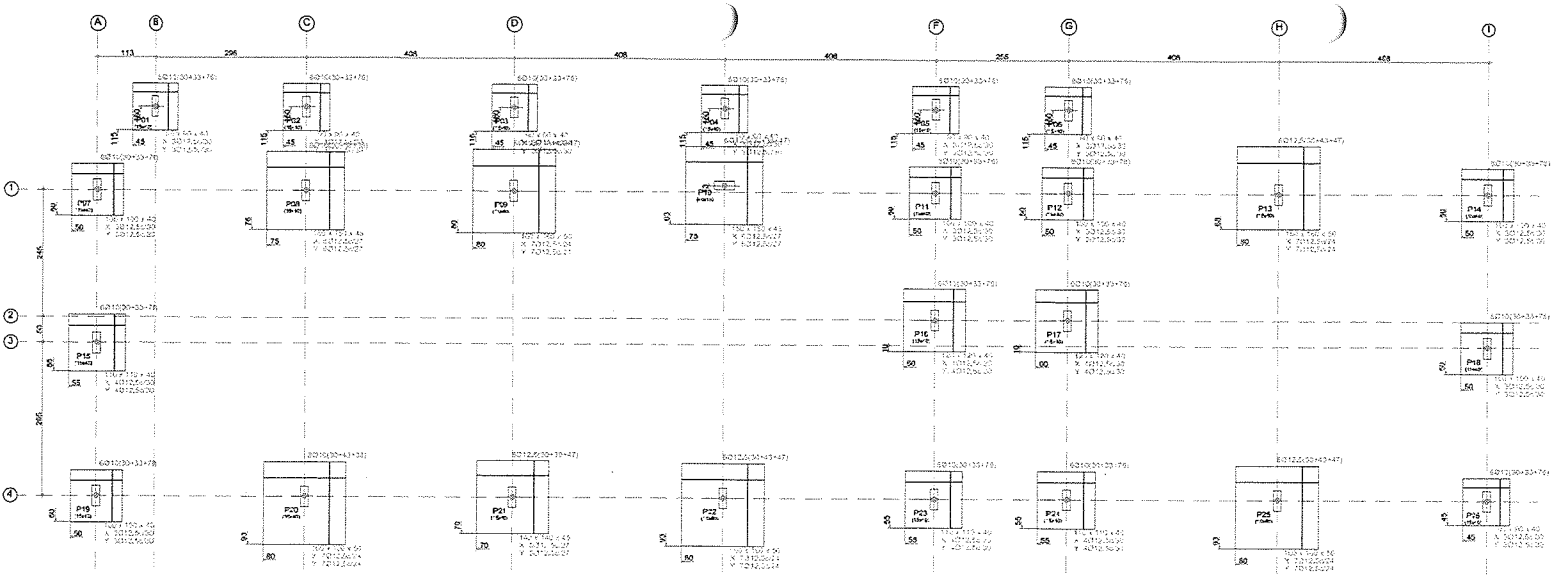
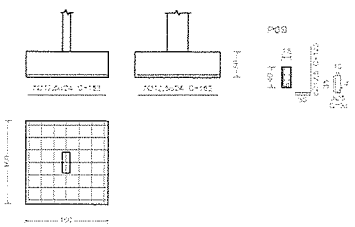


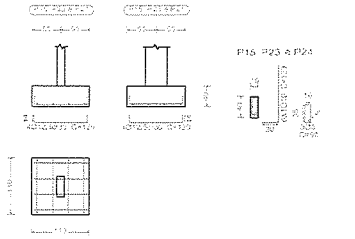
Nível (cm)	Fundação	Concreto C25 on point	Aço em fundações (CA-50 e CA-60)	Escala: 1:50
P01, P02, P03, P04, P05, P06 e P25	50x50	40	4Ø12,5c=110	4Ø12,5c=110
P07, P08, P09, P10, P13, P15, P16 e P17	50x50	40	4Ø12,5c=110	4Ø12,5c=110
P11	50x50	40	4Ø12,5c=110	4Ø12,5c=110
P12	50x50	40	4Ø12,5c=110	4Ø12,5c=110
P14	50x50	40	4Ø12,5c=110	4Ø12,5c=110
P18	50x50	40	4Ø12,5c=110	4Ø12,5c=110
P19	50x50	40	4Ø12,5c=110	4Ø12,5c=110
P20	50x50	40	4Ø12,5c=110	4Ø12,5c=110
P21	50x50	40	4Ø12,5c=110	4Ø12,5c=110
P22	50x50	40	4Ø12,5c=110	4Ø12,5c=110
P23	50x50	40	4Ø12,5c=110	4Ø12,5c=110
P24	50x50	40	4Ø12,5c=110	4Ø12,5c=110
P25	50x50	40	4Ø12,5c=110	4Ø12,5c=110

Nível (cm)
Fundação
Concreto C25 on point
Aço em fundações (CA-50 e CA-60)
Escala: 1:50

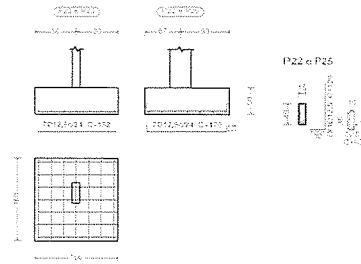
P09



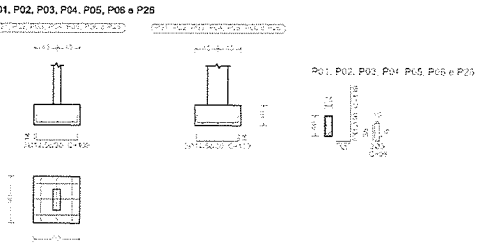
P15, P23 e P24



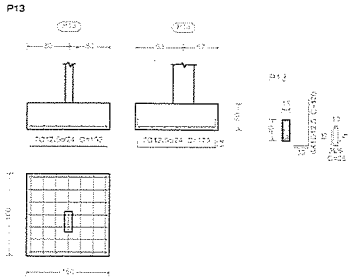
P22 e P25



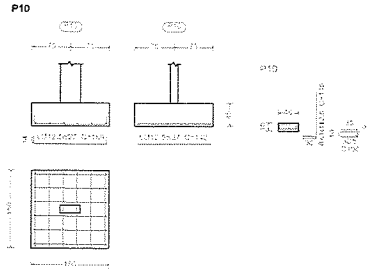
P01, P02, P03, P04, P05, P06 e P25



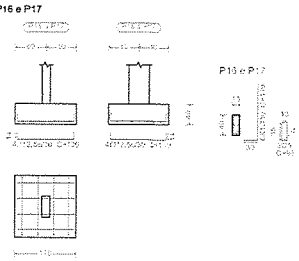
P13



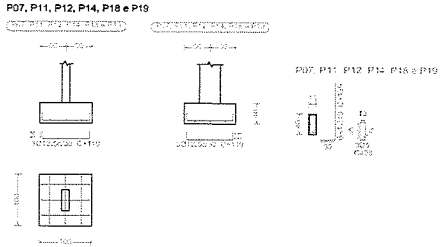
P10



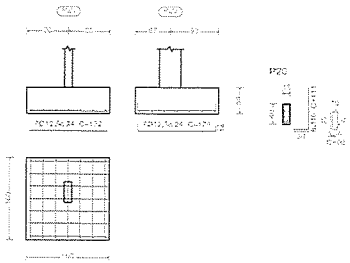
P16 e P17



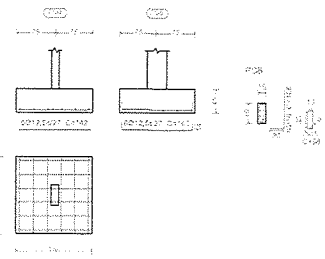
P07, P11, P12, P14, P18 e P19



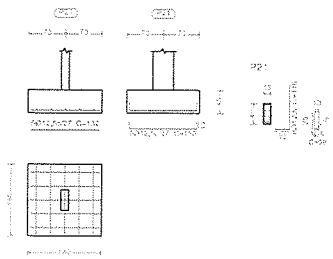
P20



P08



P21



Notas

Observações
Todas as medidas devem ser conferidas no local.
É proibido a alteração sem a autorização do autor

Responsável Técnico
Rui Nunes Lopes CREA - CE nº 12587CE

Responsável Técnico
William Saymon Carvalho Silva CREA - CE nº 34594CE

João Udson Sarema Cruz
Secretário Municipal de Projetos Urbanísticos e Habitação

Obra:
REFORMA E AMPLIAÇÃO ESCOLA JOSÉ HAMILTON DE OLIVEIRA - FLUXO 01

Localização: Rua Raimundo Cordeiro
Desenho: William Saymon
Escala: 1:50

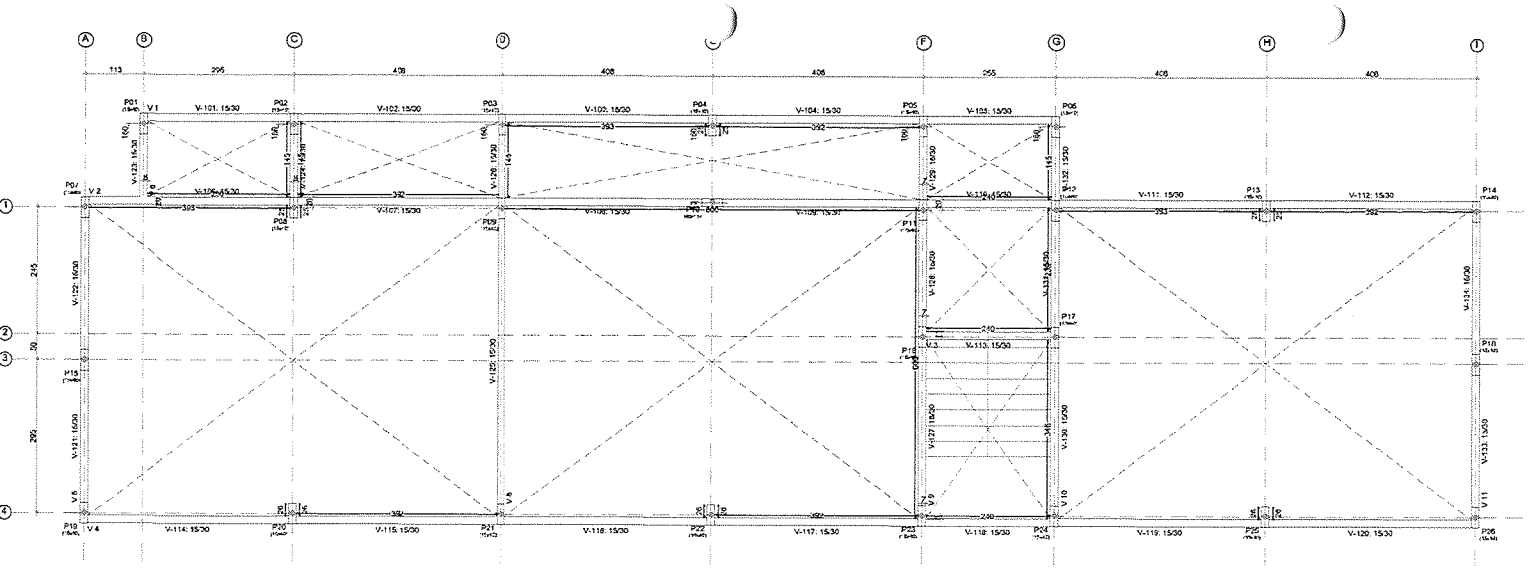
Projeto: PROJETO ESTRUTURAL

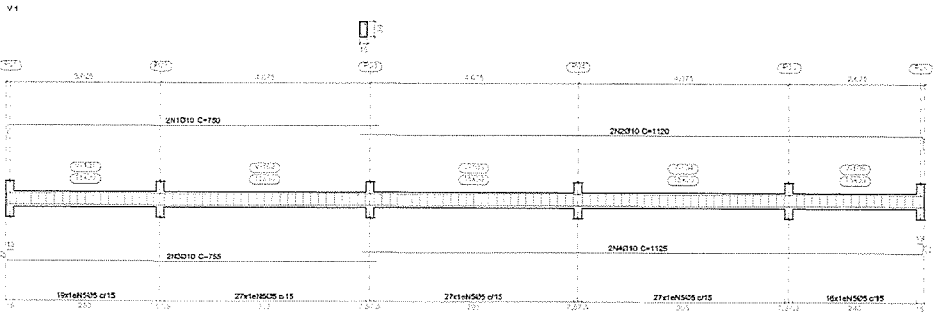
Área útil: LEVANTAMENTO ESTRUTURAL NAS FUNDAÇÕES
Data: 10/01/2024
Área total: 1.147,71

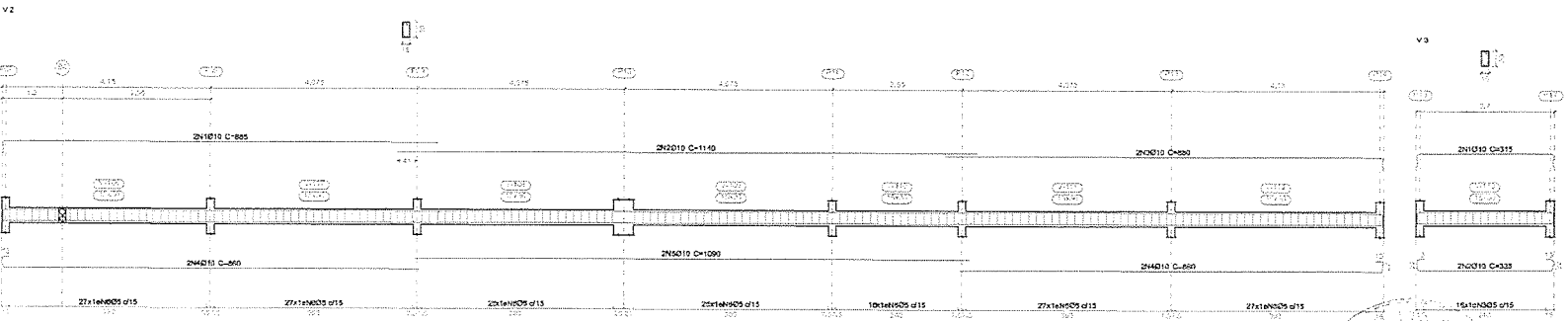
PREFEITURA DE IMOBIRO DO NORTE
SEPURB

Prancha: 03 / 11

TESTEMUNHO MUNICIPAL DE IMOBIRO DO NORTE
325







Elemento	Pos.	Diam.	Q.	Esquema (cm)	Comp. (cm)	Total (cm)	CA-50 (kg)	CA-60 (kg)
V1	1	Ø10	2		750	1500	9,2	
	2	Ø10	2		1120	2240	13,8	
	3	Ø10	2		755	1510	9,3	
	4	Ø10	2		1125	2250	13,9	
	5	Ø5	116		78	9048		14,2
						Total+10%:	50,8	15,6
V2	1	Ø10	2		885	1770	10,9	
	2	Ø10	2		1140	2280	14,0	
	3	Ø10	2		880	1760	10,8	
	4	Ø10	4		860	3440	21,2	
	5	Ø10	2		1090	2180	13,4	
	6	Ø5	176		78	13725		21,6
						Total+10%:	77,3	23,8
V3	1	Ø10	2		315	630	3,9	
	2	Ø10	2		335	670	4,1	
	3	Ø5	16		78	1248		2,0
						Total+10%:	8,8	2,2
V4	1	Ø10	2		885	1770	10,9	
	2	Ø10	2		1145	2290	14,1	
	3	Ø10	2		890	1780	11,0	
	4	Ø10	2		155	310	1,9	
	5	Ø10	4		860	3440	21,2	
	6	Ø10	2		1085	2170	13,4	
	7	Ø5	178		78	13884		21,8
						Total+10%:	79,8	24,0
V5–V11	1	Ø10	2		675	1350	8,3	
	2	Ø10	2		695	1390	8,6	
	3	Ø5	34		78	2652		4,2
						Total+10%:	18,8	4,6
						(x2):	37,2	9,2
V6	1	Ø10	2		230	460	2,8	
	2	Ø10	2		240	480	3,0	
	3	Ø5	9		78	702		1,1
						Total+10%:	6,4	1,2
V7	1	Ø10	2		221	442	2,7	
	2	Ø10	2		265	530	3,3	
	3	Ø5	9		78	702		1,1
						Total+10%:	6,6	1,2
V8	1	Ø10	2		835	1670	10,3	
	2	Ø10	1		175	175	1,1	
	3	Ø10	1		165	165	1,0	
	4	Ø10	2		855	1710	10,5	
	5	Ø5	43		78	3354		5,3
						Total+10%:	22,9	5,8
						(x2):	45,8	11,6
V9–V10	1	Ø10	2		835	1670	10,3	
	2	Ø10	2		855	1710	10,5	
	3	Ø5	43		78	3354		5,3
						Total+10%:	22,9	5,8
						(x2):	45,8	11,6
						Ø5:	0,0	94,9
						Ø10:	337,9	0,0
						Total:	337,9	94,9

Notas

Observações:
Todas as medidas devem ser conferidas no local
É proibida a alteração sem a autorização do autor

Responsável Técnico
Rui Nunes Lopes CREA - CE nº 2058778

Responsável Técnico
William Saymon Carvalho Silva CREA - CE nº 34094CE

João Victor Barbosa Cruz
Secretaria Municipal de Projeto, Urbanismo e Habitação

Obra:
REFORMA E AMPLIAÇÃO ESCOLA JOSÉ HAVE FRANCO DE OLIVEIRA - BLOCO C1

Localização:
Rua Francisco Gracian

Desenho:
William Saymon

Escala:
1:25

Projeto:
PROJETO ESTRUTURAL

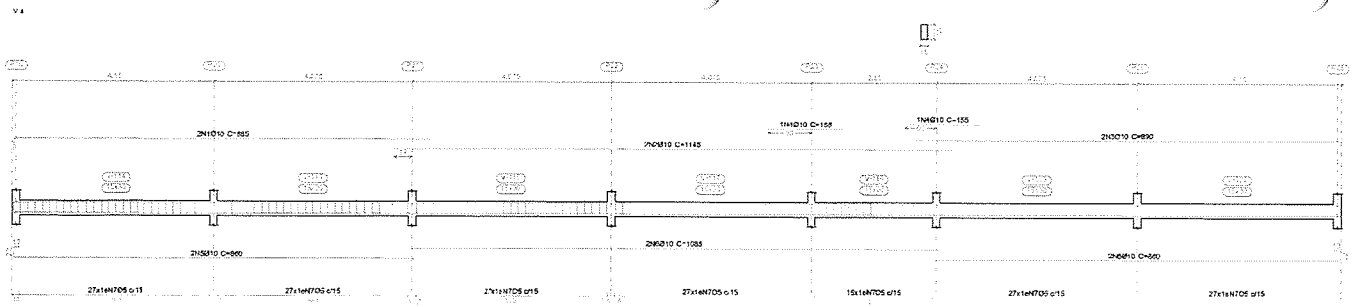
Área de:
DETALHAMENTO VIGAS NÍVEL 15

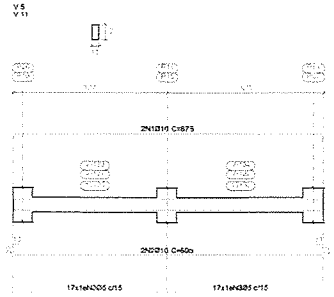
Data:
10-01-2024

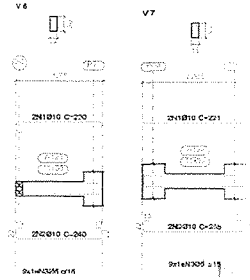
Formato:
A0 (841 L

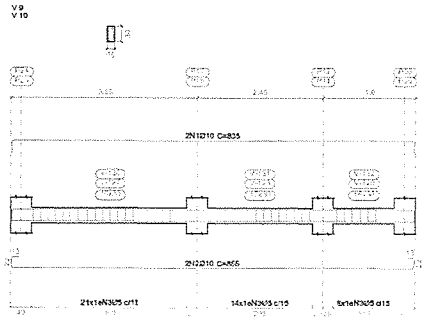
PREFEITURA DE LIMOEIRO DO NORTE
SECRETARIA DE PROJETOS URBANOS E HABITAÇÃO SEPURB

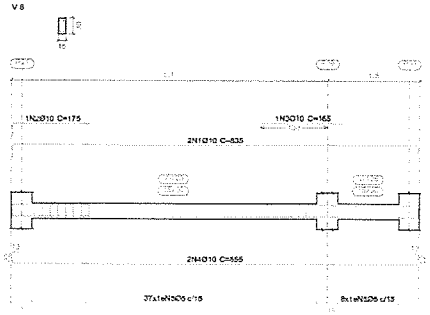
Prancha
04
11











Notas:

Observações:
Todas as medidas devem ser conferidas no local.
É proibida a alteração sem a autorização do autor.

Responsável Técnico
Wallace Lopes CREA - CE nº 32052CE

Responsável Técnico
Allan Sarmento Carvalho Silva CREA - CE nº 34199CE

João Gilmar Saldanha Cruz
Secretário Municipal de Finanças Urbanismo e Habitação

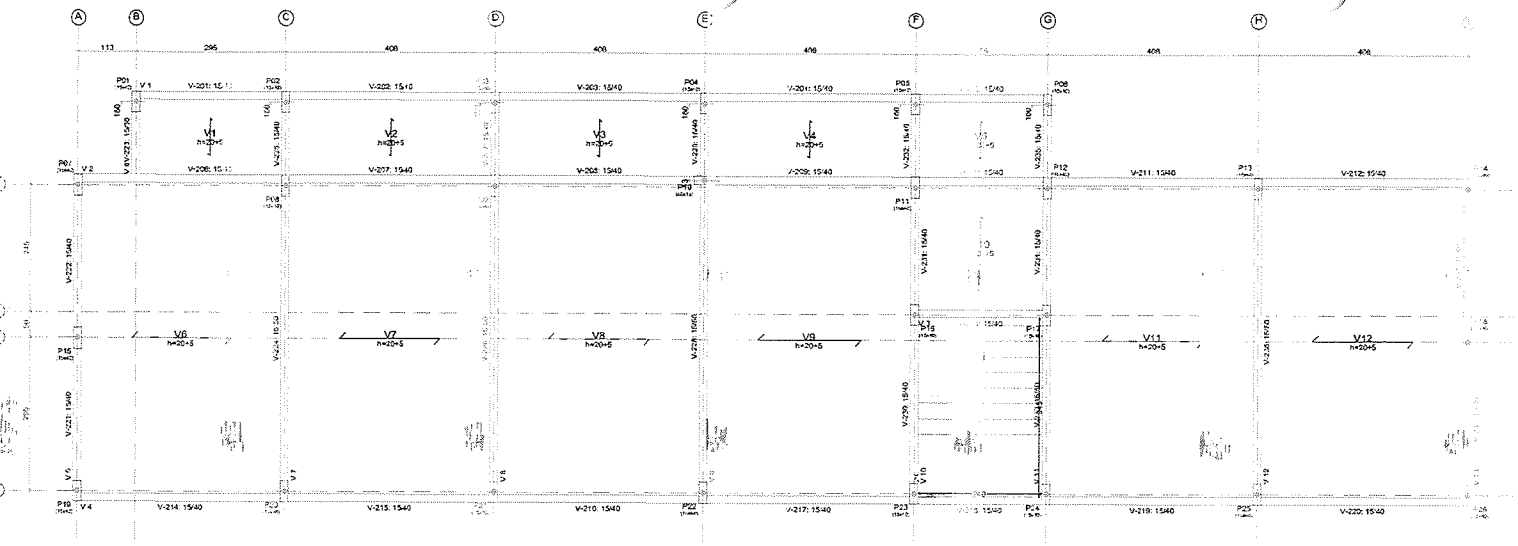
Obra:
REFORMA E AMPLIAÇÃO ESCOLA JOSÉ HAMILTON DE OLIVEIRA - ALCOBAÇA

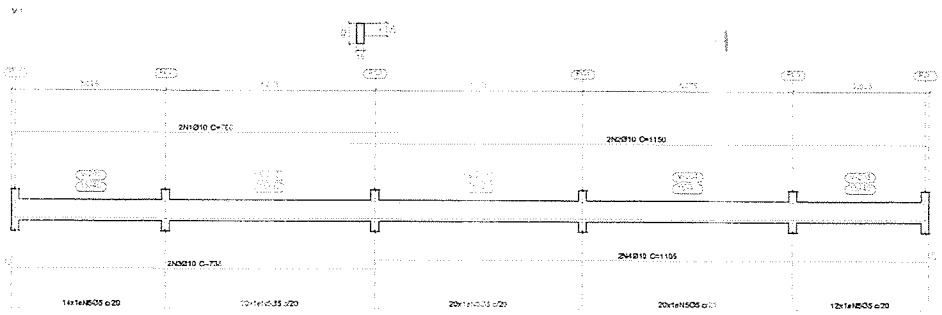
Localização: Rua Francisco Sousa
Desenho: Arquivo Solimar
Escala: 1:50

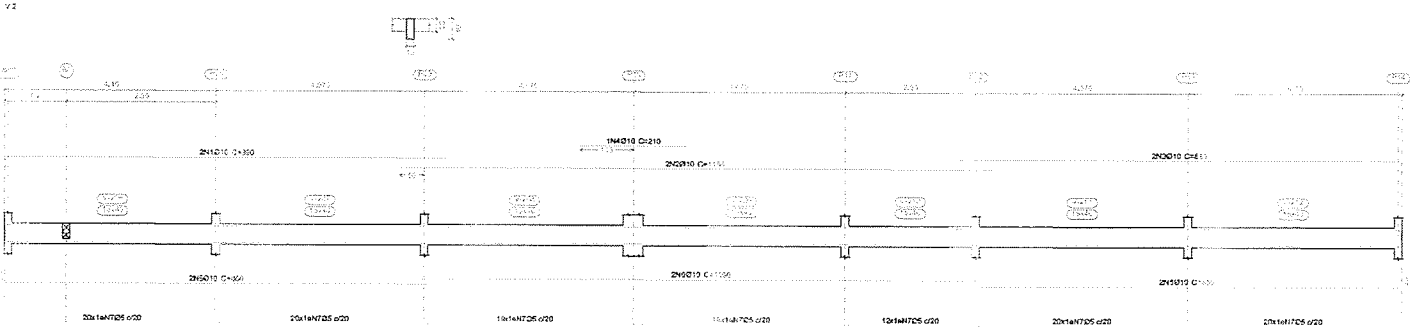
Projeto: PROJETO ESTRUTURAL

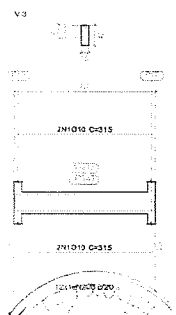
Assunto: DETALHAMENTO - PÓRTICOS - NÍVEL 15
Data: 10/01/2024
Formato: A1 (841x594)

PREFEITURA DE LIMOEIRO DO NORTE
SEPURB
Prancha 05 / 11





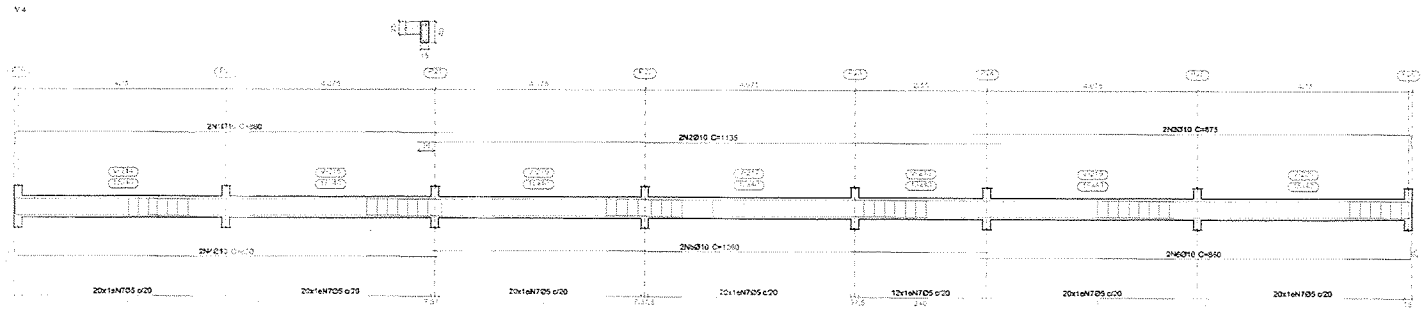


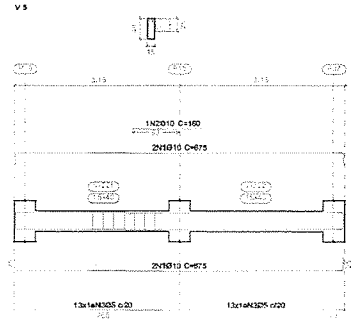


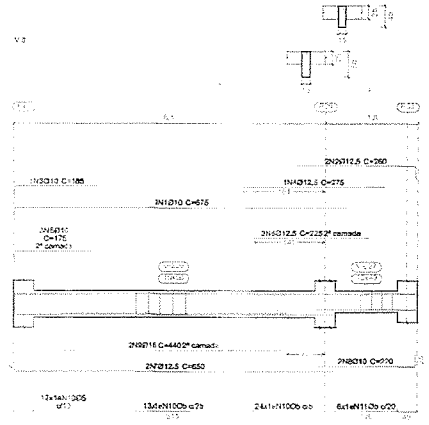
Ele	Pos.	Diam.	Q.	Esquema (cm)	Comp. (cm)		
	1	Ø10	2		760		
	2	Ø10	2		1150		
	3	Ø10	2		730		
	4	Ø10	2		1105		
	5	Ø5	66		96		1,1
	Total						
	1	Ø10	2		890		
	2	Ø10	2		1155		
	3	Ø10	2		880		
	4	Ø10	1		210		
	5	Ø10	4		850		
	6	Ø10	2		1090		
	7	Ø5	130		96		22,0
	Total					18,9	22,0
	1	Ø10	4		315	7,8	
	2	Ø5	12		96		1,8
	Total					8,6	2,0
	1	Ø10	2		880	10,8	
	2	Ø10	2		1135	14,0	
	3	Ø10	2		875	10,8	
	4	Ø10	2		850	10,5	
	5	Ø10	2		1060	13,3	
	6	Ø10	2		860	10,6	
	7	Ø5	132		96		20,1
	Total					70	22,3
	1	Ø10	4		675	6,6	
	2	Ø10	1		180	1,0	
	3	Ø5	26		96		4,0
	Total					8,4	4,4
	1	Ø10	2		230	2,8	
	2	Ø10	2		240	3,0	
	3	Ø5	9		78		1,1
	Total					6,4	1,2
	1	Ø10	2		830	3,3	
	2	Ø10	1		180	1,1	
	3	Ø10	1		250	1,5	
	4	Ø10	2		175	2,2	
	5	Ø12,5	2		235	4,5	
	6	Ø10	2		650	8,0	
	7	Ø10	2		221	2,7	
	8	Ø12,5	1		465	4,5	
	9	Ø10	2		385	4,7	
	10	Ø5	33		116		6,1
	11	Ø5	7		96		1,1
	Total					13,2	7,9
						3,0	74,3
						0,0	0,0
						3,0	0,0
						16,2	74,3

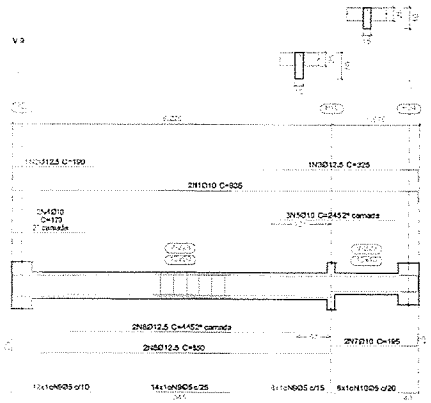
LIMOEIRO DO NORTE | SEPURB

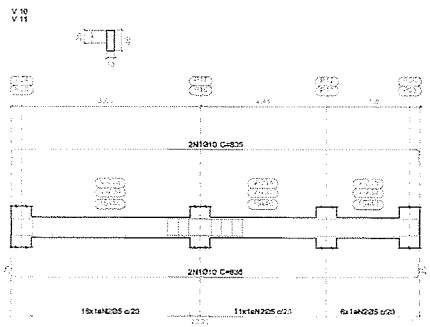
06 / 11

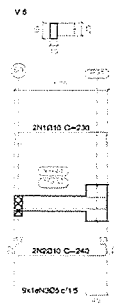


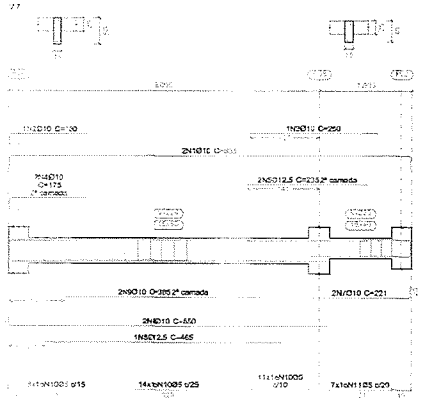


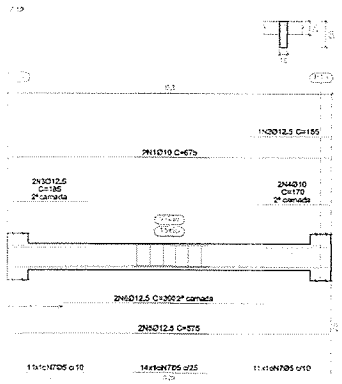


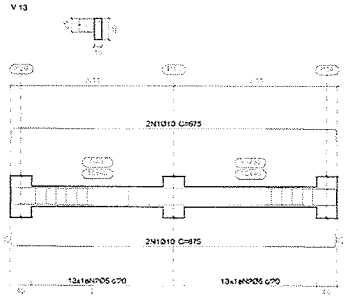












Elemento	Pos.	Diam.	Q.	Esquema (cm)	Comp. (cm)	Total (cm)	CA-50 (kg)	CA-60 (kg)
V 8	1	Ø10	2		675	1350	8,3	
	2	Ø12,5	2		260	520	8,0	
	3	Ø10	1		185	185	1,1	
	4	Ø12,5	1		275	275	2,8	
	5	Ø10	3		175	525	3,2	
	6	Ø12,5	3		225	675	6,5	
	7	Ø12,5	2		650	1300	12,5	
	8	Ø10	2		220	440	2,7	
	9	Ø16	2		440	880	13,9	
	10	Ø5	49		118	5782		2,1
	11	Ø5	6		98	588		0,3
						Total+10%	61,4	11,0
V 9	1	Ø10	2		835	1670	10,3	
	2	Ø12,5	1		190	190	1,8	
	3	Ø12,5	1		325	325	3,1	
	4	Ø10	2		170	340	2,1	
	5	Ø10	3		245	735	4,5	
	6	Ø12,5	2		650	1300	12,5	
	7	Ø10	2		195	390	2,4	
	8	Ø12,5	2		445	890	8,6	
	9	Ø5	34		118	4012		6,3
	10	Ø5	6		98	588		0,9
						Total+10%	49,8	7,9
V 10+V 11	1	Ø10	4		835	3340	20,6	
	2	Ø5	33		98	3234		5,1
						Total+10%	22,7	5,6
						(x2)	45,4	11,2
V 12	1	Ø10	2		675	1350	8,3	
	2	Ø12,5	1		185	185	1,8	
	3	Ø12,5	2		185	370	3,6	
	4	Ø10	2		170	340	2,1	
	5	Ø12,5	2		675	1350	13,0	
	6	Ø12,5	2		390	780	7,5	
	7	Ø5	30		118	4248		0,7
						Total+10%	35,9	7,4
V 13	1	Ø10	4		675	2700	16,6	
	2	Ø5	26		98	2548		4,0
						Total+10%	18,3	4,4
						Ø5	0,0	41,9
						Ø10	113,1	0,0
						Ø12,5	96,4	0,0
						Ø16	13,9	0,0
						Total	214,8	41,9

Notas:

Observações:
Todas as medidas devem ser conferidas no local
É proibida a alteração sem a autorização do autor

Responsável Técnico
Ana Nunes Lopes CREA - CE nº 32587CE

Responsável Técnico
William Gomes Carvalho Silva CREA - CE nº 34399CE

João Orlan Sousa Cruz
Secretário Municipal de Obras, Urbanismo e Habitação

Obra:
REFORMA E AMPLIAÇÃO ESCOLA JOSÉ HAMILTON DE OLIVEIRA - PLOA 01

Localização:
Rua Raimundo Gomes

Desenho:
Vigas Baldrame

Escala:
1:50

Projeto:
PROJETO ESTRUTURAL

Arquivo:
SEC-LIMOEIRO-ESCOLA JOSE HAMILTON

Data:
12-01-2024

Revisão:
REV-01

PREFEITURA DE LIMOEIRO DO NORTE

SEPURB

Prancha
07
11

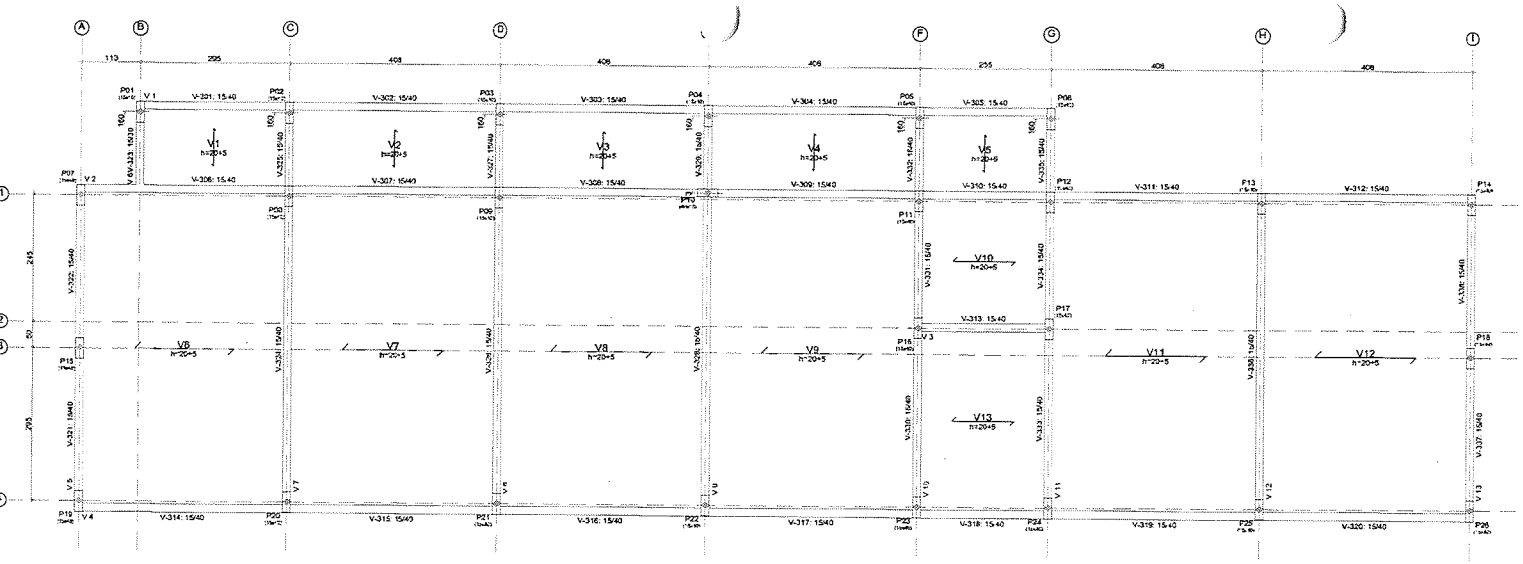
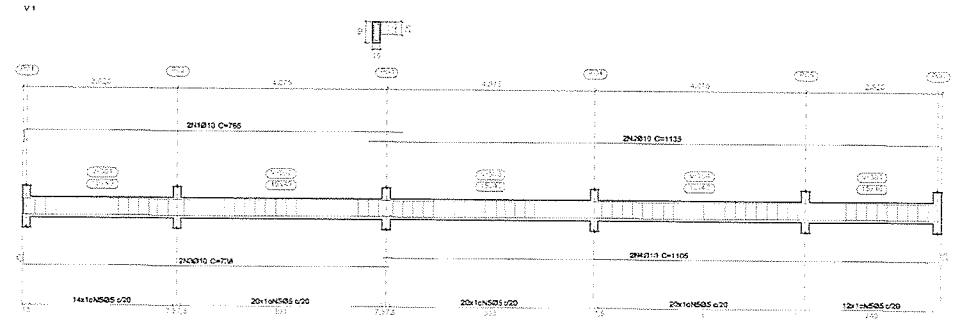


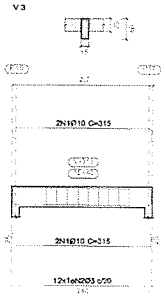
Tabela de características de lajes de vigas (Grupo 1)
LAJE 01 (10CM) DE CONCRETO
Altura h: (h=h+h=10+10) 20 cm
Espessura camada de compressão 5 cm
E-tijolos: 42 cm
Piso: Mesma do pavimento
Lastro de nivelação: 12 cm
Volume de concreto: 0,263 m3/m2
Peso próprio: 3,29 kN/m2 (1 tijolo + 0,13 kN/m2 (Piso))
Nota: Consulta de cabeças inferiores e alturas com lajes da cobertura pelo arq. e demais fachadas

Elemento	Pos.	Diam.	Q.	Esquema (cm)	Comp. (cm)	Total (cm)	CA-50 (kg)	CA-60 (kg)
V1	1	Ø10	2		765	1530	9,4	
	2	Ø10	2		1135	2270	14,0	
	3	Ø10	2		738	1476	9,1	
	4	Ø10	2		1105	2210	13,6	
	5	Ø5	86		98	8428		13,2
					Total+10%		50,7	14,5
V2	1	Ø10	4		870	3480	21,4	
	2	Ø10	2		1120	2240	13,8	
	3	Ø10	4		850	3400	21,0	
	4	Ø10	2		1080	2160	13,3	
	5	Ø5	130		98	12740		20,0
					Total+10%		76,5	22,0
V3	1	Ø10	4		315	1260	7,8	
	2	Ø5	12		98	1176		1,8
					Total+10%		8,6	2,0
V4	1	Ø10	4		870	3480	21,4	
	2	Ø10	2		1120	2240	13,8	
	3	Ø10	4		850	3400	21,0	
	4	Ø10	2		1080	2160	13,3	
	5	Ø5	130		98	12740		20,0
					Total+10%		76,5	22,0
V5	1	Ø10	2		650	1300	8,0	
	2	Ø10	1		140	140	0,9	
	3	Ø10	2		675	1350	8,3	
	4	Ø5	28		98	2548		4,0
					Total+10%		18,0	4,4
V6	1	Ø10	2		230	460	2,8	
	2	Ø10	2		240	480	3,0	
	3	Ø5	8		78	702		1,1
					Total+10%		6,4	1,2
V7	1	Ø10	4		835	3340	20,6	
	2	Ø10	4		175	700	4,3	
	3	Ø10	1		335	335	2,1	
	4	Ø10	3		265	795	4,9	
	5	Ø12,5	1		415	415	4,0	
	6	Ø10	2		355	710	4,4	
	7	Ø5	46		98	4508		7,1
					Total+10%		44,3	7,8
						Ø5	0,0	74,2
						Ø10	271,0	0,0
						Ø12,5	4,4	0,0
						Total	291,9	74,2

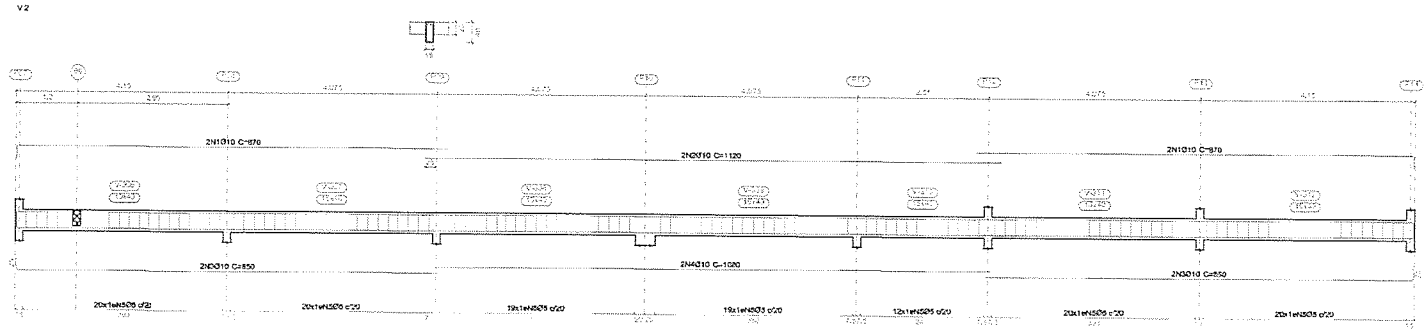
V1



V3



V2



Notas

Observações
Todas as medidas devem ser conferidas no local
É proibida a alteração sem a autorização do autor

Responsável Técnico
Ana Paula Lopes OREA - CE nº 12741-7-TE

Responsável Técnico
William Salmon Canuto SAVA CREA - CE nº 5429-D/CE

João Vitor Sousa Cruz
Secretaria Municipal de Projeto, Urbanismo e Habitação

OBRA
ESCOLA CAIPU MUNICIPAL ESCOLA JOSÉ HAMILTON DE OLIVEIRA - ALCOLOU

LOCALIZAÇÃO:
RUA RAYMUNDO DA VIVE

DESENHO:
William Salmon

ESCALA:
1:50

PROJETO:
PROJETO ESTRUTURAL

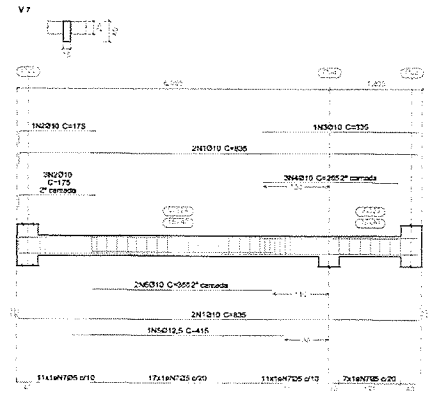
DATA:
15-01-2024

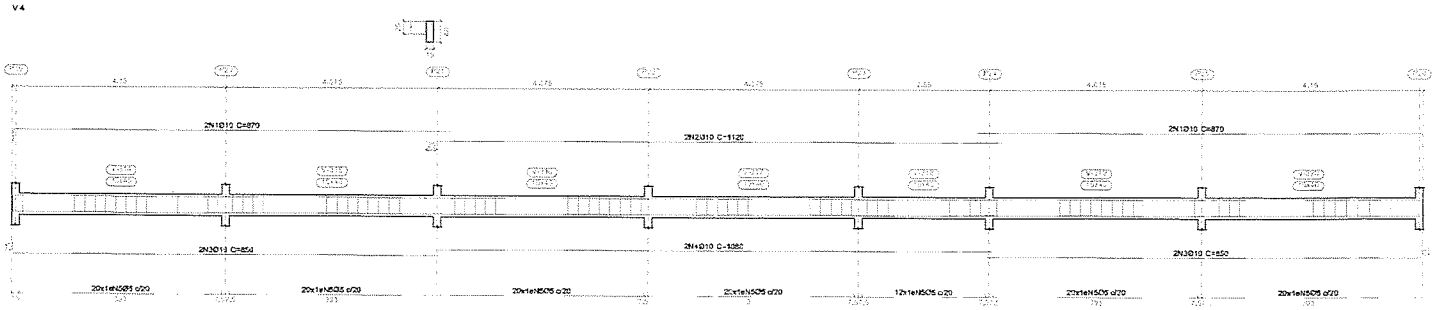
DESENHO:
DETALHAMENTO (LIG NIVELIRO)

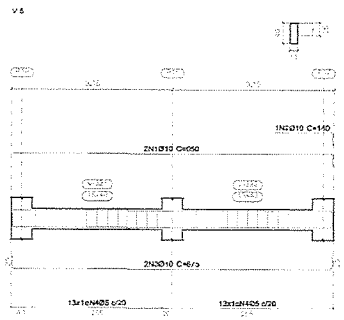
DESENVOLVIDO:
INCOL

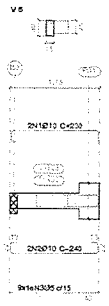
PREFEITURA DE LIMOEIRO DO NORTE
SECRETARIA DE INFRAESTRUTURA E DESENVOLVIMENTO URBANO
SEPURB

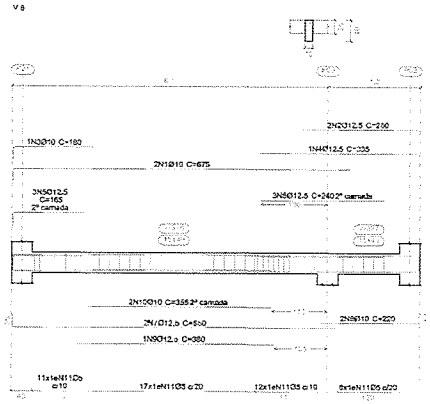
Prancha
08
11

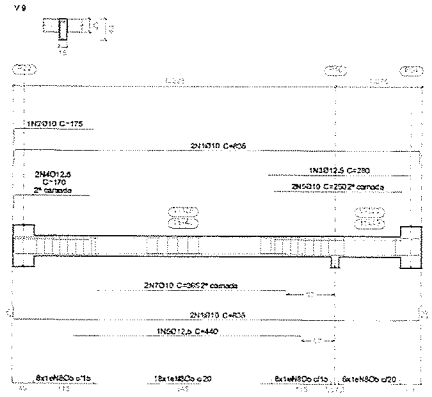


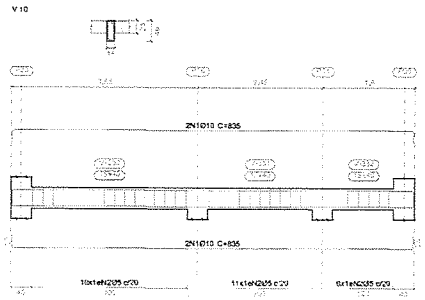


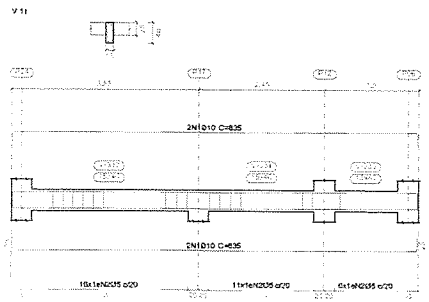


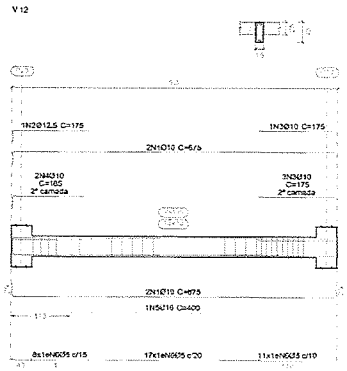


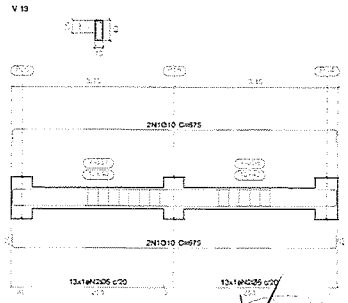












Elemento	Pos.	Diam.	Q.	Esquema (cm)	Comp. (cm)	Total (cm)	CA-50 (kg)	CA-60 (kg)
V 8	1	Ø10	2		675	1350	8,3	
	2	Ø12,5	2		260	520	5,0	
	3	Ø10	1		180	180	1,1	
	4	Ø12,5	1		335	335	3,2	
	5	Ø12,5	3		165	495	4,8	
	6	Ø12,5	3		240	720	6,9	
	7	Ø12,5	2		650	1300	12,5	
	8	Ø10	2		220	440	2,7	
	9	Ø12,5	1		380	380	3,7	
	10	Ø10	2		355	710	4,4	
	11	Ø5	46		98	4508		7,1
						Total+10%:	57,9	7,8
V 9	1	Ø10	4		835	3340	20,6	
	2	Ø10	1		175	175	1,1	
	3	Ø12,5	1		250	250	2,7	
	4	Ø12,5	2		170	340	3,3	
	5	Ø10	2		250	500	3,1	
	6	Ø12,5	1		440	440	4,2	
	7	Ø10	2		365	730	4,5	
	8	Ø5	40		98	3920		5,2
						Total+10%:	43,5	5,8
V 10	1	Ø10	4		835	3340	20,6	
	2	Ø5	33		98	3234		5,1
						Total+10%:	22,7	5,6
V 11	1	Ø10	4		835	3340	20,6	
	2	Ø5	33		98	3234		5,1
						Total+10%:	22,7	5,6
V 12	1	Ø10	4		675	2700	16,6	
	2	Ø12,5	1		175	175	1,7	
	3	Ø10	4		175	700	4,3	
	4	Ø10	2		165	330	2,0	
	5	Ø16	1		400	400	6,3	
	6	Ø5	36		98	3528		5,5
						Total+10%:	31,0	6,1
V 13	1	Ø10	4		675	2700	16,6	
	2	Ø5	26		98	2546		4,0
						Total+10%:	18,3	4,4
						Ø5:	0,0	34,3
						Ø10:	139,3	0,0
						Ø12,5:	52,9	0,0
						Ø16:	6,9	0,0
						Total:	199,1	38,3

Notas

Observações
Todas as medidas devem ser conferidas no local.
É proibida a alteração sem a autorização do autor

Responsável Técnico
Rui Nunes Lopes CREA - CE nº 5202879CE

Responsável Técnico
William Santos Carvalho Silva CREA - CE nº 14.239-D

João Urbano Soares Cruz
Secretário Municipal de Projetos, Infraestrutura e Habitação

OBRA:
REFORMA E AMPLIAÇÃO ESCOLA JOSÉ MANUEL TON DE OLIVEIRA - PLUNDO CP

LOCALIZAÇÃO:
Rua Nova Plundo

ESCALA:
Arbori Sagmon

DATA:
1:50

PROJETO:
PROJETO ESTRUTURAL

Assunto:
DETALHAMENTO VIGAS - NÍVEL 4,20

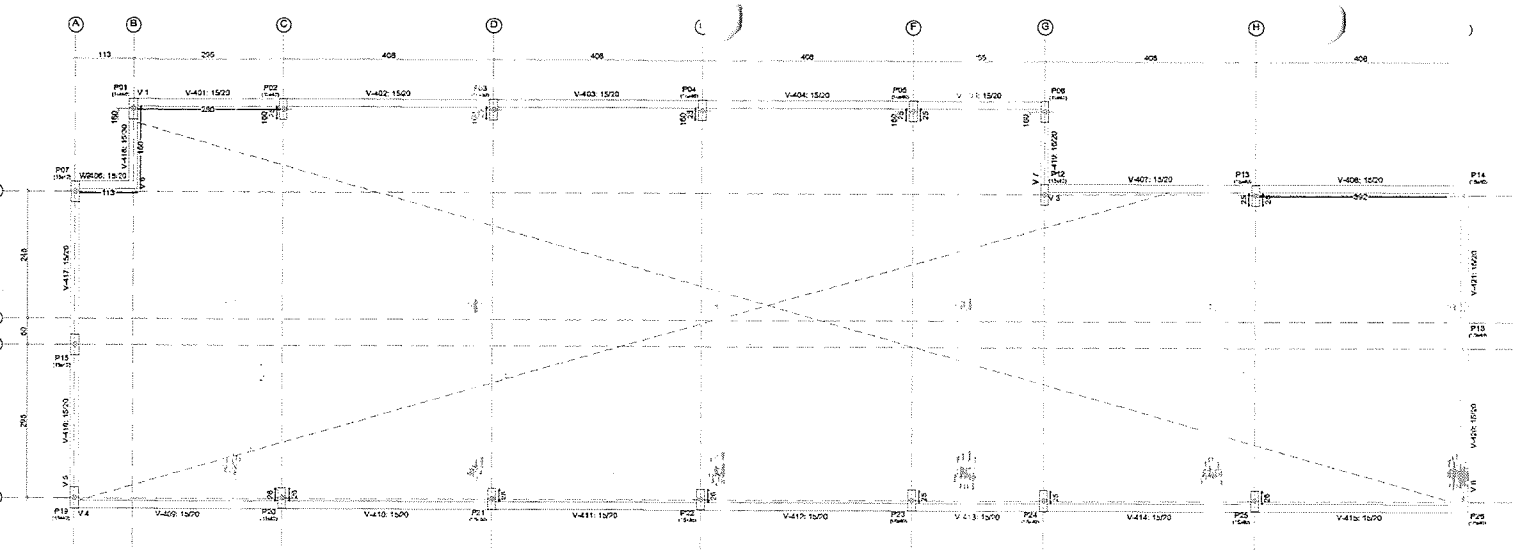
Data:
TOMBO 01/2024

Arquivo:
A4.DWG

PREFEITURA DE LIMOEIRO DO NORTE

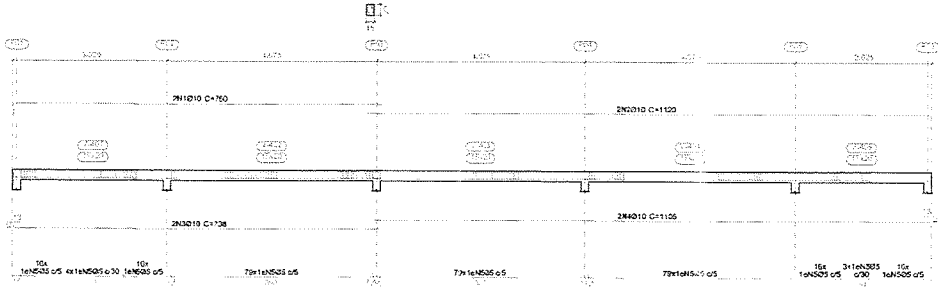
SECRETARIA DE PROJETOS, INFRAESTRUTURA E HABITAÇÃO SEPURB

Prancha
09
11

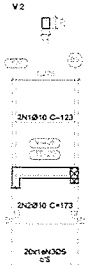


Elemento	Pos.	Diam.	Q.	Esquema (cm)	Co (c	Total (cm)	CA-50 (kg)	CA-60 (kg)
V1	1	Ø10	2			1800	9,2	
	2	Ø10	2		1	2240	3,8	
	3	Ø10	2			1474	9,1	
	4	Ø10	2		1	2210	3,8	
	5	Ø5	306			17884		28,0
						(+10%)	0,3	30,8
V2	1	Ø10	2			240	1,5	
	2	Ø10	2			340	2,1	
	3	Ø5	20			1150		1,8
						(+10%)	4,0	2,0
V3	1	Ø10	2			1750	0,8	
	2	Ø10	2			1750	0,8	
	3	Ø5	158			9150		14,4
						(+10%)	23,8	15,8
V4	1	Ø10	4			3460	21,3	
	2	Ø10	2		1	2225	13,7	
	3	Ø10	4			3400	21,0	
	4	Ø10	2			2150	13,3	
	5	Ø5	509			29522		46,3
						(+10%)	76,2	50,9
V5	1	Ø10	2			1300	8,0	
	2	Ø10	2			1350	8,3	
	3	Ø5	192			5910		9,3
						(+10%)	17,9	10,2
V6	1	Ø10	2			390	2,4	
	2	Ø10	2			450	2,8	
	3	Ø5	9			702		1,1
						(+10%)	5,8	1,2
V7	1	Ø10	2			440	2,7	
	2	Ø10	2			490	3,0	
	3	Ø5	24			1392		2,2
						(+10%)	6,3	2,4
V8	1	Ø10	2			1300	8,0	
	2	Ø10	2			1350	8,3	
	3	Ø5	88			3064		5,3
						(+10%)	17,0	5,8
						Ø5:	0,0	119,1
						Ø10:	202,3	0,0
						Total:	202,3	119,1

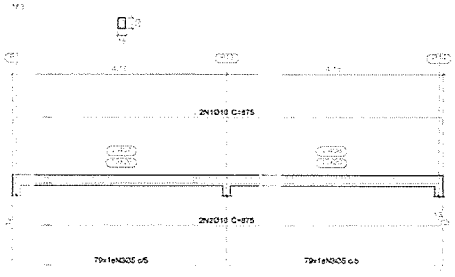
V1



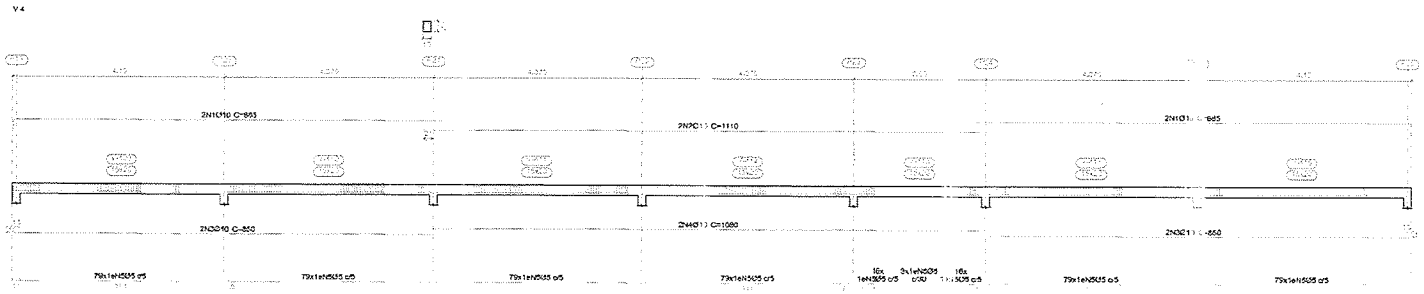
V2



V3



V4



Notas

Cotas: cotas devem ser conferidas no local
É proibida a reprodução sem a autorização do autor

Proprietário Técnico
Ivanildo Lopes CREA - CE nº 3239622

Responsável Técnico
Carlos Cavalcante Silva CREA - CE nº 3239622

Responsável Técnico
Engenheiro Civil
Projetista Estruturas e Fundações

Obra: REF: ELABORAÇÃO EDITAL PCCS - MANILTON DE OLIVEIRA - BL

Local: RUA: RUA 04

Desenho: Kleber Gadelha

Data: 2023

Prefeitura: LIMOEIRO DO NORTE

Secretaria: SEPURB

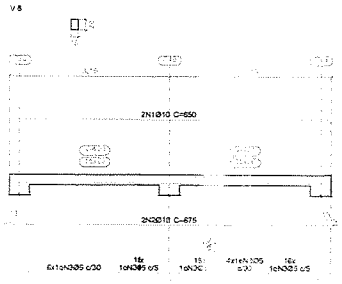
Prancha: ESTRUTURAS

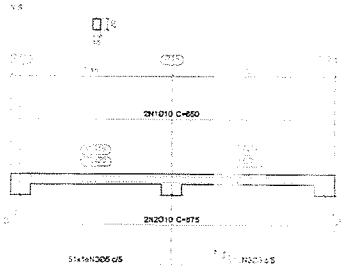
Assunto: ESTRUTURAS

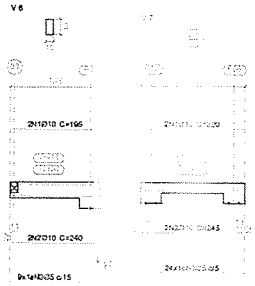
Data: 15/07/2023

Escala: INDICA

Prancha: 10 / 11







Elemento	Pos.	Diam.	Q.	Dob. Reta (cm)	Dob. C (cm)	Comp. Total (m)
Pilares Inferiores	1	Ø12	7	444		[illegible]
	2	Ø12	13	386		[illegible]
	3	Ø12	13	158		[illegible]
	4	Ø12	7	99		[illegible]
	5	Ø12	13	103		[illegible]
	6	Ø12	32	249		[illegible]
	7	Ø12	7	106		[illegible]
	8	Ø12	7	389		[illegible]
	9	Ø12	13	510		[illegible]
	10	Ø12	14	129		[illegible]

Escala 1

Tramo 1	
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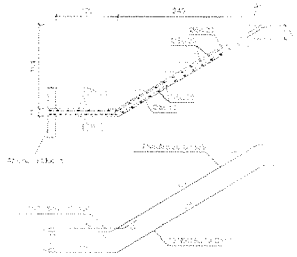
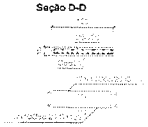
[illegible]	[illegible]

Secção C-C

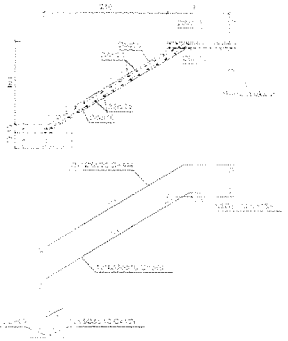


Secção D-D

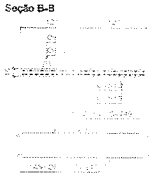


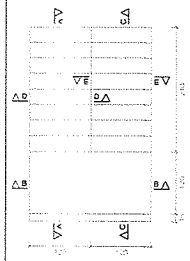
Secção E-E

Secção A-A

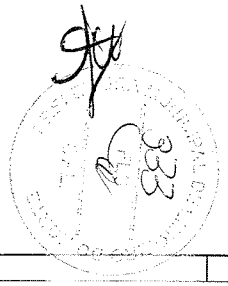


Secção B-B





Escala 1:50



[illegible]

LIMOEIRO DO NORTE | SEPURB