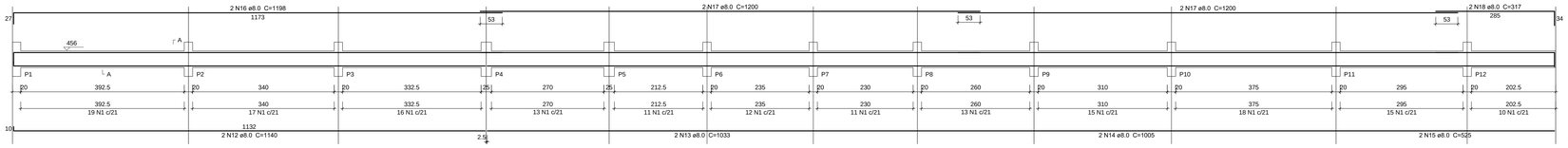
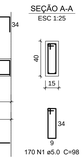
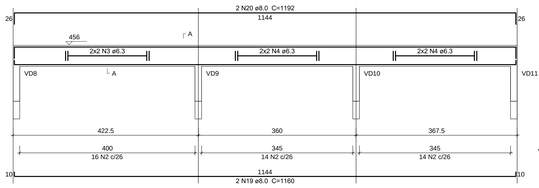
VD1
ESC 1:50



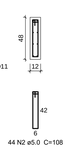
SEÇÃO A-A
ESC 1:25



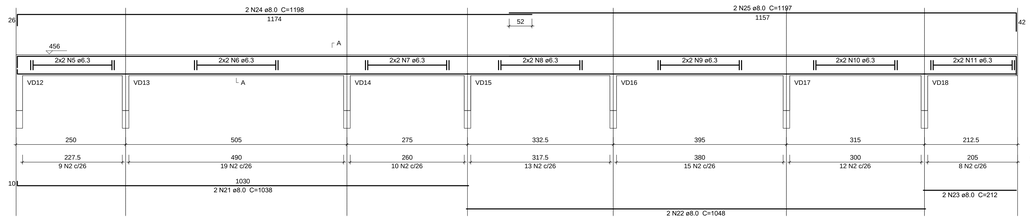
VD2
ESC 1:50



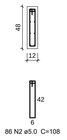
SEÇÃO A-A
ESC 1:25



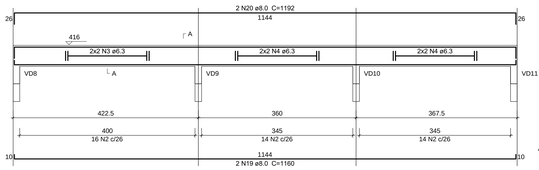
VD3
ESC 1:50



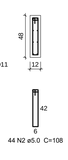
SEÇÃO A-A
ESC 1:25



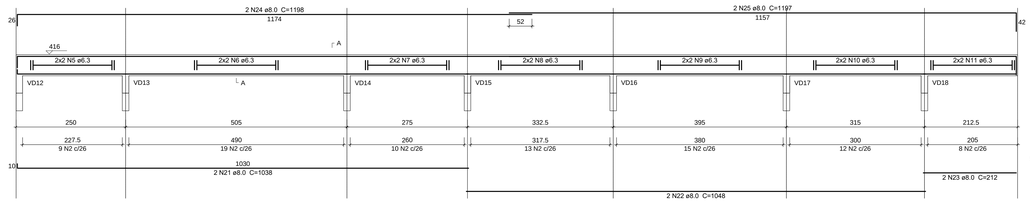
VD4
ESC 1:50



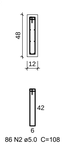
SEÇÃO A-A
ESC 1:25



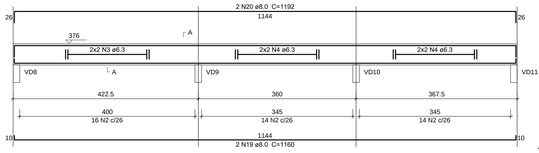
VD5
ESC 1:50



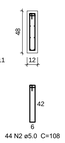
SEÇÃO A-A
ESC 1:25



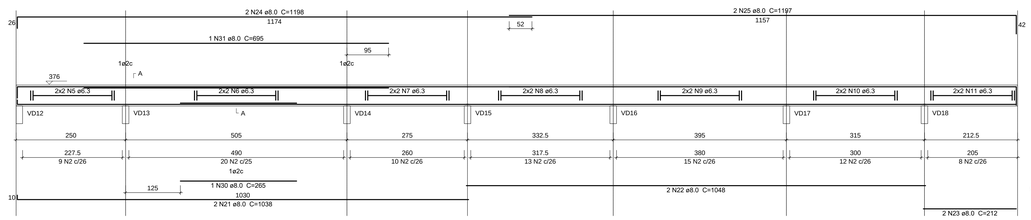
VD6
ESC 1:50



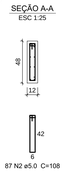
SEÇÃO A-A
ESC 1:25



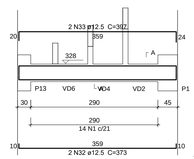
VD7
ESC 1:50



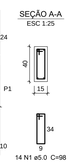
SEÇÃO A-A
ESC 1:25



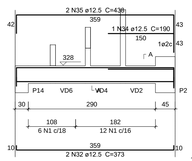
VD8
ESC 1:50



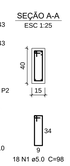
SEÇÃO A-A
ESC 1:25



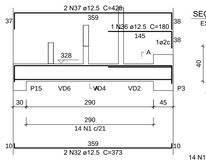
VD9
ESC 1:50



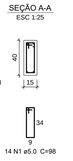
SEÇÃO A-A
ESC 1:25



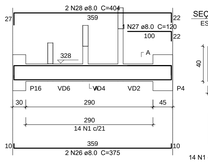
VD10
ESC 1:50



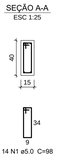
SEÇÃO A-A
ESC 1:25



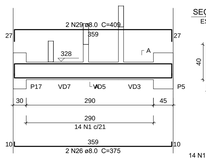
VD11
ESC 1:50



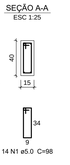
SEÇÃO A-A
ESC 1:25



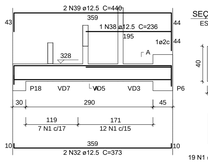
VD12
ESC 1:50



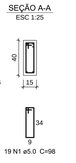
SEÇÃO A-A
ESC 1:25



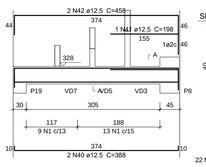
VD13
ESC 1:50



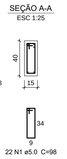
SEÇÃO A-A
ESC 1:25



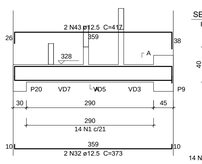
VD14
ESC 1:50



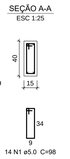
SEÇÃO A-A
ESC 1:25



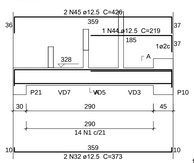
VD15
ESC 1:50



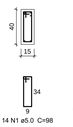
SEÇÃO A-A
ESC 1:25



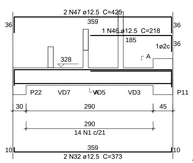
VD16
ESC 1:50



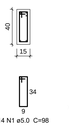
SEÇÃO A-A
ESC 1:25



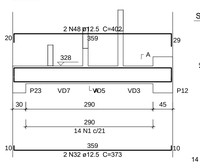
VD17
ESC 1:50



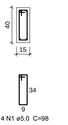
SEÇÃO A-A
ESC 1:25



VD18
ESC 1:50



SEÇÃO A-A
ESC 1:25



Relação do aço

VD1 VD2 VD3
VD4 VD5 VD6
VD7 VD8 VD9
VD10 VD11 VD12
VD13 VD14 VD15
VD16 VD17 VD18

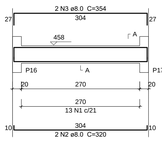
AÇO	N	DIAM (mm)	QUANT (Barras)	UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	341	98	33418
	2	5.0	391	108	42228
CA50	1	6.3	12	CORR	4800
	4	6.3	24	CORR	8280
	5	6.3	12	CORR	2736
	6	6.3	12	CORR	5880
	7	6.3	12	CORR	3120
	8	6.3	12	CORR	3816
	9	6.3	12	CORR	4560
	10	6.3	12	CORR	3600
	11	6.3	12	CORR	2460
	12	8.0	2	1140	2280
	13	8.0	2	1033	2066
	14	8.0	2	1005	2010
	15	8.0	2	525	1050
	16	8.0	2	1198	2396
	17	8.0	4	1200	4800
	18	8.0	2	317	634
	19	8.0	6	1160	6960
	20	8.0	6	1192	7152
	21	8.0	6	1038	6228
	22	8.0	6	1048	6288
	23	8.0	6	212	1272
	24	8.0	6	1198	7188
	25	8.0	6	1197	7182
	26	8.0	4	375	1500
	27	8.0	1	120	120
	28	8.0	2	404	808
	29	8.0	2	409	818
	30	8.0	1	265	265
	31	8.0	1	695	695
	32	12.5	16	373	5968
	33	12.5	2	397	794
	34	12.5	1	190	190
	35	12.5	2	438	876
	36	12.5	1	180	180
	37	12.5	2	428	856
	38	12.5	1	236	236
	39	12.5	2	440	880
	40	12.5	2	388	776
	41	12.5	1	198	198
	42	12.5	2	458	916
	43	12.5	2	417	834
	44	12.5	1	219	219
	45	12.5	2	426	852
	46	12.5	1	218	218
	47	12.5	2	425	850
	48	12.5	2	402	804

Resumo do aço

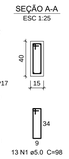
AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10 % (kg)
CA50	6.3	392.6	105.7
	8.0	617.2	267.9
	12.5	156.5	165.8
CA60	5.0	756.5	128.3
PESO TOTAL (kg)			
CA50	539.3		
CA60	128.3		

Volume de concreto (C-25) = 10.58 m³
Área de forma = 184.78 m²

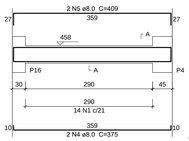
VE1
ESC 1:50



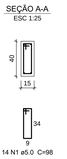
SEÇÃO A-A
ESC 1:25



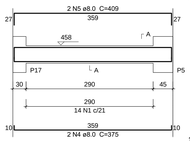
VE2
ESC 1:50



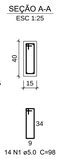
SEÇÃO A-A
ESC 1:25



VE3
ESC 1:50



SEÇÃO A-A
ESC 1:25



Relação do aço

VE1 VE2 VE3

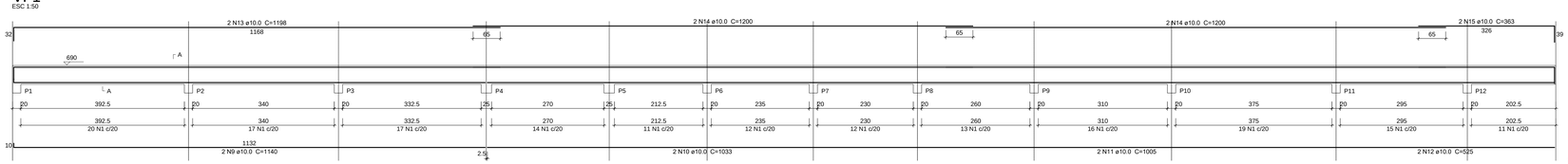
AÇO	N	DIAM (mm)	QUANT (Barras)	UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	41	98	4018
CA50	2	8.0	2	320	640
	3	8.0	2	354	708
	4	8.0	4	375	1500
	5	8.0	4	409	1636

Resumo do aço

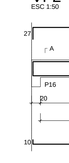
AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10 % (kg)
CA50	8.0	44.9	19.5
CA60	5.0	40.2	6.8
PESO TOTAL (kg)			
CA50	19.5		
CA60	6.8		

Volume de concreto (C-25) = 0.62 m³
Área de forma = 9.88 m²

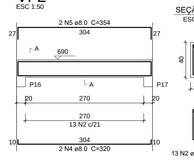
VF1
ESC 1:50



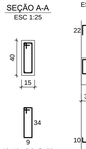
SEÇÃO A-A
ESC 1:25



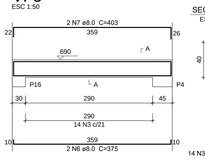
VF2
ESC 1:50



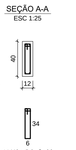
SEÇÃO A-A
ESC 1:25



VF3
ESC 1:50



SEÇÃO A-A
ESC 1:25



Relação do aço

VF1 VF2 VF3
VF4

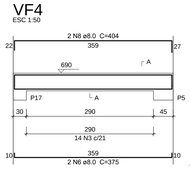
AÇO	N	DIAM (mm)	QUANT (Barras)	UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	177	118	20886
	2	5.0	13	98	1274
	3	5.0	28	92	2576
CA50	4	8.0	2	320	640
	5	8.0	2	354	708
	6	8.0	4	375	1500
	7	8.0	2	403	806
	8	8.0	2	404	808
	9	10.0	2	1140	2280
	10	10.0	2	1033	2066
	11	10.0	2	1005	2010
	12	10.0	2	525	1050
	13	10.0	2	1198	2396
	14	10.0	4	1200	4800
	15	10.0	2	363	726

Resumo do aço

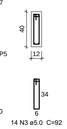
AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10 % (kg)
CA50	8.0	44.7	19.4
	10.0	153.3	104
CA60	5.0	247.4	41.9
PESO TOTAL (kg)			
CA50	123.3		
CA60	41.9		

Volume de concreto (C-25) = 3.87 m³
Área de forma = 50.42 m²

VF4
ESC 1:50



SEÇÃO A-A
ESC 1:25



PROJETO ESTRUTURAL

UTILIZAÇÃO: ESPECIAL

ENDEREÇO DA OBRA: RUA JOÃO FREIRE FILHO, Nº 155, CENTRO, IMBITUVA, PARANÁ.

BETO Engenharia

RESPONSÁVEL TÉCNICO:
LUIZ ROBERTO PENTEADO JR
ENGENHEIRO CIVIL CREA-PR:137.732/D

PROPRIETÁRIO:
MUNICÍPIO DE IMBITUVA
CNPJ:76.175.892/0001-23

REF.: ARMAÇÃO DE VIGAS D, E, F

DATA:	ARQUIVO:	ESCALA:	UNIDADE:	DESENHO:	FOLHA:
13/08/2021	2021-031	INDICADA	METRO	BETO	10/11