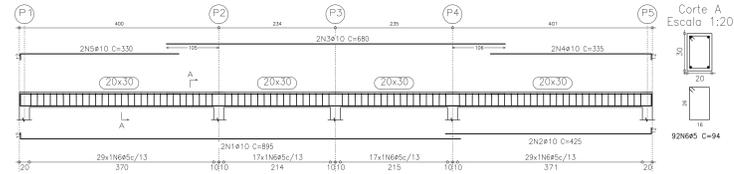
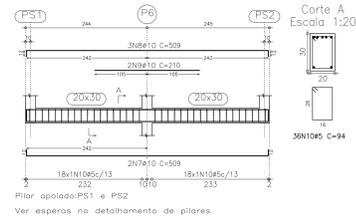


Loje 1  
 Desenho de vigas  
 Concreto: C20, em geral  
 Aço: CA-50-A e CA-60-B  
 Escala vigas: 1:50  
 Escala seções: 1:20

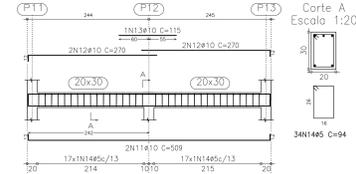
V 101  
 Escala 1:50



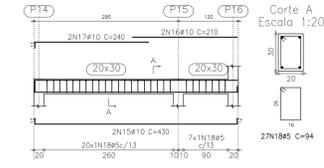
V 102  
 Escala 1:50



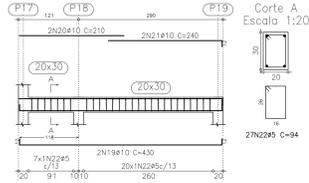
V 103  
 Escala 1:50



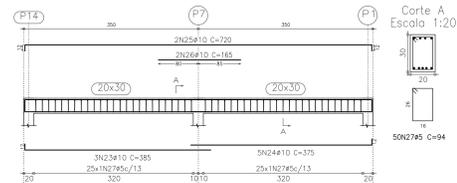
V 104  
 Escala 1:50



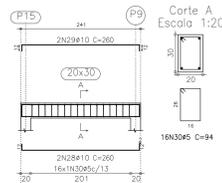
V 105  
 Escala 1:50



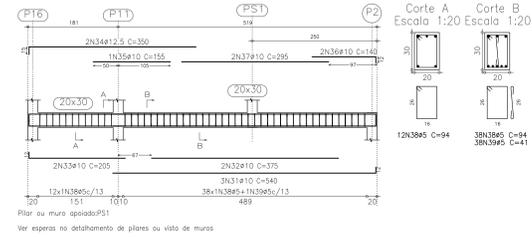
V 106  
 Escala 1:50



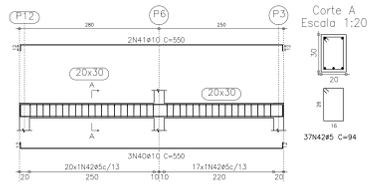
V 107  
 Escala 1:50



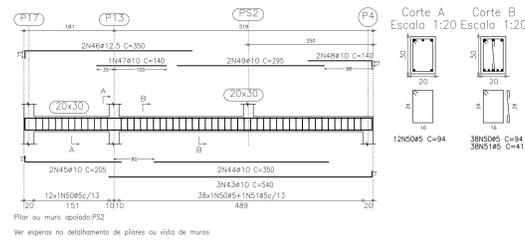
V 108  
 Escala 1:50



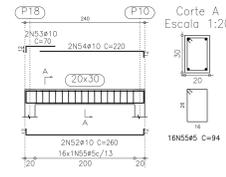
V 109  
 Escala 1:50



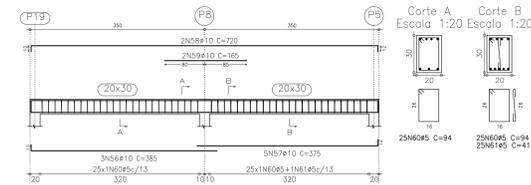
V 110  
 Escala 1:50



V 111  
 Escala 1:50

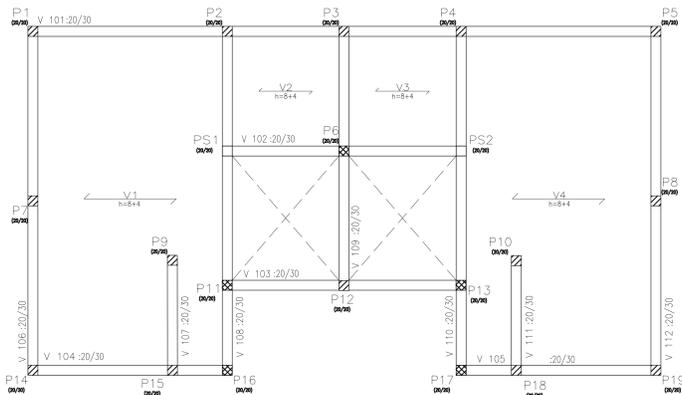


V 112  
 Escala 1:50



**LEGENDA**

- PILAR NASCE
- PILAR SEGUIE
- PILAR MORRE



Loje 1 - Superfície total: 69,69 m<sup>2</sup>

Elemento	Formas (m <sup>2</sup> )	Volume (m <sup>3</sup> )
LAJE	69,69	0,36
Vigas	12,34	4,12
Forma Metal	28,97	
Mobra (Esp. Formas)	48,88	2,47
<b>Total</b>	<b>149,88</b>	<b>11,95</b>

Tabela de caracterização de lajes de vigas  
 LAJE DE VIGAS DE CONCRETO  
 Área de incidência: 4 m  
 Espessura nominal de concreto: 4 cm  
 Entalhe: 55 cm  
 Massa/Vol: Concreto  
 Largura de nervo: 10 cm  
 Volume de concreto: 5,08 m<sup>3</sup>  
 Para projeto: 0,13 t/m<sup>2</sup>  
 Nota: Consulte as diretrizes referentes a lajes com lajes de estrutura principal e das cores mais altas.

Pilares que terminam em Loje 1  
 Concreto: C20, em geral  
 Aço: CA-50-A e CA-60-B  
 Escala: 1:50

P1=P2=P3=P4=P5=P7=P8  
 P9=P10=P12=P14=P15=P18  
 P19

Aço	Pos.	Diâm.	Q.	Comp. (cm)	Total (cm)	Volume (m <sup>3</sup> )
CA-50-A	1	ø10	4	348	1392	19488
CA-60-B	2	ø5	31	72	2232	31248

P6=P11=P13=P16=P17

Aço	Pos.	Diâm.	Q.	Comp. (cm)	Total (cm)	Volume (m <sup>3</sup> )
CA-50-A	1	ø10	4	395	1580	7900
CA-60-B	2	ø5	31	72	2232	11160

Resumo Aço	Comp. total (m)	Peso+10% (kg)	Total
Pilares até Loje 1	273,9	189	189
CA-50-A-ø10		73	73
CA-60-B-ø5		86	86
<b>Total</b>		<b>265</b>	<b>265</b>

Elemento	Pos.	Diâm.	Q.	Comp. (cm)	Total (cm)	Volume (m <sup>3</sup> )	Peso (kg)	Total	
V 101	1	ø10	2	12	883	895	1790	11,2	
	2	ø10	2	12	413	12	425	850	5,3
	3	ø10	2	12	680	680	1360	8,5	
	4	ø10	2	12	323	12	335	670	4,2
	5	ø10	2	12	318	330	660	4,1	
	6	ø5	31	72	72	94	8648	13,6	
<b>Total+10%</b>								<b>36,6</b>	
V 102	7	ø10	2	12	485	12	509	1018	6,4
	8	ø10	2	12	485	12	509	1027	6,6
	9	ø10	2	12	210	210	420	2,6	
	10	ø5	36	72	94	3384	84	5,3	
<b>Total+10%</b>								<b>20,5</b>	
V 103	11	ø10	2	12	460	12	509	1018	6,4
	12	ø10	4	12	258	270	1080	6,8	
	13	ø10	2	12	115	115	230	0,7	
	14	ø5	34	72	94	3196	84	5,0	
<b>Total+10%</b>								<b>15,3</b>	
V 104	15	ø10	2	12	408	12	430	860	5,4
	16	ø10	2	12	210	210	420	2,6	
	17	ø10	2	12	208	240	480	3,0	
	18	ø5	27	72	94	2938	84	4,0	
<b>Total+10%</b>								<b>12,1</b>	
V 105	19	ø10	2	12	408	12	430	860	5,4
	20	ø10	2	12	210	210	420	2,6	
	21	ø10	2	12	228	12	240	480	3,0
	22	ø5	27	72	94	2938	84	4,0	
<b>Total+10%</b>								<b>12,1</b>	
V 106	23	ø10	2	12	373	385	1155	7,3	
	24	ø10	2	12	363	12	375	1875	11,8
	25	ø10	2	12	696	12	720	1440	9,0
	26	ø10	2	12	165	165	330	2,1	
	27	ø5	50	72	94	4700	84	7,4	
<b>Total+10%</b>								<b>33,2</b>	
V 107	28	ø10	2	12	236	12	260	520	3,3
	29	ø10	2	12	236	12	260	520	3,3
	30	ø5	16	72	94	1504	84	2,4	
<b>Total+10%</b>								<b>7,3</b>	
V 108	31	ø10	3	12	528	12	540	1620	10,2
	32	ø10	2	12	375	375	750	4,7	
	33	ø10	2	12	193	205	410	2,6	
	34	ø12,5	2	15	335	350	700	6,9	
	35	ø10	2	12	155	155	310	1,9	
	36	ø10	2	12	128	12	140	280	1,8
	37	ø10	2	12	295	295	590	3,7	
	38	ø5	50	72	94	4700	84	7,4	
	39	ø5	38	72	94	1558	41	2,4	
<b>Total+10%</b>								<b>34,0</b>	
V 109	40	ø10	2	12	526	12	550	1650	10,4
	41	ø10	2	12	526	12	550	1650	10,4
	42	ø5	37	72	94	3478	84	5,5	
<b>Total+10%</b>								<b>19,0</b>	
V 110	43	ø10	3	12	528	12	540	1620	10,2
	44	ø10	2	12	350	350	700	4,4	
	45	ø10	2	12	193	205	410	2,6	
	46	ø12,5	2	15	335	350	700	6,9	
	47	ø10	2	12	140	140	280	0,9	
	48	ø10	2	12	138	140	280	1,8	
	49	ø10	2	12	295	295	590	3,7	
	50	ø5	50	72	94	4700	84	7,4	
	51	ø5	38	72	94	1558	41	2,4	
<b>Total+10%</b>								<b>33,6</b>	
V 111	52	ø10	2	12	236	12	260	520	3,3
	53	ø10	2	12	236	12	260	520	3,3
	54	ø10	2	12	208	12	220	440	2,8
	55	ø5	16	72	94	1504	84	2,4	
<b>Total+10%</b>								<b>7,7</b>	
V 112	56	ø10	3	12	373	385	1155	7,3	
	57	ø10	2	12	363	12	375	1875	11,8
	58	ø10	2	12	696	12	720	1440	9,0
	59	ø10	2	12	165	165	330	2,1	
	60	ø5	50	72	94	4700	84	7,4	
	61	ø5	25	72	94	1025	41	1,6	
<b>Total+10%</b>								<b>33,3</b>	
		ø5	0,0				86,0		
		ø10					249,4	0,0	
		ø12,5					15,2	0,0	
		<b>Total</b>					<b>264,6</b>	<b>86,0</b>	

Resumo Aço	Comp. total (m)	Peso+10% (kg)	Total
Loje Vigas	360,6	249	249
CA-50-A-ø10		15	264
CA-60-B-ø5		86	86
<b>Total</b>	<b>497,3</b>	<b>340</b>	<b>350</b>



FORMA DA LAJE 1  
 ESCALA 1:50

Ob:

SECRETARIA	DEPARTAMENTO			
Planejamento	Arquitetura e Urbanismo			
ESCALA	DATA	VISTO	DESENHO	FOLHA/TOTAL
Indicadas	Julho/2017	VISTO	Adriano	1 / 1

Assunto: **Modernização de Infraestrutura Esportiva**  
**Forma da Laje 1**



Assunto: **Modernização de Infraestrutura Esportiva**  
**Forma da Laje 1**