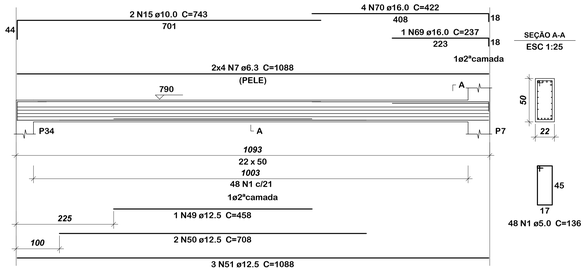
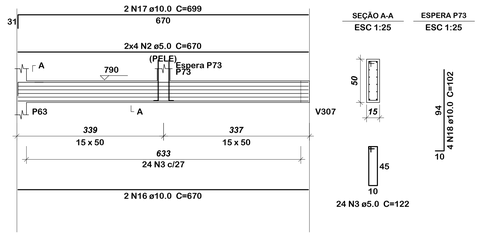
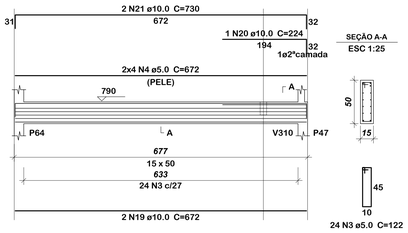
V321 (22 x 50)
ESC 1:50



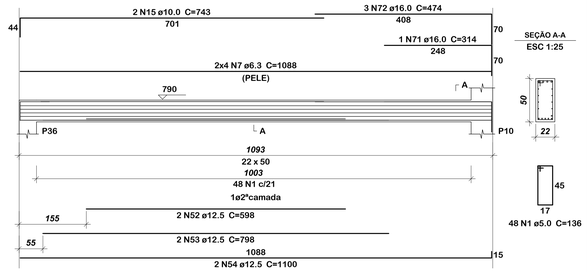
V322 (15 x 50)
ESC 1:50



V324 (15 x 50)
ESC 1:50



V329 (22 x 50)
ESC 1:50



Relação do aço

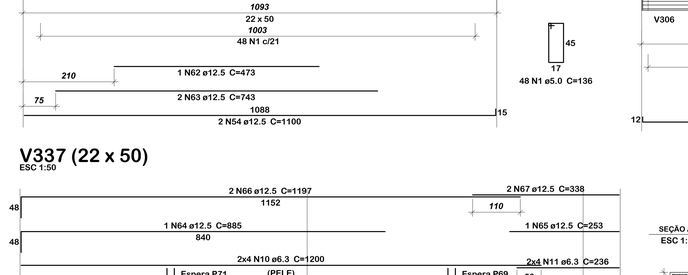
AÇO	N	DIAM (mm)	QUANT (Barras)	UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	426	136	57936
	2	5.0	8	670	5360
	3	5.0	140	122	17080
	4	5.0	8	672	5376
	5	5.0	16	1330	21280
	6	5.0	49	176	8624
CA50	7	6.3	32	1088	34816
	8	6.3	8	690	5520
	9	6.3	24	1070	25680
	10	6.3	8	1200	9600
	11	6.3	8	236	1888
	12	8.0	1	162	162
	13	8.0	8	1090	8720
	14	8.0	1	202	202
	15	10.0	6	743	4458
	16	10.0	2	670	1340
	17	10.0	2	699	1398
	18	10.0	8	102	816
	19	10.0	2	672	1344
	20	10.0	1	224	224
	21	10.0	2	730	1460
	22	10.0	4	646	2584
	23	10.0	1	449	449
	24	10.0	4	674	2696
	25	10.0	1	793	793
	26	10.0	2	1198	2396
	27	10.0	2	262	524
	28	10.0	1	439	439
	29	10.0	1	892	892
	30	10.0	2	1198	2396
	31	10.0	2	256	512
	32	10.0	2	690	1380
	33	10.0	2	318	636
	34	10.0	2	739	1478
	35	10.0	1	360	360
	36	10.0	1	665	665
	37	10.0	2	1073	2146
	38	10.0	2	698	1396
	39	10.0	2	748	1496
	40	10.0	1	363	363
	41	10.0	4	1080	4320
	42	10.0	1	573	573
	43	10.0	1	673	673
	44	10.0	4	1113	4452
	45	10.0	1	418	418
	46	10.0	2	655	1310
	47	10.0	1	353	353
	48	10.0	2	715	1430
	49	12.5	1	458	458
	50	12.5	3	708	2124
	51	12.5	3	1088	3264
	52	12.5	2	598	1196
	53	12.5	2	798	1596
	54	12.5	6	1100	6600
	55	12.5	2	593	1186
	56	12.5	2	793	1586
	57	12.5	2	375	750
	58	12.5	2	540	1080
	59	12.5	2	1112	2224
	60	12.5	1	538	538
	61	12.5	2	1102	2204
	62	12.5	1	473	473
	63	12.5	2	743	1486
	64	12.5	1	885	885
	65	12.5	1	253	253
	66	12.5	2	1197	2394
	67	12.5	2	338	676
	68	12.5	8	112	896
	69	16.0	1	237	237
	70	16.0	4	422	1688
	71	16.0	2	314	628
	72	16.0	6	474	2844
	73	16.0	1	248	248
	74	16.0	3	413	1239
	75	16.0	1	232	232
	76	16.0	4	417	1668

Resumo do aço

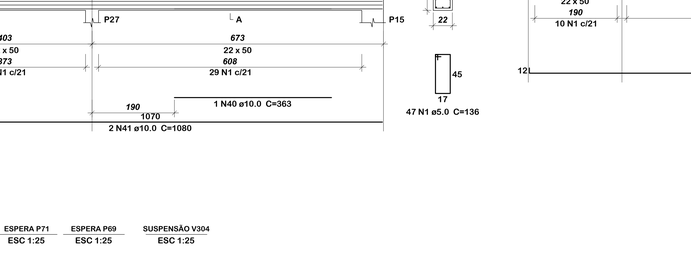
AÇO	DIAM (mm)	C.TOTAL (m)	PESO (kg)
CA50	6.3	775.1	189.7
	8.0	90.9	35.8
	10.0	481.7	297
	12.5	318.7	307
	16.0	87.9	138.6
CA60	5.0	1156.6	178.3
PESO TOTAL (kg)			
CA50	968.1		
CA60	178.3		

Volume de concreto (C-20) = 15.35 m³
Área de forma = 182.06 m²

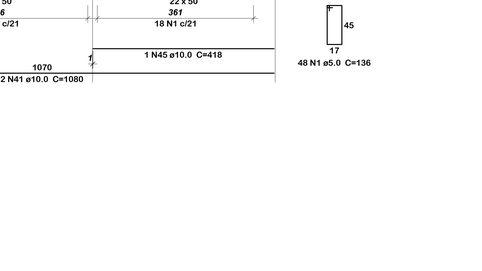
V325 (15.1 x 50)
ESC 1:50



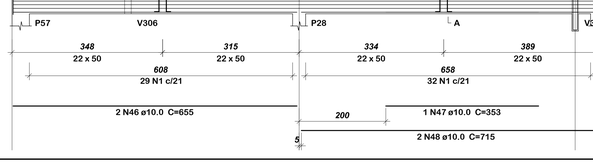
V327 (15 x 50)
ESC 1:50



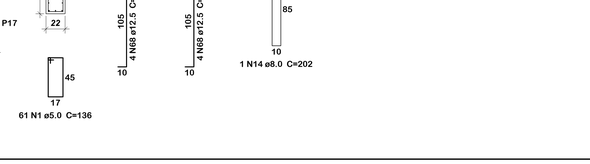
V330 (22 x 50)
ESC 1:50



V331 (22 x 50)
ESC 1:50

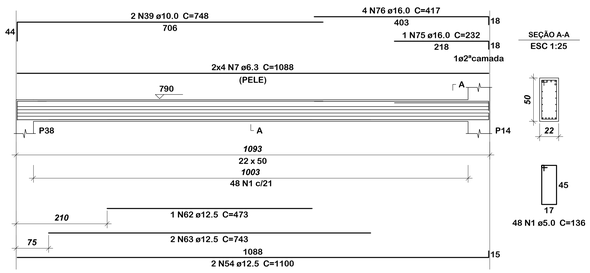


V332 (22 x 50)
ESC 1:50

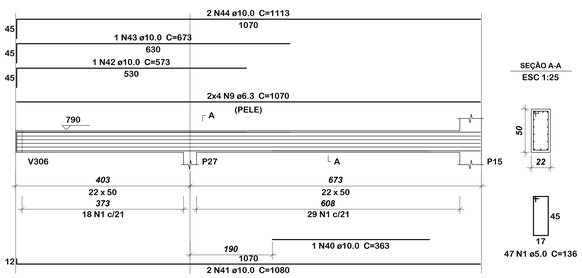


V333 (22 x 70)
ESC 1:50

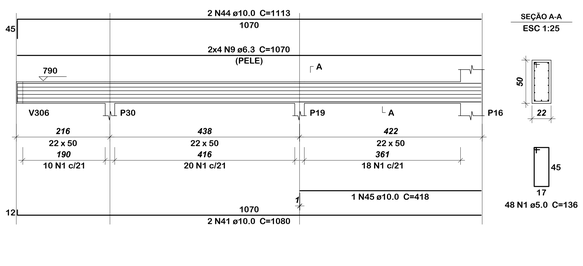
V334 (22 x 50)
ESC 1:50



V335 (22 x 50)
ESC 1:50



V336 (22 x 50)
ESC 1:50



V337 (22 x 50)
ESC 1:50

V321 V322 V324
V325 V327 V329
V330 V331 V332
V333 V334 V335
V336 V337

MINISTÉRIO DA EDUCAÇÃO
UNIVERSIDADE FEDERAL DE LAVRAS

EMPRESA
EMPRESA: AS BUILT ENGENHARIA DE PROJETOS LTDA
CNPJ: 09.480.531/0001-01

PROJETO
TÍTULO: PROJETO ESTRUTURAL DBI
CONTEÚDO: FERRAGEM DAS VIGAS: COBERTURA (3/3)
AUTOR DO PROJETO: CARLOS HENRIQUE DE SOUZA GONÇALVES, ENGENHEIRO CIVIL - CREA-PR 78620
EXECUÇÃO DE OBRA:

DATA:	REVISÃO DATA:	PROJETO:
12/2014	-	EXECUTIVO
ESCALA:	ÁREA: (m²)	FOLHA:
INDICADA	1.859,96	EST 18 /20