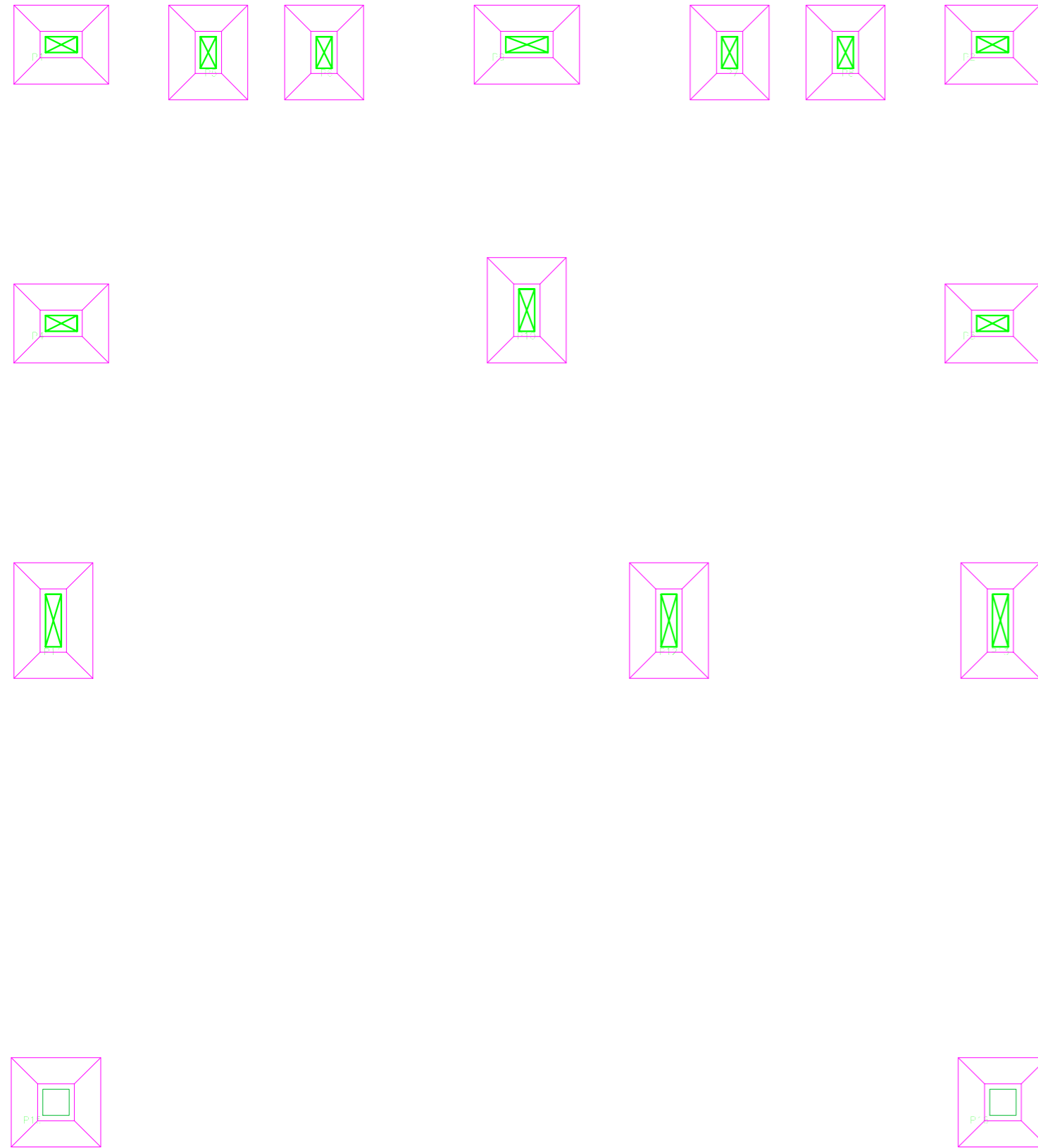
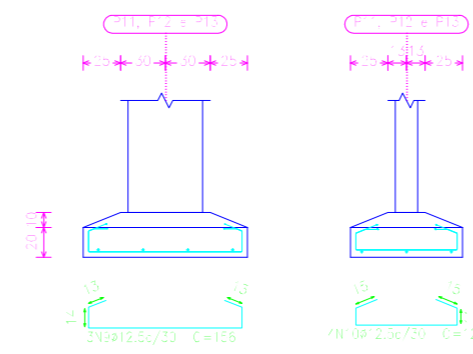


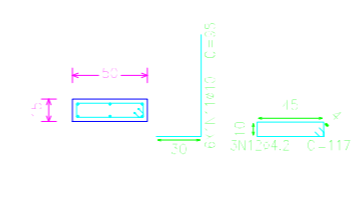
SAPATA EM CONCRETO ARMADO



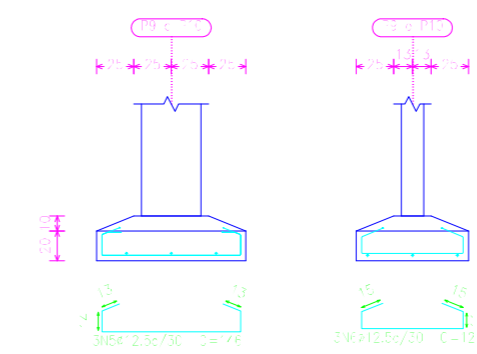
P11, P12 e P13



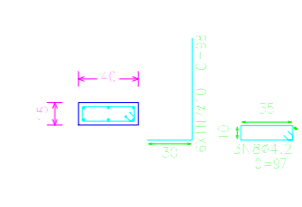
P11, P12 e P13



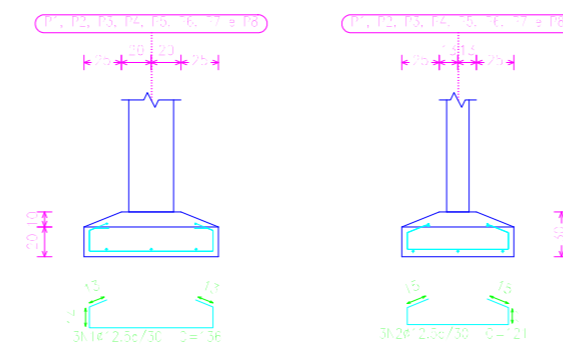
P9 e P10



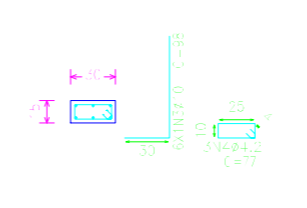
P9 e P10



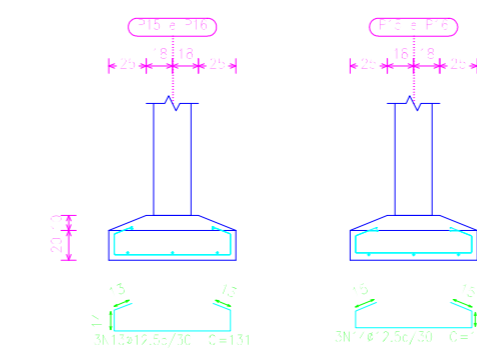
P1, P2, P3, P4, P5, P6, P7 e P8



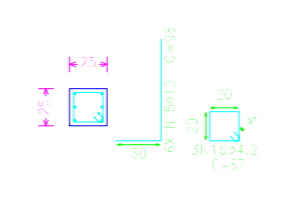
P1, P2, P3, P4, P5, P6, P7 e P8



P15 e P16



P15 e P16



Item	Pos.	Dim.	Q	Vol. (m³)	Peso (kg)	Vol. (m³)	Peso (kg)	Total (m³)	Total (kg)
P1 a P8	1	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	2	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	3	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
P9 e P10	1	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	2	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	3	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
P11 a P13	1	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	2	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	3	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
P15 e P16	1	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	2	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	3	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Total				12.00	12.00	12.00	12.00	12.00	12.00

Resumo	Comp. Tot.	Peso Tot.	Total
Deslocamento L: 10000	80.0	5.0	103
Deslocamento L: 20000	40.0	5.0	5
Total			108

Deslocamento L: 10000 em cm²

APROVAÇÃO:

PREFEITURA MUNICIPAL DE PIRACANJUBA
Praça Wilson Eloy Pimenta, 100 - Centro, Piracanjuba - GO.

PROJETO ESTRUTURAL - QUIOSQUE

01/05

PRÇA PALÁCIO DAS ORQUÍDEAS

Endereço da Obra:
Loteamento Recanto do Bosque, Palácio das Orquídeas, Piracanjuba - GO.

Proprietário:
Prefeitura Municipal de Piracanjuba
CNPJ: 01.179.647/0001-95

Profissional:
Autor e R.T.: Paulo Henrique de Toledo Cardoso
Engenheiro Civil CREA nº 14.743/3-GO

Conteúdo:
PROJETO DE ESTRUTURA DE CONCRETO ARMADO - FUNDAÇÃO

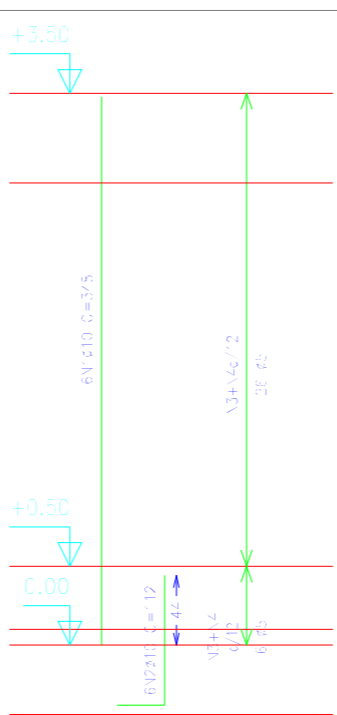
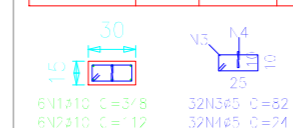
Escala:
Indicadas

Data:
Maio/2015

Assinatura:
[Assinatura]

P1=P2=P3=P4

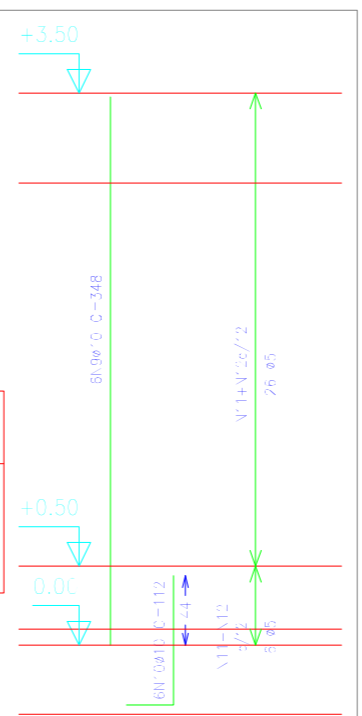
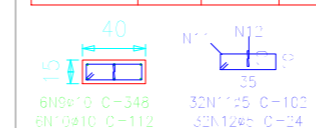
Aço	Pos.	Diam.	Q.	Comp. (cm)	Total (cm)	x 4 (cm)
CA-50-A	1	ø10	6	348	2088	8352
"	2	ø10	6	112	672	2688
CA-60-B	3	ø5	32	82	2624	10496
"	4	ø5	32	24	768	3072



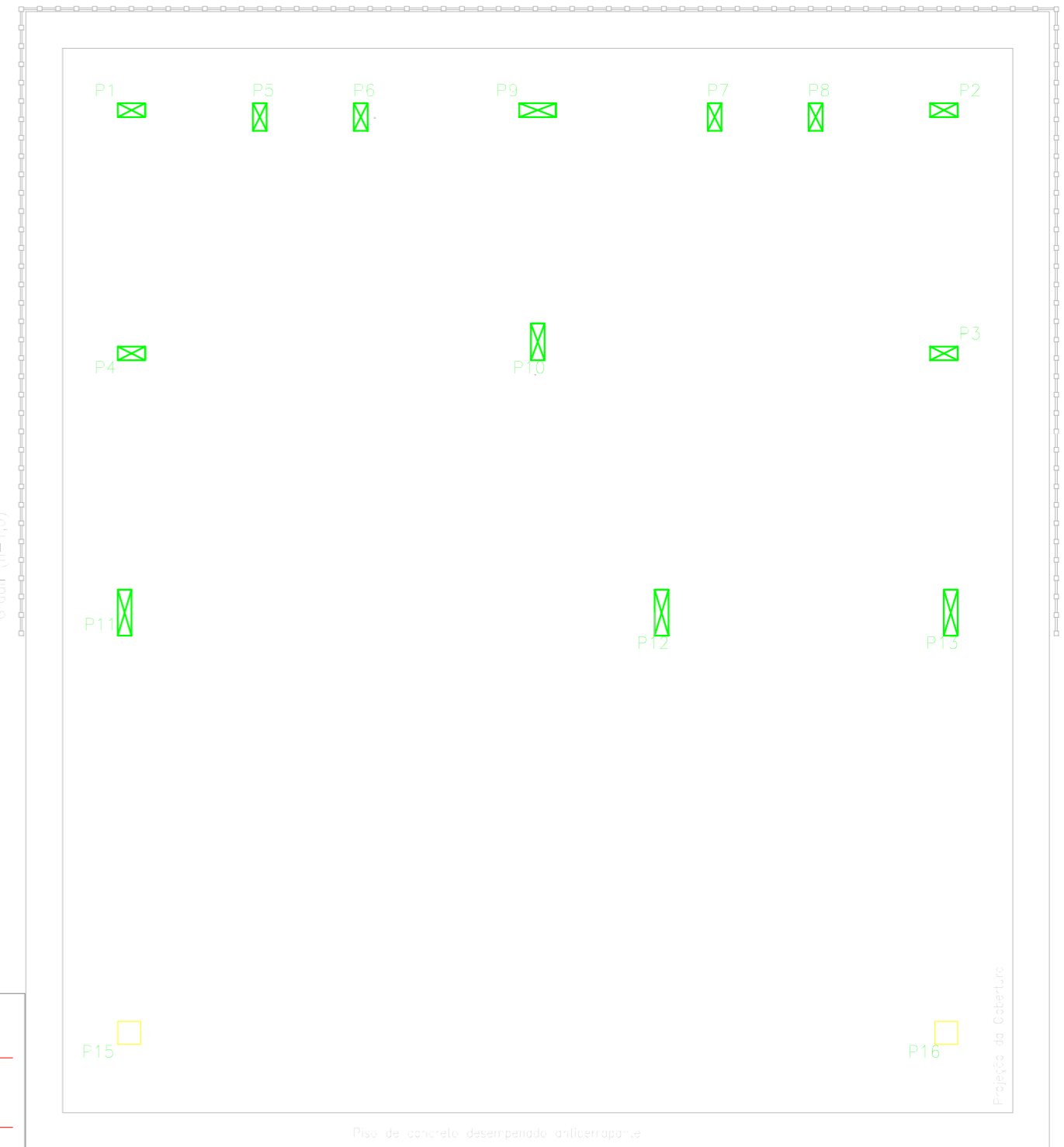
Pilares que terminam em Cobertura
 Concreto: FCK 20 MPa
 Aço: CA-50-A e CA-60-B
 Escala: 1:50

P9

Aço	Pos.	Diam.	Q.	Comp. (cm)	Total (cm)
CA-50-A	9	ø10	6	348	2088
"	10	ø10	6	112	672
CA-60-B	1	ø5	32	102	3264
"	2	ø5	32	24	768



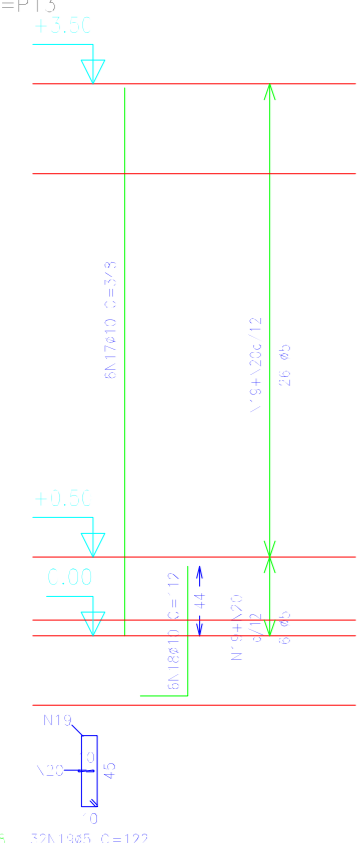
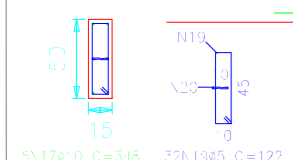
Cross I (h=1,0)



PLANTA QUIOSQUE
 ESC:1/50

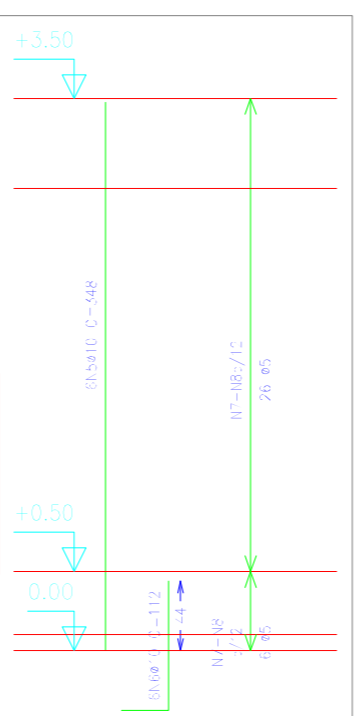
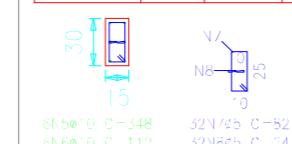
P11=P12=P13

Aço	Pos.	Diam.	Q.	Comp. (cm)	Total (cm)	x 3 (cm)
CA-50-A	17	ø10	6	348	2088	6234
"	18	ø10	6	112	672	2016
CA-60-B	19	ø5	32	122	3904	11712
"	20	ø5	32	24	768	2334



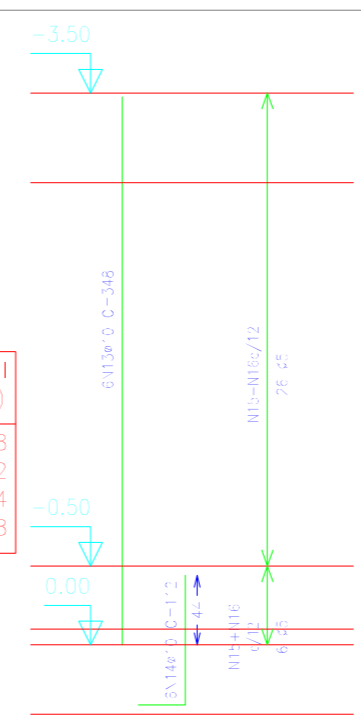
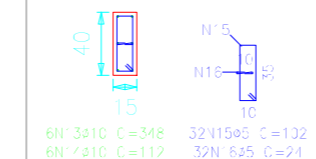
P5=P6=P7=P8

Aço	Pos.	Diam.	Q.	Comp. (cm)	Total (cm)	x 4 (cm)
CA-50-A	5	ø10	6	348	2088	8352
"	6	ø10	6	112	672	2688
CA-60-B	7	ø5	32	82	2624	10496
"	8	ø5	32	24	768	3072



P10

Aço	Pos.	Diam.	Q.	Comp. (cm)	Total (cm)
CA-50-A	13	ø10	6	348	2088
"	14	ø10	6	112	672
CA-60-B	15	ø5	32	102	3264
"	16	ø5	32	24	768



APROVAÇÃO:

02/05

PROJETO ESTRUTURAL - QUIOSQUE

PREFEITURA MUNICIPAL DE PIRACANJUBA
 Praça Wilson Eloy Pimenta, 100 - Centro, Piracanjuba - GO.

PRAÇA PALÁCIO DAS ORQUÍDEAS

Loteamento Recanto do Bosque, Palácio das Orquídeas, Piracanjuba - GO.

Proprietário:
 Prefeitura Municipal de Piracanjuba
 CNPJ: 01.179.647/0001-95

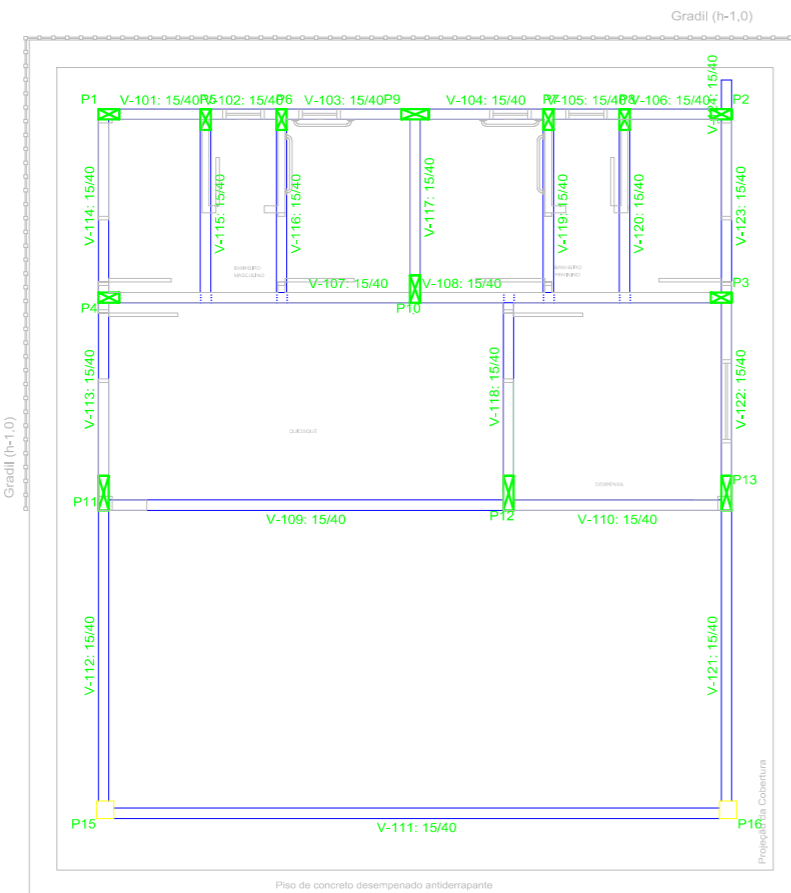
Profissionais:
 Autor e R.T.: Paulo Henrique de Toledo Cardoso
 Engenheiro Civil CREA nº 14.742/D-GO

Conteúdo:
 PROJETO DE ESTRUTURA DE CONCRETO ARMADO - PILARES

Escala:
 Indicadas

Data:
 Maio/2015

Assinatura:



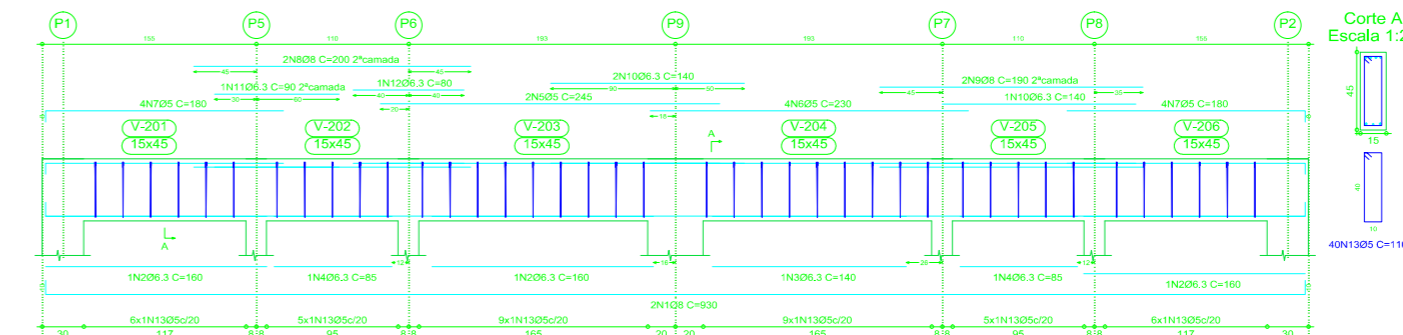
PLANTA QUIOSQUE
ESC:1/50

Piso 1
Fundido
Concreto FCK 20 MPa
Escala: 1:20

Cobertura
Desenho de vigas
Concreto FCK 20 MPa
Aço: CA-50-A e CA-60-B
Escala vigas: 1:25
Escala seções: 1:20

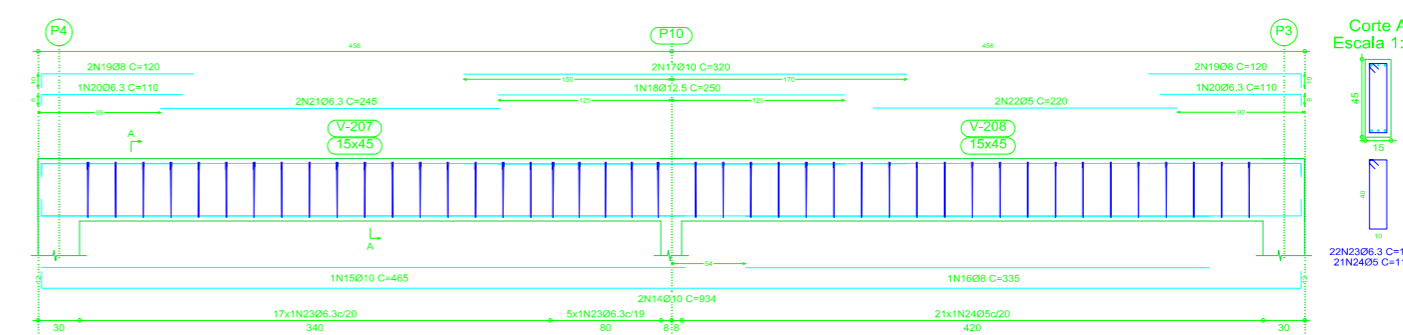
Elemento	Pos.	Diam.	Q.	Dob.	Rela.	Dob.	Comp.	Total	CA-50-A	CA-60-B	
		(cm)	(cm)	(cm)	(cm)	(cm)	(cm)	(kg)	(kg)	(kg)	
V 1	1	Ø8	2	10	100	10	100	160	7,3		
	2	Ø8,3	2	10	160	10	160	480	1,2		
	3	Ø8,3	1	85	160	10	160	140	0,4		
	4	Ø8,3	3	85	170	10	170	85	0,4	0,8	
	5	Ø8	2	245	245	450	245	450		1,4	
	6	Ø8	4	200	200	250	200	450		2,5	
	7	Ø8	8	172	100	140	100	140		1,6	
	8	Ø8	2	200	200	450	200	450		1,5	
	9	Ø8	2	190	190	350	190	350		1,5	
	10	Ø8,3	1	140	140	420	140	420		0,2	
	11	Ø8,3	1	80	80	80	80	80		0,2	
	12	Ø8,3	1	80	80	80	80	80		0,2	
	13	Ø8	40	110	110	4400	110	2310	15,1	6,9	
Total 10%									16,1	12,9	
V 2	14	Ø10	2	12	910	12	910	1988	11,7		
	15	Ø10	1	565	565	465	565	465	2,8		
	16	Ø8	1	330	330	330	330	330	1,3		
	17	Ø10	2	500	500	640	500	640	4,0		
	18	Ø8,3	1	200	200	250	200	250	2,3		
	19	Ø8	4	110	110	120	110	120	3,9		
	20	Ø8,3	2	102	110	220	110	220	0,5		
	21	Ø8,3	2	248	245	490	245	490	1,2	0,7	
	22	Ø8	2	200	200	440	200	440		0,2	
	23	Ø8,3	27	113	248	6,1	113	248	6,1	3,8	
	24	Ø8	21	110	2310		110	2310		4,7	
	Total 10%									30,3	4,7
										Ø8:	0,0
									Ø8,3:	12,3	0,0
									Ø10:	16,9	0,0
									Ø12:	2,7	0,0
									Total:	30,4	17,2

V 1
Escala 1:25



Corte A
Escala 1:20

V 2
Escala 1:25



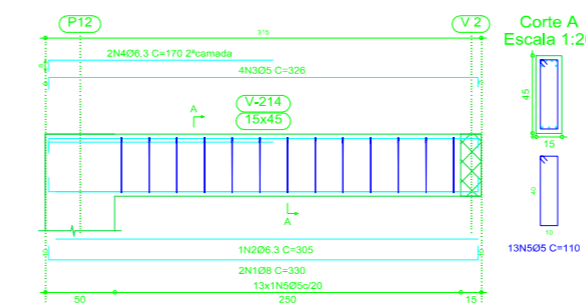
Corte A
Escala 1:20

Elemento	Pos.	Diam.	Q.	Dob.	Rela.	Dob.	Comp.	Total	CA-50-A	CA-60-B	
		(cm)	(cm)	(cm)	(cm)	(cm)	(cm)	(kg)	(kg)	(kg)	
V 3	1	Ø8	2	10	910	10	910	1988	7,3		
	2	Ø8	2	565	565	1130	565	1130	4,4		
	3	Ø8,3	1	330	330	330	330	330	0,8		
	4	Ø8,3	3	362	8	370	1110	2,7			
	5	Ø8	2	310	310	620	2,4				
	6	Ø10	1	185	185	185	1,2				
	7	Ø8	2	125	145	290	1,1				
	8	Ø8,3	1	122	130	130	0,3				
	9	Ø8	2	338	338	670	1,1				
	10	Ø8	26	130	4850						
	Total 10%									22,2	9,0
										Ø8:	7,1
										Ø8,3:	0,0
									Ø10:	0,0	
									Ø12:	0,0	
									Total:	37,4	18,5

Cobertura
Desenho de vigas
Concreto FCK 20 MPa
Aço: CA-50-A e CA-60-B
Escala vigas: 1:25
Escala seções: 1:20

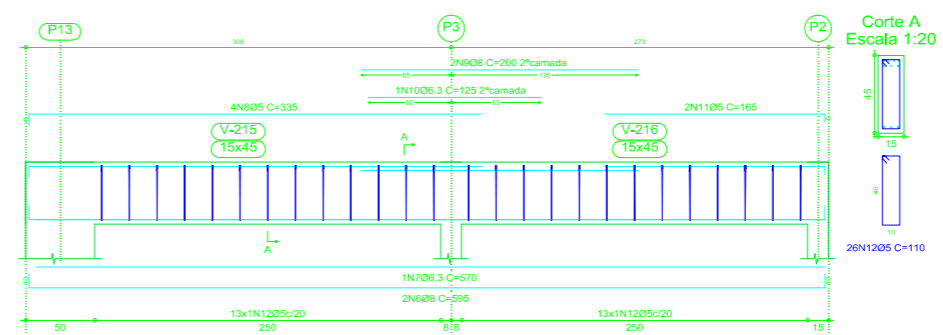
Elemento	Pos.	Diam.	Q.	Dob.	Rela.	Dob.	Comp.	Total	CA-50-A	CA-60-B		
		(cm)	(cm)	(cm)	(cm)	(cm)	(cm)	(kg)	(kg)	(kg)		
V 6	1	Ø8	2	10	310	10	310	680	2,8			
	2	Ø8,3	1	300	300	300	0,8		2,0			
	3	Ø8	2	8	162	7	208	1384	0,8	2,2		
	4	Ø8,3	13	110	1480							
	Total 10%									4,6	4,0	
V 7	6	Ø8	2	10	970	10	970	1990	4,7			
	7	Ø8,3	1	370	370	370	1,4		2,1			
	8	Ø8	4	327	330	1340	1,6					
	9	Ø8	2	200	200	450	1,8					
	10	Ø8,3	1	125	125	125	0,3		0,5			
	11	Ø8	2	198	8	160	280	7,9				
	12	Ø8	26	110	2860							
	Total 10%									8,8	7,9	
										Ø8:	0,0	12,4
										Ø8,3:	3,6	0,0
										Ø10:	8,8	0,0
										Total:	13,4	12,4

V 6
Escala 1:25



Corte A
Escala 1:20

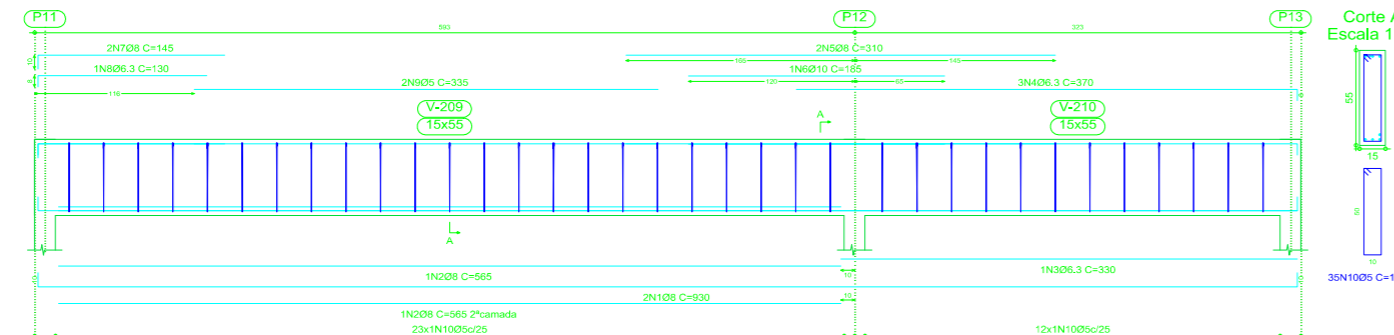
V 7
Escala 1:25



Corte A
Escala 1:20

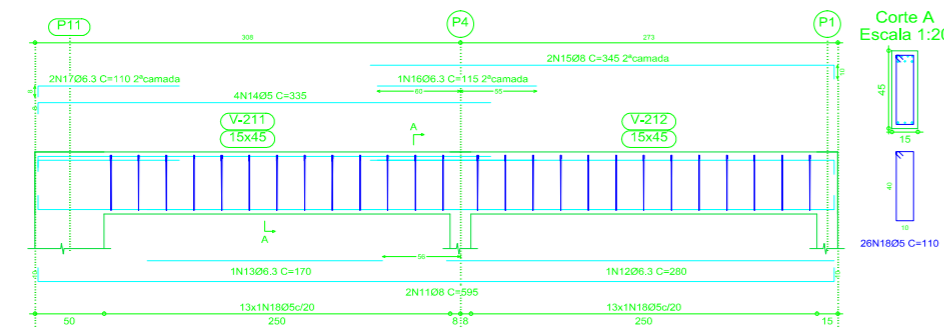
Cobertura
Desenho de vigas
Concreto FCK 20 MPa
Aço: CA-50-A e CA-60-B
Escala vigas: 1:25
Escala seções: 1:20

V 3
Escala 1:25



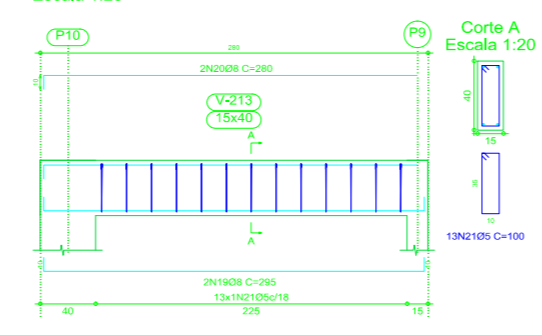
Corte A
Escala 1:20

V 4
Escala 1:25



Corte A
Escala 1:20

V 5
Escala 1:25



Corte A
Escala 1:20

APROVAÇÃO

PREFEITURA MUNICIPAL DE PIRACANJUBA
Praça Wilson Eloy Pimenta, 100 - Centro, Piracanjuba - GO.

PRAÇA PALÁCIO DAS ORQUÍDEAS
Loteamento Recanto do Bosque, Palácio das Orquídeas, Piracanjuba - GO.

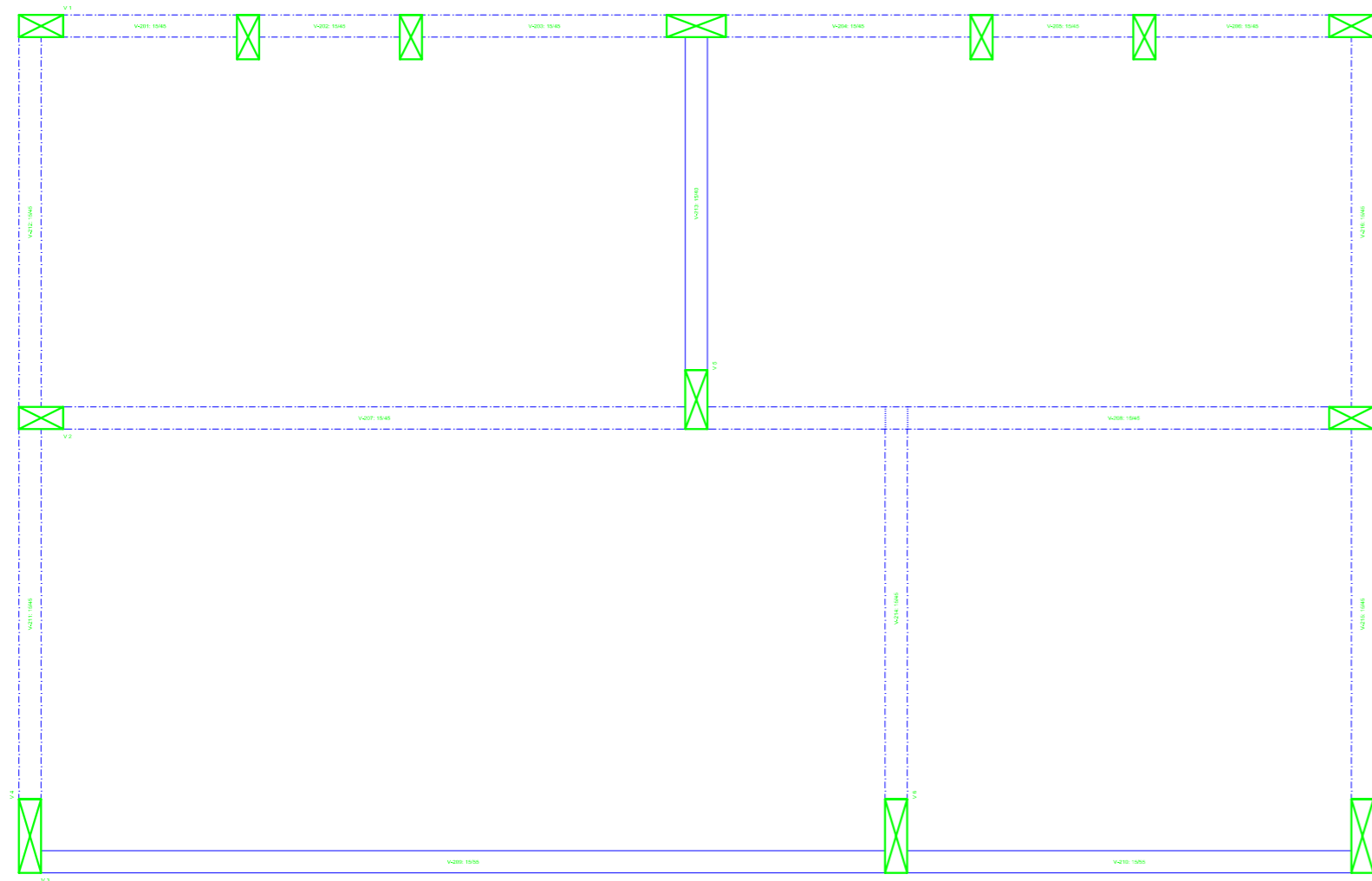
PROJETO ESTRUTURAL - QUIOSQUE

Prefeitura Municipal de Piracanjuba
CNPJ: 01.073.547/0001-95

PROJETO DE ESTRUTURA DE CONCRETO ARMADO - VIGAS INFERIORES

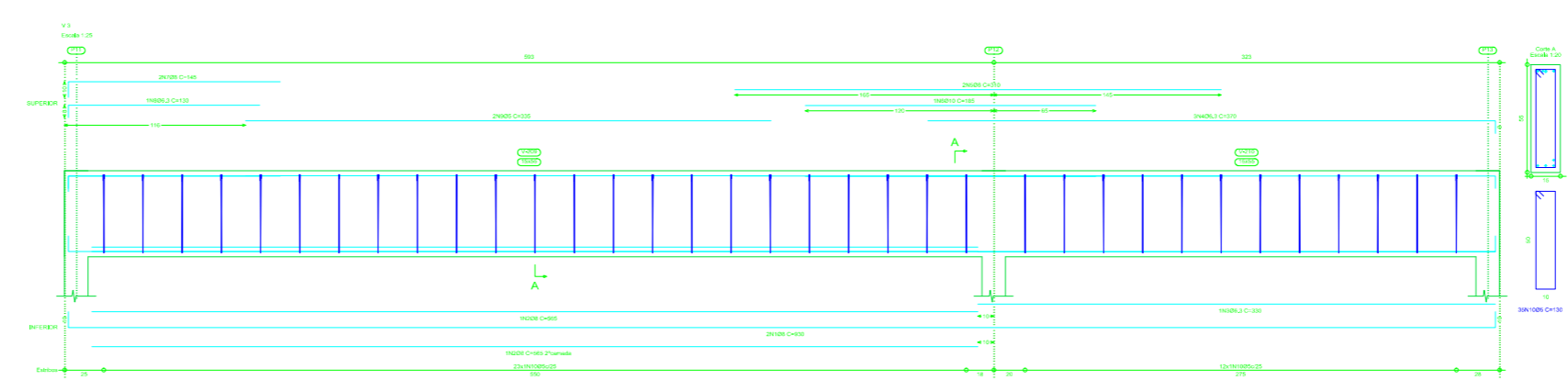
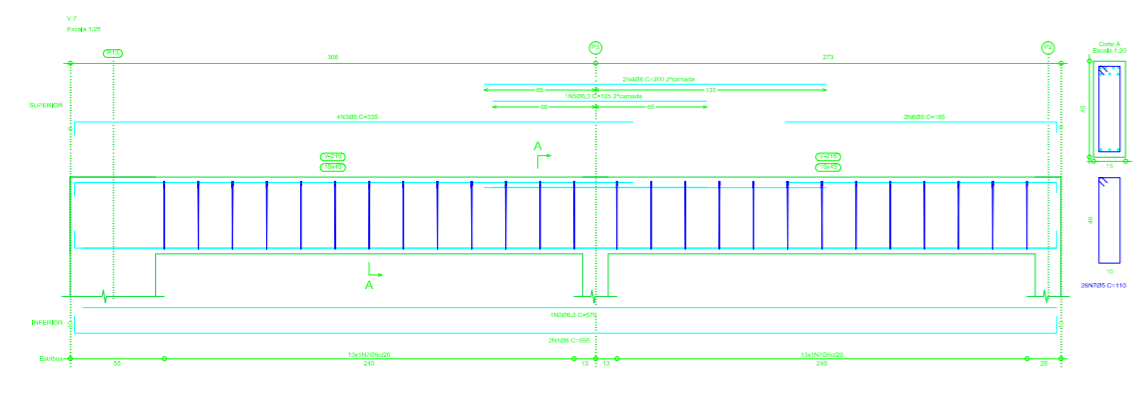
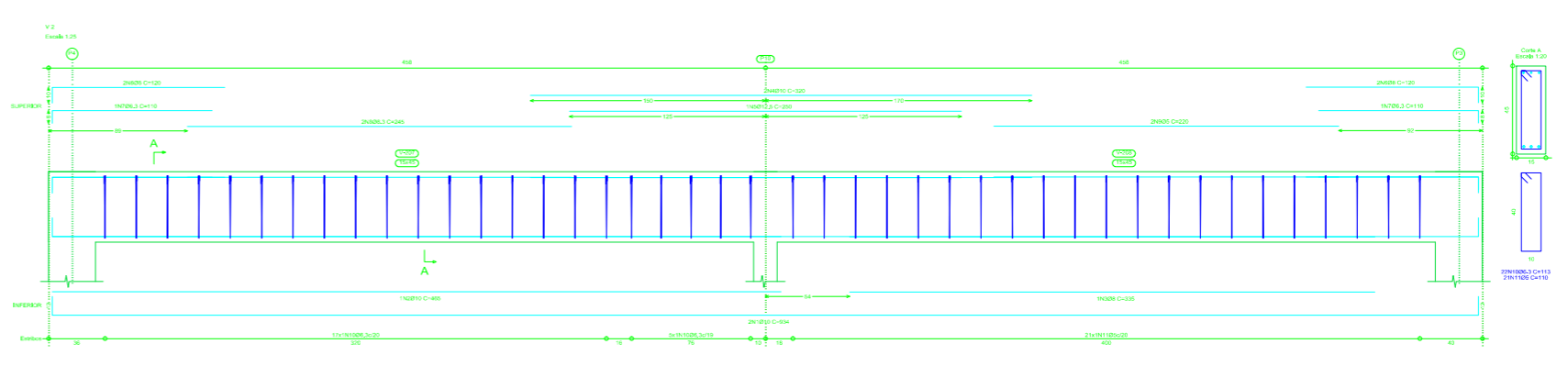
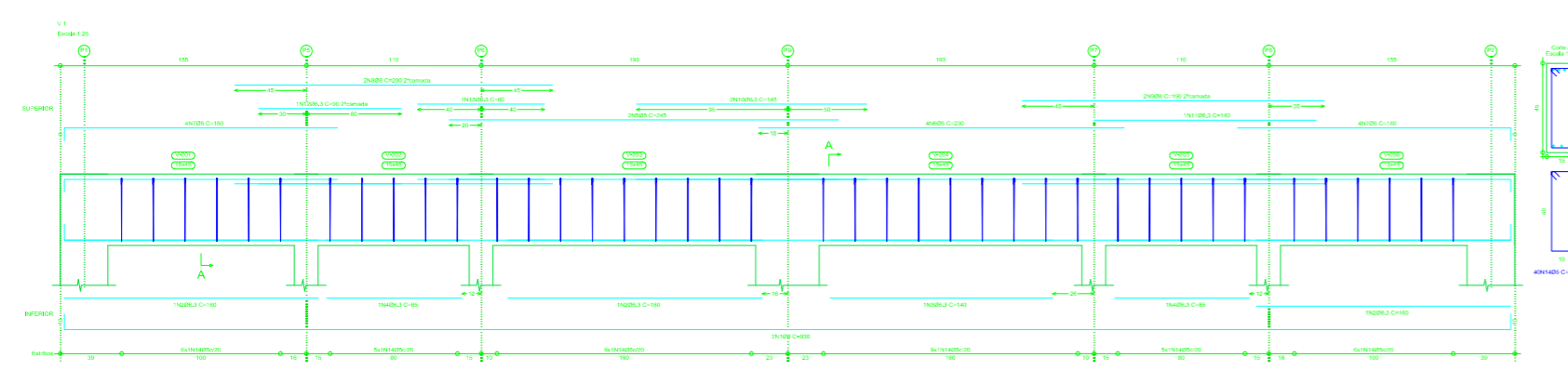
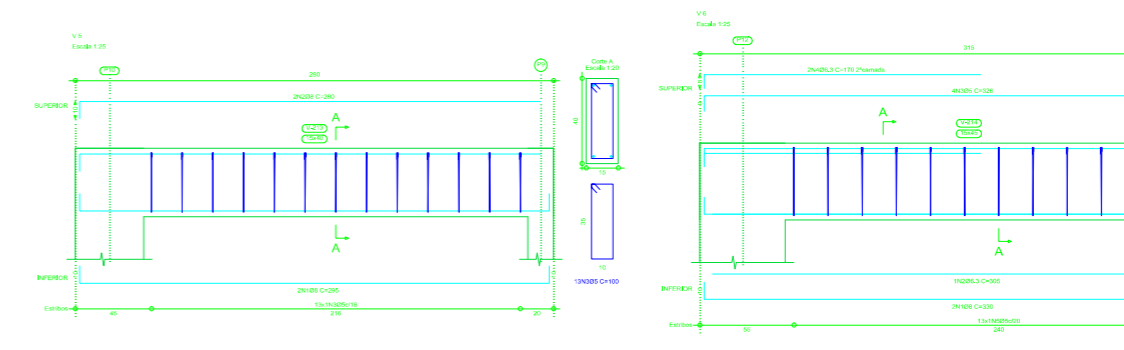
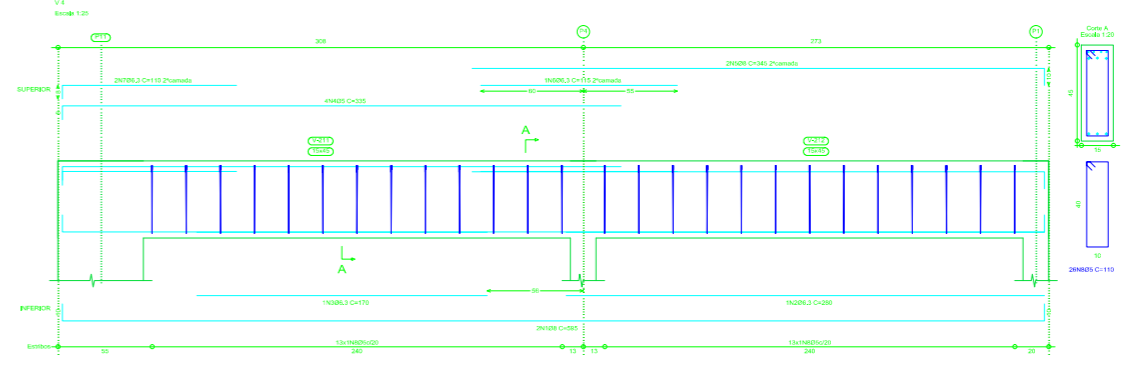
Autor e R.T.: Paulo Henrique de Toledo Cardoso
Engenheiro Civil CREA nº 14.742/D-GO

Indicadas: MAIO/2015



Elemento	Pos.	Diam.	Q	Dob.	Ret.	Dob.	Comp.	Total	CA-50-A	CA-60-B	
					(cm)	(cm)	(cm)	(kg)	(kg)	(kg)	
V 1											
1	08	2	10	910	10	930	1868	7,3			
2	06.3	3	160	160	160	480	1,2				
3	06.3	1	140	140	140	0,3					
4	06.3	2	85	85	170	0,4					
5	05	2	245	245	490	0,8					
6	05	4	230	230	620	1,4					
7	05	8	172	170	1440	1,6					
8	08	2	200	200	400	1,6					
9	08	2	190	190	380	1,5					
10	06.3	2	145	145	290	0,7					
11	06.3	1	140	140	140	0,3					
12	06.3	1	90	90	90	0,2					
13	06.3	1	80	80	80	0,2					
14	05	40			110	4400				6,9	
Total+10%:									15,1	12,5	
V 2											
1	010	2	12	910	12	934	1868	11,7			
2	010	1	465	465	465	2,9					
3	08	1	335	335	335	1,3					
4	010	2	320	320	640	4,0					
5	012,5	1	250	250	250	2,5					
6	08	4	110	120	480	1,9					
7	06.3	2	8	102	110	220	0,5				
8	06.3	2	245	245	490	1,2					
9	05	2	220	220	440	0,7					
10	06.3	22			113	2486	6,1				
11	05	21			110	2310	3,6				
Total+10%:									35,3	4,7	
V 3											
1	08	2	10	910	10	930	1868	7,3			
2	08	2	565	565	1130	4,4					
3	06.3	1	330	330	330	0,9					
4	06.3	3	362	370	1110	2,7					
5	08	2	310	310	620	2,4					
6	010	1	185	185	185	1,2					
7	08	2	10	135	145	290	1,1				
8	06.3	1	8	122	130	130	0,3				
9	05	2	335	335	670	1,1					
10	05	35			130	4550	7,1				
Total+10%:									22,2	9,0	
V 4											
1	08	2	10	575	10	595	1190	4,7			
2	06.3	1	280	280	280	0,7					
3	06.3	1	170	170	170	0,4					
4	05	4	8	327	335	1340	2,1				
5	08	2	335	345	690	2,7					
6	06.3	1	115	115	115	0,3					
7	06.3	2	8	102	110	220	0,5				
8	05	26			110	2860	4,5				
Total+10%:									10,2	7,3	
V 5											
1	08	2	10	275	10	295	590	2,3			
2	08	2	10	270	280	560	2,2				
3	05	13			100	1300	2,0				
Total+10%:									5,0	2,2	
V 6											
1	08	2	10	310	10	330	660	2,6			
2	06.3	1	305	305	305	0,9					
3	05	4	9	310	7	326	1304	2,0			
4	06.3	2	8	162	170	340	0,8				
5	05	13			110	1430	2,2				
Total+10%:									4,6	4,6	
V 7											
1	08	2	10	575	10	595	1190	4,7			
2	06.3	1	570	570	570	1,4					
3	05	4	8	327	335	1340	2,1				
4	08	2	200	200	400	1,6					
5	06.3	1	125	125	125	0,3					
6	05	2	159	165	330	0,5					
7	05	26			110	2860	4,5				
Total+10%:									8,8	7,8	
									05	0,0	48,1
									06.3	22,2	0,0
									08	54,5	0,0
									010	21,8	0,0
									012,5	2,7	0,0
									Total	101,2	48,1

VIGAS SUPERIORES
 Desenho de vigas:
 Concreto: FCK 20 MPa
 Aço: CA-50-A e CA-60-B
 Escala vigas: 1:25
 Escala seções: 1:20



Resumo Apo Cobertura Vigas	Comp. total (m)	Peso+10% (kg)	Total
CA-50-A 06.3	62,8	23	
08	126,4	55	
010	31,8	22	
012,5	2,5	3	103
CA-60-B 05	279,8	48	48
Total			151

APROVAÇÃO:

PREFEITURA MUNICIPAL DE PIRACANJUBA
 Praça Wilson Eloy Pimenta, 100
 - Centro, Piracanjuba - GO.

PRAÇA PALÁCIO DAS ORQUÍDEAS

PROJETO ESTRUTURAL - QUIOSQUE

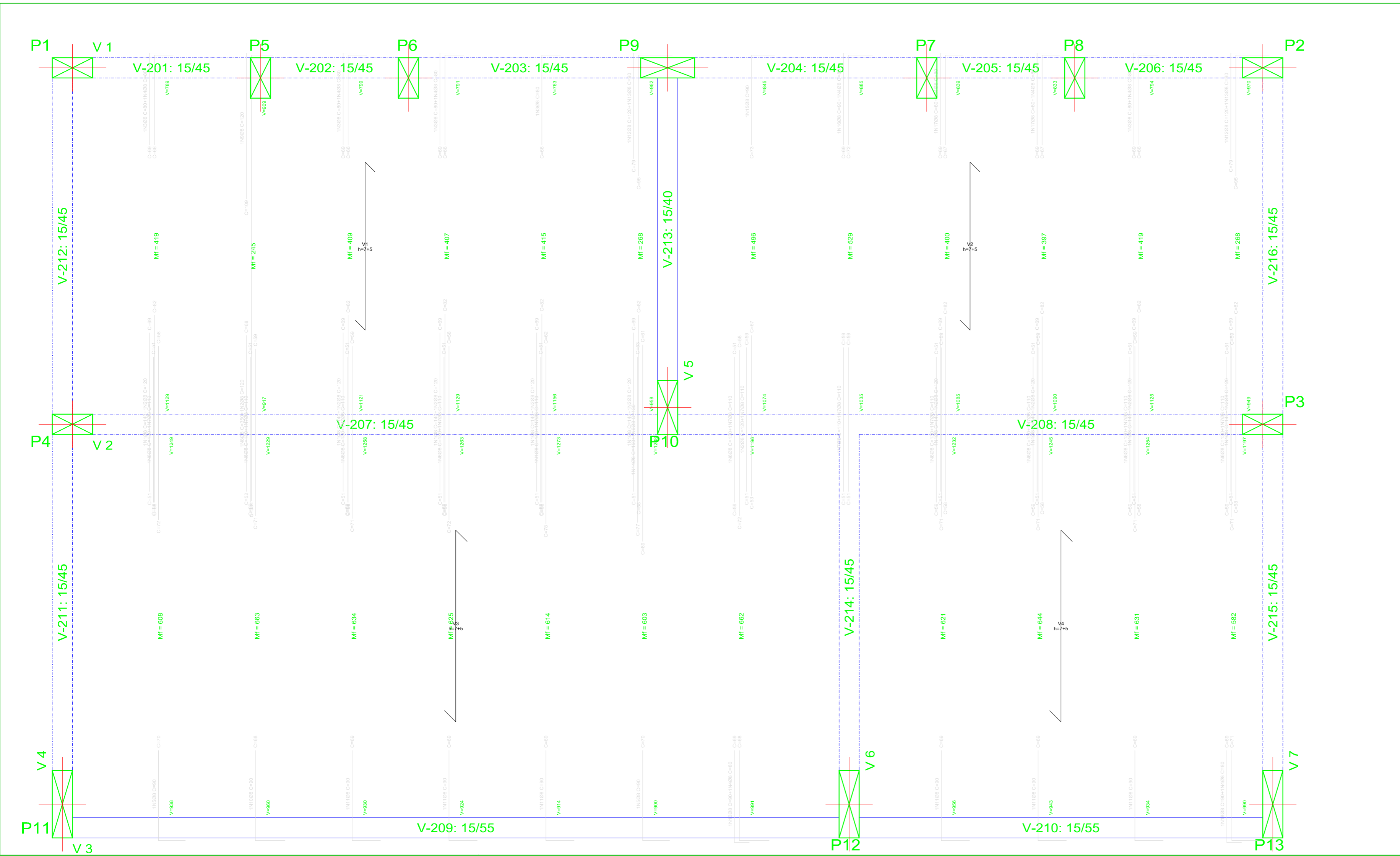
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Proprietário:
 Prefeitura Municipal de Piracanjuba
 CNPJ: 01.179.647/0001-95

Profissional:
 Autor e R.T.: Paulo Henrique de Toledo Cardoso
 Engenheiro Civil CREA nº 14.742/D-GO

Conteúdo:
 PROJETO DE ESTRUTURA DE CONCRETO ARMADO - VIGAS SUPERIORES

Indicadas: Maio/2015



Elemento	Pos.	Diam.	Q.	Dob. (cm)	Reta Dob. (cm)	Comp. (cm)	Total (cm)	CA-50-A (kg)	CA-60-B (kg)
Formas	1	Ø8	10	140	140	140	1400	5,5	
	2	Ø8	11	120	120	120	1320	5,2	
	3	Ø8	5	14	66	80	400	1,6	
	4	Ø8	9	11	69	80	720	2,8	
	5	Ø8	2	20	70	90	180	0,7	
	6	Ø8	10	130	130	130	1300	5,1	
	7	Ø8	13	110	110	110	1430	5,6	
	8	Ø8	1	16	334	350	350	1,4	
	9	Ø8	1	11	109	120	120	0,5	
	10	Ø8	2	22	68	90	180	0,7	
	11	Ø8	6	21	69	90	540	2,1	
	12	Ø8	2	25	95	120	240	0,9	
	13	Ø8	2	11	79	90	180	0,7	
	14	Ø8	1	150	150	150	150	0,6	
	15	Ø8	1	17	73	90	90	0,4	
	16	Ø8	1	18	72	90	90	0,4	
	17	Ø8	2	13	67	80	160	0,6	
	18	Ø8	1	19	71	90	90	0,4	
Total+10%:								38,7	
Ø8:								38,7	0,0
Total:								38,7	0,0

Resumo Aço Cobertura Formas	Comp. total (m)	Peso+10% (kg)
CA-50-A Ø8	89,4	39

Recobrimento: 3cm
 Concreto: FCK 15 MPa
 CA-50-A e CA-60-B
 Escala: 1:25

APROVAÇÃO:

PREFEITURA MUNICIPAL DE PIRACANJUBA

Praça Wilson Eloy Pimenta, 100 - Centro, Piracanjuba - GO.

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PRAÇA PALÁCIO DAS ORQUÍDEAS

Projeto de Obra

Loteamento Recanto do Bosque, Palácio das Orquídeas, Piracanjuba - GO.

Proprietário:

PREFEITURA MUNICIPAL DE PIRACANJUBA
 CNPJ: 01.179.647/0001-95

Profissional:

Autor e R.T.: Paulo Henrique de Toledo Cardoso
 Engenheiro Civil CREA nº 14.742-D-GO

Condição:

PROJETO DE ESTRUTURA DE CONCRETO ARMADO - LAJES - PRÉ-MOLDADAS

Indicadas: Maio/2015