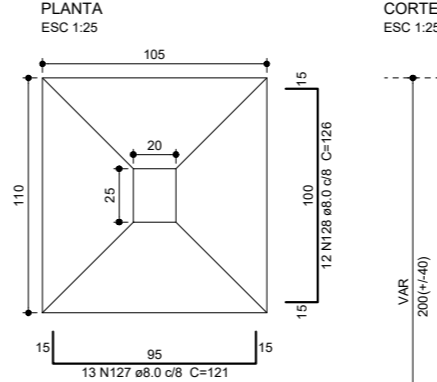


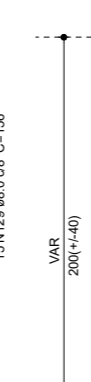
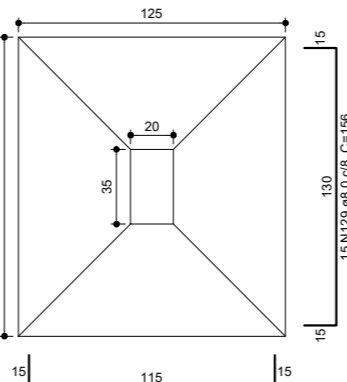
PLANTA DE LOCAÇÃO
Escala: 1:75

S1=S8=S9=S10=S11=S12=S13=S20=S21
S22=S23=S24=S25=S26=S28=S29=S30
S31=S32=S33=S34=S35=S36



Solo com capacidade de suporte > 3.00 kgf/cm²
Solo compactado sobre a sapata
peso específico > 1600.00 kgfm³

S2=S3=S4=S5=S6=S7=S14=S15=S16=S17=S18=S19



Solo com capacidade de suporte > 3.00 kgf/cm²
Solo compactado sobre a sapata
peso específico > 1600.00 kgfm³

Relação do aço

CAIXA D'ÁGUA:	13xP1	P7
Fôrro Superior:	11xP2	P37
Terreo:	P28	5xP25
	2xP9	24xS1
	12xS19	

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	32	5.0	39	52	2028
	33	5.0	70	72	3600
	34	5.0	945	102	96390
	35	5.0	1629	82	133578
	64	5.0	22	68	1936
CA50	65	5.0	44	68	2992
	127	8.0	312	121	37752
	128	8.0	288	126	36288
	129	8.0	180	156	28080
	253	10.0	120	140	16800
	254	10.0	8	VAR	VAR
	255	10.0	6	VAR	2292
	256	10.0	60	VAR	VAR
	257	10.0	54	435	23490
	258	10.0	20	330	6600
	259	10.0	52	60	3120
	260	10.0	26	331	8606
	261	10.0	4	98	392
	369	10.0	4	247	988
	370	10.0	8	242	1936
371	10.0	8	383	3064	
372	10.0	4	97	388	
373	10.0	4	140	560	
376	12.5	128	VAR	VAR	
377	12.5	128	435	55680	
378	12.5	64	330	21120	
379	12.5	64	383	24512	
425	12.5	6	97	962	
426	12.5	6	140	840	
427	16.0	44	330	14520	
428	16.0	48	435	20880	
429	16.0	48	VAR	VAR	
440	16.0	2	140	280	
441	16.0	4	383	1532	
442	16.0	2	97	194	

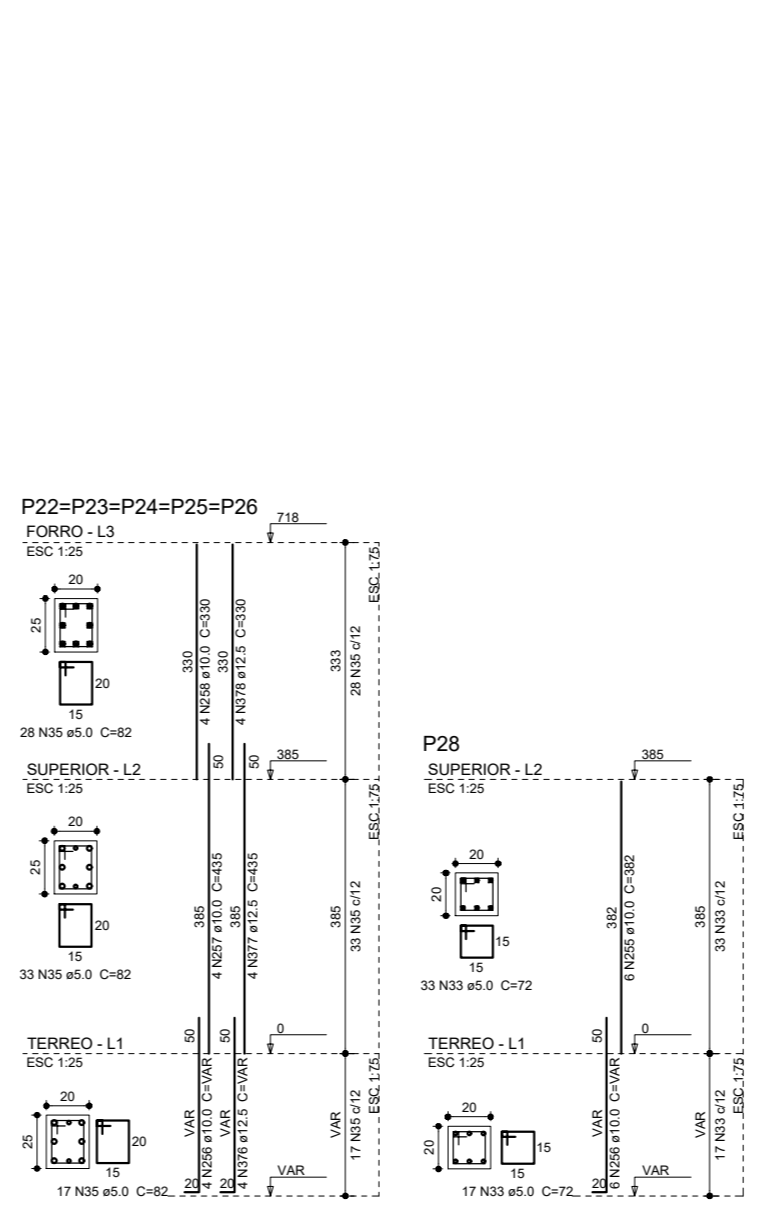
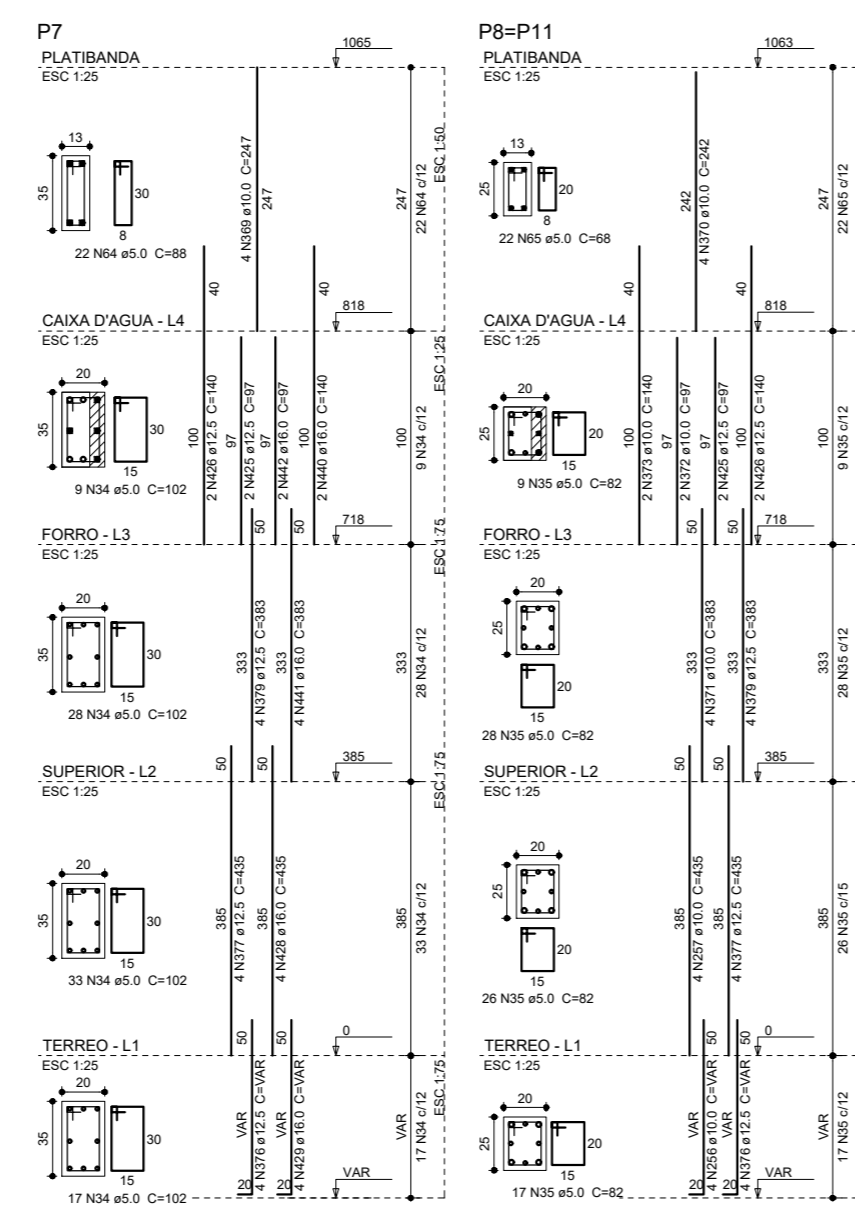
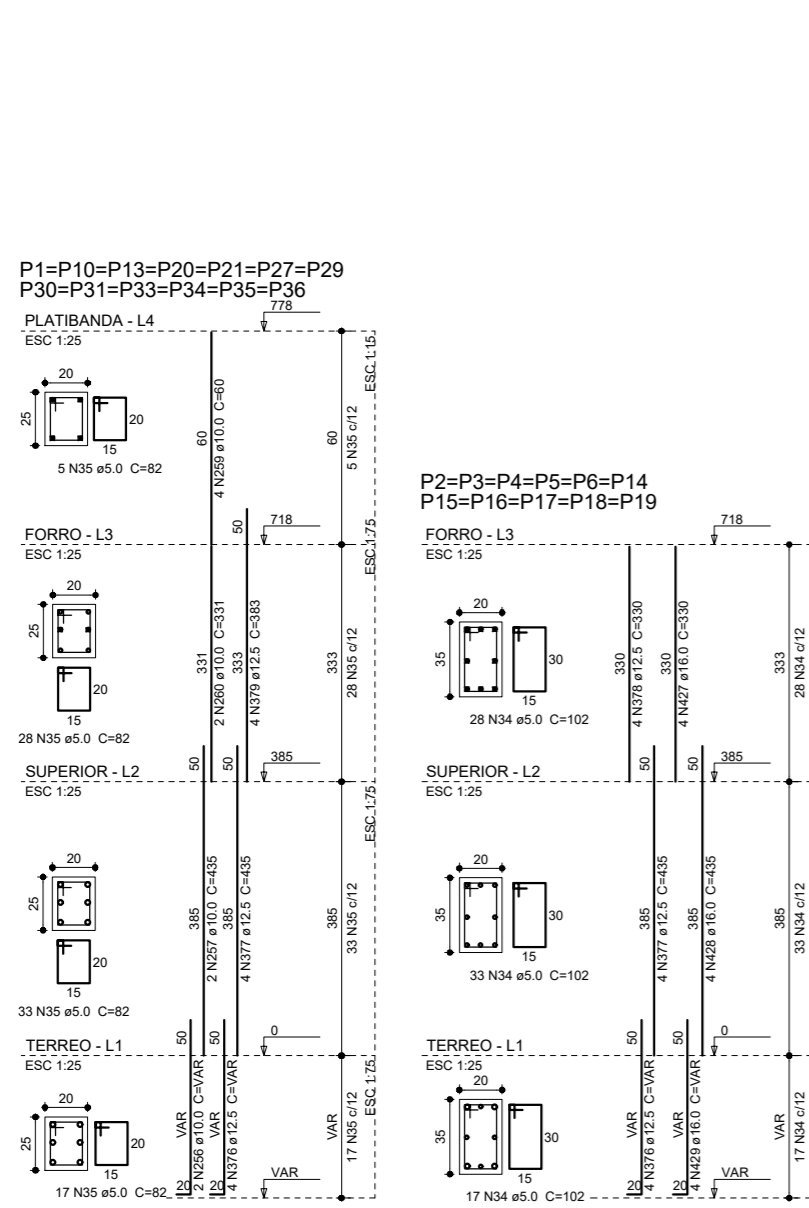
Resumo do aço

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	6.0	1021.2	443.2
	10.0	862.4	584.9
	12.5	1362.7	1444
	16.0	499.4	866.9
CA60	5.0	2453.3	407.8
PESO TOTAL (kg)			
CA50		3339.1	
CA60		407.8	

Volume de concreto (C-25) = 17.24 m³
Volume de concreto (C-30) = 19.41 m³

IMPORTANTE
TRAÇO RECOMENDADO

TRAÇO CONCRETO 30mpa	TRAÇO CONCRETO 25mpa
1 SC CIMENTO	1 LATA 18kg DE CIMENTO
3.5 LATA 18kg DE AREIA GROSSA	2.3 LATA 18kg DE AREIA GROSSA
5 LATA 18kg DE BRITA 19mm	3 LATA 18kg DE BRITA 19mm
25 LITROS DE AGUA	28 LITROS DE AGUA
1 m³ CONCRETO 30mpa	
8 SC CIMENTO 50KG	7 SC CIMENTO 50KG
28 Lts DE AREIA GROSSA	0.55 m ³ AREIA GROSSA
40 Lts DE BRITA 19mm	0.80 m ³ BRITA 19mm
200 LITROS DE AGUA	200 LITROS DE AGUA



José Ribamar Alves de Araújo
Engenheiro Civil
CREA/CE 352649CE

PROJETO ESTRUTURAL

ASSINATURAS:

PROPRIETÁRIO _____

RESP. TÉCNICO _____

OBRA: **CONSTRUÇÃO DA NOVA SEDE DA CÂMARA DE ITAITINGA**

FRANCHA: **PLANTA DE LOCAÇÃO/ARMAÇÃO DAS SAPATAS ARMAÇÃO DOS PILARES**

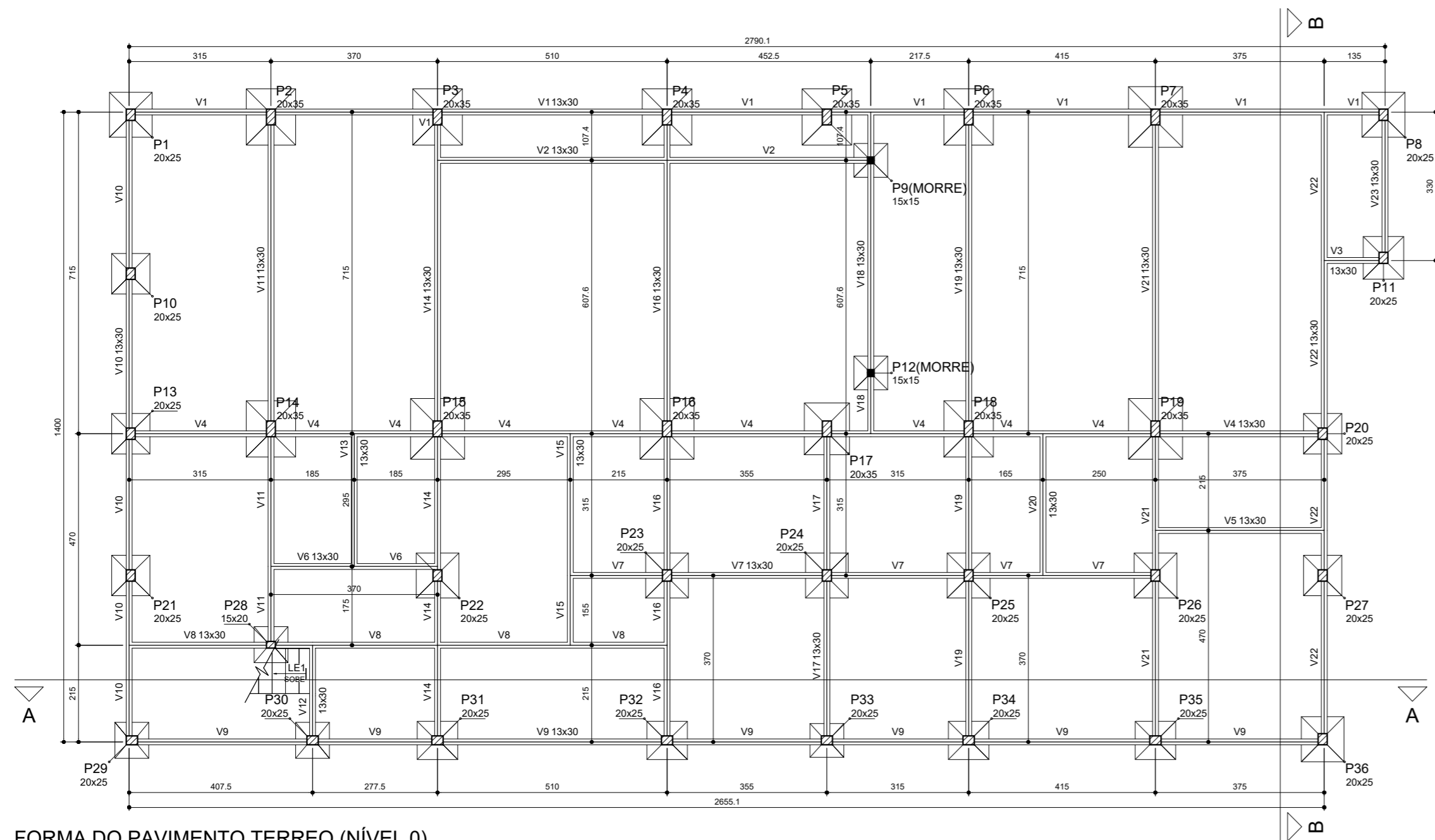
PROPRIETÁRIO: **CÂMARA MUNICIPAL DE ITAITINGA**

PAVIMENTO: _____

REVISÃO: **R002**

DATA: **16/08/2021**

FOLHA: **01/14**



FORMA DO PAVIMENTO TERREO (NÍVEL 0)
Escala 1:75

Relação do aço

AÇO	N	DIAM (mm)	QUANT	C.LIMIT (cm)	C.TOTAL (cm)
V1	36	5.0	636	78	49608
V4	130	8.0	4	724	2896
V5	131	8.0	4	1009	4036
V7	132	8.0	2	1167	2334
	133	8.0	4	1200	4800
	134	8.0	4	1199	4796
	135	8.0	2	514	1028
	136	8.0	2	980	1960
	137	8.0	2	1000	2000
	138	8.0	2	151	302
	139	8.0	2	174	348
	140	8.0	2	1040	2080
	141	8.0	2	377	754
	142	8.0	2	399	798
	143	8.0	2	411	822
	144	8.0	2	394	788
	145	8.0	2	406	812
	146	8.0	2	924	1848
	147	8.0	2	449	898
	148	8.0	2	1052	2104
	149	8.0	2	360	720
	150	8.0	2	716	1432
	151	8.0	2	533	1066
	152	8.0	2	839	1678
	153	8.0	2	428	856

Resumo do aço

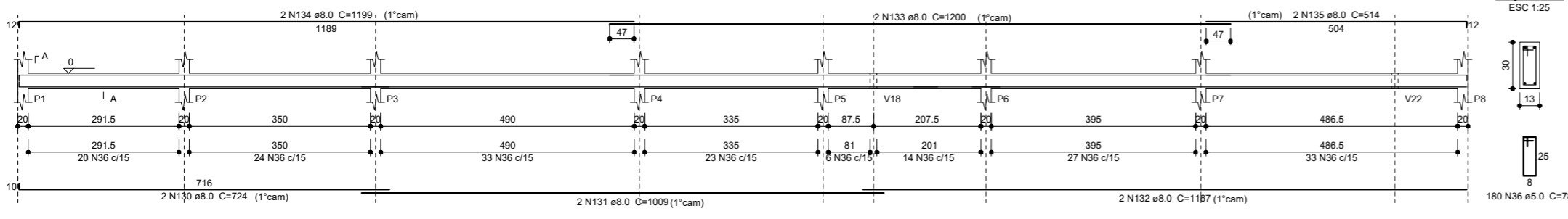
AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA60	8.0	411.6	178.6
CA60	5.0	496.1	84.1
PESO TOTAL (kg)			
CA50			178.6
CA60			84.1

Volume de concreto (C-30) = 3.86 m³

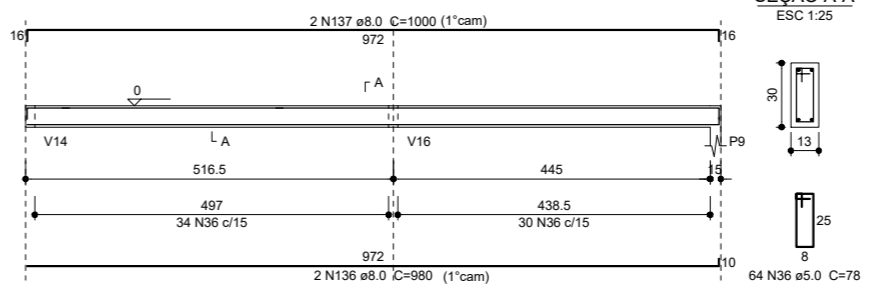
IMPORTANTE TRAÇO RECOMENDADO

TRAÇO CONCRETO 30mpa	TRAÇO CONCRETO 25mpa	
1 SC CIMENTO	1 LATA 18kg DE CIMENTO	
3.5 LATA 18kg DE AREIA GROSSA	2.3 LATA 18kg DE AREIA GROSSA	
5 LATA 18kg DE BRITA 19mm	3 LATA 18kg DE BRITA 19mm	
25 LITROS DE AGUA	28 LITROS DE AGUA	
1 m³ CONCRETO 30mpa		1 m³ CONCRETO 25mpa
8 SC CIMENTO 50KG	7 SC CIMENTO 50KG	
28 Lts DE AREIA GROSSA	0.55 m³ AREIA GROSSA	
40 Lts DE BRITA 19mm	0.80 m³ BRITA 19mm	
200 LITROS DE AGUA	200 LITROS DE AGUA	

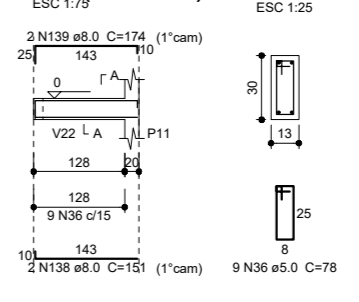
V1 (13 x 30)
ESC 1:75



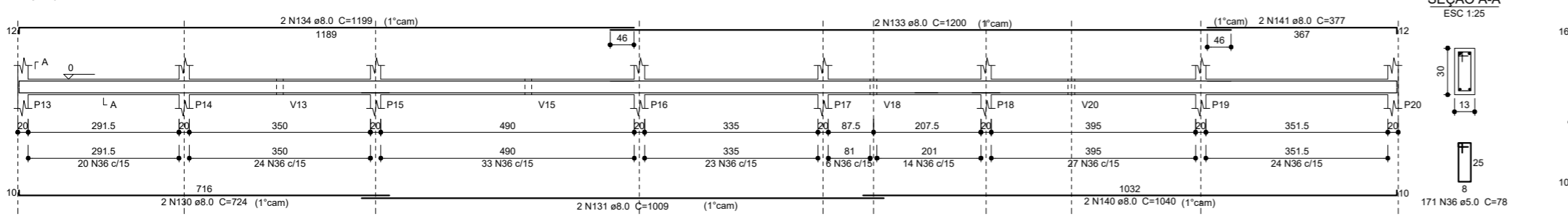
V2 (13 x 30)
ESC 1:75



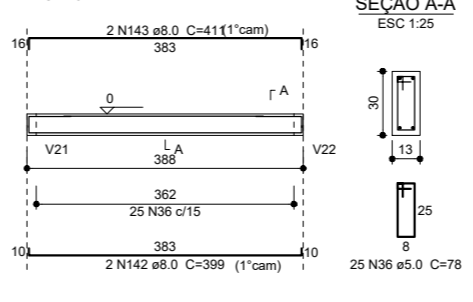
V3 (13 x 30)
ESC 1:75



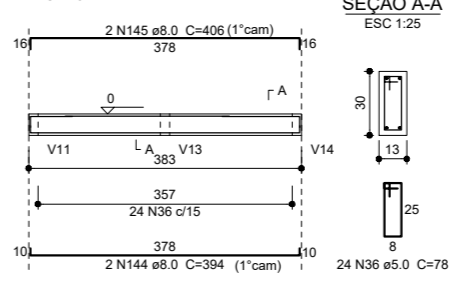
V4 (13 x 30)
ESC 1:75



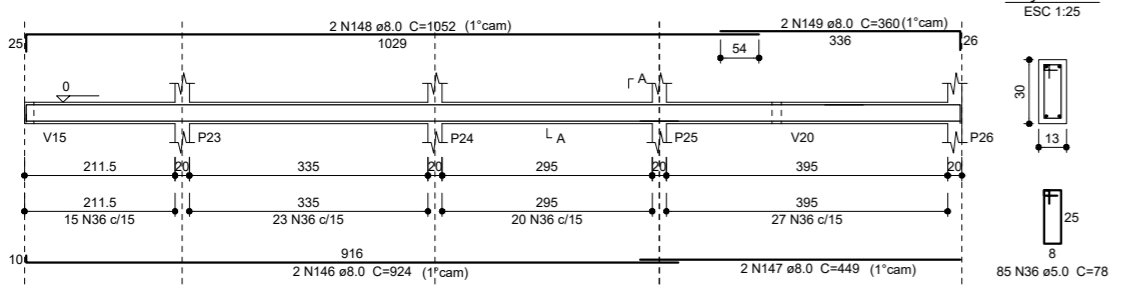
V5 (13 x 30)
ESC 1:75



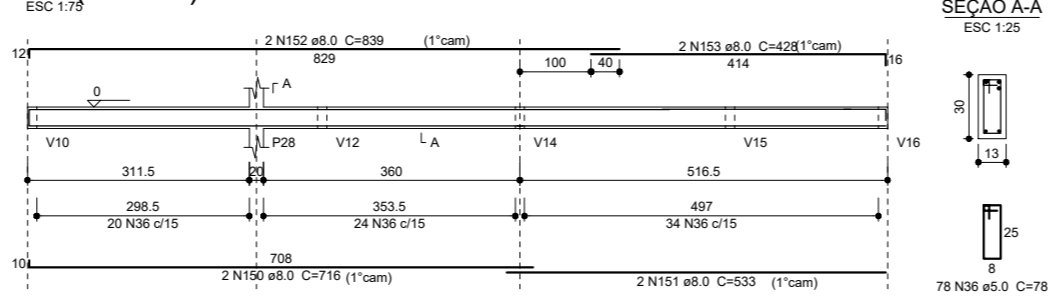
V6 (13 x 30)
ESC 1:75



V7 (13 x 30)
ESC 1:75



V8 (13 x 30)
ESC 1:75



Assinatura: *[Signature]*
José Ribamar Alves de Araujo
Engenheiro Civil
CREA/CE 352649CE

PROJETO ESTRUTURAL

ASSINATURAS:

PROPRIETÁRIO: _____

RESP. TÉCNICO: _____

OBRA: **CONSTRUÇÃO DA NOVA SEDE DA CÂMARA DE ITAITINGA**

FRANCHA: **FORMAS/ARMAÇÃO DAS VIGAS 1º TRAMA**

PROPRIETÁRIO: CÂMARA MUNICIPAL DE ITAITINGA

PAVIMENTO: _____

REVISÃO: R002

DATA: 16/08/2021

FOLHA: **02/14**

Relação do aço

ACO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA50	36	5.0	974	78	75972
CA50	154	8.0	2	716	1432
	155	8.0	2	912	1824
	156	8.0	2	1137	2274
	133	8.0	4	1200	4800
	157	8.0	2	367	734
	158	8.0	2	1075	2150
	159	8.0	2	393	786
	160	8.0	4	1198	4792
	161	8.0	2	332	664
	162	8.0	2	528	1056
	163	8.0	2	741	1482
	164	8.0	1	108	216
	165	8.0	1	215	430
	166	8.0	1	130	260
	167	8.0	2	1083	2166
	168	8.0	2	172	344
	169	8.0	2	233	466
	170	8.0	2	283	566
	171	8.0	2	311	622
	172	8.0	2	331	662
	173	8.0	2	424	848
	174	8.0	2	1076	2152
	175	8.0	1	205	410
	176	8.0	1	170	340
	177	8.0	2	1198	2396
	178	8.0	2	316	632
	179	8.0	2	486	972
	180	8.0	2	506	1012
	181	8.0	2	1054	2108
	182	8.0	1	117	234
	183	8.0	1	466	932
	184	8.0	1	120	240
	185	8.0	2	311	622
	186	8.0	2	426	852
	187	8.0	2	396	792
	188	8.0	2	753	1506
	189	8.0	2	738	1476
	190	8.0	2	751	1502
	191	8.0	2	728	1456
	192	8.0	2	1198	2396
	193	8.0	2	318	636
	194	8.0	2	339	678
	195	8.0	2	351	702
	196	8.0	2	350	700
	197	8.0	2	1198	2396
	198	8.0	2	321	642
	199	8.0	1	729	1458
	200	8.0	2	732	1464
	201	8.0	2	754	1508
	202	8.0	2	1198	2396
	203	8.0	2	301	602
	204	8.0	2	364	728
	205	8.0	2	409	818
	206	10.0	2	404	808
	207	10.0	2	730	1460
	208	10.0	2	752	1504

Resumo do aço

ACO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	8.0	638.4	277.1
CA60	10.0	37.8	25.6
CA60	5.0	759.8	128.8
PESO TOTAL (kg)			
CA50		302.8	
CA60		128.8	

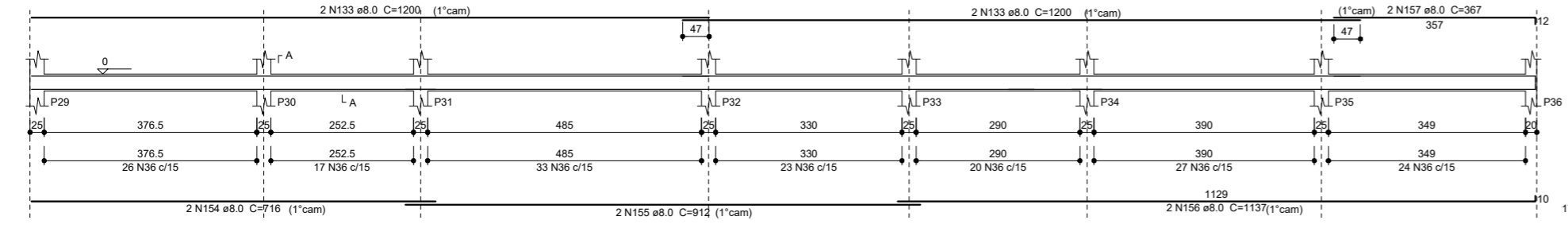
Volume de concreto (C-30) = 6.04 m³

IMPORTANTE TRAPO RECOMENDADO

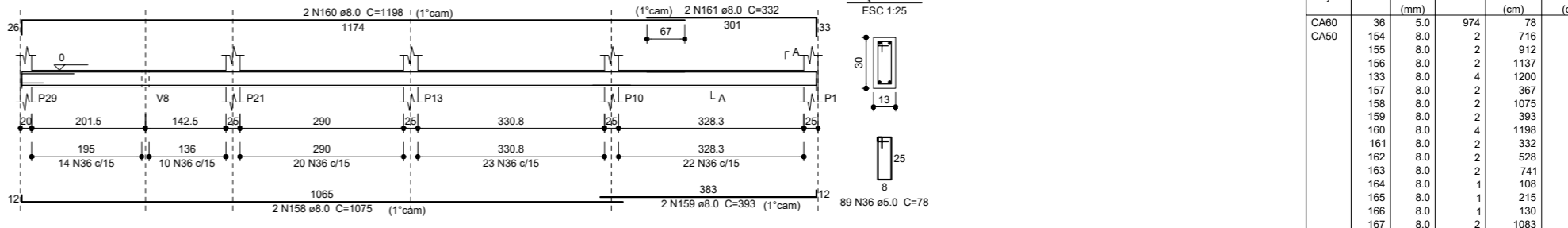
TRACO CONCRETO 30mpa	TRACO CONCRETO 25mpa
1 SC CIMENTO	1 LATA 18kg DE CIMENTO
3.5 LATA 18kg DE AREIA GROSSA	2.3 LATA 18kg DE AREIA GROSSA
5 LATA 18kg DE BRITA 19mm	3 LATA 18kg DE BRITA 19mm
25 LITROS DE AGUA	28 LITROS DE AGUA
1 m³ CONCRETO 30mpa	
8 SC CIMENTO 50KG	7 SC CIMENTO 50KG
28 LTs DE AREIA GROSSA	0.55 m³ AREIA GROSSA
40 LTs DE BRITA 19mm	0.80 m³ BRITA 19mm
200 LITROS DE AGUA	200 LITROS DE AGUA

José Ribamar Alves de Araújo
Engenheiro Civil
CREA/CE 35264/9CE

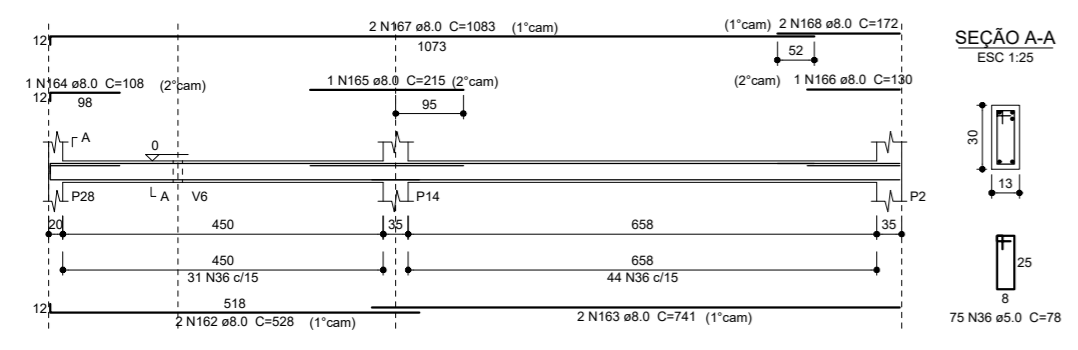
V9 (13 x 30)



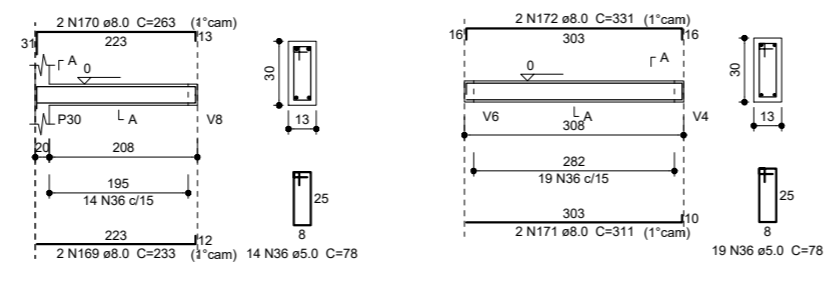
V10 (13 x 30)



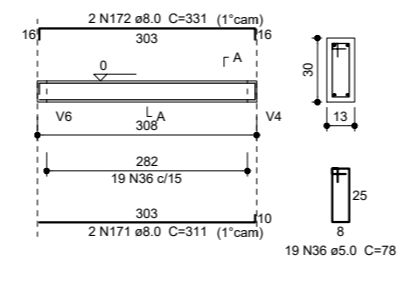
V11 (13 x 30)



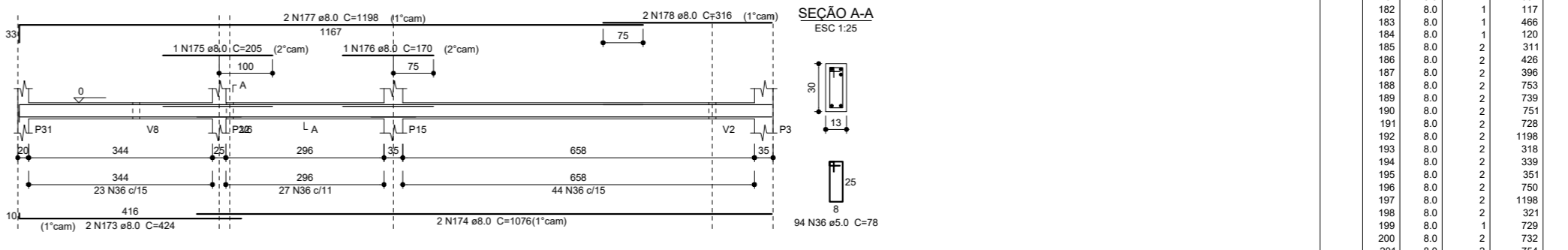
V12 (13 x 30)



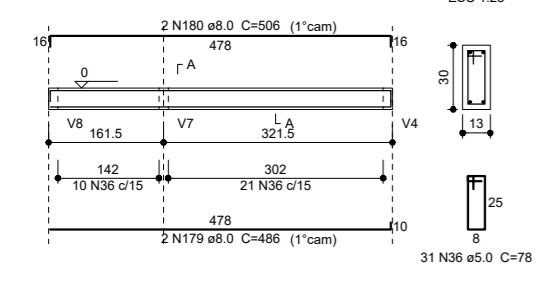
V13 (13 x 30)



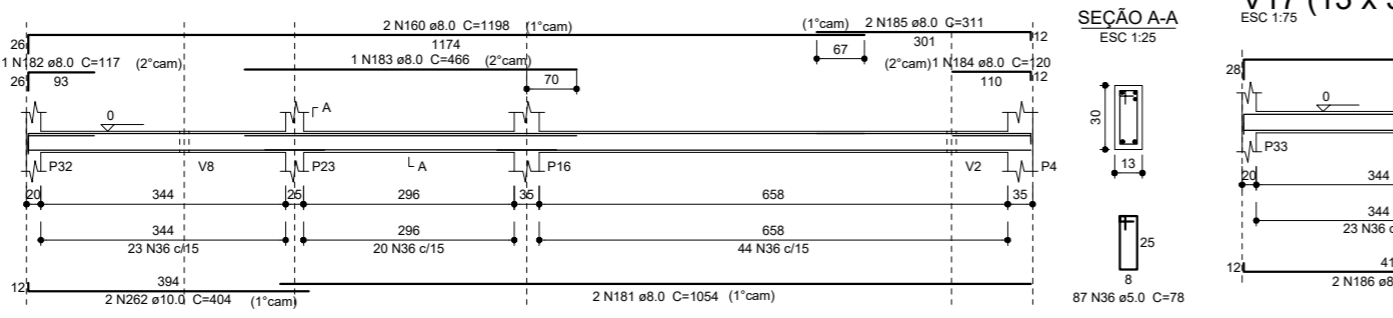
V14 (13 x 30)



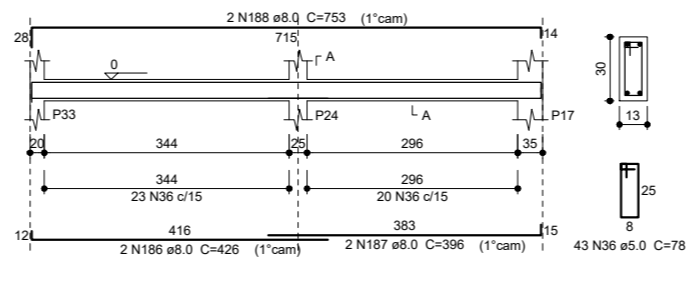
V15 (13 x 30)



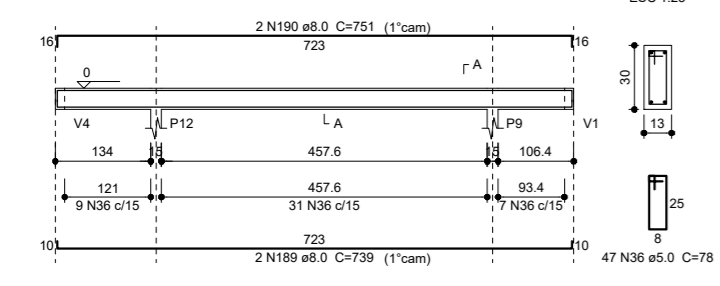
V16 (13 x 30)



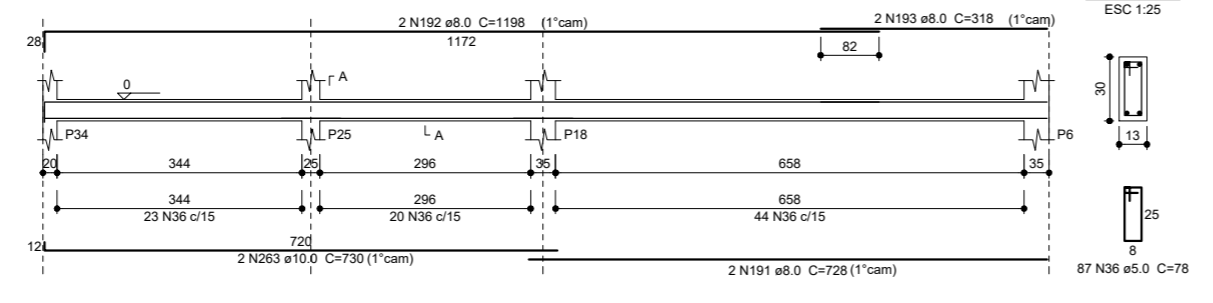
V17 (13 x 30)



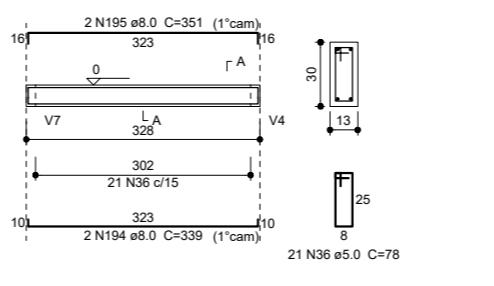
V18 (13 x 30)



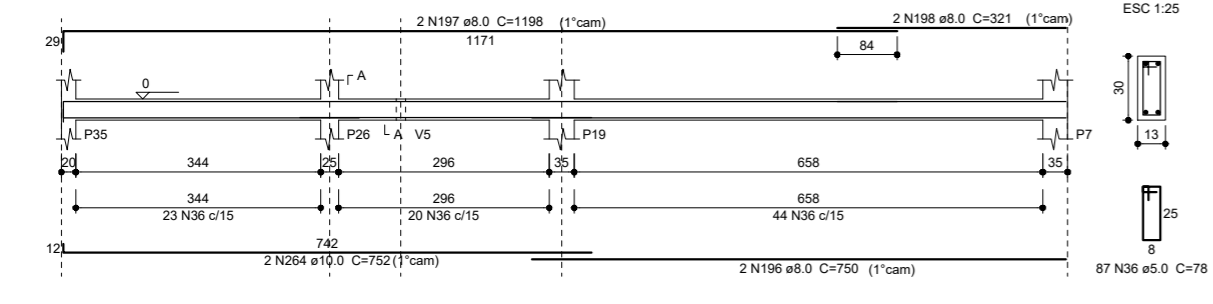
V19 (13 x 30)



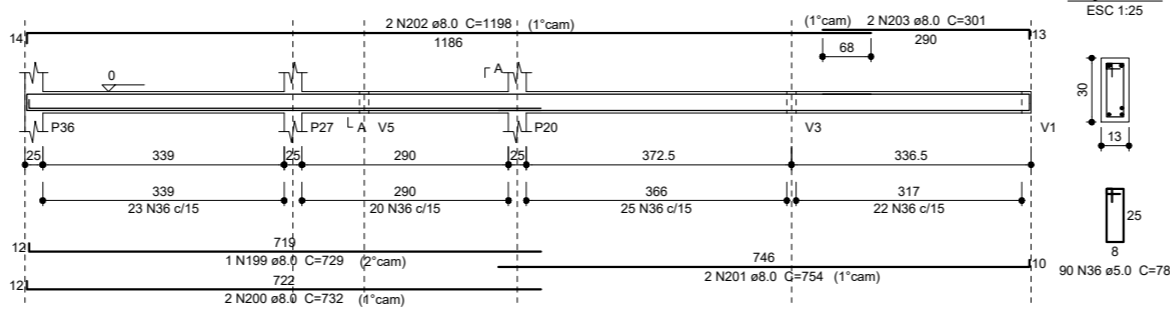
V20 (13 x 30)



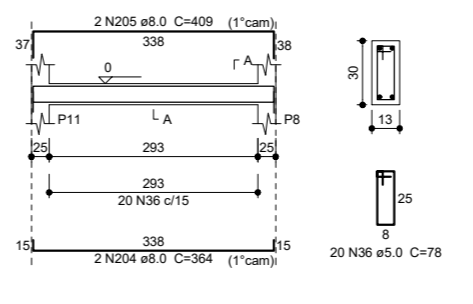
V21 (13 x 30)



V22 (13 x 30)



V23 (13 x 30)



PROJETO ESTRUTURAL

ASSINATURAS:

PROPRIETÁRIO _____

RESP. TÉCNICO _____

OBRA:

CONSTRUÇÃO DA NOVA SEDE DA CÂMARA DE ITAITINGA

FRANCHA:

ARMAÇÃO DAS VIGAS ULTIMA TRAMA

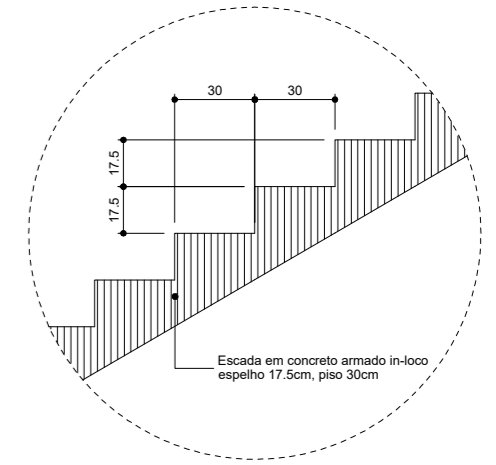
PROPRIETÁRIO: CÂMARA MUNICIPAL DE ITAITINGA

PAVIMENTO: _____

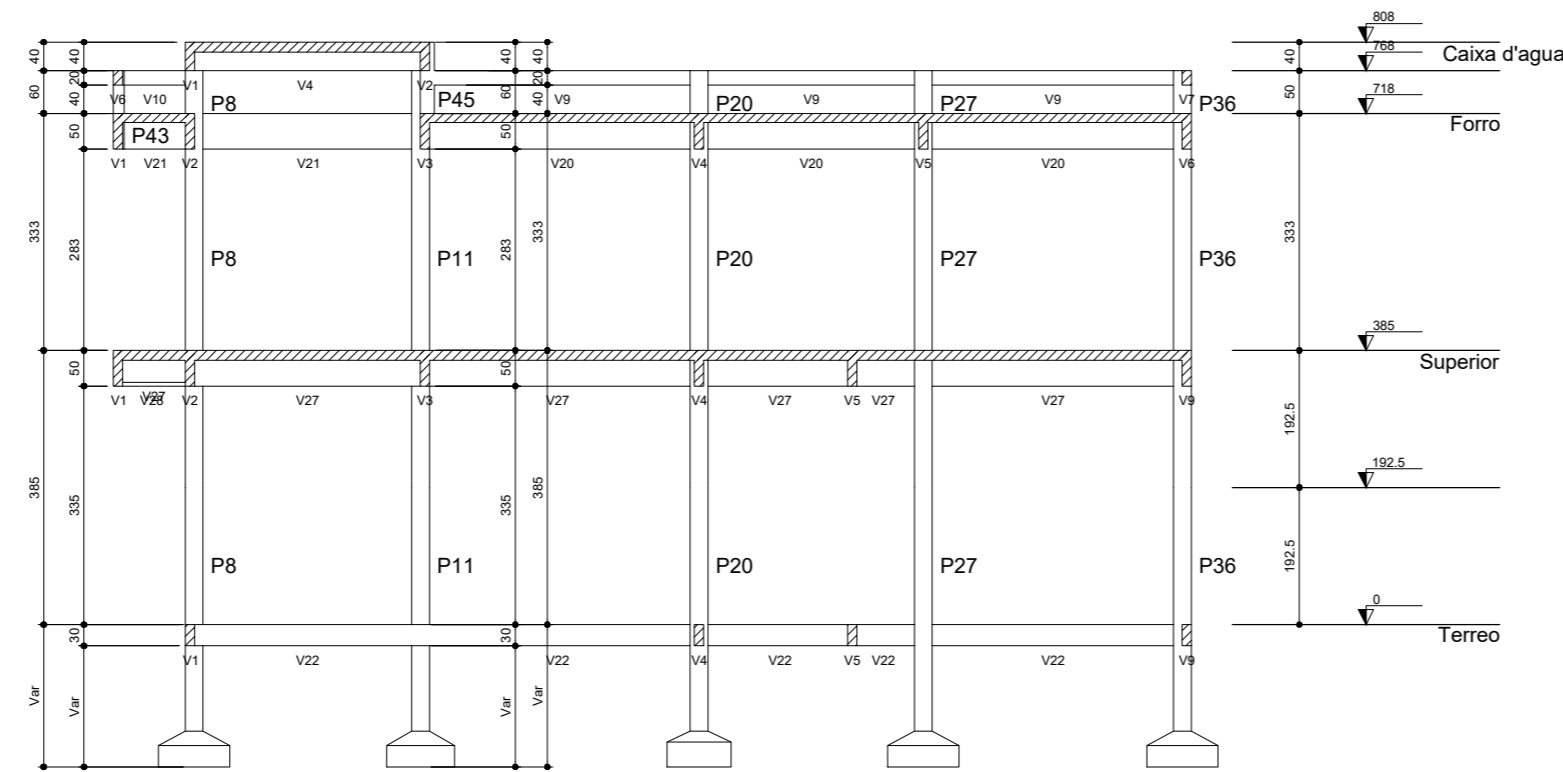
REVISÃO: R002

DATA: 16/08/2021

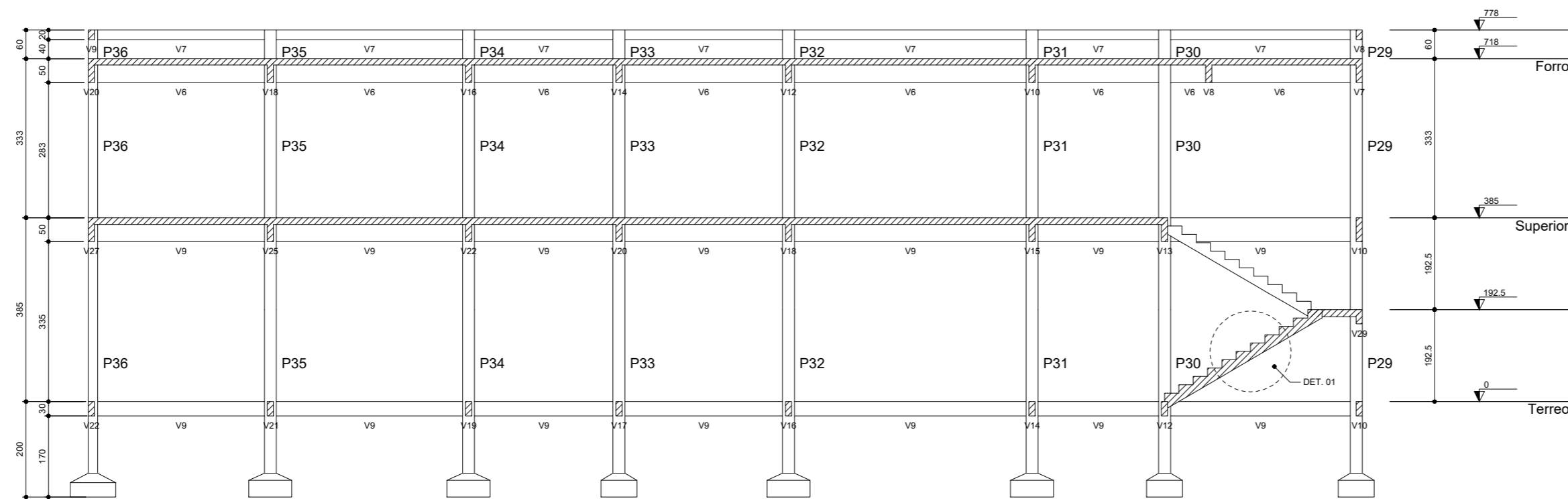
FOLHA
03/14



DET. 01 ESCADA
Escala 1:20



CORTE B-B
Escala 1:75



CORTE A-A
Escala 1:75

José Ribamar Alves de Araújo
Engenheiro Civil
CREA/CE 352649CE

PROJETO ESTRUTURAL

ASSINATURAS:

PROPRIETÁRIO _____

RESP. TÉCNICO _____

OBRA:

CONSTRUÇÃO DA NOVA SEDE
DA CÂMARA DE ITAITINGA

FRANCHA:

CORTE AA/BB

PROPRIETÁRIO: CÂMARA MUNICIPAL DE ITAITINGA

PAVIMENTO: _____

REVISÃO: R002

DATA: 16/08/2021

FOLHA
04/14

Relação do aço

LE2	V29				
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	36	5.0	23	78	1794
CA50	70	6.3	1	81	81
	69	6.3	1	91	91
	122	6.3	5	118	589
	123	6.3	5	269	1345
	124	6.3	2	164	328
	125	6.3	16	109	1744
	126	6.3	14	107	1488
	252	8.0	4	109	436
	374	10.0	10	463	4630
	375	10.0	10	505	5050
	404	12.5	2	408	816
	405	12.5	2	482	924

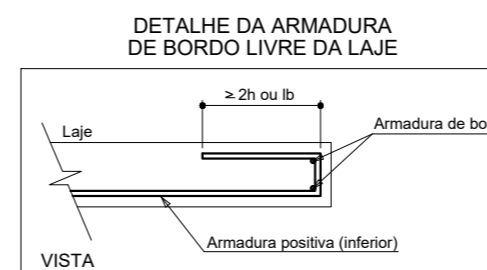
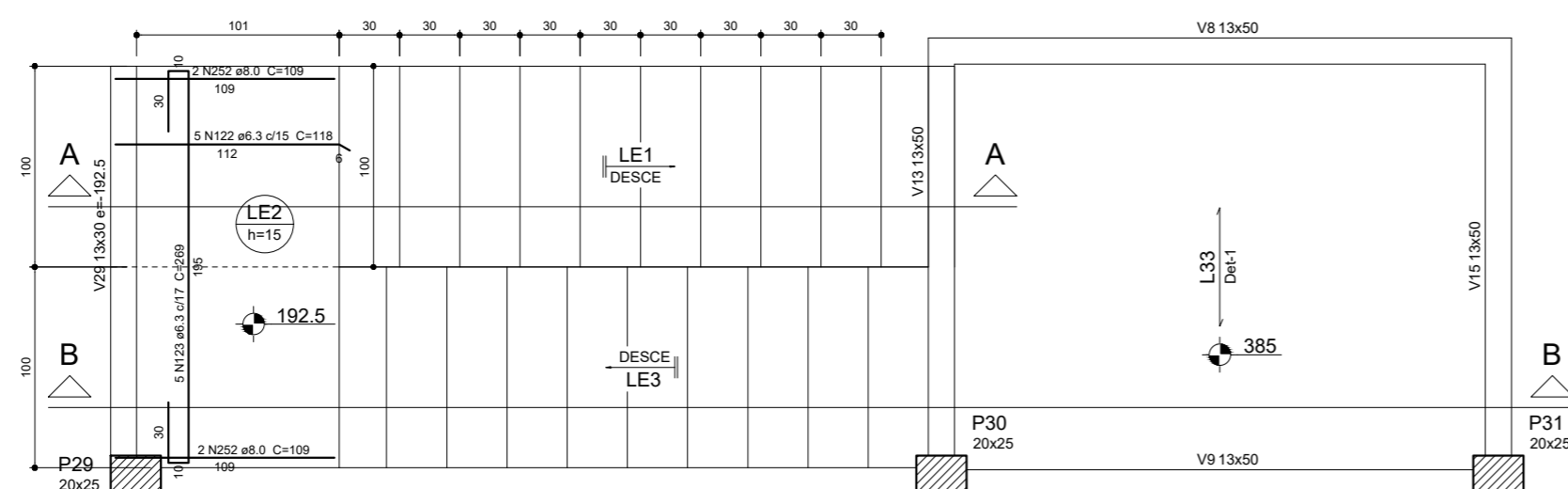
Resumo do aço

AÇO	DIAM (mm)	C.TOTAL (m)	PESO * 10 % (kg)
CA50	6.3	56.8	15.3
	8.0	4.4	1.9
	10.0	96.8	65.6
	12.5	17.4	18.4
CA60	5.0	18	3
PESO TOTAL (kg)			
CA50	101.3		
CA60	3		

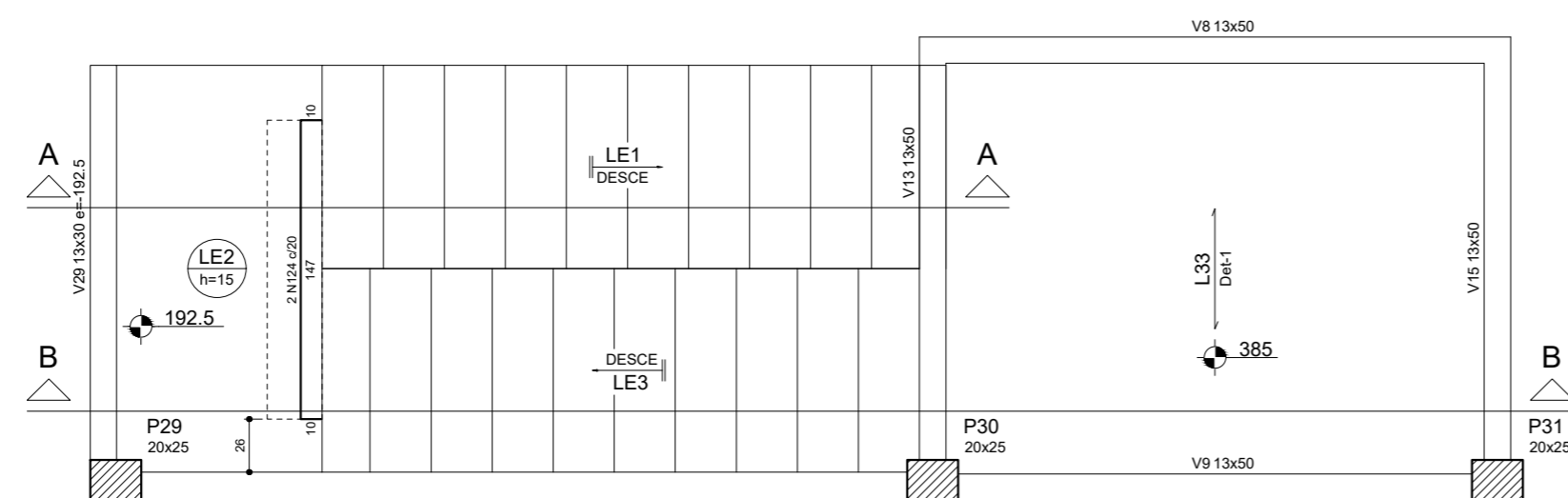
Volume de concreto (C-30) = 2.03 m³

IMPORTANTE

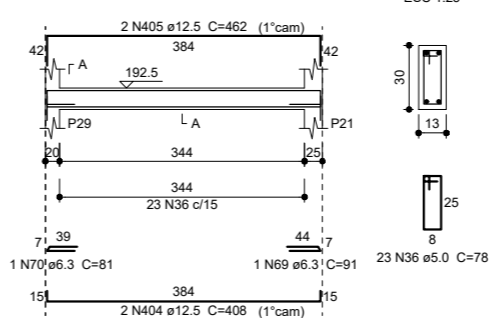
TRAÇO CONCRETO 30mpa		TRAÇO CONCRETO 25mpa	
1	SC CIMENTO	1	LATA 18lbs DE CIMENTO
3.5	LATA 18lbs DE AREIA GROSSA	2.3	LATA 18lbs DE AREIA GROSSA
5	LATA 18lbs DE BRITA 19mm	3	LATA 18lbs DE BRITA 19mm
25	LITROS DE AGUA	28	LITROS DE AGUA
1 m³ CONCRETO 30mpa		1 m³ CONCRETO 25mpa	
8	SC CIMENTO 50KG	7	SC CIMENTO 50KG
28	Lts DE AREIA GROSSA	0.55	m³ AREIA GROSSA
40	Lts DE BRITA 19mm	0.80	m³ BRITA 19mm
200	LITROS DE AGUA	200	LITROS DE AGUA



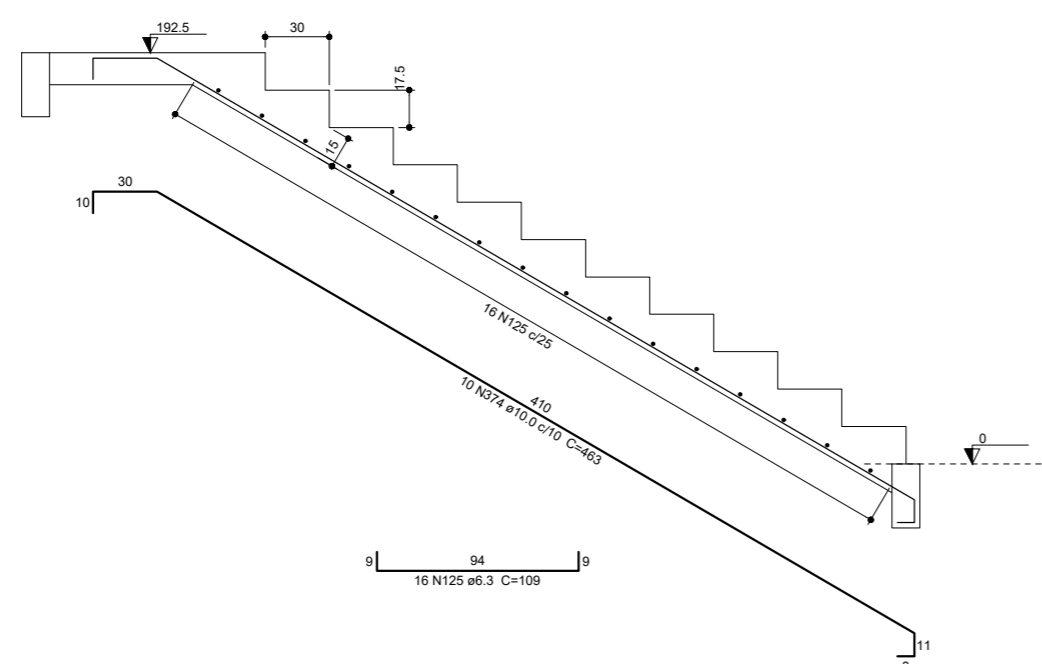
ARMAÇÃO POSITIVA DA ESCADA E1
Escala 1:25



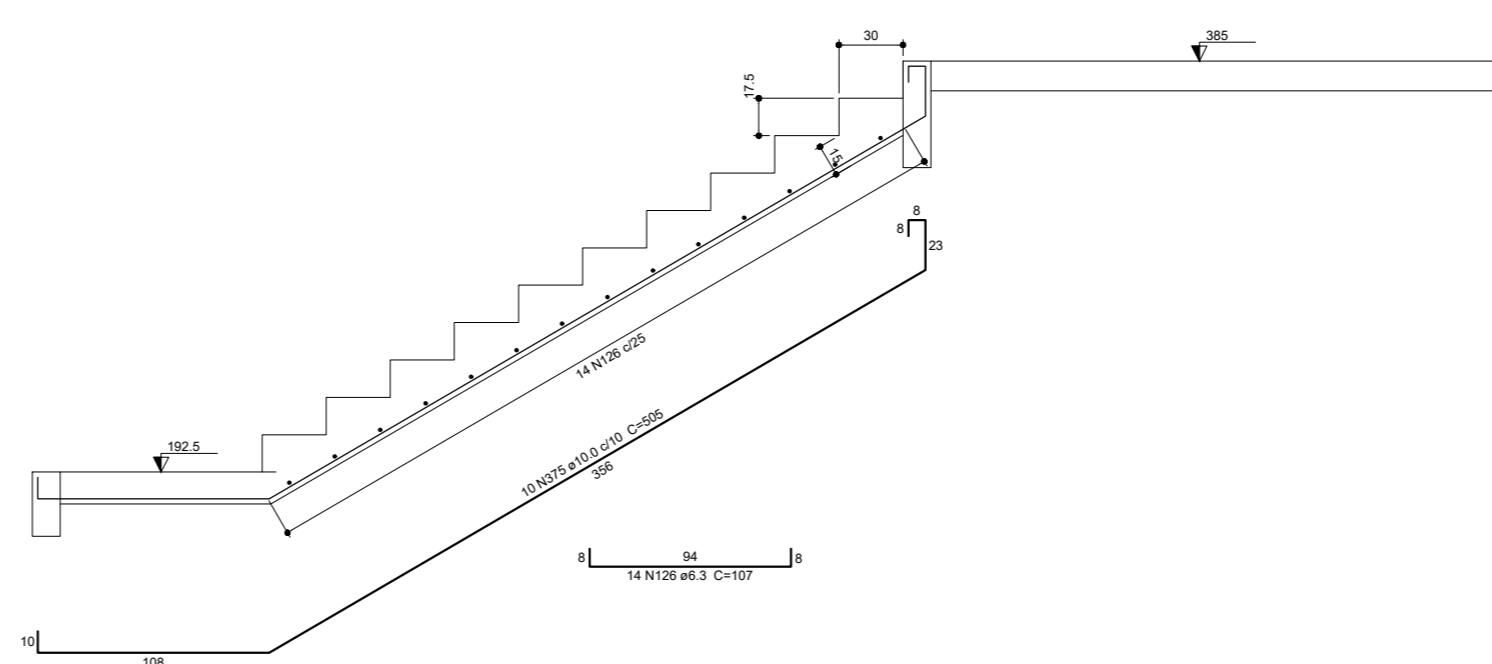
V29 (13 x 30)
ESC 1:75



ARMAÇÃO NEGATIVA DA ESCADA E1
Escala 1:25



CORTE A-A (LE1)
Escala 1:25

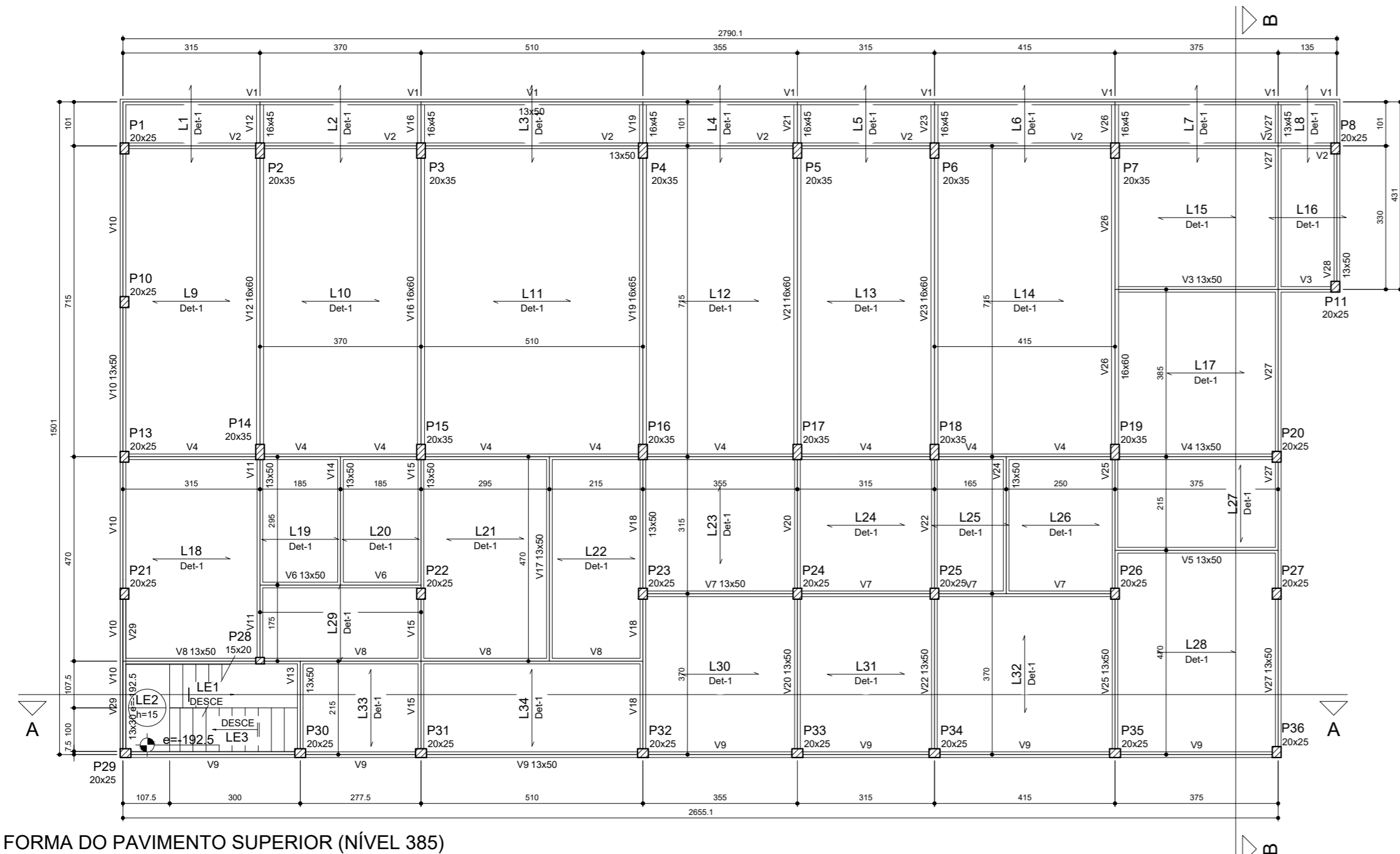


CORTE B-B (LE3)
Escala 1:25

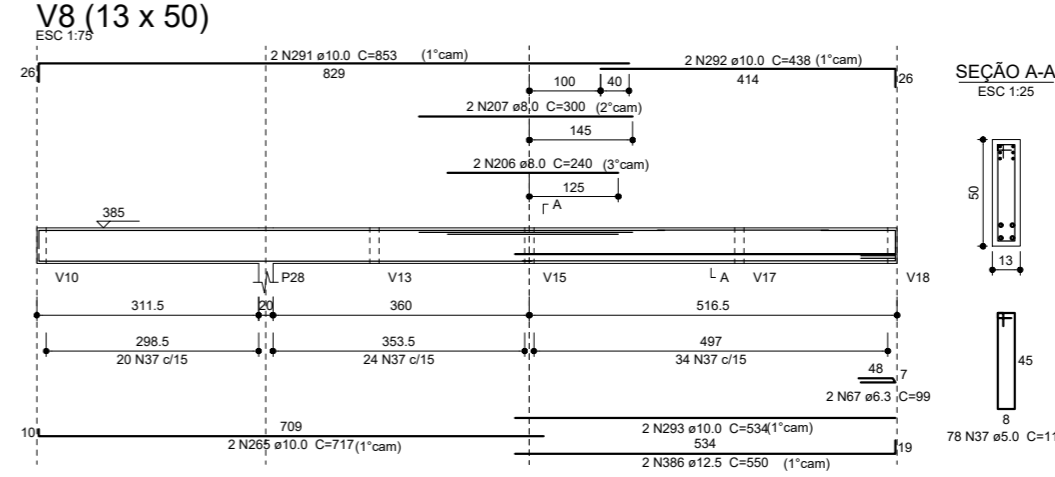
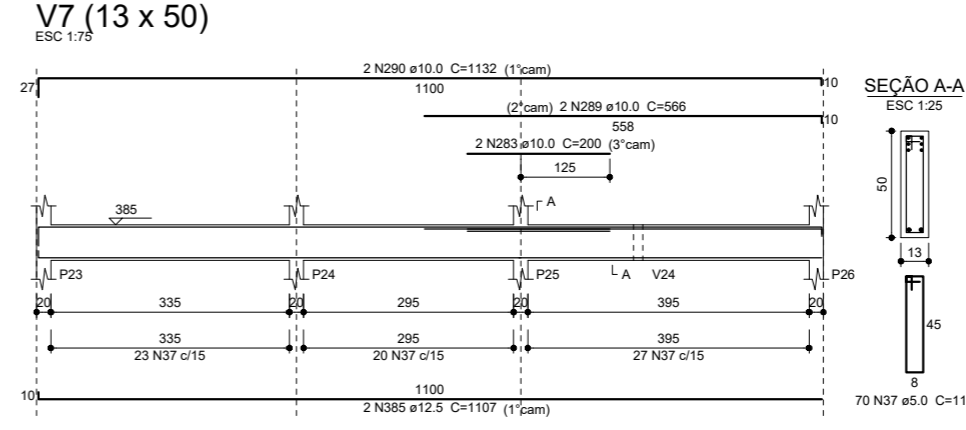
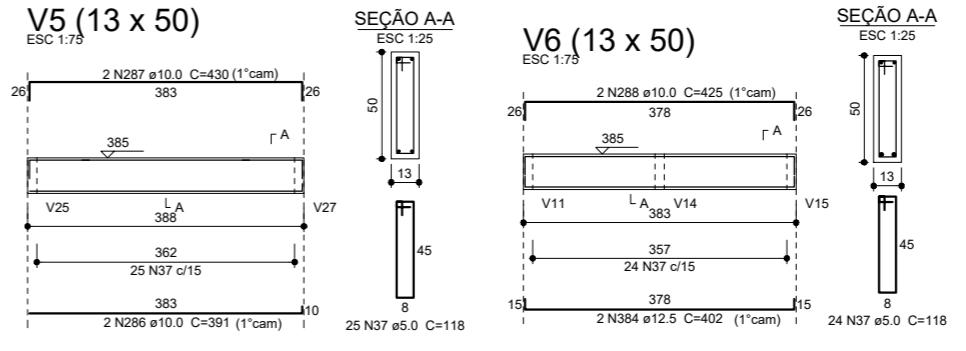
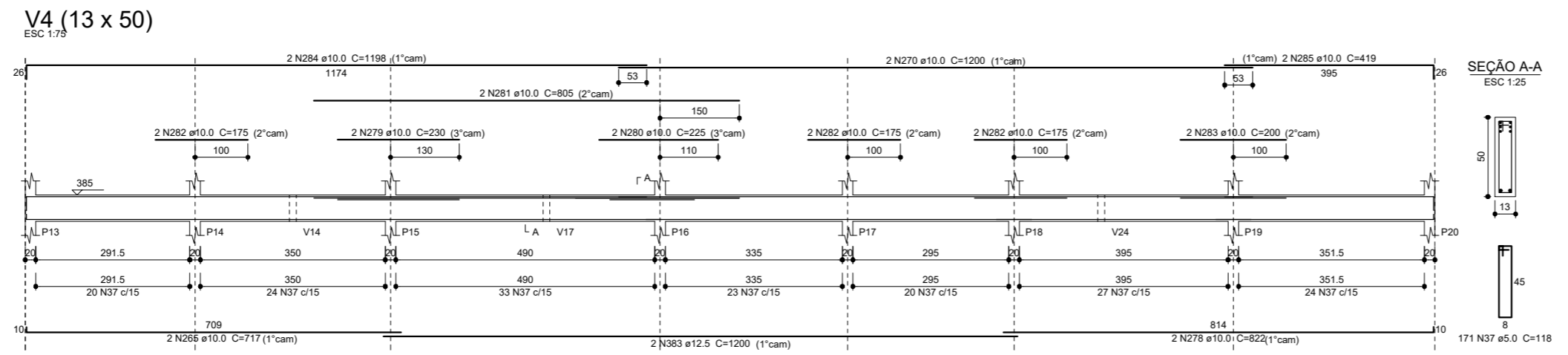
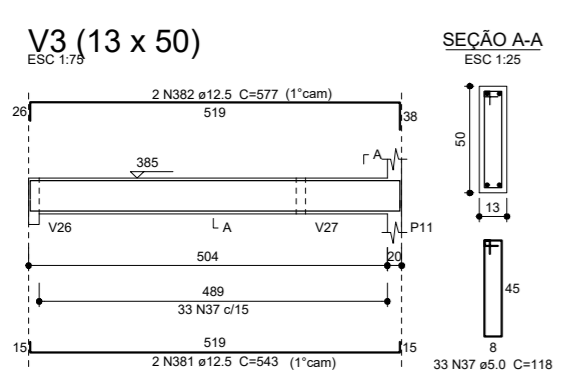
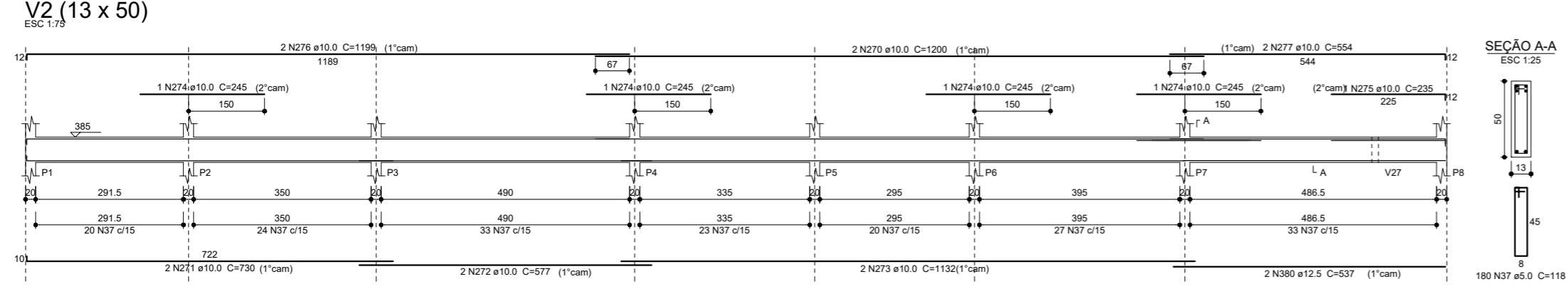
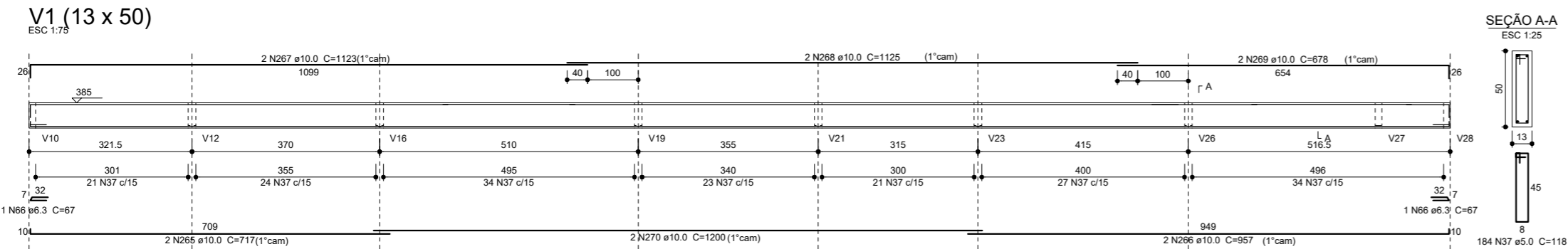
José Ribamar Alves de Araújo
Engenheiro Civil
CREA/CE 352649CE

PROJETO ESTRUTURAL

ASSINATURAS:	
PROPRIETÁRIO	_____
RESP. TÉCNICO	_____
OBRA:	CONSTRUÇÃO DA NOVA SEDE DA CÂMARA DE ITAITINGA
FRANCHA:	ARMAÇÃO DA ESCADA
PROPRIETÁRIO:	CÂMARA MUNICIPAL DE ITAITINGA
PAVIMENTO:	
REVISÃO:	R002
DATA:	16/08/2021
FOLHA:	05/14



FORMA DO PAVIMENTO SUPERIOR (NÍVEL 385)
Escala 1:75



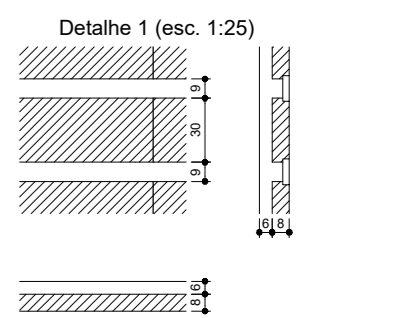
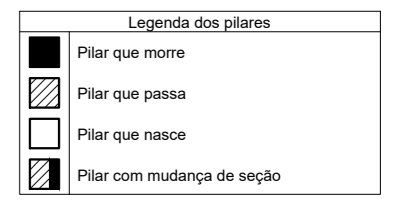
Relação do aço

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)	C.TOTAL (kg)
CA60	37	5.0	785	118	90270	118
CA50	66	6.3	2	67	134	67
	67	6.3	2	99	188	99
	206	8.0	2	240	480	240
	207	8.0	2	300	600	300
	265	10.0	6	717	4302	4302
	266	10.0	2	957	1914	957
	267	10.0	2	1123	2246	1123
	268	10.0	2	1125	2250	1125
	269	10.0	2	1125	2250	1125
	270	10.0	6	1200	7200	7200
	271	10.0	2	730	1460	730
	272	10.0	2	577	1154	577
	273	10.0	2	1132	2264	1132
	274	10.0	4	245	980	245
	275	10.0	1	235	235	235
	276	10.0	2	1199	2398	1199
	277	10.0	2	554	1108	554
	278	10.0	2	822	1644	822
	279	10.0	2	230	460	230
	280	10.0	2	225	450	225
	281	10.0	2	605	1210	605
	282	10.0	6	175	1050	175
	283	10.0	4	200	800	200
	284	10.0	2	1186	2372	1186
	285	10.0	2	419	838	419
	286	10.0	2	391	782	391
	287	10.0	2	430	860	430
	288	10.0	2	425	850	425
	289	10.0	2	566	1132	566
	290	10.0	2	1132	2264	1132
	291	10.0	2	853	1706	853
	292	10.0	2	438	876	438
	293	10.0	2	534	1068	534
	380	12.5	2	557	1114	557
	381	12.5	2	543	1086	543
	382	12.5	2	577	1154	577
	383	12.5	2	1200	2400	1200
	384	12.5	2	402	804	402
	385	12.5	2	1107	2214	1107
	386	12.5	2	550	1100	550

Resumo do aço

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	6.3	3.4	0.9
	8.0	10.8	4.7
	10.0	476.6	323.2
	12.5	98.4	104.2
CA60	5.0	902.7	153.1
PESO TOTAL (kg)			
CA50	432.9		
CA60	153.1		

Volume de concreto (C-30) = 7.72 m³



Blocos de enchimento

Detalhe	Tipo	Nome	Dimensões (cm)	Quantidade
1	EPS Unidirecional	B8/30/125	8 x 30 x 125	848

IMPORTANTE TRAÇO RECOMENDADO

TRAÇO CONCRETO 30mpa	TRAÇO CONCRETO 25mpa
1 SC CIMENTO	1 LATA 18lbs DE CIMENTO
3.5 LATA 18lbs DE AREIA GROSSA	2.3 LATA 18lbs DE AREIA GROSSA
5 LATA 18lbs DE BRITA 19mm	3 LATA 18lbs DE BRITA 19mm
25 LITROS DE AGUA	28 LITROS DE AGUA
1 m³ CONCRETO 30mpa	1 m³ CONCRETO 25mpa
8 SC CIMENTO 50kg	7 SC CIMENTO 50kg
28 Lts de AREIA GROSSA	0.55 m³ AREIA GROSSA
40 Lts de BRITA 19mm	0.80 m³ BRITA 19mm
200 LITROS DE AGUA	200 LITROS DE AGUA

José Ribamar Alves de Araújo
Engenheiro Civil
CREACE 352649CE

PROJETO ESTRUTURAL

ASSINATURAS:

PROPRIETÁRIO: _____

RESP. TÉCNICO: _____

OBRA: **CONSTRUÇÃO DA NOVA SEDE DA CÂMARA DE ITAITINGA**

FRANCHA: **FORMAS/ARMAÇÃO DAS VIGAS 1º TRAMA**

PROPRIETÁRIO: CÂMARA MUNICIPAL DE ITAITINGA

PAVIMENTO: _____

REVISÃO: R002

DATA: 16/08/2021

FOLHA: **06/14**

ACO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	37	5.0	743	118	87674
	38	5.0	6	108	648
	39	5.0	372	144	53568
	40	5.0	54	114	6156
	68	6.3	6	298	1788
	66	6.3	2	67	134
	69	6.3	1	91	91
	208	8.0	2	271	542
	209	8.0	2	351	702
	210	8.0	6	351	2106
CA50	211	8.0	6	371	742
	212	8.0	2	127	254
	213	8.0	2	161	322
	214	10.0	2	724	1448
	295	10.0	2	629	1258
	296	10.0	6	215	1290
	270	10.0	4	1200	4800
	294	10.0	2	724	1448
	298	10.0	2	417	834
	299	10.0	2	731	1462
	300	10.0	2	508	1016
	301	10.0	2	498	996
	302	10.0	2	1198	2396
	303	10.0	2	452	904
	304	10.0	2	475	950
	305	10.0	2	231	462
	306	10.0	2	303	606
	307	10.0	4	323	1292
	308	10.0	2	375	750
	309	10.0	2	525	1050
	310	10.0	2	508	1016
	311	10.0	4	725	2900
	312	10.0	2	723	1446
	313	10.0	2	456	912
	314	10.0	2	732	1464
	315	10.0	2	760	1520
	316	10.0	24	824	19776
	317	10.0	12	144	1728
	318	10.0	12	465	5580
	319	10.0	6	119	714
	320	10.0	12	300	3600
	383	12.5	2	1000	2400
	387	12.5	2	512	1024
	388	12.5	2	231	462
	389	12.5	2	527	1054
	390	12.5	4	727	2908
	391	12.5	2	788	1576
	392	12.5	2	502	1004
	393	12.5	2	756	1512
	394	12.5	2	176	352
395	12.5	2	754	1508	
396	12.5	2	754	1508	
397	12.5	2	196	392	
398	12.5	2	750	1500	
399	12.5	2	225	450	
400	12.5	2	1197	2394	
401	12.5	2	426	852	
402	12.5	2	382	764	
403	12.5	2	510	1020	
406	12.5	12	227	2724	
407	12.5	12	312	3744	
432	16.0	12	252	3024	
430	16.0	18	741	13338	
431	16.0	12	352	4224	
432	16.0	12	252	3024	
433	16.0	18	266	4788	
434	16.0	18	388	6984	

Resumo do aço

ACO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	6.3	20.2	5.4
	8.0	46.7	20.3
	10.0	633.8	429.8
	12.5	387.3	410.3
	16.0	323.6	561.8
CA60	5.0	1489.5	251
PESO TOTAL (kg)			1427.7
CA50			251
CA60			1176.7

Volume de concreto (C=30) = 12.13 m³

IMPORTANTE	
TRAÇO RECOMENDADO	
TRAÇO CONCRETO 30mpa	TRAÇO CONCRETO 25mpa
1 SC CIMENTO	1 LATA 18lbs DE CIMENTO
3.5 LATA 18lbs DE AREIA GROSSA	2.3 LATA 18lbs DE AREIA GROSSA
5 LATA 18lbs DE BRITA 19mm	3 LATA 18lbs DE BRITA 19mm
25 LITROS DE AGUA	28 LITROS DE AGUA
1 m³ CONCRETO 30mpa	1 m³ CONCRETO 25mpa
8 SC CIMENTO 50KG	7 SC CIMENTO 50KG
28 Lts DE AREIA GROSSA	0.55 m³ AREIA GROSSA
40 Lts DE BRITA 19mm	0.80 m³ BRITA 19mm
200 LITROS DE AGUA	200 LITROS DE AGUA

José Ribamar Alves de Araújo
Engenheiro Civil
CREA/CE 352649CE

PROJETO ESTRUTURAL

ASSINATURAS:

PROPRIETÁRIO _____

RESP. TÉCNICO _____

OBRA: **CONSTRUÇÃO DA NOVA SEDE DA CÂMARA DE ITAITINGA**

FRANCHA: **ARMAÇÃO DAS VIGAS ULTIMA TRAMA**

PROPRIETÁRIO: CÂMARA MUNICIPAL DE ITAITINGA

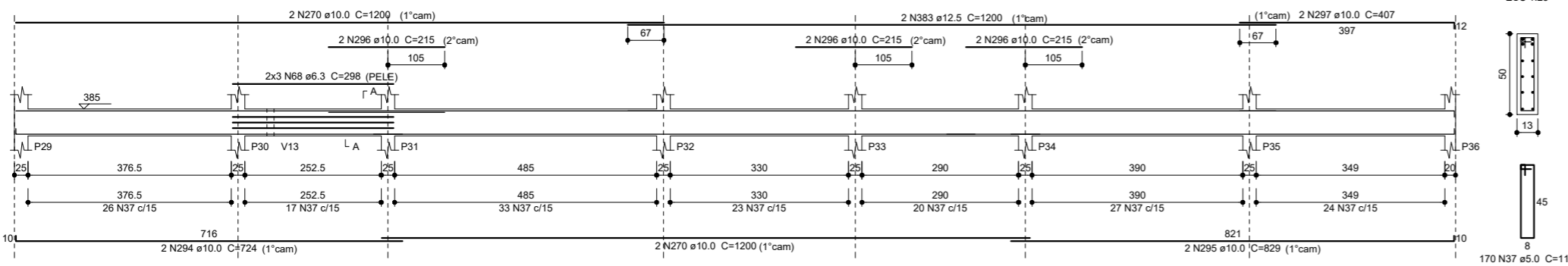
PAVIMENTO: _____

REVISÃO: R002

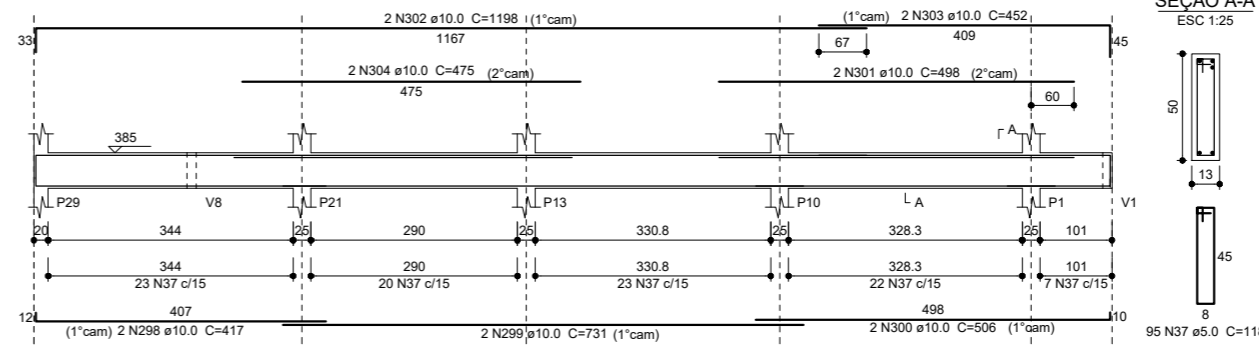
DATA: 16/08/2021

FOLHA: **07/14**

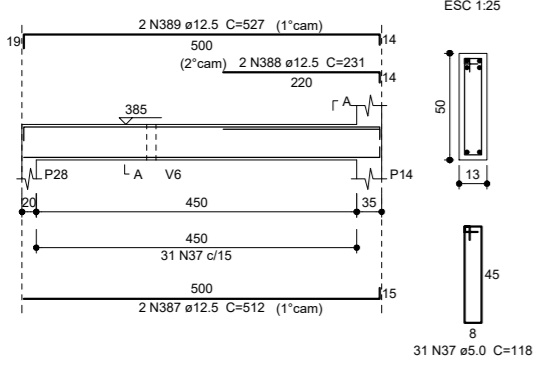
V9 (13 x 50)



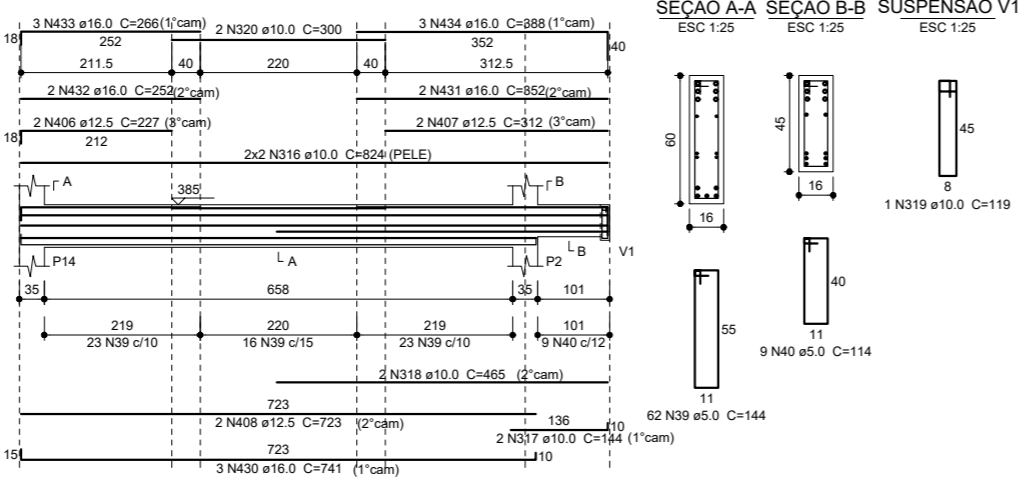
V10 (13 x 50)



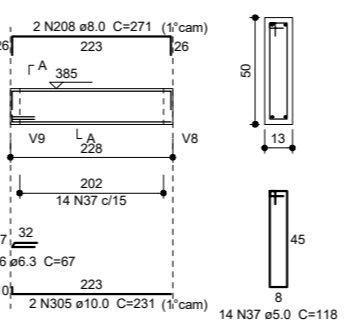
V11 (13 x 50)



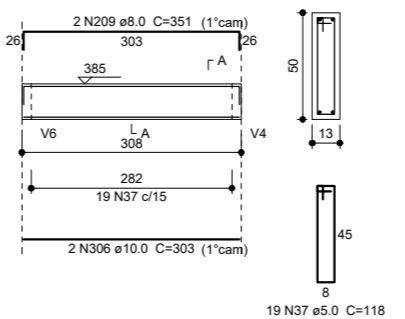
V12=V16=V19=V21=V23=V26 (x6) (var)



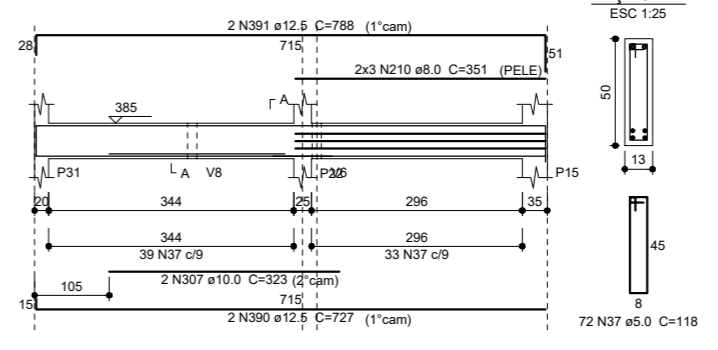
V13 (13 x 50)



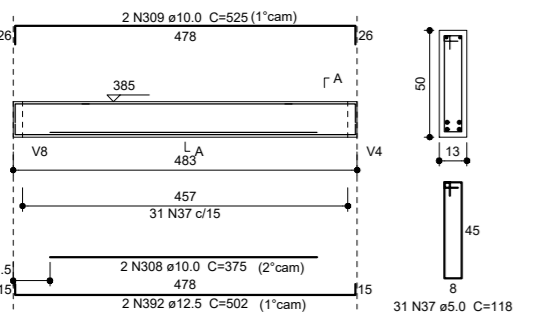
V14 (13 x 50)



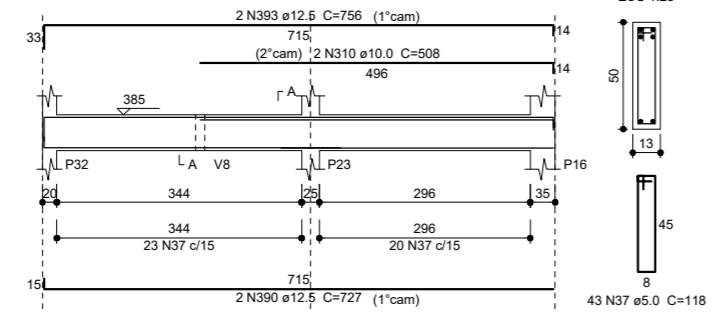
V15 (13 x 50)



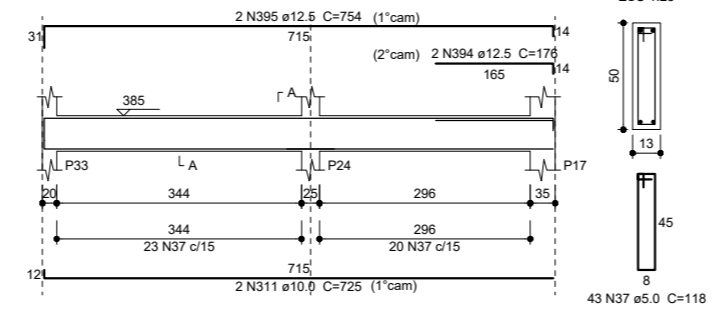
V17 (13 x 50)



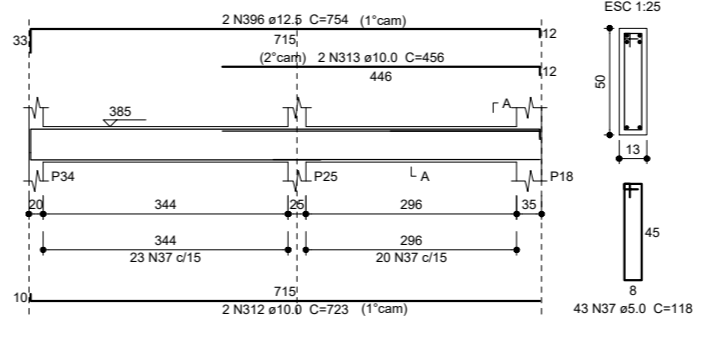
V18 (13 x 50)



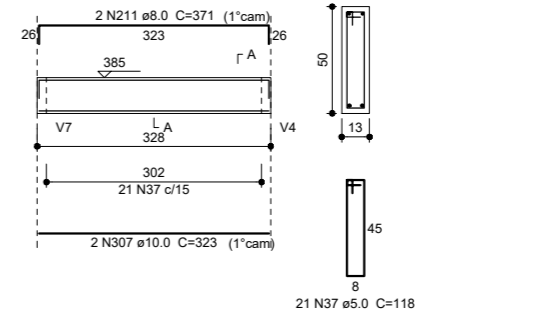
V20 (13 x 50)



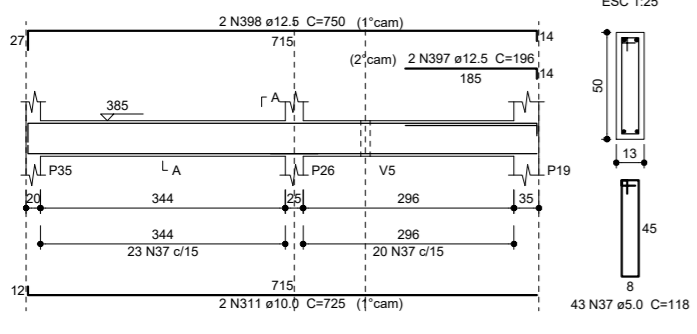
V22 (13 x 50)



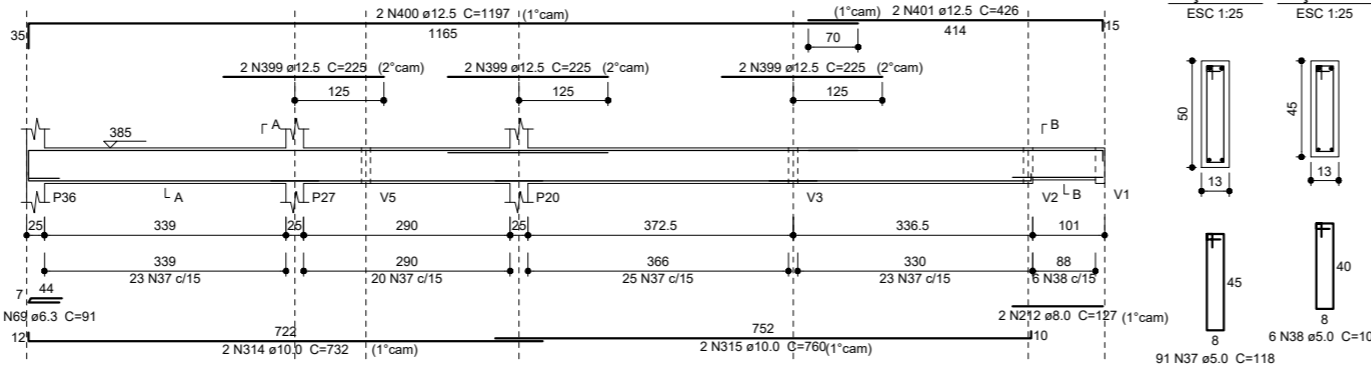
V24 (13 x 50)



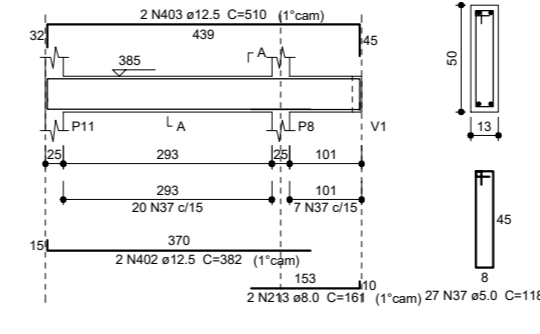
V25 (13 x 50)

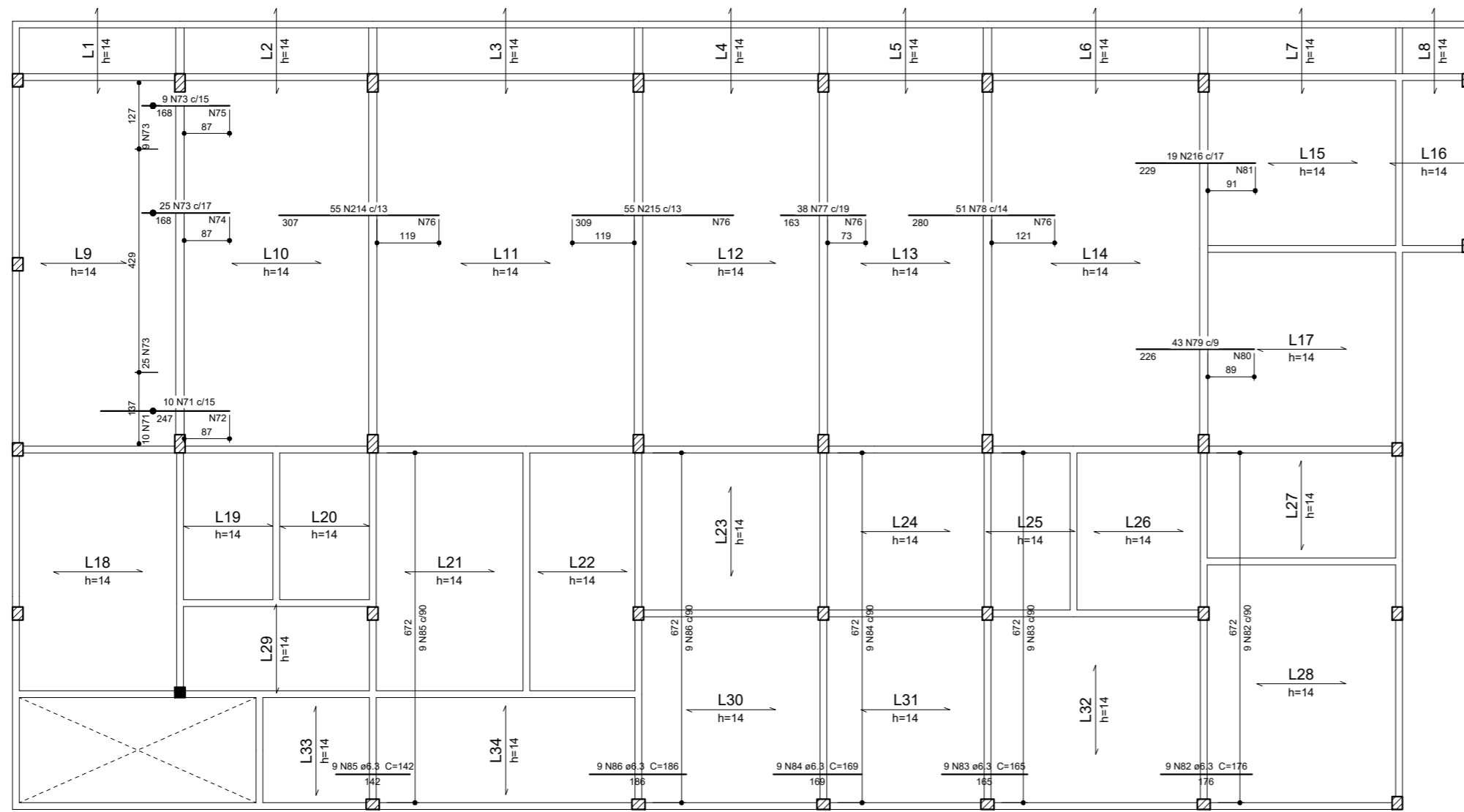


V27 (var)



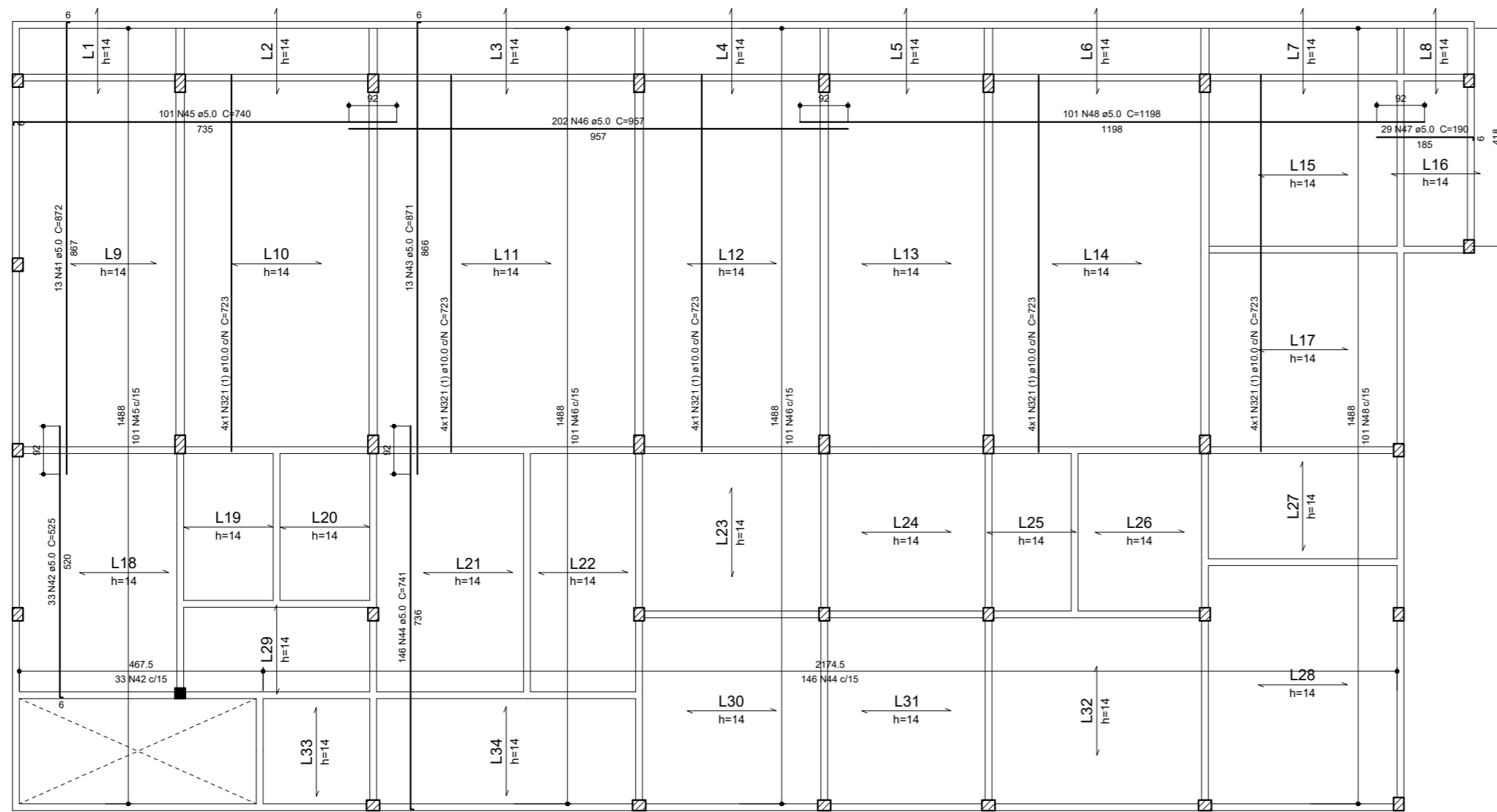
V28 (13 x 50)





ARMAÇÃO NEGATIVA DAS LAJES DO PAVIMENTO SUPERIOR

Escala 1:75

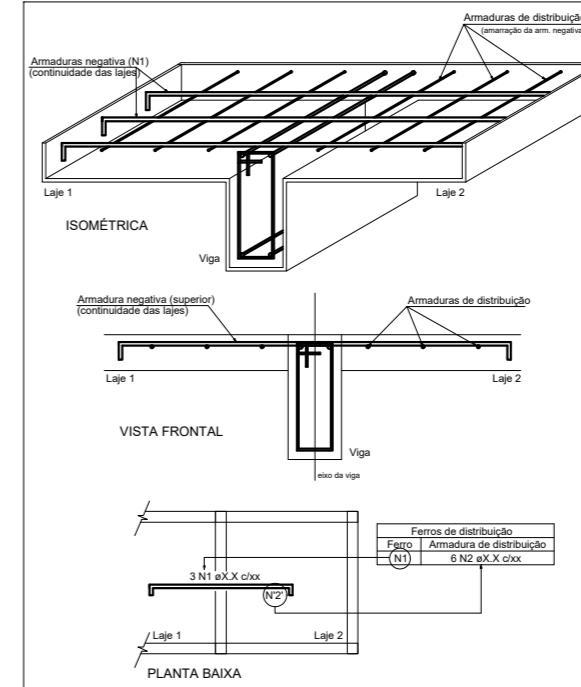


ARMAÇÃO POSITIVA DAS LAJES DO PAVIMENTO SUPERIOR

Escala 1:75

Ferro	Armadura de distribuição
N71	13 N72 ø6.3 c/20 C=148
N73	9 N74 ø6.3 c/20 C=429
N73	9 N75 ø6.3 c/20 C=139
N214	16 N76 ø6.3 c/20 C=715
N215	16 N76 ø6.3 c/20 C=715
N77	9 N76 ø6.3 c/20 C=715
N78	14 N76 ø6.3 c/20 C=385
N79	12 N80 ø6.3 c/20 C=330
N216	12 N81 ø6.3 c/20 C=330

DETALHE DA ARMADURA DE SUPERIOR DE CONTINUIDADE DA LAJE E MONTAGEM DA ARMADURA DE DISTRIBUIÇÃO



Relação do aço

AÇO	N	DIAM (mm)	QUANT	C.TOTAL (cm)	
				NEGATIVOS	POSITIVOS
CA60	41	5.0	13	872	11336
	42	5.0	33	525	17325
	43	5.0	13	871	11323
	44	5.0	146	741	108186
	45	5.0	101	740	74740
CA50	46	5.0	202	957	193314
	47	5.0	29	198	5510
	48	5.0	101	1198	120998
	71	6.3	10	247	2470
	72	6.3	13	148	1924
	73	6.3	34	168	5712
	74	6.3	9	429	3861
	75	6.3	9	139	1251
	76	6.3	55	715	38325
	77	6.3	38	163	6194
	78	6.3	51	280	14280
79	6.3	43	226	9718	
80	6.3	12	365	4620	
81	6.3	12	330	3960	
82	6.3	9	176	1584	
83	6.3	9	165	1485	
84	6.3	9	169	1521	
85	6.3	9	142	1278	
86	6.3	9	186	1674	
214	8.0	55	307	16885	
215	8.0	55	309	16995	
216	8.0	19	229	4351	
321	10.0	29	723	14460	

Resumo do aço

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	6.3	1008.6	271.5
	8.0	382.4	165.9
CA60	10.0	144.6	98.1
	5.0	9427.4	920.2
PESO TOTAL (kg)			
CA50			535.5
CA60			920.2

Volume de concreto (C-30) = 25.1 m³

IMPORTANTE TRAÇO RECOMENDADO	
TRAÇO CONCRETO 30mpa	TRAÇO CONCRETO 25mpa
1 SC CIMENTO	1 LATA 18lbs DE CIMENTO
3.5 LATA 18lbs DE AREIA GROSSA	2.3 LATA 18lbs DE AREIA GROSSA
5 LATA 18lbs DE BRITA 19mm	3 LATA 18lbs DE BRITA 19mm
25 LITROS DE AGUA	28 LITROS DE AGUA
1 m³ CONCRETO 30mpa	1 m³ CONCRETO 25mpa
8 SC CIMENTO 50KG	7 SC CIMENTO 50KG
28 Lts DE AREIA GROSSA	0.85 m³ AREIA GROSSA
40 Lts DE BRITA 19mm	0.80 m³ BRITA 19mm
200 LITROS DE AGUA	200 LITROS DE AGUA

PROJETO ESTRUTURAL

ASSINATURAS:

PROPRIETÁRIO _____

RESP. TÉCNICO _____

OBRA:

CONSTRUÇÃO DA NOVA SEDE DA CÂMARA DE ITAITINGA

FRANCHA:

ARMAÇÃO POSITIVA E NEGATIVA DA LAJE DET. DA ARMAÇÃO DE DISTRIBUIÇÃO

PROPRIETÁRIO: CÂMARA MUNICIPAL DE ITAITINGA

PAVIMENTO: _____

REVISÃO: R002

DATA: 16/08/2021

FOLHA: **08/14**

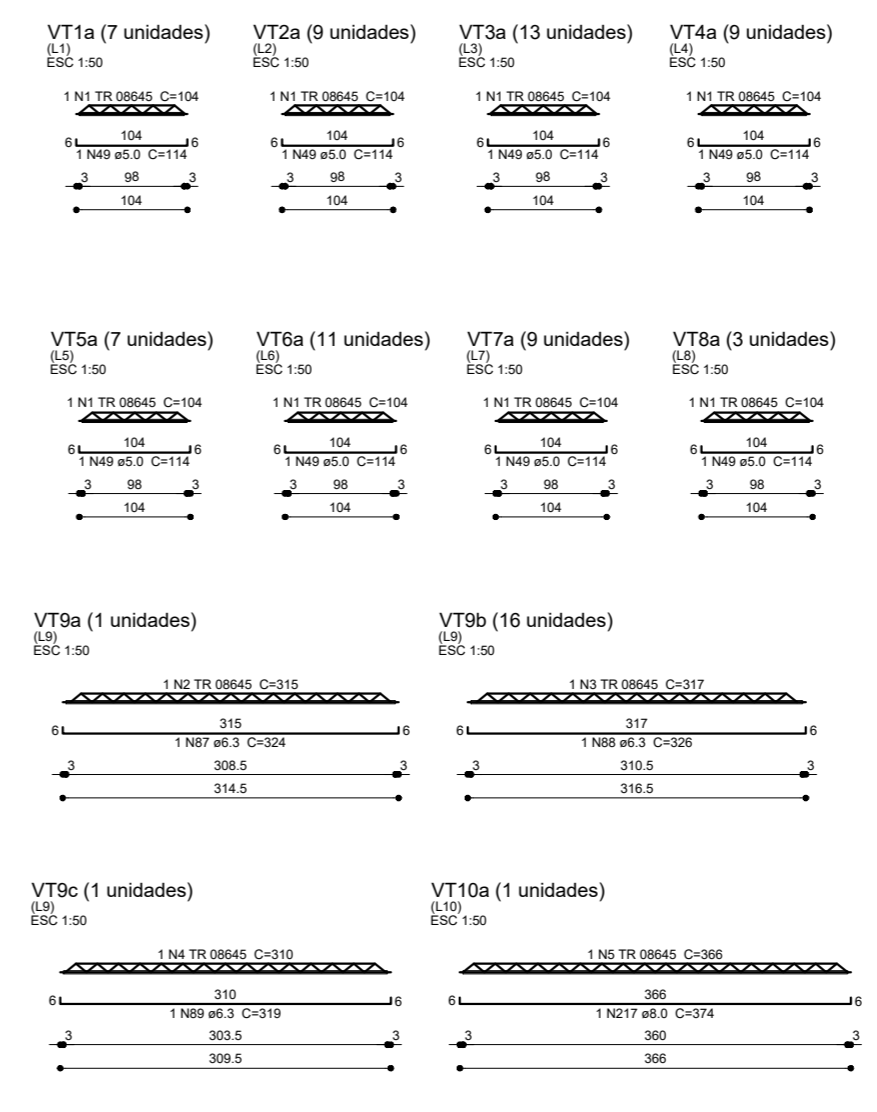
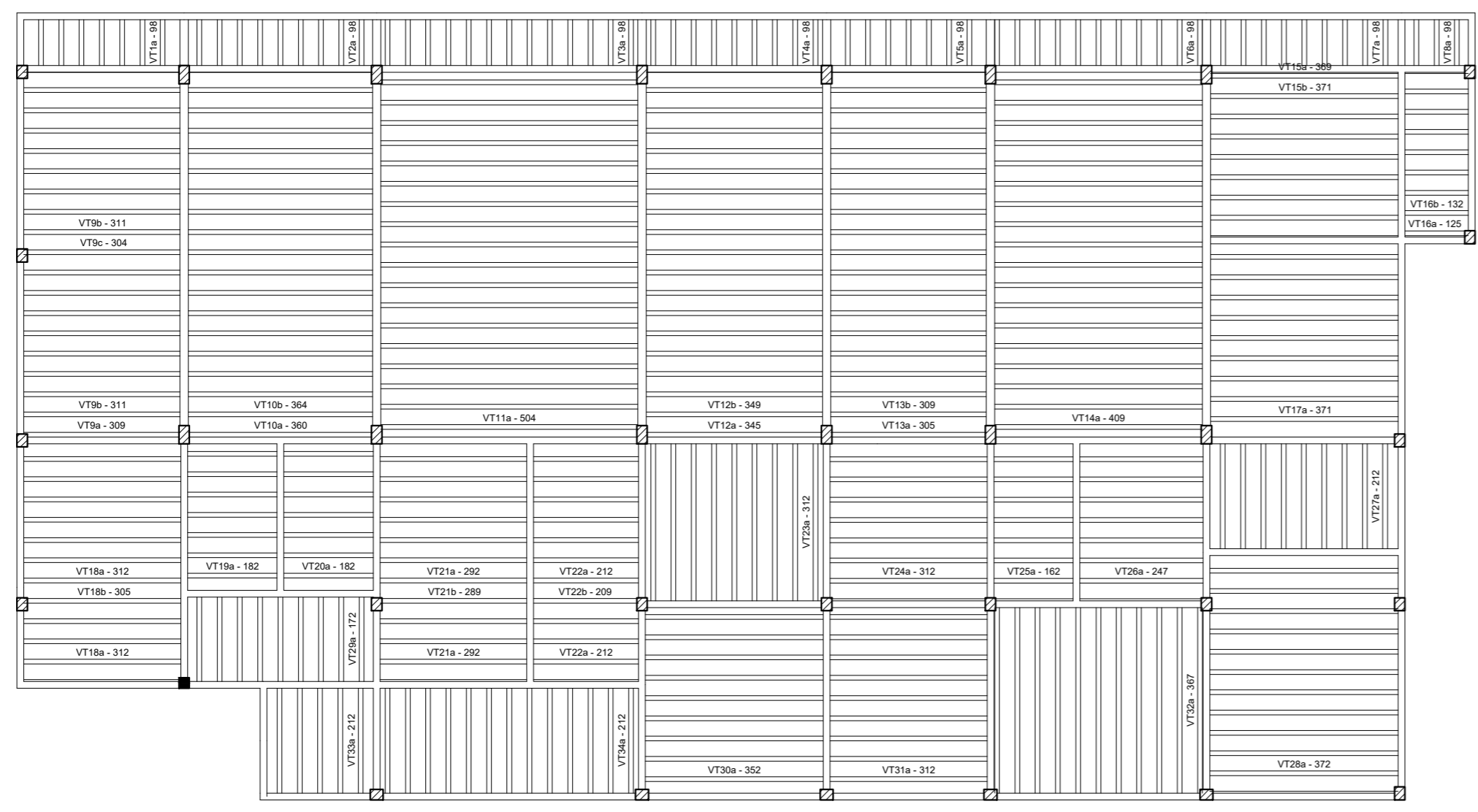
Jose Ribamar Alves de Araujo
Jose Ribamar Alves de Araujo
 Engenheiro Civil
 CREA/CE 352649CE

Resumo do aço

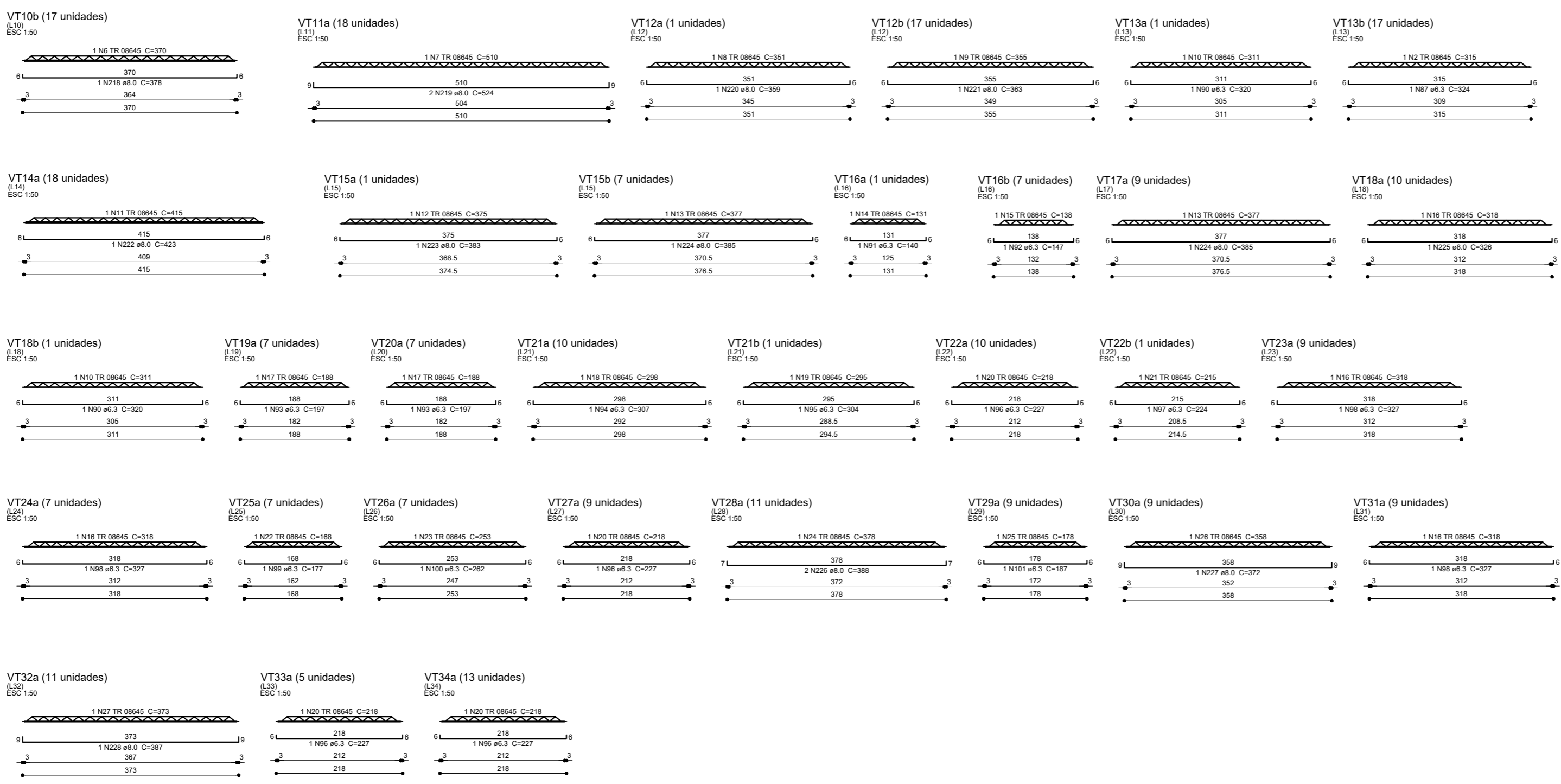
AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	6.3	408.7	110
CA60	8.0	657.6	285.4
	TR 08645	973	879.7
		5.0	77.8
PESO TOTAL (kg)			
CA50		395.4	
CA60		892.9	

IMPORTANTE

TRAÇO CONCRETO 30mpa		TRAÇO CONCRETO 25mpa	
1	SC CIMENTO	1	LATA 18kg DE CIMENTO
3.5	LATA 18kg DE AREIA GROSSA	2.3	LATA 18kg DE AREIA GROSSA
5	LATA 18kg DE BRITA 19mm	3	LATA 18kg DE BRITA 19mm
25	LITROS DE AGUA	28	LITROS DE AGUA
1 m³ CONCRETO 30mpa		1 m³ CONCRETO 25mpa	
8	SC CIMENTO 50KG	7	SC CIMENTO 50KG
28	LITROS DE AREIA GROSSA	0.55	m³ AREIA GROSSA
40	LITROS DE BRITA 19mm	0.80	m³ BRITA 19mm
200	LITROS DE AGUA	200	LITROS DE AGUA



PLANTA DE VIGOTAS PRÉ-MOLDADAS
Escala 1:75



José Ribamar Alves de Araújo
Engenheiro Civil
CREA/CE 352649CE

PROJETO ESTRUTURAL

ASSINATURAS:

PROPRIETÁRIO _____

RESP. TÉCNICO _____

OBRA: **CONSTRUÇÃO DA NOVA SEDE DA CÂMARA DE ITAITINGA**

FRANCHA: **LOCAÇÃO DAS VIGOTAS/DET. DAS VIGOTAS**

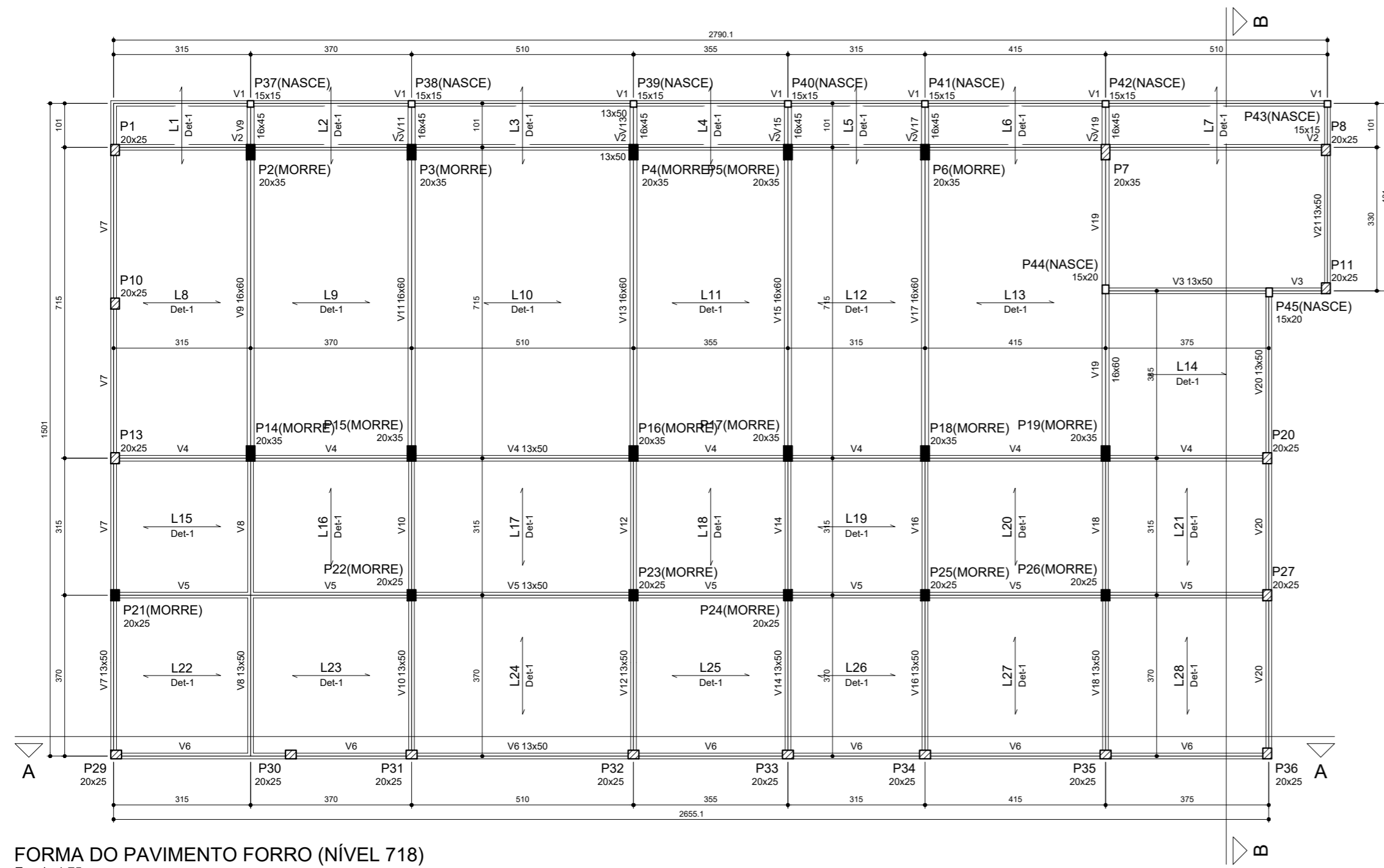
PROPRIETÁRIO: **CÂMARA MUNICIPAL DE ITAITINGA**

PAVIMENTO: _____

REVISÃO: **R002**

DATA: **16/08/2021**

FOLHA: **09/14**



FORMA DO PAVIMENTO FORRO (NÍVEL 718)
Escala 1:75

Relação do aço

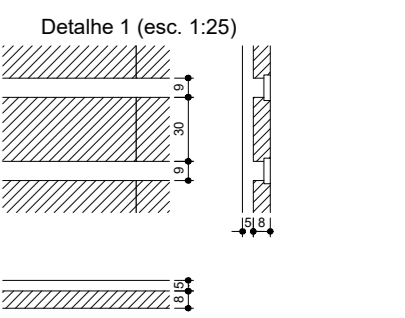
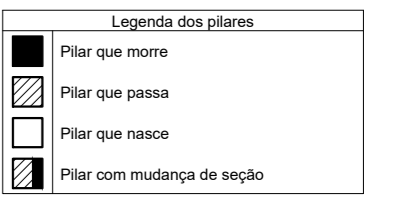
CAÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	37	5.0	566	118	66786
CA50	50	5.0	4	62	248
	66	6.3	1	67	67
	229	8.0	2	711	1422
	230	8.0	2	959	1918
	133	8.0	2	1200	2400
	287	10.0	2	1123	2246
	322	10.0	2	829	1658
	323	10.0	2	950	1900
	294	10.0	2	724	1448
	324	10.0	2	956	1912
	325	10.0	12	250	3000
	284	10.0	4	1196	4792
	270	10.0	8	1200	9600
	326	10.0	2	552	1104
	327	10.0	2	200	400
	328	10.0	2	553	1106
	329	10.0	6	118	708
	330	10.0	2	722	1444
	331	10.0	2	807	1614
	283	10.0	12	200	2400
	332	10.0	2	421	842
	409	12.5	2	538	1076

Resumo do aço

CAÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	6.3	0.7	0.2
	8.0	57.4	24.9
	10.0	382.2	245.6
	12.5	10.8	11.4
CA60	5.0	670.4	113.7

PESO TOTAL (kg)
CA50 282.1
CA60 113.7

Volume de concreto (C-30) = 5.72 m³

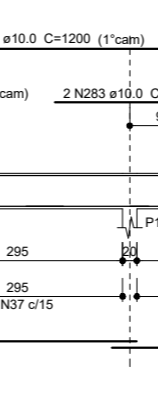
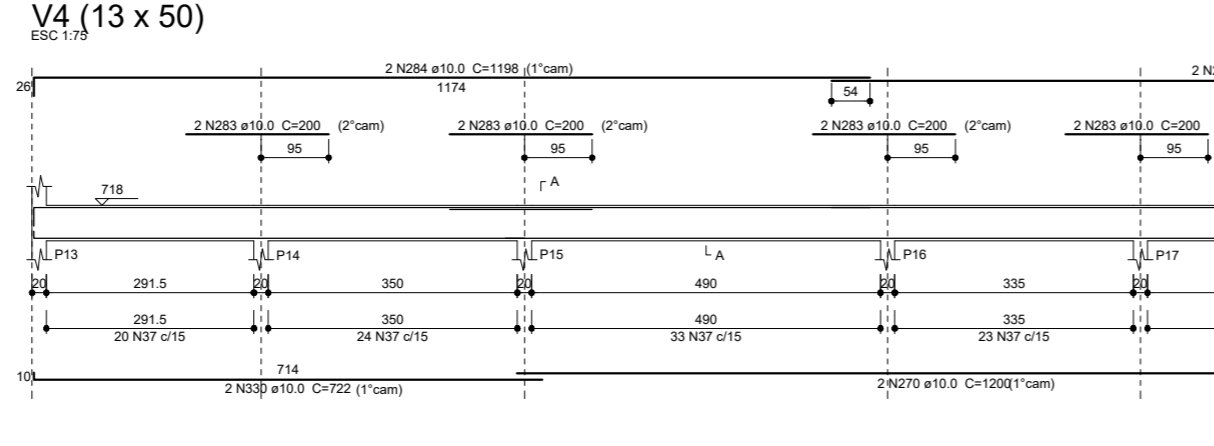
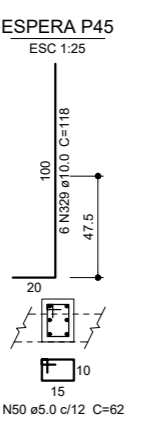
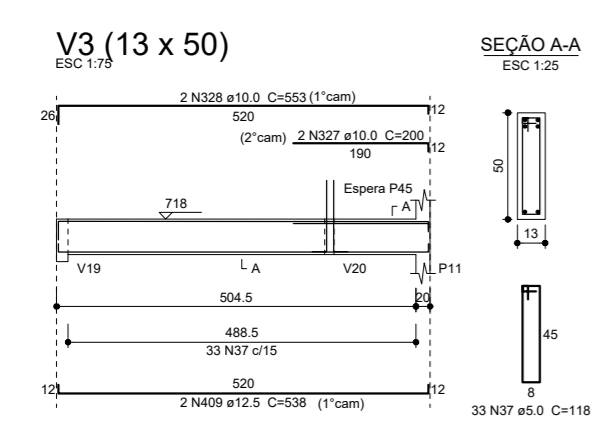
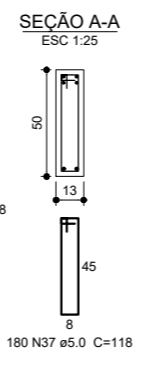
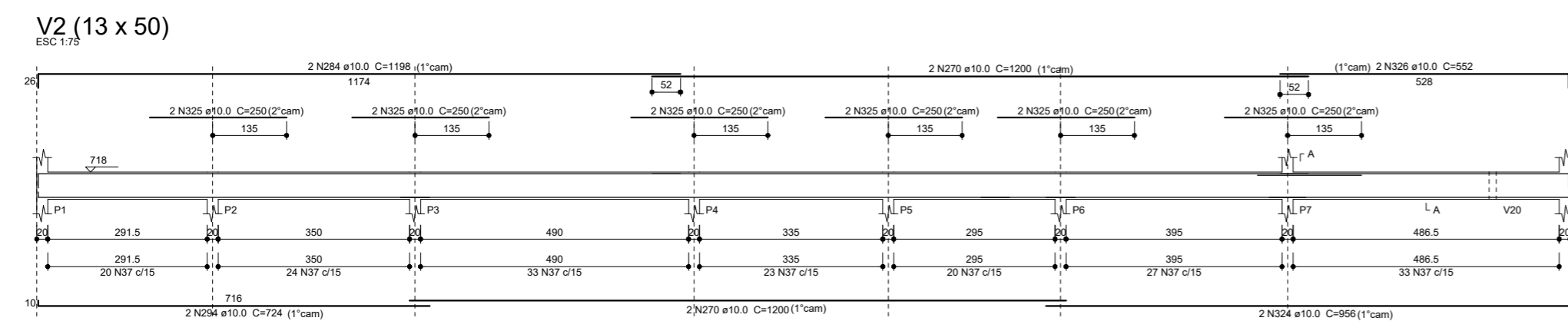
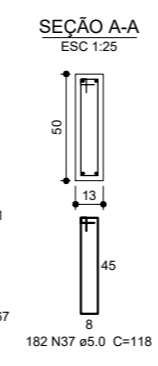
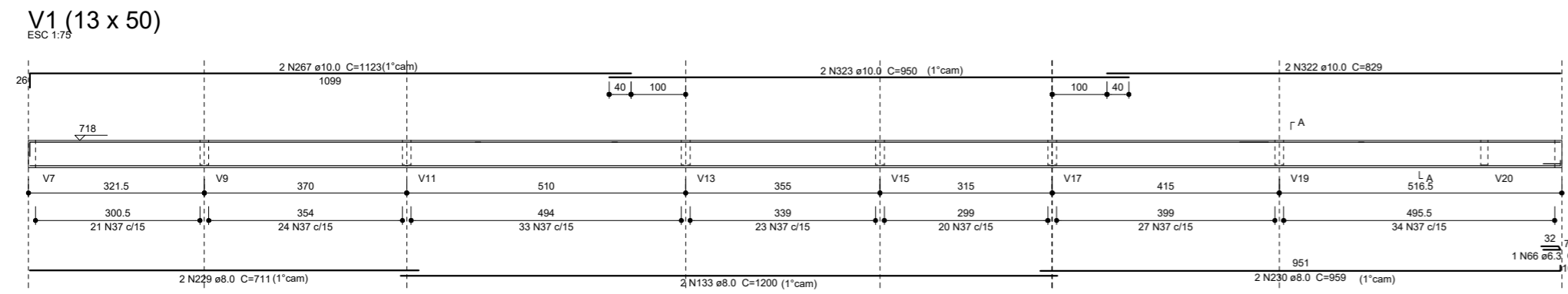


Blocos de enchimento

Detalhe	Tipo	Nome	Dimensões(cm)	Quantidade
1	EPS Unidirecional	BS/30/125	8 30 125	800

IMPORTANTE TRAÇO RECOMENDADO

TRAÇO CONCRETO 30mpa	TRAÇO CONCRETO 25mpa
1 - SIC CIMENTO	1 - LATA 18lbs DE CIMENTO
3.5 LATA 18lbs DE AREIA GROSSA	2.3 LATA 18lbs DE AREIA GROSSA
5 LATA 18lbs DE BRITA 19mm	3 LATA 18lbs DE BRITA 19mm
25 LITROS DE AGUA	28 LITROS DE AGUA



Assinatura: José Ribamar Alves de Araújo
Engenheiro Civil
CREA/CE 352649CE

PROJETO ESTRUTURAL

ASSINATURAS:

PROPRIETÁRIO: _____

RESP. TÉCNICO: _____

OBRA: **CONSTRUÇÃO DA NOVA SEDE DA CÂMARA DE ITAITINGA**

FRANCHA: **FORMAS/ARMAÇÃO DAS VIGAS 1º TRAMA**

PROPRIETÁRIO: CÂMARA MUNICIPAL DE ITAITINGA

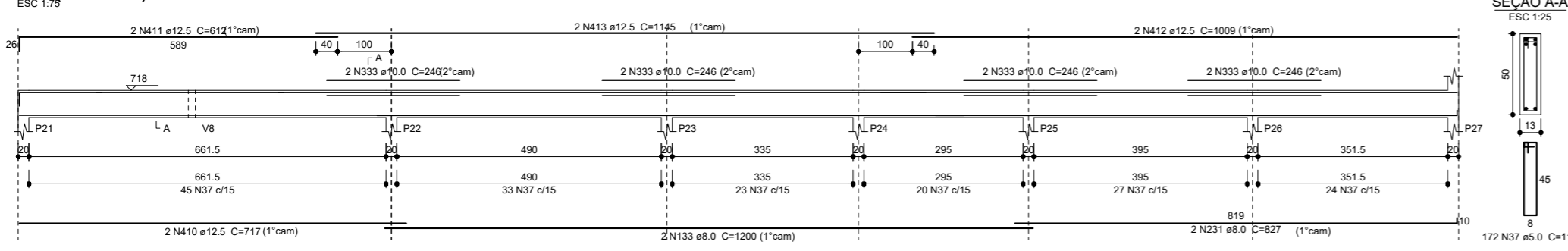
PAVIMENTO: _____

REVISÃO: R002

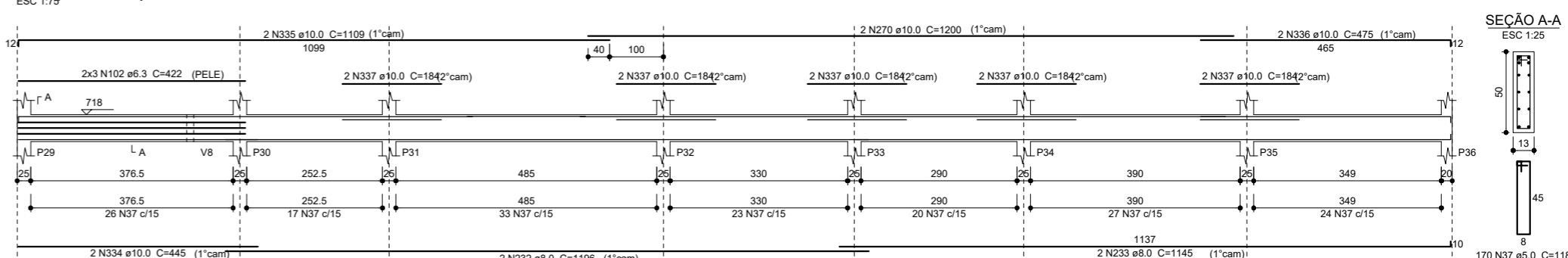
DATA: 06/08/2021

FOLHA: **10/14**

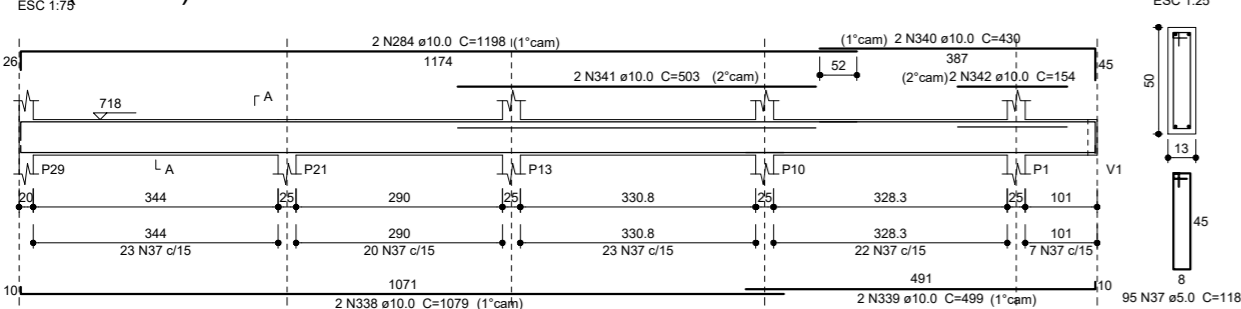
V5 (13 x 50)



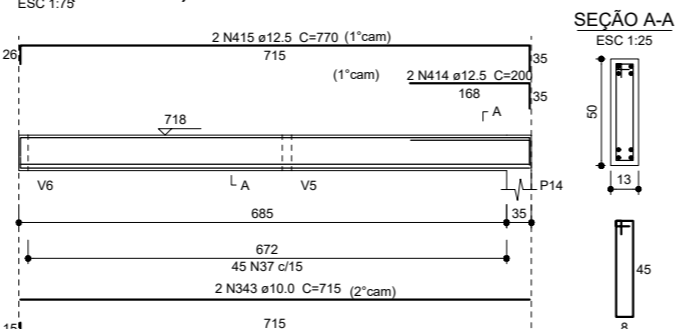
V6 (13 x 50)



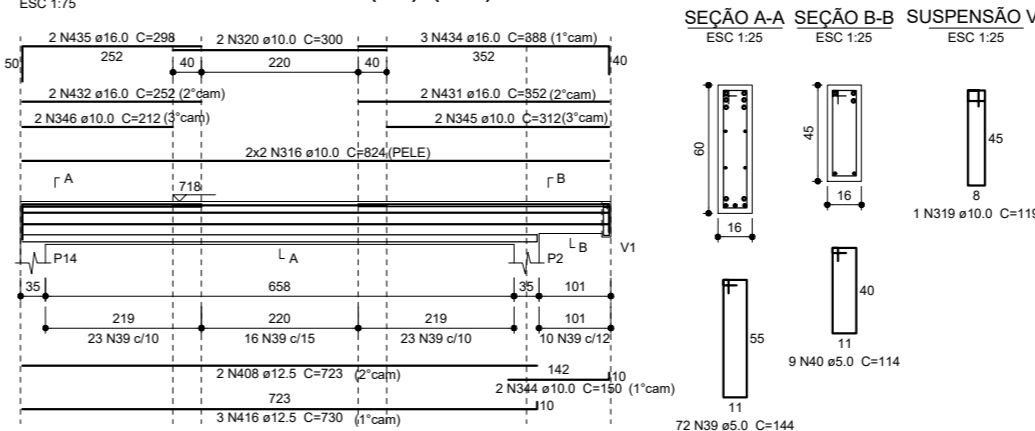
V7 (13 x 50)



V8 (13 x 50)



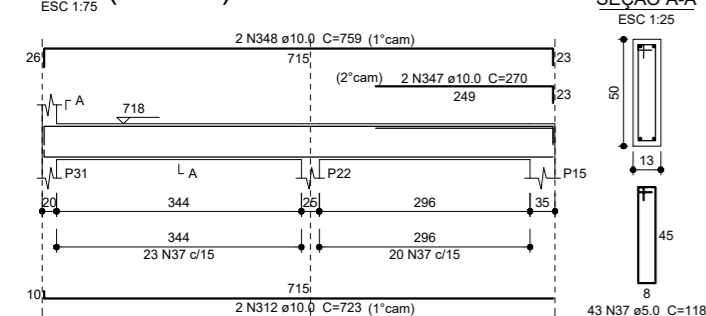
V9=V11=V13=V15=V17 (x5) (var)



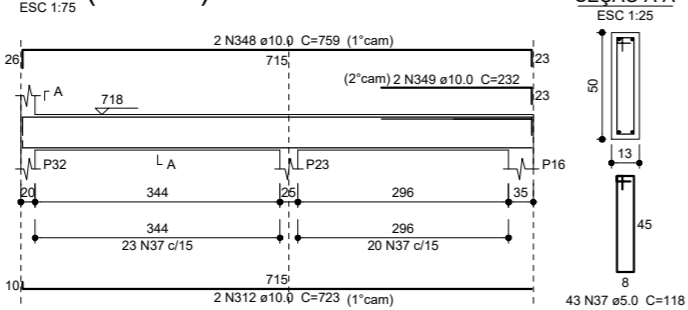
Relação do aço

CAO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	37	5.0	794	118	9392
	39	5.0	432	144	6228
	40	5.0	54	114	6156
	62	5.0	5	62	310
CA50	102	6.3	6	422	2532
	231	8.0	2	827	1654
	133	8.0	2	1250	2400
	232	8.0	2	1196	2392
	233	8.0	2	1145	2290
	234	8.0	4	824	3296
	333	10.0	8	246	1968
	334	10.0	2	445	890
	335	10.0	2	1109	2218
	270	10.0	2	1200	2400
	336	10.0	2	475	950
	337	10.0	10	184	1840
	338	10.0	2	1079	2158
	339	10.0	2	499	998
	284	10.0	2	1198	2396
	340	10.0	2	430	860
	341	10.0	2	503	1006
	342	10.0	2	154	308
	343	10.0	2	715	1430
	316	10.0	20	824	16480
	344	10.0	10	150	1500
	319	10.0	6	119	714
	320	10.0	12	300	3600
	312	10.0	10	312	3120
	346	10.0	10	212	2120
	312	10.0	10	723	7230
	347	10.0	2	270	540
	348	10.0	4	759	3036
	349	10.0	2	232	464
	350	10.0	2	755	1510
	351	10.0	2	219	438
	352	10.0	2	263	526
	353	10.0	2	142	284
	354	10.0	6	128	768
	355	10.0	2	447	894
	356	10.0	2	482	964
	357	10.0	2	1086	2172
	358	10.0	4	160	640
	359	10.0	2	1109	2218
	410	12.5	2	717	1434
	411	12.5	2	612	1224
	412	12.5	2	1009	2018
	413	12.5	2	1145	2290
	390	12.5	2	727	1454
	414	12.5	2	200	400
	415	12.5	2	770	1540
	416	12.5	15	730	10950
	408	12.5	12	723	8676
	417	12.5	2	760	1520
	418	12.5	2	762	1524
	419	12.5	2	291	582
	420	12.5	2	233	466
	431	16.0	10	352	3520
	432	16.0	10	252	2520
	435	16.0	10	298	2980
	434	16.0	15	388	5820
	436	16.0	3	729	2187
	437	16.0	5	314	1570
	438	16.0	2	331	662
	439	16.0	3	367	1101

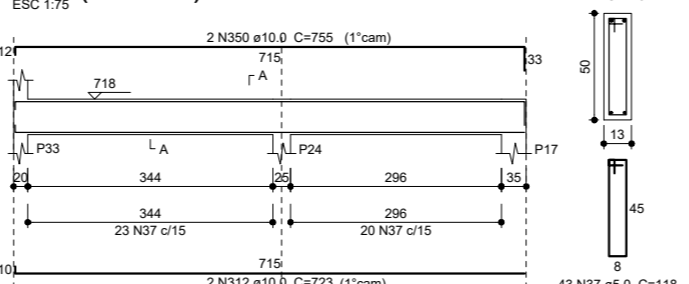
V10 (13 x 50)



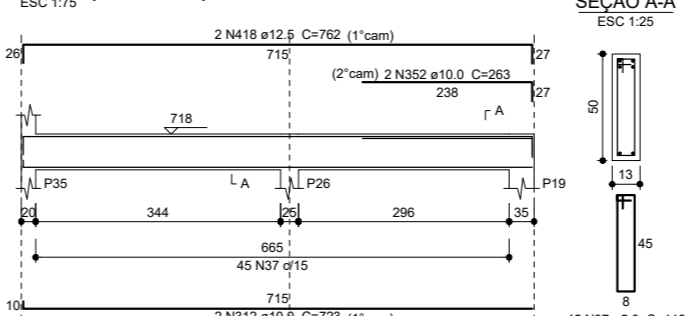
V12 (13 x 50)



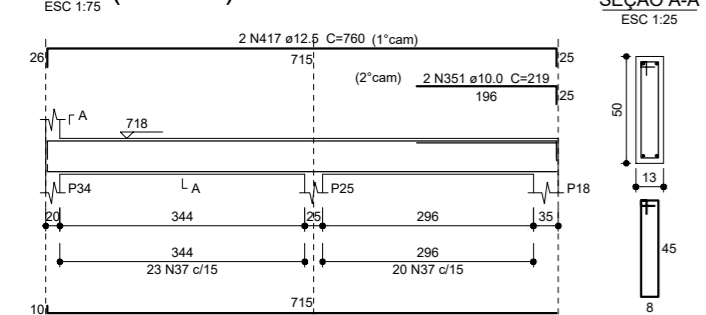
V14 (13 x 50)



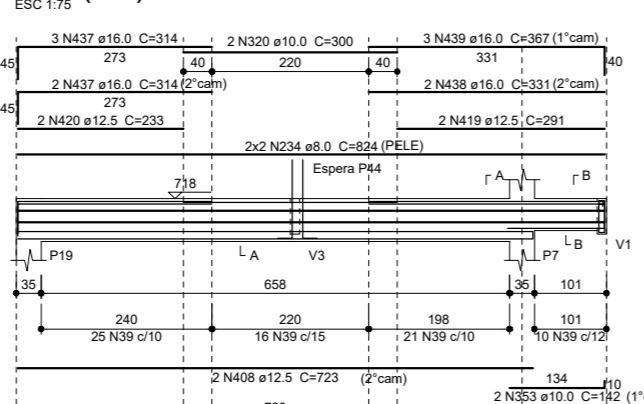
V18 (13 x 50)



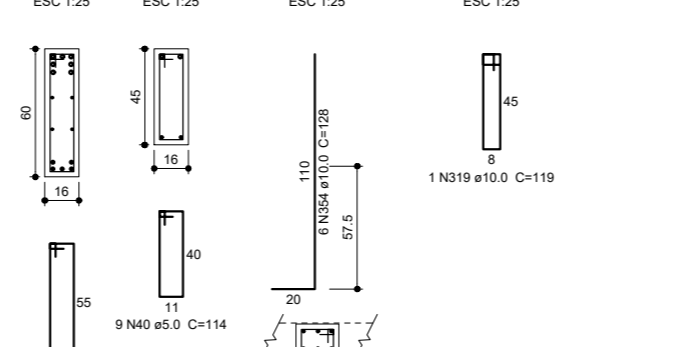
V16 (13 x 50)



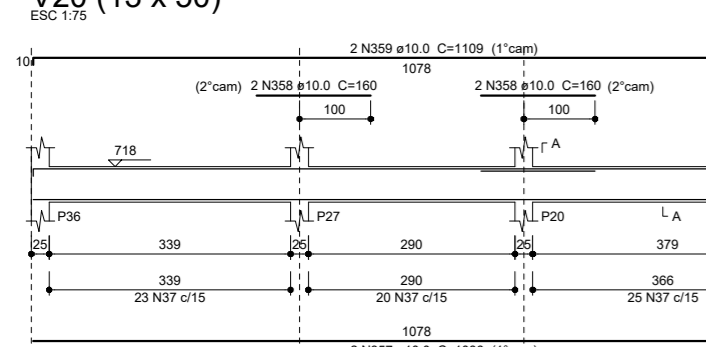
V19 (var)



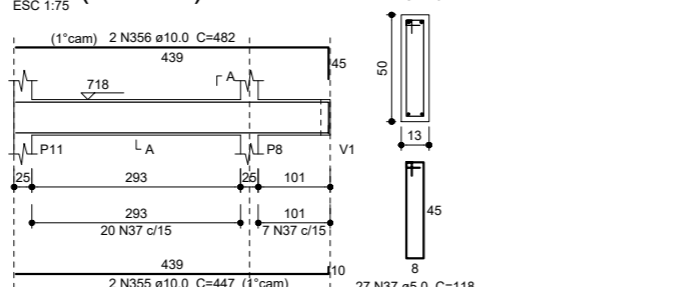
V20 (13 x 50)



V20 (13 x 50)



V21 (13 x 50)



Resumo do aço

CAO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	6.3	25.4	6.8
	8.0	120.4	52.2
	10.0	686.4	465.5
	12.5	340.8	361.1
	16.0	203.8	353.5
	5.0	1623.7	275.3
PESO TOTAL (kg)			
CA50		1239.1	
CA60		275.3	

Volume de concreto (C-30) = 12.86 m³

IMPORTANTE TRAÇO RECOMENDADO	
TRAÇO CONCRETO 30mpa	TRAÇO CONCRETO 25mpa
1 SC CIMENTO	1 LATA 18kg DE CIMENTO
3.5 LATA 18kg DE AREIA GROSSA	2.3 LATA 18kg DE AREIA GROSSA
5 LATA 18kg DE BRITA 19mm	3 LATA 18kg DE BRITA 19mm
25 LITROS DE AGUA	28 LITROS DE AGUA
1 m³ CONCRETO 30mpa	1 m³ CONCRETO 25mpa
8 SC CIMENTO 60KG	7 SC CIMENTO 50KG
28 Lts DE AREIA GROSSA	0.55 m³ AREIA GROSSA
40 Lts DE BRITA 19mm	0.80 m³ BRITA 19mm
200 LITROS DE AGUA	200 LITROS DE AGUA

PROJETO ESTRUTURAL

ASSINATURAS:

PROPRIETÁRIO _____

RESP. TÉCNICO _____

OBRA: **CONSTRUÇÃO DA NOVA SEDE DA CÂMARA DE ITAITINGA**

FRANCHA: **ARMAÇÃO DAS VIGAS ULTIMA TRAMA**

PROPRIETÁRIO: CÂMARA MUNICIPAL DE ITAITINGA

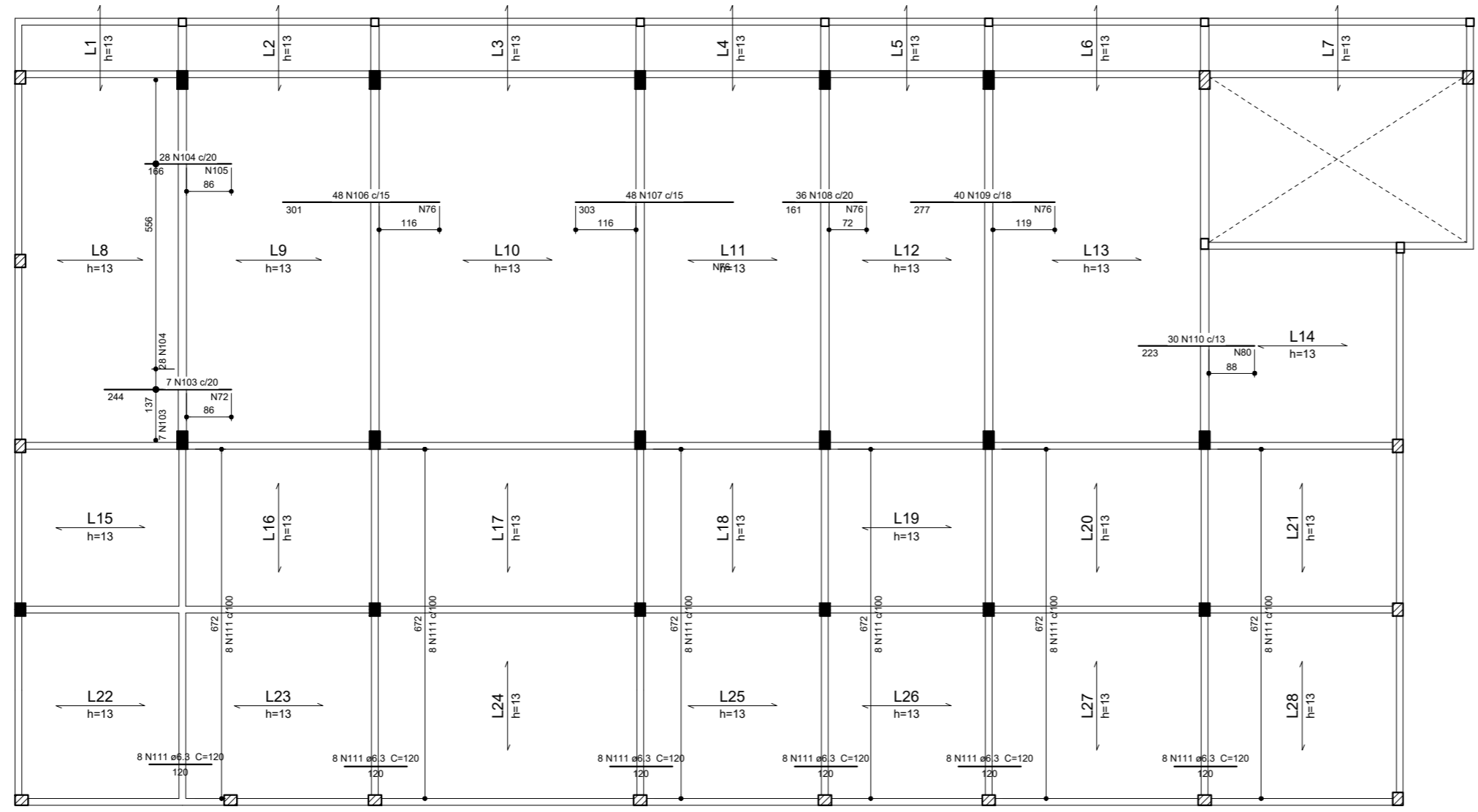
PAVIMENTO: _____

REVISÃO: R002

DATA: 16/08/2021

FOLHA: **11/14**

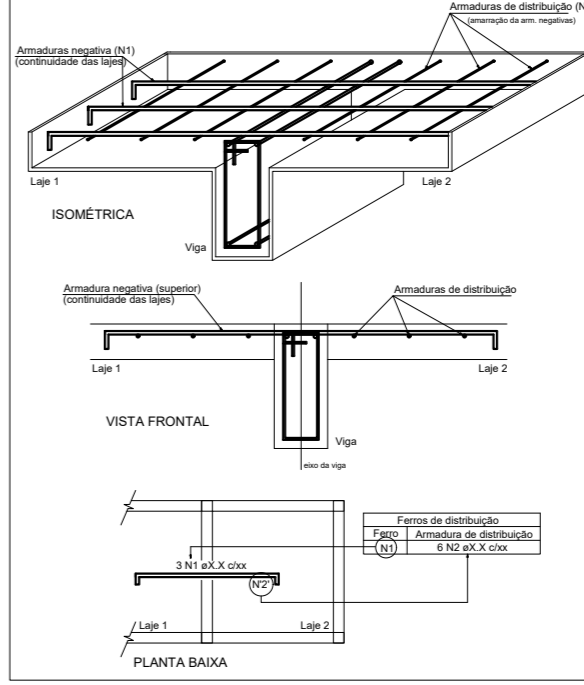
José Ribamar Alves de Araujo
Engenheiro Civil
CREACE 352649CE



ARMAÇÃO NEGATIVA DAS LAJES DO PAVIMENTO FORRO
Escala 1:75

Ferro de distribuição	
Ferro	Armadura de distribuição
N103	13 N72 ø6.3 c/20 C=148
N104	9 N105 ø6.3 c/20 C=568
N106	15 N76 ø6.3 c/20 C=715
N107	16 N76 ø6.3 c/20 C=715
N108	8 N76 ø6.3 c/20 C=715
N109	14 N76 ø6.3 c/20 C=715
N110	12 N80 ø6.3 c/20 C=385

DETALHE DA ARMADURA DE SUPERIOR DE CONTINUIDADE DA LAJE E MONTAGEM DA ARMADURA DE DISTRIBUIÇÃO



Relação do aço

Negativos		Positivos		
AÇO	N	DIAM (mm)	QUANT	C.TOTAL (cm)
CA60	51	5.0	7	566
	41	5.0	154	872
	45	5.0	153	740
	52	5.0	124	1200
	53	5.0	30	1196
	54	5.0	35	120
	55	5.0	101	1200
	56	5.0	72	458
	57	5.0	26	1089
	103	6.3	7	244
	72	6.3	13	148
	104	6.3	28	166
	105	6.3	9	508
	106	6.3	48	301
	76	6.3	53	715
	107	6.3	48	303
	108	6.3	36	161
	109	6.3	40	277
	110	6.3	30	223
	80	6.3	12	385
	111	6.3	48	120
	112	6.3	16	723
				11588

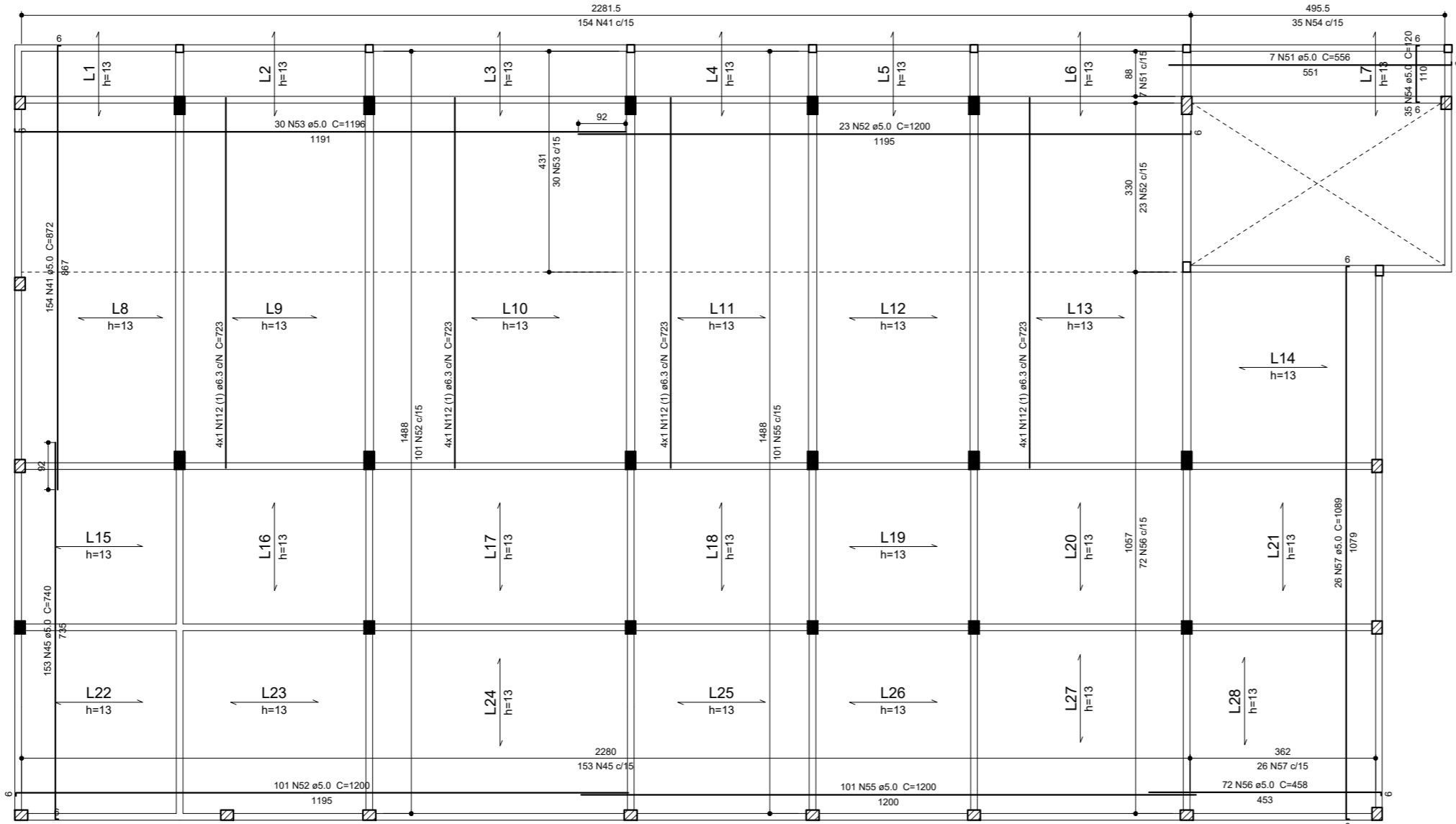
Resumo do aço

AÇO	DIAM (mm)	C.TOTAL (cm)	PESO + 10% (kg)
CA50	6.3	1258	338.6
CA60	5.0	6227.7	1055.9
PESO TOTAL (kg)			
CA50			338.6
CA60			1055.9

Volume de concreto (C-30) = 22.2 m³

IMPORTANTE TRAÇO RECOMENDADO

1 m³ CONCRETO 30mpa	1 m³ CONCRETO 25mpa
1 SC CIMENTO	1 LATA 18lbs DE CIMENTO
3.5 LATA 18lbs DE AREIA GROSSA	2.3 LATA 18lbs DE AREIA GROSSA
5 LATA 18lbs DE BRITA 19mm	3 LATA 18lbs DE BRITA 19mm
25 LITROS DE AGUA	28 LITROS DE AGUA
1 m³ CONCRETO 30mpa	
8 SC CIMENTO SIKO	7 SC CIMENTO SIKO
28 LTs DE AREIA GROSSA	0.55 m³ AREIA GROSSA
40 LTs DE BRITA 19mm	0.80 m³ BRITA 19mm
200 LITROS DE AGUA	200 LITROS DE AGUA



ARMAÇÃO POSITIVA DAS LAJES DO PAVIMENTO FORRO
Escala 1:75

José Ribamar Alves de Araújo
Engenheiro Civil
CREACE 352649CE

PROJETO ESTRUTURAL

ASSINATURAS:

PROPRIETÁRIO _____

RESP. TÉCNICO _____

OBRA:

CONSTRUÇÃO DA NOVA SEDE DA CÂMARA DE ITAITINGA

FRANCHA:

ARMAÇÃO DAS LAJES POSITIVA E NEGATIVA DET. DA MALHA DE DISTRIBUIÇÃO

PROPRIETÁRIO: CÂMARA MUNICIPAL DE ITAITINGA

PAVIMENTO: _____

REVISÃO: R002

DATA: 16/08/2021

FOLHA: **12/14**



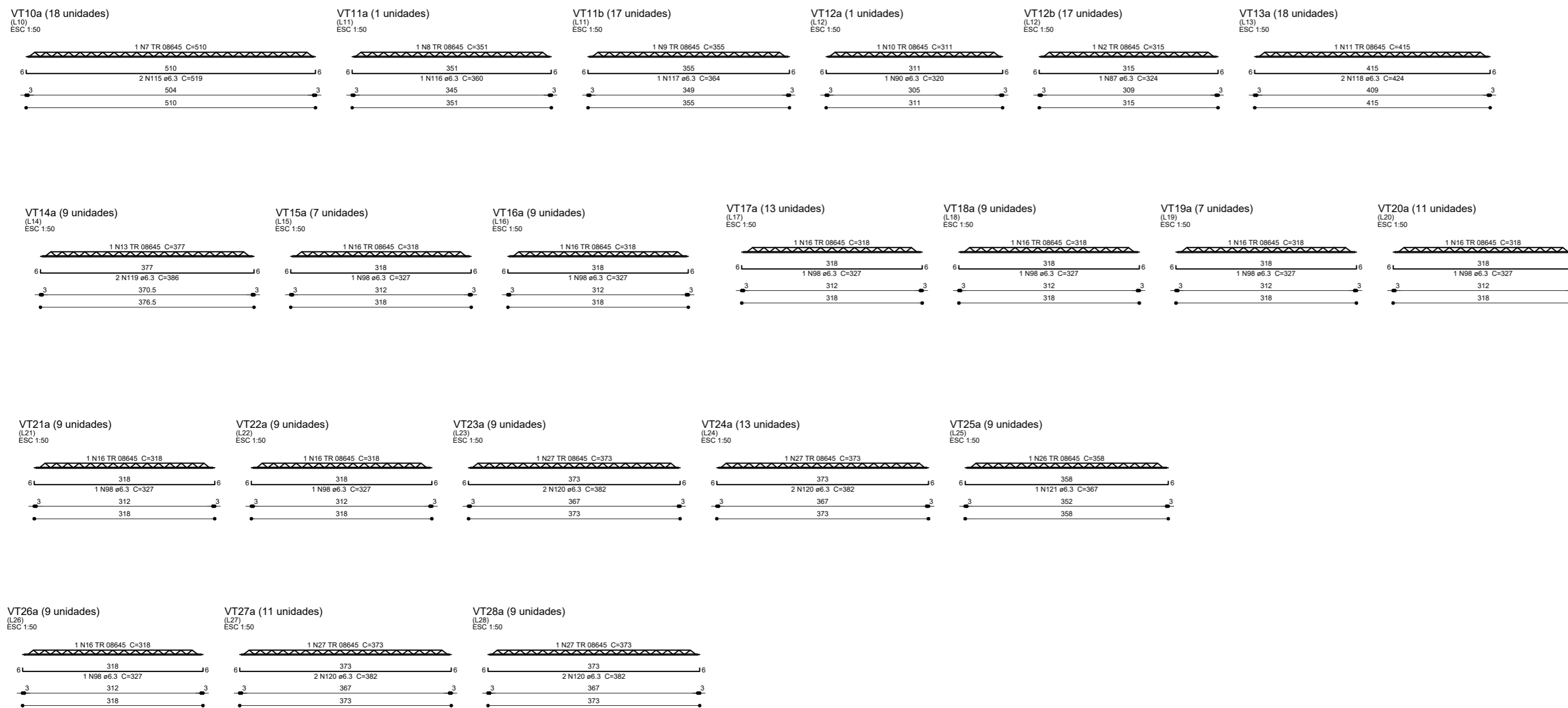
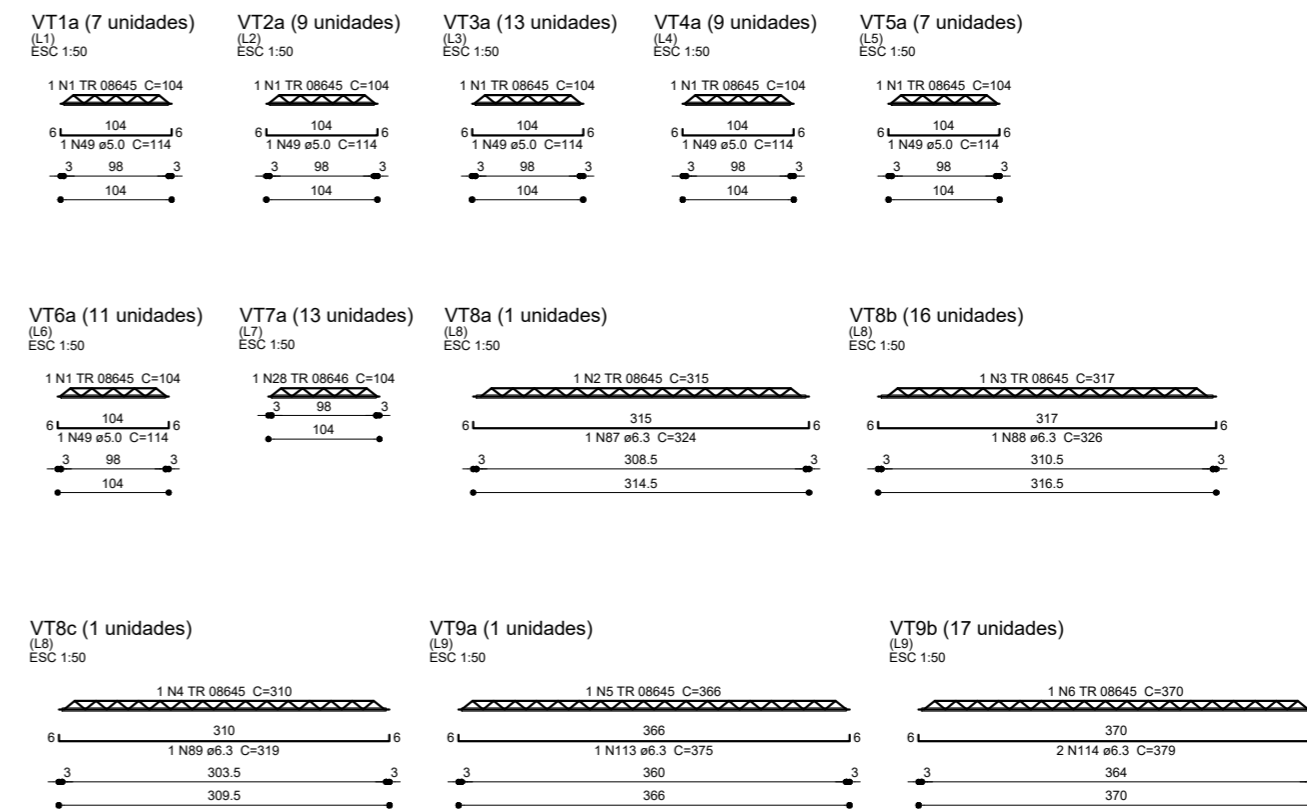
PLANTA DE VIGOTAS PRÉ-MOLDADAS
Escala 1:75

Resumo do aço

ACO	DIAM (mm)	C. TOTAL (m)	PESO + 10% (kg)
CA50	6.3	1349.3	363.2
CA60	TR 08645	955.6	864
	TR 08646	13.6	14.3
		63.9	10.8
PESO TOTAL (kg)			
CA50			363.2
CA60			868.1

IMPORTANTE

TRAÇO CONCRETO 30mpa		TRAÇO CONCRETO 25mpa	
1 SC CIMENTO		1 LATA 18lbs DE CIMENTO	
3.5 LATA 18lbs DE AREIA GROSSA		2.3 LATA 18lbs DE AREIA GROSSA	
5 LATA 18lbs DE BRITA 19mm		3 LATA 18lbs DE BRITA 19mm	
25 LITROS DE AGUA		28 LITROS DE AGUA	
1 m³ CONCRETO 30mpa		1 m³ CONCRETO 25mpa	
8 SC CIMENTO 50KG		7 SC CIMENTO 50KG	
28 Lts DE AREIA GROSSA		0.55 m³ AREIA GROSSA	
40 Lts DE BRITA 19mm		0.80 m³ BRITA 19mm	
200 LITROS DE AGUA		200 LITROS DE AGUA	



Jose Ribamar Alves de Araújo
Engenheiro Civil
CREA/CE 352649CE

PROJETO ESTRUTURAL

ASSINATURAS:

PROPRIETÁRIO _____

RESP. TÉCNICO _____

OBRA: **CONSTRUÇÃO DA NOVA SEDE DA CÂMARA DE ITAITINGA**

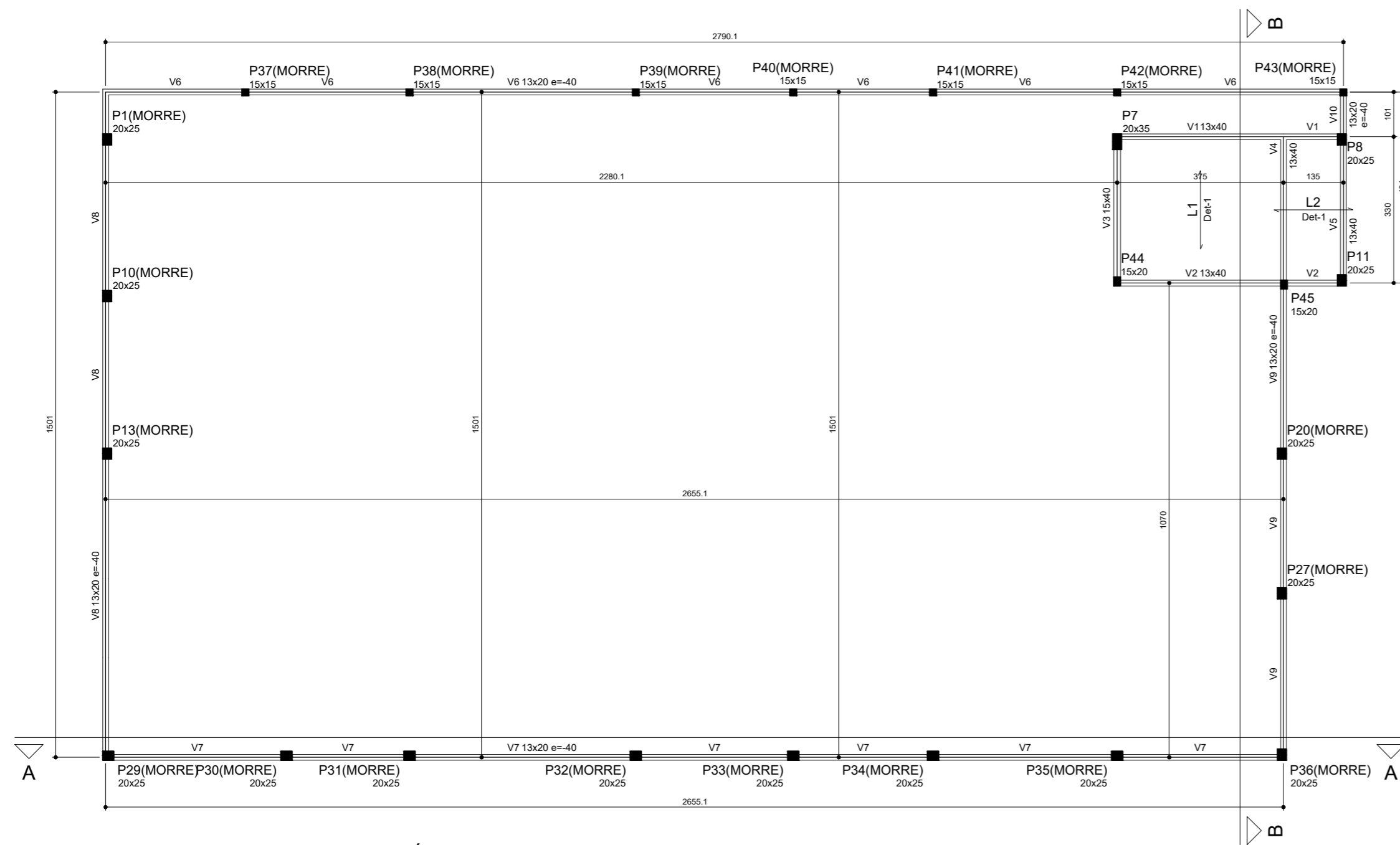
FRANCHA: **LOCAÇÃO DAS VIGOTAS/DET. DAS VIGOTAS**

PROPRIETÁRIO: **CÂMARA MUNICIPAL DE ITAITINGA**

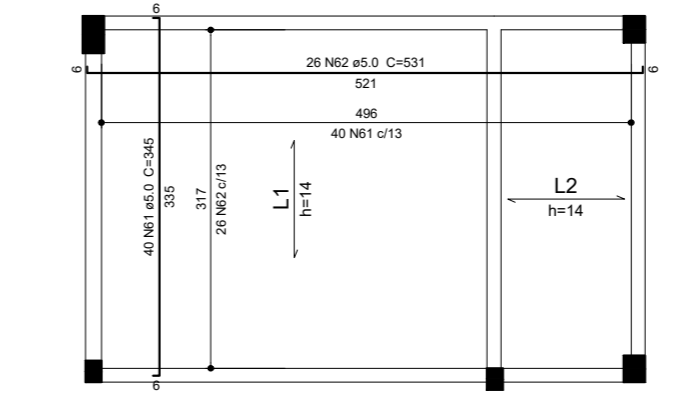
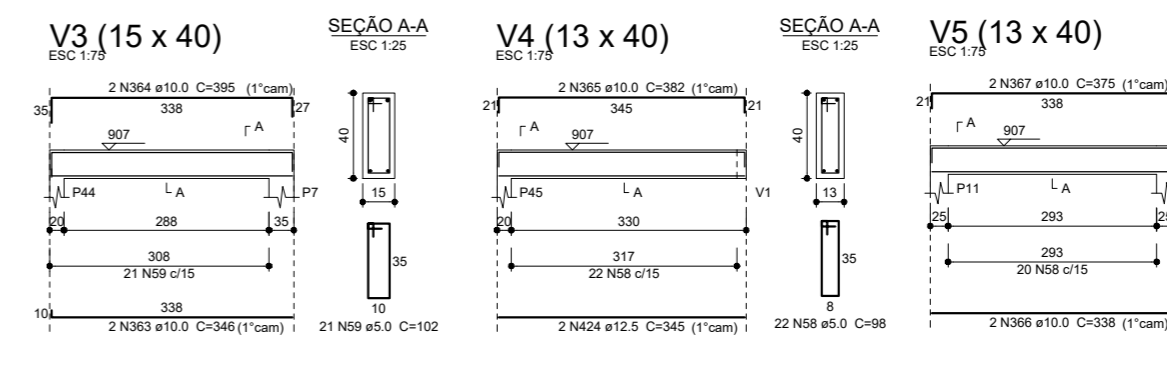
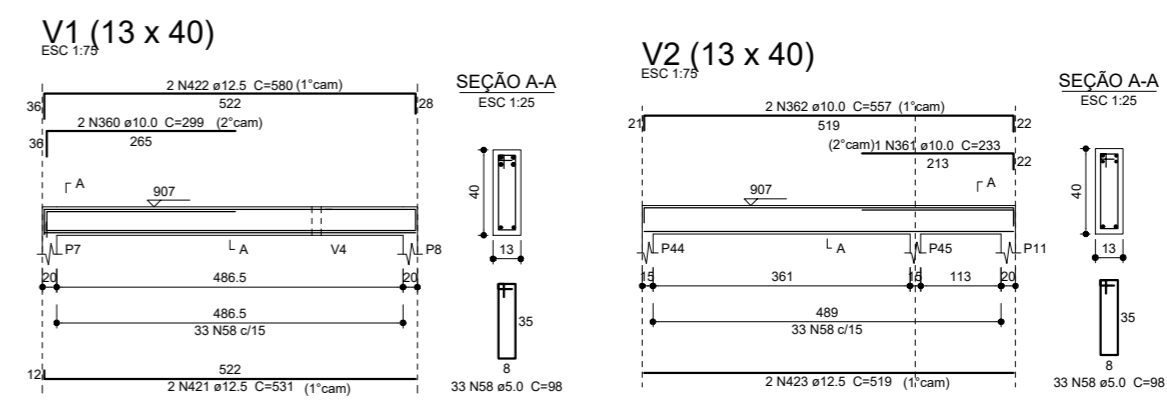
PAVIMENTO: _____

REVISÃO: **R002** DATA: **16/08/2021**

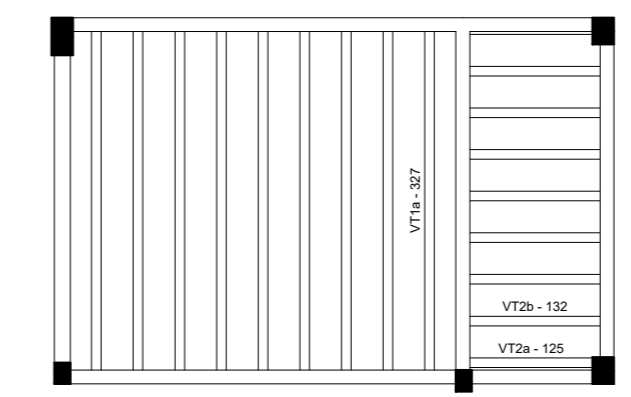
FOLHA: **13/14**



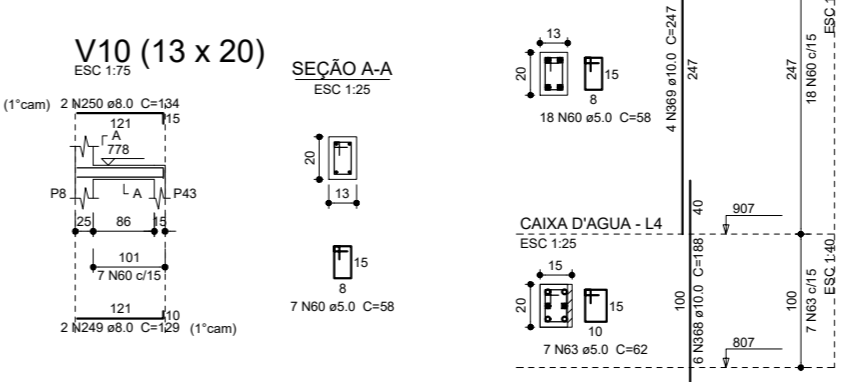
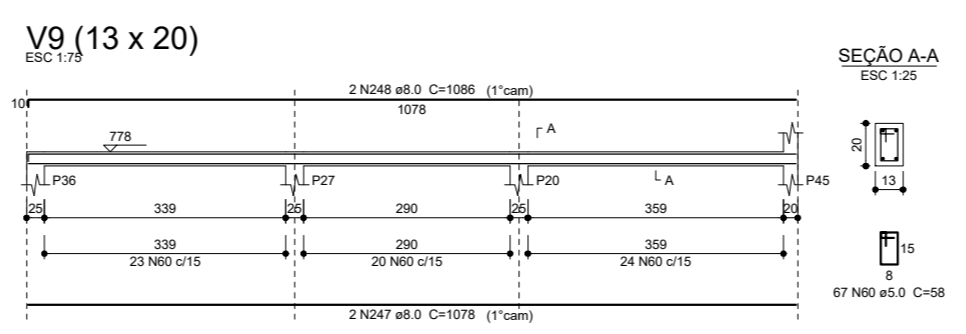
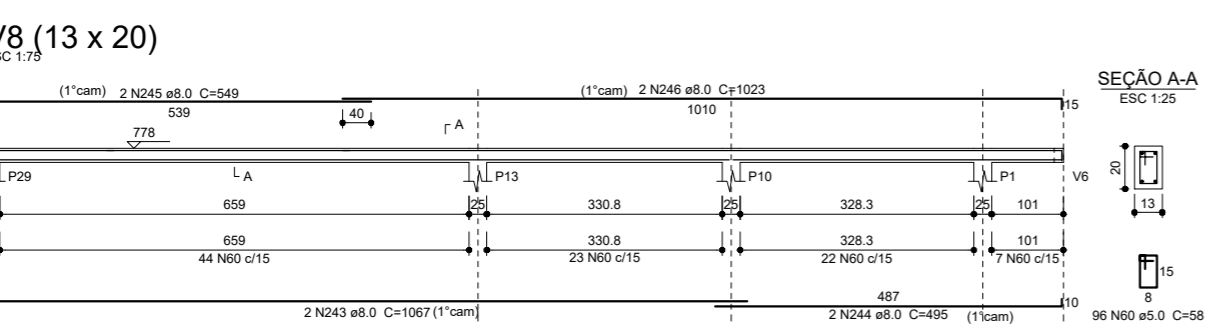
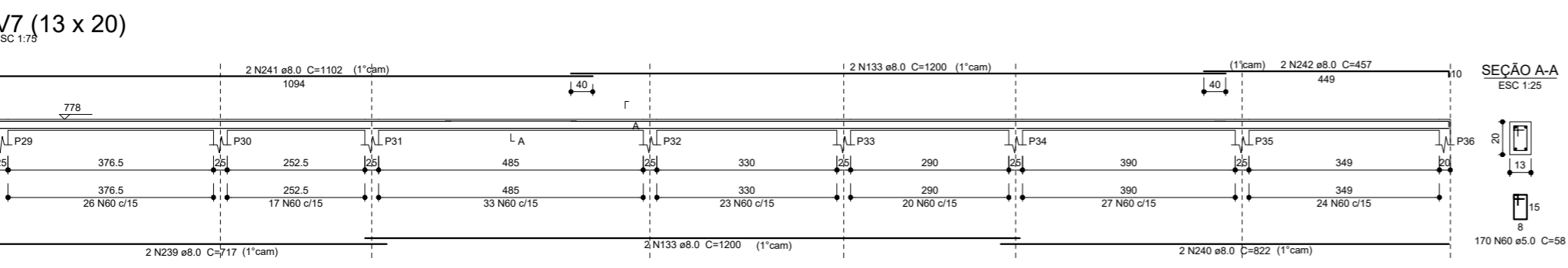
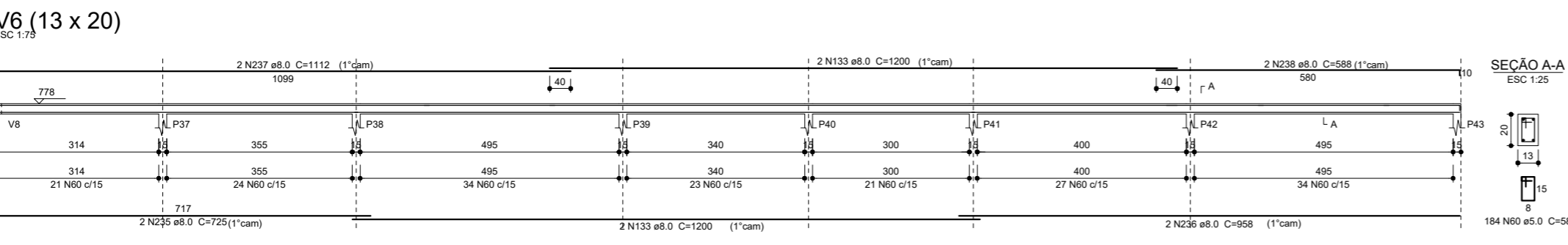
FORMA DO PAVIMENTO CAIXA D'AGUA (NÍVEL 818)
Escala 1:75



ARMAÇÃO POSITIVA DAS LAJES DO PAVIMENTO CAIXA D'AGUA
Escala 1:50



PLANTA DE VIGOTAS PRÉ-MOLDADAS
Escala 1:50



Relação do aço

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA80	58	5.0	108	38	10584
	59	5.0	21	102	2142
	60	5.0	560	58	32480
	61	5.0	40	345	13800
	62	5.0	26	531	13806
	63	5.0	14	62	868
	235	8.0	2	725	1450
	236	8.0	2	958	1916
	237	8.0	2	1112	2224
	133	8.0	8	1200	9600
	238	8.0	2	588	1176
	239	8.0	2	717	1434
	240	8.0	2	822	1644
	241	8.0	2	1102	2204
	242	8.0	2	457	914
	243	8.0	2	1067	2134
	244	8.0	2	495	990
	245	8.0	2	549	1098
	246	8.0	2	1023	2046
	248	8.0	2	1086	2172
	249	8.0	2	129	258
	250	8.0	2	134	268
	360	10.0	2	299	598
	361	10.0	1	233	233
	362	10.0	2	557	1114
	363	10.0	2	346	692
	364	10.0	2	395	790
	365	10.0	2	382	764
	366	10.0	2	338	676
	367	10.0	2	375	750
	368	10.0	12	188	2256
	369	10.0	8	247	1976
	421	12.5	2	531	1062
	422	12.5	2	580	1160
	423	12.5	2	519	1038
	424	12.5	2	549	1098

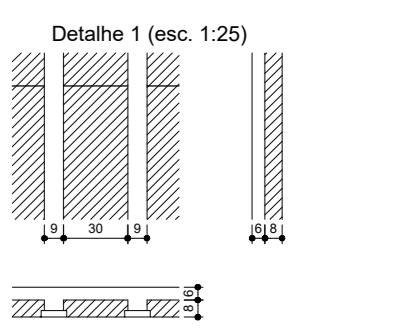
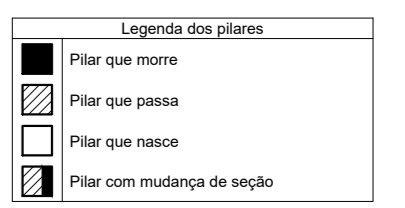
Resumo do aço

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	8.0	336.9	146.2
	10.0	98.5	66.8
	12.5	39.5	41.9
CA60	5.0	738.8	124.9
PESO TOTAL (kg)			
CA50		254.9	
CA60		124.9	

Volume de concreto (C-30) = 4.4 m³

Resumo do aço

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	8.0	31.3	13.6
CA60	TR 08646	41	43.3
PESO TOTAL (kg)			
CA50		13.6	
CA60		43.3	



Blocos de enchimento

Detalhe	Tipo	Nome	Dimensões(cm)	Quantidade
1	EPS Unidirecional	BB/30/125	8 30 125	38

IMPORTANTE TRAÇO RECOMENDADO

TRAÇO CONCRETO 30mpa	TRAÇO CONCRETO 25mpa
1 - 5C CIMENTO	1 - LATA 18lbs DE CIMENTO
3 - 5 LATA 18lbs DE AREIA GROSSA	2 - 3 LATA 18lbs DE AREIA GROSSA
5 - LATA 18lbs DE BRITA 19mm	3 - LATA 18lbs DE BRITA 19mm
25 LITROS DE AGUA	28 LITROS DE AGUA
1 m³ CONCRETO 30mpa	1 m³ CONCRETO 25mpa
8 - 5C CIMENTO 50KG	7 - 5C CIMENTO 50KG
28 Lts DE AREIA GROSSA	0.55 m³ AREIA GROSSA
40 Lts DE BRITA 19mm	0.80 m³ BRITA 19mm
200 LITROS DE AGUA	200 LITROS DE AGUA

José Ribamar Alves de Araújo
Engenheiro Civil
CREA/CE 352649CE

PROJETO ESTRUTURAL

ASSINATURAS:

PROPRIETÁRIO _____

RESP. TÉCNICO _____

OBRA: **CONSTRUÇÃO DA NOVA SEDE DA CÂMARA DE ITAITINGA**

FRANCHA: **FORMAS/LAOCÇÃO DAS VIGOTAS DET. DAS VIGOTAS/ARMAÇÃO DAS VIGAS ARMAÇÃO DOS PILARES**

PROPRIETÁRIO: CÂMARA MUNICIPAL DE ITAITINGA

PAVIMENTO: _____

REVISÃO: R002

DATA: 16/08/2021

FOLHA: 14/14