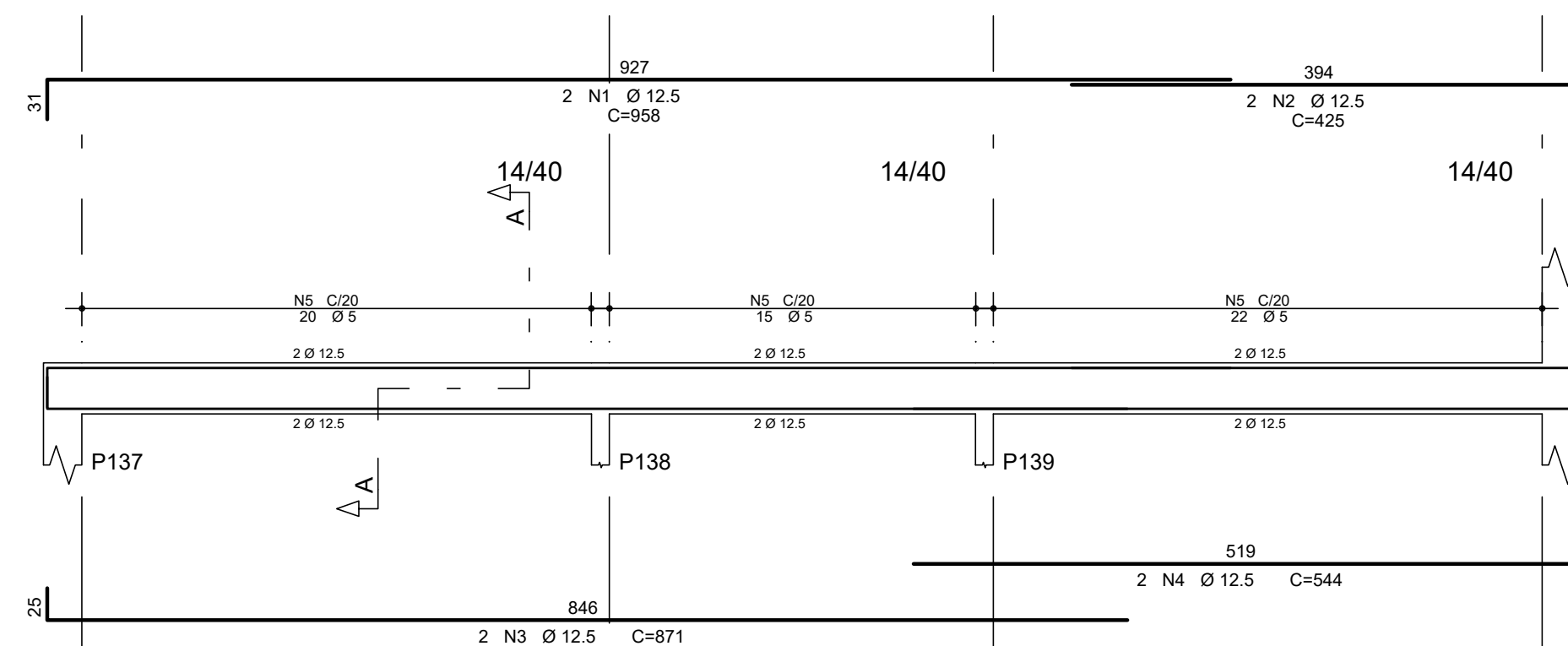
V228



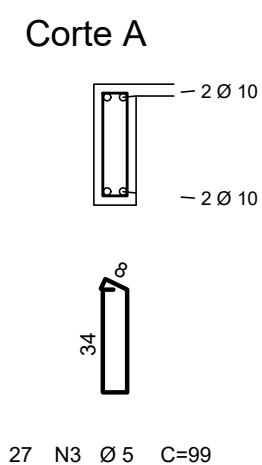
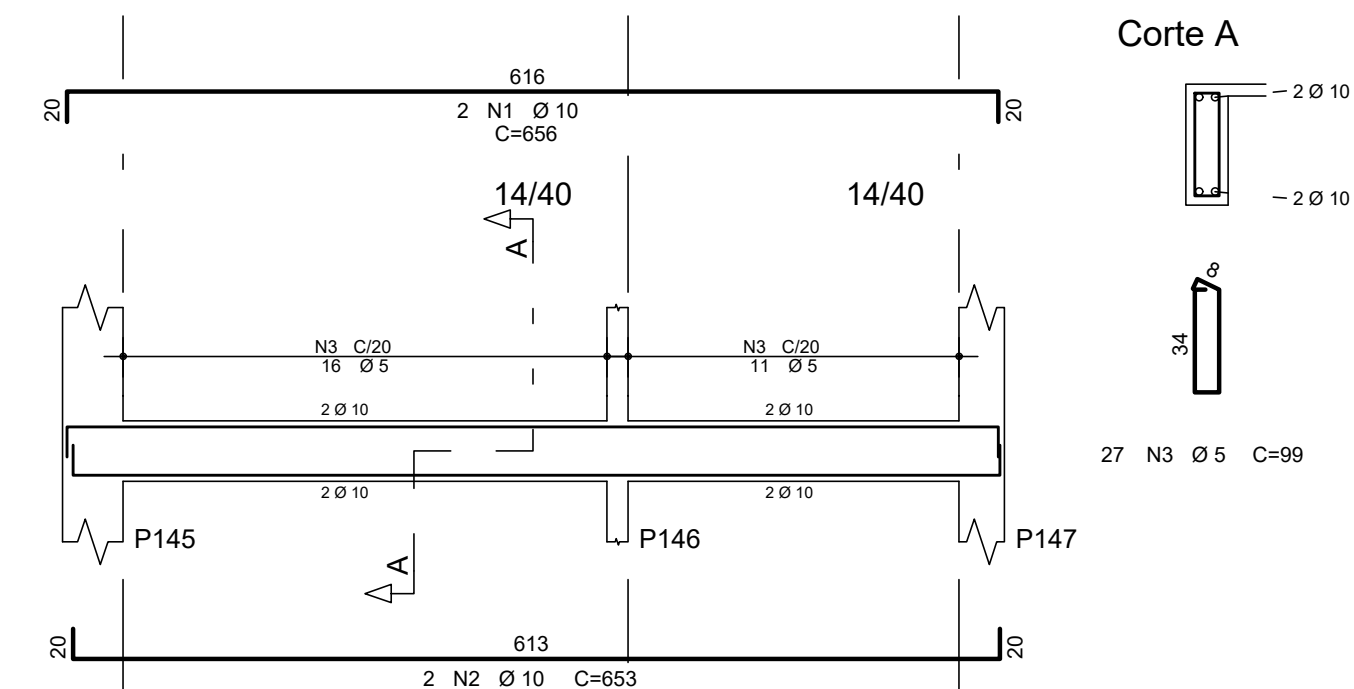
V230



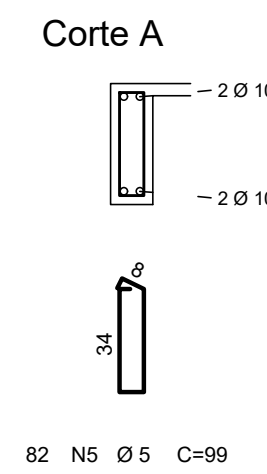
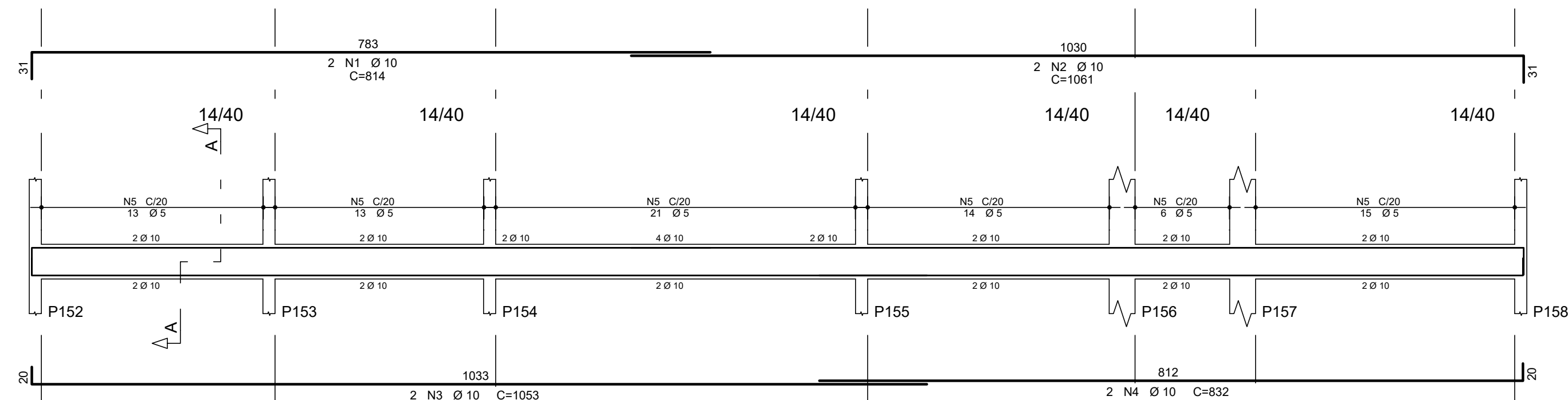
V231



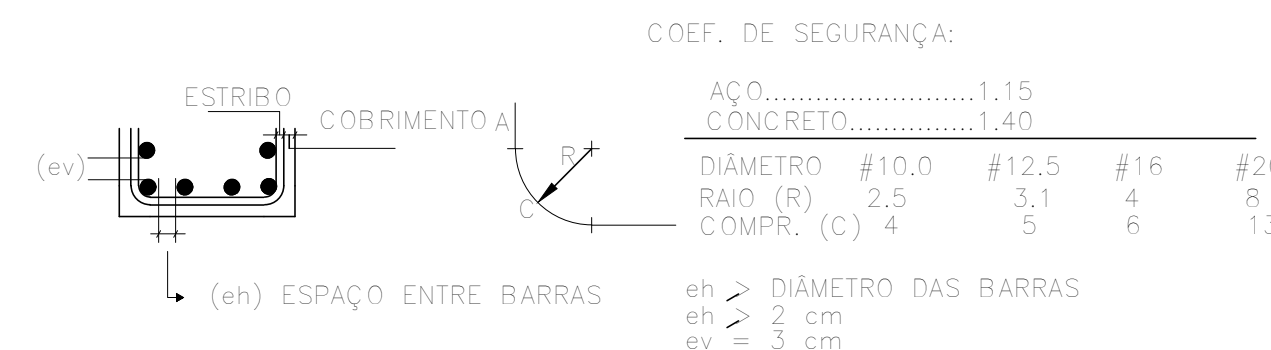
V233



V235



DOBRAS E DIST. ENTRE BARRAS



00	29/05/2025	EMISSION INICIAL	E.P.
REVISÃO	DATA	DESCRIÇÃO	RESP.

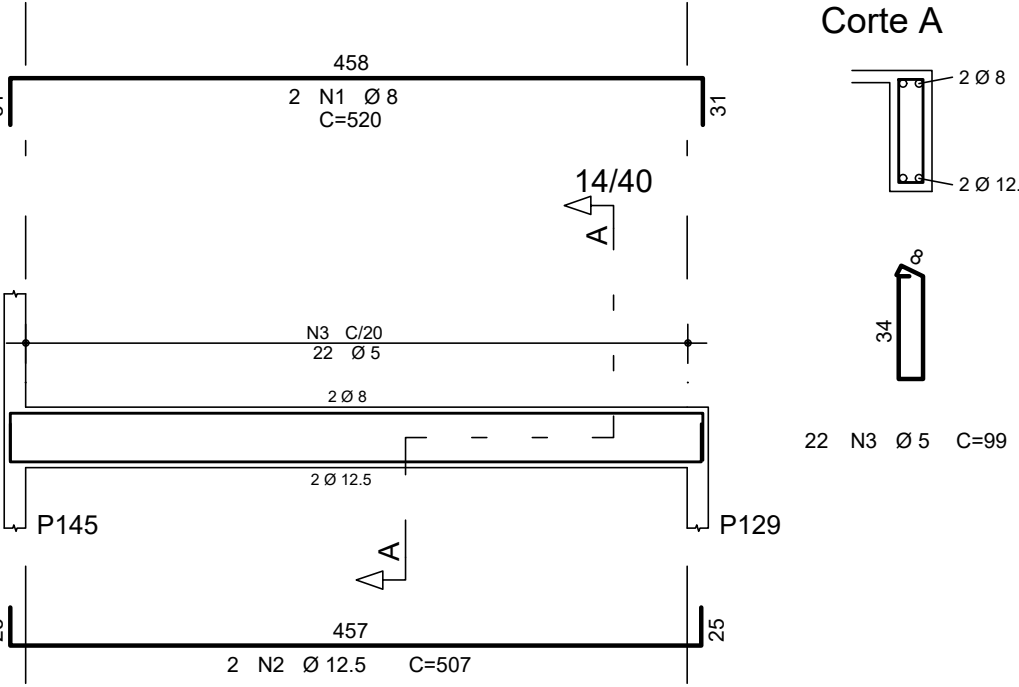
EXATA

ENGENHARIA E PROJETOS LTDA.

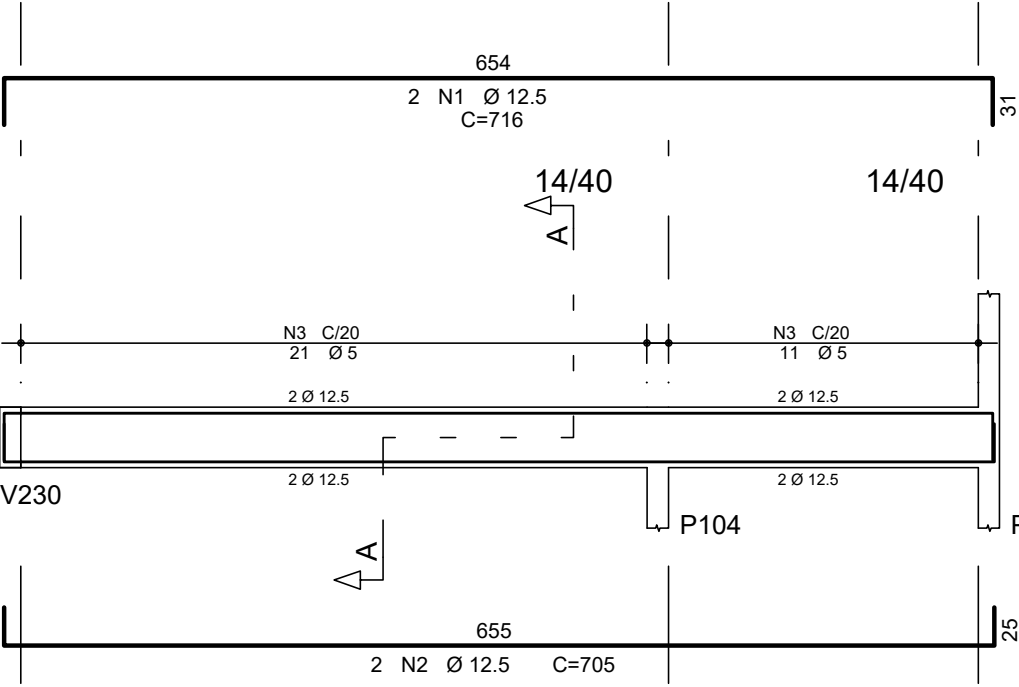
Fone: (19) 3236 - 1034
Site: www.exatacampinas.com.br
e-mail: contato@exatacampinas.com

CONTRATANTE		
PREFEITURA MUNICIPAL DE HORTOLÂNDIA		
LOCAL UBS JARDIM AMANDA - UNIDADE BÁSICA DE SAÚDE R. Rg. Faria Lima, 280 - Jardim Amada I - Hortolândia - SP		
OBRA INSTITUCIONAL	TÍTULO UBS JARDIM AMANDA ESTRUTURA	FOLHA
Nº OBRA 03724-10	DET. ARMAÇÃO DAS - V200 (COBERTURA)	C 24 36
Nº ART 2620250357459		
AUTOR DO PROJETO EXATA ENGENHARIA		DATA 05/2025
DESENHO EXATA ENGENHARIA		ESCALA INDICADA

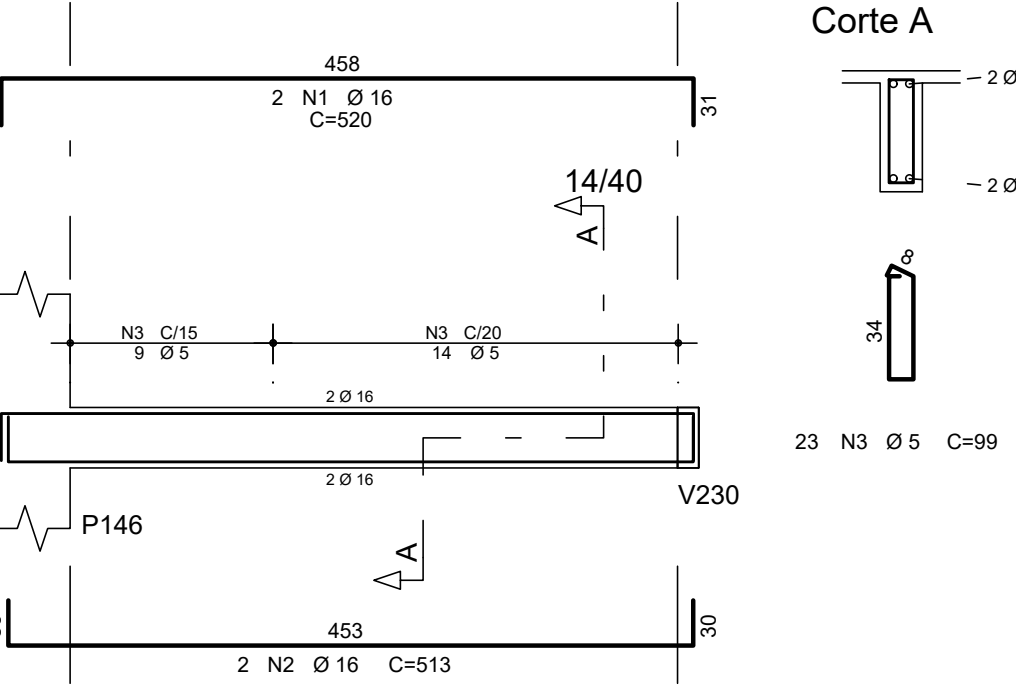
V241



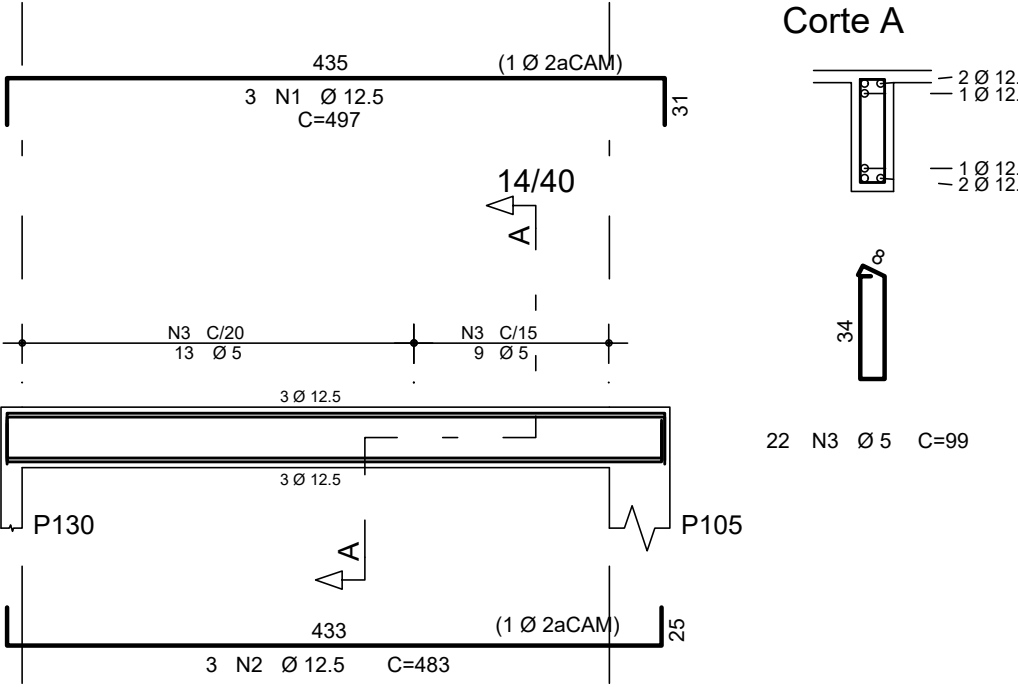
V243



V245



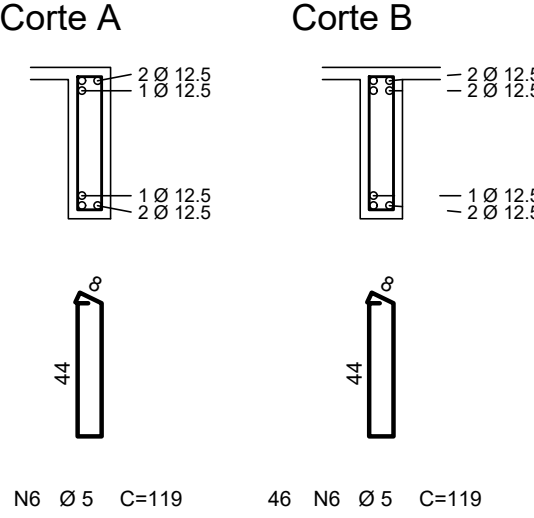
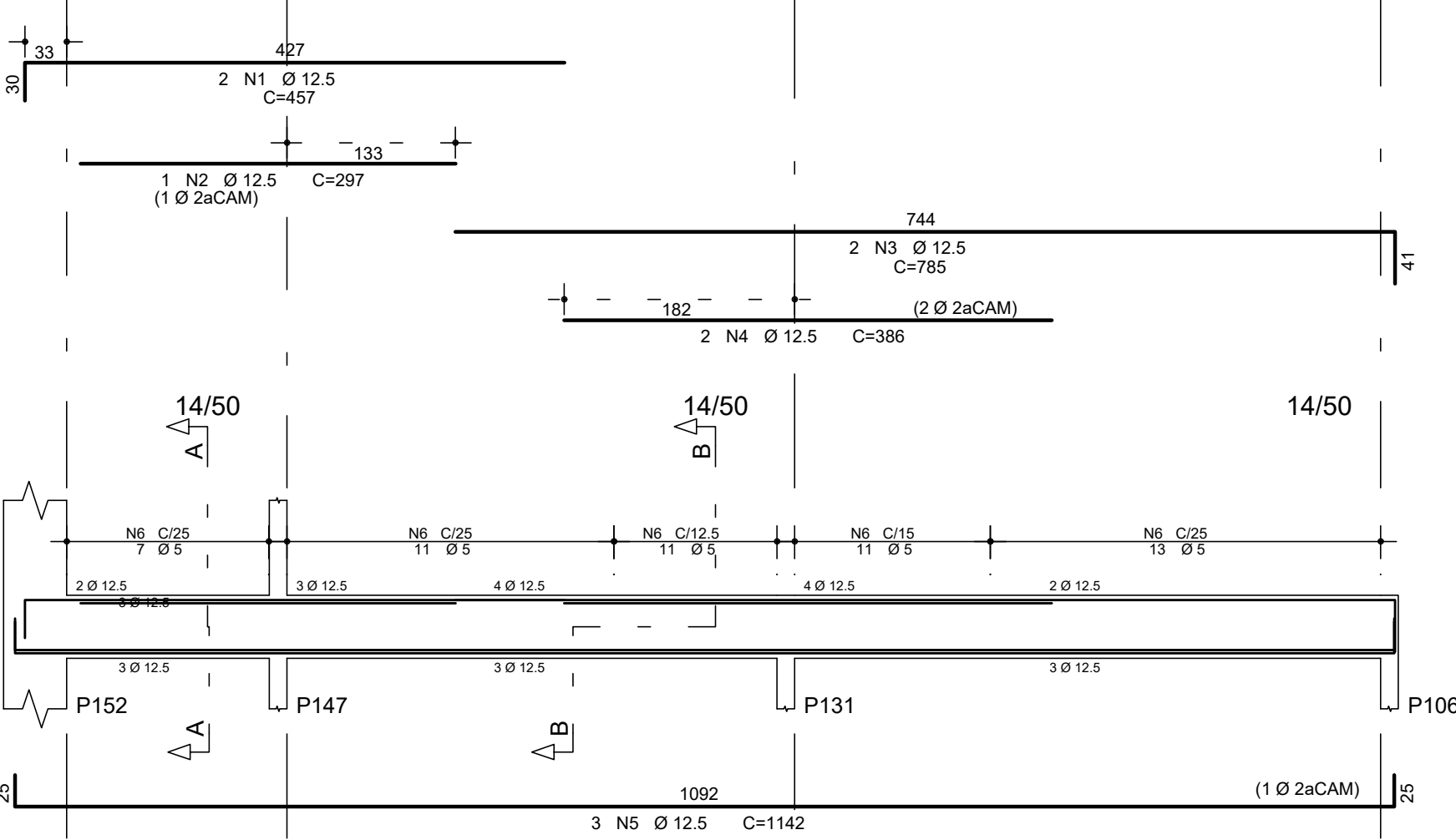
V246



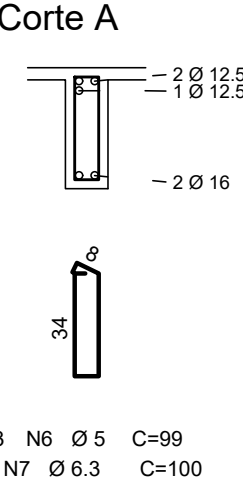
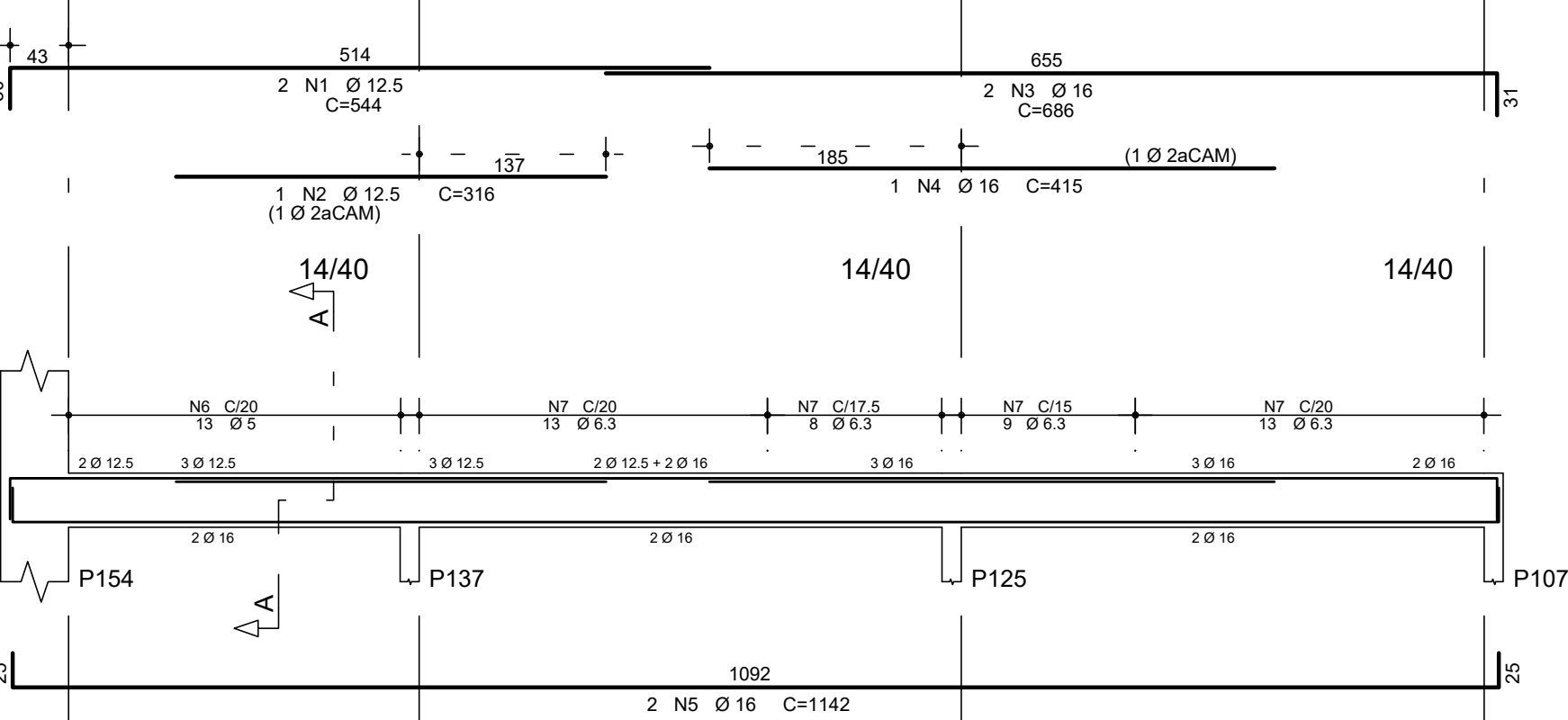
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					UNIT	TOTAL
			mm		cm	cm
V241	50A	1	8	2	520	1040
	50A	2	12.5	2	507	1014
	60B	3	5	22	99	2178
V243	50A	1	12.5	2	716	1432
	50A	2	12.5	2	705	1410
	60B	3	5	32	99	3168
V245	50A	1	16	2	520	1040
	50A	2	12.5	2	513	1026
	60B	3	5	23	99	2277
V246	50A	1	12.5	3	497	1491
	50A	2	12.5	3	483	1449
	60B	3	5	22	99	2178
V248	50A	1	12.5	2	457	914
	50A	2	12.5	1	297	297
	50A	3	12.5	2	785	1570
	50A	4	12.5	2	386	772
	50A	5	12.5	3	1142	3426
	60B	6	5	53	119	6307
V251	50A	1	12.5	2	544	1088
	50A	2	12.5	1	316	316
	50A	3	16	2	686	1372
	50A	4	16	1	415	415
	50A	5	16	2	1142	2284
	60B	6	5	13	99	1287
	50A	7	6.3	43	100	4300
V253	50A	1	16	2	882	1764
	50A	2	16	2	860	1720
	60B	3	5	40	99	3960
V257	50A	1	12.5	2	866	1732
	50A	2	12.5	2	516	1032
	50A	3	12.5	3	855	2565
	50A	4	6.3	19	100	1900
	60B	5	5	22	99	2178
V260	50A	1	12.5	2	1155	2310
	50A	2	12.5	2	1142	2284
	60B	3	5	51	99	5049
V263	50A	1	8	2	310	620
	50A	2	12.5	2	285	570
	60B	3	5	12	99	1188

RESUMO DE AÇO			
AÇO	BIT	COMPR	PESO
	mm	m	kgf
60B	5	298	46
50A	6.3	62	15
50A	8	17	7
50A	12.5	257	247
50A	16	96	152
Peso Total 60B =		46 kgf	
Peso Total 50A =		421 kgf	
VOLUME DE CONCRETO =		4,10 m³	

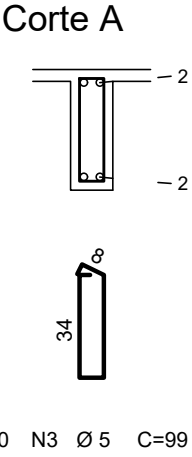
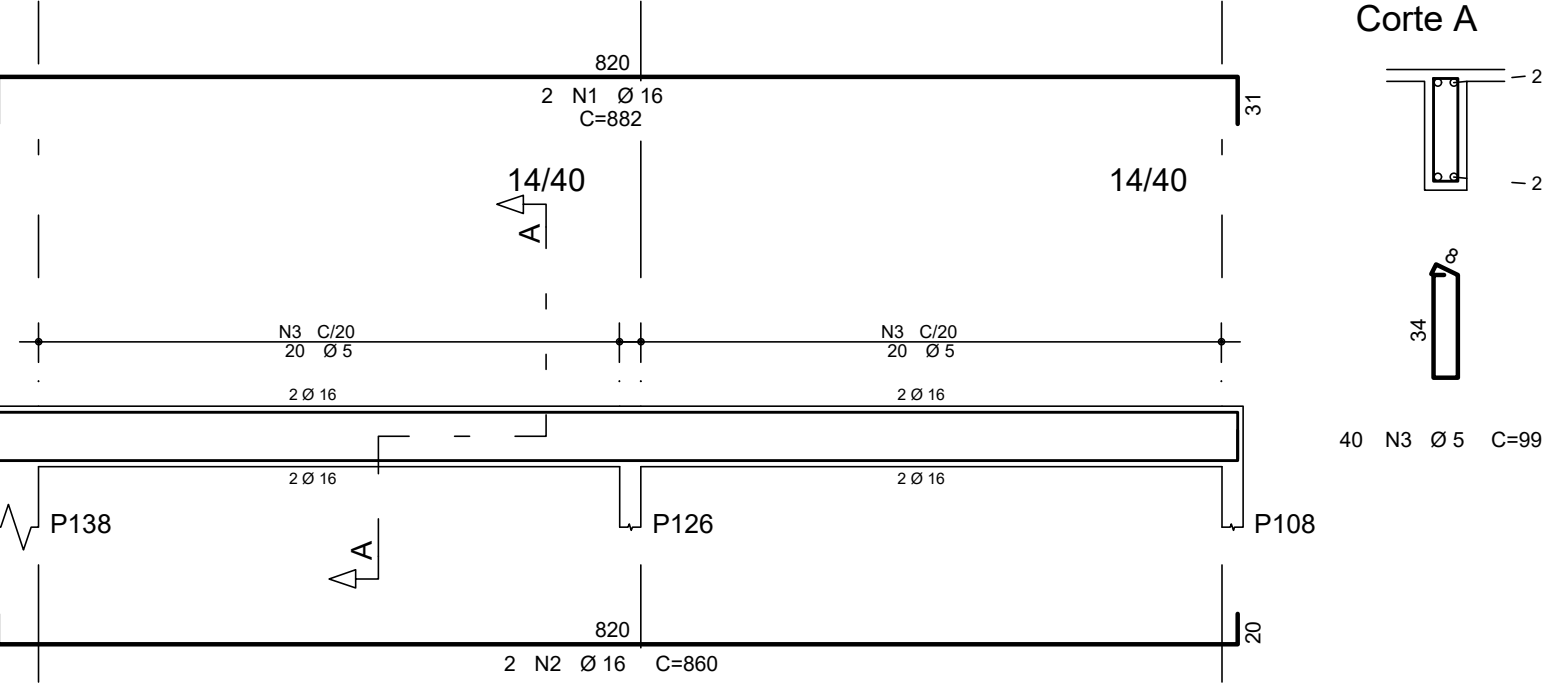
V248



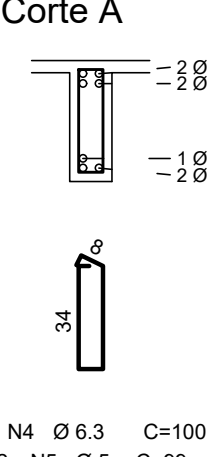
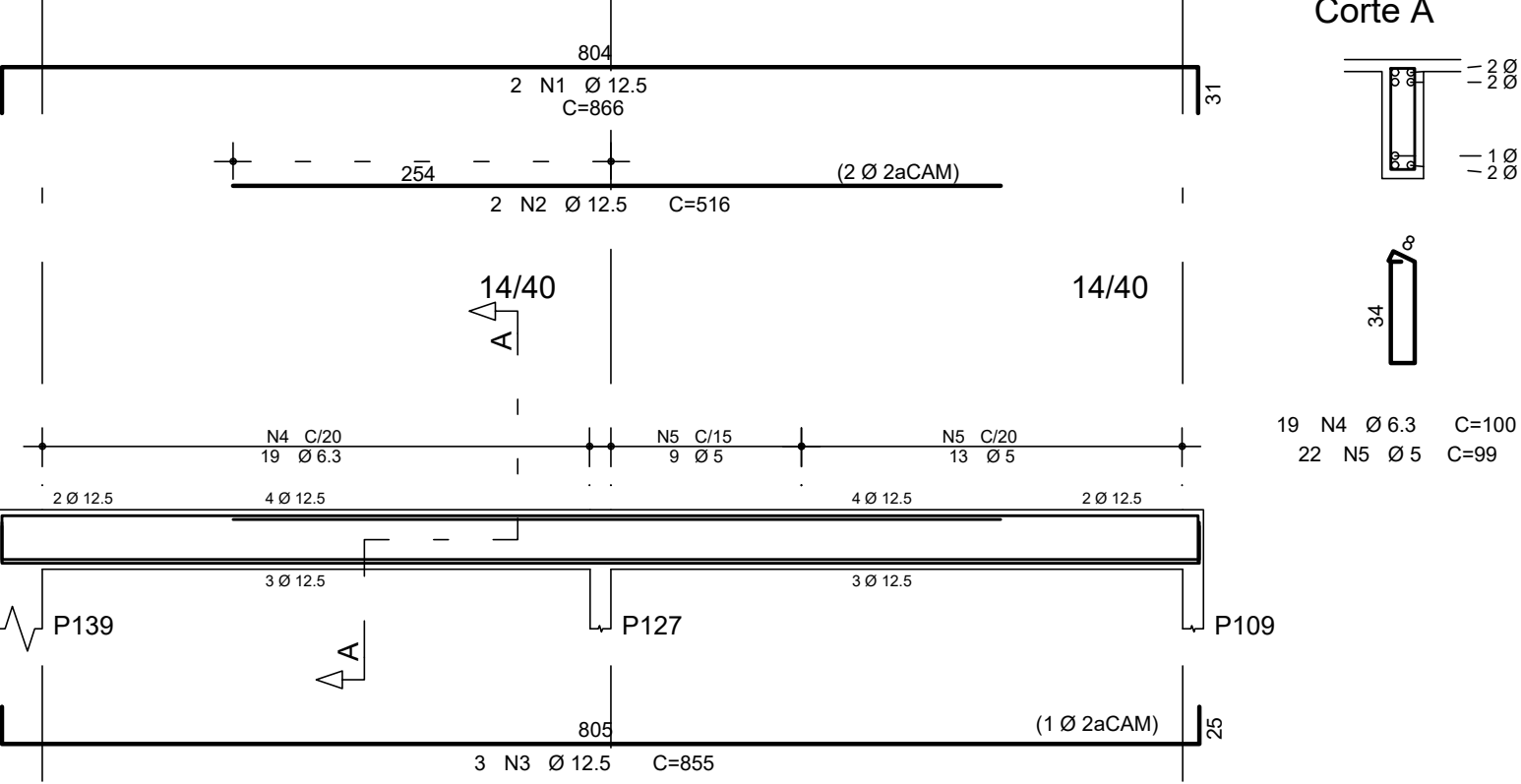
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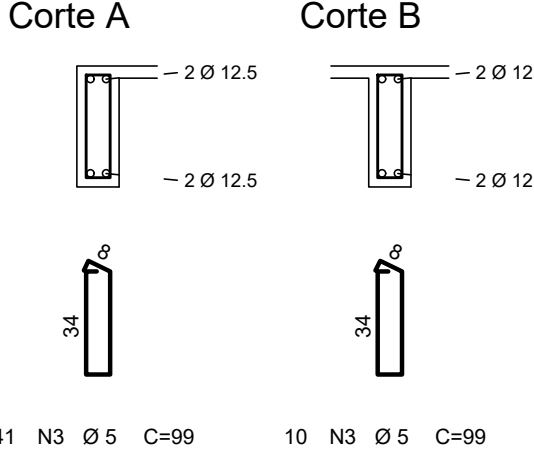
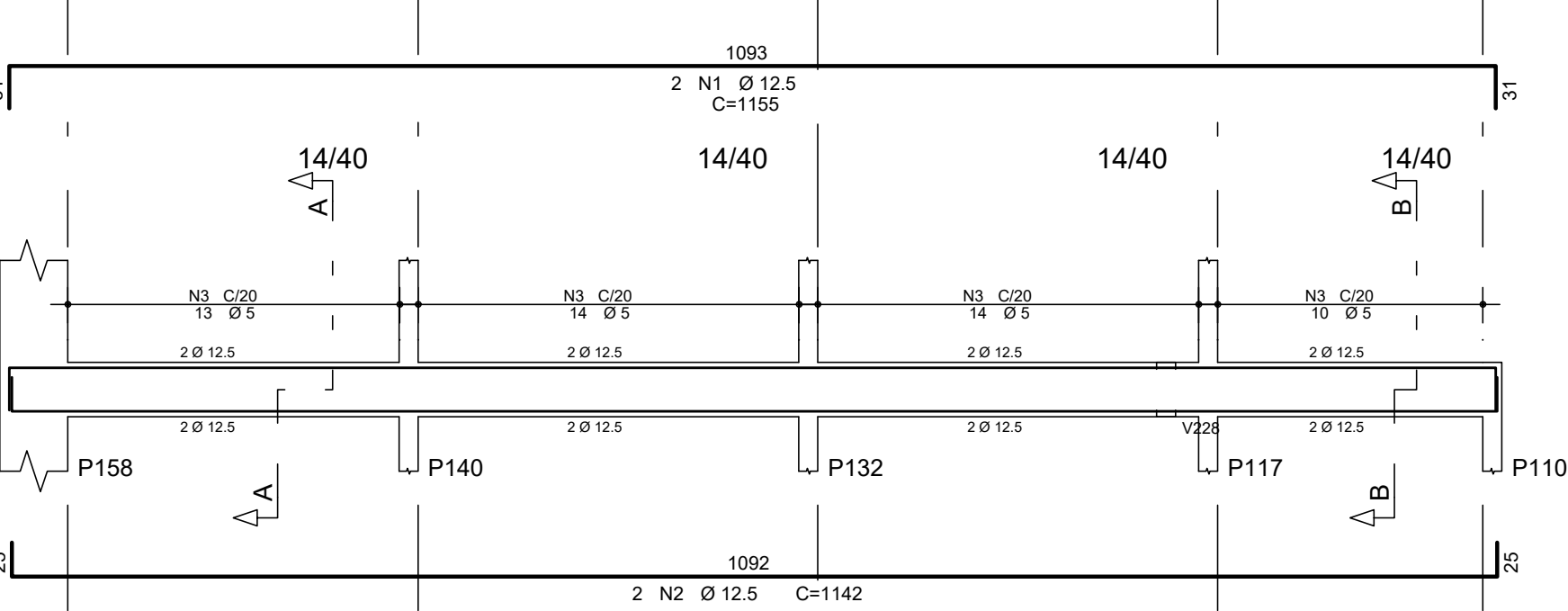
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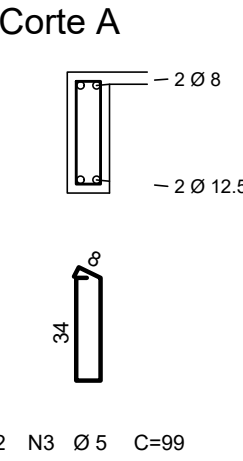
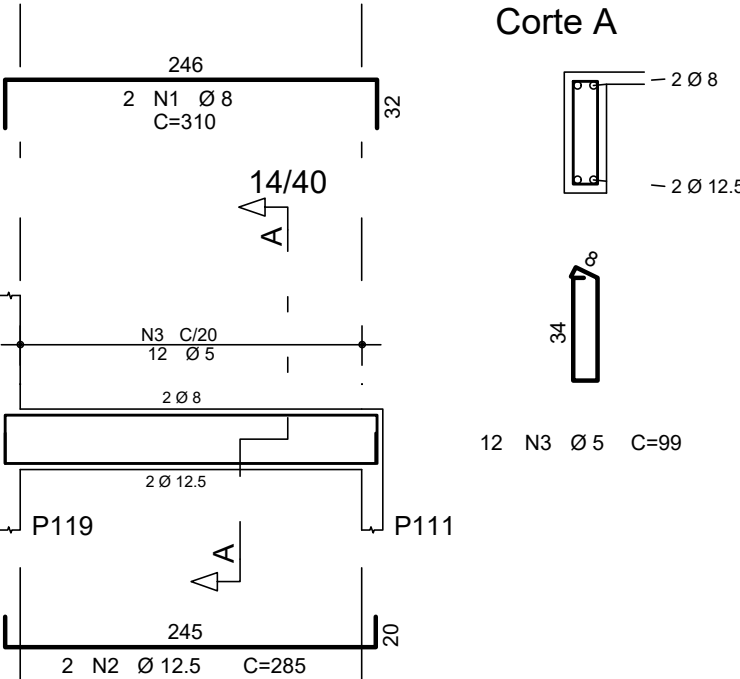
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V260



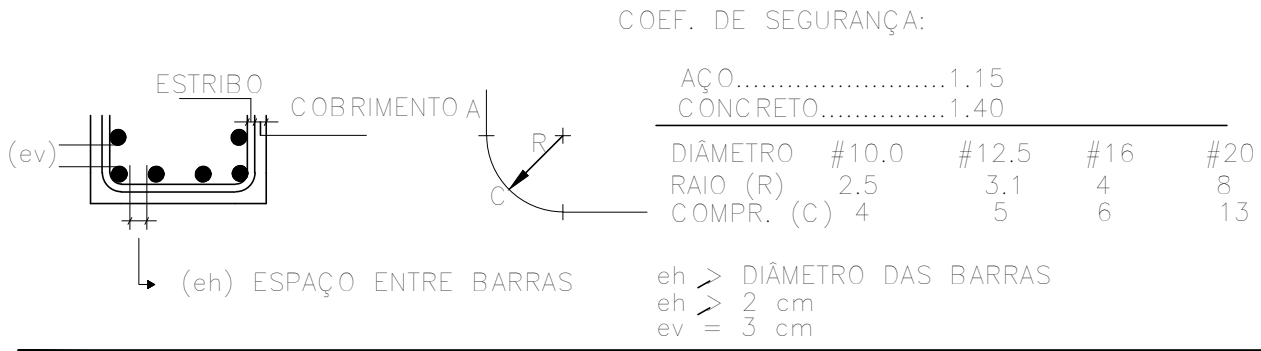
V263



EDUARDO JOSE BARBOZA DE OLIVEIRA
PRATA:30924256850

Assinado de forma digital por
EDUARDO JOSE BARBOZA DE
OLIVEIRA PRATA:30924256850
Data: 2025.06.18 13:22:32

DOBRAS E DIST. ENTRE BARRAS

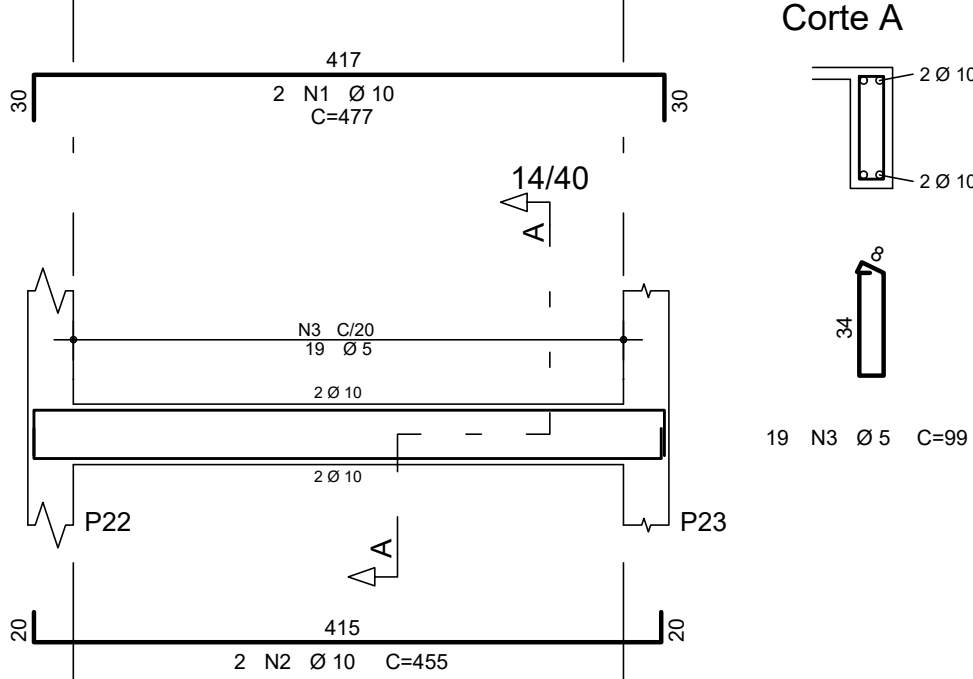


00	29/05/2025	EMIÇÃO INICIAL	E.P.
REVISÃO	DATA	DESCRIÇÃO	RESP.

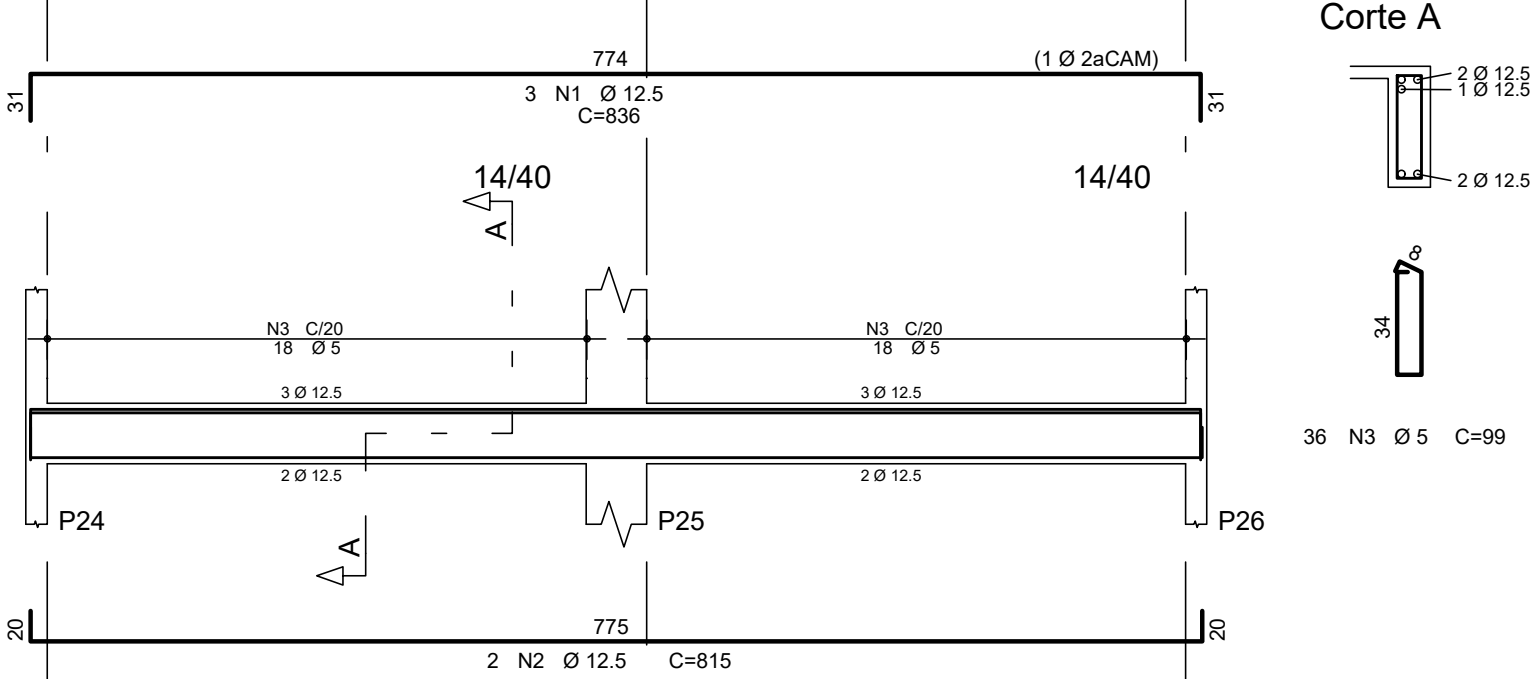
EXATA
ENGENHARIA E PROJETOS LTDA.
Fone: (19) 3236 - 1034
Site: www.exatacampinas.com.br
e-mail: contato@exatacampinas.com.br

CONTRATANTE PREFEITURA MUNICIPAL DE HORTOLÂNDIA		
LOCAL UBS JARDIM AMANDA - UNIDADE BÁSICA DE SAÚDE R. Rg. Faria Lima, 280 - Jardim Amanda I - Hortolândia - SP		
OBRA INSTITUCIONAL	TÍTULO UBS JARDIM AMANDA ESTRUTURA	FOLHA
Nº OBRA 03724-10	DET. ARMAÇÃO DAS - V200 (COBERTURA)	C25 36
Nº ART 2620250357459		
AUTOR DO PROJETO EXATA ENGENHARIA	DATA 05/2025	INDICADA
DESENHO EXATA ENGENHARIA	ESCALA	

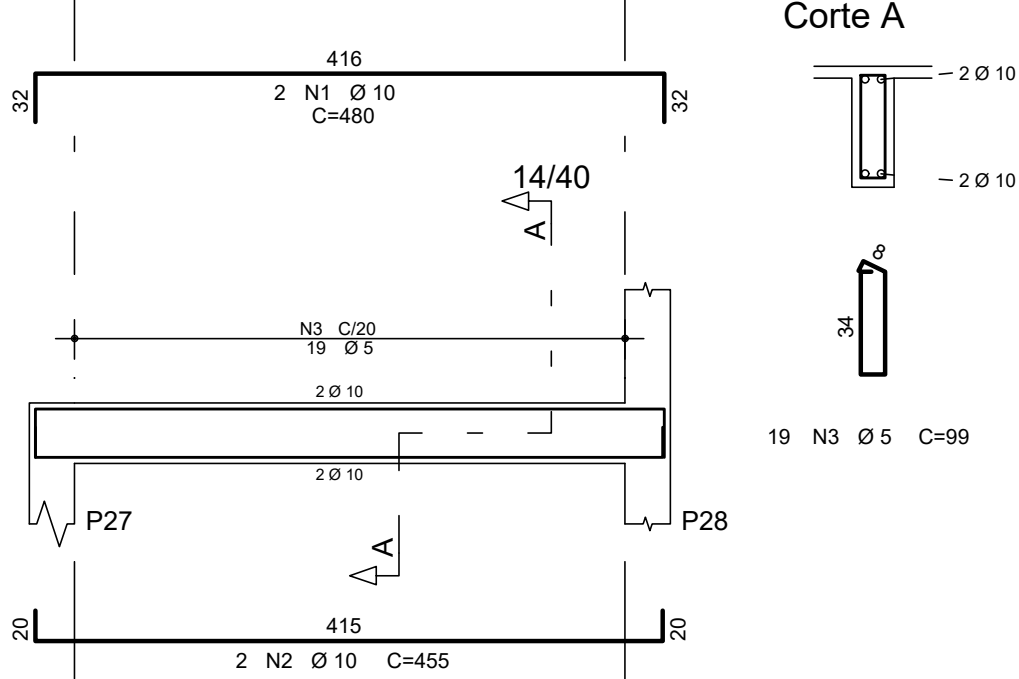
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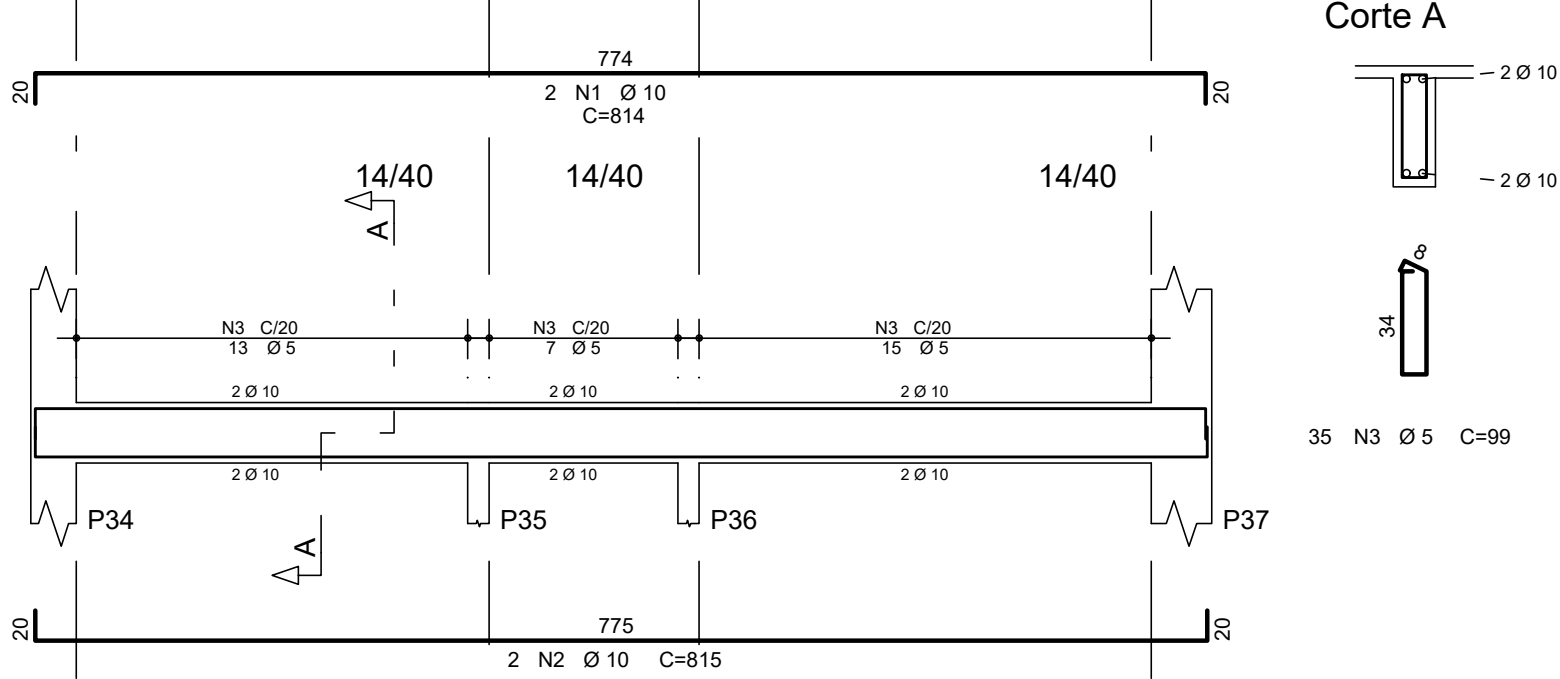
V207



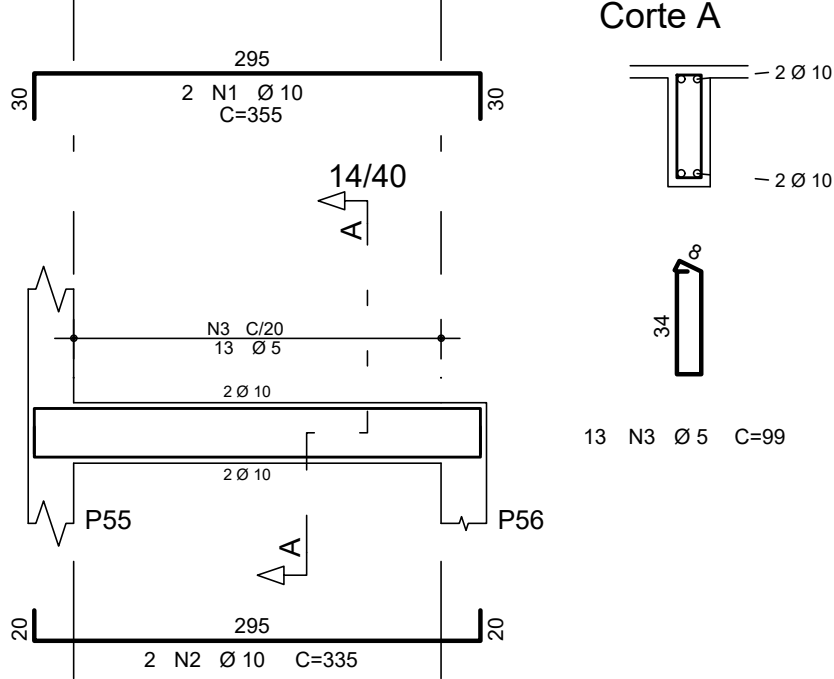
V208



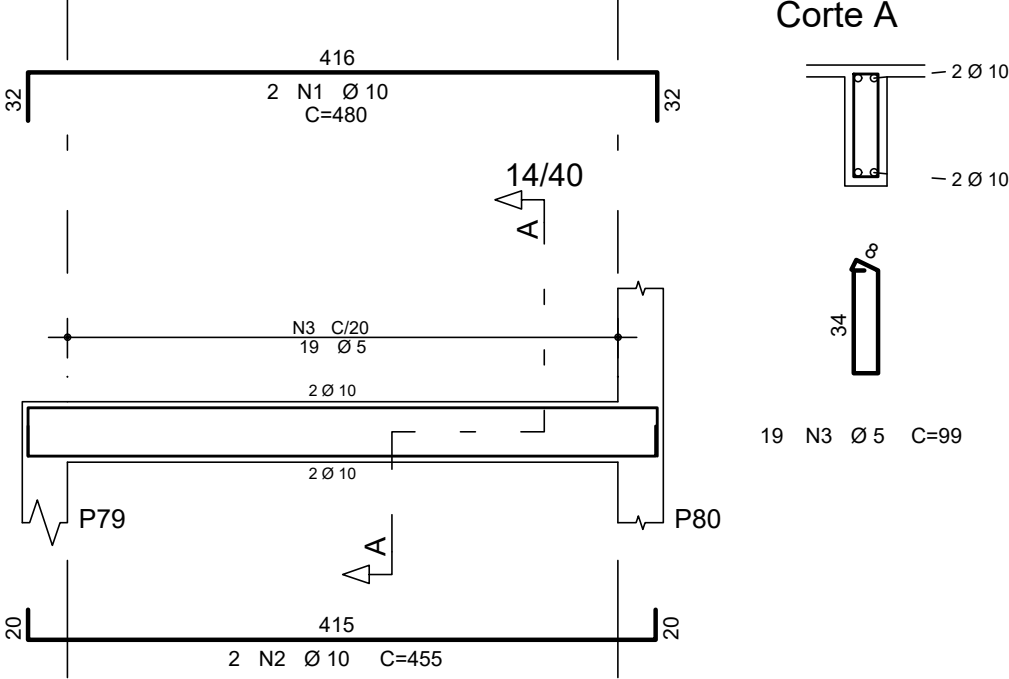
V210



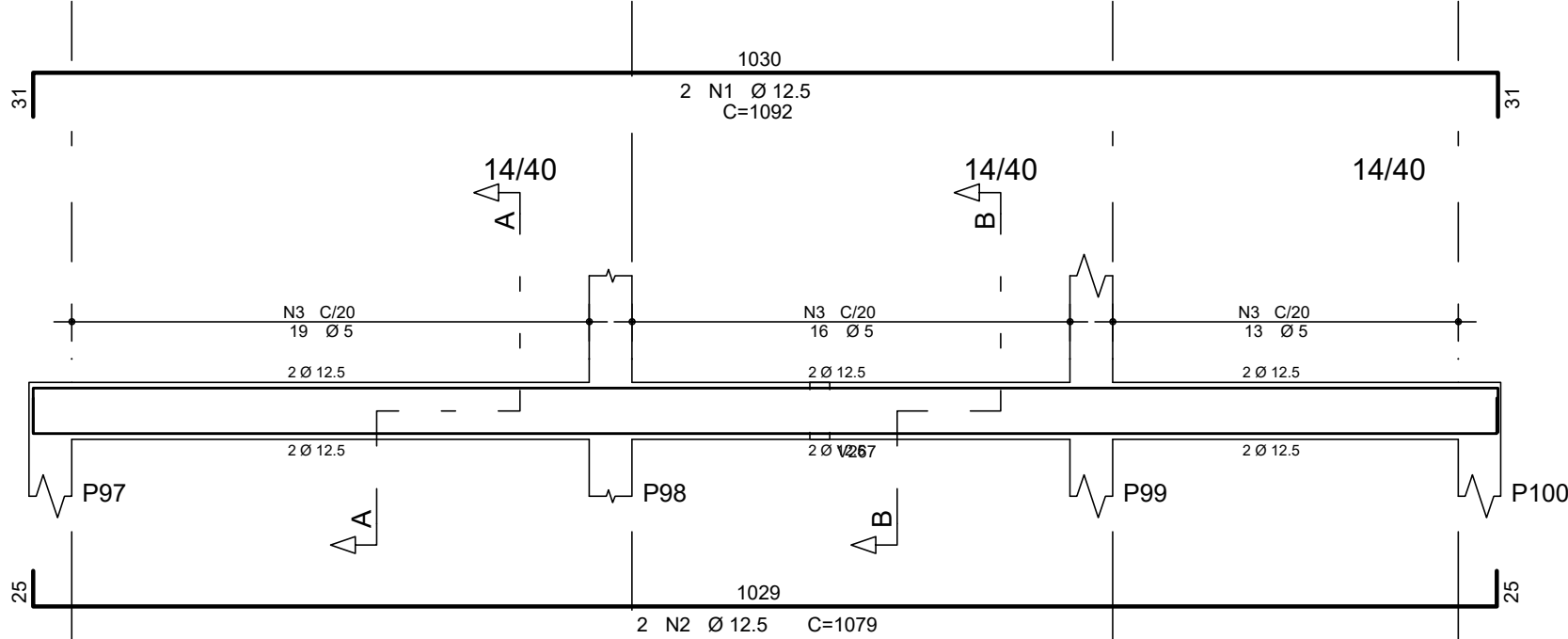
V215



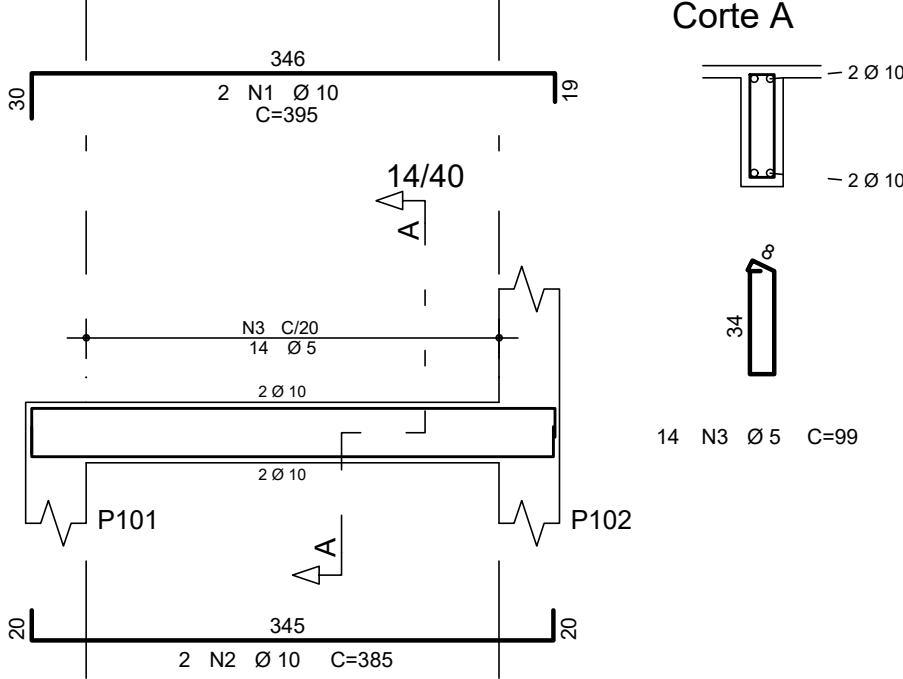
V220



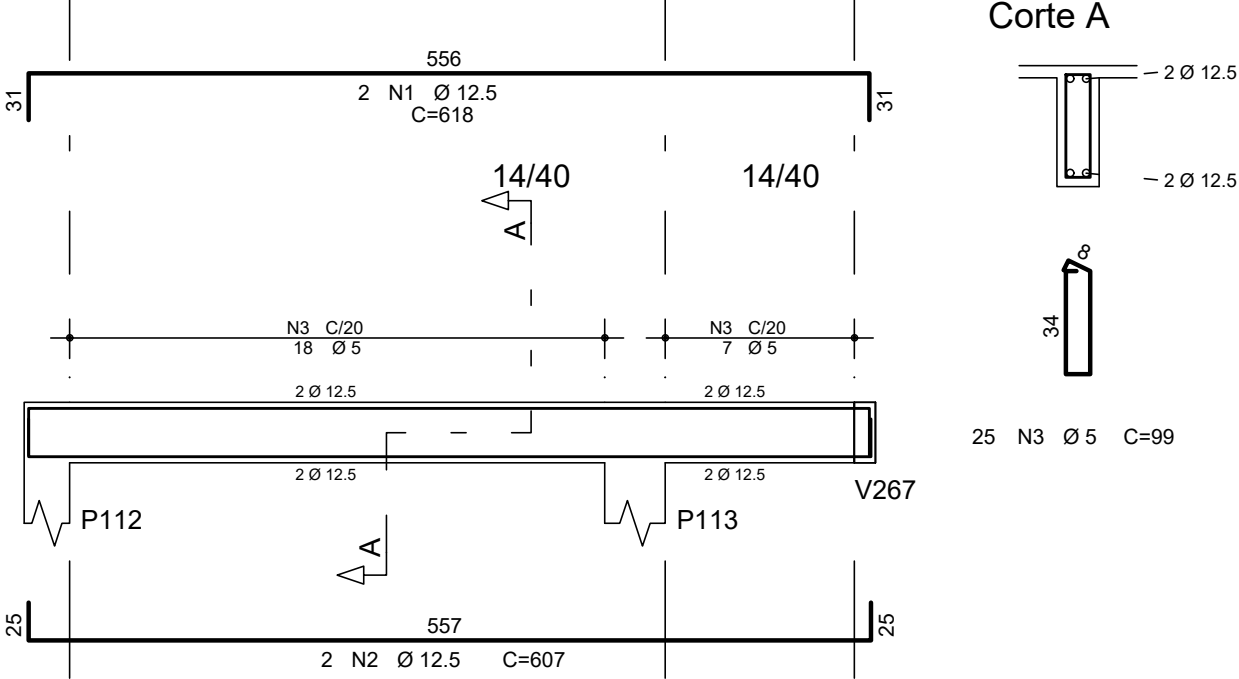
V223



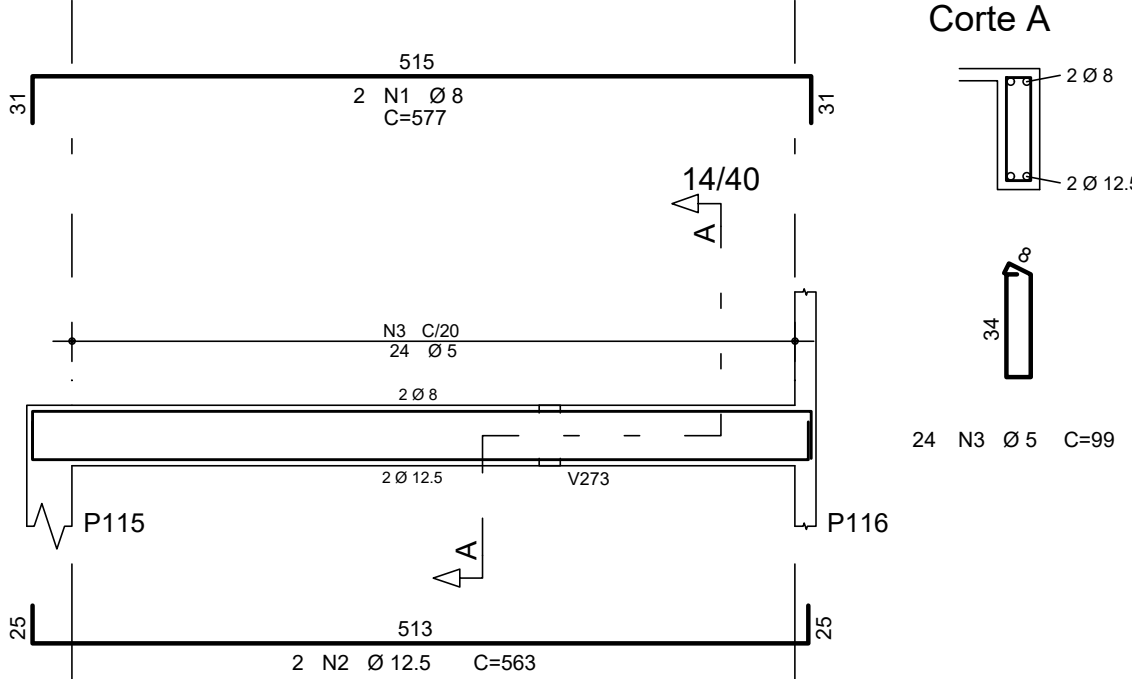
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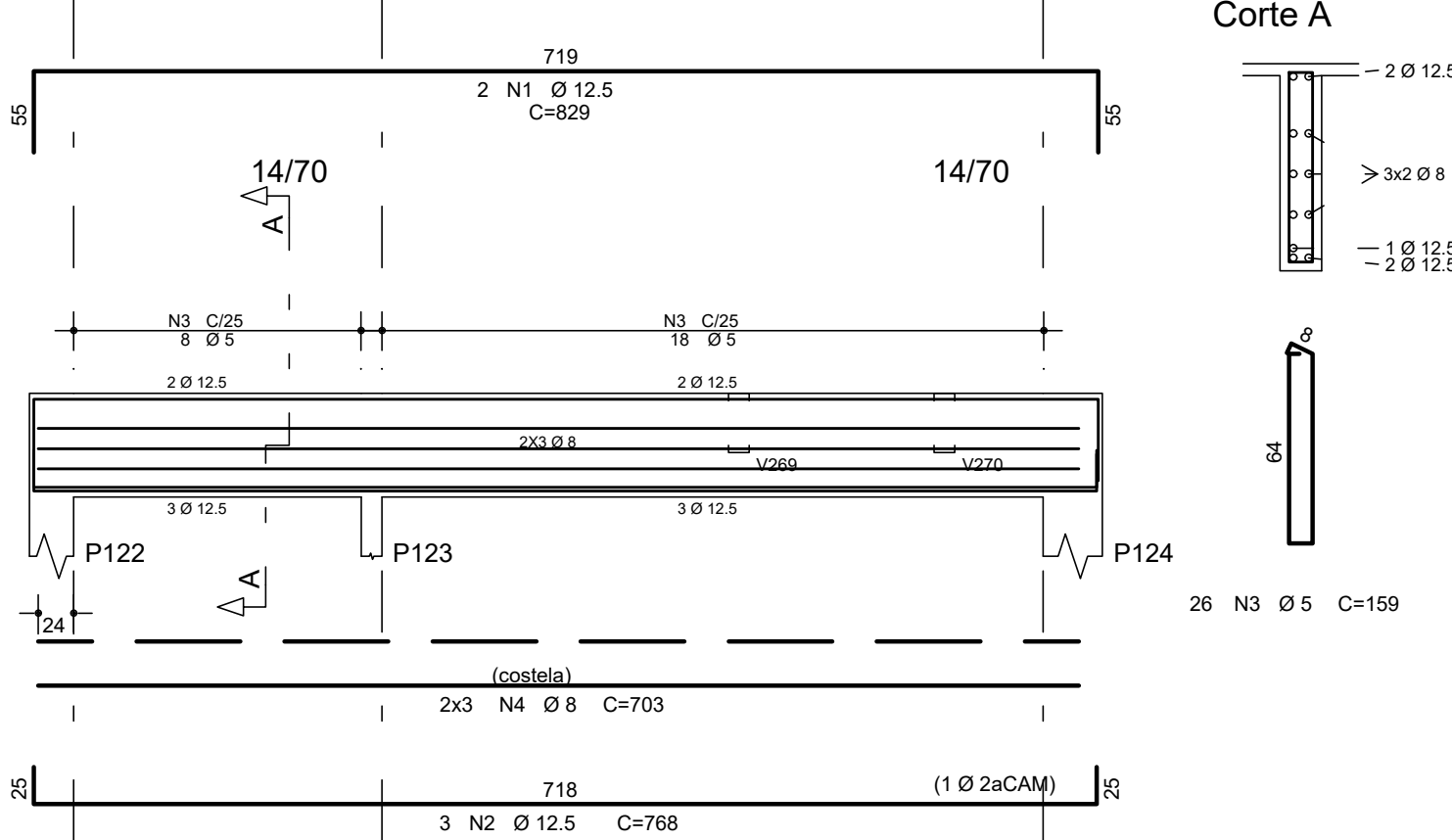
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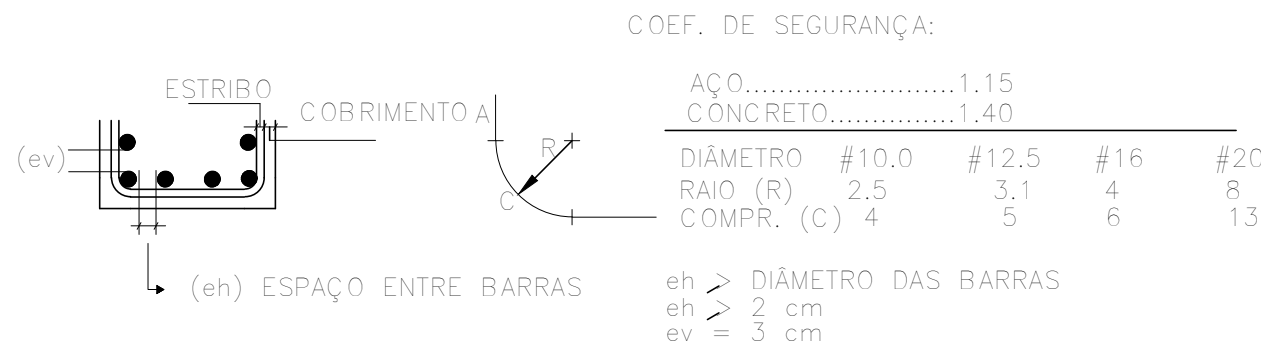
V227



V229



DOBRAS E DIST. ENTRE BARRAS



COEF. DE SEGURANÇA:

AÇO.....1,15

CONCRETO.....1,40

DIÂMETRO #10,0 #12,5 #16 #20

RAIO (R) 2,5 3,1 4 8

COMPR. (C) 4 5 6 13

eh > DIÂMETRO DAS BARRAS

eh > 2 cm

ev = 3 cm

00	29/05/2025	EMIÇÃO INICIAL	E.P.
REVISÃO	DATA	DESCRIÇÃO	RESP.

EXATA

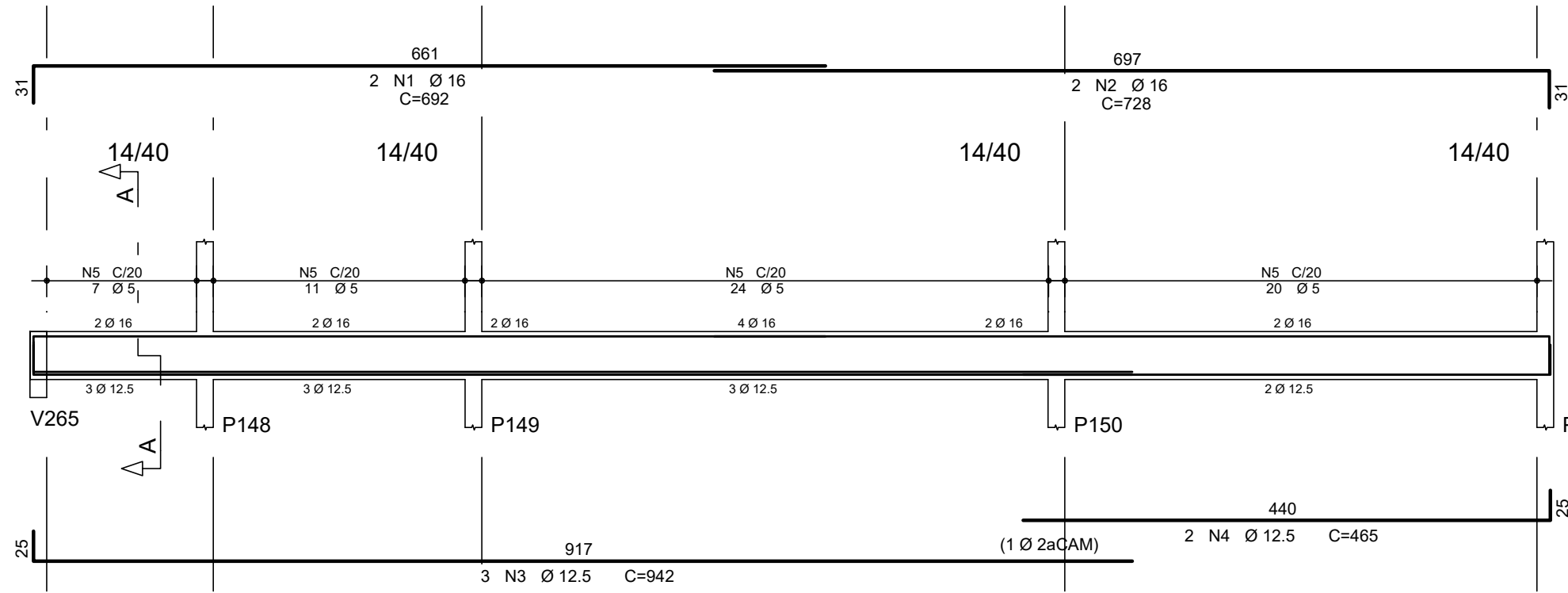
ENGENHARIA E PROJETOS LTDA.

Fone: (19) 3236 - 1034
Site: www.exatacampinas.com.br
e-mail: contato@exatacampinas.com.br

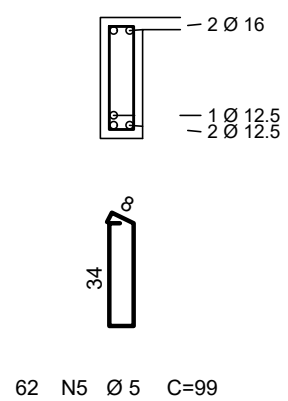
CONTRATANTE PREFEITURA MUNICIPAL DE HORTOLÂNDIA		
LOCAL UBS JARDIM AMANDA - UNIDADE BÁSICA DE SAÚDE R. Brg. Faria Lima, 280 - Jardim Amanda I - Hortolândia - SP		
OBRA INSTITUCIONAL	TÍTULO UBS JARDIM AMANDA ESTRUTURA	FOLHA
Nº OBRA 03724-10	DET. ARMAÇÃO DAS - V200 (COBERTURA)	C26 36
Nº ART 2620250357459		
AUTOR DO PROJETO EXATA ENGENHARIA	DATA 05/2025	INDICADA
DESENHO EXATA ENGENHARIA	ESCALA	

Assinado de forma digital
por EDUARDO JOSE
BARBOZA DE OLIVEIRA
PRATA:30924256850
Dados: 2025.06.18 13:23:08
-03'00

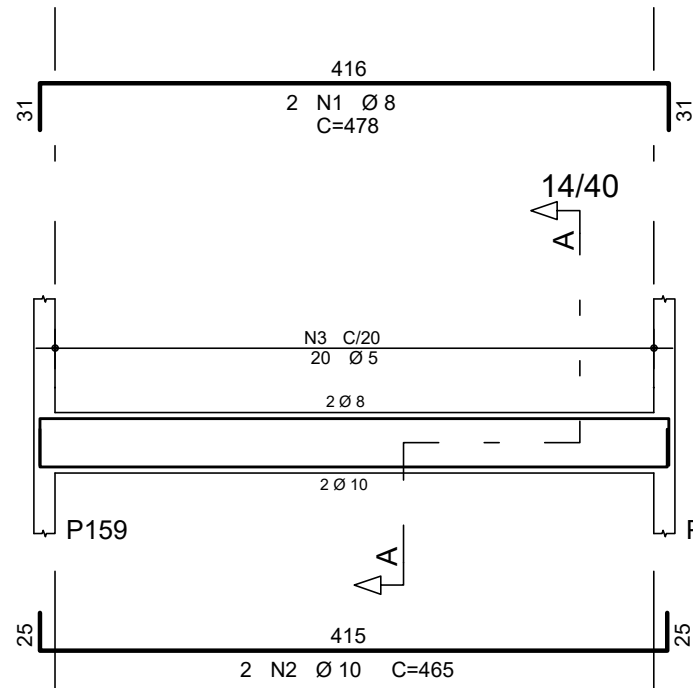
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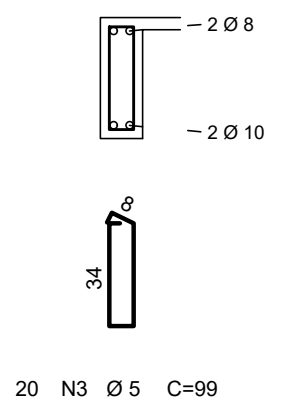
Corte A



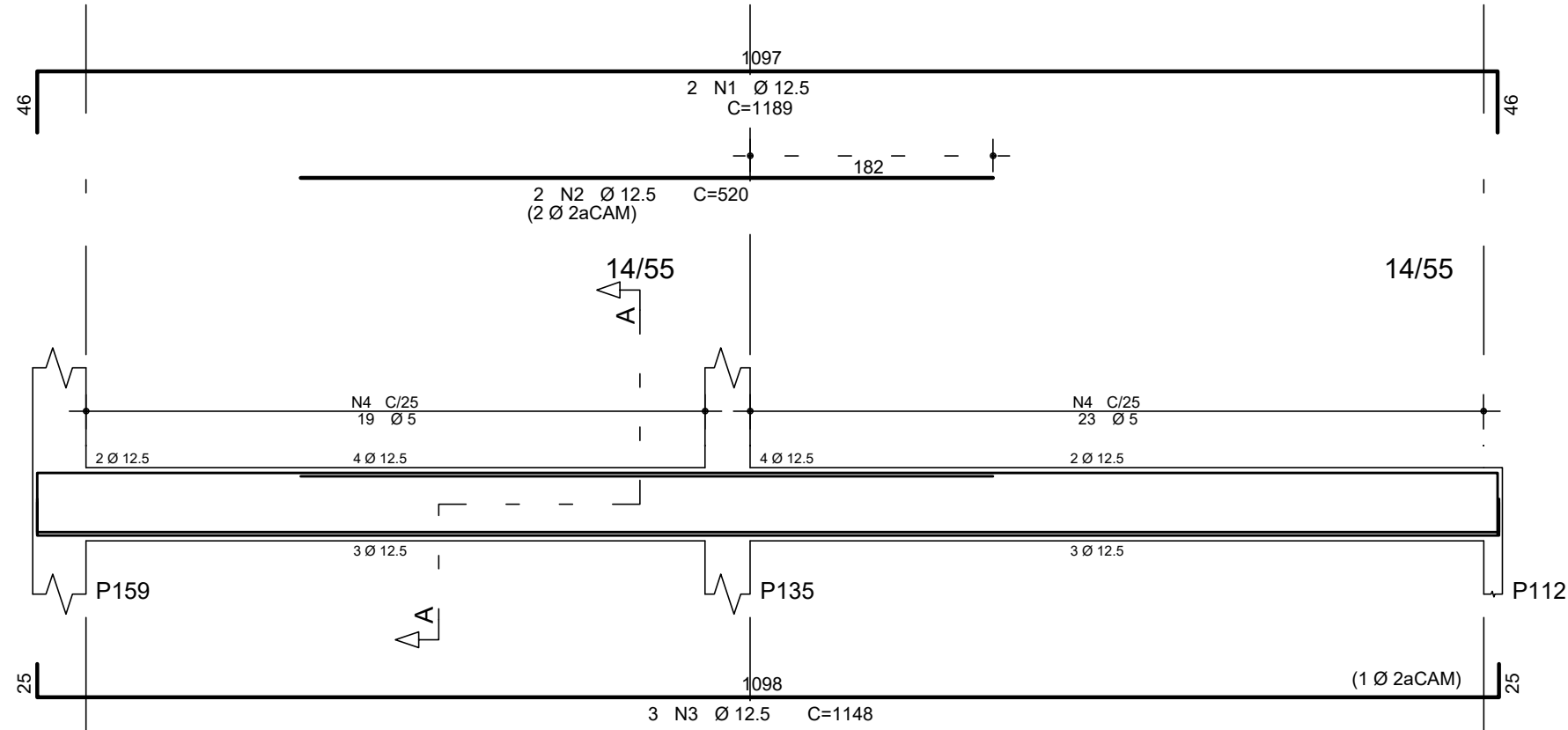
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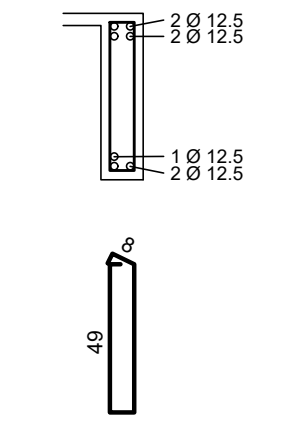
Corte A



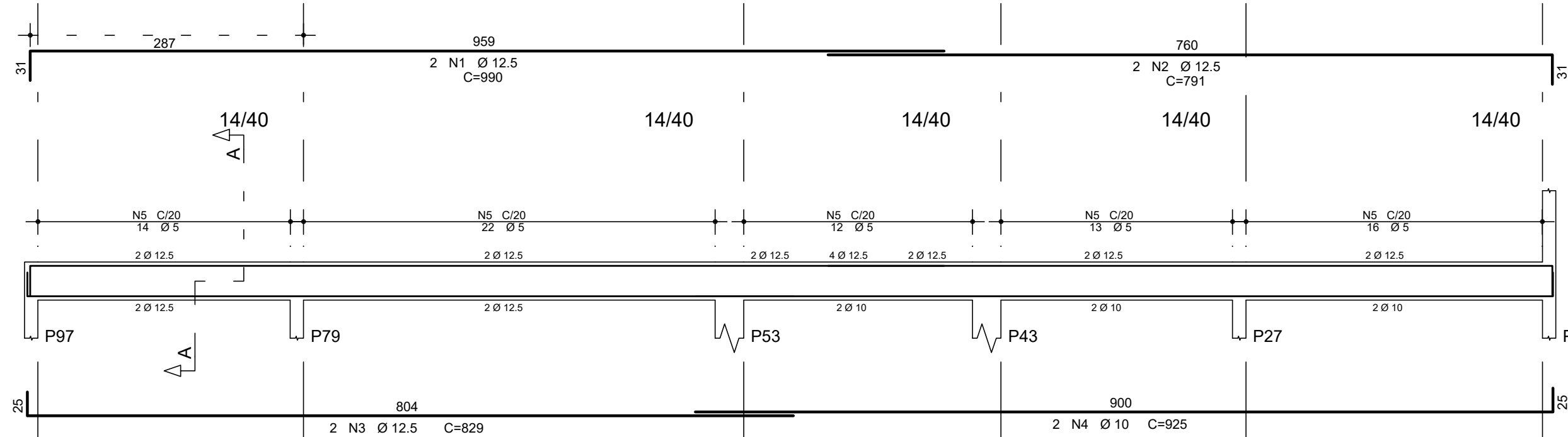
V262



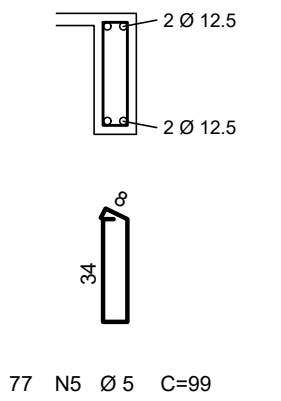
Corte A



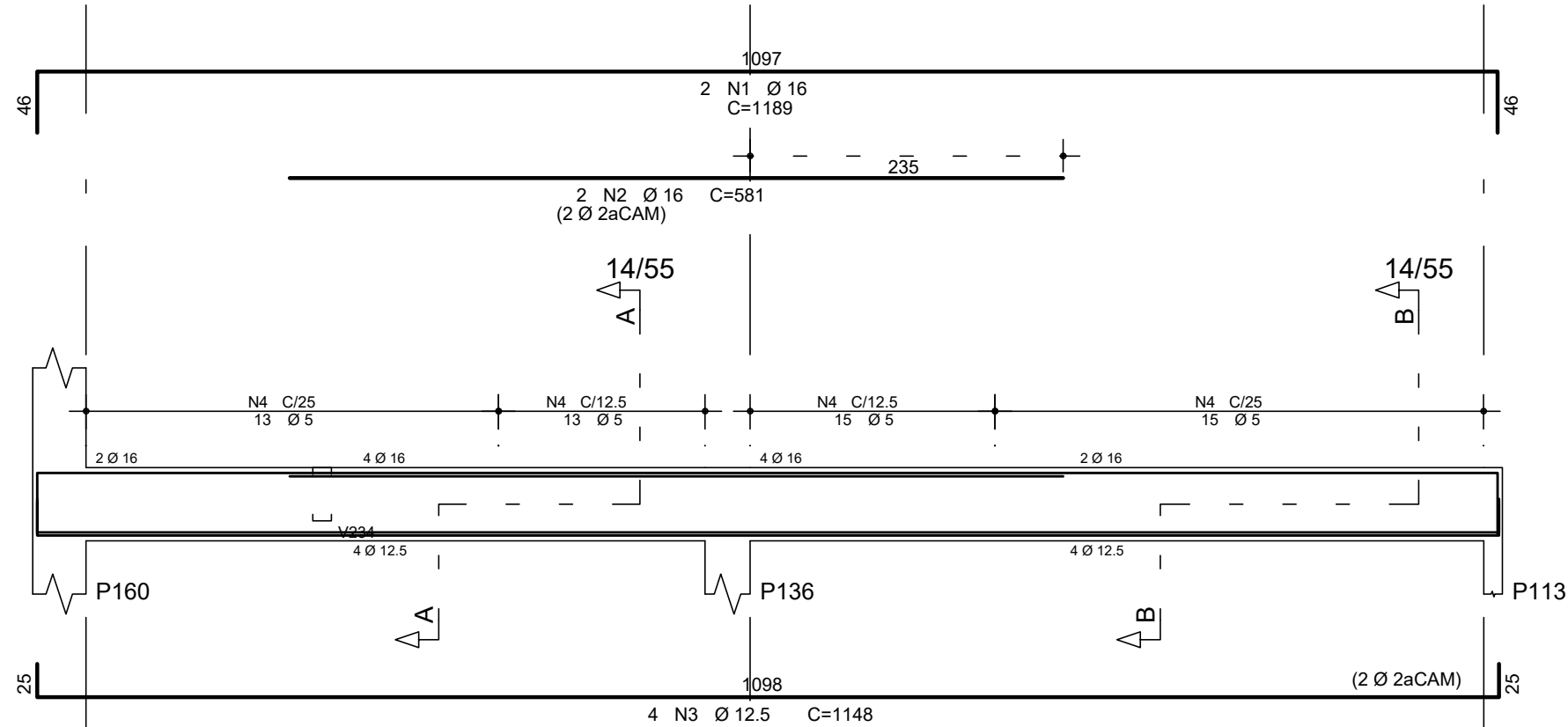
V264



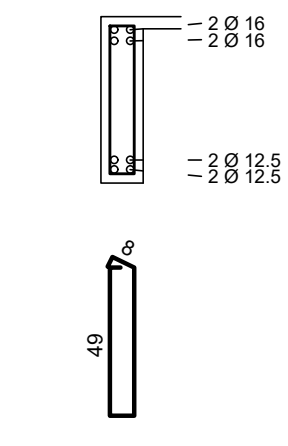
Corte A



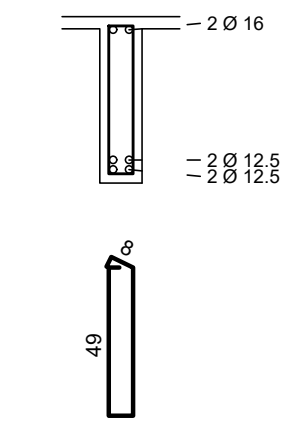
V265



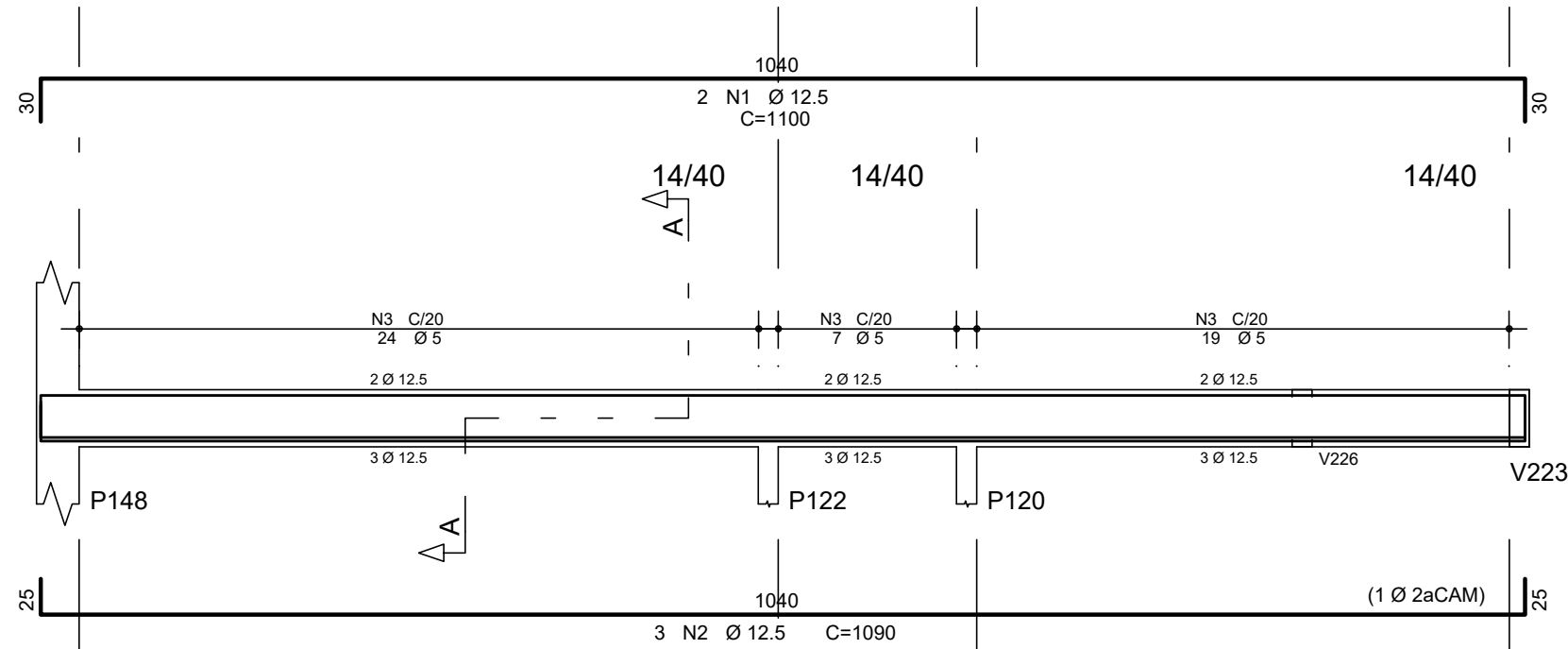
Corte A



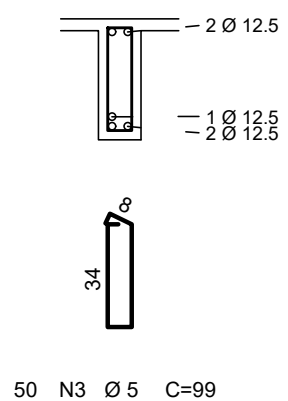
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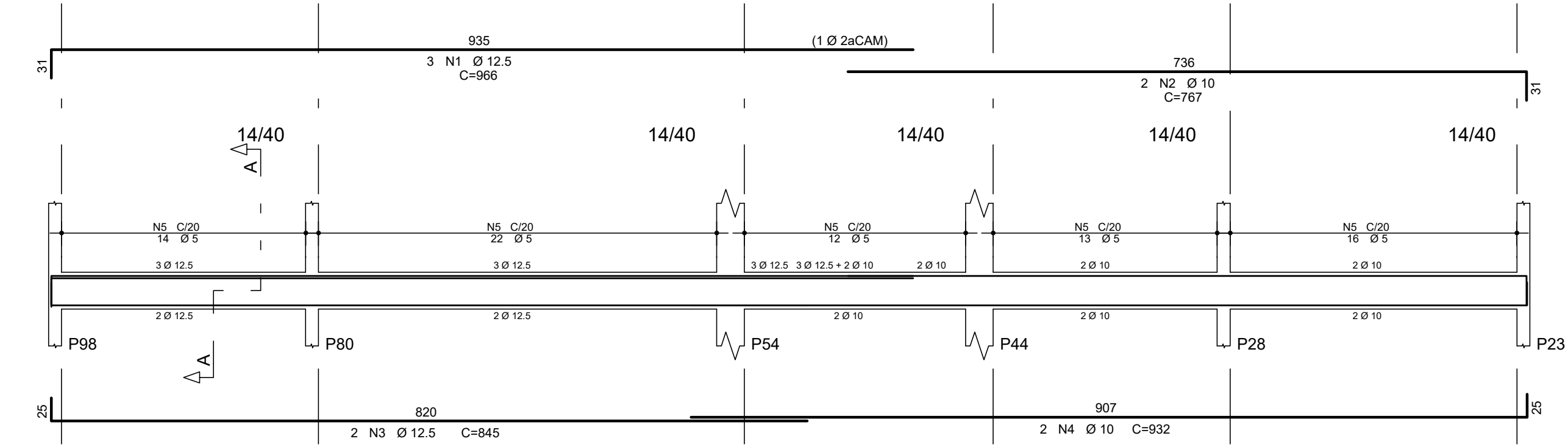
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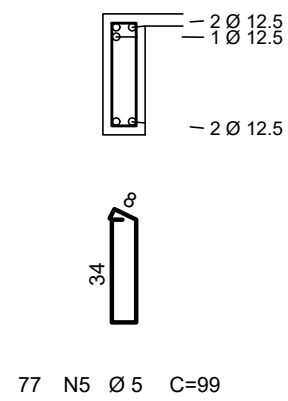
Corte A



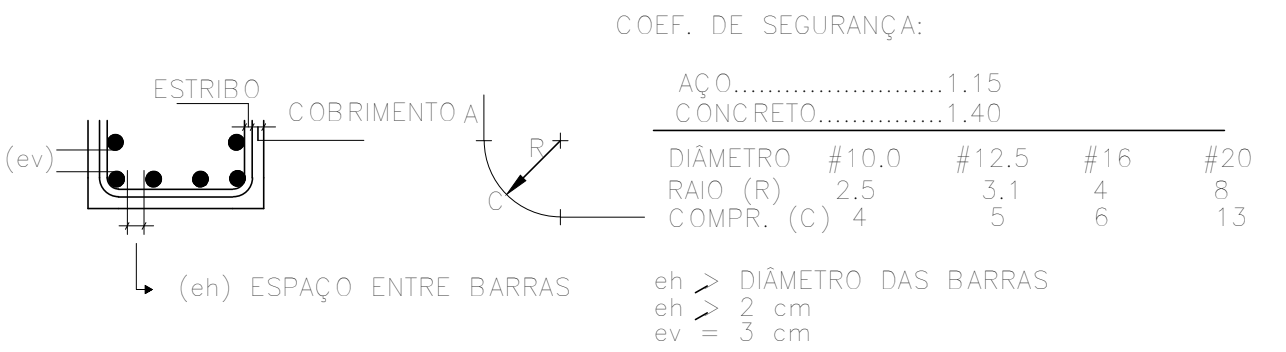
V266



Corte A



DOBRAS E DIST. ENTRE BARRAS



COEF. DE SEGURANÇA:

AÇO.....1,15
CONCRETO.....1,40

DIÂMETRO #10,0 #12,5 #16 #20
RAIO (R) 2,5 3,1 4 8
COMPR. (C) 4 5 6 13

eh > DIÂMETRO DAS BARRAS
eh > 2 cm
ev = 3 cm

(ev) ESPAÇO ENTRE BARRAS

00	29/05/2025	EMIÇÃO INICIAL	E.P.
REVISÃO	DATA	DESCRIÇÃO	RESP.

EXATA

ENGENHARIA E PROJETOS LTDA.

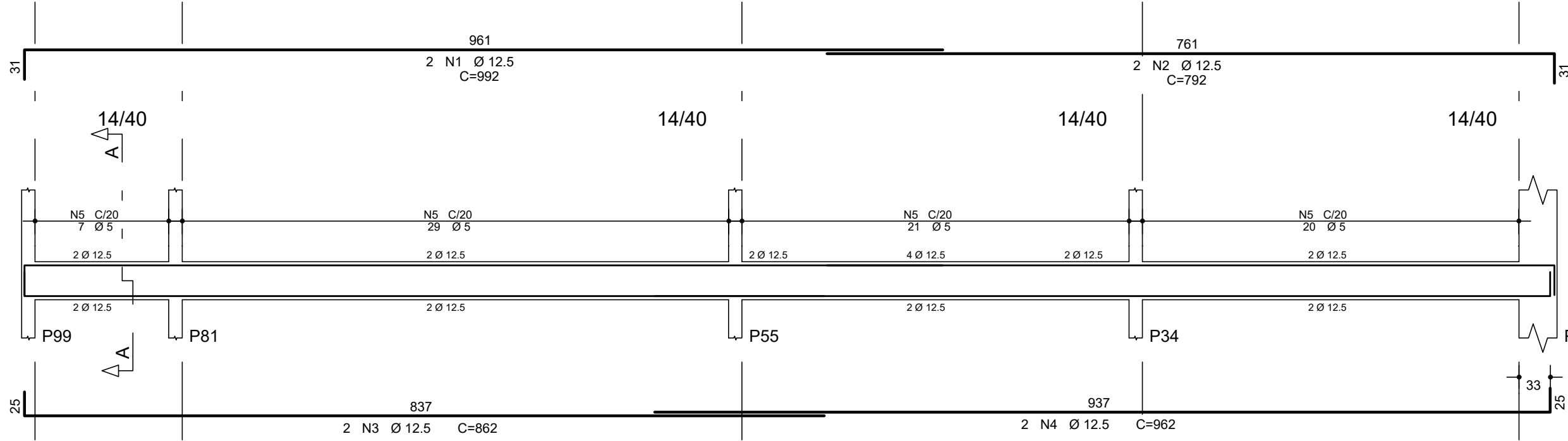
Fone: (19) 3236 - 1034
Site: www.exatacampinas.com.br
e-mail: contato@exatacampinas.com.br

CONTRATANTE PREFEITURA MUNICIPAL DE HORTOLÂNDIA		
LOCAL UBS JARDIM AMANDA - UNIDADE BÁSICA DE SAÚDE R. Brg. Faria Lima, 280 - Jardim Amanda I - Hortolândia - SP		
OBRA INSTITUCIONAL	TÍTULO UBS JARDIM AMANDA ESTRUTURA	FOLHA
Nº OBRA 03724-10	DET. ARMAÇÃO DAS - V200 (COBERTURA)	C27 36
Nº ART 2620250357459		
AUTOR DO PROJETO EXATA ENGENHARIA	DATA 05/2025	INDICADA
DESENHO EXATA ENGENHARIA	ESCALA	

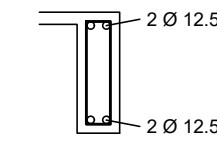
EDUARDO JOSE BARBOZA DE OLIVEIRA
PRATA:30924256850

Assinado de forma digital por
EDUARDO JOSE BARBOZA DE
OLIVEIRA PRATA:30924256850
Dados: 2025.06.18 13:23:53
-03'00'

V268

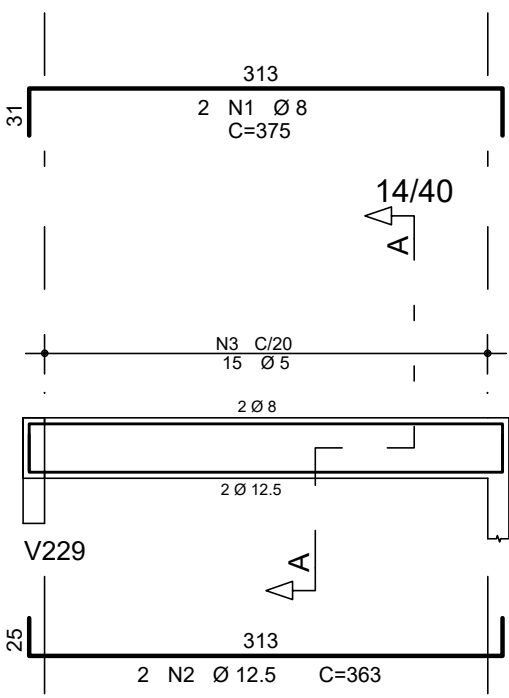


Corte A

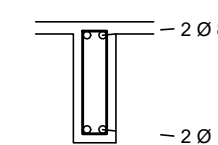


77 N5 Ø 5 C=99

V270

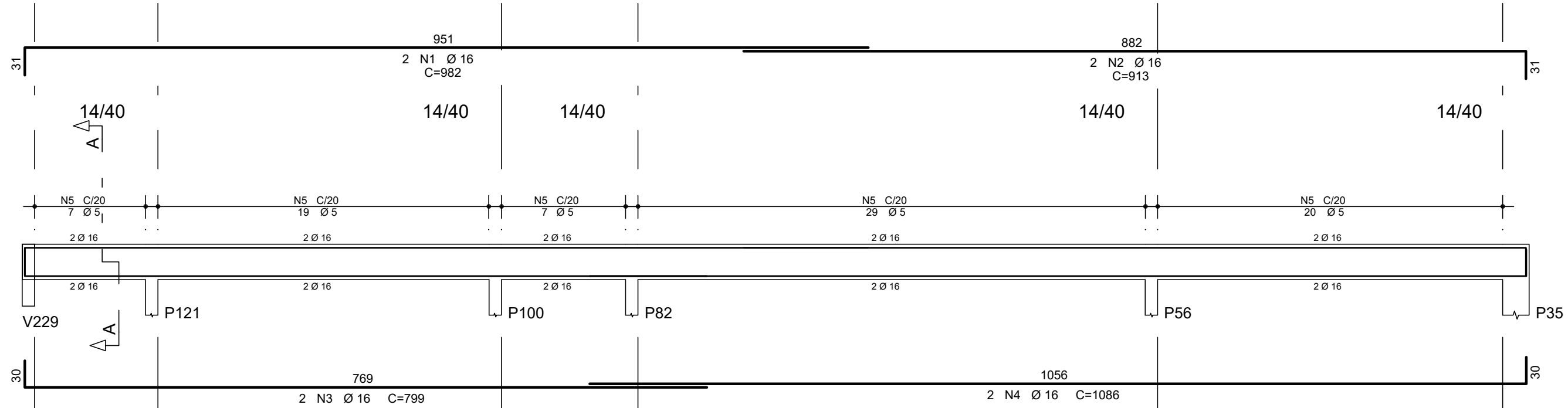


Corte A

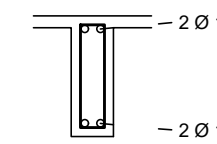


15 N3 Ø 5 C=99

V269

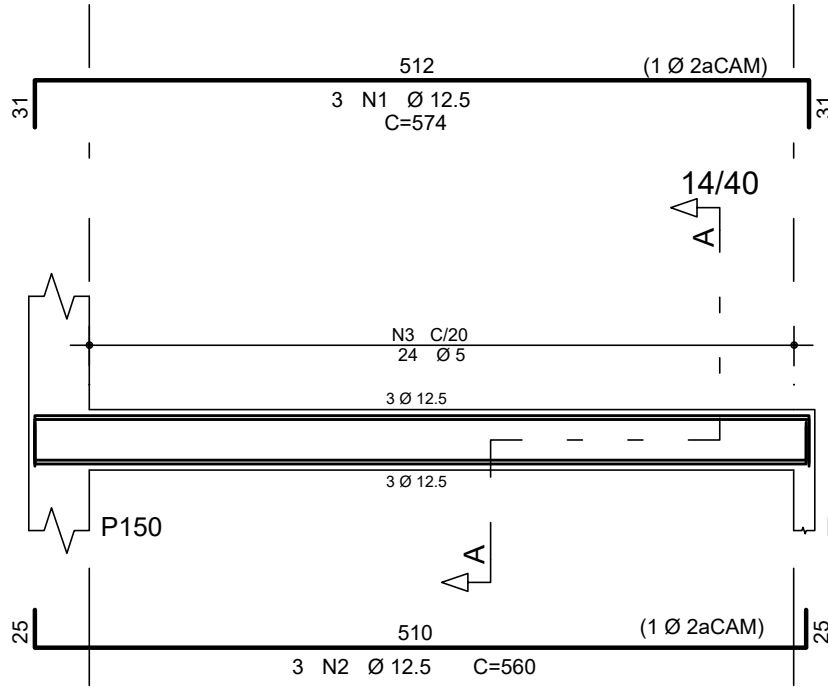


Corte A

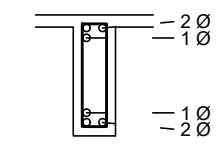


82 N5 Ø 5 C=99

V272

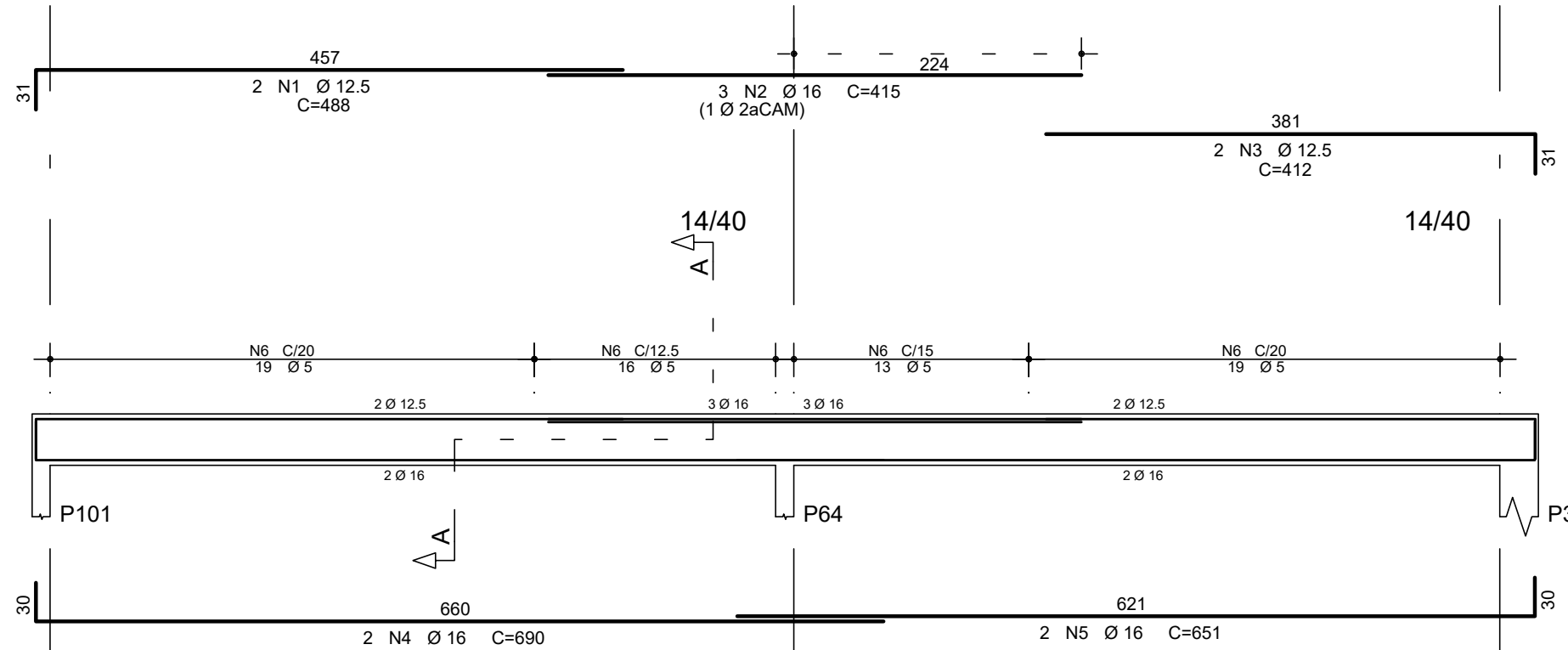


Corte A

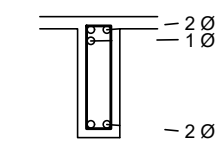


24 N3 Ø 5 C=99

V271

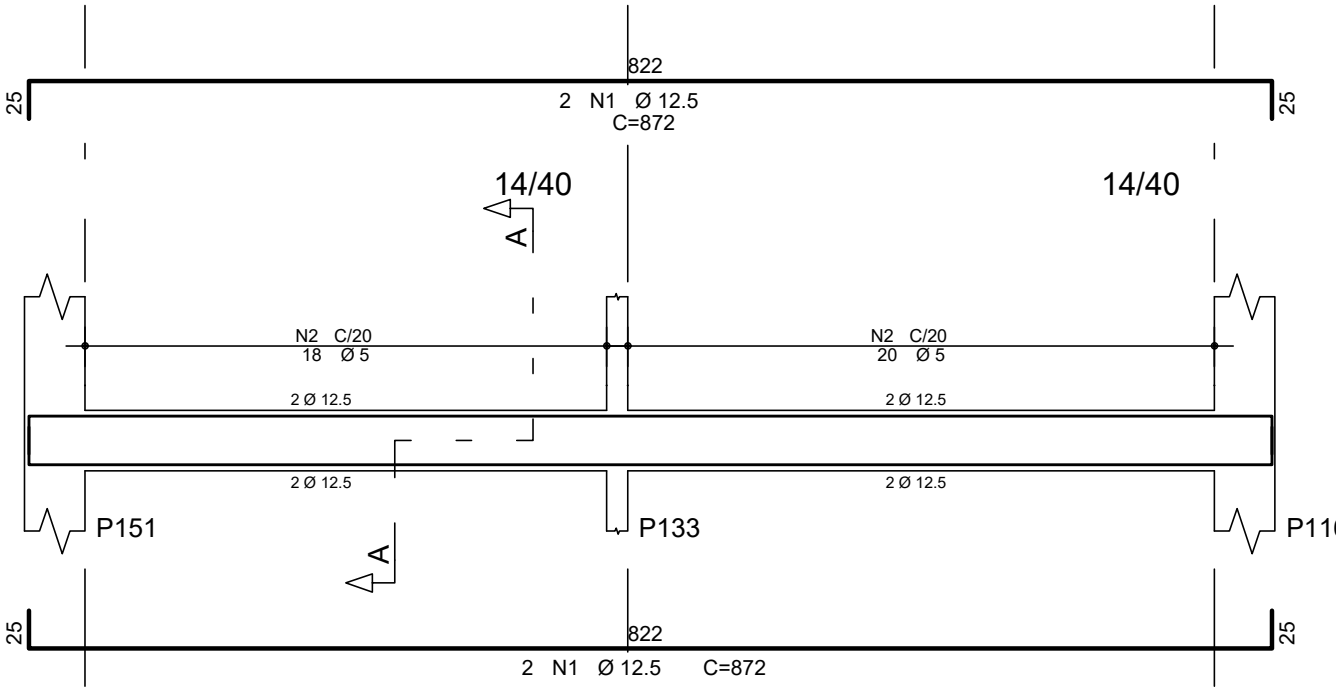


Corte A

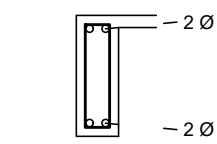


67 N6 Ø 5 C=99

V274

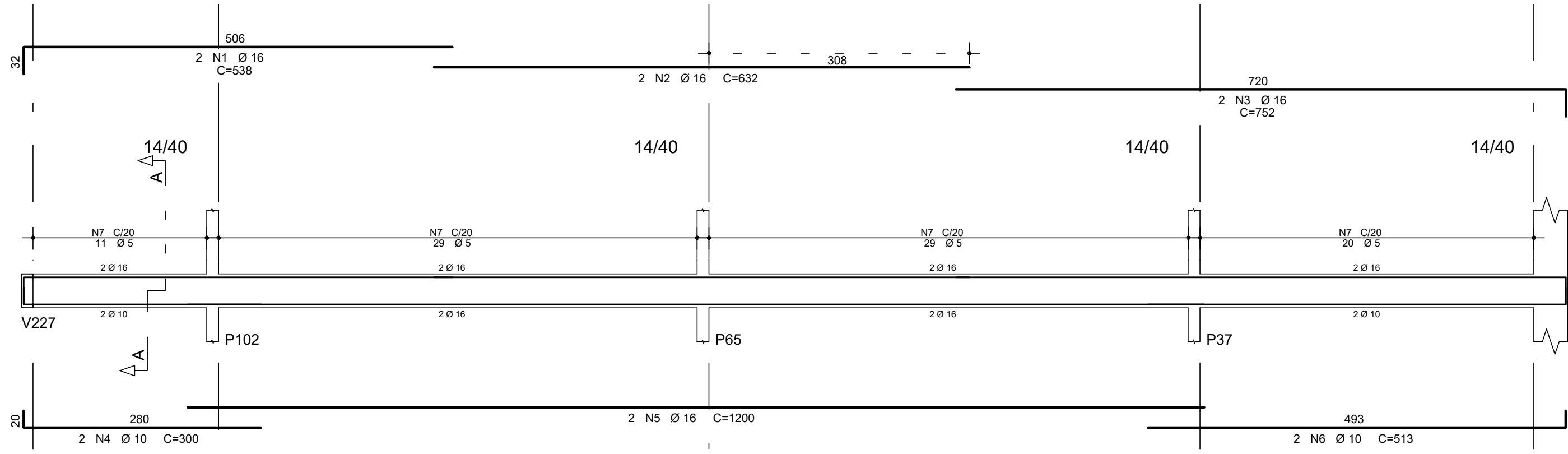


Corte A

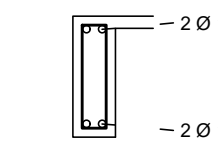


38 N2 Ø 5 C=99

V273



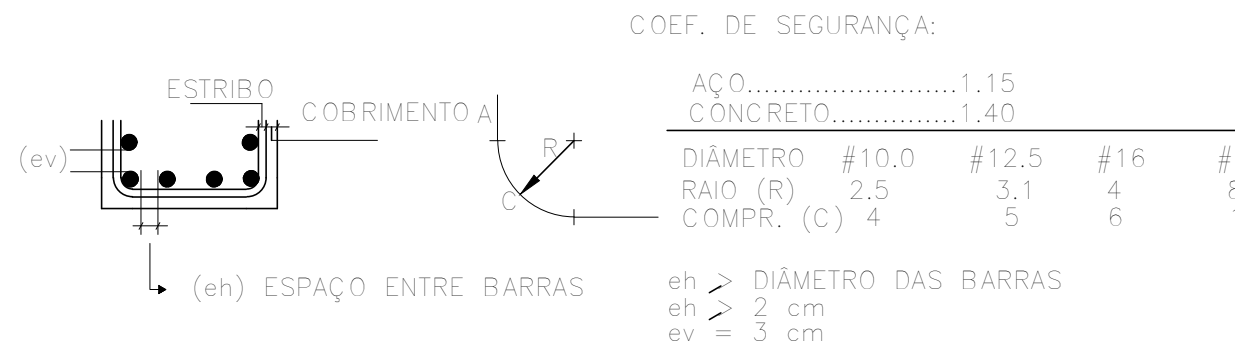
Corte A



89 N7 Ø 5 C=99

Assinado de forma digital por EDUARDO JOSE BARBOZA DE OLIVEIRA PRATA:30924256850

DOBRAS E DIST. ENTRE BARRAS



REVISÃO	DATA	DESCRIÇÃO	RESP.
00	29/05/2025	EMISSÃO INICIAL	E.P.

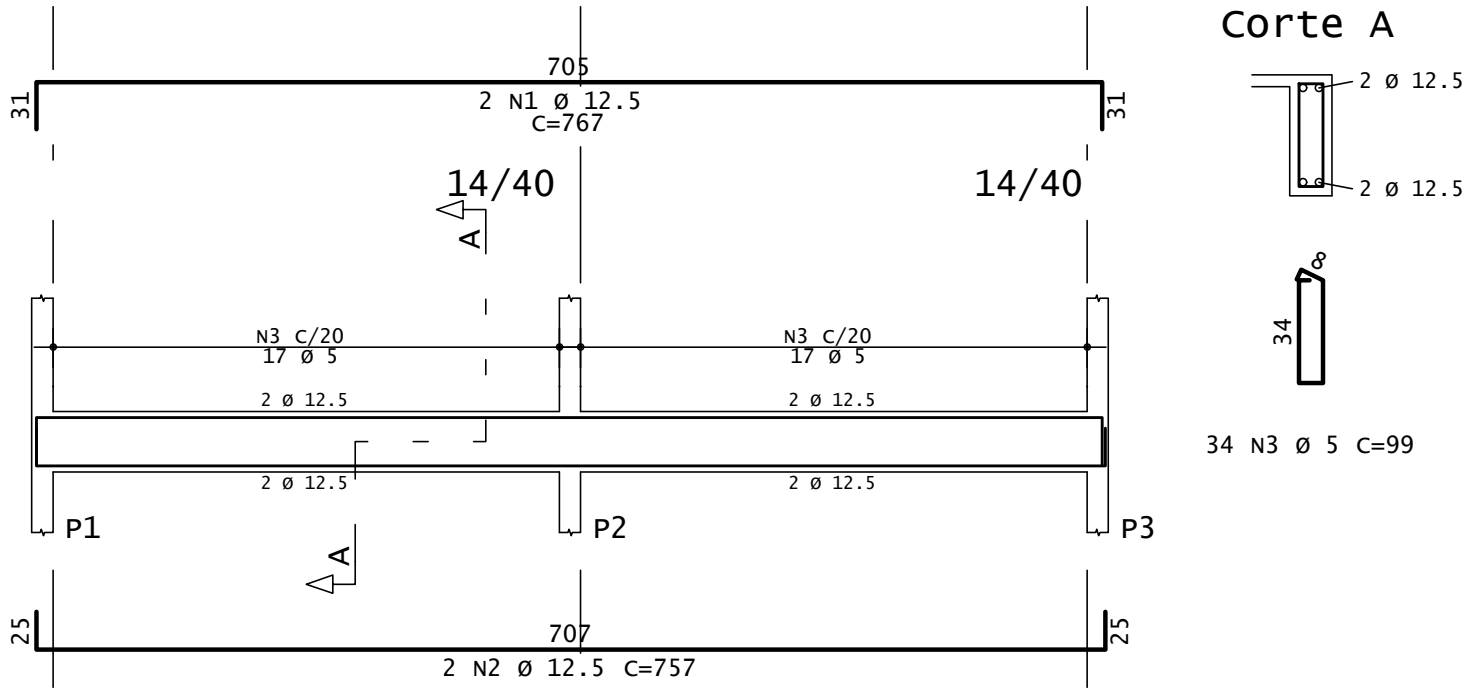
EXATA

ENGENHARIA E PROJETOS LTDA.

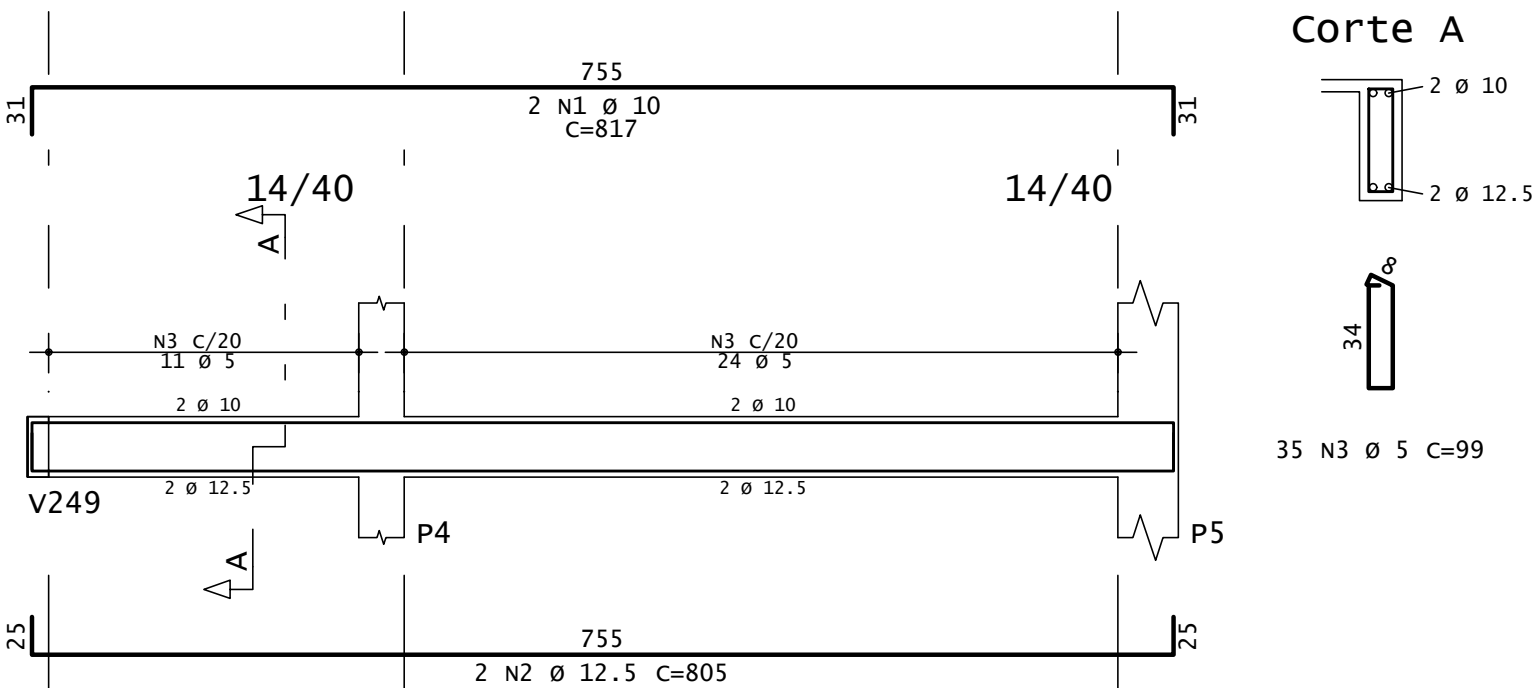
Fone: (19) 3236 - 1034
Site: www.exatacampinas.com.br
e-mail: contato@exatacampinas.com.br

CONTRATANTE PREFEITURA MUNICIPAL DE HORTOLÂNDIA		
LOCAL UBS JARDIM AMANDA - UNIDADE BÁSICA DE SAÚDE R. Brg. Faria Lima, 280 - Jardim Amanda I - Hortolândia - SP		
OBRA INSTITUCIONAL	TÍTULO UBS JARDIM AMANDA ESTRUTURA	FOLHA
Nº OBRA 03724-10	DET. ARMAÇÃO DAS - V200 (COBERTURA)	C28 36
Nº ART 2620250357459		
AUTOR DO PROJETO EXATA ENGENHARIA	DATA 05/2025	INDICADA
DESENHO EXATA ENGENHARIA	ESCALA	

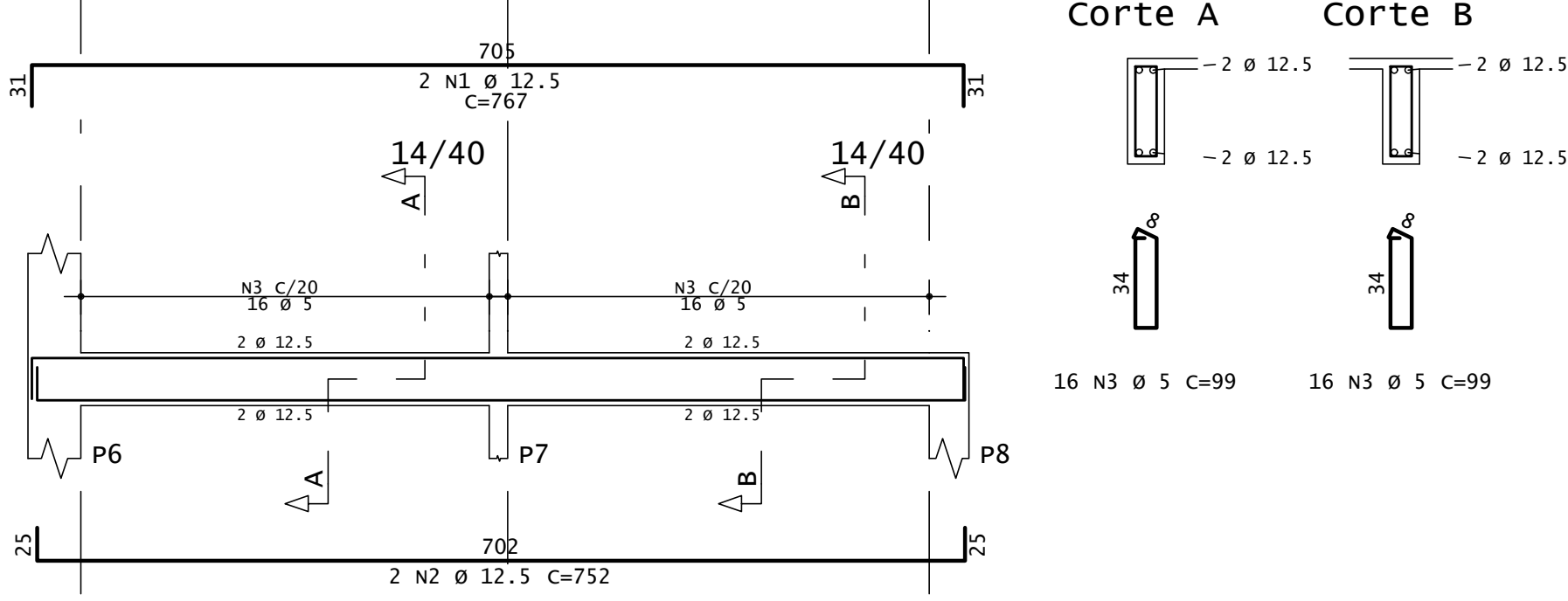
V201



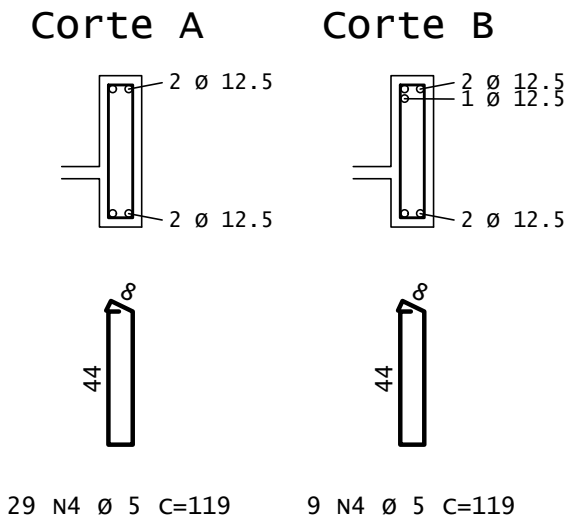
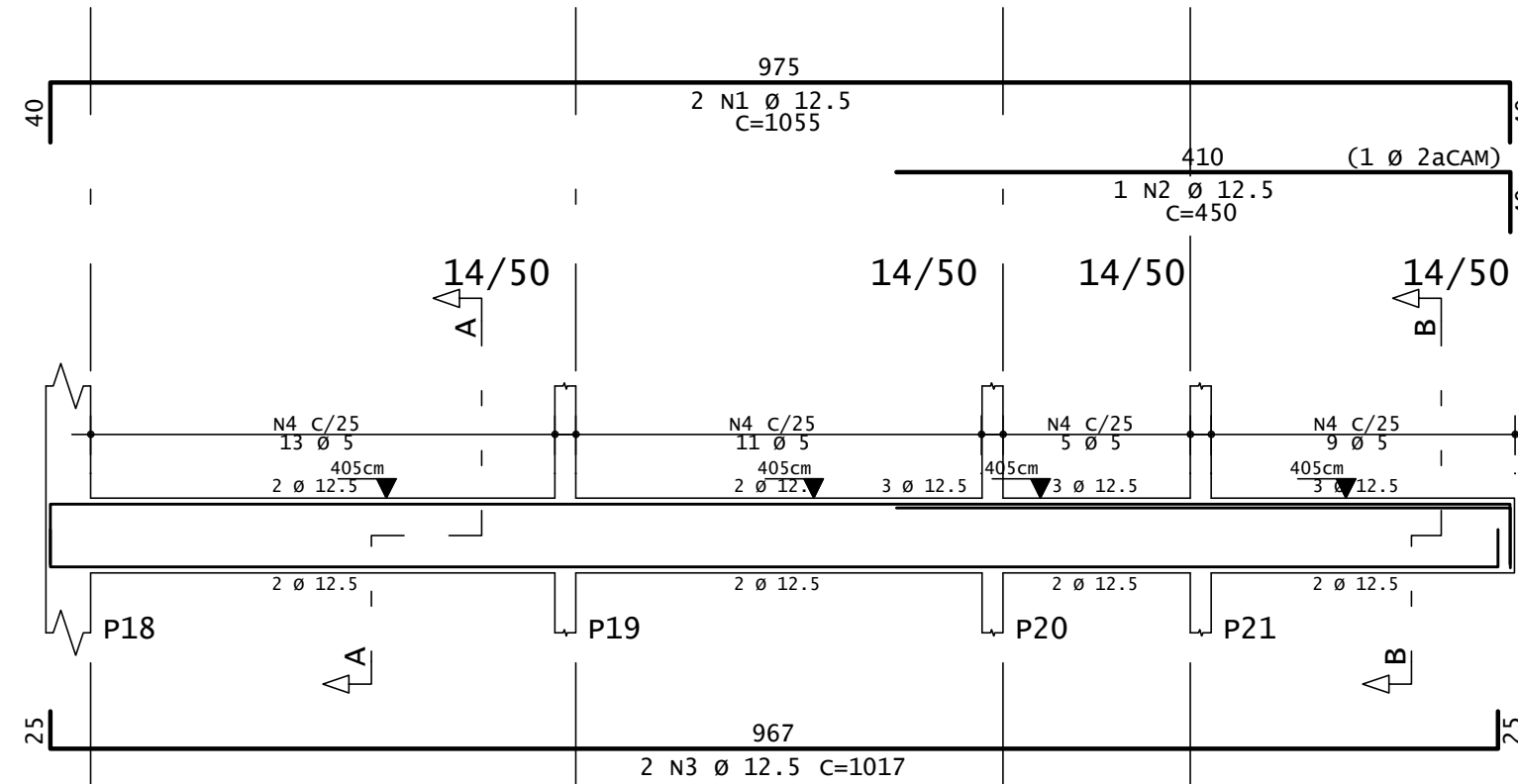
V202



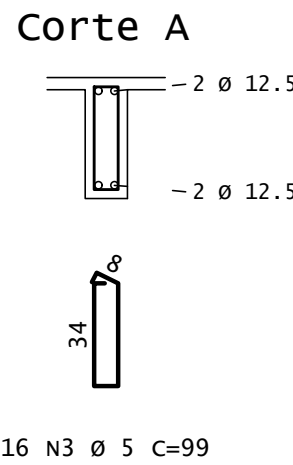
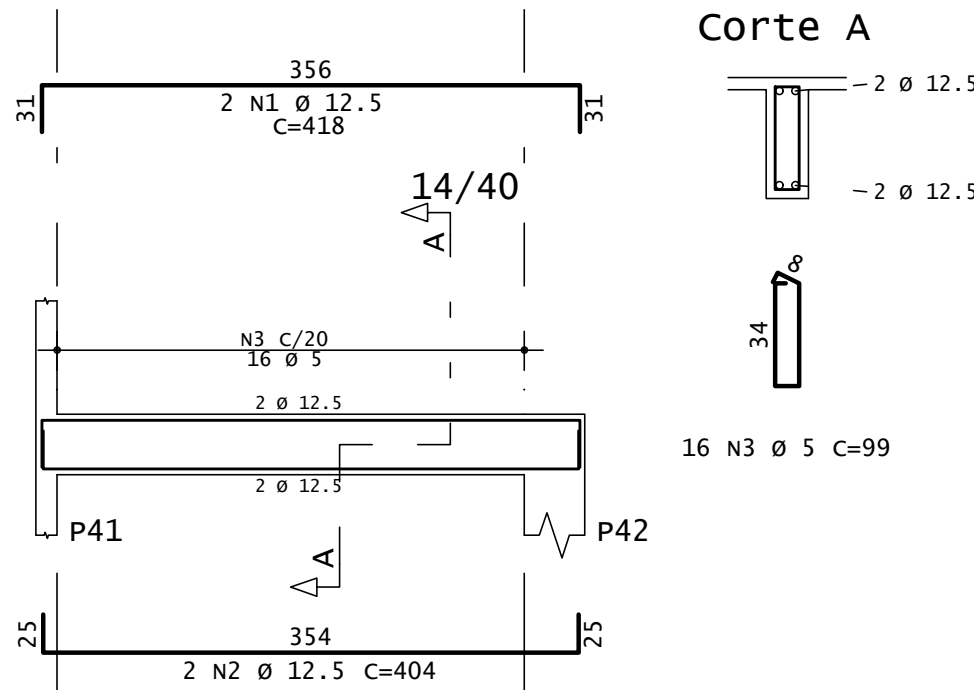
V203



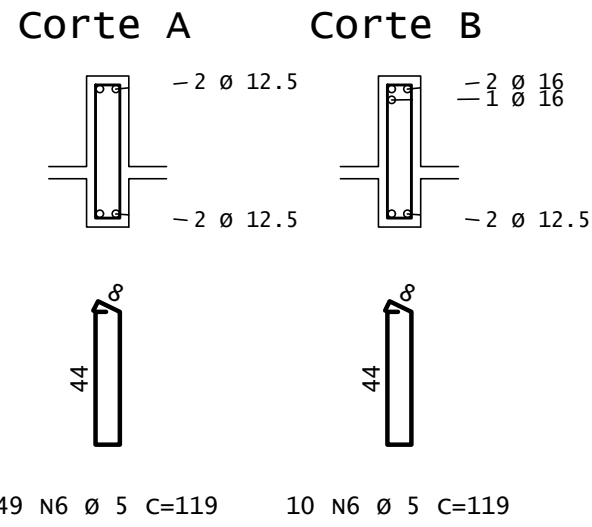
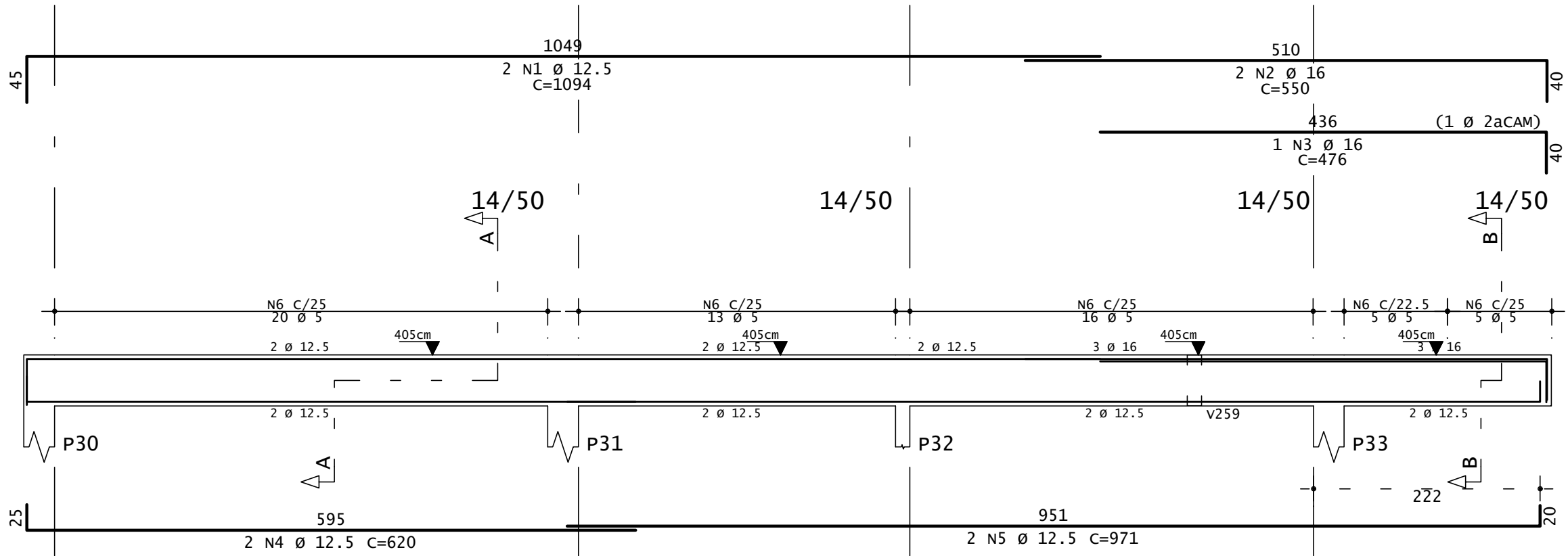
V205



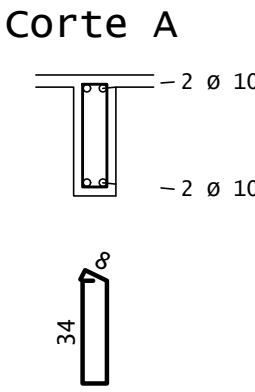
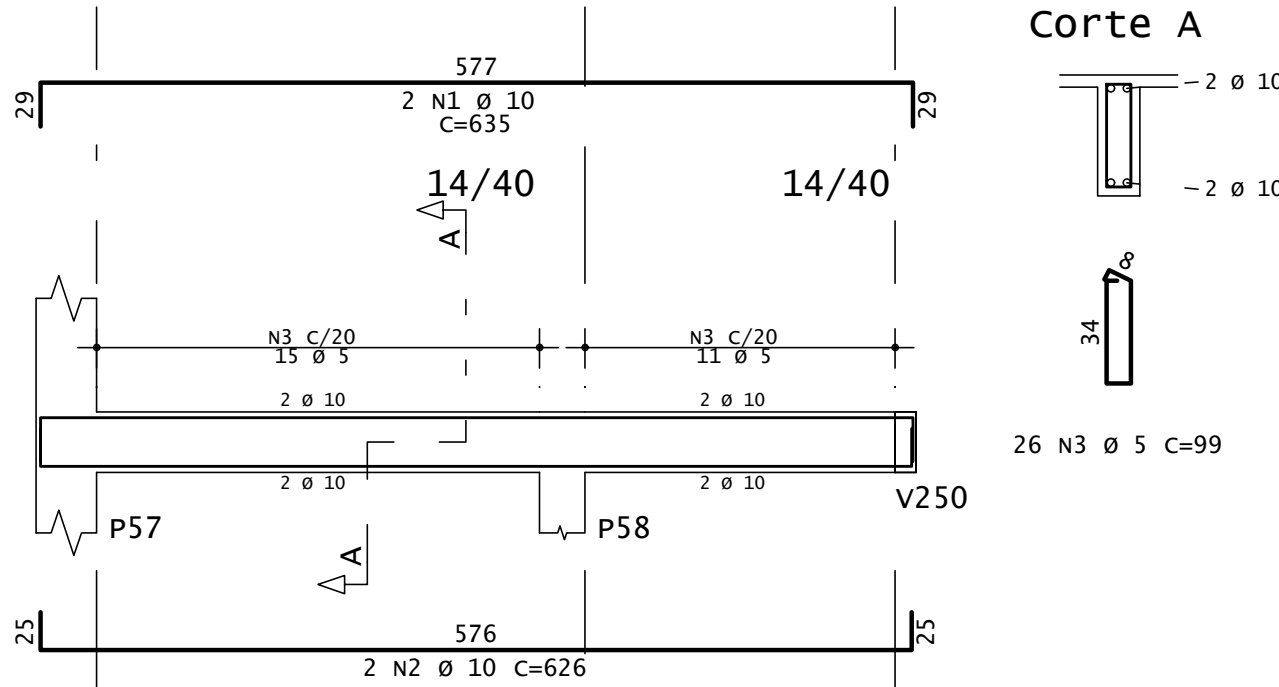
V211



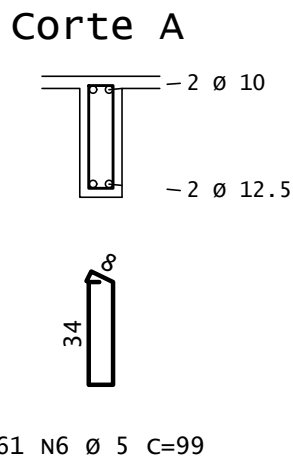
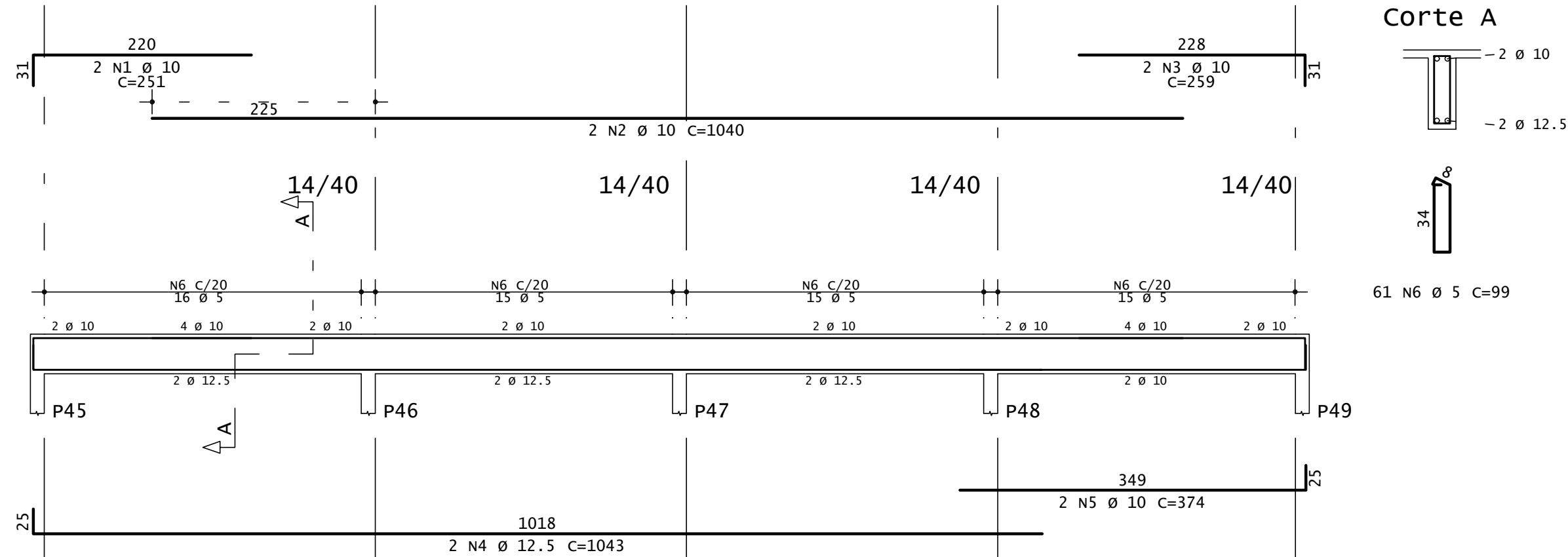
V209



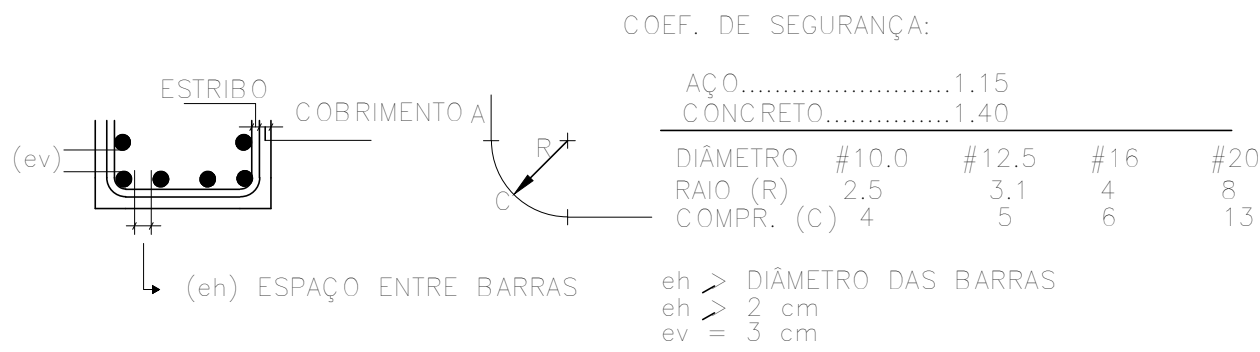
V216



V213



DOBRAS E DIST. ENTRE BARRAS



00	29/05/2025	EMIÇÃO INICIAL	E.P.
REVISÃO	DATA	DESCRIÇÃO	RESP.

EXATA

ENGENHARIA E PROJETOS LTDA.

Fone: (19) 3236 - 1034
Site: www.exatacampinas.com.br
e-mail: contato@exatacampinas.com.br

CONTRATANTE PREFEITURA MUNICIPAL DE HORTOLÂNDIA		
LOCAL UBS JARDIM AMANDA - UNIDADE BÁSICA DE SAÚDE R. Brg. Faria Lima, 280 - Jardim Amanda I - Hortolândia - SP		
OBRA INSTITUCIONAL	TÍTULO UBS JARDIM AMANDA ESTRUTURA DET. ARMAÇÃO DAS - V200 (COBERTURA)	FOLHA
Nº OBRA 03724-10		C29 36
Nº ART 2620250357459		
AUTOR DO PROJETO EXATA ENGENHARIA	DATA 05/2025	DESENHO EXATA ENGENHARIA
DESENHO EXATA ENGENHARIA	ESCALA INDICADA	

EDUARDO JOSE BARBOZA DE OLIVEIRA
PRATA:30924256850
Assinado de forma digital por EDUARDO JOSE BARBOZA DE OLIVEIRA PRATA:30924256850
Data: 2025.06.18 13:25:33 -03'00'

The drawing shows a reinforced concrete slab (P59) with the following details:

- Top View:**
 - Overall dimensions: 710 (width) x 520 (length).
 - Reinforcement: 2 N1 $\emptyset$ 12.5 C=740 (top), 2 N2 $\emptyset$ 16 C=560 (bottom).
 - Additional reinforcement: 2 N3 $\emptyset$ 16 C=481 (bottom), (2 $\emptyset$ 2aCAM) (bottom).
 - Section lines: A-A, B-B, C-C.
- Bottom View:**
 - Overall dimensions: 945 (width) x 305 (length).
 - Reinforcement: 2 N4 $\emptyset$ 12.5 C=970 (bottom), 2 N5 $\emptyset$ 10 C=325 (bottom).
 - Section lines: A-A, B-B, C-C.
- Details:**
 - Reinforcement bars are shown with hooks and lap joints.
 - Dimensions for bar placement and lap lengths are provided (e.g., 405cm, 405cm, 405cm).

Technical drawing of a bridge deck layout showing reinforcement details. The drawing includes a plan view of the deck with reinforcement bars (N1, N2, N3, N4, N5, N6, N7, N8) and their respective diameters and spacings. It also shows cross-sections A-A and B-B, and a section C-C. The drawing is labeled with dimensions and reinforcement specifications.

Reinforcement Details:

- N1:** 2 N1 Ø 12.5 C=525
- N2:** 2 N2 Ø 12.5 C=1141
- N3:** 2 N3 Ø 12.5 C=725
- N4:** 1 N4 Ø 12.5 C=442
- N5:** 2 N5 Ø 12.5 C=995
- N6:** 2 N6 Ø 12.5 C=1084
- N7:** 2 N7 Ø 10 C=220
- N8:** 8 N8 C/25 13 Ø 5

Dimensions and Spacing:

- 480 (width)
- 685 (width)
- 975 (width)
- 405cm (spacing)
- 200 (spacing)
- 79 (spacing)

Section Labels:

- A-A
- B-B
- C-C

The drawing shows a reinforced concrete slab with the following details:

- Top View:**
 - Reinforcement: 2 N1 Ø 12.5 C=514, 2 N2 Ø 12.5 C=945, 1 N3 Ø 12.5 C=784 (1 Ø 2aCAM), 2 N4 Ø 12.5 C=576.
 - Dimensions: 494, 203, 197, 551.
 - Labels: 14/40 (5 locations).
- Bottom View:**
 - Reinforcement: 2 Ø 12.5, 2 Ø 12.5, 3 Ø 12.5, 2 Ø 12.5, 2 Ø 12.5, 2 Ø 10.
 - Labels: P83, P70, P57, P41, P15.
 - Dimensions: 33, 661, 61, 380.
 - Reinforcement: 2 N5 Ø 12.5 C=686, 2 N6 Ø 12.5 C=1045, 2 N7 Ø 10 C=400.

[illegible][illegible]

RESUMO DE AÇO				
AÇO	BIT	COMPR	PESO	
	mm	m	kgf	
60B	5	388	60	
50A	6.3	2	0	
50A	10	30	18	
50A	12.5	349	336	
50A	16	21	33	
Peso Total		60B =	60 kgf	
Peso Total		50A =	387 kgf	
VOLUME DE CONCRETO = 5.00m³				

COEF. DE SEGURANÇA:

AÇO 0.....	1,15
CONCRETO.....	1,40

DIÂMETRO # 10.0 # 12,5 # 16 # 20

RAIO (R) 2.5 3.1 4 8

COMPR. (C) 4 5 6 13

(ev)

ESTRIBO

COBRIMENTO A

F#

C

(eh) ESPAÇO ENTRE BARRAS

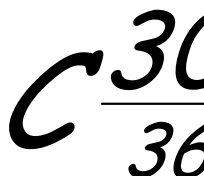
eh > DIÂMETRO DAS BARRAS

eh ≥ 2 cm

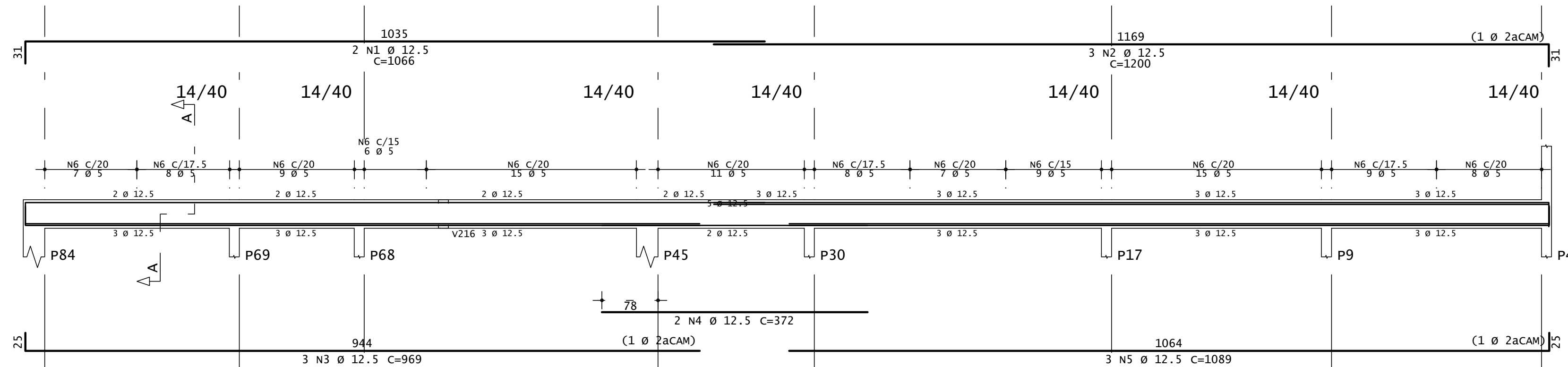
ew ≥ 2 cm

EXATA
ENGENHARIA E PROJETOS LTDA.

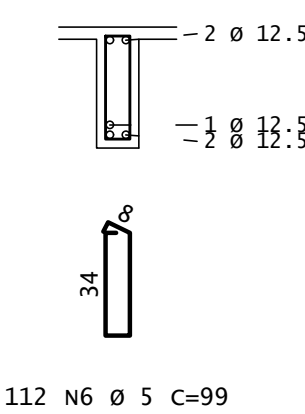
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e-mail: contato@exatacampinas.com

CONTRATANTE		
PREFEITURA MUNICIPAL DE HORTOLÂNDIA		
LOCAL		
UBS JARDIM AMANDA - UNIDADE BÁSICA DE SAÚDE R. Rg. Faria Lima, 280 - Jardim Amanda I - Hortolândia - SP		
OBRA	TÍTULO	FOLHA
INSTITUCIONAL	UBS JARDIM AMANDA ESTRUTURA	
Nº OBRA	DET. ARMAÇÃO DAS - V200 (COBERTURA)	
Nº ART		
2620250357459		
AUTOR DO PROJETO		DATA
EXATA ENGENHARIA		05/2025
DESENHO	EXATA ENGENHARIA	ESCALA
		INDICADA

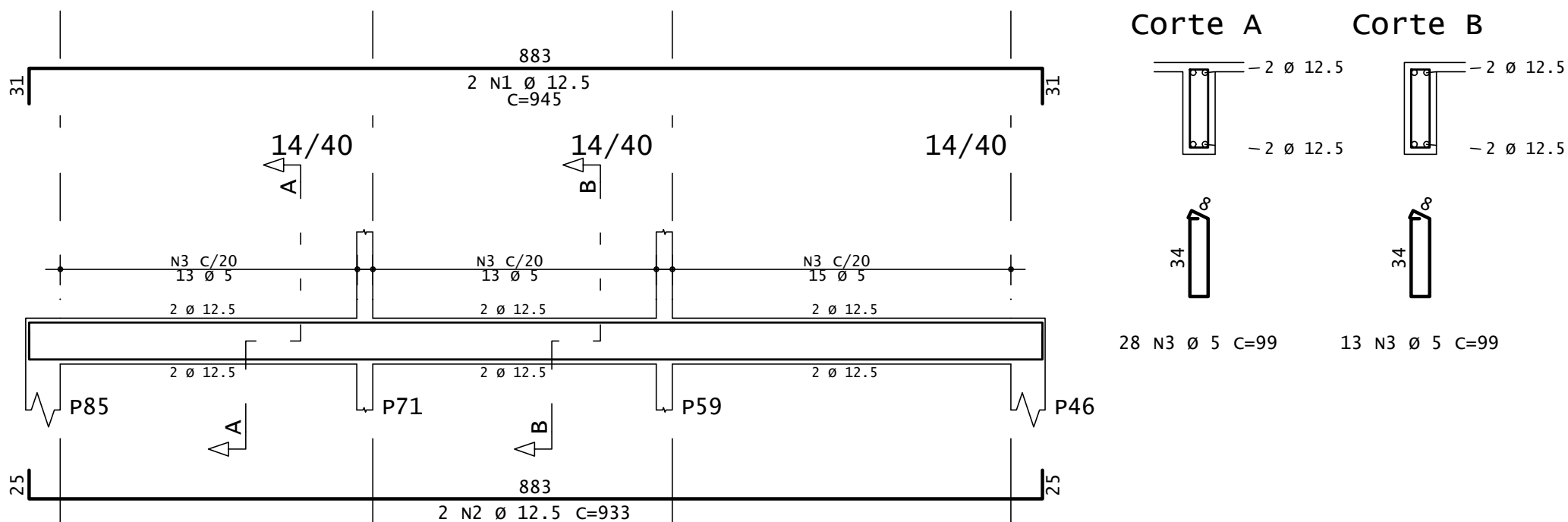
V250



Corte A

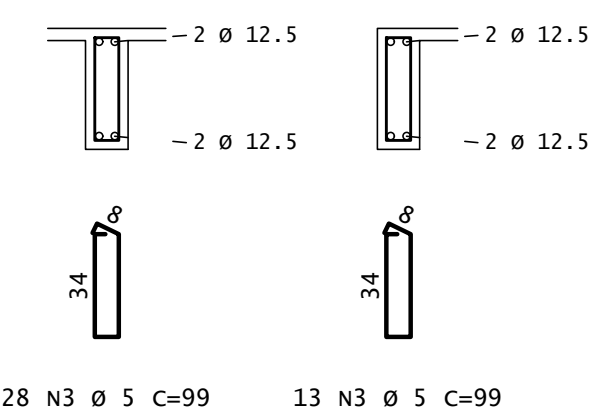


V252

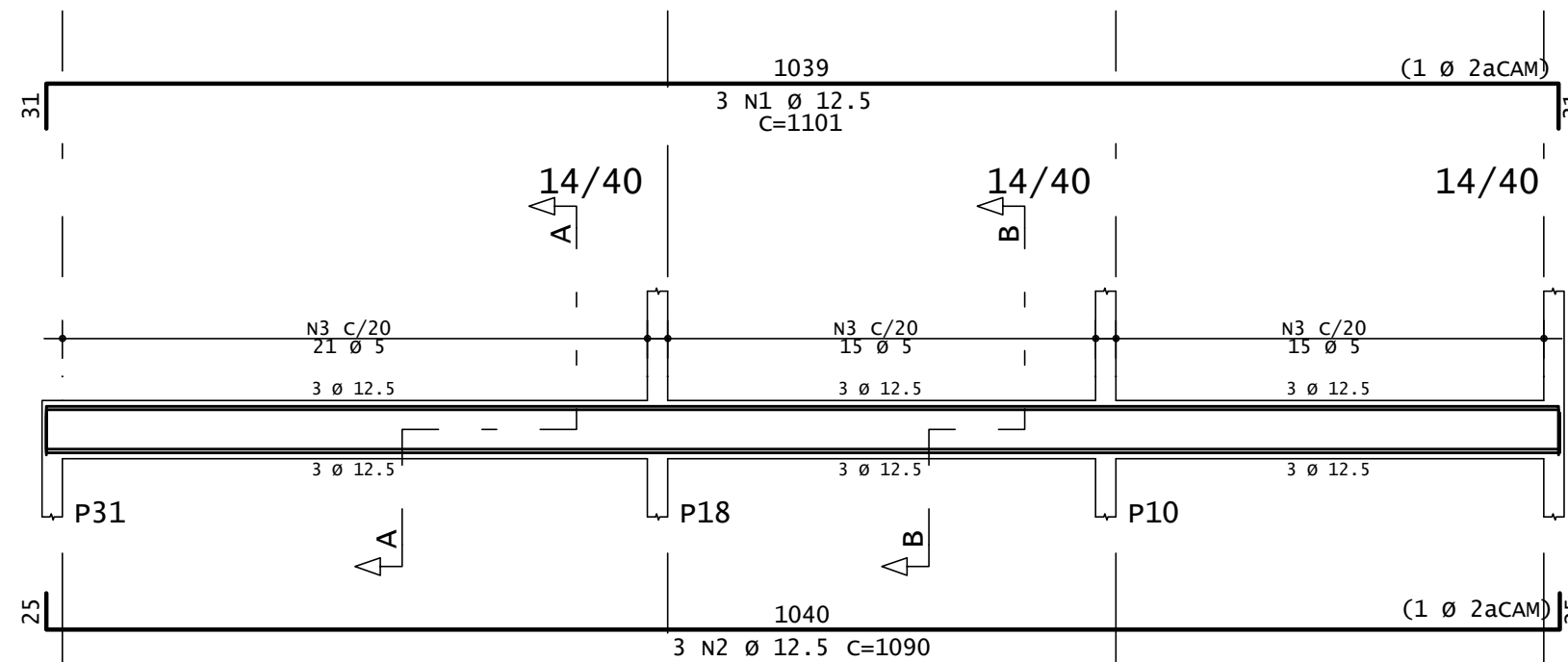


Corte A

Corte B

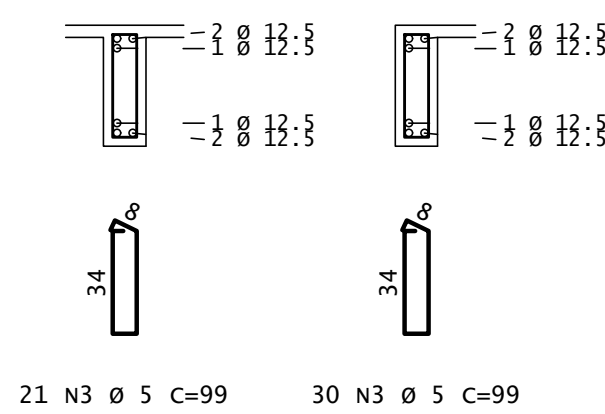


V254



Corte A

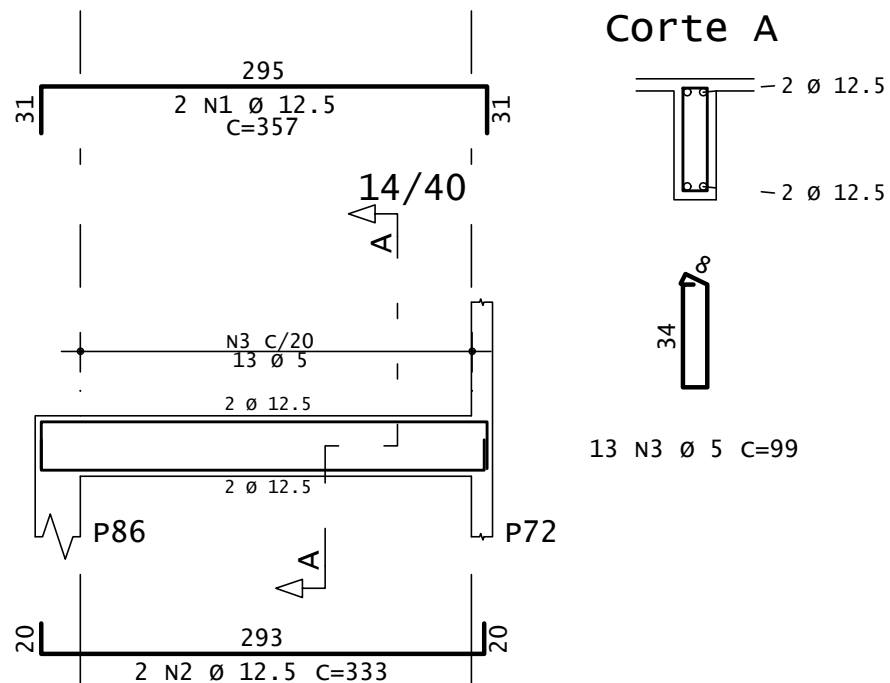
Corte B



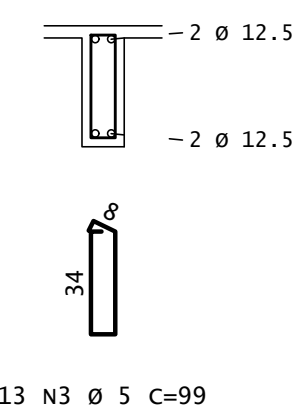
AÇO	POS	BIT	QUANT	COMPROMITO		
				UNIT	TOTAL	
		mm		cm	cm	
V250						
	50A	1	12.5	2	1066	2132
	50A	2	12.5	3	1200	3600
	50A	3	12.5	3	969	2907
	50A	4	12.5	2	372	744
	60B	5	5	3	1089	3267
		6	5	112	99	11088
V252						
	50A	1	12.5	2	945	1890
	50A	2	12.5	2	933	1866
	60B	3	5	41	99	4059
V254						
	50A	1	12.5	3	1101	3303
	50A	2	12.5	3	1090	3270
	60B	3	5	51	99	5049
V255						
	50A	1	12.5	2	357	714
	50A	2	12.5	2	333	666
	60B	3	5	13	99	1287
V256						
	50A	1	12.5	2	393	786
	50A	2	12.5	2	378	756
	60B	3	5	14	99	1386
V258						
	50A	1	10	2	330	660
	50A	2	10	2	300	600
	60B	3	5	12	99	1188
V259						
	50A	1	10	2	480	960
	50A	2	12.5	2	472	944
	60B	3	5	16	119	1904
V261						
	50A	1	12.5	2	1162	2324
	50A	2	12.5	2	1152	2304
	60B	3	5	52	99	5148

RESUMO DE AÇO			
AÇO	BIT	COMPR	PESO
	mm	m	kgf
60B	5	311	48
50A	10	22	14
50A	12,5	315	303
Peso Total		60B =	48 kgf
Peso Total		50A =	317 kgf
VOLUME DE CONCRETO =			3,65m³

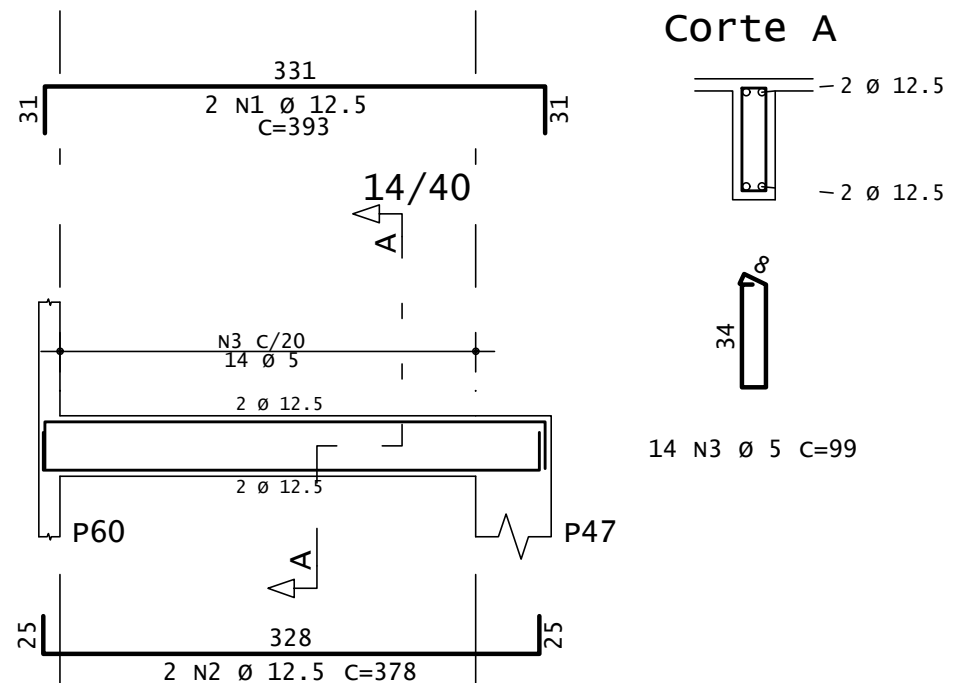
V255



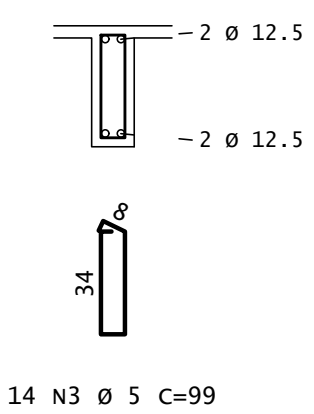
Corte A



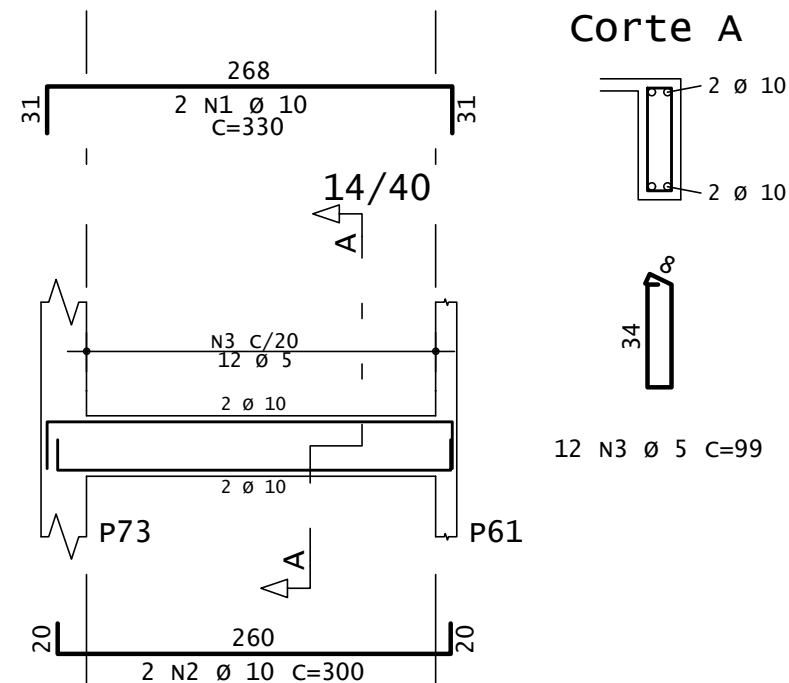
V256



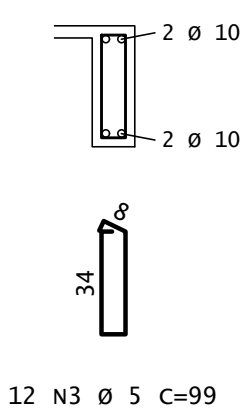
Corte A



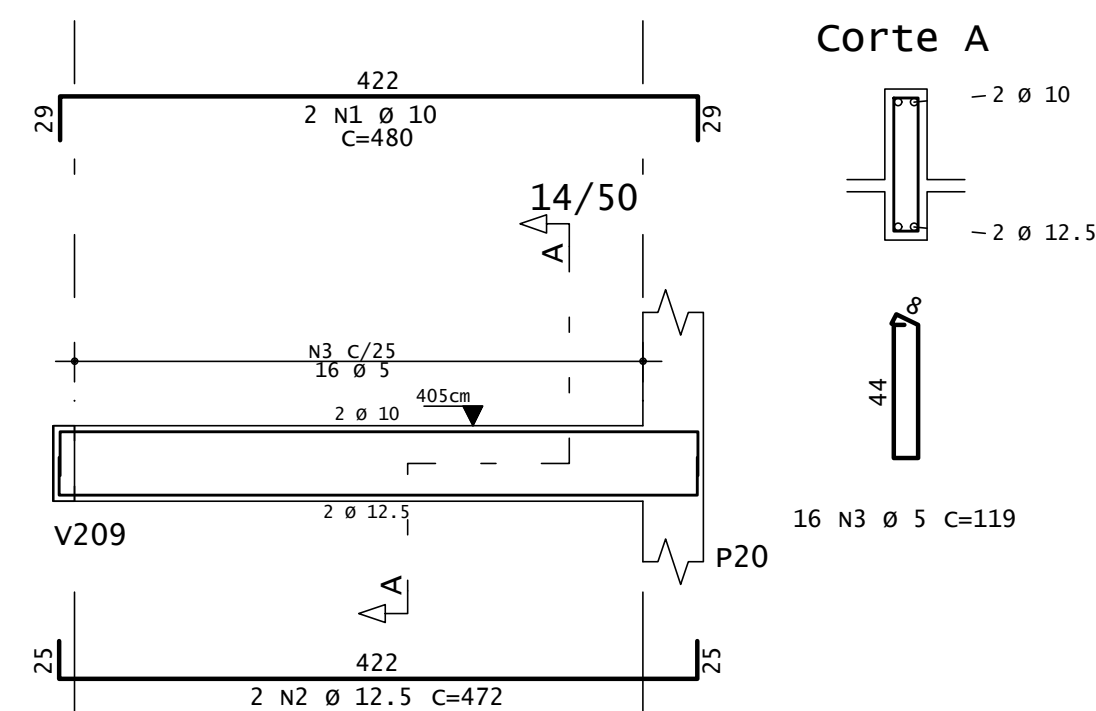
V258



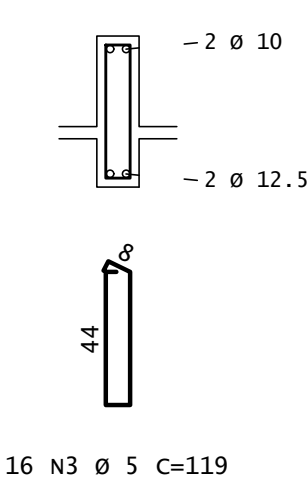
Corte A



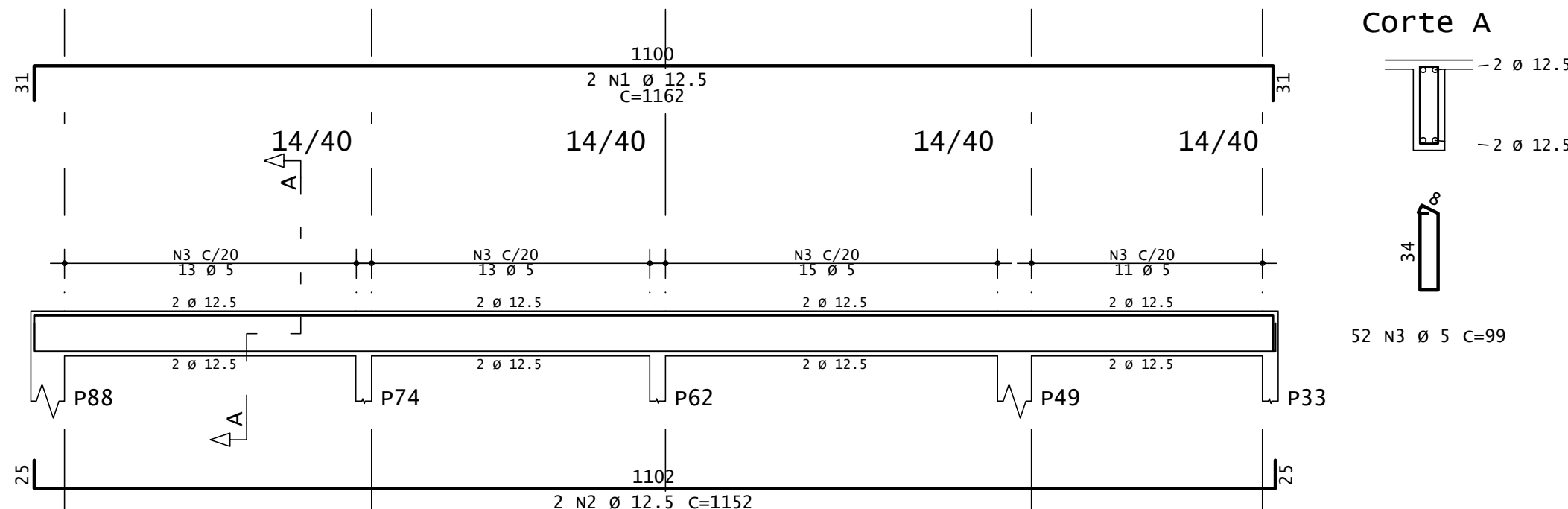
V259



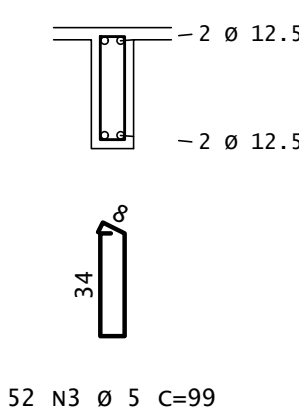
Corte A



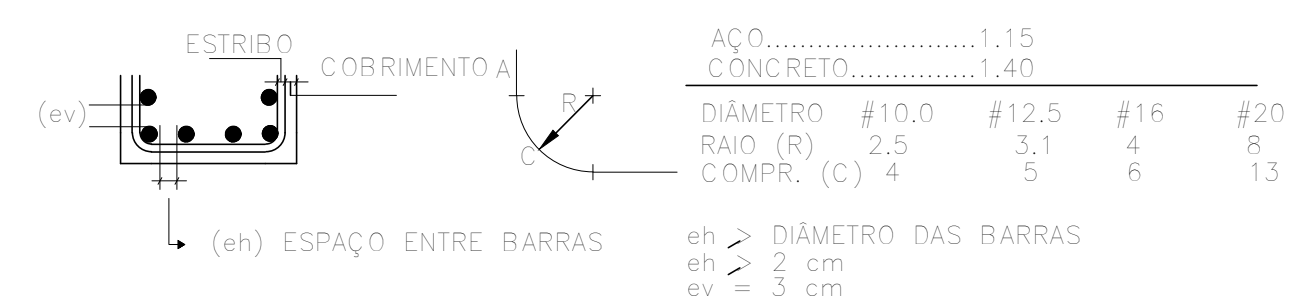
V261



Corte A



DOBRAS E DIST. ENTRE BARRAS

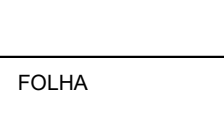


00	29/05/2025	EMISSÃO INICIAL	E.P.
REVISÃO	DATA	DESCRIÇÃO	RESP.



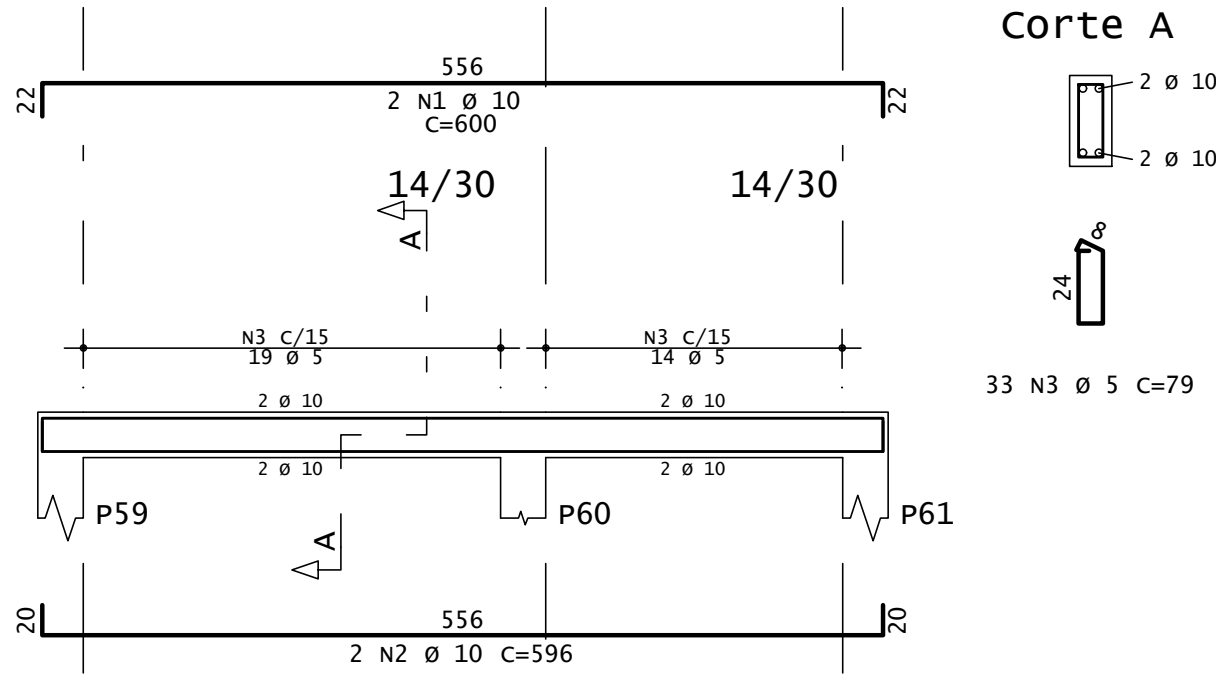
ENGENHARIA E PROJETOS LTDA.

Fone: (19) 3236 - 1034
Site: www.exatacampinas.com.br
e-mail: contato@exatacampinas.com.br

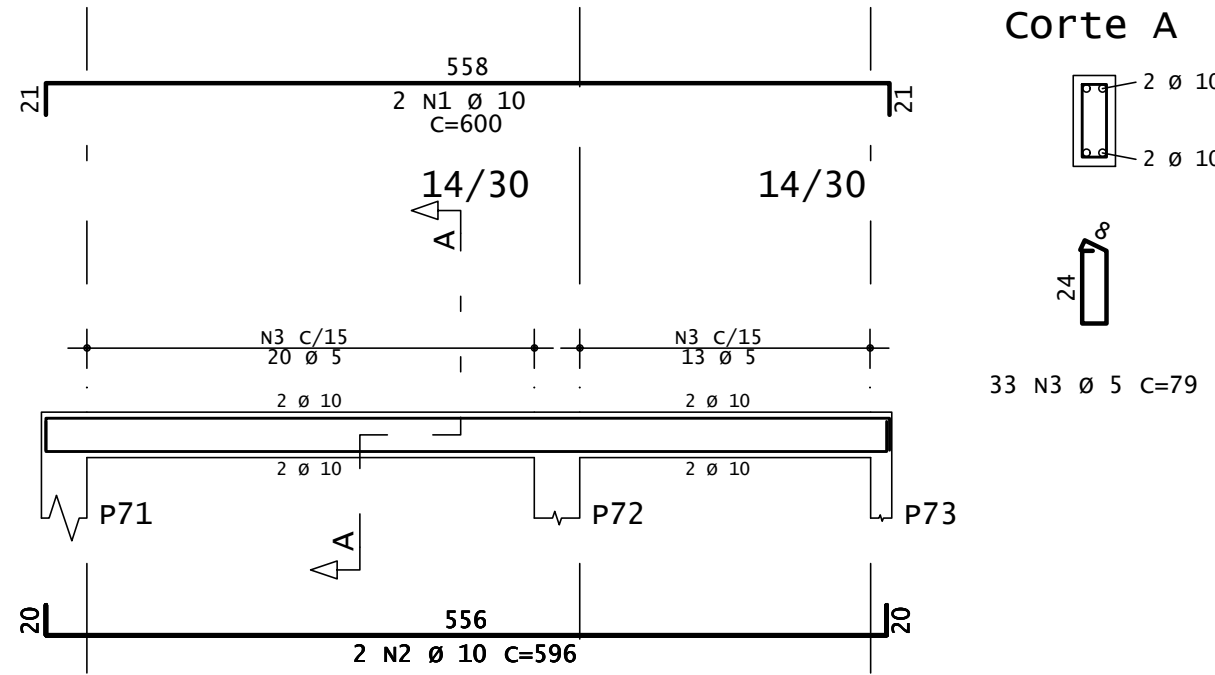
CONTRATANTE			
PREFEITURA MUNICIPAL DE HORTOLÂNDIA			
LOCAL			
UBS JARDIM AMANDA - UNIDADE BÁSICA DE SAÚDE R. Brg. Faria Lima, 280 - Jardim Amanda I - Hortolândia - SP			
OBRA	TÍTULO	FOLHA	
INSTITUCIONAL	UBS JARDIM AMANDA ESTRUTURA		
Nº OBRA	DET. ARMAÇÃO DAS - V200		
03724-10	(COBERTURA)		
Nº ART			
2620250357459			
AUTOR DO PROJETO		DATA	
EXATA ENGENHARIA		05/2025	
DESENHO		ESCALA	
EXATA ENGENHARIA		INDICADA	

EDUARDO JOSE
BARBOZA DE
OLIVEIRA
PRATA:30924256850

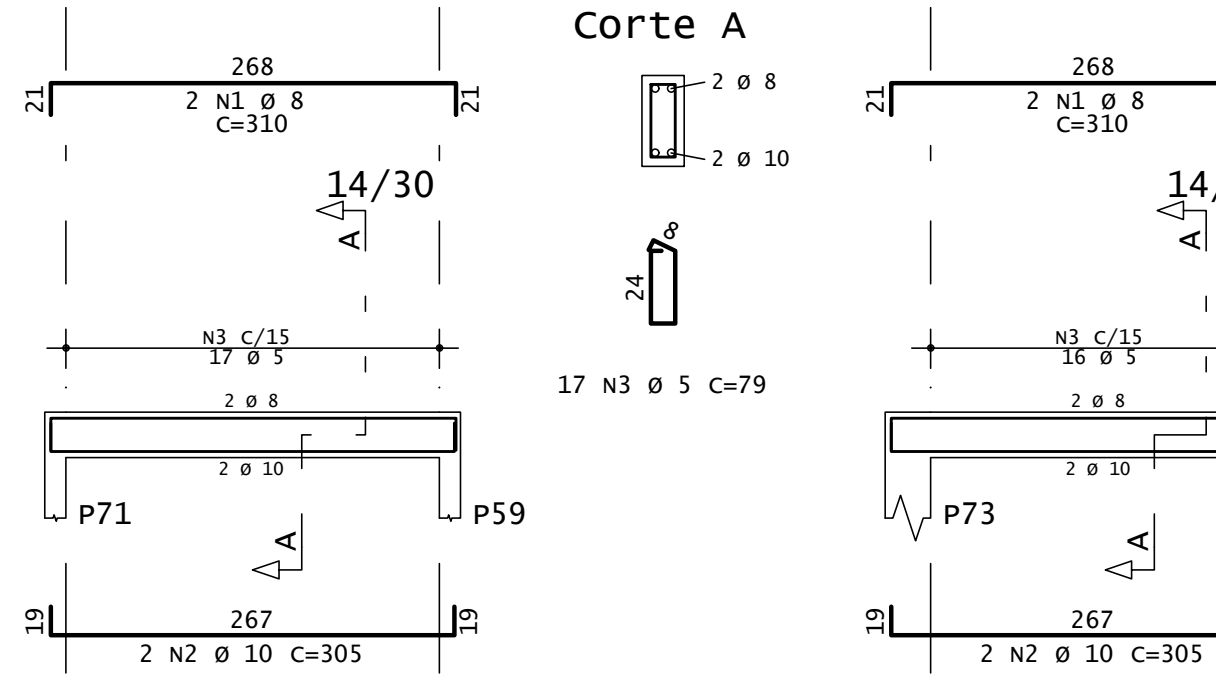
V401



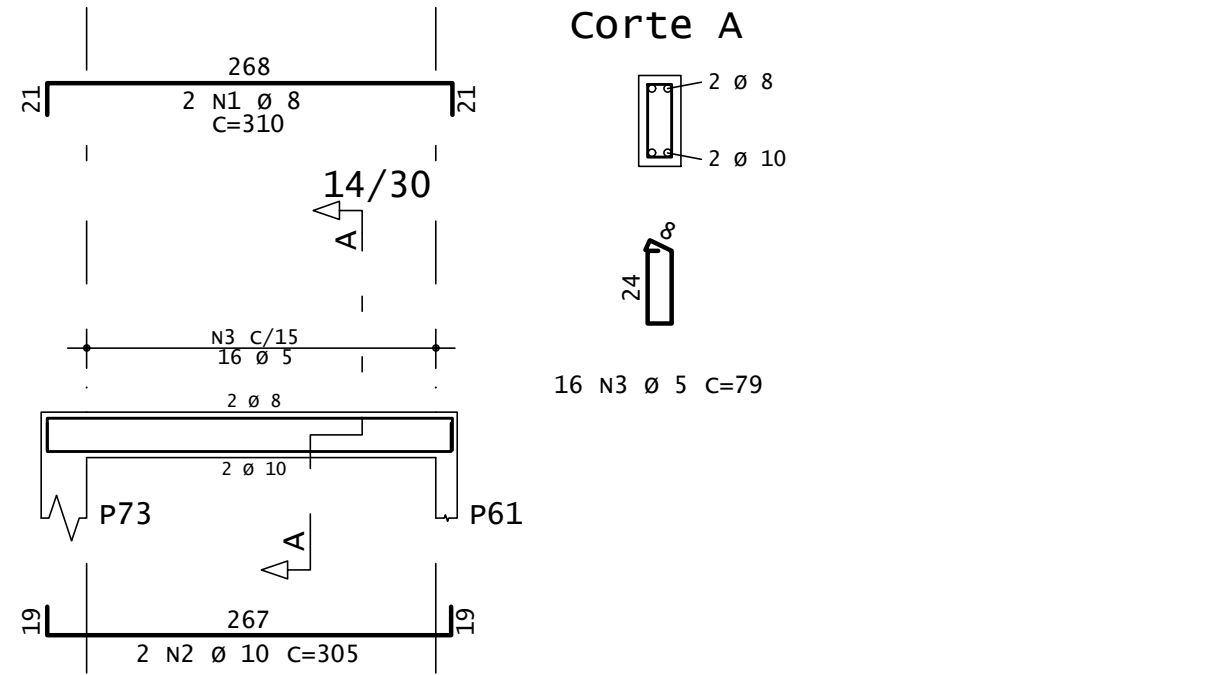
V402



V403



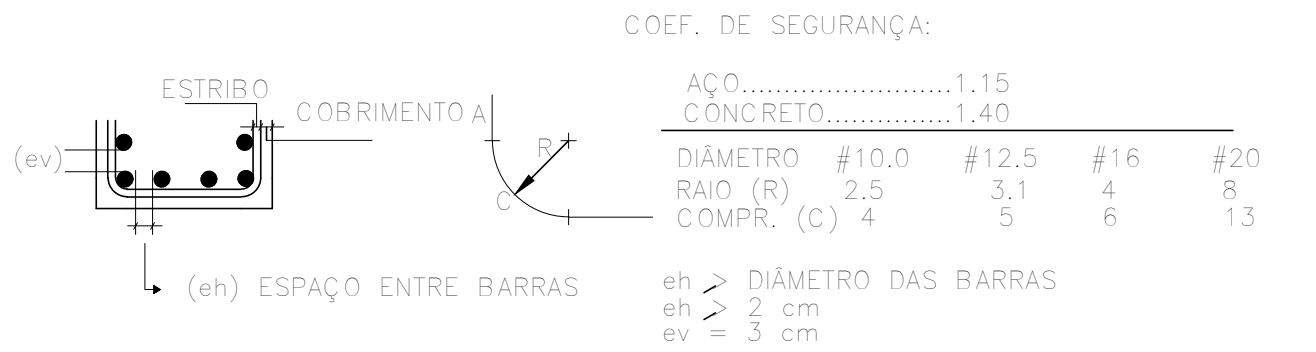
V404



AÇO	POS	BIT	QUANT	COMPRIMENTO	
				UNIT	TOTAL
		mm		cm	cm
V401	50A	1	10	2	600
	50A	2	10	10	596
	60B	3	5	33	79
V402	50A	1	10	2	600
	50A	2	10	10	596
	60B	3	5	33	79
V403	50A	1	8	2	310
	50A	2	10	2	305
	60B	3	5	17	79
V404	50A	1	8	2	310
	50A	2	10	2	305
	60B	3	5	16	79

RESUMO DE AÇO			
AÇO	BIT	COMPR	PESO
	mm	m	kgf
60B	5	78	12
50A	8	12	5
50A	10	108	66
Peso Total	60B =		12 kgf
Peso Total	50A =		71 kgf
VOLUME DE CONCRETO =			0,70m³

DOBRAS E DIST. ENTRE BARRAS



00	29/05/2025	EMIÇÃO INICIAL	E.P.
REVISÃO	DATA	DESCRIÇÃO	RESP.

EXATA

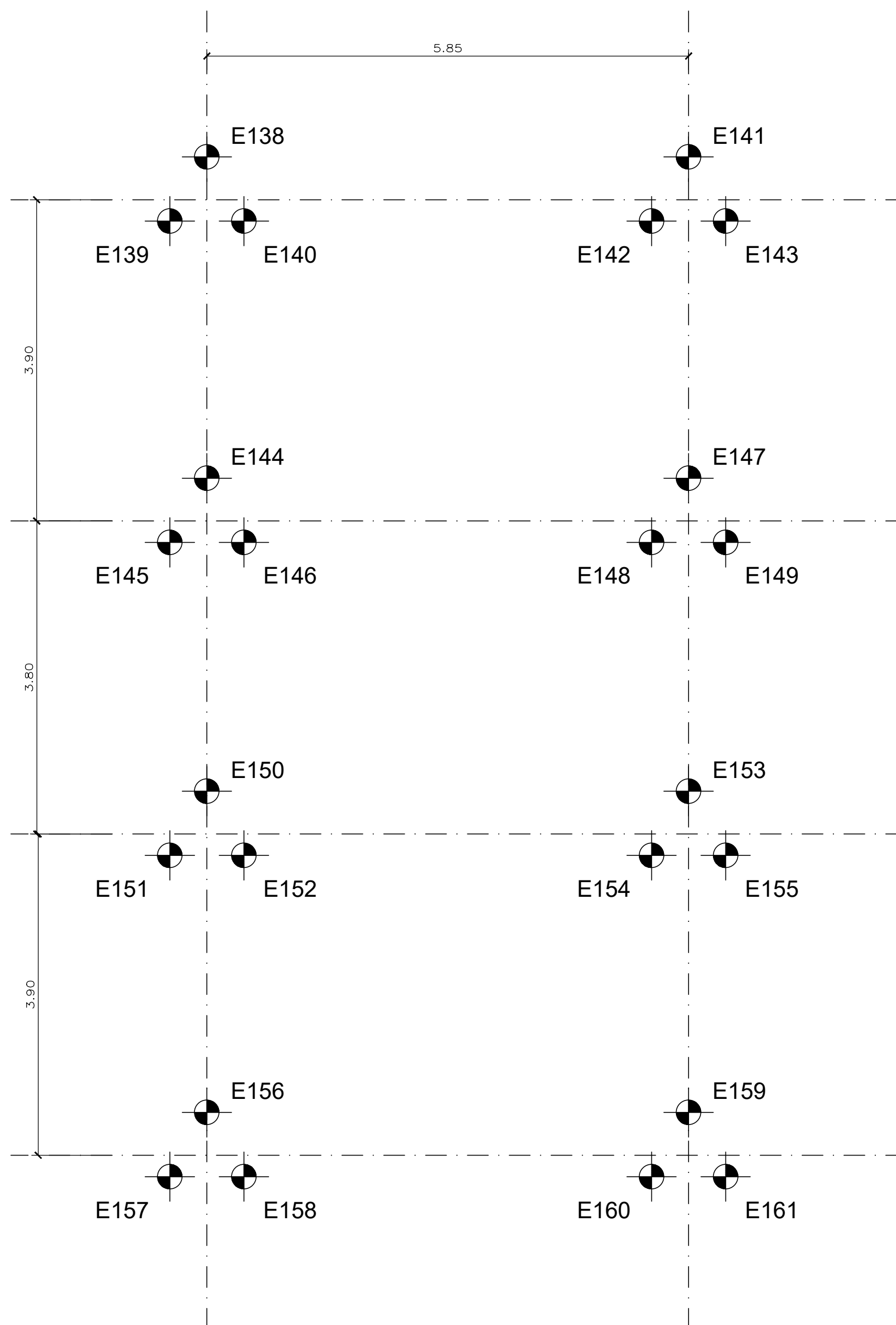
ENGENHARIA E PROJETOS LTDA.

Fone: (19) 3236 - 1034
Site: www.exatacampinas.com.br
e-mail: contato@exatacampinas.com.br

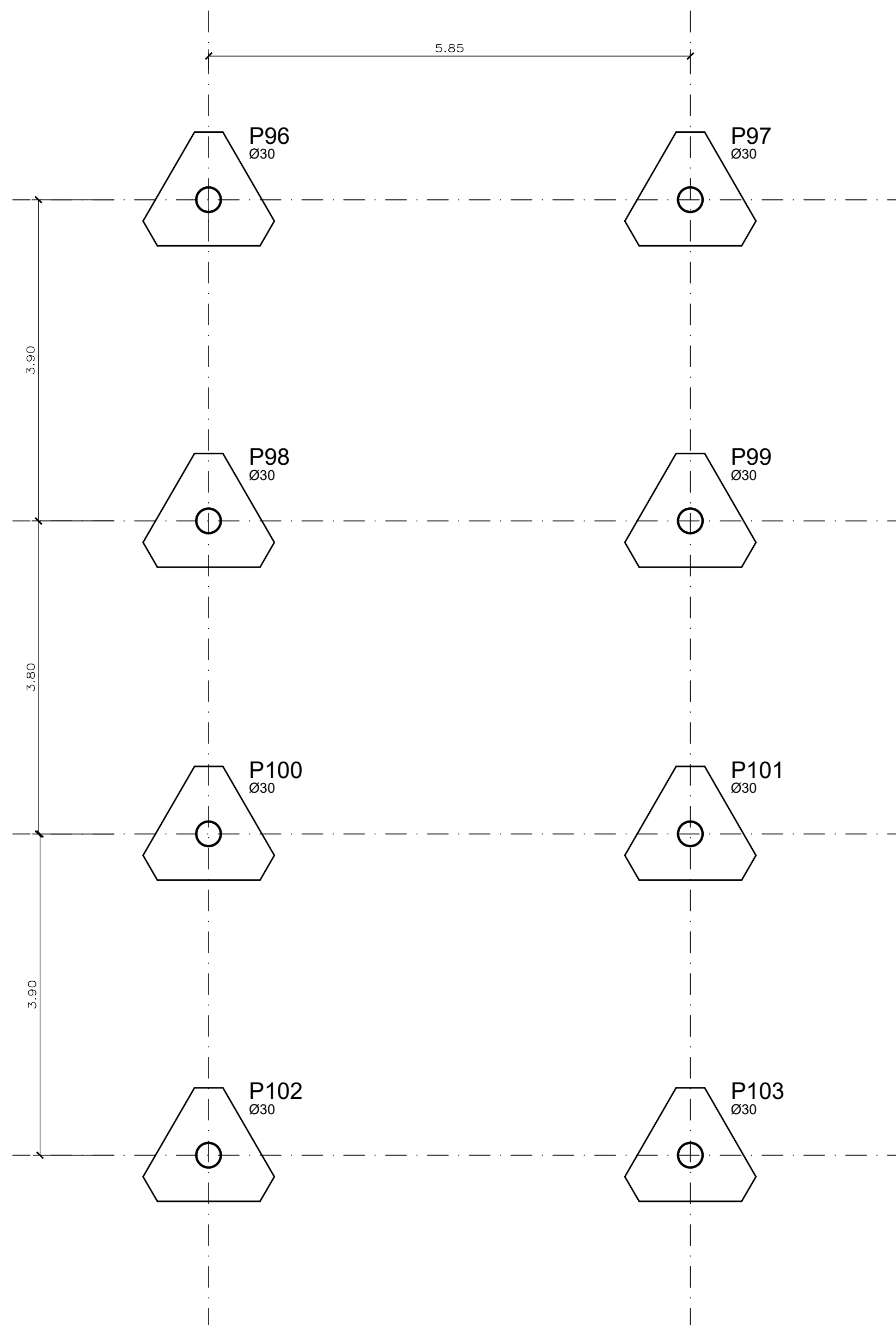
CONTRATANTE		
PREFEITURA MUNICIPAL DE HORTOLÂNDIA		
LOCAL		
UBS JARDIM AMANDA - UNIDADE BÁSICA DE SAÚDE R. Brg. Faria Lima, 280 - Jardim Amanda I - Hortolândia - SP		
OBRA	TÍTULO	FOLHA
INSTITUCIONAL	UBS JARDIM AMANDA	32 36
Nº OBRA	ESTRUTURA	
03724-10	DET. ARMAÇÃO DAS - V400	
Nº ART	(RESPALDO ALVENARIA)	
2620250357459		
AUTOR DO PROJETO	DATA	
EXATA ENGENHARIA	05/2025	
DESENHO	ESCALA	
EXATA ENGENHARIA	INDICADA	

Assinado de forma digital por
EDUARDO JOSE BARBOZA DE
OLIVEIRA PRATA:30924256850
Data: 2025.06.18 13:27:30
+03'00'

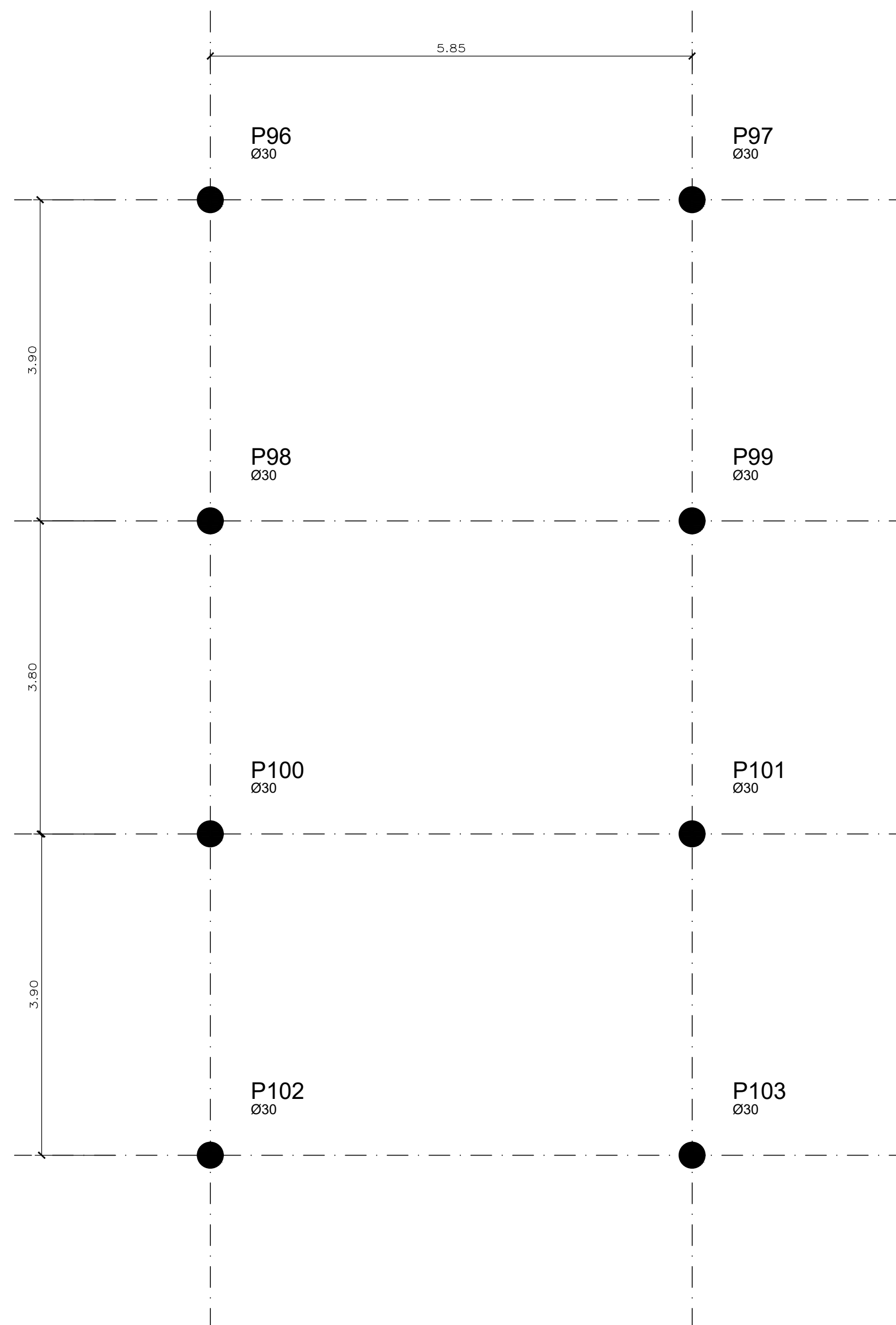
ESCALA 1:50
C.A. = 609,06m



ESCALA 1:50
NÍVEL = 609,56m / P.A. 609,96m



ESCALA 1:50
NÍVEL = 612,56m

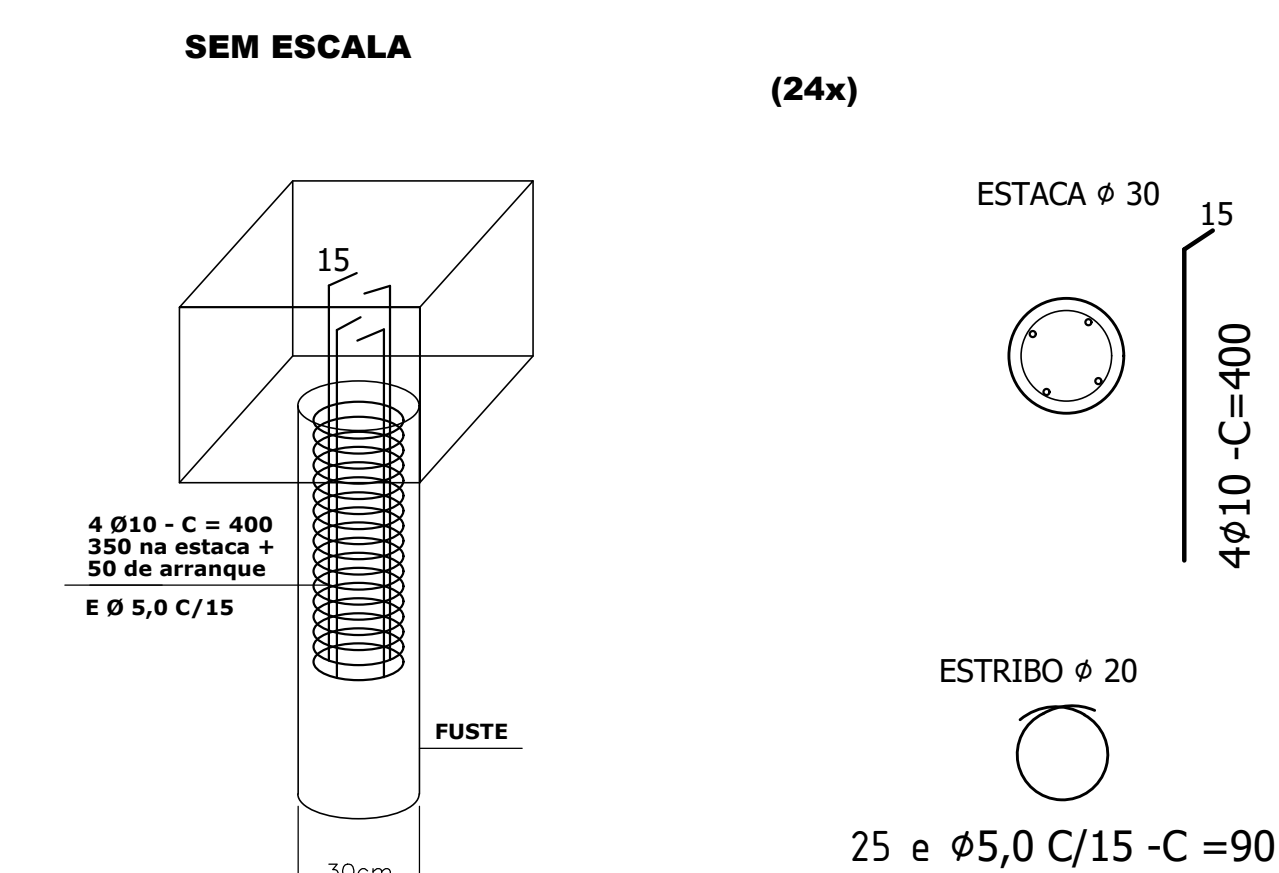


ESTACA TIPO HÉLICE CONTÍNUA Ø30, PR 10,00 tf
 PROFUNDIDADE MÍNIMA = 10,00m, NO TERRENO NATURAL
 C.A. = -609,06m

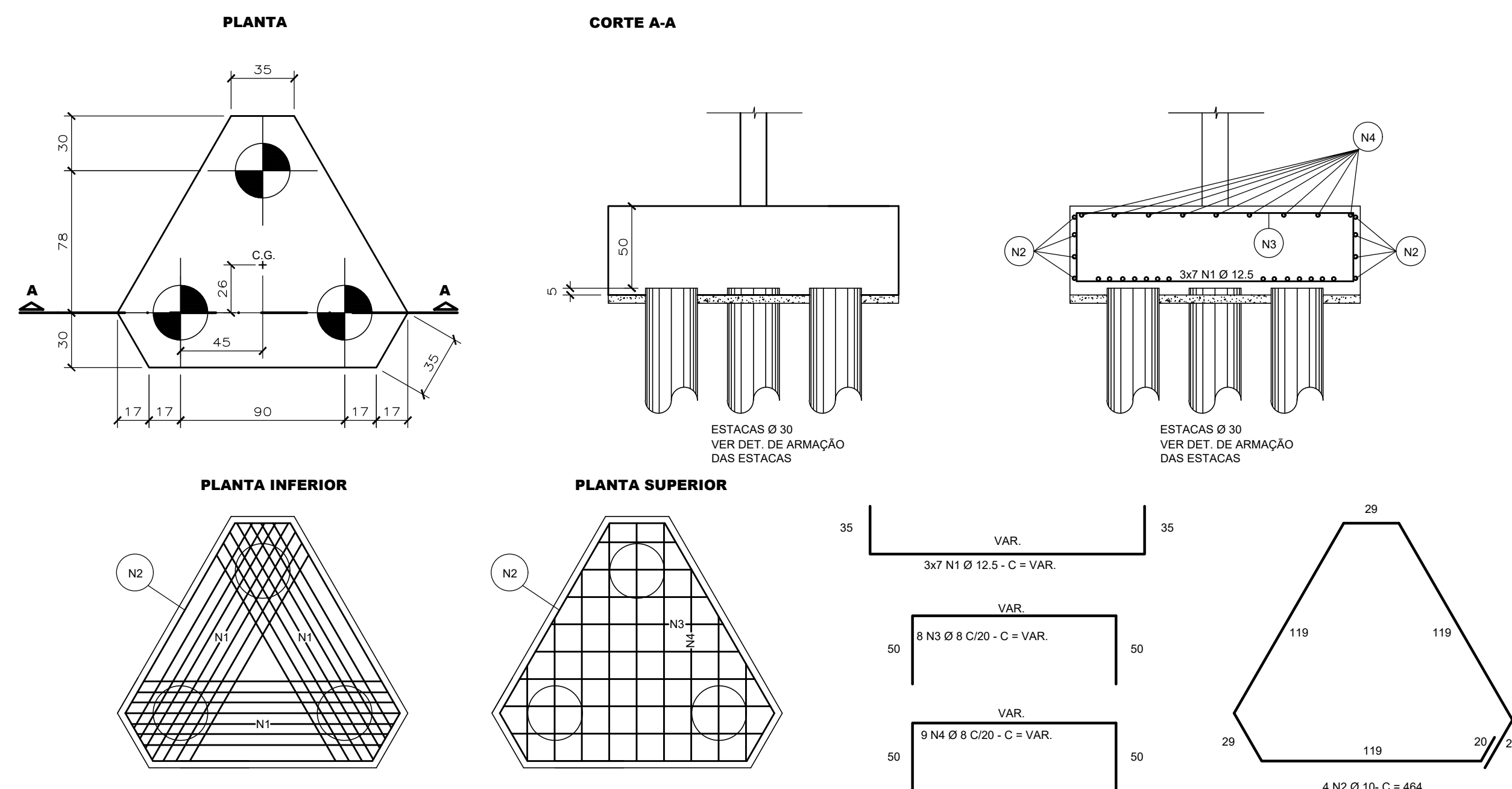
 PILAR QUE NASCE

 PILAR QUE MORRE

SEM ESCALA



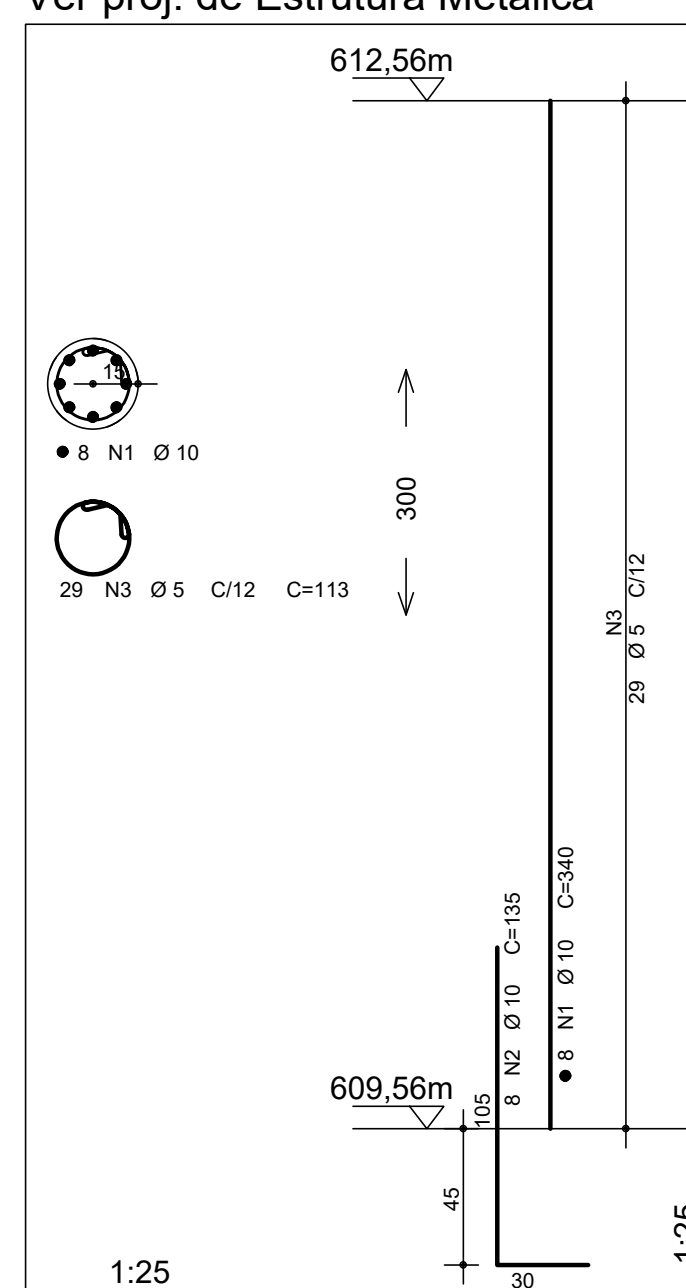
SEM ESCALA



OBS.: ATENTAR PARA ARRANQUE DOS PILARES

SEM ESCALA

P96=P97=P98=P99=P100=P101=P102=P103 Lance 1
Atentar para os inserts metálicos
Ver proj. de Estrutura Metálica



AÇO	POS	BIT	QUANT	COMPROMIMENTO	
				UNIT	TOTAL
		mm		cm	cm
ESTACAS Ø30 - 24x					
60S	ESTR8B	5,0	600	90	54000
50A	LONG1	10,0	96	400	38400
BLOCO - 3 ESTACAS Ø30 - 8x					
50A		12,5	168	VAR	-36460
50A		2	10	32	464
50A		8	64	VAR	-12800
50A		4	72	VAR	-14400
P46-P97-P98-P99-P100-P101-P102-P103 Lance 1 (XB)					
50A		1	10	64	21760
50A		2	10	135	8640
50B		5	5	234	20216

RESUMO DE AÇO			
AÇO	BIT mm	COMPR m	PESO kgf
60B	5	803	128
50A	8	272	109
50A	10	837	527
50A	12,5	365	365
Peso Total	60B =		128 kgf
Peso Total	50A =		1.001 kgf
VOLUME DE CONCRETO DAS ESTACAS =			17,00 m³
VOLUME DE CONCRETO DOS BLOCOS =			6,50 m³
VOLUME DE CONCRETO DOS PILARES =			1,70 m³

COEF. DE SEGURANÇA:

ACO.....	1,15
CONCRETO.....	1,40

DIÂMETRO #10,0 #12,5 #16 #18

RAIO (R) 2,5 3,1 4 5

COMPR. (C) 4 5 6 6

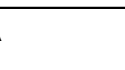
eh > DIÂMETRO DAS BARRAS

eh > 2 cm

00	29/05/2025	EMIÇÃO INICIAL	E.P.
REVISÃO	DATA	DESCRIÇÃO	RESP.

ENGENHARIA E PROJETOS LTDA

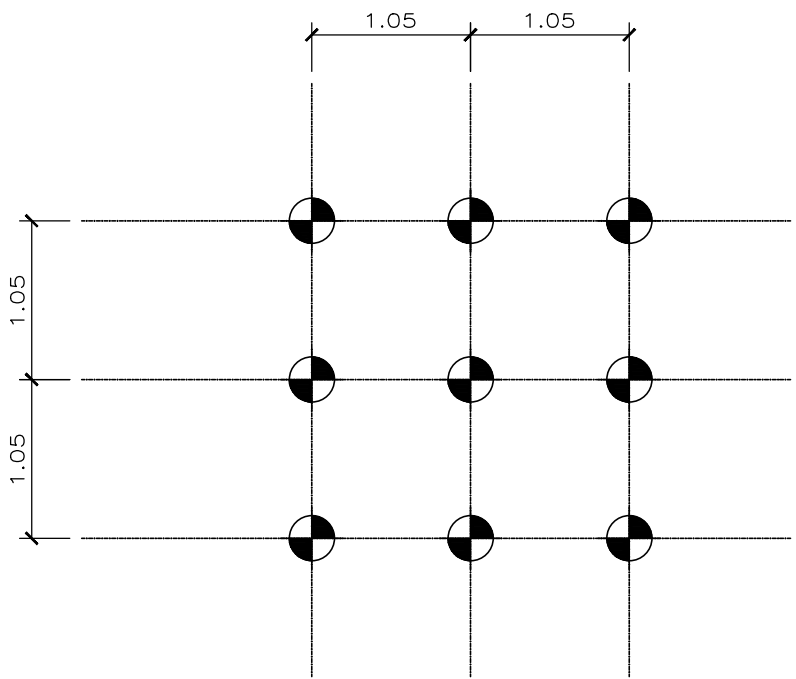
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Site: www.exatacampinas.com.br
e-mail: contato@exatacampinas.com.br

CONTRATANTE			
PREFEITURA MUNICIPAL DE HORTOLÂNDIA			
LOCAL			
UBS JARDIM AMANDA - UNIDADE BÁSICA DE SAÚDE R. Brg. Faria Lima, 280 - Jardim Amanda I - Hortolândia - SP			
OBRA		TÍTULO	FOLHA
INSTITUCIONAL		UBS JARDIM AMANDA ESTRUTURA	
Nº OBRA		ÁREA DE DESCOMPRESSÃO	
03724-10			
Nº ART			
262025037459			
AUTOR DO PROJETO		DATA	
EXATA ENGENHARIA		05/2025	
DESENHO	EXATA ENGENHARIA	ESCALA	INDICADA

Assinado de forma digital por EDUARDO JOSE BARBOZA DE OLIVEIRA PRATA:30924256850
Dados: 2025.06.18 13:28:05 -03'00'

LOCAÇÃO DAS ESTACAS

ESCALA 1:50

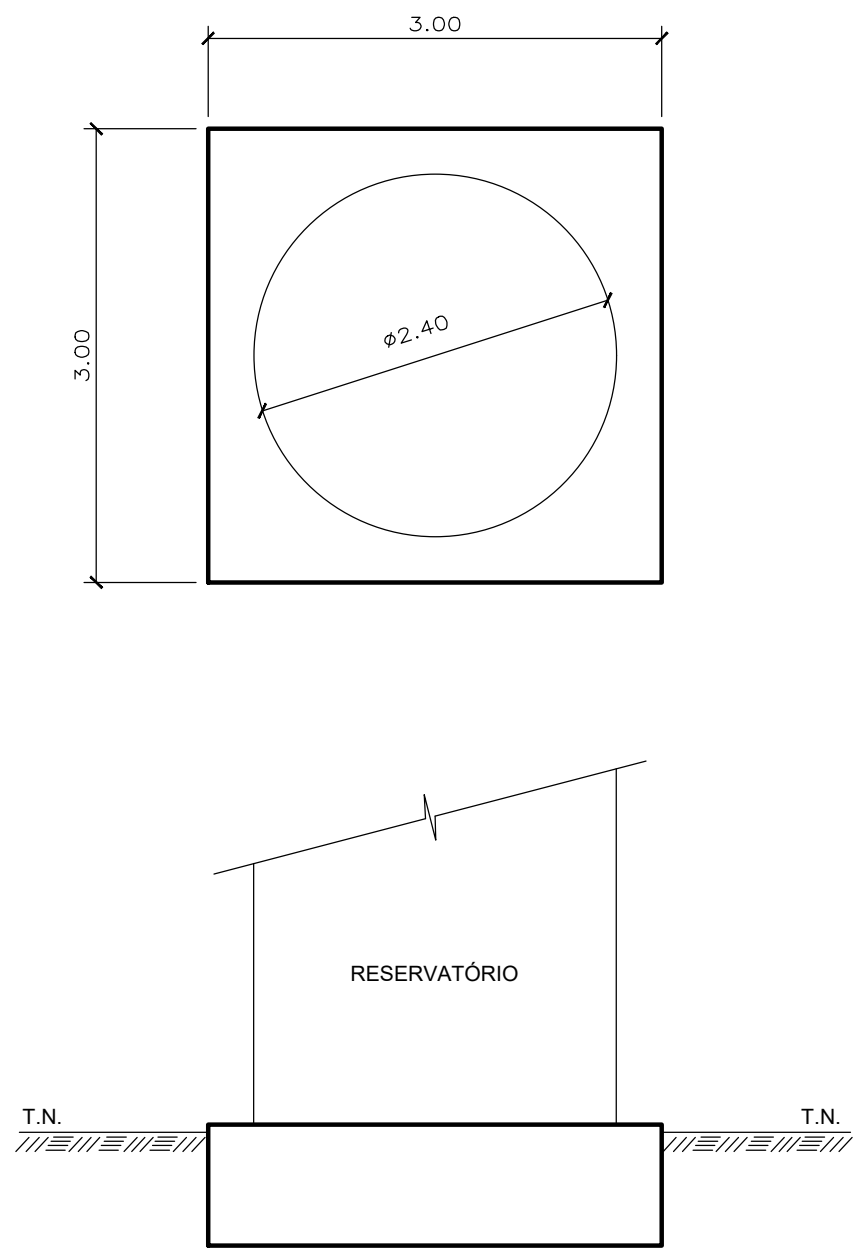


LEGENDA

(9x)  ESTACA TIPO HÉLICE CONTÍNUA Ø30, PR > 20,00 If
PROFUNDIDADE MÍNIMA = 12,00m, NO TERRENO NATURAL

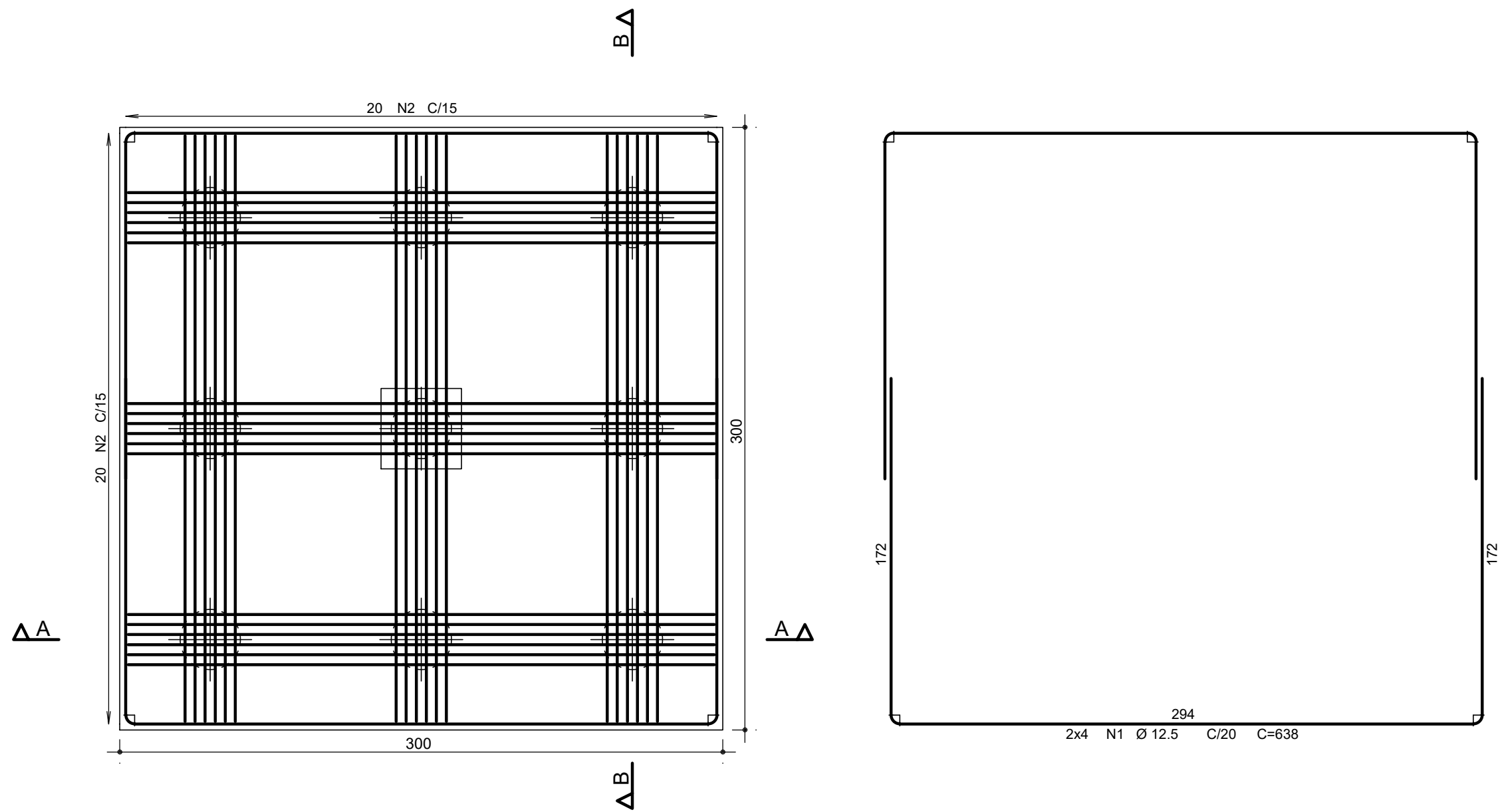
PLANTA DA BASE (BLOCO)

ESCALA 1:50



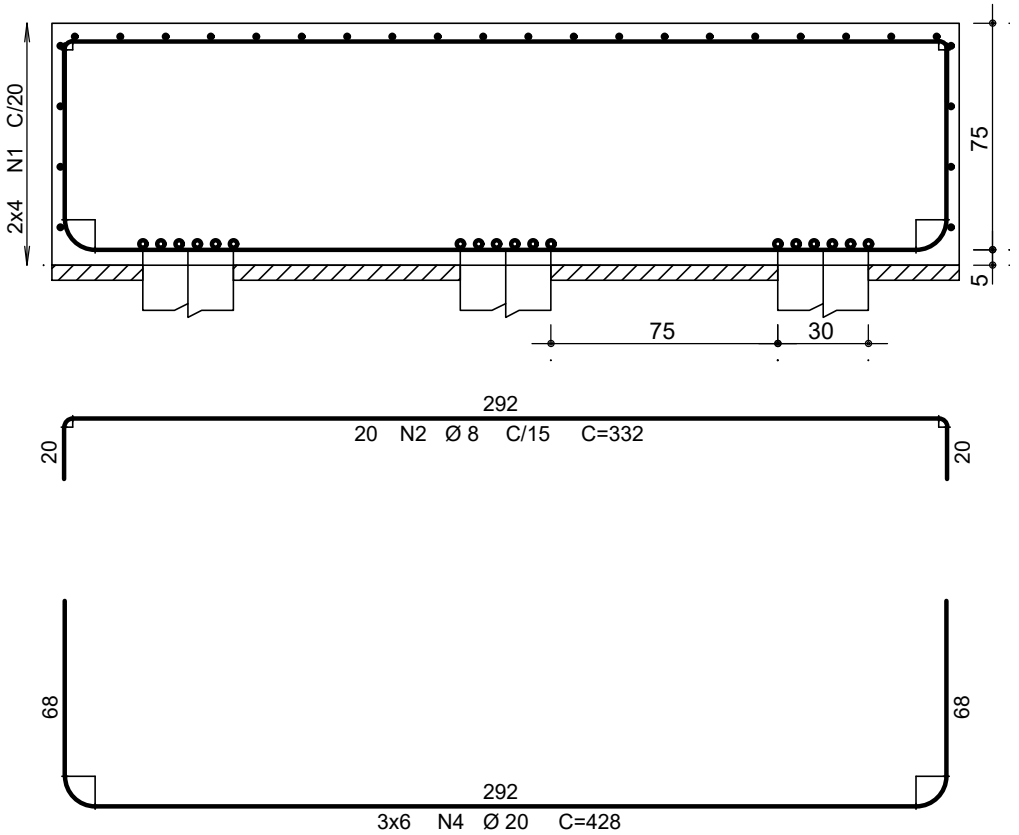
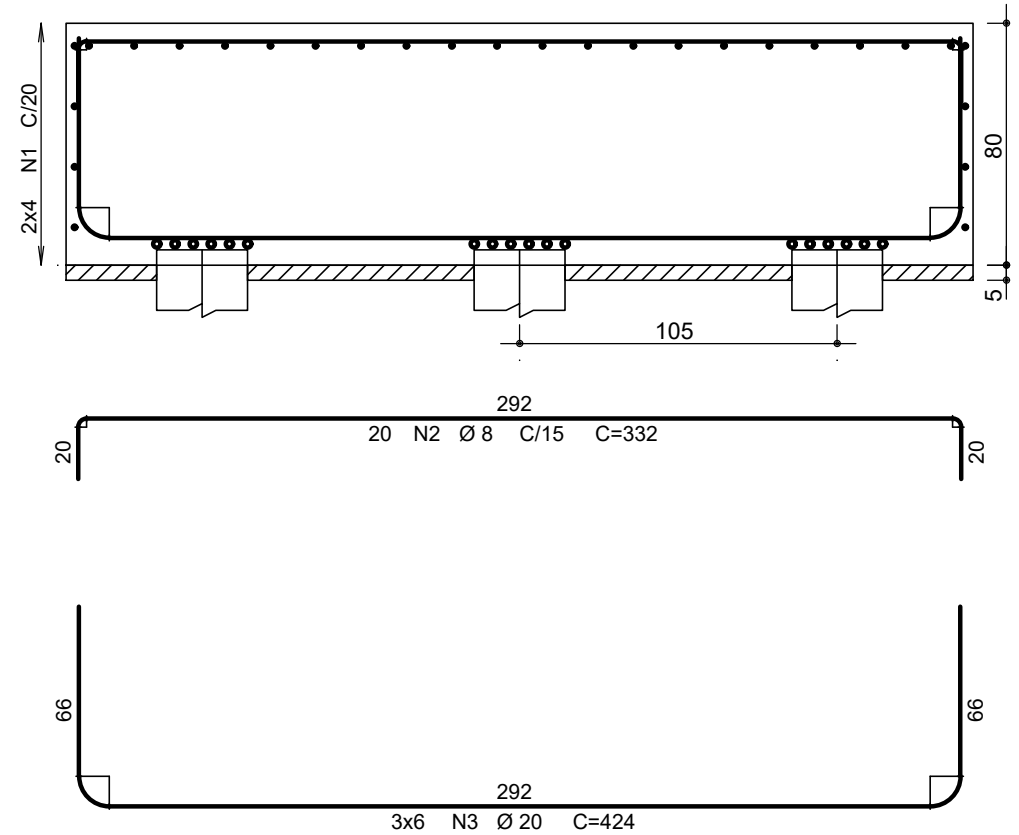
DETALHE DE ARMAÇÃO DO BLOCO

ESCALA 1:50



CORTE A - A

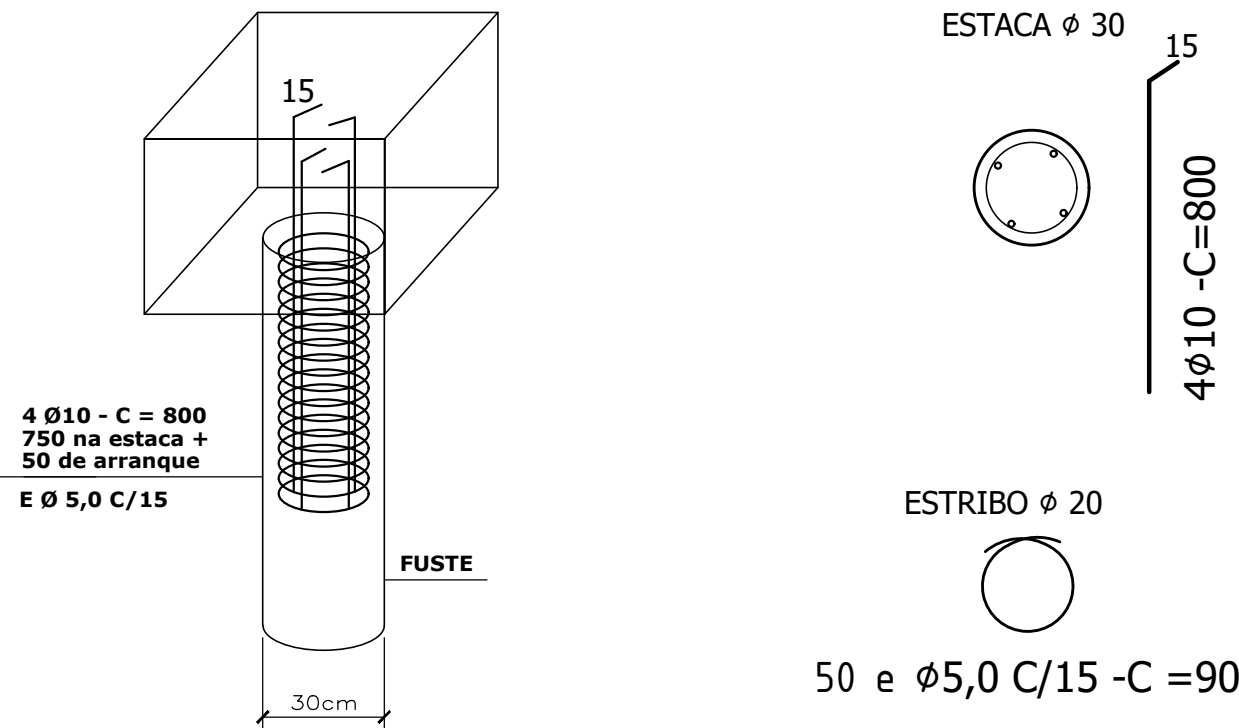
CORTE B - B



DET. ARMAÇÃO DAS ESTACAS Ø 30

SEM ESCALA

(9x)



ÇO	POS	BIT (mm)	QUANT	COMPIMENTO UNIT (cm)	TOTAL (cm)
ESTACAS Ø 30 - 9x					
50A	LONG	10	36	800	28800
50A	ESTRIB	5	450	90	40500

RESUMO AÇO CA 50-60			
ÇO	BIT (mm)	COMPR (m)	PESO (kg)
60B	5	405	65
50A	10	288	181
Peso Total	60B =		65
Peso Total	50A =		181
VOLUME DE CONCRETO ESTACAS =			7,60 m³

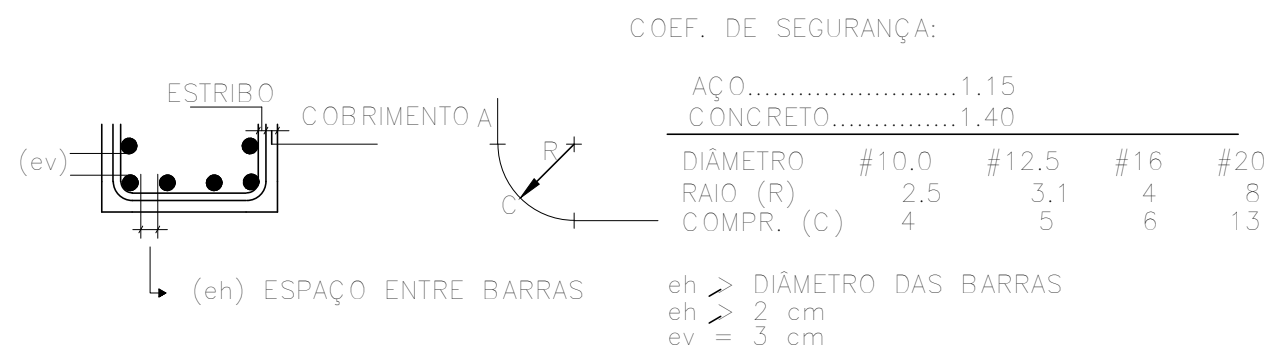
NOTAS

- NÃO TIRAR MEDIDAS EM ESCALA
- CONFIRMAR MEDIDAS E NÍVEIS NA OBRA
- COTAS ADOTADAS CONFORME ARQUITETURA
- A EXECUÇÃO DO PROJETO IMPLICA NA APROVAÇÃO DAS FORMAS PELO CLIENTE / RESPONSÁVEL TÉCNICO
- A OBRA PROJETADA NÃO ENCOSTA EM EDIFICAÇÕES EXISTENTES
- CONCRETO C30 (f_{ck} >= 30 MPa) AOS 28 DIAS
- CLASSE DE AGRESSIVIDADE AMBIENTAL (CAA) AGRESSIVIDADE = II
- FATOR ÁGUA/CIMENTO ≤ 0,60
- MÓDULO DE DEFORMAÇÃO SECANTE DO CONCRETO - E_{cs} = 27 Gpa
α E=1,0 (PARA GRANITO e GNAISSE)
- FISSURAÇÃO - ELS=W wk <= 0,3mm
- O PREPARO E O ADENSAMENTO DO CONCRETO NÃO PODERÃO SER MANUAIS
- DEVERÁ SER FEITO O CONTROLE TECNOLÓGICO DO CONCRETO CONFORME NBR 12654 E NBR 12655, ADOTANDO-SE OBRIGATORIAMENTE O CONTROLE POR AMOSTRAGEM TOTAL
- É DE REPONSABILIDADE DO FORNECEDOR DAS LAJES, A INDICAÇÃO DE NERVURAS DE TRAVAMENTO, NEGATIVOS, NEGATIVOS DE BORDA, MALHA DE DISTRIBUIÇÃO E ARMADURAS ADICIONAIS
- A MONTAGEM E O CIMBRAMENTO DAS LAJES DEVERÃO OBEDECER AS INDICAÇÕES DOS FORNECEDORES
- A ARMADURA DEVE OBEDECER A NBR 7489, COM VALOR CARACTERÍSTICO DA RESISTÊNCIA DE ESCOAMENTO NAS CATEGORIAS CA-50 e CA-60, CONFORME DETALHAMENTO
- A MONTAGEM DA ARMADURA DEVE OBEDECER RIGOROSAMENTE O PROJETO

AÇO	POS	BIT mm	QUANT	COMPIMENTO	
				UNIT cm	TOTAL cm
BLOCO					
50A	1	12.5	8	638	5104
50A	2	8	40	332	13280
50A	3	20	18	424	7632
50A	4	20	18	428	7704

RESUMO DE AÇO			
AÇO	BIT mm	COMPR m	PESO kgf
50A	8	133	52
50A	12,5	51	49
50A	20	153	378
Peso Total	50A =		480 kgf
VOLUME DE CONCRETO=			7,20m³

DOBRAS E DIST. ENTRE BARRAS



REVISÃO	DATA	DESCRIÇÃO	RESP.
00	29/05/2025	EMIÇÃO INICIAL	E.P.

EXATA

ENGENHARIA E PROJETOS LTDA.

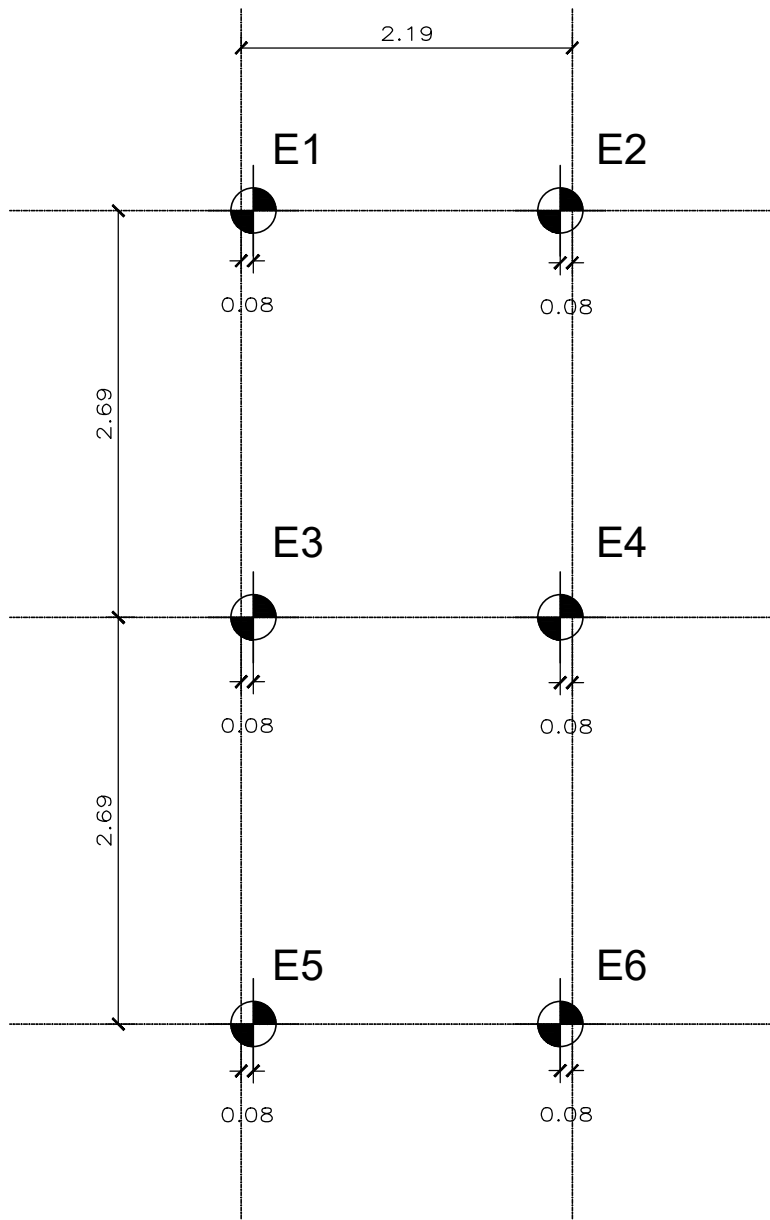
Fone: (19) 3236 - 1034
Site: www.exatacampinas.com.br
e-mail: contato@exatacampinas.com.br

CONTRATANTE PREFEITURA MUNICIPAL DE HORTOLÂNDIA		
LOCAL UBS JARDIM AMANDA - UNIDADE BÁSICA DE SAÚDE R. Brg. Faria Lima, 280 - Jardim Amanda I - Hortolândia - SP		
OBRA INSTITUCIONAL Nº OBRA 03724-10 Nº ART 2620250357459	TÍTULO UBS JARDIM AMANDA ESTRUTURA BASE DO RESERVATÓRIO	FOLHA 34 36
AUTOR DO PROJETO EXATA ENGENHARIA	DATA 05/2025	
DESENHO EXATA ENGENHARIA	ESCALA INDICADA	

EDUARDO JOSE BARBOZA DE OLIVEIRA
Assinado de forma digital por EDUARDO JOSE BARBOZA DE OLIVEIRA
PRATA:30924256850
Dados: 2025.06.18 13:28:42 -03'00'

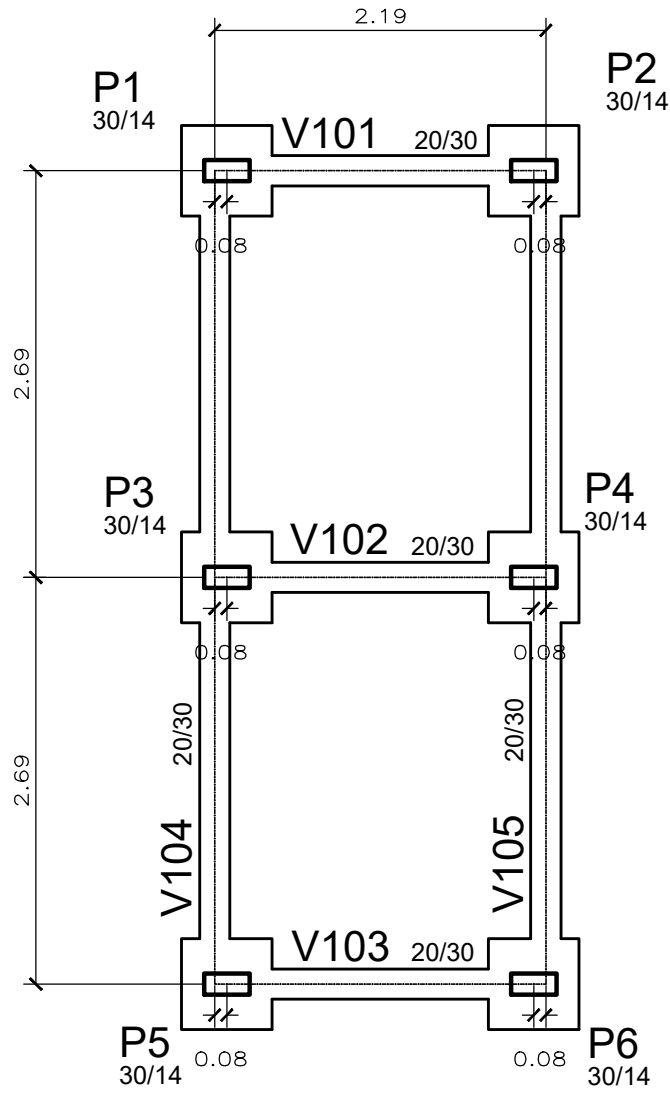
LOCAÇÃO DAS ESTACAS

ESCALA 1:50
C.A. = 609,18 m



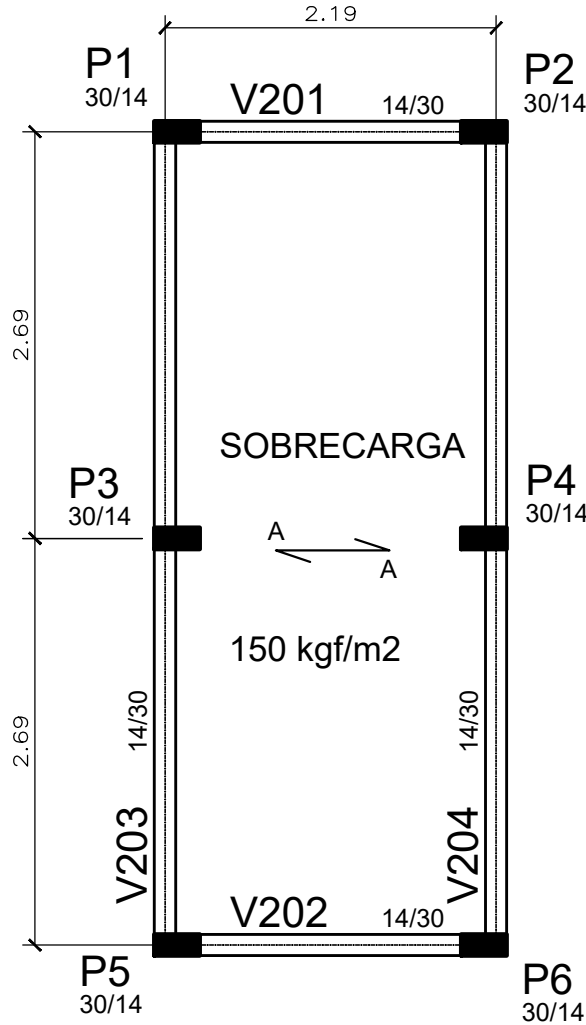
FORMA DOS BALDRAMES

ESCALA 1:50
NÍVEL = 609,68 m (P.A. = 609,98 m / EMBASAMENTO = 30cm)



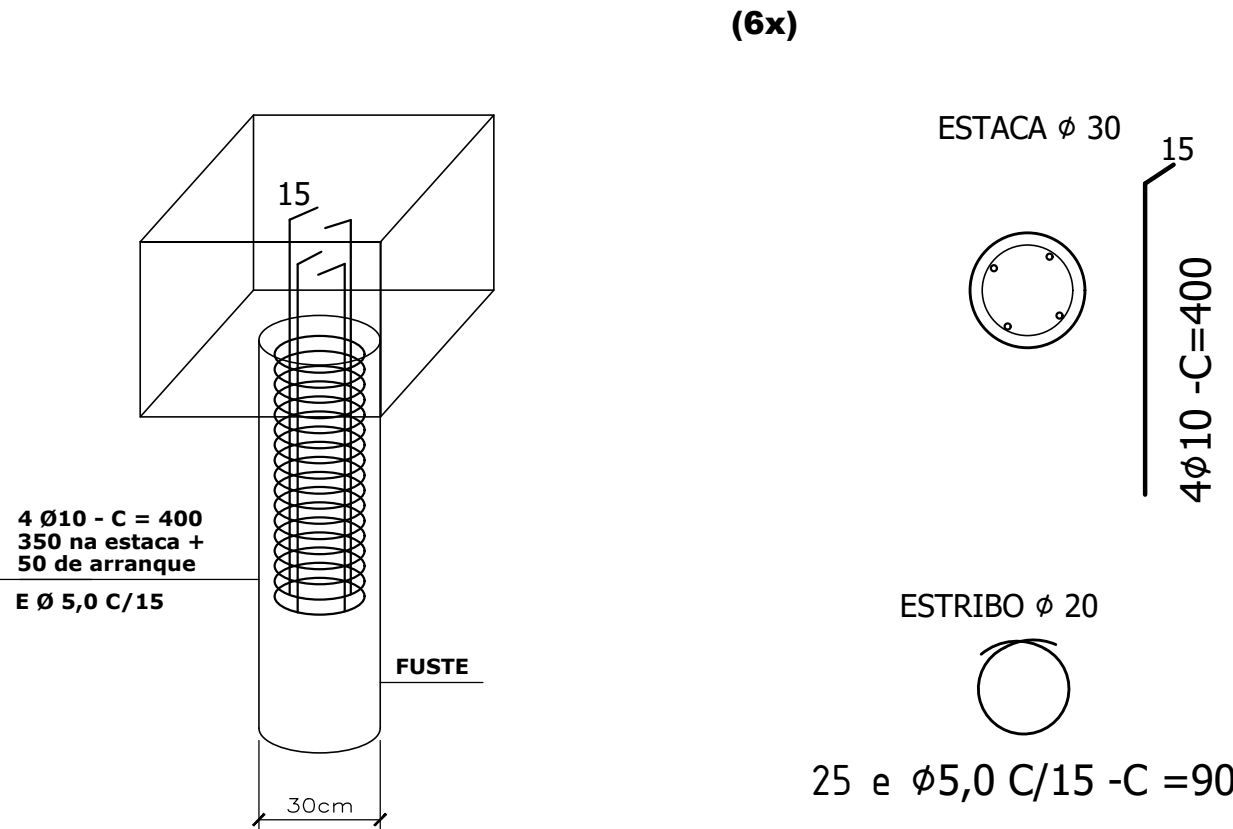
FORMA DA COBERTURA

ESCALA 1:50
NÍVEL = 612,93 m



DET. ARMAÇÃO DAS ESTACAS Ø 30

SEM ESCALA



CARGAS NAS FUNDAÇÕES

Elem	Fz tf	Mx Máx tfm	Mx Mín tfm	My Máx tfm	My Mín tfm
P1	4.41	0.27	0.19	0.74	-0.36
P2	4.41	0.27	-0.19	0.36	-0.74
P3	8.24	0.13	0.10	0.49	-0.29
P4	8.24	0.13	-0.10	0.29	-0.49
P5	4.45	-0.27	0.19	0.74	-0.36
P6	4.45	-0.27	-0.19	0.36	-0.74

Observações:

=====

- Os valores apresentados referem-se às reações nos apoios
- Esforços com valores característicos
- Forças em tf
- Momentos em tfm

LEGENDA

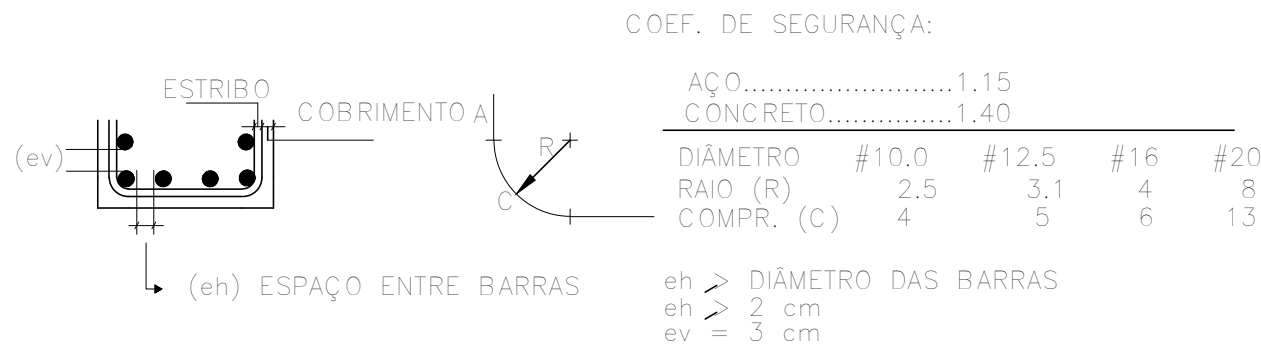
- PILAR QUE NASCE
- PILAR QUE MORRE

(6x) ESTACA TIPO HÉLICE CONTÍNUA Ø30, PR > 20,00 tf
PROFUNDIDADE MÍNIMA = 12,00m, NO TERRENO NATURAL
C.A. = 609,18m

NOTAS

- NÃO TIRAR MEDIDAS EM ESCALA
- CONFIRMAR MEDIDAS E NÍVEIS NA OBRA
- COTAS ADOTADAS CONFORME ARQUITETURA
- A EXECUÇÃO DO PROJETO IMPLICA NA APROVAÇÃO DAS FORMAS PELO CLIENTE / RESPONSÁVEL TÉCNICO
- A OBRA PROJETADA NÃO ENCOSTA EM EDIFICAÇÕES EXISTENTES
- CONCRETO C30 (fck >= 30 MPa) AOS 28 DIAS
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- FATOR ÁGUA/CIMENTO ≤ 0,60
- MÓDULO DE DEFORMAÇÃO SECANTE DO CONCRETO - Ecs = 27 Gpa
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- É DE REPONSABILIDADE DO FORNECEDOR DAS LAJES, A INDICAÇÃO DE NERVURAS DE TRAVAMENTO, NEGATIVOS, NEGATIVOS DE BORDA, MALHA DE DISTRIBUIÇÃO E ARMADURAS ADICIONAIS
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- A MONTAGEM DA ARMADURA DEVE OBEDECER RIGOROSAMENTE O PROJETO

DOBRAS E DIST. ENTRE BARRAS



00	29/05/2025	EMIÇÃO INICIAL	E.P.
REVISÃO	DATA	DESCRIÇÃO	RESP.

EXATA

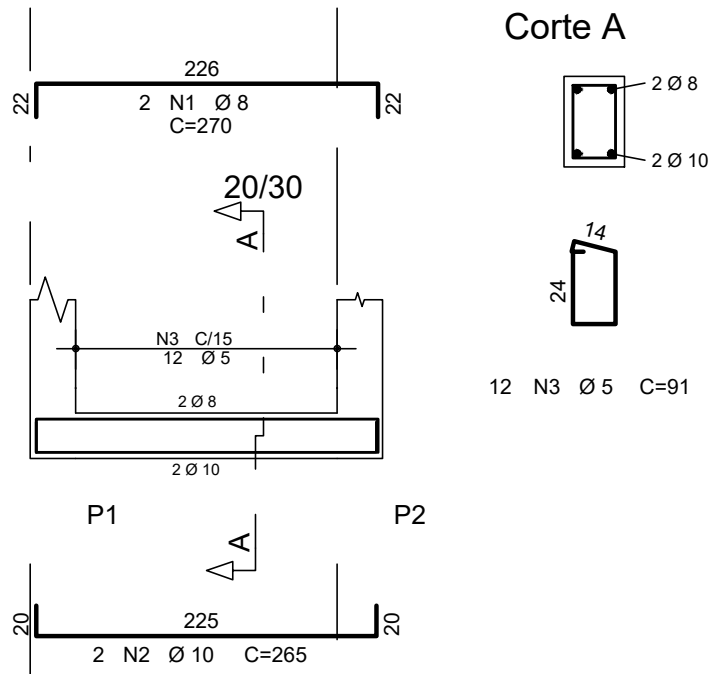
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e-mail: contato@exatacampinas.com.br

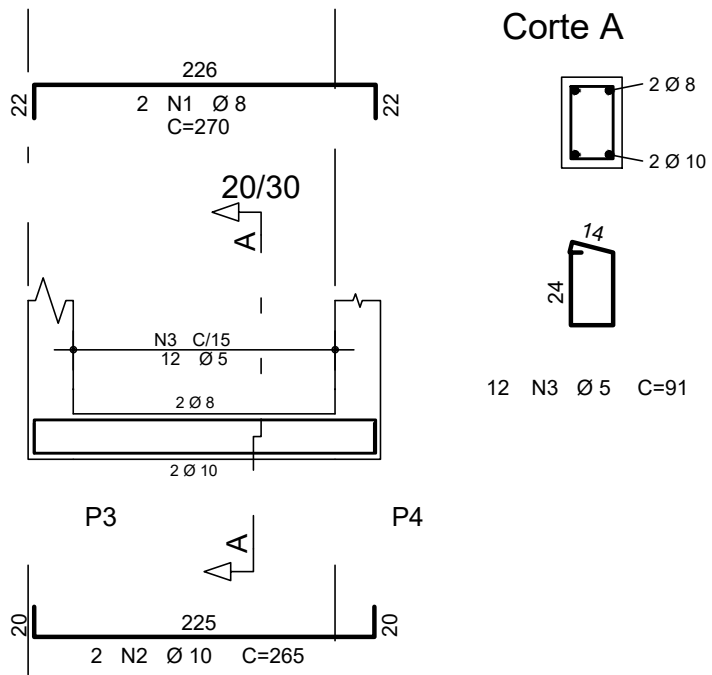
CONTRATANTE			
PREFEITURA MUNICIPAL DE HORTOLÂNDIA			
LOCAL			
UBS JARDIM AMANDA - UNIDADE BÁSICA DE SAÚDE R. Brg. Faria Lima, 280 - Jardim Amanda I - Hortolândia - SP			
OBRA	TÍTULO	FOLHA	
INSTITUCIONAL	UBS JARDIM AMANDA ESTRUTURA	35 36	
Nº OBRA	ABRIGO DE RESÍDUOS		
Nº ART			
2620250357459			
AUTOR DO PROJETO	DATA		
EXATA ENGENHARIA	05/2025		
DESENHO	ESCALA		
EXATA ENGENHARIA	INDICADA		

Assinado de forma digital por EDUARDO JOSE BARBOZA DE OLIVEIRA PRATA:30924256850
Dados: 2025.06.18 13:29:35 -03'00'

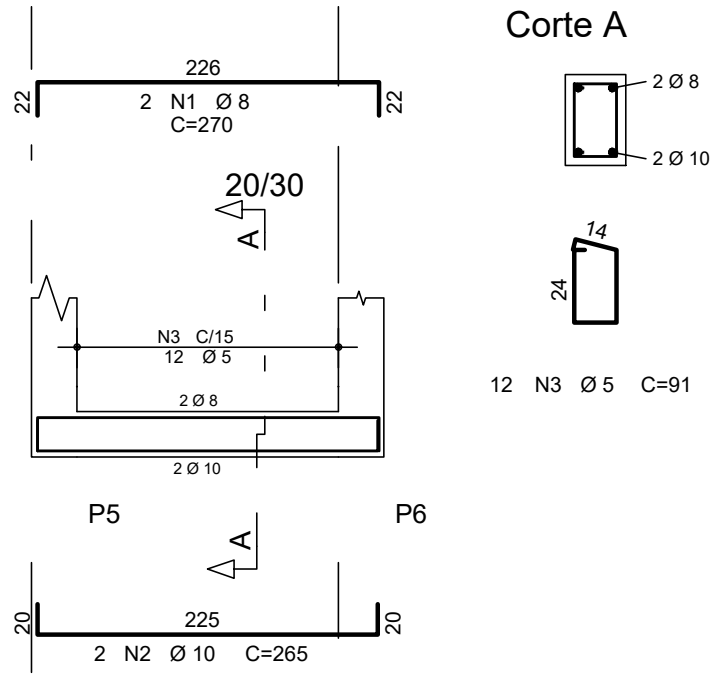
V101



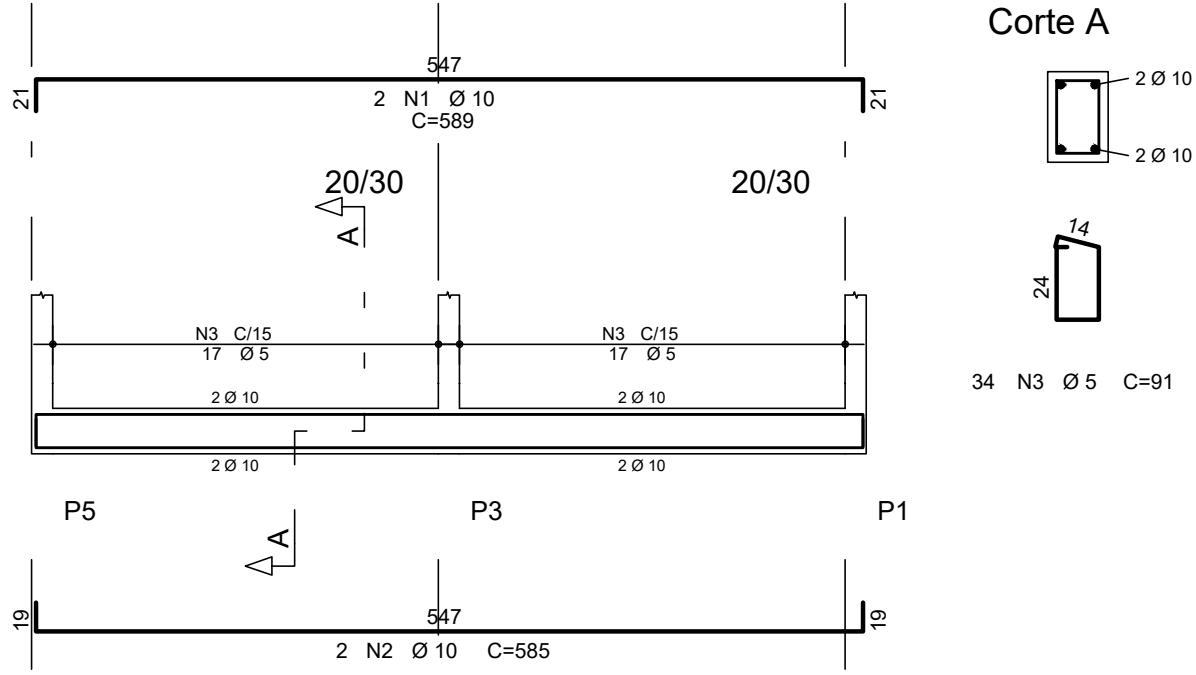
V102



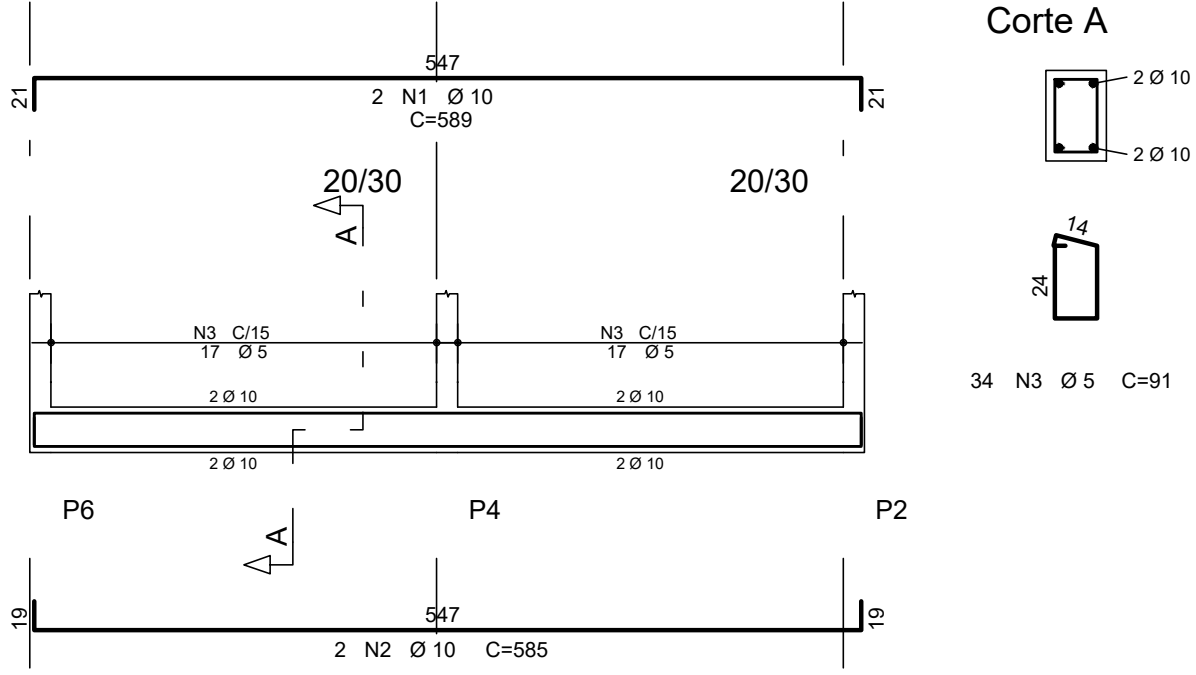
V103



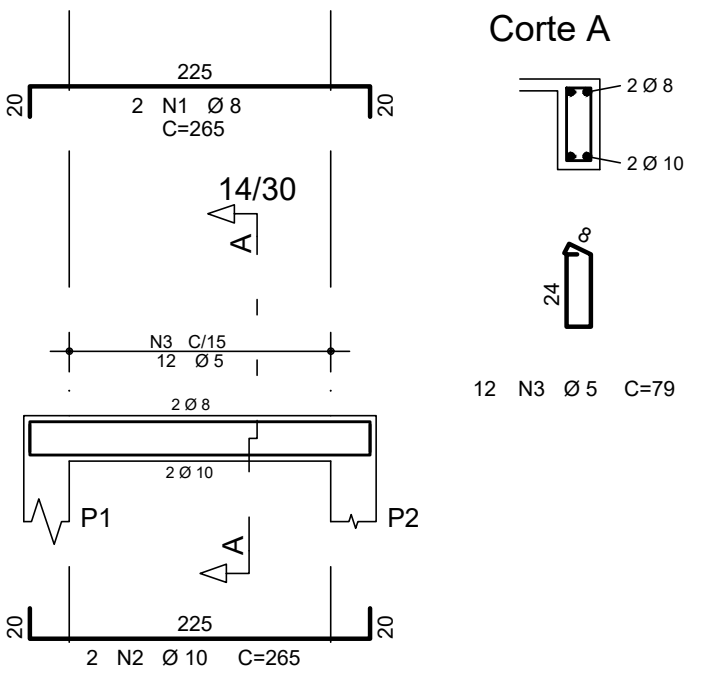
V104



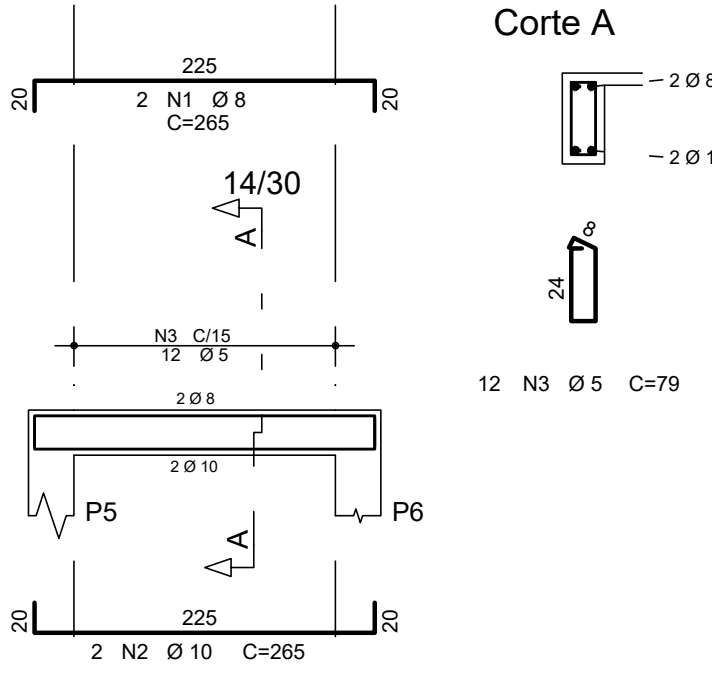
V105



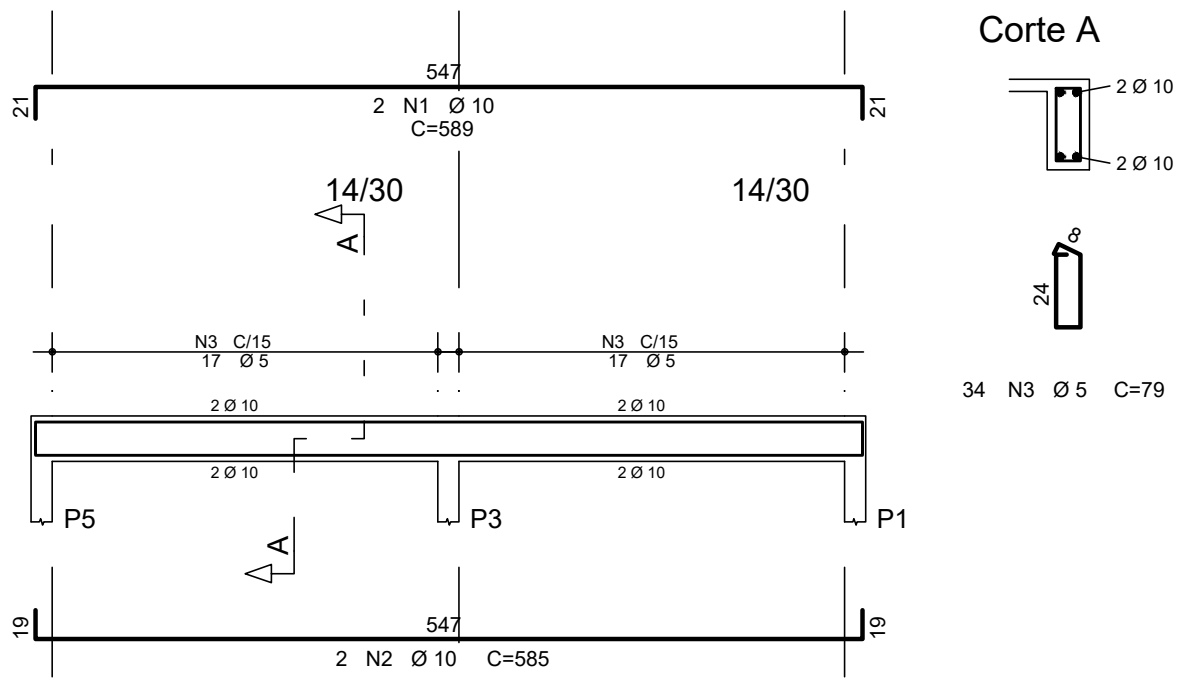
V201



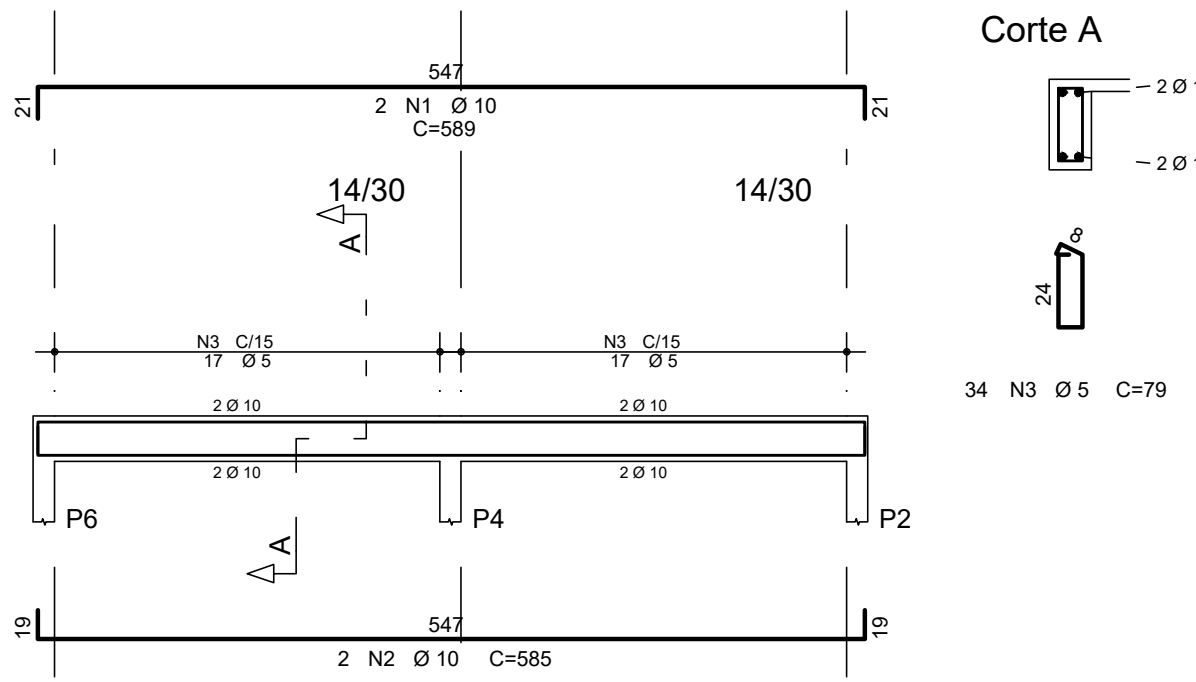
V202



V203



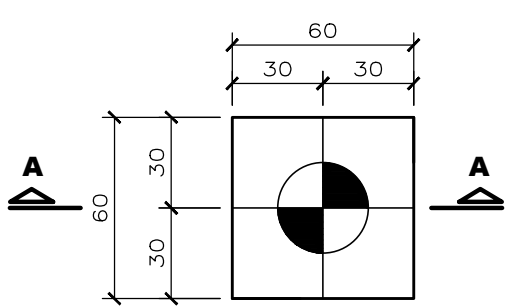
V204



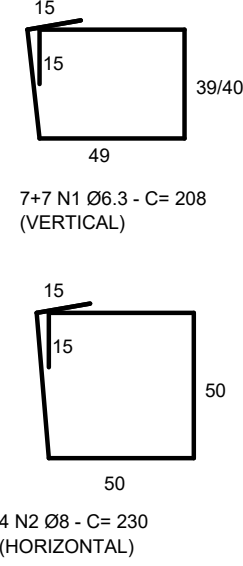
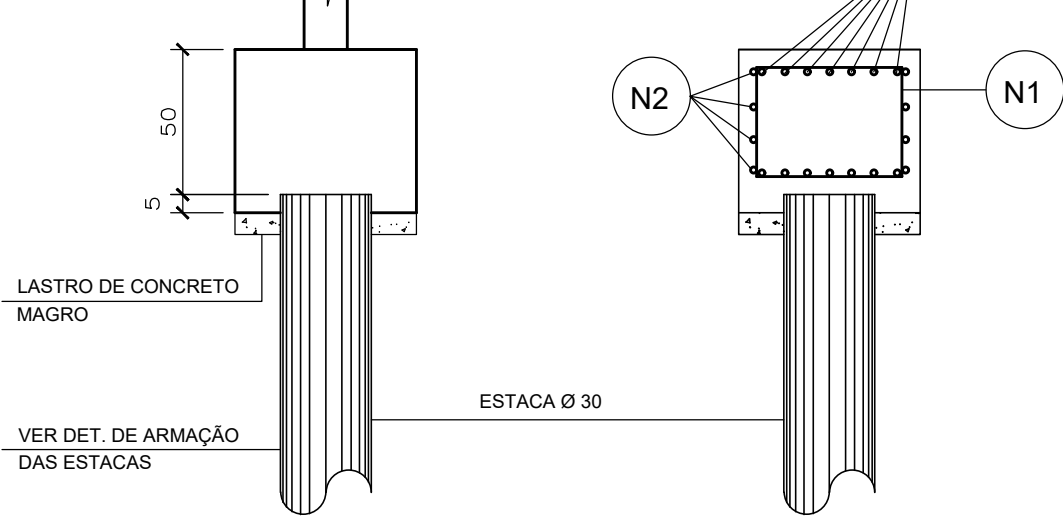
ARMAÇÃO DOS BLOCOS - 1 ESTACA (Ø 30) (6 x)

SEM ESCALA

PLANTA



CORTE A-A

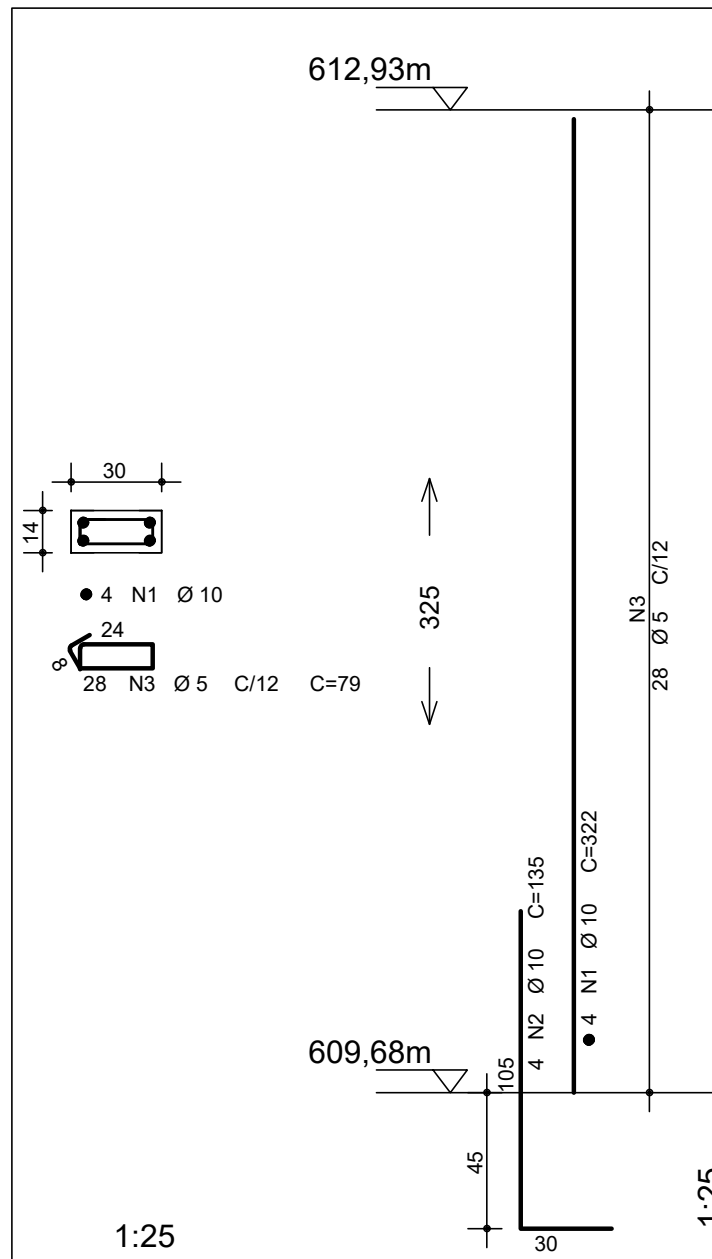


OBS.: ATENTAR PARA ARRANQUE DOS PILARES

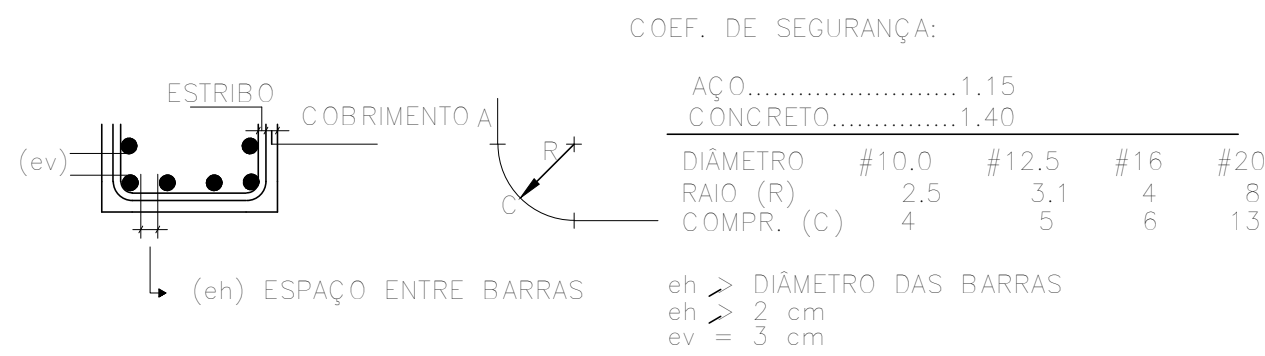
ÇO	POS	BIT (mm)	QUANT	COMPRIMENTO UNIT (cm)	TOTAL (cm)
BLOCO - 1 ESTACA Ø30 - 6x					
50A	1	6,3	84	208	17472
50A	2	8	24	230	5520

RESUMO AÇO CA 50-60			
AÇO	BIT (mm)	COMPR (m)	PESO (kg)
50A	6,3	17,5	44
50A	8	56	22
Peso Total	50A =		66
VOLUME DE CONCRETO BLOCOS =			1,20 m3

P1=P2=P3=P4=P5=P6 Lance 1



DOBRAS E DIST. ENTRE BARRAS



REVISÃO	DATA	DESCRIÇÃO	RESP.
00	29/05/2025	EMIÇÃO INICIAL	E.P.

EXATA

ENGENHARIA E PROJETOS LTDA.

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Site: www.exatacampinas.com.br
e-mail: contato@exatacampinas.com.br

CONTRATANTE PREFEITURA MUNICIPAL DE HORTOLÂNDIA		
LOCAL UBS JARDIM AMANDA - UNIDADE BÁSICA DE SAÚDE R. Brg. Faria Lima, 280 - Jardim Amanda I - Hortolândia - SP		
OBRA INSTITUCIONAL	TÍTULO UBS JARDIM AMANDA ESTRUTURA	FOLHA
Nº OBRA 03724-10	ABRIGO DE RESÍDUOS	C36 36
Nº ART 2620250357459		
AUTOR DO PROJETO EXATA ENGENHARIA	DATA 05/2025	INDICADA
DESENHO EXATA ENGENHARIA	ESCALA	

Assinado de forma digital
por EDUARDO JOSE
BARBOZA DE OLIVEIRA
PRATA:30924256850
Dados: 2025.06.18
13:30:08 -03'00'