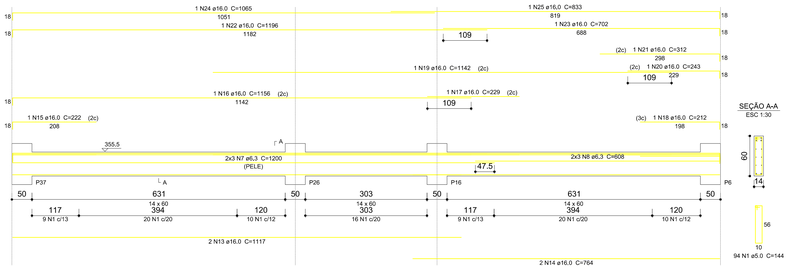
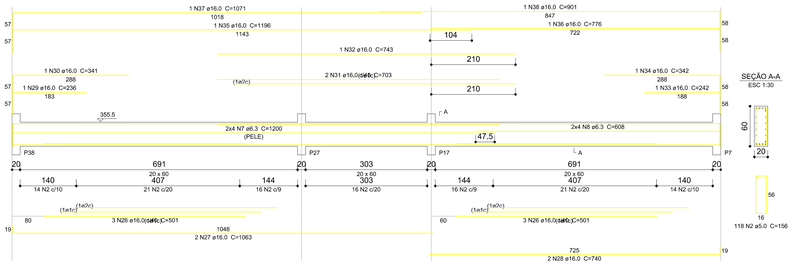
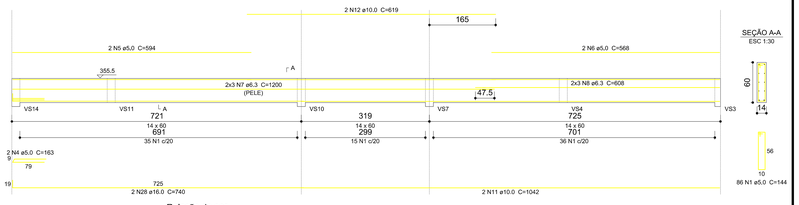
VS20 (14 x 60)
ESC 1:50



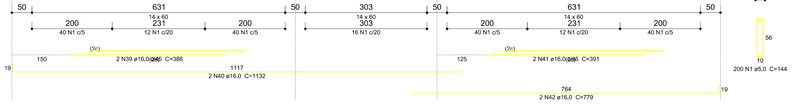
VS21 (20 x 60)
ESC 1:50



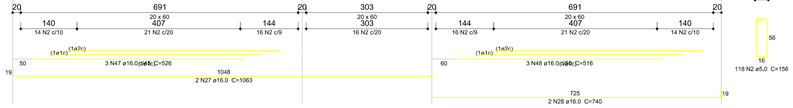
VS28 (14 x 60)
ESC 1:50



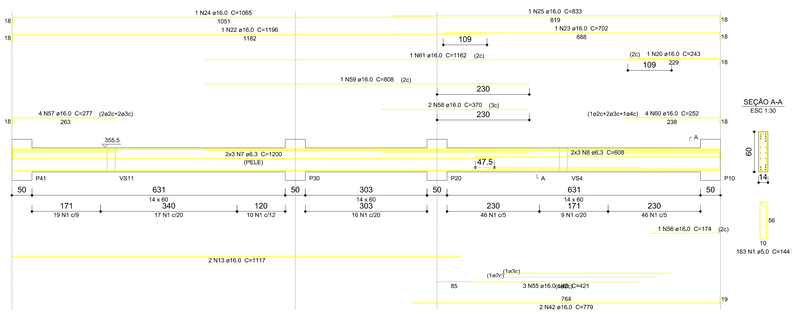
VS22 (14 x 60)
ESC 1:50



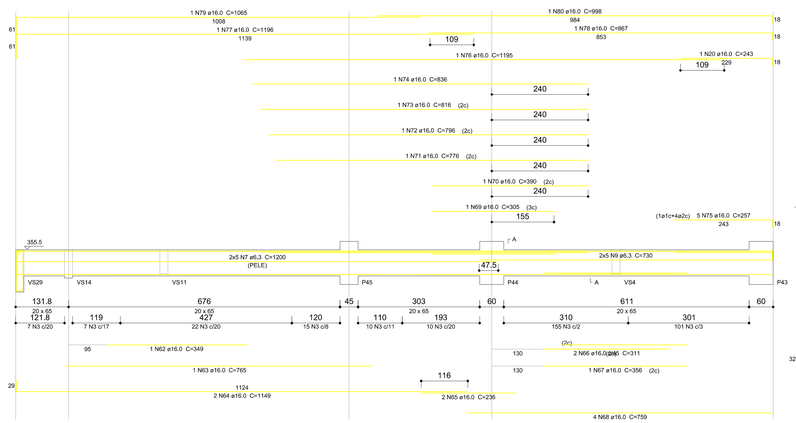
VS23 (20 x 60)
ESC 1:50



VS24 (14 x 60)
ESC 1:50



VS27 (20 x 65)
ESC 1:50



Relação do aço

VS20 VS21 VS22
VS23 VS24 VS27
VS28

AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	543	144	78192
	2	5.0	236	156	36816
	3	5.0	327	166	54282
	4	5.0	2	163	326
	5	5.0	2	594	1188
	6	5.0	2	568	1136
CA50	7	6.3	50	1200	60000
	8	6.3	40	608	24320
	9	6.3	10	730	7300
	10	10.0	1	247	247
	11	10.0	2	1042	2084
	12	10.0	2	619	1238
	13	16.0	4	1117	4468
	14	16.0	2	764	1528
	15	16.0	1	222	222
	16	16.0	1	1156	1156
	17	16.0	1	229	229
	18	16.0	1	212	212
	19	16.0	1	1142	1142
	20	16.0	3	243	729
	21	16.0	1	312	312
	22	16.0	4	1196	4784
	23	16.0	4	702	2808
	24	16.0	3	1065	3195
	25	16.0	3	833	2499
	26	16.0	6	501	3006
	27	16.0	4	1063	4252
	28	16.0	6	740	4440
	29	16.0	1	236	236
	30	16.0	1	341	341
	31	16.0	3	703	2109
	32	16.0	2	743	1486
	33	16.0	1	242	242
	34	16.0	1	342	342
	35	16.0	2	1196	2392
	36	16.0	1	776	776
	37	16.0	1	1071	1071
	38	16.0	1	901	901
	39	16.0	2	386	772
	40	16.0	2	1132	2264
	41	16.0	2	391	782
	42	16.0	4	779	3116
	43	16.0	6	247	1482
	44	16.0	1	733	733
	45	16.0	1	753	753
	46	16.0	1	813	813
	47	16.0	3	526	1578
	48	16.0	3	516	1548
	49	16.0	2	256	512
	50	16.0	1	723	723
	51	16.0	2	314	628
	52	16.0	1	771	771
	53	16.0	1	1074	1074
	54	16.0	1	893	893
	55	16.0	3	421	1263
	56	16.0	1	174	174
	57	16.0	4	277	1108
	58	16.0	2	370	740
	59	16.0	1	808	808
	60	16.0	4	252	1008
	61	16.0	1	1162	1162
	62	16.0	1	349	349
	63	16.0	1	765	765
	64	16.0	2	1149	2298
	65	16.0	2	236	472
	66	16.0	2	311	622
	67	16.0	1	356	356
	68	16.0	4	759	3036
	69	16.0	1	305	305
	70	16.0	1	390	390
	71	16.0	1	776	776
	72	16.0	1	796	796
	73	16.0	1	816	816
	74	16.0	1	836	836
	75	16.0	5	257	1285
	76	16.0	1	1195	1195
	77	16.0	1	1196	1196
	78	16.0	1	867	867
	79	16.0	1	1065	1065
	80	16.0	1	998	998

Resumo do aço

AÇO	DIAM	C.TOTAL (m)	PESO + 10 % (kg)
CA50	6.3	916.2	246.6
	10.0	35.7	24.2
	16.0	880.1	1527.9
CA60	5.0	1719.4	291.5
PESO TOTAL			
CA50	1798.8		
CA60	291.5		

Vol. de concreto total (C-25) = 12.62 m³
Área de forma total = 172.33 m²

FB ENGENHARIA LTDA
Felisberto & Biava Associados

FB ENGENHARIA LTDA
CNPJ: 08.582.028/0001-96
CREA-SC - 82.125-1 - VIDEIRA-SC

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Cliente: **INSTITUTO FEDERAL CATARINENSE**
Projeto: **425**
Obra: **EDIFICAÇÃO PARA SALAS DE AULA E OFICINAS**
Local: **RODOVIA SC 303 - VIDEIRA - SC**
Prancha: **21/32**
Resp. técnico: **Eng. Civil FABIANO BIAVA** CREA SC - 67691-0
Assinatura Proprietário
Descrição: **VIGAS SUPERIOR (03/03)**
Projeto: ESTRUTURAL
Desenho: FB ENGENHARIA | Unidade: CENTÍMETROS | Data: FEVEREIRO/2013 | Escala: INDICADA | Área: 2.546,18m²