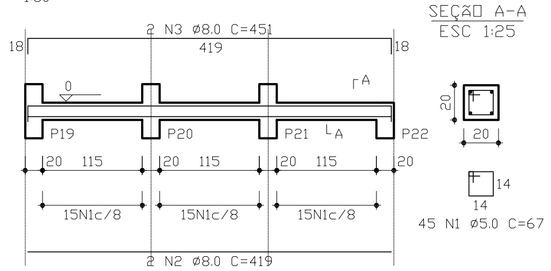
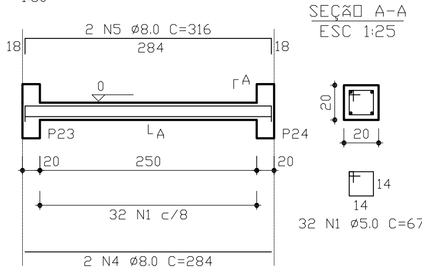
V1
1:50



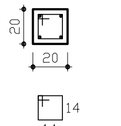
SEÇÃO A-A
ESC 1:25

45 N1 ø5.0 C=67

V2
1:50

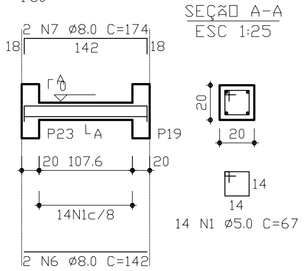


SEÇÃO A-A
ESC 1:25



32 N1 ø5.0 C=67

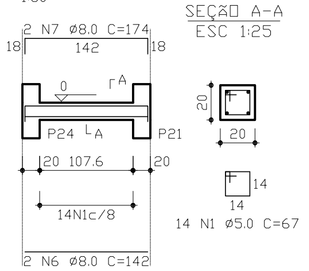
V3
1:50



SEÇÃO A-A
ESC 1:25

14 N1 ø5.0 C=67

V4
1:50



SEÇÃO A-A
ESC 1:25

14 N1 ø5.0 C=67

RELAÇÃO DO AÇO

V1
V4

V2

V3

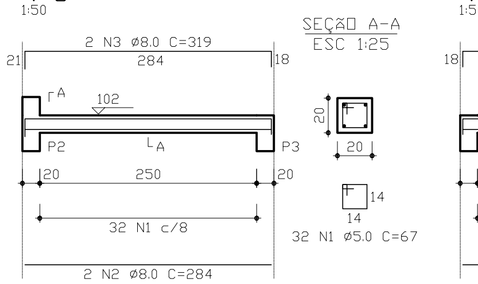
AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
60	1	5.0	105	67	7035
50	2	8.0	2	419	838
	3	8.0	2	451	902
	4	8.0	2	284	568
	5	8.0	2	316	632
	6	8.0	4	142	568
	7	8.0	4	174	696

RESUMO DO AÇO

AÇO	DIAM	C.TOTAL (m)	PESO+10% (kg)
CA50	8.0	42.1	18.3
CA60	5.0	70.9	12.0
PESO TOTAL			
CA50	18.3		
CA60	12.0		

Vol. concreto (C-25) = 0.40 m³
Área de forma total = 6.06 m²

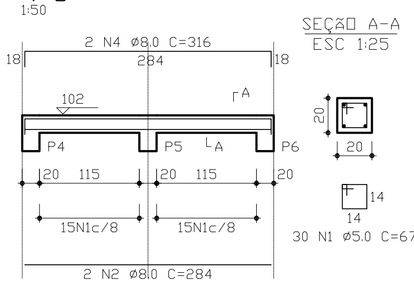
V5
1:50



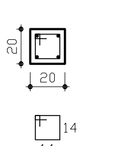
SEÇÃO A-A
ESC 1:25

32 N1 ø5.0 C=67

V6
1:50

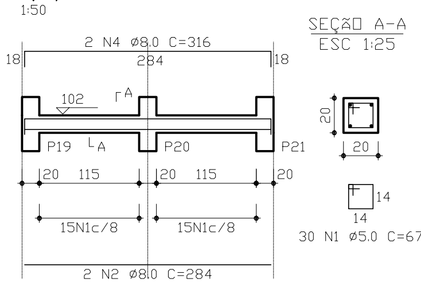


SEÇÃO A-A
ESC 1:25

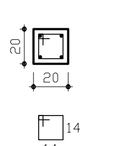


30 N1 ø5.0 C=67

V7
1:50

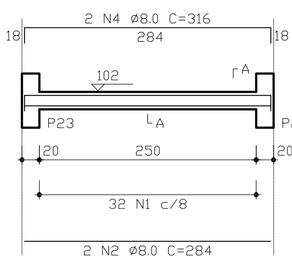


SEÇÃO A-A
ESC 1:25

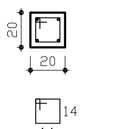


30 N1 ø5.0 C=67

V8
1:50

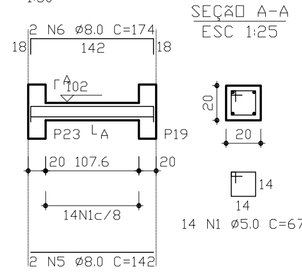


SEÇÃO A-A
ESC 1:25



32 N1 ø5.0 C=67

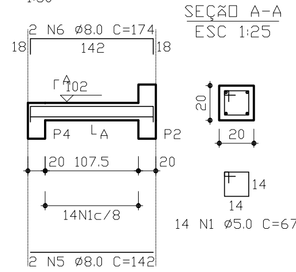
V9
1:50



SEÇÃO A-A
ESC 1:25

14 N1 ø5.0 C=67

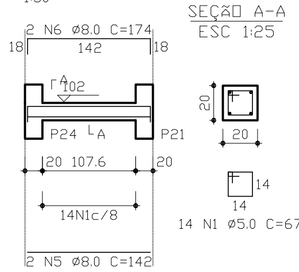
V10
1:50



SEÇÃO A-A
ESC 1:25

14 N1 ø5.0 C=67

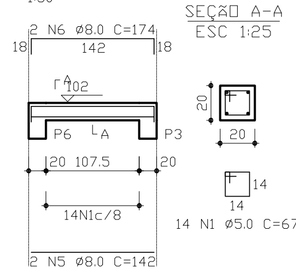
V11
1:50



SEÇÃO A-A
ESC 1:25

14 N1 ø5.0 C=67

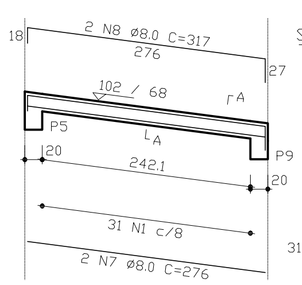
V12
1:50



SEÇÃO A-A
ESC 1:25

14 N1 ø5.0 C=67

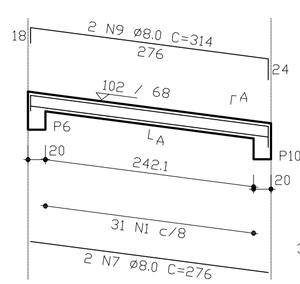
V13
1:50



SEÇÃO A-A
ESC 1:25

31 N1 ø5.0 C=67

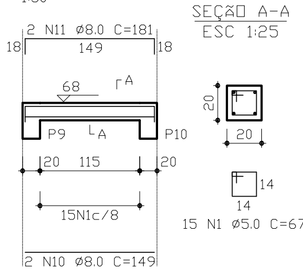
V14
1:50



SEÇÃO A-A
ESC 1:25

31 N1 ø5.0 C=67

V15
1:50



SEÇÃO A-A
ESC 1:25

15 N1 ø5.0 C=67

RELAÇÃO DO AÇO

V5
V8
V11
V14
V17
V20

V6
V9
V12
V15
V18

V7
V10
V13
V19

AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
60	1	5.0	456	67	30552
50	2	8.0	8	284	2272
	3	8.0	8	319	638
	4	8.0	6	316	1896
	5	8.0	8	142	1136
	6	8.0	8	174	1392
	7	8.0	4	276	1104
	8	8.0	2	317	634
	9	8.0	2	314	628
	10	8.0	4	149	596
	11	8.0	4	181	724
	12	8.0	4	435	1740
	13	8.0	4	356	1424
	14	8.0	1	95	95
	15	8.0	2	407	814
	16	8.0	1	95	95
	17	8.0	2	405	810
	18	10.0	1	102	102
	19	10.0	2	495	990
	20	10.0	1	102	102
	21	10.0	2	495	990

RESUMO DO AÇO

AÇO	DIAM	C.TOTAL (m)	PESO+10% (kg)
CA50	8.0	160.1	69.5
CA60	10.0	21.9	14.8
CA60	5.0	307.8	52.2
PESO TOTAL			
CA50	84.3		
CA60	52.2		

Vol. concreto (C-25) = 1.69 m³
Área de forma total = 25.39 m²

V16
1:50

SEÇÃO A-A
ESC 1:25

51 N1 ø5.0 C=67

V17
1:50

SEÇÃO A-A
ESC 1:25

51 N1 ø5.0 C=67

V18
1:50

SEÇÃO A-A
ESC 1:25

15 N1 ø5.0 C=67

V19
1:50

SEÇÃO A-A
ESC 1:25

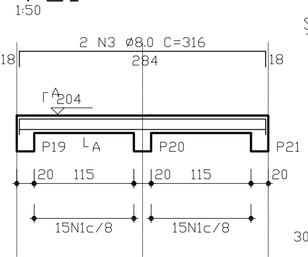
41 N1 ø5.0 C=67

V20
1:50

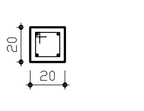
SEÇÃO A-A
ESC 1:25

41 N1 ø5.0 C=67

V21
1:50

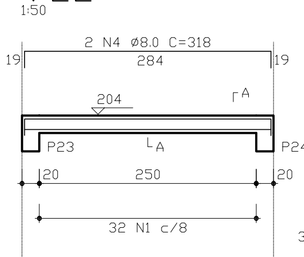


SEÇÃO A-A
ESC 1:25

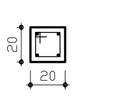


30 N1 ø5.0 C=67

V22
1:50

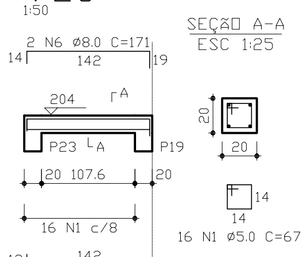


SEÇÃO A-A
ESC 1:25



32 N1 ø5.0 C=67

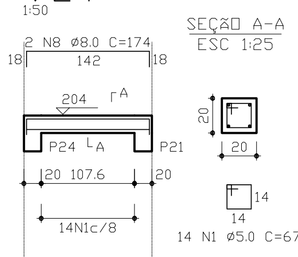
V23
1:50



SEÇÃO A-A
ESC 1:25

16 N1 ø5.0 C=67

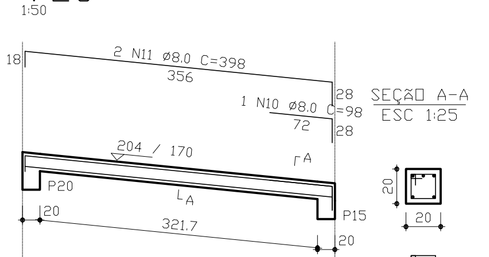
V24
1:50



SEÇÃO A-A
ESC 1:25

14 N1 ø5.0 C=67

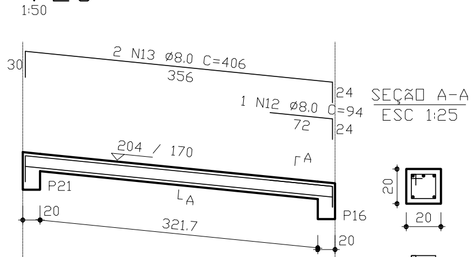
V25
1:50



SEÇÃO A-A
ESC 1:25

41 N1 ø5.0 C=67

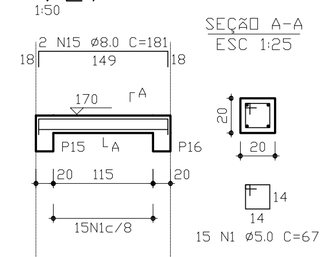
V26
1:50



SEÇÃO A-A
ESC 1:25

41 N1 ø5.0 C=67

V27
1:50



SEÇÃO A-A
ESC 1:25

15 N1 ø5.0 C=67

RELAÇÃO DO AÇO

V21
V24
V27
V30

V22
V25
V28
V31

V23
V26
V29
V32

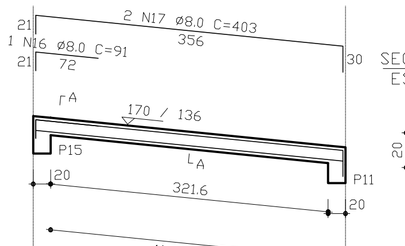
AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
60	1	5.0	368	67	24656
50	2	8.0	4	284	1136
	3	8.0	2	316	632
	4	8.0	2	318	636
	5	8.0	2	152	304
	6	8.0	2	171	342
	7	8.0	2	142	284
	8	8.0	2	174	348
	9	8.0	12	356	4272
	10	8.0	1	98	98
	11	8.0	2	398	796
	12	8.0	1	94	94
	13	8.0	2	406	812
	14	8.0	4	149	596
	15	8.0	4	181	724
	16	8.0	1	91	91
	17	8.0	2	403	806
	18	8.0	2	412	824
	19	8.0	1	94	94
	20	8.0	2	406	812
	21	8.0	1	95	95
	22	8.0	2	403	806

RESUMO DO AÇO

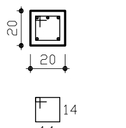
AÇO	DIAM	C.TOTAL (m)	PESO+10% (kg)
CA50	8.0	146.1	63.4
CA60	5.0	248.4	42.1
PESO TOTAL			
CA50	63.4		
CA60	42.1		

Vol. concreto (C-25) = 1.34 m³
Área de forma total = 20.14 m²

V28
1:50

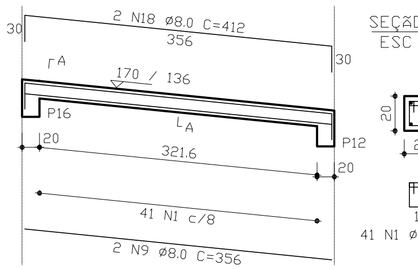


SEÇÃO A-A
ESC 1:25

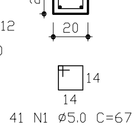


41 N1 ø5.0 C=67

V29
1:50

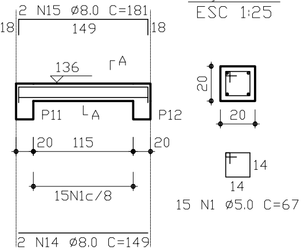


SEÇÃO A-A
ESC 1:25



41 N1 ø5.0 C=67

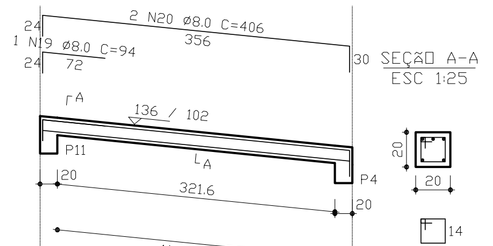
V30
1:50



SEÇÃO A-A
ESC 1:25

15 N1 ø5.0 C=67

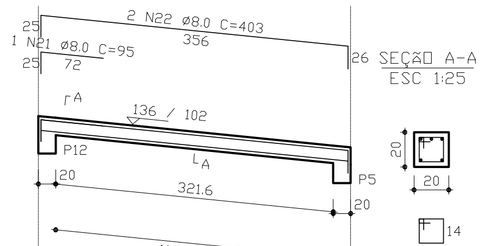
V31
1:50



SEÇÃO A-A
ESC 1:25

41 N1 ø5.0 C=67

V32
1:50



SEÇÃO A-A
ESC 1:25

41 N1 ø5.0 C=67

Prefeitura Municipal de Jaguariaíva

Praça Getúlio Vargas 60 - Centro Cx.Postal.11 - Fone (43) 3535-1233 - Fax (43) 3535-2130
Jaguariaíva -PR - CEP: 84.200-000 - CNPJ 76.910.900/0001-38

Secretaria Municipal de Infraestrutura e Habitação

GESTÃO: 2017-2020 JOSÉ SLOBODA PREFEITO MUNICIPAL	TÍTULO: REPAROS NA ESCOLA MUN. CARLOS CARNEIRO SAMPAIO JD SÃO ROQUE PROJETO ESTRUTURAL - RAMPA 01
RESPONSÁVEL TÉCNICO: ENGª ANA CLAUDIA KRUL CREA-PR 69.540-D	DATA: REV. FEV 2017 / DESENHO: ANA CLAUDIA / ESCALA: Indicadas / FOLHA: 05/06