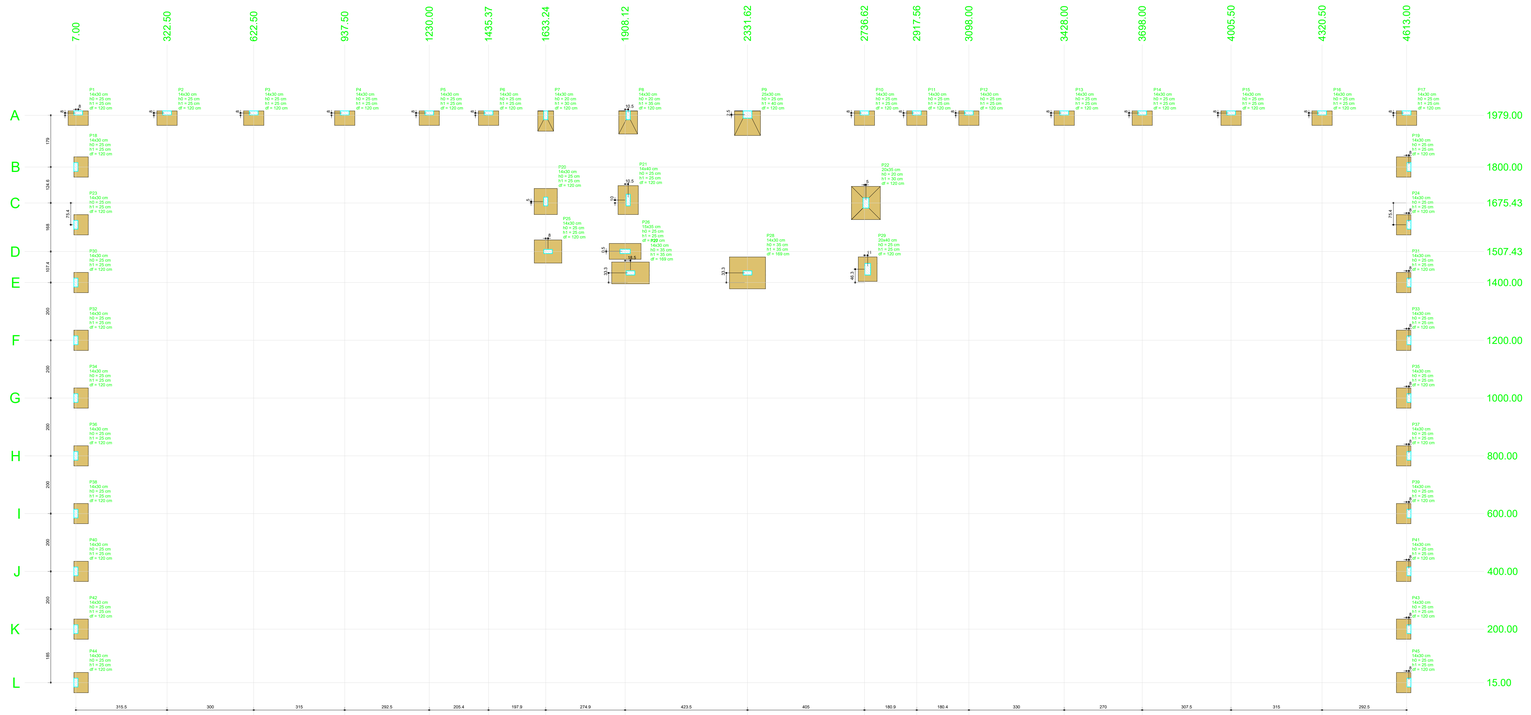
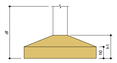


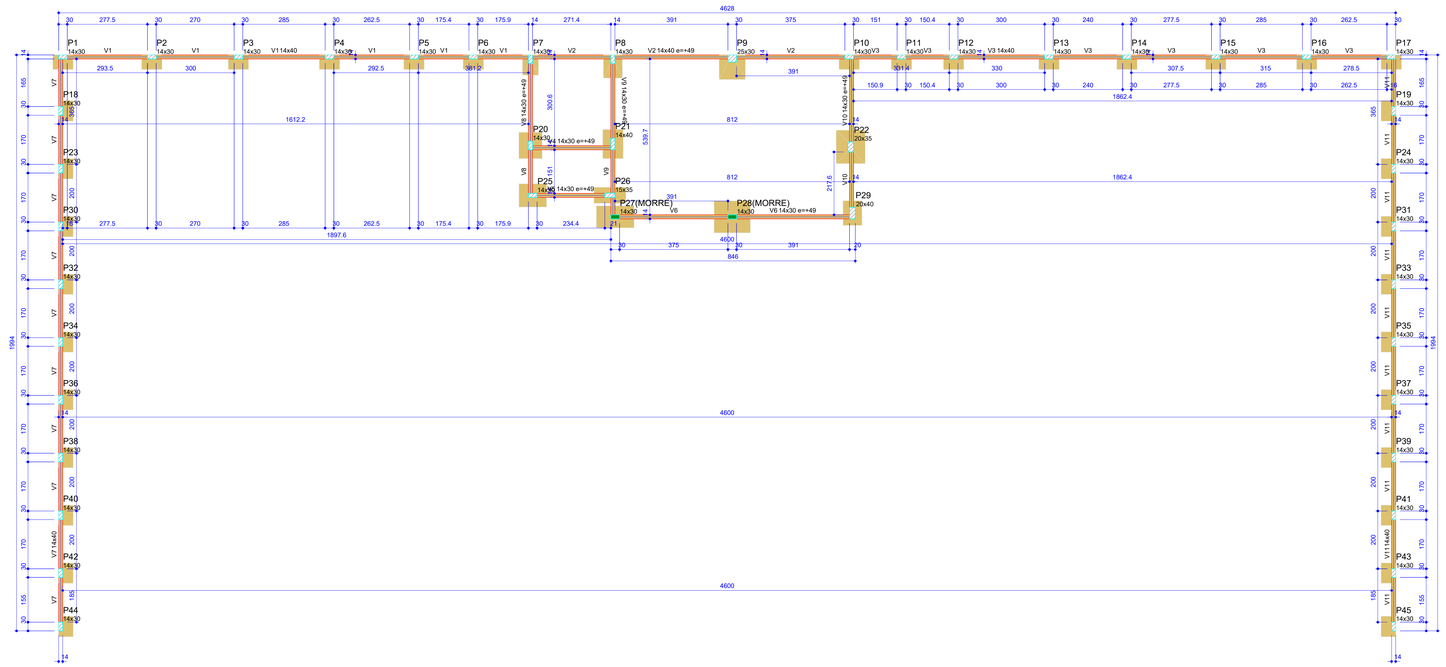
Planta de locação
escala 1:75

Pilar						Posição				
Nome	Seção (cm)	X (cm)	Y (cm)	Carga Máx (kN)	Carga Mín (kN)	Lado 1 (cm)	Lado 2 (cm)	Nó Sup	Nó Inf (cm)	Ø
P1	14x30	13.90	1967.00	29	27	50	70	-Z+	-Z-	120
P2	14x30	322.50	1967.00	57	53	50	70	-Z+	-Z-	120
P3	14x30	622.50	1967.00	53	50	50	70	-Z+	-Z-	120
P4	14x30	937.50	1967.00	51	30	50	70	-Z+	-Z-	120
P5	14x30	1230.00	1967.00	39	21	50	70	-Z+	-Z-	120
P6	14x30	1435.37	1967.00	24	20	50	70	-Z+	-Z-	120
P7	14x30	1612.24	1979.00	48	43	50	70	-Z+	-Z-	120
P8	14x30	1908.12	1979.00	103	97	50	70	-Z+	-Z-	120
P9	25x30	2331.62	1981.00	109	85	50	250	-Z+	-Z-	120
P10	14x30	2736.62	1967.00	48	40	50	70	-Z+	-Z-	120
P11	14x30	2917.56	1967.00	13	10	50	70	-Z+	-Z-	120
P12	14x30	3098.00	1967.00	53	50	50	70	-Z+	-Z-	120
P13	14x30	3428.00	1967.00	53	50	50	70	-Z+	-Z-	120
P14	14x30	3698.00	1967.00	53	50	50	70	-Z+	-Z-	120
P15	14x30	4005.50	1967.00	53	50	50	70	-Z+	-Z-	120
P16	14x30	4320.50	1967.00	53	50	50	70	-Z+	-Z-	120
P17	14x30	4613.00	1967.00	29	27	50	70	-Z+	-Z-	120
P18	14x30	13.90	1612.24	48	43	50	70	-Z+	-Z-	120
P19	14x30	4613.00	1612.24	48	43	50	70	-Z+	-Z-	120
P20	14x30	622.50	1633.24	48	43	50	70	-Z+	-Z-	120
P21	14x40	1908.12	1633.24	48	43	50	70	-Z+	-Z-	120
P22	20x35	2736.62	1633.24	48	43	50	70	-Z+	-Z-	120
P23	14x30	13.90	1400.00	48	43	50	70	-Z+	-Z-	120
P24	14x30	4613.00	1400.00	48	43	50	70	-Z+	-Z-	120
P25	14x30	1612.24	1507.43	48	43	50	70	-Z+	-Z-	120
P26	15x35	1908.12	1507.43	48	43	50	70	-Z+	-Z-	120
P27	14x30	1908.12	1433.50	0	0	50	70	-Z+	-Z-	120
P28	20x40	2737.62	1446.50	87	66	50	200	-Z+	-Z-	120
P29	20x40	2736.62	1400.00	27	23	50	70	-Z+	-Z-	120
P30	14x30	13.90	1200.00	48	43	50	70	-Z+	-Z-	120
P31	14x30	4613.00	1200.00	48	43	50	70	-Z+	-Z-	120
P32	14x30	13.90	1000.00	48	43	50	70	-Z+	-Z-	120
P33	14x30	4613.00	1000.00	48	43	50	70	-Z+	-Z-	120
P34	14x30	13.90	800.00	48	43	50	70	-Z+	-Z-	120
P35	14x30	4613.00	800.00	48	43	50	70	-Z+	-Z-	120
P36	14x30	13.90	600.00	48	43	50	70	-Z+	-Z-	120
P37	14x30	4613.00	600.00	48	43	50	70	-Z+	-Z-	120
P38	14x30	13.90	400.00	48	43	50	70	-Z+	-Z-	120
P39	14x30	4613.00	400.00	48	43	50	70	-Z+	-Z-	120
P40	14x30	13.90	200.00	48	43	50	70	-Z+	-Z-	120
P41	14x30	4613.00	200.00	48	43	50	70	-Z+	-Z-	120
P42	14x30	13.90	15.00	48	43	50	70	-Z+	-Z-	120
P43	14x30	4613.00	15.00	48	43	50	70	-Z+	-Z-	120
P44	14x30	13.90	0	0	0	50	70	-Z+	-Z-	120
P45	14x30	4613.00	15.00	48	43	50	70	-Z+	-Z-	120



Locação no eixo X	
Coordenadas (cm)	Nome
7.00	P18, P23, P30, P32, P34, P36, P38, P40, P42, P44
13.90	P1
322.50	P2
622.50	P3
937.50	P4
1230.00	P5
1435.37	P6
1612.24	P7, P20
1641.24	P25
1908.12	P26
1918.62	P8
1948.62	P27
2331.62	P28
2736.62	P9
2747.63	P29
2917.56	P11
3098.00	P12
3428.00	P13
3698.00	P14
4005.50	P15
4320.50	P16
4613.00	P17
4622.00	P19, P24, P31, P33, P35, P37, P39, P41, P43, P45

Locação no eixo Y	
Coordenadas (cm)	Nome
1967.00	P1, P2, P3, P4, P5, P6, P10, P11, P12, P13, P14, P15, P16, P17
1981.50	P9
1979.00	P7, P8
1800.00	P18, P19
1675.43	P21
1633.24	P20
1507.43	P22
1446.50	P27, P28
1433.50	P26
1400.00	P23, P24
1200.00	P30, P31
1000.00	P32, P33
800.00	P34, P35
600.00	P36, P37
400.00	P38, P39
200.00	P40, P41
15.00	P42, P43
	P44, P45



Forma do pavimento FundaçãoTérreo (Nível 0)
escala 1:75

Vigas			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
V1	14x40	0	0
V2	14x40	49	49
V3	14x40	0	0
V4	14x30	49	49
V5	14x30	49	49
V6	14x30	49	49
V7	14x40	0	0
V8	14x30	49	49
V9	14x30	49	49
V10	14x30	49	49
V11	14x40	0	0

Características dos materiais	
fck (MPa)	Ecs (MPa)
35	29403

Pilares			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
P1	14x30	0	0
P2	14x30	0	0
P3	14x30	0	0
P4	14x30	0	0
P5	14x30	0	0
P6	14x30	0	0
P7	14x30	0	0
P8	14x30	0	0
P9	25x30	0	0
P10	14x30	0	0
P11	14x30	0	0
P12	14x30	0	0
P13	14x30	0	0
P14	14x30	0	0
P15	14x30	0	0
P16	14x30	0	0
P17	14x30	0	0
P18	14x30	0	0
P19	14x30	0	0
P20	14x30	0	0
P21	14x40	0	0
P22	20x35	0	0
P23	14x30	0	0
P24	14x30	0	0
P25	14x30	0	0
P26	15x35	0	0
P27	14x30	49	49
P28	14x30	49	49
P29	20x40	0	0
P30	14x30	0	0
P31	14x30	0	0
P32	14x30	0	0
P33	14x30	0	0
P34	14x30	0	0
P35	14x30	0	0
P36	14x30	0	0
P37	14x30	0	0
P38	14x30	0	0
P39	14x30	0	0
P40	14x30	0	0
P41	14x30	0	0
P42	14x30	0	0
P43	14x30	0	0
P44	14x30	0	0
P45	14x30	0	0

Legenda dos pilares
Pilar que morre
Pilar que passa
Pilar com mudança de seção

Legenda das vigas e paredes
Viga

CHARLES RAMALHO
CREA: 1820696464
CONTATO: (83) 98114-7014
wendencharles@gmail.com

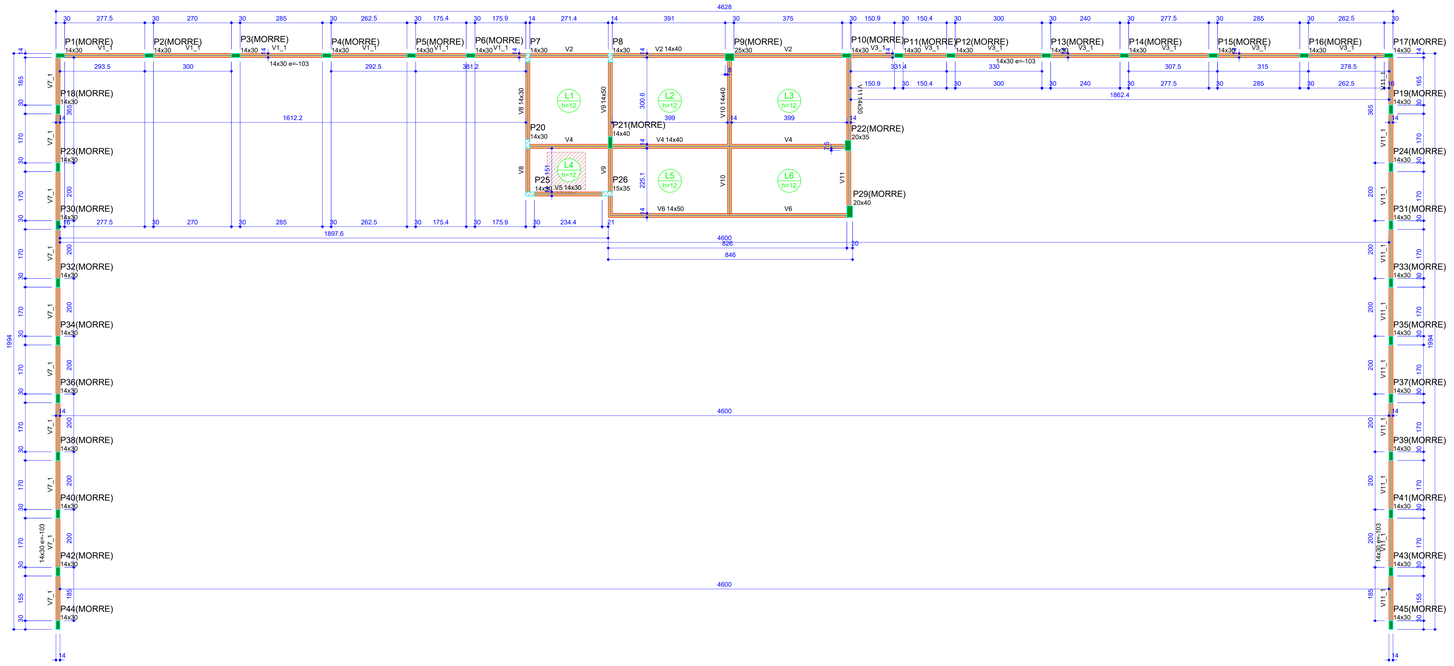
AREA DO TERRENO: 922,82 m²
AREA DA CONST.: 62,78 m²

PROJETO: PROJETO ESTRUTURAL
LOCAL: RUA JOSE SALVIANO ALVES
PROPRIETÁRIO: PREFEITURA MUNICIPAL DE MALTA - PB

RESPONSÁVEL: Charles Ramalho
Documento assinado digitalmente
DESENHISTA: Charles Ramalho
WENDEN CHARLES RAMALHO SOARES
Data: 16/09/2024 11:33:09-0300
Verifique em https://validar.iti.gov.br

FASE: PROJETO
DATA: 01/09/2026

DESENHO(S): PLANTA DE LOCAÇÃO E FORMA TÉRREO
ESCALAS: 1/75
FOLHA: P01



Forma do pavimento Pavimento 1 (Nível 403)
escala 1:75

Vigas			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
V2	14x40	0	403
V4	14x40	0	403
V5	14x30	0	403
V6	14x50	0	403
V8	14x30	0	403
V9	14x50	0	403
V10	14x40	0	403
V11	14x30	0	403
V1_1	14x30	-103	300
V3_1	14x30	-103	300
V7_1	14x30	-103	300
V11_1	14x30	-103	300

Lajes						
Nome	Tipo	Dados			Sobrecarga (kN/m²)	
		Altura (cm)	Elevação (cm)	Nível (cm)	Adicional	Acidental
L1	Maciça	12	0	403	1.37	3.00
L2	Maciça	12	0	403	1.37	3.00
L3	Maciça	12	0	403	1.37	3.00
L4	Maciça	12	0	403	1.37	3.00
L5	Maciça	12	0	403	1.37	3.00
L6	Maciça	12	0	403	1.37	3.00

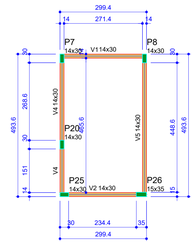
Área de lajes			
Tipo	Altura (cm)	Bloco de Enchimento	Área (m²)
Maciça	12	-	54.17

Características dos materiais	
fck (MPa)	Ecs (MPa)
35	29403

Pilares			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
P1	14x30	-103	300
P2	14x30	-103	300
P3	14x30	-103	300
P4	14x30	-103	300
P5	14x30	-103	300
P6	14x30	-103	300
P7	14x30	-49	354
P8	14x30	-49	354
P9	25x30	0	403
P10	14x30	0	403
P11	14x30	-103	300
P12	14x30	-103	300
P13	14x30	-103	300
P14	14x30	-103	300
P15	14x30	-103	300
P16	14x30	-103	300
P17	14x30	-103	300
P18	14x30	-103	300
P19	14x30	-103	300
P20	14x30	-49	354
P21	14x40	0	403
P22	20x35	0	403
P23	14x30	-103	300
P24	14x30	-103	300
P25	14x30	-49	354
P26	15x35	-49	354
P29	20x40	0	403
P30	14x30	-103	300
P31	14x30	-103	300
P32	14x30	-103	300
P33	14x30	-103	300
P34	14x30	-103	300
P35	14x30	-103	300
P36	14x30	-103	300
P37	14x30	-103	300
P38	14x30	-103	300
P39	14x30	-103	300
P40	14x30	-103	300
P41	14x30	-103	300
P42	14x30	-103	300
P43	14x30	-103	300
P44	14x30	-103	300
P45	14x30	-103	300

Legenda dos pilares
Pilar que morre
Pilar que passa

Legenda das vigas e paredes
Viga



Forma do pavimento Platibanda (Nível 517)
escala 1:75

Vigas			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
V1	14x30	0	517
V2	14x30	0	517
V4	14x30	0	517
V5	14x30	0	517

Características dos materiais	
fck (MPa)	Ecs (MPa)
35	29403

Pilares			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
P7	14x30	0	517
P8	14x30	0	517
P20	14x30	0	517
P25	14x30	0	517
P26	15x35	0	517

Legenda dos pilares
Pilar que morre

Legenda das vigas e paredes
Viga

MALTA
GOVERNO MUNICIPAL
Nossa marca é o trabalho

PROJETO: PROJETO ESTRUTURAL
LOCAL: RUA JOSE SALVIANO ALVES
PROPRIETÁRIO: PREFEITURA MUNICIPAL DE MALTA - PB

RESPONSÁVEL: Charles Ramalho
DESENHISTA: Charles Ramalho
FASE: PROJETO
DATA: 01/09/2026

Documento assinado digitalmente
govbr
WENDEN CHARLES RAMALHO SOARES
Data: 14/09/2026 11:55:09-0300
Verifique em https://validar.iti.gov.br

CHARLES RAMALHO
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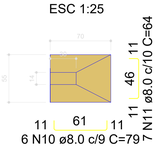
wendencharles@gmail.com

ÁREA DO TERRENO: 922,82 m²
ÁREA DA CONST.: 62,78 m²

DESENHO(S): FORMAS PAV. 1 E PLATIBANDA
ESCALAS: 1/75
FOLHA: P02

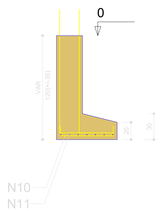
S7

PLANTA
ESC 1:25



Solo compactado sobre a sapata
peso específico > 16.00 kN/m³

CORTE
ESC 1:25



P7

FUNDAÇÃOTÉRREO - L1

SEÇÃO
ESC 1:20

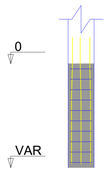


VISTA B

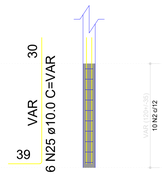


10 N2 ø5.0 C=75
10 N1 ø5.0 C=23

VISTA H
ESC 1:25

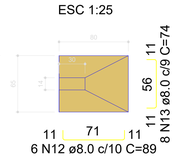


VISTA B
ESC 1:25



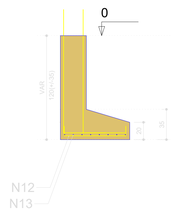
S8

PLANTA
ESC 1:25



Solo compactado sobre a sapata
peso específico > 16.00 kN/m³

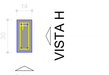
CORTE
ESC 1:25



P8

FUNDAÇÃOTÉRREO - L1

SEÇÃO
ESC 1:20

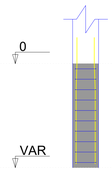


VISTA B

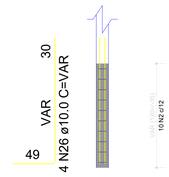


10 N2 ø5.0 C=75

VISTA H
ESC 1:25

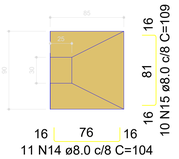


VISTA B
ESC 1:25



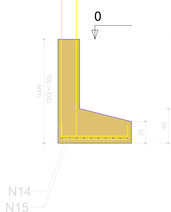
S9

PLANTA
ESC 1:25



Solo compactado sobre a sapata
peso específico > 16.00 kN/m³

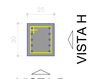
CORTE
ESC 1:25



P9

FUNDAÇÃOTÉRREO - L1

SEÇÃO
ESC 1:20

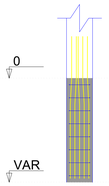


VISTA B

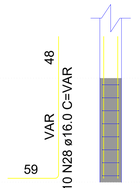


8 N9 ø6.0 C=98

VISTA H
ESC 1:25

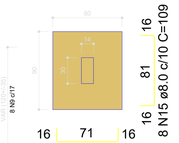


VISTA B
ESC 1:25



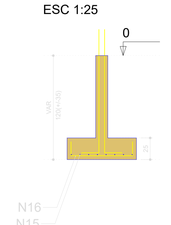
S20

PLANTA
ESC 1:25



Solo compactado sobre a sapata
peso específico > 16.00 kN/m³

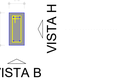
CORTE
ESC 1:25



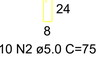
P20

FUNDAÇÃOTÉRREO - L1

SEÇÃO
ESC 1:20

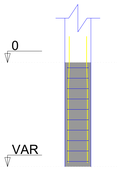


VISTA B

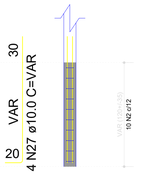


10 N2 ø5.0 C=75

VISTA H
ESC 1:25

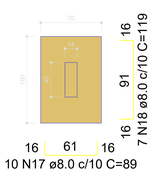


VISTA B
ESC 1:25



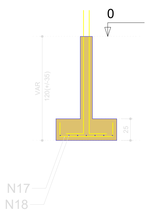
S21

PLANTA
ESC 1:25



Solo compactado sobre a sapata
peso específico > 16.00 kN/m³

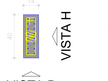
CORTE
ESC 1:25



P21

FUNDAÇÃOTÉRREO - L1

SEÇÃO
ESC 1:20

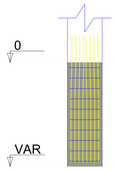


VISTA B

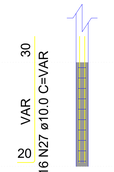


10 N3 ø5.0 C=95
2x10 N1 ø5.0 C=23

VISTA H
ESC 1:25

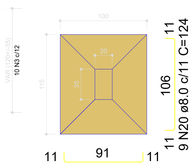


VISTA B
ESC 1:25



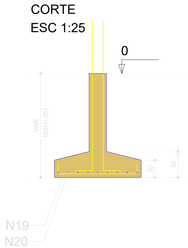
S22

PLANTA
ESC 1:25



Solo compactado sobre a sapata
peso específico > 16.00 kN/m³

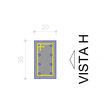
CORTE
ESC 1:25



P22

FUNDAÇÃOTÉRREO - L1

SEÇÃO
ESC 1:20

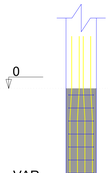


VISTA B

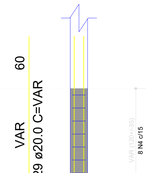


8 N4 ø5.0 C=97

VISTA H
ESC 1:25

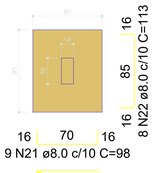


VISTA B
ESC 1:25



S25

PLANTA
ESC 1:25

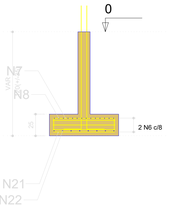


2 N6 ø5.0 C=325

Solo compactado sobre a sapata
peso específico > 16.00 kN/m³

CORTE
ESC 1:25

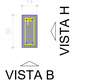
17 N7 ø5.0 c/5 C=79 14 N8 ø5.0 c/5 C=94
6 70 6 6 85 6



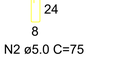
P25

FUNDAÇÃOTÉRREO - L1

SEÇÃO
ESC 1:20



VISTA B



10 N2 ø5.0 C=75

VISTA H
ESC 1:25

VISTA B
ESC 1:25

S26

PLANTA
ESC 1:25

Solo compactado sobre a sapata
peso específico > 16.00 kN/m³

CORTE
ESC 1:25

P26

FUNDAÇÃOTÉRREO - L1

SEÇÃO
ESC 1:20

VISTA B

10 N5 ø5.0 C=87

VISTA H
ESC 1:25

VISTA B
ESC 1:25

RELAÇÃO DO AÇO

P7	P8	P9
P20	P21	P22
P25	P26	S7
S8	S9	S20
S21	S22	S25
S26		

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	30	23	690
	2	5.0	40	75	3000
	3	5.0	10	95	950
	4	5.0	8	97	776
	5	5.0	10	87	870
	6	5.0	2	325	650
	7	5.0	17	79	1343
	8	5.0	14	94	1316
	9	6.0	8	98	784
CA50	10	8.0	6	79	474
	11	8.0	7	64	448
	12	8.0	6	89	534
	13	8.0	8	74	592
	14	8.0	11	104	1144
	15	8.0	18	109	1962
	16	8.0	9	99	891
	17	8.0	17	89	890
	18	8.0	7	119	833
	19	8.0	10	109	1090
	20	8.0	9	124	1116
	21	8.0	9	98	882
	22	8.0	8	113	904
	23	8.0	11	74	814
	24	8.0	6	129	774
	25	10.0	6	VAR	VAR
	26	10.0	4	VAR	VAR
	27	10.0	28	VAR	VAR
	28	16.0	10	VAR	VAR
	29	20.0	8	VAR	VAR

RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	8.0	133.5	57.9
	10.0	64.6	43.8
	16.0	21.9	38
	20.0	15.2	41.2
CA60	5.0	96	16.3
	6.0	7.8	1.9

PESO TOTAL (kg)	
CA50	181
CA60	18.2

Volume de concreto (C-35) = 1.84 m³
Área de forma = 13.56 m²

MALTA
GOVERNO MUNICIPAL
Nosso norte é o trabalho

PROJETO: PROJETO ESTRUTURAL
LOCAL: RUA JOSE SALVIANO ALVES
PROPRIETÁRIO: PREFEITURA MUNICIPAL DE MALTA - PB

RESPONSÁVEL: Charles Ramalho
Documento assinado digitalmente
WENDEN CHARLES RAMALHO SOARES
Data: 16/09/2026 11:33:09-0300
Verifique em https://validar.iti.gov.br
DESENHISTA: Charles Ramalho
FASE: PROJETO
DATA: 01/09/2026

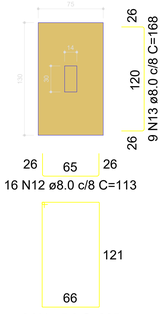
CHARLES RAMALHO
CREA: 182696646
CONTATO: (83) 98114-7014
wendencharles@gmail.com

ÁREA DO TERRENO: 922,82 m²
ÁREA DA CONST.: 62,78 m²

DESENHO(S): SAPATAS 01
ESCALAS: COMO NO PROJETO
FOLHA: P03

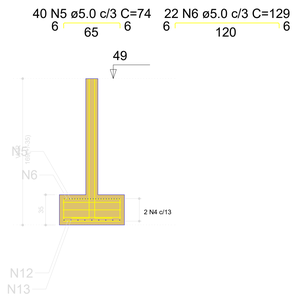
S27

PLANTA
ESC 1:25



Solo compactado sobre a sapata
peso específico > 16.00 kN/m³

CORTE
ESC 1:25



P27

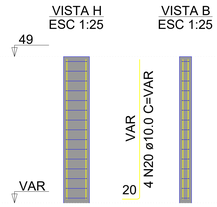
FUNDAÇÃOTÉRREO - L1

SEÇÃO
ESC 1:20



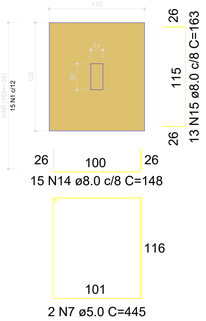
VISTA H
ESC 1:25

VISTA B
ESC 1:25



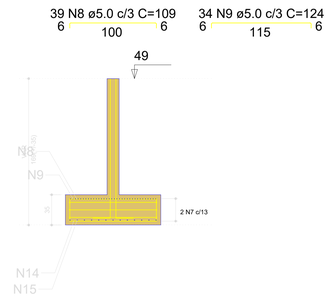
S28

PLANTA
ESC 1:25



Solo compactado sobre a sapata
peso específico > 16.00 kN/m³

CORTE
ESC 1:25



P28

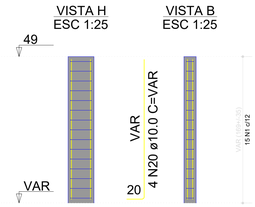
FUNDAÇÃOTÉRREO - L1

SEÇÃO
ESC 1:20



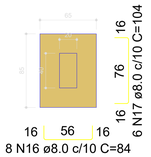
VISTA H
ESC 1:25

VISTA B
ESC 1:25



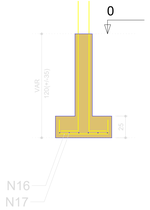
S29

PLANTA
ESC 1:25



Solo compactado sobre a sapata
peso específico > 16.00 kN/m³

CORTE
ESC 1:25



P29

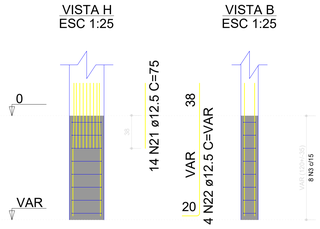
FUNDAÇÃOTÉRREO - L1

SEÇÃO
ESC 1:20



VISTA H
ESC 1:25

VISTA B
ESC 1:25



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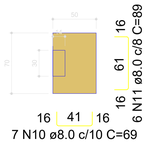
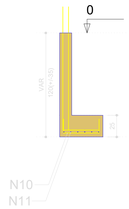
PLANTA
ESC 1:25



Solo compactado sobre a sapata
peso específico > 16.00 kN/m³

CORTE
ESC 1:25



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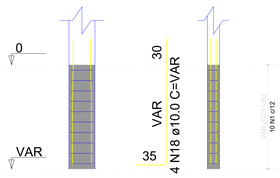
FUNDAÇÃOTÉRREO - L1

SEÇÃO
ESC 1:20



VISTA H
ESC 1:25

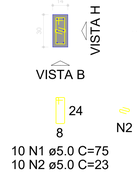
VISTA B
ESC 1:25



P10

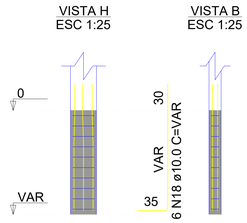
FUNDAÇÃOTÉRREO - L1

SEÇÃO
ESC 1:20



VISTA H
ESC 1:25

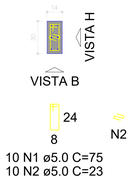
VISTA B
ESC 1:25



P2=P3=P4=P5=P12=P13=P14= =P15=P16

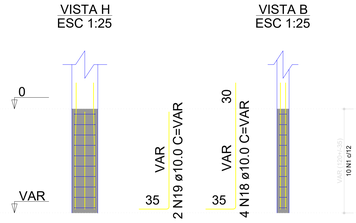
FUNDAÇÃOTÉRREO - L1

SEÇÃO
ESC 1:20



VISTA H
ESC 1:25

VISTA B
ESC 1:25



RELAÇÃO DO AÇO

24xP1	9xP2	P10
P27	P28	P29
34xS1	S27	S28
S29		

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	370	75	27750
	2	5.0	100	23	2300
	3	5.0	8	107	856
	4	5.0	2	385	770
	5	5.0	40	74	2960
	6	5.0	22	129	2838
	7	5.0	2	445	890
	8	5.0	39	109	4251
	9	5.0	34	124	4216
CA50	10	8.0	238	69	16422
	11	8.0	204	89	18156
	12	8.0	16	113	1808
	13	8.0	9	168	1512
	14	8.0	15	148	2220
	15	8.0	13	163	2119
	16	8.0	8	84	672
	17	8.0	6	104	624
	18	10.0	138	VAR	VAR
	19	10.0	18	VAR	VAR
	20	10.0	8	VAR	VAR
	21	12.5	14	75	1050
	22	12.5	4	VAR	VAR

RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	8.0	435.3	189
	10.0	287.4	194.9
	12.5	17.3	18.4
CA60	5.0	468.3	79.4

PESO TOTAL (kg)	
CA50	402.3
CA60	79.4

Volume de concreto (C-35) = 5.48 m³
Área de forma = 56.15 m²

MALTA
GOVERNO MUNICIPAL
Nunca estive só à Trabalho

PROJETO: PROJETO ESTRUTURAL
LOCAL: RUA JOSE SALVIANO ALVES
PROPRIETÁRIO: PREFEITURA MUNICIPAL DE MALTA - PB

RESPONSÁVEL: Charles Ramalho
DESENHISTA: Charles Ramalho
FASE: PROJETO
DATA: 01/09/2026

Documento assinado digitalmente
WENDEN CHARLES RAMALHO SOARES
Data: 14/09/2026 11:55:09-0300
Verifique em https://validar.iti.gov.br

CHARLES RAMALHO
CREA: 1820696464
CONTATO: (83) 98114-7014
wendencharles@gmail.com

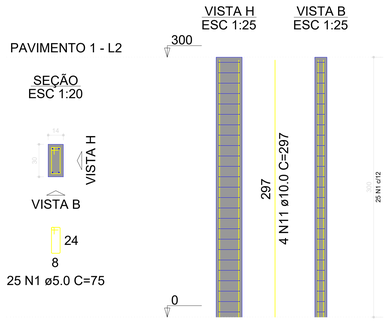
AREA DO TERRENO: 922.82 m²
AREA DA CONST.: 62.78 m²

DESENHO(S)
SAPATAS 02

ESCALAS
COMO NO PROJETO

FOLHA
P04

P1=P2=P3=P4=P5=P6= =P11=P12=P13=P14=P15= =P16=P17=P18=P19=P23= =P24=P30=P31=P32=P33= =P34=P35=P36=P37=P38= =P39=P40=P41=P42=P43= =P44=P45



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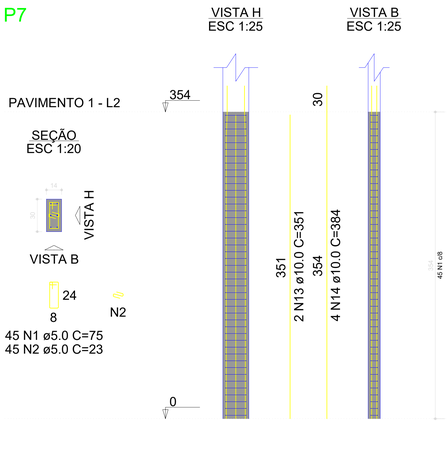

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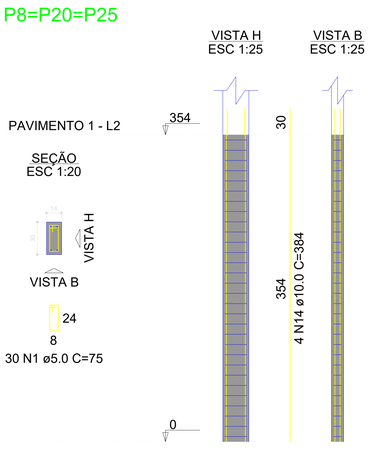
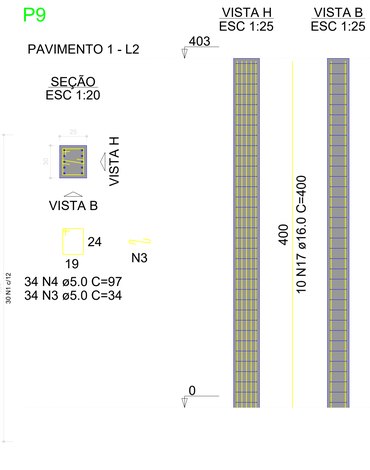
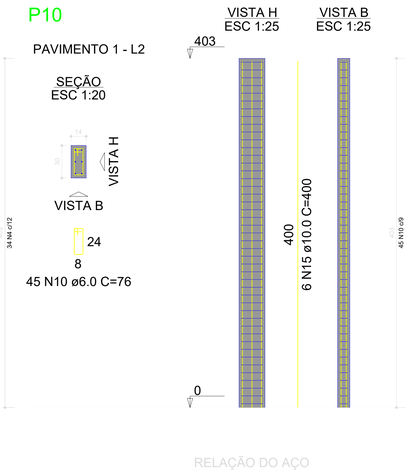


P9



P10



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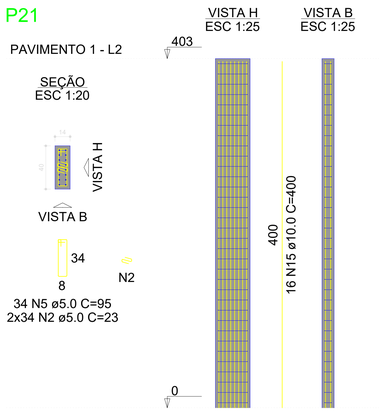

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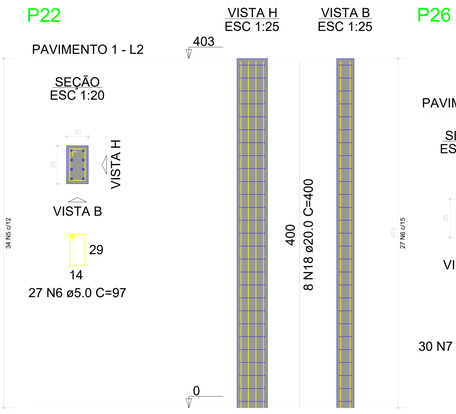

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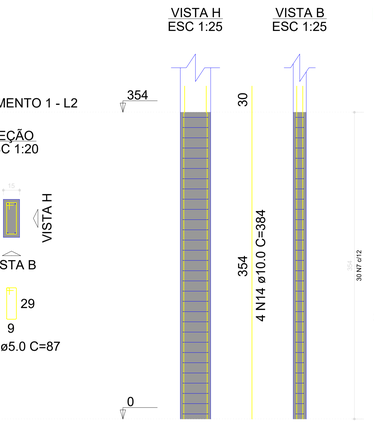

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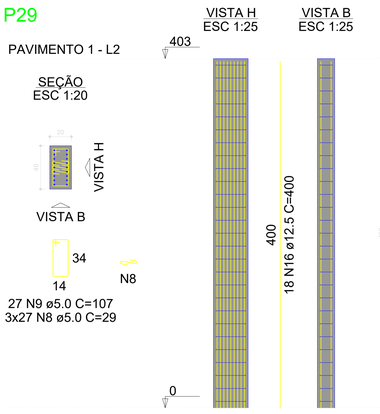


RELAÇÃO DO AÇO

33xP1-L2
3xP8-L2
P21-L2
P26-L2
4xP7-L3
P9-L2
P22-L2
P29-L2
P7-L2
P10-L2
P26-L3

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	1016	75	76200
	2	5.0	113	23	2599
	3	5.0	34	34	1156
	4	5.0	34	97	3298
	5	5.0	34	95	3230
	6	5.0	27	97	2619
	7	5.0	44	87	3828
	8	5.0	81	29	2349
	9	5.0	27	107	2889
	10	6.0	45	76	3420
CA50	11	10.0	132	297	39204
	12	10.0	20	160	3200
	13	10.0	2	351	702
	14	10.0	20	384	7680
	15	10.0	22	400	8800
	16	12.5	18	400	7200
	17	16.0	10	400	4000
	18	20.0	8	400	3200

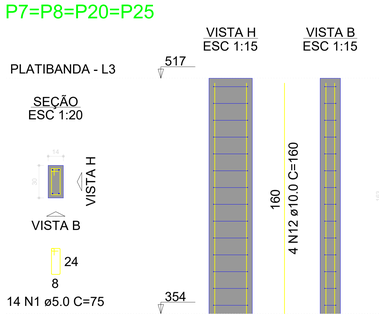
RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	10.0	595.9	404.1
	12.5	72	76.3
	16.0	40	69.4
	20.0	32	86.8
CA60	5.0	981.7	166.4
	6.0	34.2	8.3

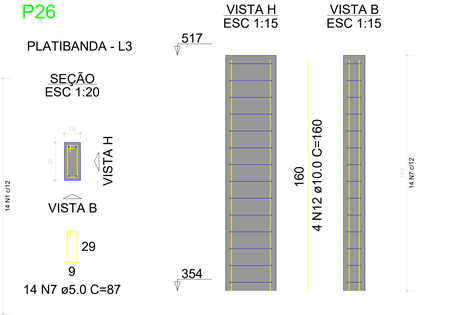
PESO TOTAL (kg)	
CA50	636.7
CA60	174.8

Volume de concreto (C-35) = 6.60 m³
Área de forma = 132.09 m²

P7=P8=P20=P25



P26



MALTA
GESTÃO PÚBLICA
Novo avanço é o trabalho

PROJETO: PROJETO ESTRUTURAL
LOCAL: RUA JOSE SALVIANO ALVES
PROPRIETÁRIO: PREFEITURA MUNICIPAL DE MALTA - PB

RESPONSÁVEL: Charles Ramalho
DESENHISTA: Charles Ramalho
Documento assinado digitalmente
govbr
WENDEN CHARLES RAMALHO SOARES
Data: 18/01/2026 11:33:09-0300
Verifique em https://validar.iti.gov.br
FASE: PROJETO
DATA: 01/09/2026

CHARLES RAMALHO
CREA: 182069664I4
CONTATO: (83) 98114-7014
wendencharles@gmail.com

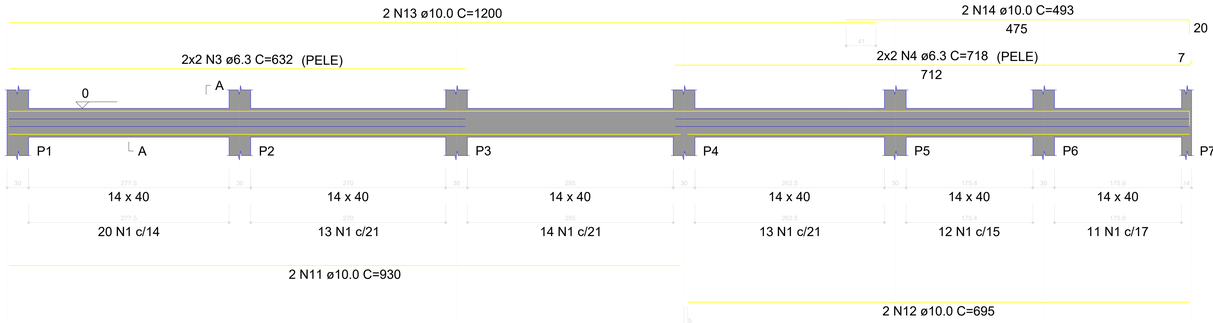
ÁREA DO TERRENO: 922,82 m²
ÁREA DA CONST.: 62,78 m²

DESENHO(S): PILARES

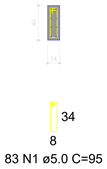
ESCALA: COMO NO PROJETO

FOLHA: P05

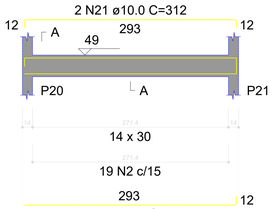
V1
ESC 1:30



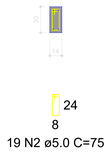
SEÇÃO A-A
ESC 1:25



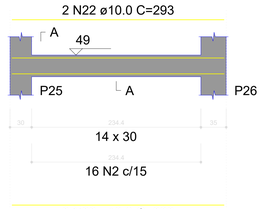
V4
ESC 1:30



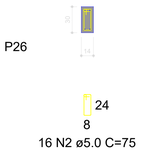
SEÇÃO A-A
ESC 1:25



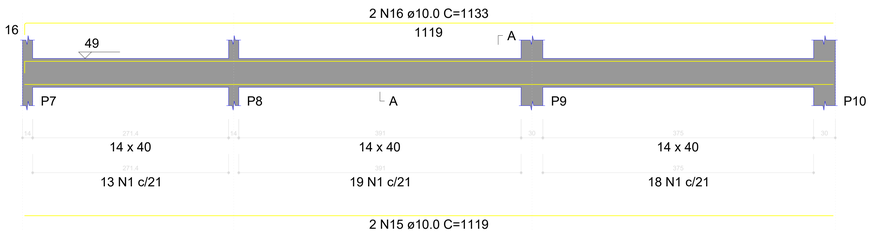
V5
ESC 1:30



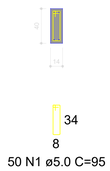
SEÇÃO A-A
ESC 1:25



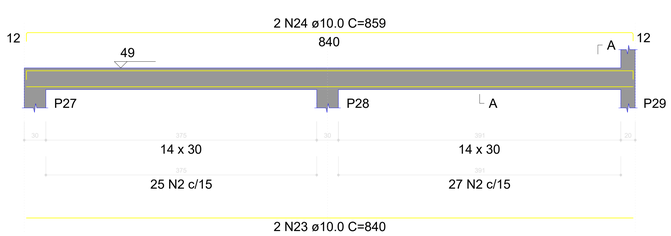
V2
ESC 1:30



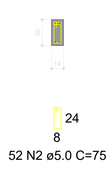
SEÇÃO A-A
ESC 1:25



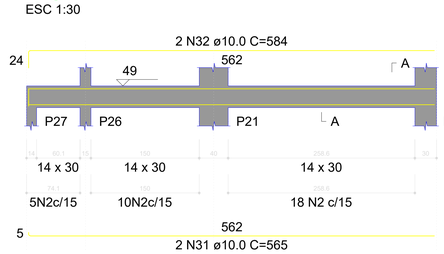
V6
ESC 1:30



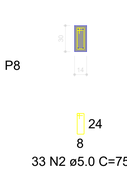
SEÇÃO A-A
ESC 1:25



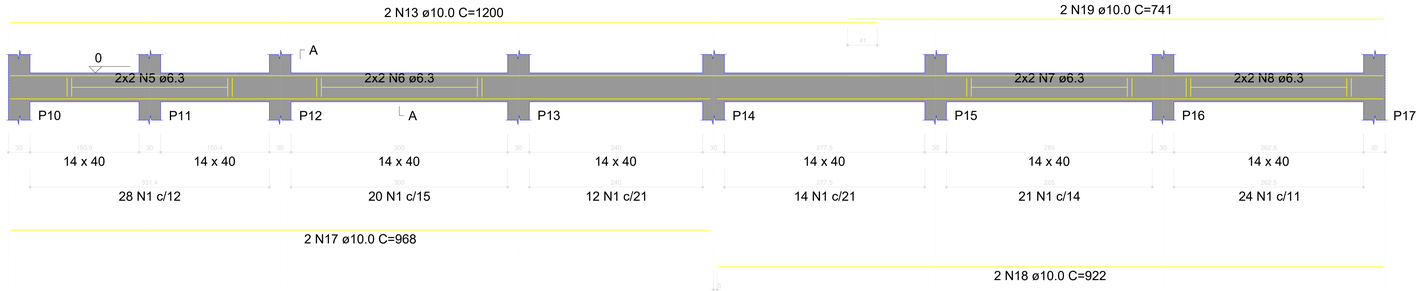
V9
ESC 1:30



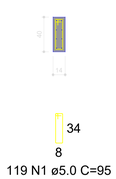
SEÇÃO A-A
ESC 1:25



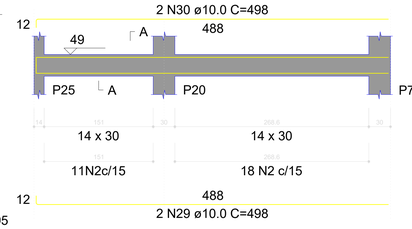
V3
ESC 1:30



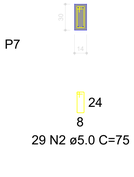
SEÇÃO A-A
ESC 1:25



V8
ESC 1:30



SEÇÃO A-A
ESC 1:25

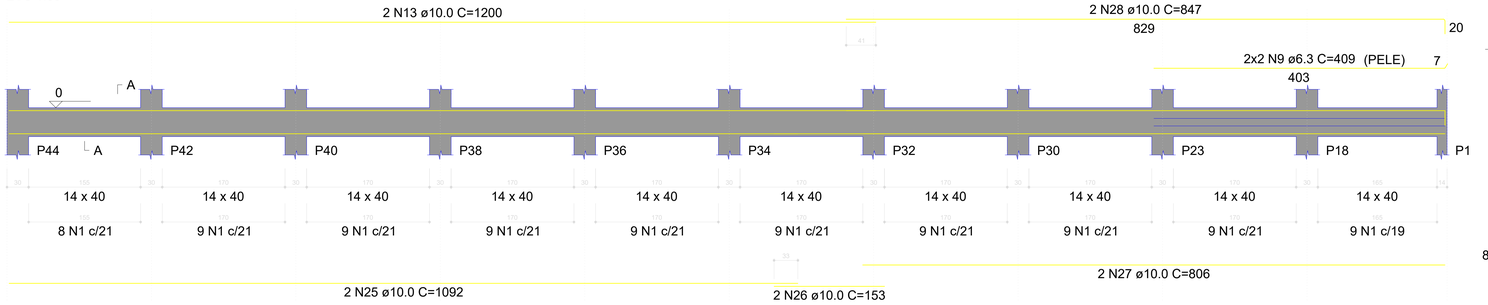


RELAÇÃO DO AÇO

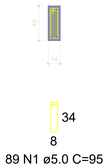
V1	V2	V3
V4	V5	V6
V7	V8	V9
V10	V11	

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	432	95	41040
	2	5.0	182	75	13650
CA50	3	6.3	4	632	2528
	4	6.3	4	718	2872
	5	6.3	4	corr	1540
	6	6.3	4	corr	1416
	7	6.3	4	corr	1356
	8	6.3	4	corr	1268
	9	6.3	4	409	1636
	10	6.3	4	609	2436
	11	10.0	2	930	1860
	12	10.0	2	695	1390
	13	10.0	8	1200	9600
	14	10.0	2	493	986
	15	10.0	2	1119	2238
	16	10.0	2	1133	2266
	17	10.0	2	968	1936
	18	10.0	2	922	1844
	19	10.0	2	741	1482
	20	10.0	2	303	606
	21	10.0	2	312	624
	22	10.0	4	293	1172
	23	10.0	2	840	1680
	24	10.0	2	859	1718
	25	10.0	2	1092	2184
	26	10.0	2	153	306
	27	10.0	2	806	1612
	28	10.0	2	847	1694
	29	10.0	2	498	996
	30	10.0	2	498	996
	31	10.0	2	565	1130
	32	10.0	2	584	1168
	33	10.0	2	562	1124
	34	10.0	2	572	1144
	35	10.0	2	1192	2384
	36	10.0	2	786	1572
	37	10.0	2	848	1696

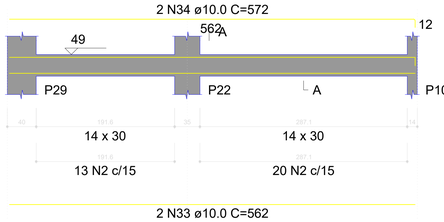
V7
ESC 1:30



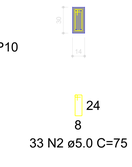
SEÇÃO A-A
ESC 1:25



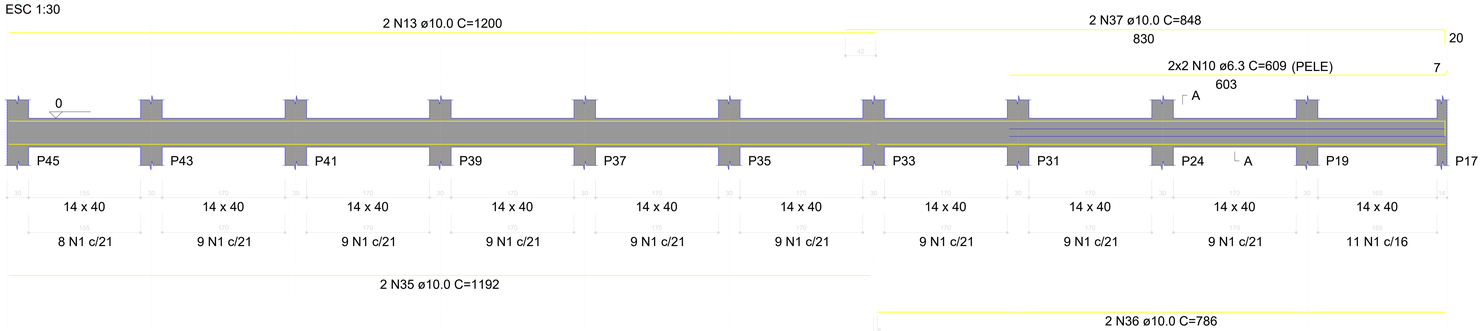
V10
ESC 1:30



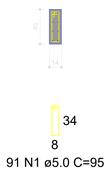
SEÇÃO A-A
ESC 1:25



V11
ESC 1:30



SEÇÃO A-A
ESC 1:25



OBS:VIGAS COM NIVEIS DIFERENTES

RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	6.3	150.5	40.5
	10.0	474.1	321.5
CA60	5.0	546.9	92.7

PESO TOTAL (kg)	
CA50	362
CA60	92.7

Volume de concreto (C-35) = 5.31 m³
Área de forma = 90.12 m²

MALTA
GOVERNO MUNICIPAL
"Deus escreve certo" Fr. Hebdoffe

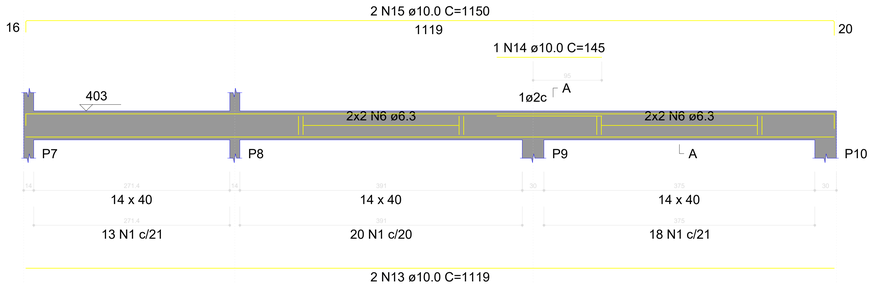
PROJETO: PROJETO ESTRUTURAL
LOCAL: RUA JOSE SALVIANO ALVES
PROPRIETÁRIO: PREFEITURA MUNICIPAL DE MALTA - PB

RESPONSÁVEL	Charles Ramalho
DESENHISTA	Charles Ramalho
FASE	PROJETO
DATA	01/09/2026

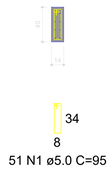
Documento assinado digitalmente
govbr
WENDEN CHARLES RAMALHO SOARES
Data: 18/09/2026 11:30:57-0300
Verifique em https://validar.iti.gov.br

CHARLES RAMALHO CREA: 1820996464 CONTATO: (83) 98114-7014 wendencharles@gmail.com	DESENHO(S) VIGAS BALDRAME	ESCALAS COMO NO PROJETO	FOLHA P06
AREA DO TERRENO: 922.82 m² AREA DA CONST.: 62.78 m²			

V2
ESC 1:30



SEÇÃO A-A
ESC 1:25

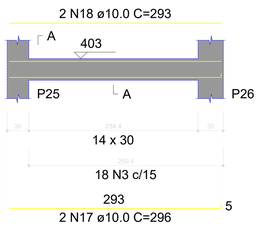


V4
ESC 1:30

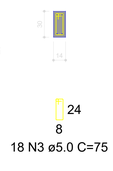


SEÇÃO A-A
ESC 1:25

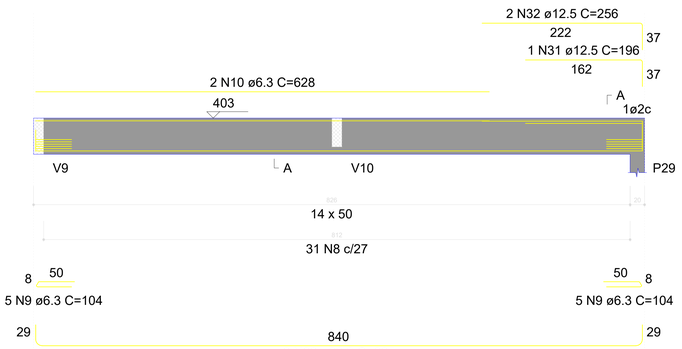
V5
ESC 1:30



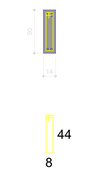
SEÇÃO A-A
ESC 1:25



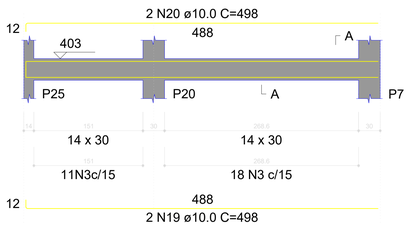
V6
ESC 1:30



SEÇÃO A-A
ESC 1:25



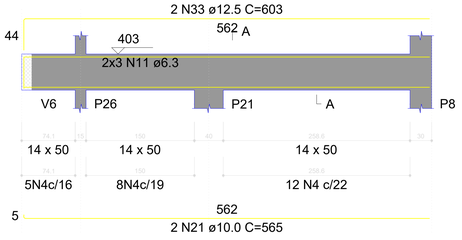
V8
ESC 1:30



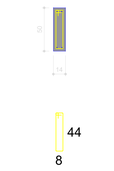
SEÇÃO A-A
ESC 1:25



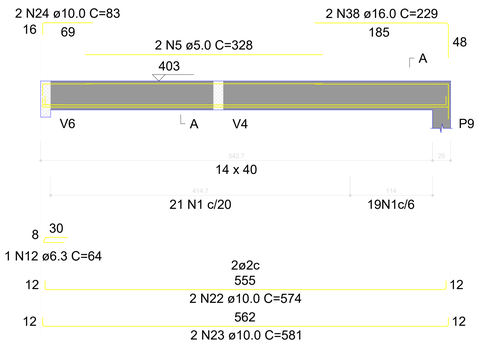
V9
ESC 1:30



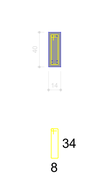
SEÇÃO A-A
ESC 1:25



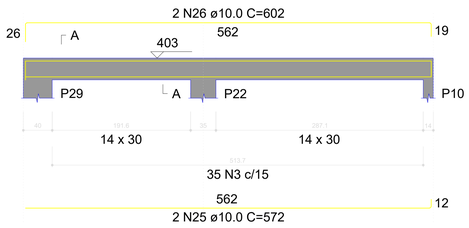
V10
ESC 1:30



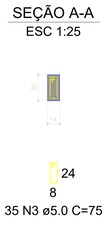
SEÇÃO A-A
ESC 1:25



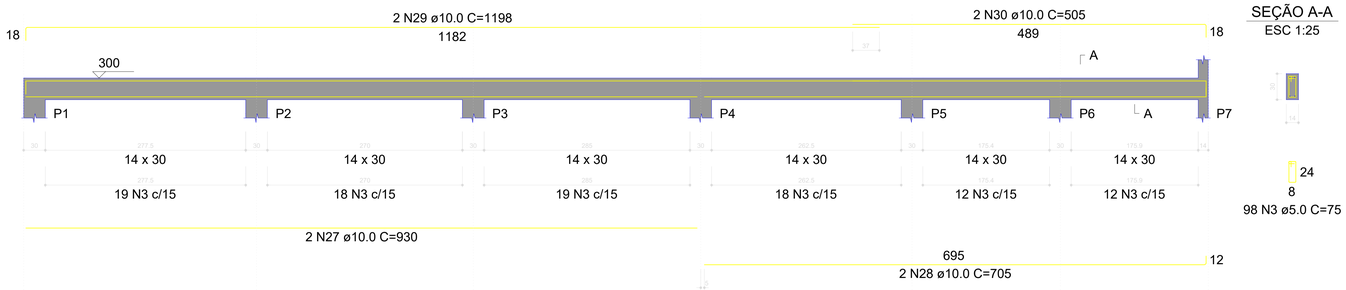
V11
ESC 1:30



SEÇÃO A-A
ESC 1:25



V1_1
ESC 1:30



SEÇÃO A-A
ESC 1:25

OBS:VIGAS COM NIVEIS DIFERENTES

RELAÇÃO DO AÇO

V2 V4 V5
V6 V8 V9
V10 V11 V1_1

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	154	95	14630
	2	5.0	2	383	766
	3	5.0	180	75	13500
	4	5.0	25	115	2875
	5	5.0	2	328	656
CA50	6	6.3	8	corr	3432
	7	6.3	1	76	76
	8	6.3	31	116	3596
	9	6.3	10	104	1040
	10	6.3	2	628	1256
	11	6.3	6	corr	1194
	12	6.3	1	64	64
	13	10.0	2	1119	2238
	14	10.0	1	145	145
	15	10.0	2	1150	2300
	16	10.0	2	302	604
	17	10.0	2	296	592
	18	10.0	2	293	586
	19	10.0	2	498	996
	20	10.0	2	498	996
	21	10.0	2	565	1130
	22	10.0	2	574	1148
	23	10.0	2	581	1162
	24	10.0	2	83	166
	25	10.0	2	572	1144
	26	10.0	2	602	1204
	27	10.0	2	930	1860
	28	10.0	2	705	1410
	29	10.0	2	1198	2396
	30	10.0	2	505	1010
	31	12.5	1	196	196
	32	12.5	2	256	512
	33	12.5	2	603	1206
	34	16.0	2	854	1708
	35	16.0	2	310	620
	36	16.0	2	581	1162
	37	16.0	2	230	460
	38	16.0	2	229	458
	39	22.2	2	885	1770

RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	6.3	106.6	28.7
	10.0	210.9	143
	12.5	19.1	20.3
	16.0	44.1	76.5
	22.2	17.7	59.2
CA60	5.0	324.3	55

PESO TOTAL (kg)

CA50	327.7
CA60	55

Volume de concreto (C-35) = 3.47 m³
Área de forma = 50.24 m²

MALTA
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Nosso motor é o trabalho

PROJETO: PROJETO ESTRUTURAL
LOCAL: RUA JOSE SALVIANO ALVES
PROPRIETÁRIO: PREFEITURA MUNICIPAL DE MALTA - PB

RESPONSÁVEL	Charles Ramalho
DESENHISTA	Charles Ramalho
FASE	PROJETO
DATA	01/09/2026

Documento assinado digitalmente
govbr
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CHARLES RAMALHO
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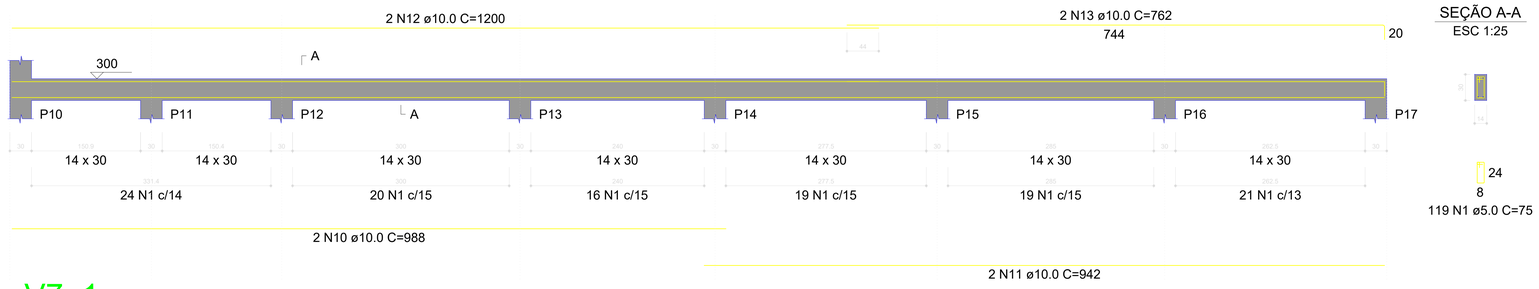
ÁREA DO TERRENO: 922,82 m²
ÁREA DA CONST.: 62,78 m²

DESENHO(S): VIGAS DE AMARRAÇÃO
ESCALAS: COMO NO PROJETO
FOLHA: P07

V3_1

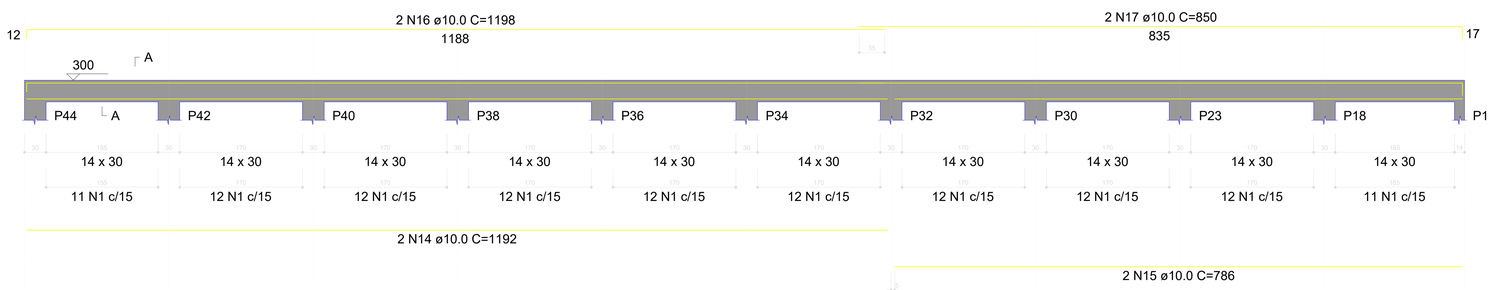
ESC 1:30



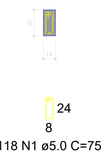
SEÇÃO A-A
ESC 1:25

V7_1

ESC 1:30

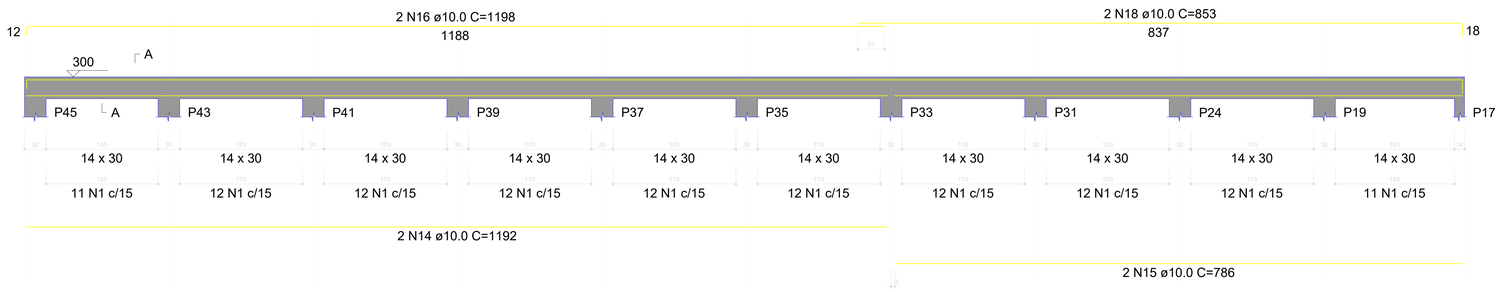


SEÇÃO A-A
ESC 1:25

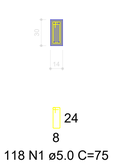


V11_1

ESC 1:30

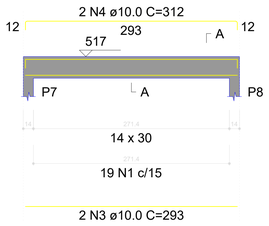


SEÇÃO A-A
ESC 1:25



V1

ESC 1:30

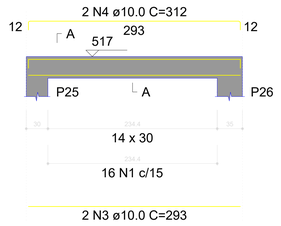


SEÇÃO A-A
ESC 1:25



V2

ESC 1:30

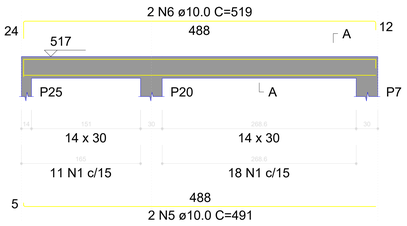


SEÇÃO A-A
ESC 1:25

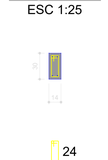


V4

ESC 1:30

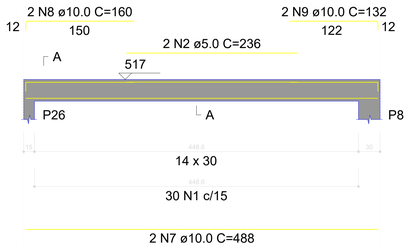


SEÇÃO A-A
ESC 1:25

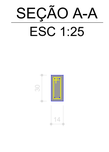


V5

ESC 1:30



SEÇÃO A-A
ESC 1:25



RELAÇÃO DO AÇO

V1-L3
V2-L3
V4-L3
V5-L3
V3_1-L2
V7_1-L2
V11_1-L2

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	449	75	33675
	2	5.0	2	236	472
CA50	3	10.0	4	293	1172
	4	10.0	4	312	1248
	5	10.0	2	491	982
	6	10.0	2	519	1038
	7	10.0	2	488	976
	8	10.0	2	160	320
	9	10.0	2	132	264
	10	10.0	2	988	1976
	11	10.0	2	942	1884
	12	10.0	2	1200	2400
	13	10.0	2	762	1524
	14	10.0	4	1192	4768
	15	10.0	4	786	3144
	16	10.0	4	1198	4792
	17	10.0	2	850	1700
	18	10.0	2	853	1706

RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	10.0	298.9	202.7
CA60	5.0	341.5	57.9

PESO TOTAL (kg)	
CA50	202.7
CA60	57.9

Volume de concreto (C-35) = 2.69 m³
Área de forma = 47.36 m²

OBS:VIGAS COM NIVEIS DIFERENTES

MALTA
GOVERNO MUNICIPAL
"Nosso motivo é a Vitalidade"

PROJETO: PROJETO ESTRUTURAL
LOCAL: RUA JOSE SALVIANO ALVES
PROPRIETÁRIO: PREFEITURA MUNICIPAL DE MALTA - PB

RESPONSÁVEL: Charles Ramalho
DESENHISTA: Charles Ramalho
Documento assinado digitalmente
WENDEN CHARLES RAMALHO SOARES
Data: 18/09/2026 11:35:57-0300
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FASE: PROJETO
DATA: 01/09/2026

CHARLES RAMALHO
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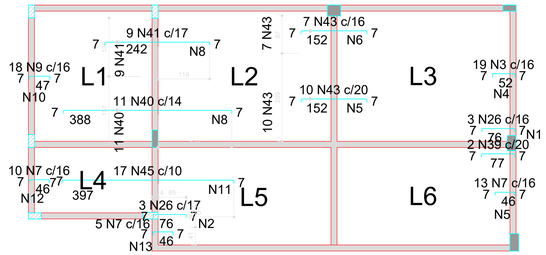
ÁREA DO TERRENO: 922,82 m²
ÁREA DA CONST.: 62,78 m²

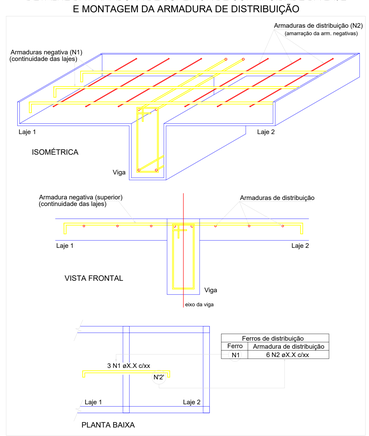
DESENHO(S): VIGAS DE AMARRAÇÃO E PLATIBANDA
ESCALAS: COMO NO PROJETO
FOLHA: P08



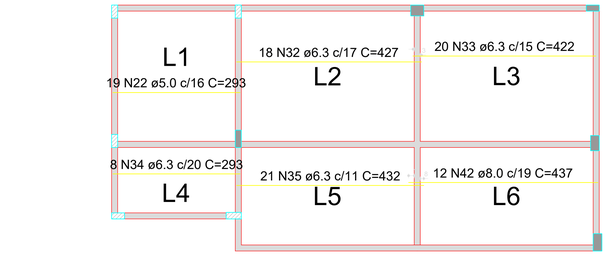
Armação negativa das lajes do pavimento Pavimento 1 (Eixo X)
escala 1:50

Armaduras de distribuição	
Armadura	Armadura de distribuição
N26	4 N1 ø5.0 c/20 C=45
N26	4 N2 ø5.0 c/20 C=48
N3	3 N4 ø5.0 c/20 C=303
N43	8 N5 ø5.0 c/20 C=210
N43	8 N6 ø5.0 c/20 C=105
N7	3 N5 ø5.0 c/20 C=210
N40	20 N8 ø5.0 c/20 C=157
N41	12 N8 ø5.0 c/20 C=157
N9	3 N10 ø5.0 c/20 C=287
N45	50 N11 ø5.0 c/8 C=165
N7	3 N12 ø5.0 c/20 C=167
N7	3 N13 ø5.0 c/20 C=75

DETALHE DA ARMADURA DE SUPERIOR DE CONTINUIDADE DA LAJE
E MONTAGEM DA ARMADURA DE DISTRIBUIÇÃO



Ferros de distribuição	
Ferro	Armadura de distribuição
N1	6 N2 øX.X c/xx



Armação positiva das lajes do pavimento Pavimento 1 (Eixo X)
escala 1:50

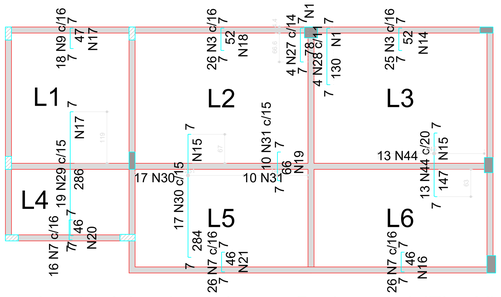
RELAÇÃO DO AÇO

Negativos X
Positivos Y

Negativos Y

Positivos X

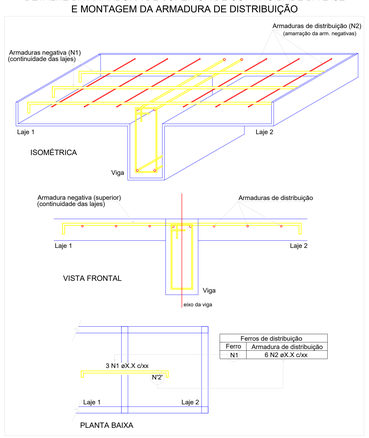
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	15	45	675
	2	5.0	4	48	192
	3	5.0	70	63	4410
	4	5.0	3	303	909
	5	5.0	11	210	2310
	6	5.0	8	105	840
	7	5.0	96	57	5472
	8	5.0	32	157	5024
	9	5.0	36	58	2088
	10	5.0	3	287	861
	11	5.0	50	165	8250
	12	5.0	3	167	501
	13	5.0	3	75	225
	14	5.0	3	399	1197
	15	5.0	23	258	5934
	16	5.0	3	416	1248
	17	5.0	18	285	5130
	18	5.0	3	410	1230
	19	5.0	4	155	620
	20	5.0	3	252	756
	21	5.0	3	413	1239
	22	5.0	19	293	5567
	23	5.0	25	323	8075
	24	5.0	17	173	2941
	25	5.0	25	247	6175
CA50	26	6.3	6	87	522
	27	6.3	4	89	356
	28	6.3	4	141	564
	29	6.3	19	297	5643
	30	6.3	17	295	5015
	31	6.3	10	77	770
	32	6.3	18	427	7686
	33	6.3	20	422	8440
	34	6.3	8	293	2344
	35	6.3	21	432	9072
	36	6.3	14	323	4522
	37	6.3	21	329	6909
	38	6.3	20	253	5060
	39	8.0	2	87	174
	40	8.0	11	398	4378
	41	8.0	9	252	2268
	42	8.0	12	437	5244
	43	10.0	17	161	2737
	44	10.0	13	156	2028
	45	12.5	17	405	6885



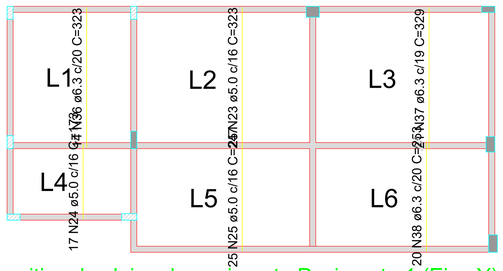
Armação negativa das lajes do pavimento Pavimento 1 (Eixo Y)
escala 1:50

Armaduras de distribuição	
Armadura	Armadura de distribuição
N27	4 N1 ø5.0 c/20 C=45
N28	7 N1 ø5.0 c/20 C=45
N3	3 N14 ø5.0 c/20 C=399
N44	8 N15 ø5.0 c/20 C=258
N7	3 N16 ø5.0 c/20 C=416
N9	3 N17 ø5.0 c/20 C=285
N29	15 N17 ø5.0 c/20 C=285
N3	3 N18 ø5.0 c/20 C=410
N30	15 N15 ø5.0 c/20 C=258
N31	4 N19 ø5.0 c/20 C=155
N7	3 N20 ø5.0 c/20 C=252
N7	3 N21 ø5.0 c/20 C=413

DETALHE DA ARMADURA DE SUPERIOR DE CONTINUIDADE DA LAJE
E MONTAGEM DA ARMADURA DE DISTRIBUIÇÃO



Ferros de distribuição	
Ferro	Armadura de distribuição
N1	6 N2 øX.X c/xx



Armação positiva das lajes do pavimento Pavimento 1 (Eixo Y)
escala 1:50

RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	6.3	569	153.2
	8.0	120.6	52.4
	10.0	47.6	32.3
	12.5	68.9	73
CA60	5.0	718.7	121.9

PESO TOTAL (kg)	
CA50	310.8
CA60	121.9

Volume de concreto (C-35) = 6.48 m³
Área de forma = 54.02 m²

MALTA
GESTÃO 2025 | 2028
Terra acima de tudo

PROJETO: PROJETO ESTRUTURAL
LOCAL: RUA JOSE SALVIANO ALVES
PROPRIETÁRIO: PREFEITURA MUNICIPAL DE MALTA - PB

RESPONSÁVEL: Charles Ramalho
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DESENHISTA: Charles Ramalho
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CONTATO: (83) 98114-7014
wendencharles@gmail.com

ÁREA DO TERRENO: 922,82 m²
ÁREA DA CONST.: 62,78 m²

DESENHO(S): LAJES
ESCALAS: 1/50
FOLHA: P09