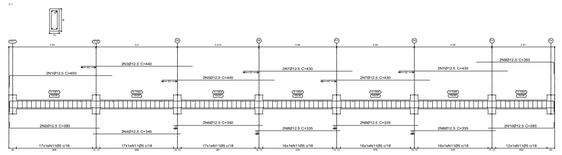
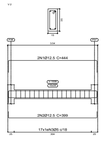
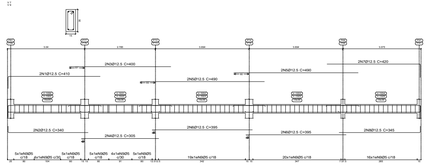
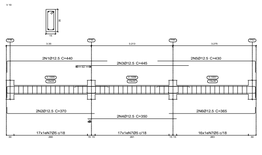


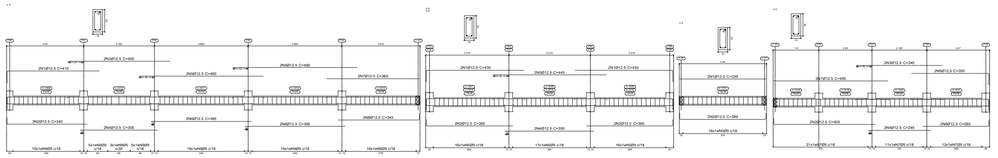


Elemento	Pos.	Diam.	Q	Esquema (cm)	Comp (cm)	Total (cm)	CA-50 (kg)	CA-60 (kg)
V 1	1	Ø12.5	d	2N/Ø12.5 C=440	440	880	8.7	
	2	Ø12.5	d	2N/Ø12.5 C=450	450	900	8.9	
	3	Ø12.5	d	2N/Ø12.5 C=480	480	960	9.4	
	4	Ø12.5	d	2N/Ø12.5 C=430	430	860	8.5	
	5	Ø12.5	d	2N/Ø12.5 C=450	450	900	8.9	
	6	Ø12.5	d	2N/Ø12.5 C=350	350	700	6.7	
	7	Ø12.5	d	2N/Ø12.5 C=430	430	2860	28.4	
	8	Ø12.5	d	2N/Ø12.5 C=340	340	2010	19.9	
	9	Ø12.5	d	2N/Ø12.5 C=350	350	700	6.7	
	10	Ø12.5	d	2N/Ø12.5 C=290	290	570	5.5	
	11	Ø5	17	38	38	6746	10.3	
					Total+10%		112.7	10.8
V 2	1	Ø12.5	d	2N/Ø12.5 C=440	440	880	8.7	
	2	Ø12.5	d	2N/Ø12.5 C=390	390	780	7.7	
	3	Ø5	17	38	38	1486	2.3	
					Total+10%		12.7	2.3
V 3	1	Ø12.5	d	2N/Ø12.5 C=410	410	820	7.9	
	2	Ø12.5	d	2N/Ø12.5 C=400	400	800	7.7	
	3	Ø12.5	d	2N/Ø12.5 C=450	450	900	8.9	
	4	Ø12.5	d	2N/Ø12.5 C=355	355	710	6.8	
	5	Ø12.5	d	2N/Ø12.5 C=490	490	1960	19.9	
	6	Ø12.5	d	2N/Ø12.5 C=360	360	1080	10.7	
	7	Ø12.5	d	2N/Ø12.5 C=350	350	700	6.7	
	8	Ø12.5	d	2N/Ø12.5 C=290	290	580	5.6	
	9	Ø5	52	38	38	7316	11.3	
					Total+10%		112.4	
V 4/V 5	1	Ø12.5	d	2N/Ø12.5 C=430	430	1720	16.6	
	2	Ø12.5	d	2N/Ø12.5 C=365	365	1460	14.1	
	3	Ø12.5	d	2N/Ø12.5 C=450	450	900	8.9	
	4	Ø12.5	d	2N/Ø12.5 C=350	350	700	6.7	
	5	Ø5	48	38	38	4312	6.6	
					Total+10%		52.0	7.3
V 5	1	Ø12.5	d	2N/Ø12.5 C=330	330	660	6.4	
	2	Ø12.5	d	2N/Ø12.5 C=300	300	1170	11.5	
	3	Ø5	18	38	38	1584	2.5	
					Total+10%		19.4	2.5
V 6	1	Ø12.5	d	2N/Ø12.5 C=490	490	980	9.7	
	2	Ø12.5	d	2N/Ø12.5 C=420	420	840	8.2	
	3	Ø12.5	d	2N/Ø12.5 C=340	340	680	6.5	
	4	Ø12.5	d	2N/Ø12.5 C=340	340	680	6.7	
	5	Ø12.5	d	2N/Ø12.5 C=350	350	700	6.9	
	6	Ø12.5	d	2N/Ø12.5 C=290	290	580	5.7	
	7	Ø5	94	38	38	3572	6.1	
					Total+10%		44.1	6.7
V 7/V 8	1	Ø12.5	d	2N/Ø12.5 C=410	410	820	7.9	
	2	Ø12.5	d	2N/Ø12.5 C=400	400	800	7.7	
	3	Ø12.5	d	2N/Ø12.5 C=450	450	900	8.7	
	4	Ø12.5	d	2N/Ø12.5 C=355	355	710	6.8	
	5	Ø12.5	d	2N/Ø12.5 C=490	490	1960	19.9	
	6	Ø12.5	d	2N/Ø12.5 C=360	360	1080	10.7	
	7	Ø12.5	d	2N/Ø12.5 C=350	350	700	6.7	
	8	Ø12.5	d	2N/Ø12.5 C=290	290	580	5.6	
	9	Ø5	52	38	38	7316	11.3	
					Total+10%		52.7	
					Ø5:	0.0	80.7	
					Ø12.5:	208.1	4.0	
					Total:	208.1	84.7	
V 10	1	Ø12.5	d	2N/Ø12.5 C=440	440	880	8.4	
	2	Ø12.5	d	2N/Ø12.5 C=375	375	750	7.1	
	3	Ø12.5	d	2N/Ø12.5 C=440	440	880	8.3	
	4	Ø12.5	d	2N/Ø12.5 C=350	350	700	6.7	
	5	Ø12.5	d	2N/Ø12.5 C=290	290	580	5.5	
	6	Ø12.5	d	2N/Ø12.5 C=360	360	720	6.8	
	7	Ø5	16	38	38	4440	6.9	
					Total+10%		52.6	7.6
					Ø5:	0.0	80.7	
					Ø12.5:	208.1	4.0	
					Total:	208.1	84.7	

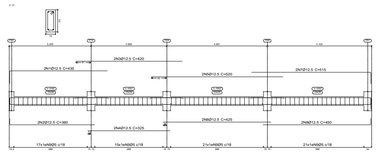


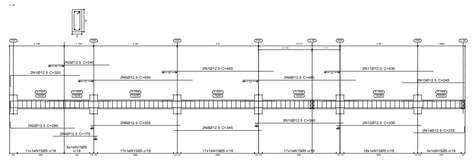


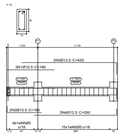
BALDRAME
Desenho de vigas
Concreto: C30, em geral
Aço das barras: CA-50 e CA-60
Aço dos estribos: CA-50 e CA-60
Escala vigas 1:50
Escala seções 1:20
Escala aberturas 1:20

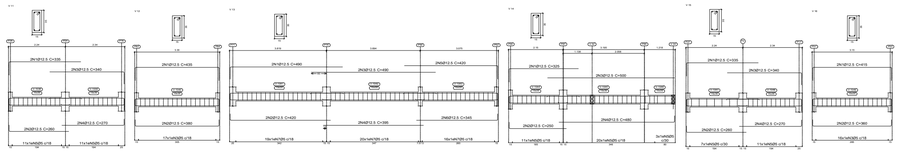


Elemento	Pos.	Diam.	Q	Esquema (cm)	Comp (cm)	Total (cm)	CA-50 (kg)	CA-60 (kg)
V 11	1	Ø12.5	d	2N/Ø12.5 C=535	535	670	6.5	
	2	Ø12.5	d	2N/Ø12.5 C=400	400	800	7.7	
	3	Ø12.5	d	2N/Ø12.5 C=340	340	680	6.5	
	4	Ø12.5	d	2N/Ø12.5 C=270	270	540	5.2	
	5	Ø5	22	38	38	1034	1.0	
					Total+10%		26.9	1.0
V 12	1	Ø12.5	d	2N/Ø12.5 C=410	410	410	3.9	
	2	Ø12.5	d	2N/Ø12.5 C=390	390	780	7.5	
	3	Ø5	17	38	38	1146	2.0	
					Total+10%		12.3	2.0
V 13	1	Ø12.5	d	2N/Ø12.5 C=490	490	980	9.4	
	2	Ø12.5	d	2N/Ø12.5 C=420	420	840	8.1	
	3	Ø12.5	d	2N/Ø12.5 C=490	490	980	9.4	
	4	Ø12.5	d	2N/Ø12.5 C=390	390	780	7.5	
	5	Ø12.5	d	2N/Ø12.5 C=420	420	840	8.1	
	6	Ø12.5	d	2N/Ø12.5 C=345	345	690	6.6	
	7	Ø5	34	38	38	2244	3.6	
					Total+10%		52.1	3.6
V 14	1	Ø12.5	d	2N/Ø12.5 C=320	320	640	6.2	
	2	Ø12.5	d	2N/Ø12.5 C=290	290	580	5.6	
	3	Ø12.5	d	2N/Ø12.5 C=320	320	640	6.2	
	4	Ø12.5	d	2N/Ø12.5 C=290	290	580	5.6	
	5	Ø5	34	38	38	2244	3.6	
					Total+10%		32.1	3.6
V 15	1	Ø12.5	d	2N/Ø12.5 C=535	535	670	6.5	
	2	Ø12.5	d	2N/Ø12.5 C=400	400	800	7.7	
	3	Ø12.5	d	2N/Ø12.5 C=340	340	680	6.5	
	4	Ø12.5	d	2N/Ø12.5 C=270	270	540	5.2	
	5	Ø5	18	38	38	1184	2.0	
					Total+10%		28.9	2.0
V 16	1	Ø12.5	d	2N/Ø12.5 C=410	410	410	3.9	
	2	Ø12.5	d	2N/Ø12.5 C=390	390	780	7.5	
	3	Ø5	16	38	38	1408	2.2	
					Total+10%		12.3	2.2
V 17	1	Ø12.5	d	2N/Ø12.5 C=535	535	670	6.4	
	2	Ø12.5	d	2N/Ø12.5 C=390	390	780	6.9	
	3	Ø12.5	d	2N/Ø12.5 C=450	450	900	8.0	
	4	Ø12.5	d	2N/Ø12.5 C=525	525	1050	9.3	
	5	Ø12.5	d	2N/Ø12.5 C=370	370	740	6.5	
	6	Ø12.5	d	2N/Ø12.5 C=450	450	900	8.0	
	7	Ø5	74	38	38	6512	10.2	
					Total+10%		72.2	11.2
V 18	1	Ø12.5	d	2N/Ø12.5 C=320	320	640	6.2	
	2	Ø12.5	d	2N/Ø12.5 C=290	290	580	5.6	
	3	Ø12.5	d	2N/Ø12.5 C=250	250	480	4.6	
	4	Ø12.5	d	2N/Ø12.5 C=170	170	340	3.3	
	5	Ø12.5	d	2N/Ø12.5 C=450	450	900	8.7	
	6	Ø12.5	d	2N/Ø12.5 C=350	350	710	6.8	
	7	Ø12.5	d	2N/Ø12.5 C=290	290	580	5.6	
	8	Ø12.5	d	2N/Ø12.5 C=350	350	700	6.7	
	9	Ø12.5	d	2N/Ø12.5 C=430	430	860	8.3	
	10	Ø12.5	d	2N/Ø12.5 C=290	290	580	5.6	
	11	Ø12.5	d	2N/Ø12.5 C=430	430	860	8.3	
	12	Ø12.5	d	2N/Ø12.5 C=320	320	640	6.2	
	13	Ø12.5	d	2N/Ø12.5 C=245	245	490	4.7	
	14	Ø12.5	d	2N/Ø12.5 C=225	225	450	4.3	
	15	Ø5	92	38	38	8184	12.8	
					Total+10%		98.2	14.1
V 19	1	Ø12.5	d	2N/Ø12.5 C=190	190	190	1.8	
	2	Ø12.5	d	2N/Ø12.5 C=350	350	700	6.7	
	3	Ø12.5	d	2N/Ø12.5 C=320	320	640	6.2	
	4	Ø12.5	d	2N/Ø12.5 C=350	350	700	6.7	
	5	Ø5	21	38	38	1748	2.9	
					Total+10%		23.7	2.9
					Ø5:	0.0	80.1	
					Ø12.5:	398.5	0.0	
					Total:	398.5	80.1	



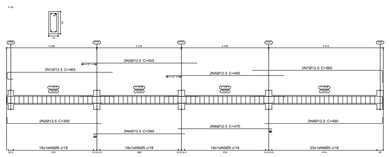


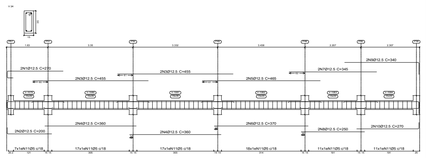


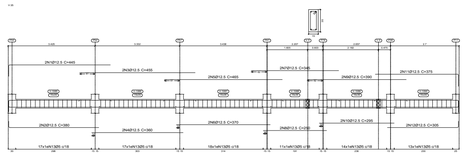


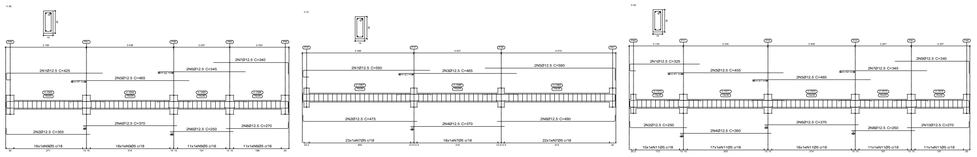
BALDRAME
Desenho de vigas
Concreto: C30, em geral
Aço das barras: CA-50 e CA-60
Aço dos estribos: CA-50 e CA-60
Escala vigas 1:50
Escala seções 1:20
Escala aberturas 1:20

Elemento	Pos.	Diam.	Q	Esquema (cm)	Comp (cm)	Total (cm)	CA-50 (kg)	CA-60 (kg)
V 26	1	Ø12.5	d	2N/Ø12.5 C=405	405	810	7.9	
	2	Ø12.5	d	2N/Ø12.5 C=390	390	780	7.6	
	3	Ø12.5	d	2N/Ø12.5 C=375	375	750	7.1	
	4	Ø12.5	d	2N/Ø12.5 C=340	340	680	6.6	
	5	Ø12.5	d	2N/Ø12.5 C=290	290	580	4.8	
	6	Ø12.5	d	2N/Ø12.5 C=360	360	720	6.0	
	7	Ø12.5	d	2N/Ø12.5 C=290	290	580	4.8	
	8	Ø12.5	d	2N/Ø12.5 C=270	270	540	5.2	
	9	Ø5	47	38	38	4104	6.5	
					Total+10%		61.7	6.5
V 27	1	Ø12.5	d	2N/Ø12.5 C=405	405	810	7.9	
	2	Ø12.5	d	2N/Ø12.5 C=390	390	780	7.6	
	3	Ø12.5	d	2N/Ø12.5 C=375	375	750	7.1	
	4	Ø12.5	d	2N/Ø12.5 C=340	340	680	6.6	
	5	Ø12.5	d	2N/Ø12.5 C=290	290	580	4.8	
	6	Ø12.5	d	2N/Ø12.5 C=360	360	720	6.0	
	7	Ø12.5	d	2N/Ø12.5 C=290	290	580	4.8	
	8	Ø12.5	d	2N/Ø12.5 C=270	270	540	5.2	
	9	Ø5	47	38	38	4104	6.5	
					Total+10%		62.9	6.5
V 28/V 31	1	Ø12.5	d	2N/Ø12.5 C=480	480	960	9.2	
	2	Ø12.5	d	2N/Ø12.5 C=420	420	840	8.2	
	3	Ø5	20	38	38	1140	2.0	
					Total+10%		19.8	2.0
					Ø5:	0.0	19.8	
					Ø12.5:	1635.0	0.0	
					Total:	1635.0	19.8	
V 29	1	Ø12.5	d	2N/Ø12.5 C=475	475	950	9.1	
	2	Ø12.5	d	2N/Ø12.5 C=405	405	810	7.8	
	3	Ø12.5	d	2N/Ø12.5 C=320	320	640	6.1	
	4	Ø12.5	d	2N/Ø12.5 C=230	230	460	4.4	
	5	Ø12.5	d	2N/Ø12.5 C=420	420	840	8.0	
	6	Ø12.5	d	2N/Ø12.5 C=380	380	760	7.3	
	7	Ø5	47	38	38	4104	6.5	
					Total+10%		62.5	7.2
V 30	1	Ø12.5	d	2N/Ø12.5 C=470	470	940	9.0	
	2	Ø12.5	d	2N/Ø12.5 C=400	400	800	7.6	
	3	Ø5	18	38	38	1072	2.0	
					Total+10%		17.4	2.0
V 32	1	Ø12.5	d	2N/Ø12.5 C=535	535	670	6.5	
	2	Ø12.5	d	2N/Ø12.5 C=410	410	820	7.9	
	3	Ø12.5	d	2N/Ø12.5 C=385	385	770	7.4	
	4	Ø12.5	d	2N/Ø12.5 C=310	310	620	6.0	
	5	Ø5	35	38	38	2356	3.5	
					Total+10%		26.3	3.5
V 33	1	Ø12.5	d	2N/Ø12.5 C=470	470	940	9.0	
	2	Ø12.5	d	2N/Ø12.5 C=400	400	800	7.6	
	3	Ø12.5	d	2N/Ø12.5 C=385	385	770	7.4	
	4	Ø12.5	d	2N/Ø12.5 C=310	310	620	6.0	
	5	Ø5	34	38	38	2356	4.7	
					Total+10%		34.3	4.7
V 34	1	Ø12.5	d	2N/Ø12.5 C=390	390	1170	10.8	
	2	Ø12.5	d	2N/Ø12.5 C=480	480	960	8.4	
	3	Ø12.5	d	2N/Ø12.5 C=320	320	640	5.6	
	4	Ø12.5	d	2N/Ø12.5 C=310	310	620	5.4	
	5	Ø12.5	d	2N/Ø12.5 C=320	320	640	5.6	
	6	Ø12.5	d	2N/Ø12.5 C=310	310	620	5.4	
	7	Ø5	45	38	38	3990	6.2	
					Total+10%		47.9	6.2
V 35	1	Ø12.5	d	2N/Ø12.5 C=490	490	980	7.4	
	2	Ø12.5	d	2N/Ø12.5 C=380	380	760	7.4	
	3	Ø12.5	d	2N/Ø12.5 C=320	320	640	5.6	
	4	Ø12.5	d	2N/Ø12.5 C=290	290	580	5.1	
	5	Ø12.5	d	2N/Ø12.5 C=430	430	860	8.3	
	6	Ø12.5	d	2N/Ø12.5 C=320	320	640	6.2	
	7	Ø12.5	d	2N/Ø12.5 C=290	290	580	5.1	
	8	Ø5	72	38	38	6336	9.9	
					Total+10%		75.8	10.9
					Ø5:	0.0	97.1	
					Ø12.5:	2917.0	0.0	
					Total:	2917.0	97.1	





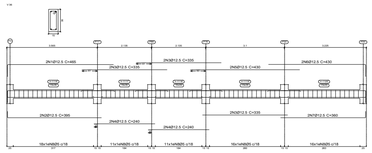


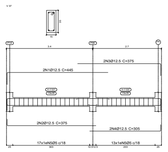


Elemento	Pos.	Diam.	Q	Esquema (cm)	Comp (cm)	Total (cm)	CA-50 (kg)	CA-60 (kg)
V 36	1	Ø12.5	d	2N/Ø12.5 C=405	405	810	8.2	
	2	Ø12.5	d	2N/Ø12.5 C=390	390	780	7.8	
	3	Ø12.5	d	2N/Ø12.5 C=335	335	2010	19.4	
	4	Ø12.5	d	2N/Ø12.5 C=240	240	960	9.2	
	5	Ø12.5	d	2N/Ø12.5 C=430	430	860	8.3	
	6	Ø12.5	d	2N/Ø12.5 C=340	340	680	6.5	
	7	Ø12.5	d	2N/Ø12.5 C=360	360	720	6.9	
	8	Ø5	72	38	38	6336	9.9	
					Total+10%		76.8	10.9
V 37	1	Ø12.5	d	2N/Ø12.5 C=445	445	890	8.6	
	2	Ø12.5	d	2N/Ø12.5 C=375	375	750	7.2	
	3	Ø12.5	d	2N/Ø12.5 C=375	375	750	7.2	
	4	Ø12.5	d	2N/Ø12.5 C=305	305	610	5.9	
	5	Ø5	34	38	38	2440	4.1	
					Total+10%		31.8	4.5
					Ø5:	0.0	19.8	
					Ø12.5:	307.4	0.0	
					Total:	307.4	19.8	

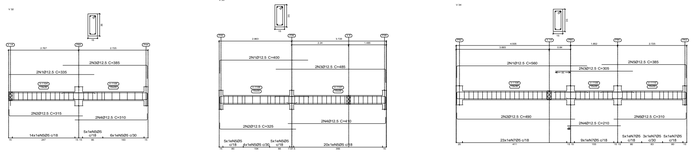
Resumo Aço Desenho de vigas		Comp. total (m)	Peso+10% (kg)	Total
CA-50	Ø12.5	1809.1	1917	1917
CA-60	Ø5	1635.0	282	282
Total				2199

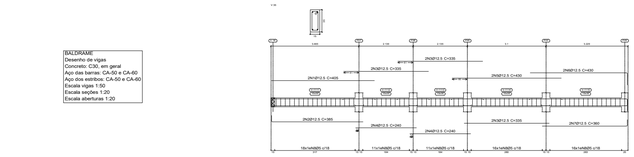
BALDRAME
Desenho de vigas
Concreto: C30, em geral
Aço das barras: CA-50 e CA-60
Aço dos estribos: CA-50 e CA-60
Escala vigas 1:50
Escala seções 1:20
Escala aberturas 1:20



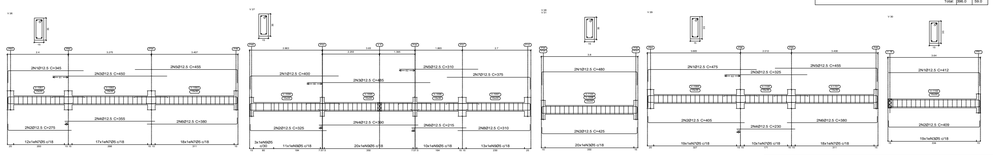


Elemento	Pos.	Diam.	Q	Esquema (cm)	Comp (cm)	Total (cm)	CA-50 (kg)	CA-60 (kg)
V 38	1	Ø12.5	d	2N/Ø12.5 C=490	490	980	9.4	
	2	Ø12.5	d	2N/Ø12.5 C=380	380	760	7.4	
	3	Ø12.5	d	2N/Ø12.5 C=320	320	640	6.2	
	4	Ø12.5	d	2N/Ø12.5 C=290	290	580	5.1	
	5	Ø12.5	d	2N/Ø12.5 C=430	430	860	8.3	
	6	Ø12.5	d	2N/Ø12.5 C=320	320	640	6.2	
	7	Ø12.5	d	2N/Ø12.5 C=290	290	580	5.1	
	8	Ø12.5	d	2N/Ø12.5 C=270	270	540	5.2	
	9	Ø5	47	38	38	4104	6.5	
					Total+10%		62.9	6.5
V 39	1	Ø12.5	d	2N/Ø12.5 C=470	470	940	9.0	
	2	Ø12.5	d	2N/Ø12.5 C=400	400	800	7.6	
	3	Ø5	18	38	38	1072	2.0	
					Total+10%		17.4	2.0
V 40	1	Ø12.5	d	2N/Ø12.5 C=390	390	1170	10.8	
	2	Ø12.5	d	2N/Ø12.5 C=480	480	960	8.4	
	3	Ø12.5	d	2N/Ø12.5 C=320	320	640	5.6	
	4	Ø12.5	d	2N/Ø12.5 C=310	310	620	5.4	
	5	Ø12.5	d	2N/Ø12.5 C=320	320	640	5.6	
	6	Ø12.5	d	2N/Ø12.5 C=310	310	620	5.4	
	7	Ø5	45	38	38	3990	6.2	
					Total+10%		47.9	6.2
V 41	1	Ø12.5	d	2N/Ø12.5 C=490	490	980	7.4	
	2	Ø12.5	d	2N/Ø12.5 C=380	380	760	7.4	
	3	Ø12.5	d	2N/Ø12.5 C=320	320	640	5.6	
	4	Ø12.5	d	2N/Ø12.5 C=290	290	580	5.1	
	5	Ø12.5	d	2N/Ø12.5 C=430	430	860	8.3	
	6	Ø12.5	d	2N/Ø12.5 C=320	320	640	6.2	
	7	Ø12.5	d	2N/Ø12.5 C=290	290	580	5.1	
	8	Ø5	72	38	38	6336	9.9	
					Total+10%		76.8	10.9
					Ø5:	0.0	97.1	
					Ø12.5:	2917.0	0.0	
					Total:	2917.0	97.1	





BALDRAME
Desenho de vigas
Concreto: C30, em geral
Aço das barras: CA-50 e CA-60
Aço dos estribos: CA-50 e CA-60
Escala vigas 1:50
Escala seções 1:20
Escala aberturas 1:20



RESP. TÉCNICO

Nayra Nayara Enes Martins
Engenharia Civil
CREA 26931 - AM

BRASÃO:

PROJETO:
CONSTRUÇÃO SECRETÁRIA DE SAÚDE

CONVENENTE:
PREFEITURA MUNICIPAL TABATINGA/AM

ENDEREÇO:
MUNICÍPIO DE TABATINGA/AM

AUTOR:
ENGª. NAYRA ENES MARTINS

CREA:
26931 - D/AM

CONTEÚDO:
ESTRUTURAL-VIGAS BALDRAMES

PREFEITO:
SAUL BEMERGUY

ESCALA:
INDICADA

DATA:
2024

ESTRUTURAL

03/07