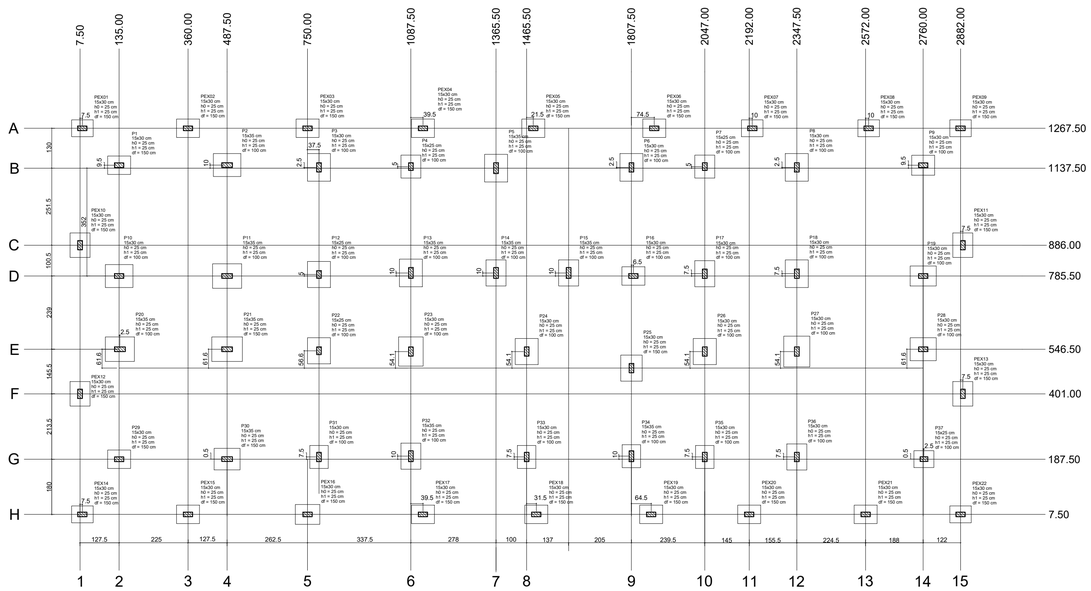
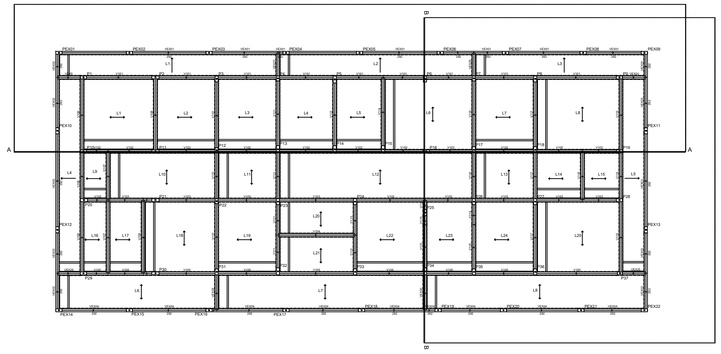


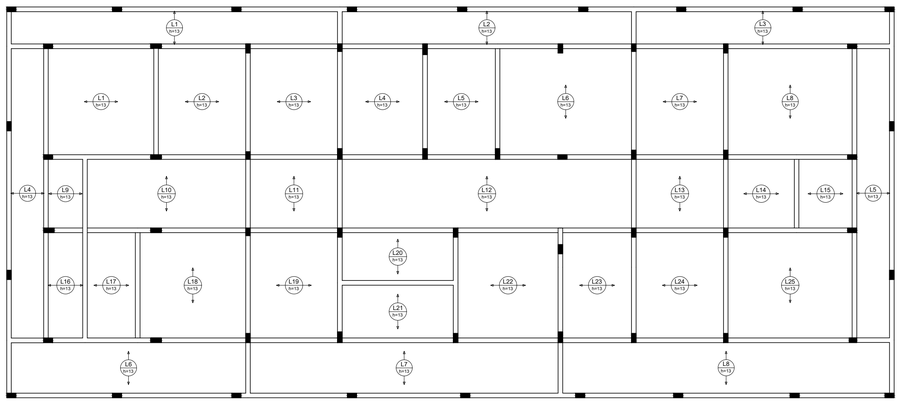
01 PLANTA DE LOCAÇÃO

1 : 50



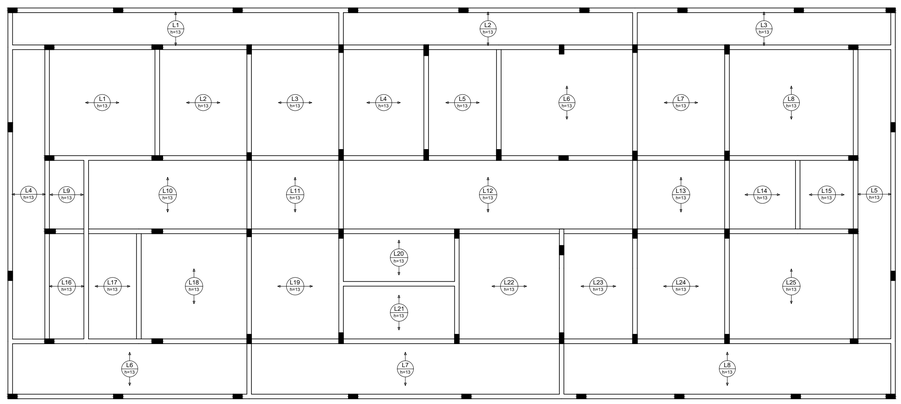
04 LAYOUT DOS CORTES ESQUEMÁTICOS

1 : 100



02 ARMAÇÃO POSITIVA DA LAJE (EIXO X)

1 : 50



03 ARMAÇÃO POSITIVA DA LAJE (EIXO Y)

1 : 50

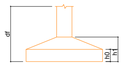
05 PLANTA DE VIGOTAS PRÉ-MOLDADAS

1 : 100

Nome	Região	x (cm)	Y (cm)	Carga Mín (kg)	Mín (kgf.cm)	Máx (kgf.cm)	Fx (kgf)	Fy (kgf)	Largura (cm)	Altura (cm)	Altura(cm) Inf.	Sup.	Tipo
P1	15x30	135.00	1435.00	5.1	4.7	0	0.1	0.1	15	65	25	25	150
P2	15x30	487.50	1147.50	5.4	4.7	0	0.2	0.1	15	65	25	25	150
P3	15x30	750.00	1147.50	5.4	4.7	0	0.2	0.1	15	65	25	25	150
P4	15x25	1087.50	1142.50	4.6	3.9	0	0.1	0.1	15	75	25	25	150
P5	15x35	1365.50	1137.50	6.2	5.4	0	-0.3	-0.2	15	65	25	25	150
P6	15x30	1807.50	1145.00	5.4	4.8	0	0.2	0.1	15	65	25	25	150
P7	15x25	2047.00	1142.50	4.6	3.9	0	0.1	0.1	15	75	25	25	150
P8	15x30	2192.00	1147.50	5.4	4.7	0	0.2	0.1	15	65	25	25	150
P9	15x30	2760.00	1147.50	5.4	4.7	0	0.2	0.1	15	65	25	25	150
P10	15x30	135.00	785.50	5.7	4.8	0	-0.1	-0.4	15	65	25	25	150
P18	15x30	2760.00	785.50	5.7	4.8	0	-0.1	-0.4	15	65	25	25	150
P20	15x35	137.50	546.50	5.7	4.8	0	0.8	0.5	15	65	25	25	150
P28	15x30	2760.00	546.50	4.3	3.6	0	0.5	0.3	15	65	25	25	150
P29	15x30	133.00	187.50	5.2	4.4	0	0.1	0.4	15	65	25	25	150
P37	15x25	2760.00	187.50	4.6	3.9	0	0.1	0.1	15	75	25	25	150
P31	15x30	197.50	185.00	5.1	4.4	0	0.2	0.1	15	65	25	25	150
P35	15x35	1087.50	197.50	2.4	1.9	0	-0.1	0.1	15	75	25	25	150
P33	15x35	1465.50	195.00	2.7	1.9	0	-0.5	0.1	15	75	25	25	150
P34	15x35	1807.50	197.50	2.7	1.9	0	-0.5	0.2	15	75	25	25	150
P36	15x30	2192.00	197.50	5.1	4.4	0	0.2	0.1	15	65	25	25	150
P38	15x30	2347.50	195.00	5.1	4.4	0	0.2	0.1	15	65	25	25	150
P39	15x25	2760.00	188.00	5.1	3.9	0	0.1	0.3	15	75	25	25	150
PEX02	15x30	15.00	1367.50	4.4	3.7	0	0.8	0.1	15	65	25	25	150
PEX03	15x30	360.00	1367.50	4.4	3.7	0	0.8	0.1	15	65	25	25	150
PEX04	15x30	750.00	1367.50	4.4	3.7	0	0.8	0.1	15	65	25	25	150
PEX05	15x30	1127.00	1367.50	4.6	3.9	0	0.1	0.1	15	65	25	25	150
PEX06	15x30	1492.00	1367.50	4.6	3.9	0	0.1	0.1	15	65	25	25	150
PEX07	15x30	2202.00	1367.50	4.2	3.5	0	-0.2	0.1	15	65	25	25	150
PEX08	15x30	2582.00	1367.50	4.2	3.5	0	0.2	0.1	15	65	25	25	150
PEX09	15x30	2882.00	1367.50	5.7	4.8	0	0.1	0.4	15	65	25	25	150
PEX11	15x30	2882.00	1137.50	5.7	4.8	0	0.1	0.4	15	65	25	25	150
PEX12	15x30	2882.00	886.00	5.7	4.8	0	0.1	0.4	15	65	25	25	150
PEX13	15x30	2882.00	401.00	5.7	4.8	0	0.1	0.4	15	65	25	25	150
PEX14	15x30	2889.50	401.00	5.7	4.8	0	0.5	0.4	15	65	25	25	150
PEX15	15x30	15.00	7.50	4.3	3.7	0	0.1	0.4	15	65	25	25	150
PEX16	15x30	360.00	7.50	4.3	3.7	0	0.1	0.4	15	65	25	25	150
PEX17	15x30	750.00	7.50	5.2	4.8	0	0.1	0.1	15	65	25	25	150
PEX18	15x30	1127.00	7.50	4.6	3.9	0	0.1	0.1	15	65	25	25	150
PEX19	15x30	1872.00	7.50	4.7	3.9	0	0.1	0.1	15	65	25	25	150
PEX20	15x30	2192.00	7.50	4.6	3.9	0	0.1	0.1	15	65	25	25	150
PEX21	15x30	2572.00	7.50	4.6	3.9	0	0.1	0.1	15	65	25	25	150
PEX22	15x30	2882.00	7.50	5.2	4.4	0	0.1	0.4	15	65	25	25	150

Localização em eixo X	
Coordenada (cm)	Nome
15.00	PEX15, PEX17
135.00	PEX01, PEX14
137.50	P10, P18, P20
197.50	P31
360.00	PEX02, PEX16
487.50	P2, P29
750.00	PEX03, PEX18
785.50	P4, P5
1087.50	P35, P36
1127.00	PEX04, PEX17
1365.50	P5
1465.50	P33
1492.00	PEX05
1807.50	P6, P34
2047.00	P7, P37
2192.00	P8, P39
2202.00	PEX07
2347.50	P9, P38
2572.00	PEX21
2582.00	PEX08
2760.00	P18, P28
2792.00	P37
2882.00	PEX09, PEX22
2889.50	PEX11, PEX13

Localização em eixo Y	
Coordenada (cm)	Nome
7.50	PEX15, PEX16, PEX17, PEX18, PEX19, PEX20, PEX21, PEX22
137.50	P2
185.00	P31, P9
188.00	P4, P7
195.00	P33, P8, P9
197.50	P5
401.00	PEX12, PEX13
546.50	P20, P28
785.50	P10, P18
886.00	PEX10, PEX11
1137.50	P1, P3
1142.50	P35, P36
1145.00	P6
1147.50	P2, P3
1367.50	PEX02, PEX03, PEX04, PEX05, PEX06, PEX07, PEX08, PEX09
1435.00	P1



REV	DATA	AUTOR	PROJETISTA	SETOR/DEPART.	ÓRGÃO
03					
02					
01					

REVISÕES

SAÚDE INDÍGENA

MINISTÉRIO DA SAÚDE
SECRETARIA ESPECIAL DE SAÚDE INDÍGENA

DISTRITO SANITÁRIO ESPECIAL INDÍGENA DO XINGU
SERVIÇO DE EDIFICAÇÕES E SANEAMENTO AMBIENTAL INDÍGENA - SESANI/DSEI - XINGU

OBRA:
REFORMA E AMPLIAÇÃO DA CASA DE SAÚDE INDÍGENA DE CANARANA - CASAI CANARANA

ENDEREÇO:
RUA MONDAI, 1278, MORADA DO SOL, CANARANA - MT

PROPRIETÁRIO: MINISTÉRIO DA SAÚDE - DISTRITO SANITÁRIO ESPECIAL INDÍGENA DO XINGU
DATA: 25/08/25

AUTOR DO PROJETO: JOSÉ GUILHERME MIRANDA DAMOUS - ENGENHEIRO CIVIL
CREA/CAU: 2019066249/MT

PROJETISTA:
REVISADO POR:
CREA/CAU:

ASSINATURAS:
QR CODE ART/RRT:

AUTOR DO PROJETO
PROPRIETÁRIO

DISCIPLINA DO PROJETO:
PROJETO ESTRUTURAL
QR CODE PROJETO:

CONTEÚDO:
PLANTA DE LOCAÇÃO E DETALHE DAS ARMAÇÕES POSITIVA

Nº: 25051.0009842022 - CASAI - EST - DE- R00

01/13

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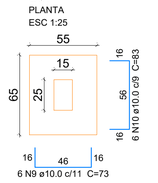
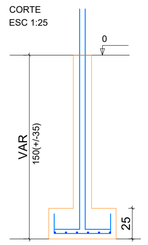
S37

PLANTA
ESC 1:25



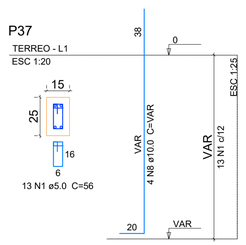
Solo com capacidade de suporte > 1.50 kgf/cm²
Solo compactado sobre a sapata
peso específico > 1600.00 kgf/m³

CORTE
ESC 1:25



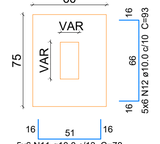
P37

TERREO - L1
ESC 1:20



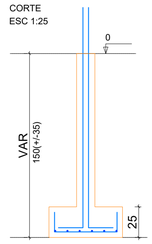
S16=S29=S31=S34=S35

PLANTA
ESC 1:25



Solo com capacidade de suporte > 1.50 kgf/cm²
Solo compactado sobre a sapata
peso específico > 1600.00 kgf/m³

CORTE
ESC 1:25



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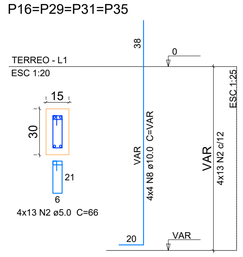
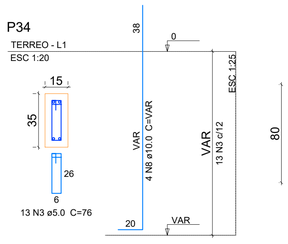
TERREO - L1
ESC 1:20



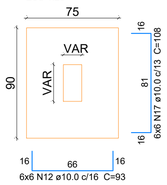
P34

TERREO - L1
ESC 1:20



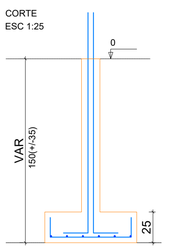
S4=S6=S10=S12=S15=S17=S25=S26=S32

PLANTA
ESC 1:25



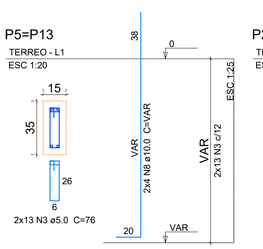
Solo com capacidade de suporte > 1.50 kgf/cm²
Solo compactado sobre a sapata
peso específico > 1600.00 kgf/m³

CORTE
ESC 1:25



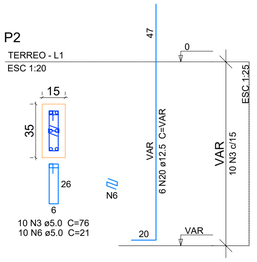
P12

TERREO - L1
ESC 1:20



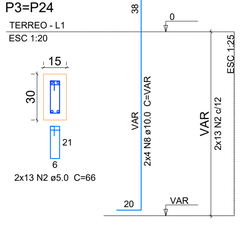
P15

TERREO - L1
ESC 1:20



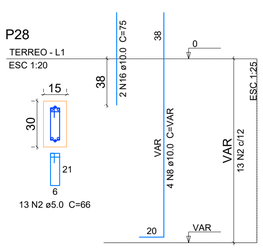
P6=P10=P17=P25=P26

TERREO - L1
ESC 1:20



P32

TERREO - L1
ESC 1:20

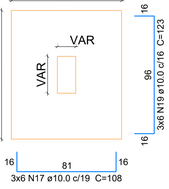


P4

TERREO - L1
ESC 1:20

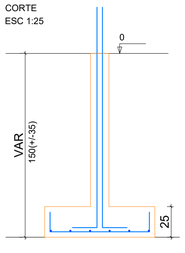
S22

PLANTA
ESC 1:25



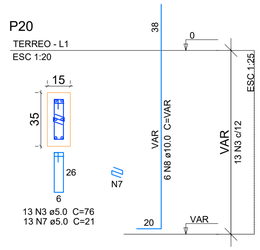
Solo com capacidade de suporte > 1.50 kgf/cm²
Solo compactado sobre a sapata
peso específico > 1600.00 kgf/m³

CORTE
ESC 1:25



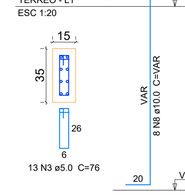
P22

TERREO - L1
ESC 1:20



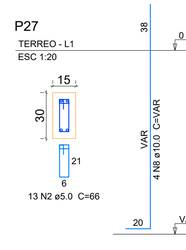
S8=S11=S18=S23

PLANTA
ESC 1:25



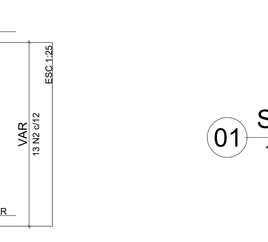
Solo com capacidade de suporte > 1.50 kgf/cm²
Solo compactado sobre a sapata
peso específico > 1600.00 kgf/m³

CORTE
ESC 1:25



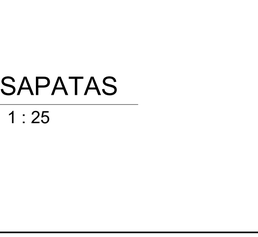
P11

TERREO - L1
ESC 1:20



P8=P18=P23

TERREO - L1
ESC 1:20



S1=S7=S9=S14=S19=S30=S33=S36

PLANTA
ESC 1:25

Solo com capacidade de suporte > 1.50 kgf/cm²
Solo compactado sobre a sapata
peso específico > 1600.00 kgf/m³

CORTE
ESC 1:25

P1=P9=P19=P33=P36

TERREO - L1
ESC 1:20

P14=P30

TERREO - L1
ESC 1:20

P7

TERREO - L1
ESC 1:20

S2=S3=S5=S13=S24=S28

PLANTA
ESC 1:25

Solo com capacidade de suporte > 1.50 kgf/cm²
Solo compactado sobre a sapata
peso específico > 1600.00 kgf/m³

CORTE
ESC 1:25

P5=P13

TERREO - L1
ESC 1:20

P2

TERREO - L1
ESC 1:20

P3=P24

TERREO - L1
ESC 1:20

P28

TERREO - L1
ESC 1:20

S20=S21=S27

PLANTA
ESC 1:25

Solo com capacidade de suporte > 1.50 kgf/cm²
Solo compactado sobre a sapata
peso específico > 1600.00 kgf/m³

CORTE
ESC 1:25

P20

TERREO - L1
ESC 1:20

P21

TERREO - L1
ESC 1:20

P27

TERREO - L1
ESC 1:20

01 SAPATAS

1 : 25

Relação do aço

S10 S19 S22
S23 S24 S27
S31 S37

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	52	56	2912
	2	5.0	273	66	18018
	3	5.0	127	76	9652
	4	5.0	13	88	1144
	5	5.0	13	68	884
	6	5.0	10	21	210
	7	5.0	26	21	546
CA50	8	10.0	154	VAR	VAR
	9	10.0	6	73	438
	10	10.0	54	83	4482
	11	10.0	30	78	2340
	12	10.0	66	93	6138
	13	10.0	54	98	5292
	14	10.0	54	88	4752
	15	10.0	78	103	8034
	16	10.0	2	75	150
	17	10.0	60	108	6480
	18	10.0	24	118	2832
	19	10.0	18	123	2214
	20	12.5	6	VAR	VAR

Resumo do aço

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10 % (kg)
CA50	10.0	742.6	503.6
	12.5	12.6	13.4
CA60	5.0	333.7	56.6

PESO TOTAL (kg)	
CA50	517
CA60	56.6

Volume de concreto (C-25) = 8.35 m³
Área de forma = 80.03 m²

REV	DATA	AUTOR	PROJETISTA	SETOR/DEPART.	ÓRGÃO
03					
02					
01					

REVISÕES

SAÚDE INDÍGENA

MINISTÉRIO DA SAÚDE
SECRETARIA ESPECIAL DE SAÚDE INDÍGENA

DISTRITO SANITÁRIO ESPECIAL INDÍGENA DO XINGU
SERVIÇO DE EDIFICAÇÕES E SANEAMENTO AMBIENTAL INDÍGENA - SESANI/DSEI - XINGU

OBRA:
REFORMA E AMPLIAÇÃO DA CASA DE SAÚDE INDÍGENA DE CANARANA - CASAI CANARANA

ENDEREÇO:
RUA MONDAI, 1278, MORADA DO SOL, CANARANA - MT

PROPRIETÁRIO:
MINISTÉRIO DA SAÚDE - DISTRITO SANITÁRIO ESPECIAL INDÍGENA DO XINGU

DATA: 25/08/25

AUTOR DO PROJETO:
JOSÉ GUILHERME MIRANDA DAMOUS - ENGENHEIRO CIVIL

CREA/CAU: 2019066249/MT

PROJETISTA:

REVISADO POR:

CREA/CAU:

ASSINATURAS:

QR CODE ART/RRT:

AUTOR DO PROJETO | PROPRIETÁRIO

DISCIPLINA DO PROJETO:
PROJETO ESTRUTURAL

QR CODE PROJETO:

CONTEÚDO:
DETALHE DAS SAPATAS

Nº: 25051.0009842022 - CASAI - EST - DE- R00

02/13

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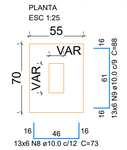
S7=S19=S28=S31=S33=S35=S36=SEX01=SEX07 =SEX08=SEX09=SEX14=SEX22

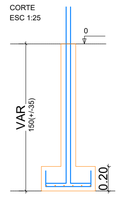
PLANTA
ESC 1:25



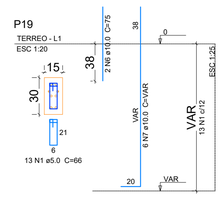
13x6 N8 ø10.0 c/12 C=73

Solo com capacidade de suporte > 1.50 kgf/cm²
Solo compactado sobre a sapata
peso específico > 1600.00 kgf/m³

CORTE
ESC 1:25

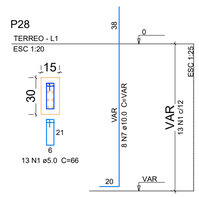


P19
TERREO - L1
ESC 1:20



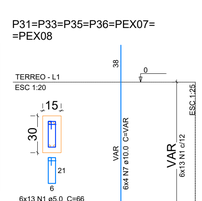
13 N1 ø5.0 C=66

P28
TERREO - L1
ESC 1:20



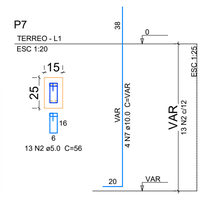
13 N1 ø5.0 C=66

P31=P33=P35=P36=PEX07= =PEX08
TERREO - L1
ESC 1:20



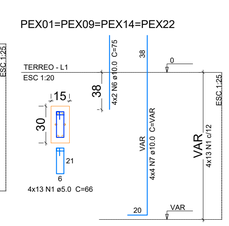
6x13 N1 ø5.0 C=66

P7
TERREO - L1
ESC 1:20



13 N2 ø5.0 C=56

PEX01=PEX09=PEX14=PEX22
TERREO - L1
ESC 1:20



4x13 N1 ø5.0 C=66

Relação do aço

S1 S3 S9
S19 SEX10

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	455	66	30030
	2	5.0	26	56	1456
	3	5.0	78	76	5928
	4	5.0	13	68	884
	5	5.0	13	21	273
CA50	6	10.0	30	75	2250
	7	10.0	184	VAR	VAR
	8	10.0	78	73	5694
	9	10.0	126	88	11088
	10	10.0	2	VAR	VAR
	11	10.0	96	78	7488
	12	10.0	102	93	9486
	13	10.0	36	83	2988
	14	10.0	36	98	3528
	15	10.0	48	103	4944
	16	10.0	6	108	648

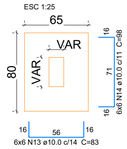
Resumo do aço

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10 % (kg)
CA50	10.0	856.1	580.5
CA60	5.0	385.8	65.4
PESO TOTAL (kg)			
CA50	580.5		
CA60	65.4		

Volume de concreto (C-25) = 8.19 m³
Área de forma = 90.15 m²

S37=SEX10=SEX11=SEX12=SEX13=SEX16

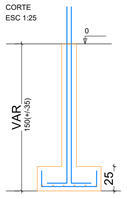
PLANTA
ESC 1:25



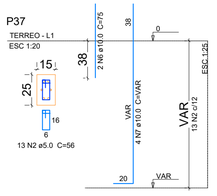
6x6 N13 ø10.0 c/14 C=83

Solo com capacidade de suporte > 1.50 kgf/cm²
Solo compactado sobre a sapata
peso específico > 1600.00 kgf/m³

CORTE
ESC 1:25

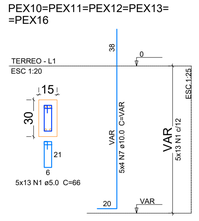


P37
TERREO - L1
ESC 1:20



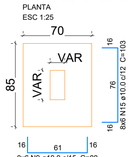
13 N2 ø5.0 C=56

PEX10=PEX11=PEX12=PEX13= =PEX16
TERREO - L1
ESC 1:20



5x13 N1 ø5.0 C=66

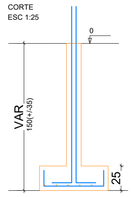
S1=S2=S5=S6=S8=S10=S20=S29
PLANTA
ESC 1:25



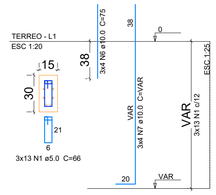
8x6 N9 ø10.0 c/15 C=88

Solo com capacidade de suporte > 1.50 kgf/cm²
Solo compactado sobre a sapata
peso específico > 1600.00 kgf/m³

CORTE
ESC 1:25

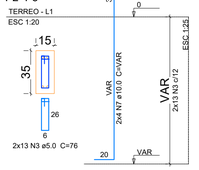


P1=P10=P29



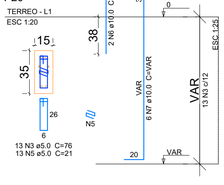
3x13 N1 ø5.0 C=66

P2=P5
TERREO - L1
ESC 1:20



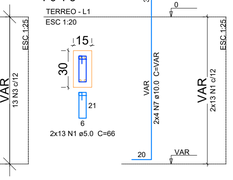
2x13 N3 ø5.0 C=76

P20
TERREO - L1
ESC 1:20



13 N3 ø5.0 C=76
13 N5 ø5.0 C=21

P6=P8
TERREO - L1
ESC 1:20



2x13 N1 ø5.0 C=66

S3=S4=S30=S32=S34=SEX02=SEX03=SEX04=SEX05 =SEX06=SEX15=SEX17=SEX18=SEX19=SEX20 =SEX21

PLANTA
ESC 1:25

16x6 N11 ø10.0 c/13 C=78

Solo com capacidade de suporte > 1.50 kgf/cm²
Solo compactado sobre a sapata
peso específico > 1600.00 kgf/m³

CORTE
ESC 1:25

P3=PEX02=PEX03=PEX04= =PEX05=PEX06=PEX15= =PEX17=PEX18=PEX19= =PEX20=PEX21
TERREO - L1
ESC 1:20

12x13 N1 ø5.0 C=66

P30=P32=P34
TERREO - L1
ESC 1:20

3x13 N3 ø5.0 C=76

P4
TERREO - L1
ESC 1:20

13 N4 ø5.0 C=68

S9
PLANTA
ESC 1:25

6 N12 ø10.0 c/16 C=93

Solo com capacidade de suporte > 1.50 kgf/cm²
Solo compactado sobre a sapata
peso específico > 1600.00 kgf/m³

CORTE
ESC 1:25

P9
TERREO - L1
ESC 1:20

13 N1 ø5.0 C=66

02 CORTE A-A
1 : 50

03 CORTE B-B
1 : 50

Vigas

Nome	Seção (cm)	Elevação (cm)	Nível (cm)
V1	15x30	0	0
V2	15x30	0	0
V3	15x30	0	0
V4	15x20	0	0
V5	15x20	0	0
V6	15x30	0	0
V7	15x30	0	0
V8	15x30	0	0
V9	15x30	0	0
V10	15x30	0	0
V11	15x30	0	0
V12	15x30	0	0
V13	15x30	0	0
V14	15x20	0	0
V15	15x25	0	0
V16	15x30	0	0
V17	15x20	0	0
V18	15x30	0	0
V19	15x30	0	0
V20	15x30	0	0
V21	15x30	0	0
V22	15x20	0	0
V23	15x30	0	0
VEX01	15x30	0	0
VEX02	15x30	0	0
VEX03	15x30	0	0
VEX04	15x30	0	0

Características dos materiais

fck (kgf/cm²)	Ecs (kgf/cm²)
250	241500

Dimensão máxima do agregado = 19 mm

Pilares

Nome	Seção (cm)	Elevação (cm)	Nível (cm)
P1	15 x 30	0	0
P2	15 x 30	0	0
P3	15 x 30	0	0
P4	15 x 30	0	0
P5	15 x 35	0	0
P6	15 x 30	0	0
P7	15 x 25	0	0
P8	15 x 30	0	0
P9	15 x 30	0	0
P10	15 x 30	0	0
P11	15 x 30	0	0
P12	15 x 25	0	0
P13	15 x 35	0	0
P14	15 x 35	0	0
P15	15 x 35	0	0
P16	15 x 30	0	0
P17	15 x 30	0	0
P18	15 x 30	0	0
P19	15 x 30	0	0
P20	15 x 30	0	0
P21	15 x 30	0	0
P22	15 x 25	0	0
P23	15 x 30	0	0
P24	15 x 30	0	0
P25	15 x 30	0	0
P26	15 x 30	0	0
P27	15 x 30	0	0
P28	15 x 30	0	0
P29	15 x 30	0	0
P30	15 x 30	0	0
P31	15 x 30	0	0
P32	15 x 30	0	0
P33	15 x 30	0	0
P34	15 x 35	0	0
P35	15 x 30	0	0
P36	15 x 30	0	0
P37	15 x 25	0	0
PEX01	15 x 30	0	0
PEX02	15 x 30	0	0
PEX03	15 x 30	0	0
PEX04	15 x 30	0	0
PEX05	15 x 30	0	0
PEX06	15 x 30	0	0
PEX07	15 x 30	0	0
PEX08	15 x 30	0	0
PEX09	15 x 30	0	0
PEX10	15 x 30	0	0
PEX11	15 x 30	0	0
PEX12	15 x 30	0	0
PEX13	15 x 30	0	0
PEX14	15 x 30	0	0
PEX15	15 x 30	0	0
PEX16	15 x 30	0	0
PEX17	15 x 30	0	0
PEX18	15 x 30	0	0
PEX19	15 x 30	0	0
PEX20	15 x 30	0	0
PEX21	15 x 30	0	0
PEX22	15 x 30	0	0

Legenda dos Pilares
- Pilar que morre
- Pilar que passa
- Pilar que nasce
- Pilar com mudança de seção

01 SAPATAS
1 : 25

04 FORMA DO PAV. BALDRAME
1 : 50

REV	DATA	AUTOR	PROJETISTA	SETOR/DEPART.	ÓRGÃO
03					
02					
01					

REVISÕES

SAÚDE INDÍGENA

MINISTÉRIO DA SAÚDE
SECRETARIA ESPECIAL DE SAÚDE INDÍGENA

DISTRITO SANITÁRIO ESPECIAL INDÍGENA DO XINGU
SERVIÇO DE EDIFICAÇÕES E SANEAMENTO AMBIENTAL INDÍGENA - SESANI/DSEI - XINGU

OBRA:
REFORMA E AMPLIAÇÃO DA CASA DE SAÚDE INDÍGENA DE CANARANA - CASAI CANARANA

ENDEREÇO:
RUA MONDAI, 1278, MORADA DO SOL, CANARANA - MT

PROPRIETÁRIO: MINISTÉRIO DA SAÚDE - DISTRITO SANITÁRIO ESPECIAL INDÍGENA DO XINGU
DATA: 25/08/25

AUTOR DO PROJETO: JOSÉ GUILHERME MIRANDA DAMOUS - ENGENHEIRO CIVIL
CREA/CAU: 2019066249/MT

PROJETISTA:
REVISADO POR:
CREA/CAU:

ASSINATURAS:
AUTOR DO PROJETO
PROPRIETÁRIO
QR CODE ART/RRT:

DISCIPLINA DO PROJETO:
PROJETO ESTRUTURAL

CONTEÚDO:
DETALHE DAS SAPATAS, FORMA E CORTES

QR CODE PROJETO:

Nº: 25051.0009842022 - CASAI - EST - DE- R00

03/13

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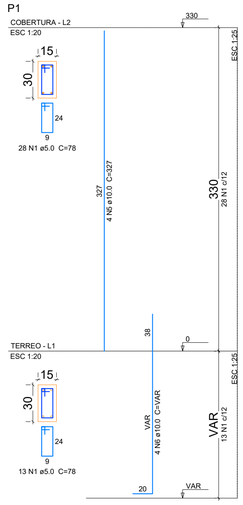
P1



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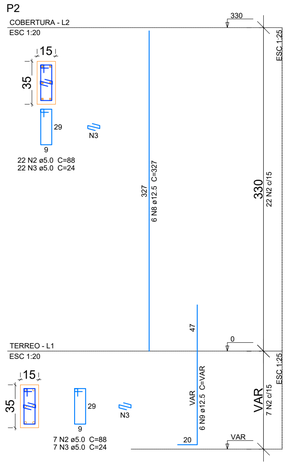
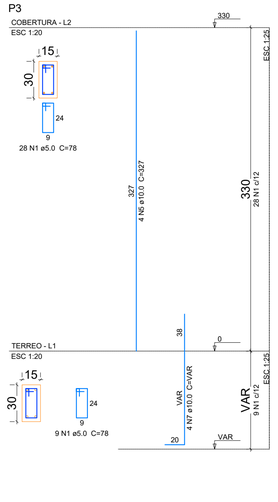
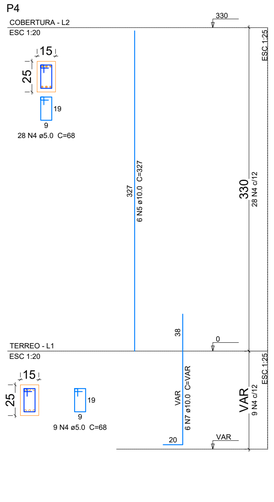


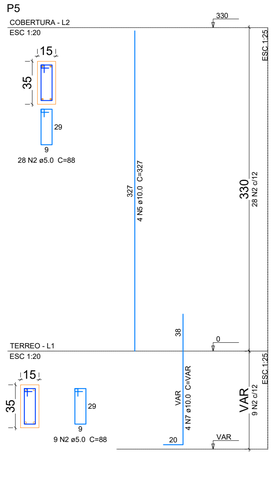
P3



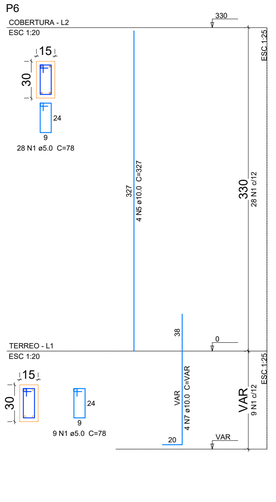
P4



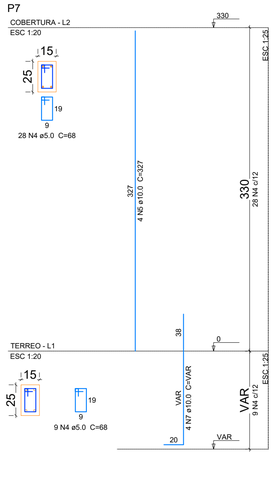
P5



P6



P7



Relação do aço

P1 P2 P3
P4 P5 P6
P7 P8

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	152	78	11856
	2	5.0	66	88	5808
	3	5.0	29	24	696
	4	5.0	74	68	5032
CA50	5	10.0	30	327	9810
	6	10.0	4	VAR	VAR
	7	10.0	26	VAR	VAR
	8	12.5	6	327	1962
	9	12.5	6	VAR	VAR

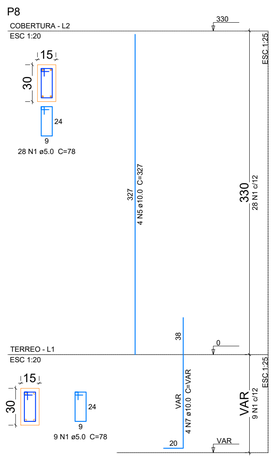
Resumo do aço

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10 % (kg)
CA50	10.0	145.7	98.8
	12.5	29.3	31
CA60	5.0	234	39.7

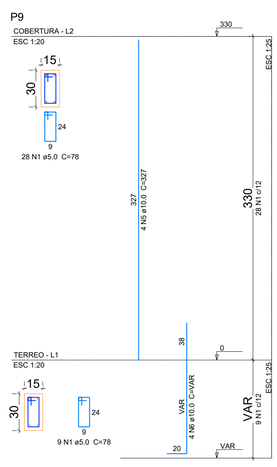
PESO TOTAL (kg)	
CA50	129.8
CA60	39.7

Volume de concreto (C-25) = 1.57 m³
Área de forma = 31.41 m²

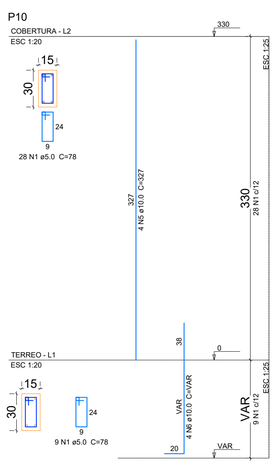
P8



P9



P10



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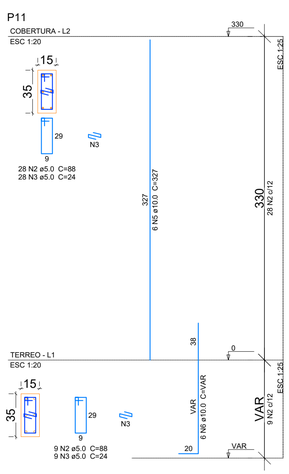

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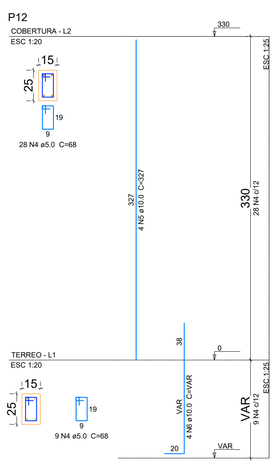

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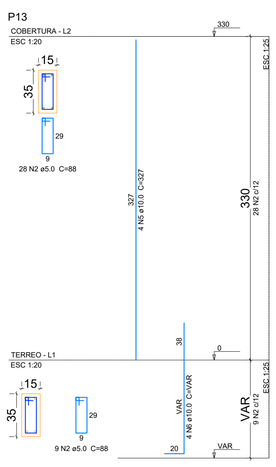

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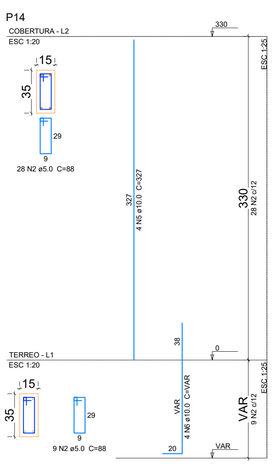


Relação do aço

P9 P10 P11
P12 P13 P14
P15 P16

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	111	78	8658
	2	5.0	148	88	13024
	3	5.0	37	24	888
	4	5.0	37	68	2516
CA50	5	10.0	34	327	11118
	6	10.0	34	VAR	VAR

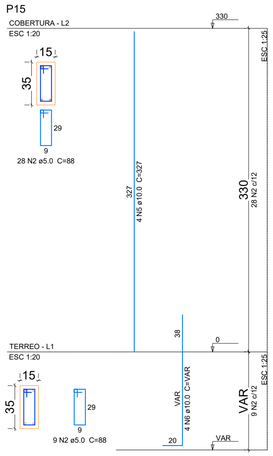
Resumo do aço

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10 % (kg)
CA50	10.0	162.9	110.5
CA60	5.0	250.9	42.5

PESO TOTAL (kg)	
CA50	110.5
CA60	42.5

Volume de concreto (C-25) = 1.64 m³
Área de forma = 32.25 m²

P15



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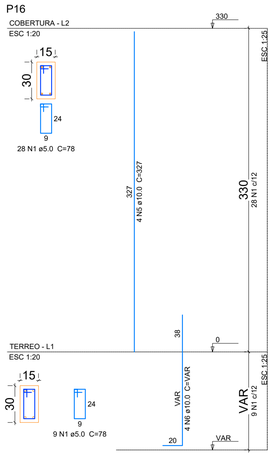

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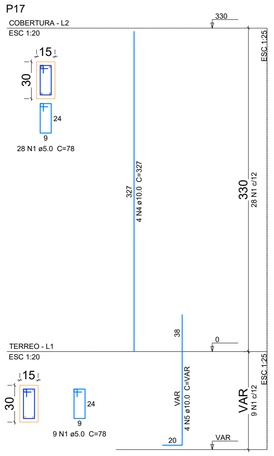

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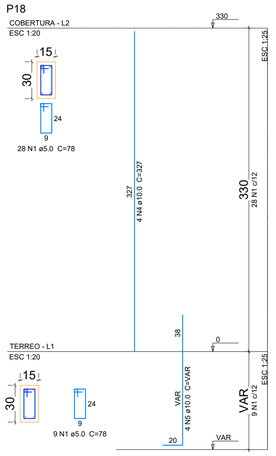

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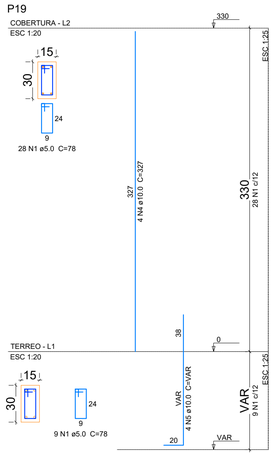

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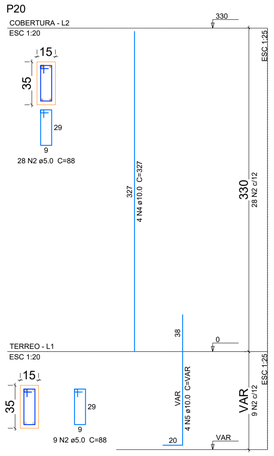

01 PILARES EM PRUMADA

1 : 25

REV	DATA	AUTOR	PROJETISTA	SETOR/DEPART.	ÓRGÃO
03					
02					
01					

REVISÕES

SAÚDE INDÍGENA

MINISTÉRIO DA SAÚDE
SECRETARIA ESPECIAL DE SAÚDE INDÍGENA

DISTRITO SANITÁRIO ESPECIAL INDÍGENA DO XINGU
SERVIÇO DE EDIFICAÇÕES E SANEAMENTO AMBIENTAL INDÍGENA - SESANI/DSEI - XINGU

OBRA:
REFORMA E AMPLIAÇÃO DA CASA DE SAÚDE INDÍGENA DE CANARANA - CASAI CANARANA

ENDEREÇO:
RUA MONDAI, 1278, MORADA DO SOL, CANARANA - MT

PROPRIETÁRIO:
MINISTÉRIO DA SAÚDE - DISTRITO SANITÁRIO ESPECIAL INDÍGENA DO XINGU

DATA:
25/08/25

AUTOR DO PROJETO:
JOSÉ GUILHERME MIRANDA DAMOUS - ENGENHEIRO CIVIL

CREA/CAU:
2019066249/MT

PROJETISTA:

REVISADO POR:

CREA/CAU:

ASSINATURAS:

QR CODE ART/RRT:

AUTOR DO PROJETO

PROPRIETÁRIO

DISCIPLINA DO PROJETO:
PROJETO ESTRUTURAL

QR CODE PROJETO:

CONTEÚDO:
DETALHE DOS PILARES

Nº: 25051.0009842022 - CASAI - EST - DE- R00

04/13

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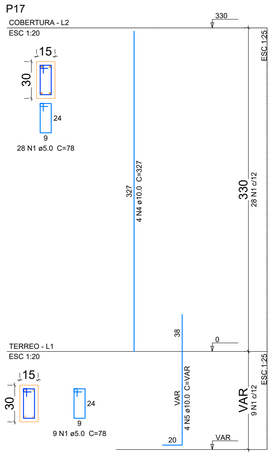

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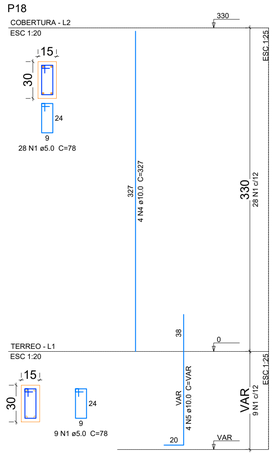

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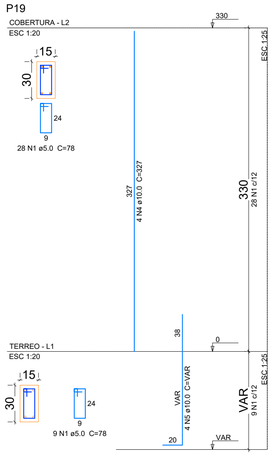

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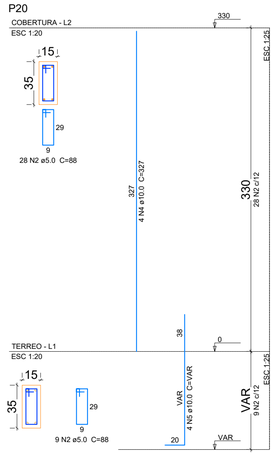

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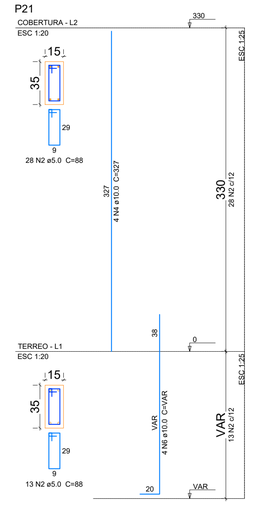

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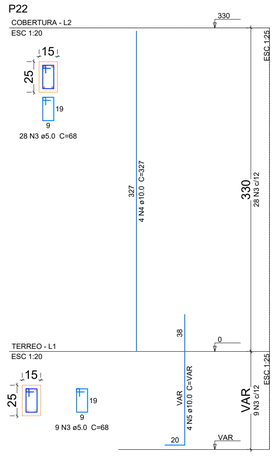

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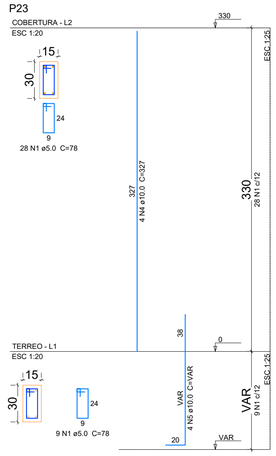

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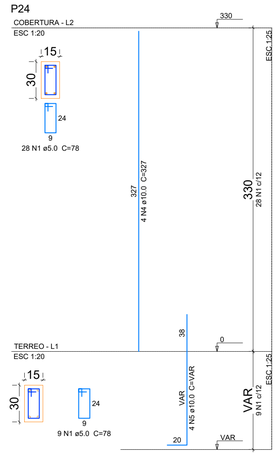

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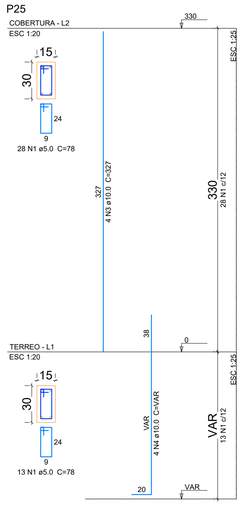

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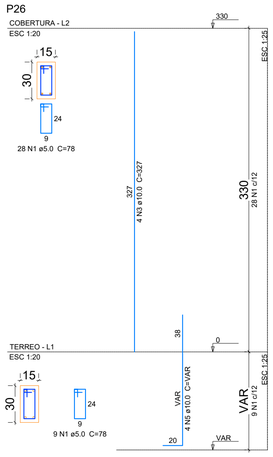

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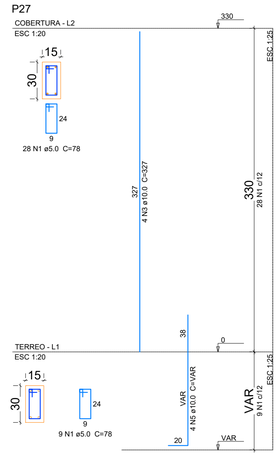

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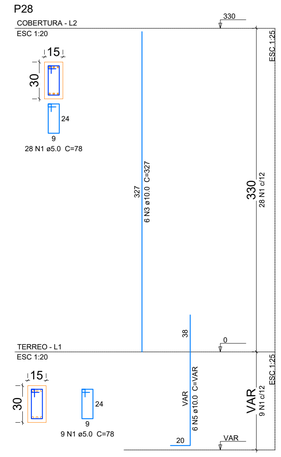

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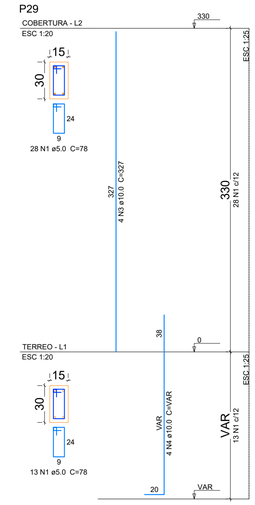

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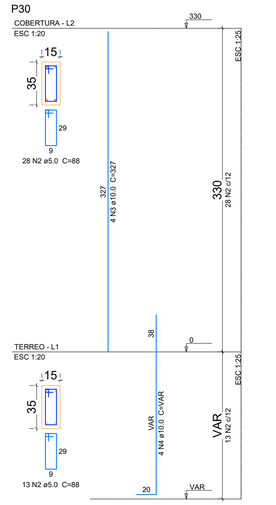

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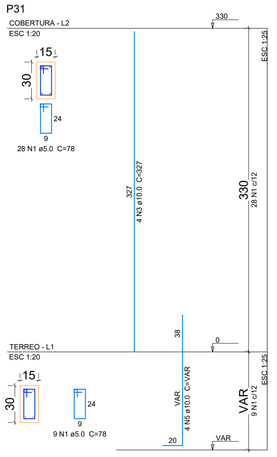

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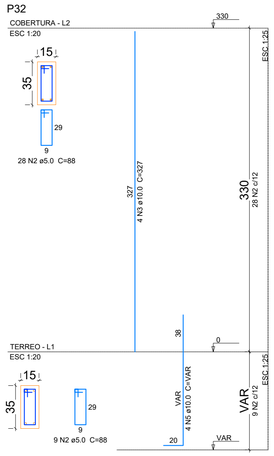

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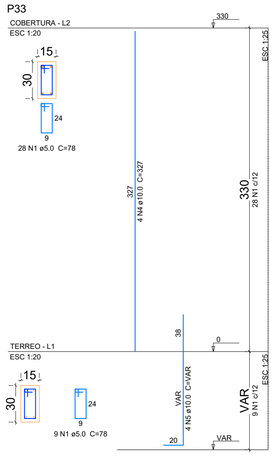

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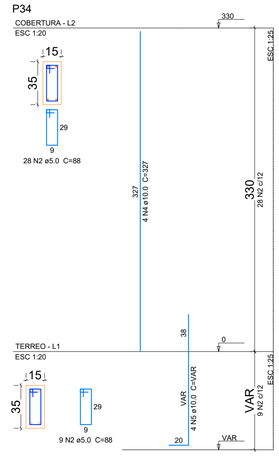

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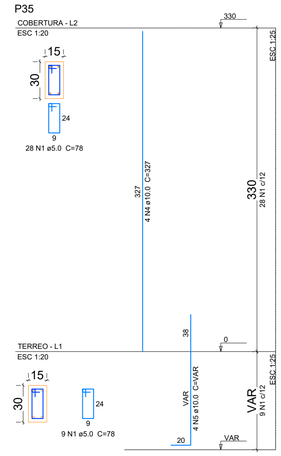

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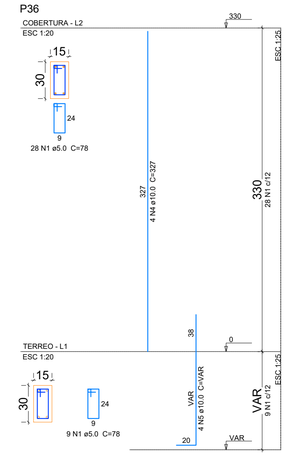

Relação do aço

P25 P26 P27
P28 P29 P30
P31 P32

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	230	78	17940
	2	5.0	78	88	6864
CA50	3	10.0	34	327	11118
	4	10.0	12	VAR	VAR
	5	10.0	22	VAR	VAR

Resumo do aço

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10 % (kg)
CA50	10.0	168.9	114.5
CA60	5.0	248.1	42.1

PESO TOTAL (kg)	
CA50	114.5
CA60	42.1

Volume de concreto (C-25) = 1.68 m³
Área de forma = 33.22 m²

Relação do aço

P33 P34 P35
P36 P37

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	111	78	8658
	2	5.0	37	88	3256
	3	5.0	37	68	2516
CA50	4	10.0	20	327	6540
	5	10.0	20	VAR	VAR

Resumo do aço

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10 % (kg)
CA50	10.0	95.8	65
CA60	5.0	144.3	24.5

PESO TOTAL (kg)	
CA50	65
CA60	24.5

Volume de concreto (C-25) = 0.97 m³
Área de forma = 19.35 m²

01 PILARES EM PRUMADA
1 : 25

REV	DATA	AUTOR	PROJETISTA	SETOR/DEPART.	ÓRGÃO
03					
02					
01					

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OBRA:
REFORMA E AMPLIAÇÃO DA CASA DE SAÚDE INDÍGENA DE CANARANA - CASAI CANARANA

ENDEREÇO:
RUA MONDAI, 1278, MORADA DO SOL, CANARANA - MT

PROPRIETÁRIO: MINISTÉRIO DA SAÚDE - DISTRITO SANITÁRIO ESPECIAL INDÍGENA DO XINGU
DATA: 25/08/25

AUTOR DO PROJETO: JOSÉ GUILHERME MIRANDA DAMOUS - ENGENHEIRO CIVIL
CREA/CAU: 2019066249/MT

PROJETISTA:
REVISADO POR:
CREA/CAU:

ASSINATURAS:
AUTOR DO PROJETO
PROPRIETÁRIO
QR CODE ART/RRT:

DISCIPLINA DO PROJETO:
PROJETO ESTRUTURAL

CONTEÚDO:
DETALHE DOS PILARES

QR CODE PROJETO:

Nº: 25051.0009842022 - CASAI - EST - DE- R00

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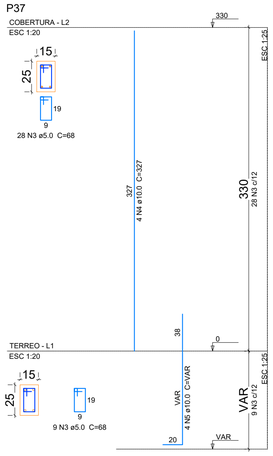
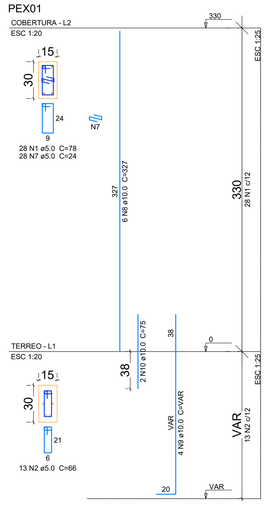
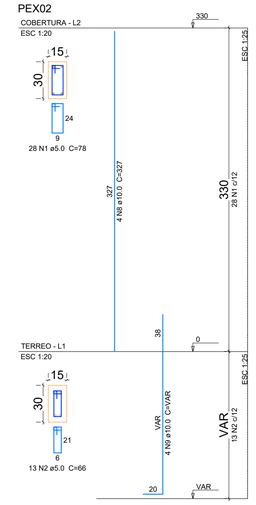
P37



PEX01



PEX02



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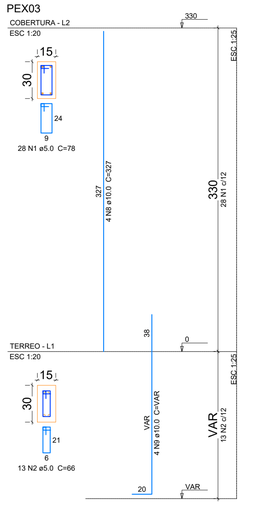
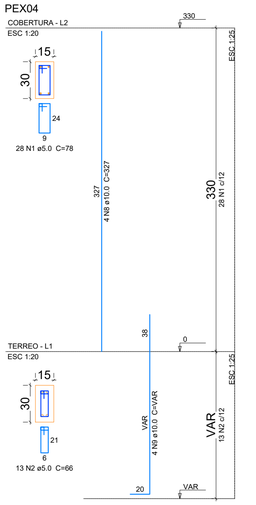


PEX04



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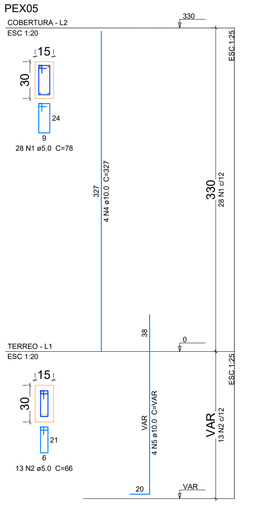

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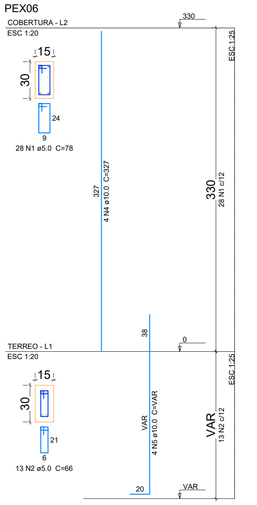


Relação do aço

P33	P34	P35
P36	P37	PEX01
PEX02	PEX03	PEX04

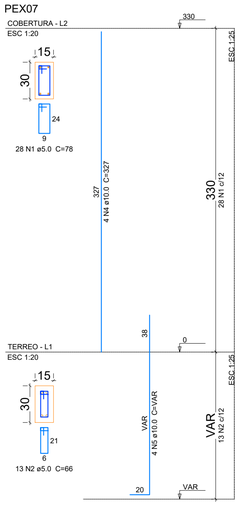
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	196	78	15288
	2	5.0	91	66	6006
	3	5.0	28	88	2464
	4	5.0	13	76	988
	5	5.0	28	68	1904
	6	5.0	13	56	728
	7	5.0	28	24	672
CA50	8	10.0	40	327	13080
	9	10.0	36	VAR	VAR
	10	10.0	4	75	300

Resumo do aço

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10 % (kg)
CA50	10.0	206.6	140.1
CA60	5.0	280.5	47.6
PESO TOTAL (kg)			
CA50	140.1		
CA60	47.6		

Volume de concreto (C-25) = 1.94 m³
Área de forma = 38.88 m²

PEX07



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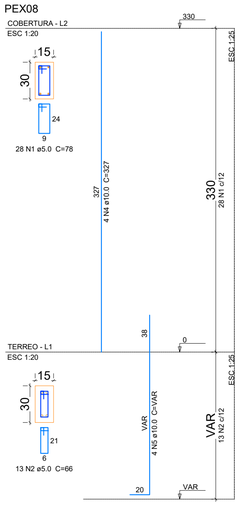
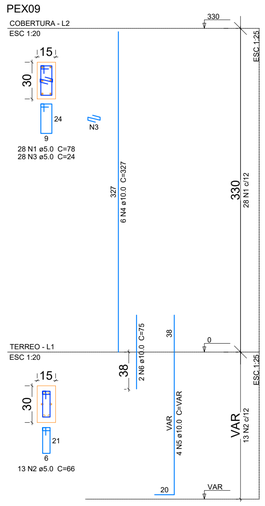
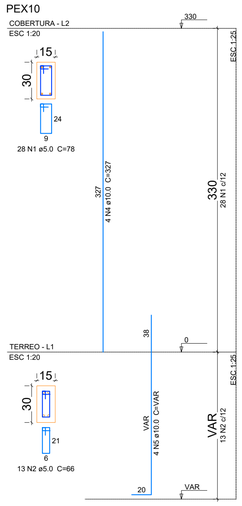


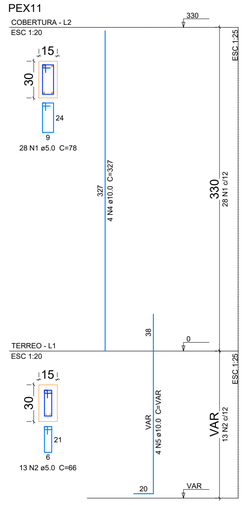
PEX09



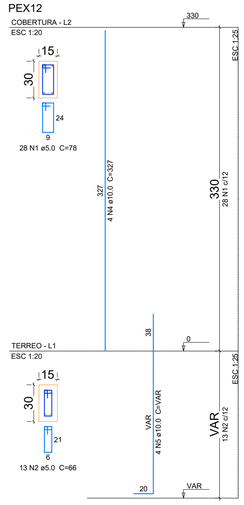
PEX10



PEX11



PEX12



Relação do aço

PEX05	PEX06	PEX07
PEX08	PEX09	PEX10
PEX11	PEX12	PEX13

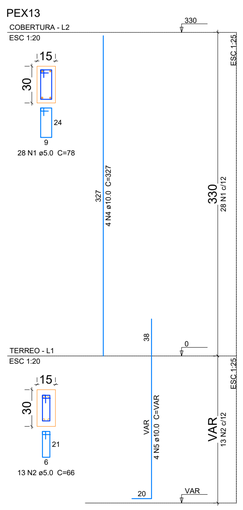
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	252	78	19656
	2	5.0	117	66	7722
	3	5.0	28	24	672
CA50	4	10.0	38	327	12426
	5	10.0	36	VAR	VAR
	6	10.0	2	75	150

Resumo do aço

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10 % (kg)
CA50	10.0	198.5	134.6
CA60	5.0	280.5	47.6
PESO TOTAL (kg)			
CA50	134.6		
CA60	47.6		

Volume de concreto (C-25) = 1.94 m³
Área de forma = 38.88 m²

PEX13



01 PILARES EM PRUMADA

1 : 25

REV	DATA	AUTOR	PROJETISTA	SETOR/DEPART.	ÓRGÃO
03					
02					
01					

REVISÕES

SAÚDE INDÍGENA

MINISTÉRIO DA SAÚDE
SECRETARIA ESPECIAL DE SAÚDE INDÍGENA

DISTRITO SANITÁRIO ESPECIAL INDÍGENA DO XINGU
SERVIÇO DE EDIFICAÇÕES E SANEAMENTO AMBIENTAL INDÍGENA - SESANI/DSEI - XINGU

OBRA:
REFORMA E AMPLIAÇÃO DA CASA DE SAÚDE INDÍGENA DE CANARANA - CASAI CANARANA

ENDEREÇO:
RUA MONDAI, 1278, MORADA DO SOL, CANARANA - MT

PROPRIETÁRIO: MINISTÉRIO DA SAÚDE - DISTRITO SANITÁRIO ESPECIAL INDÍGENA DO XINGU
DATA: 25/08/25

AUTOR DO PROJETO: JOSÉ GUILHERME MIRANDA DAMOUS - ENGENHEIRO CIVIL
CREA/CAU: 2019066249/MT

PROJETISTA:
REVISADO POR:
CREA/CAU:

ASSINATURAS:
QR CODE ART/RRT:

AUTOR DO PROJETO
PROPRIETÁRIO

DISCIPLINA DO PROJETO:
PROJETO ESTRUTURAL
QR CODE PROJETO:

CONTEÚDO:
DETALHE DOS PILARES

Nº: 25051.0009842022 - CASAI - EST - DE- R00

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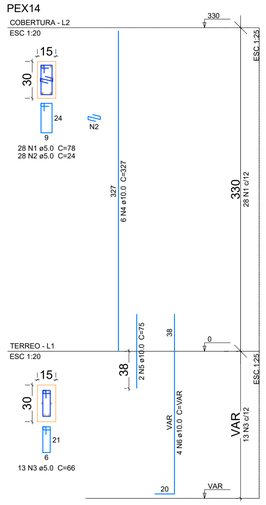
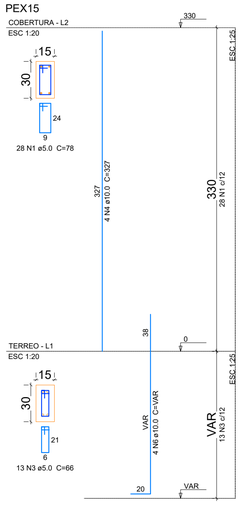
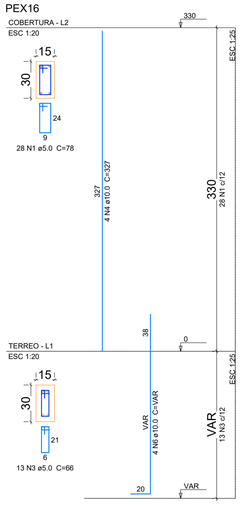
PEX14



PEX15



PEX16



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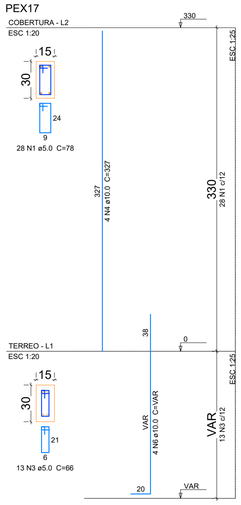
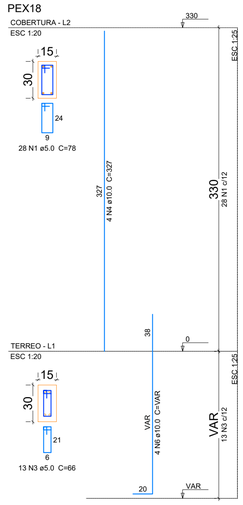
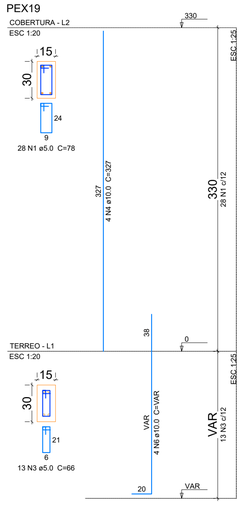


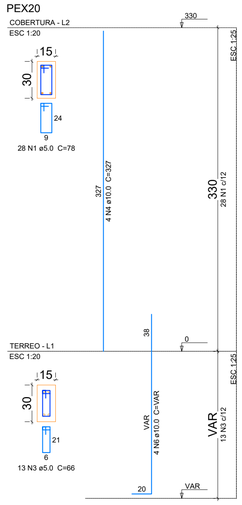
PEX18



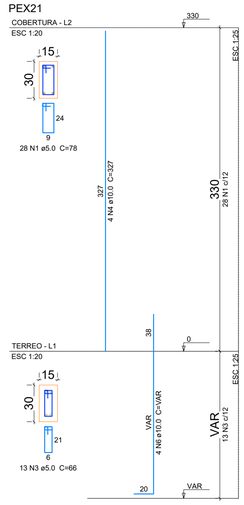
PEX19



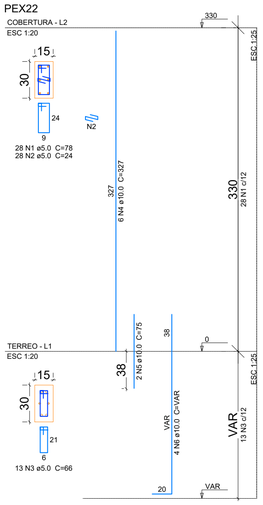
PEX20



PEX21



PEX22



01 PILARES EM PRUMADA

1 : 25

Relação do aço

PEX14 PEX15 PEX16
PEX17 PEX18 PEX19
PEX20 PEX21

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	224	78	17472
	2	5.0	28	24	672
	3	5.0	104	66	6864
CA50	4	10.0	34	327	11118
	5	10.0	2	75	150
	6	10.0	32	VAR	VAR

Resumo do aço

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10 % (kg)
CA50	10.0	177.4	120.3
CA60	5.0	250.1	42.4

PESO TOTAL (kg)	
CA50	120.3
CA60	42.4

Volume de concreto (C-25) = 1.73 m³
Área de forma = 34.56 m²

Relação do aço

PEX22

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	28	78	2184
	2	5.0	28	24	672
	3	5.0	13	66	858
CA50	4	10.0	6	327	1962
	5	10.0	2	75	150
	6	10.0	4	VAR	VAR

Resumo do aço

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10 % (kg)
CA50	10.0	29.2	19.8
CA60	5.0	37.2	6.3

PESO TOTAL (kg)	
CA50	19.8
CA60	6.3

Volume de concreto (C-25) = 0.22 m³
Área de forma = 4.32 m²

REV	DATA	AUTOR	PROJETISTA	SETOR/DEPART.	ÓRGÃO
03					
02					
01					

REVISÕES

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OBRA:
REFORMA E AMPLIAÇÃO DA CASA DE SAÚDE INDÍGENA DE CANARANA - CASAI CANARANA

ENDEREÇO:
RUA MONDAI, 1278, MORADA DO SOL, CANARANA - MT

PROPRIETÁRIO:
MINISTÉRIO DA SAÚDE - DISTRITO SANITÁRIO ESPECIAL INDÍGENA DO XINGU

DATA:
25/08/25

AUTOR DO PROJETO:
JOSÉ GUILHERME MIRANDA DAMOUS - ENGENHEIRO CIVIL

CREA/CAU:
2019066249/MT

PROJETISTA:

REVISADO POR:

CREA/CAU:

ASSINATURAS:

AUTOR DO PROJETO

PROPRIETÁRIO

QR CODE ART/RRT:

DISCIPLINA DO PROJETO:
PROJETO ESTRUTURAL

QR CODE PROJETO:

CONTEÚDO:
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Nº: 25051.0009842022 - CASAI - EST - DE- R00

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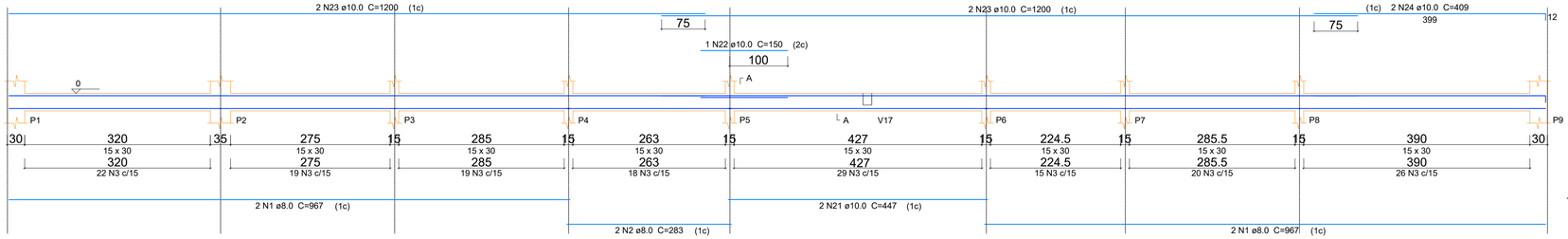
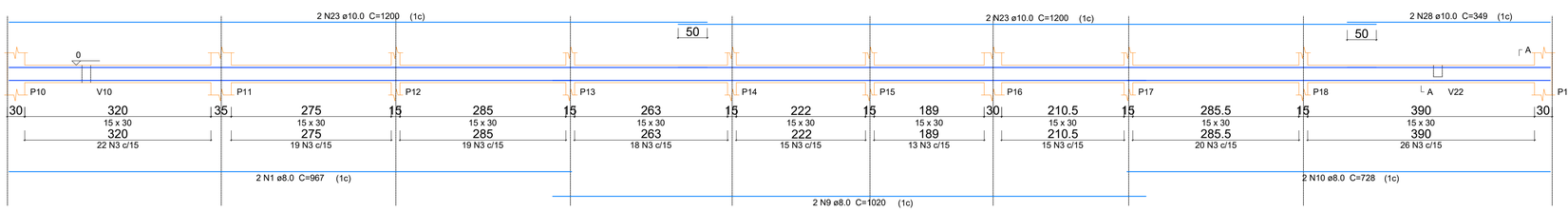
V1
ESC 1:50



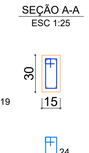
SEÇÃO A-A
ESC 1:25

168 N3 ø8.0 C=78

V2
ESC 1:50

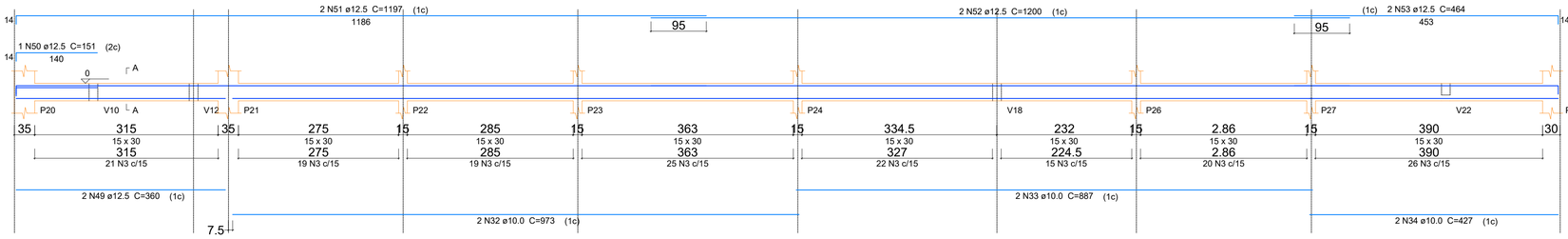


SEÇÃO A-A
ESC 1:25



167 N3 ø8.0 C=78

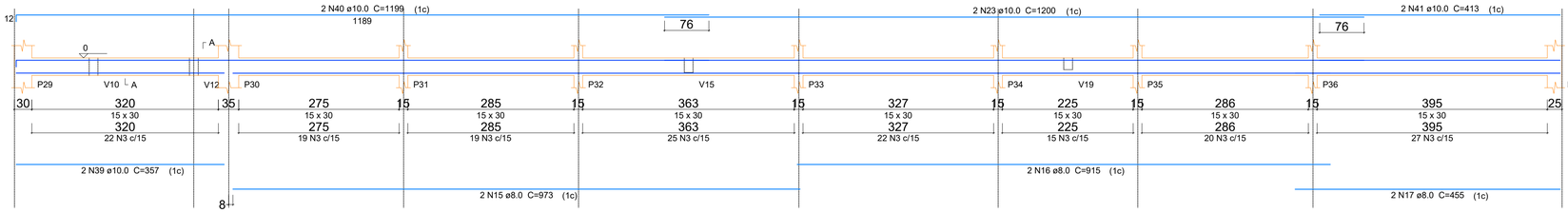
V3
ESC 1:50



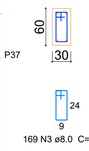
SEÇÃO A-A
ESC 1:25

167 N3 ø8.0 C=78

V7
ESC 1:50

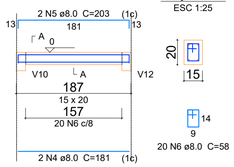


SEÇÃO A-A
ESC 1:25



169 N3 ø8.0 C=78

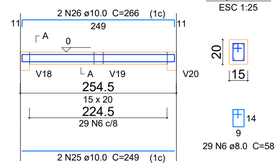
V4
ESC 1:50



SEÇÃO A-A
ESC 1:25

20 N6 ø8.0 C=58

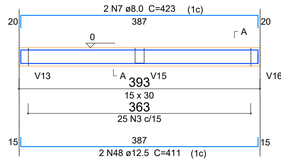
V5
ESC 1:50



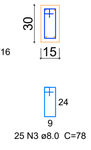
SEÇÃO A-A
ESC 1:25

29 N6 ø8.0 C=58

V6
ESC 1:50

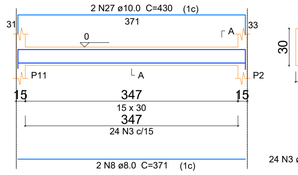


SEÇÃO A-A
ESC 1:25

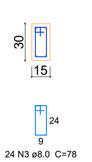


25 N3 ø8.0 C=78

V9
ESC 1:50



SEÇÃO A-A
ESC 1:25



24 N3 ø8.0 C=78

Relação do aço

V1	V2	V3
V4	V5	V6
V7	V8	V9
V10	V11	V12
V13	V14	V15
V16	V17	V18
V19	V20	V21
V22	V23	

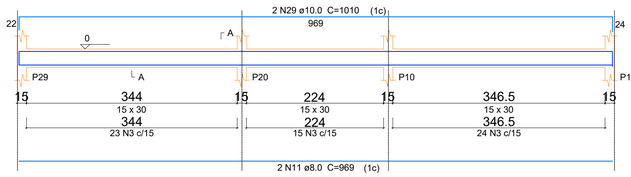
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA50	1	8.0	6	967	5802
	2	8.0	2	283	566
	3	8.0	1195	78	93210
	4	8.0	2	181	362
	5	8.0	2	203	406
	6	8.0	152	58	8816
	7	8.0	2	423	846
	8	8.0	6	371	2226
	9	8.0	2	1020	2040
	10	8.0	2	728	1456
	11	8.0	11	969	10659
	12	8.0	2	205	410
	13	8.0	2	229	458
	14	8.0	41	68	2788
	15	8.0	2	973	1946
	16	8.0	2	915	1830
	17	8.0	2	455	910
	18	8.0	4	248	992
	19	8.0	4	270	1080
	20	8.0	2	968	1936
	21	10.0	2	447	894
	22	10.0	1	150	150
	23	10.0	10	1200	12000
	24	10.0	2	409	818
	25	10.0	2	249	498
	26	10.0	2	266	532
	27	10.0	2	430	860
	28	10.0	2	349	698
	29	10.0	2	1010	2020
	30	10.0	2	607	1214
	31	10.0	2	634	1268
	32	10.0	2	973	1946
	33	10.0	2	887	1774
	34	10.0	2	427	854
	35	10.0	4	988	3952
	36	10.0	4	368	1472
	37	10.0	2	395	790
	38	10.0	23	79	1817
	39	10.0	2	357	714
	40	10.0	2	1199	2398
	41	10.0	2	413	826
	42	10.0	6	969	5814
	43	10.0	1	436	436
	44	10.0	2	1009	2018
	45	10.0	2	387	774
	46	10.0	1	170	170
	47	10.0	2	996	1992
	48	12.5	2	411	822
	49	12.5	2	360	720
	50	12.5	1	151	151
	51	12.5	2	1197	2394
	52	12.5	2	1200	2400
	53	12.5	2	464	928
	54	12.5	2	383	766
	55	12.5	2	425	850

Resumo do aço

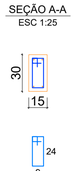
AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10 % (kg)
CA50	8.0	1387.4	602.2
	10.0	487	330.3
	12.5	90.4	95.7
PESO TOTAL (kg)			
CA50	1028.2		

Volume de concreto (C-25) = 9.42 m³
Área de forma = 157.87 m²

V8
ESC 1:50

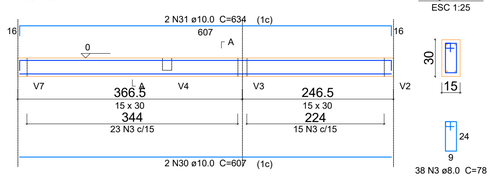


SEÇÃO A-A
ESC 1:25

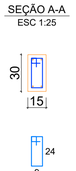


62 N3 ø8.0 C=78

V10
ESC 1:50

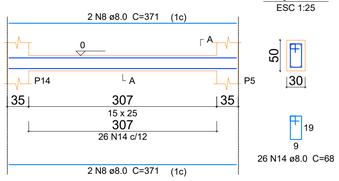


SEÇÃO A-A
ESC 1:25



38 N3 ø8.0 C=78

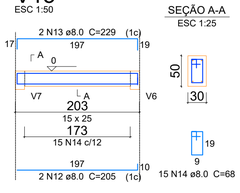
V14
ESC 1:50



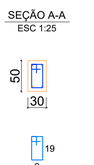
SEÇÃO A-A
ESC 1:25

26 N14 ø8.0 C=68

V15
ESC 1:50

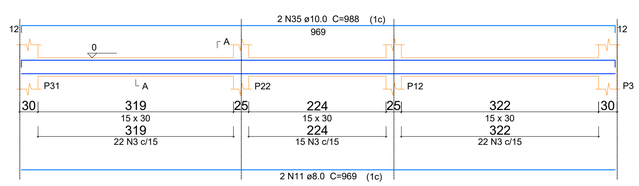


SEÇÃO A-A
ESC 1:25

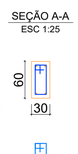


15 N14 ø8.0 C=68

V11
ESC 1:50

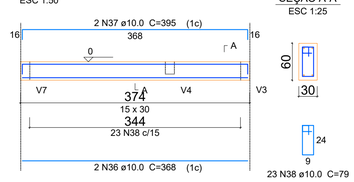


SEÇÃO A-A
ESC 1:25

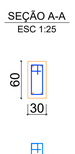


59 N3 ø8.0 C=78

V12
ESC 1:50

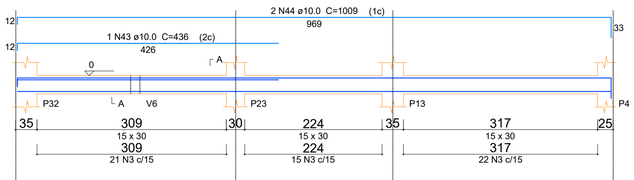


SEÇÃO A-A
ESC 1:25

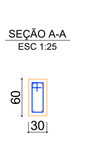


23 N38 ø10.0 C=79

V13
ESC 1:50



SEÇÃO A-A
ESC 1:25



58 N3 ø8.0 C=78

VIGAS BALDRAME
01
1 : 25

REV	DATA	AUTOR	PROJETISTA	SETOR/DEPART.	ÓRGÃO
03					
02					
01					

REVISÕES

SAÚDE INDÍGENA
MINISTÉRIO DA SAÚDE
SECRETARIA ESPECIAL DE SAÚDE INDÍGENA

DISTRITO SANITÁRIO ESPECIAL INDÍGENA DO XINGU
SERVIÇO DE EDIFICAÇÕES E SANEAMENTO AMBIENTAL INDÍGENA - SESANI/DSEI - XINGU

OBRA:
REFORMA E AMPLIAÇÃO DA CASA DE SAÚDE INDÍGENA DE CANARANA - CASAI CANARANA

ENDEREÇO:
RUA MONDAI, 1278, MORADA DO SOL, CANARANA - MT

PROPRIETÁRIO:
MINISTÉRIO DA SAÚDE - DISTRITO SANITÁRIO ESPECIAL INDÍGENA DO XINGU

DATA:
25/08/25

AUTOR DO PROJETO:
JOSÉ GUILHERME MIRANDA DAMOUS - ENGENHEIRO CIVIL

CREA/CAU:
2019066249/MT

PROJETISTA:

REVISADO POR:

CREA/CAU:

ASSINATURAS:

AUTOR DO PROJETO

PROPRIETÁRIO

QR CODE ART/RRT:

DISCIPLINA DO PROJETO:
PROJETO ESTRUTURAL

QR CODE PROJETO:

CONTEÚDO:
DETALHE DAS VIGAS BALDRAME

Nº: 25051.0009842022 - CASAI - EST - DE- R00

08/13

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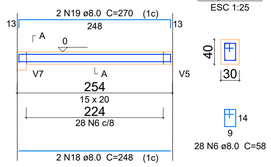
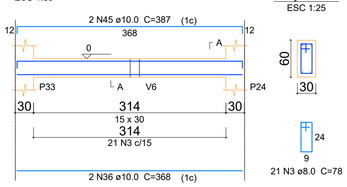
V19
ESC 1:50



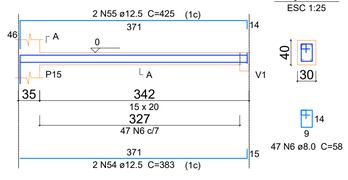
SEÇÃO A-A
ESC 1:25

V16
ESC 1:50



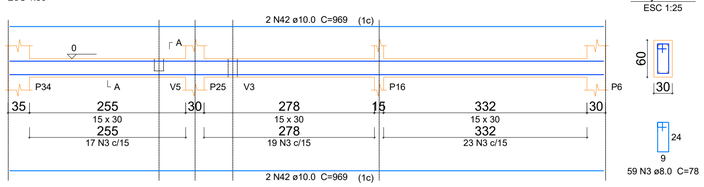
SEÇÃO A-A
ESC 1:25

V17
ESC 1:50

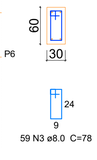


SEÇÃO A-A
ESC 1:25

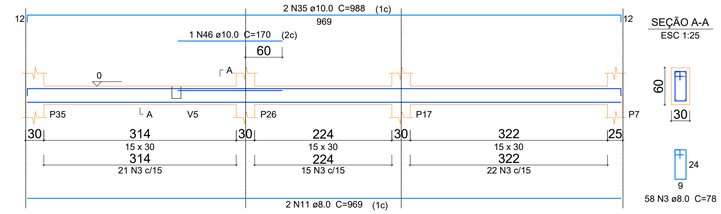
V18
ESC 1:50



SEÇÃO A-A
ESC 1:25

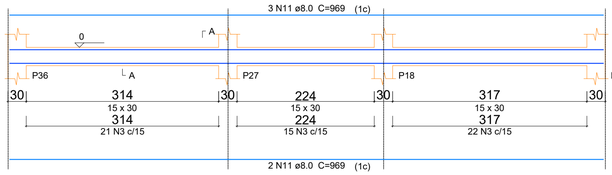


V20
ESC 1:50



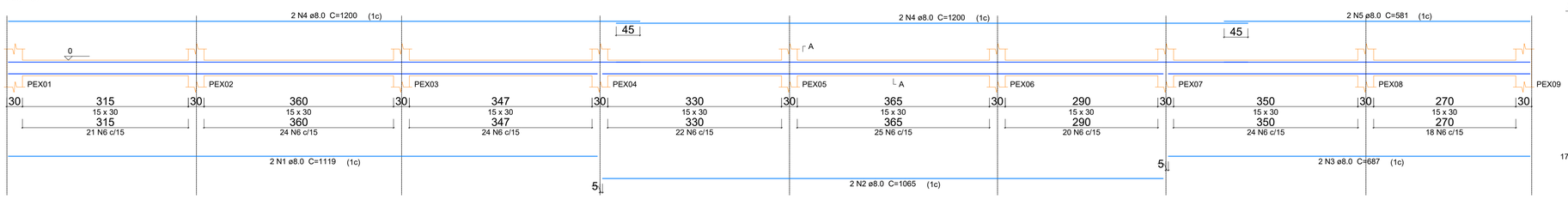
SEÇÃO A-A
ESC 1:25

V21
ESC 1:50



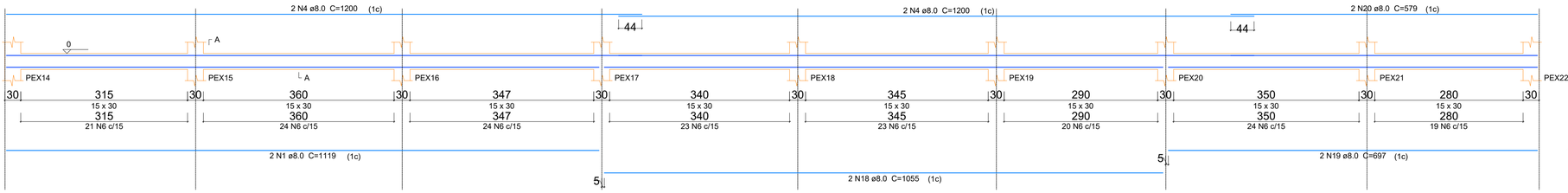
SEÇÃO A-A
ESC 1:25

VEX01
ESC 1:50

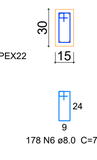


SEÇÃO A-A
ESC 1:25

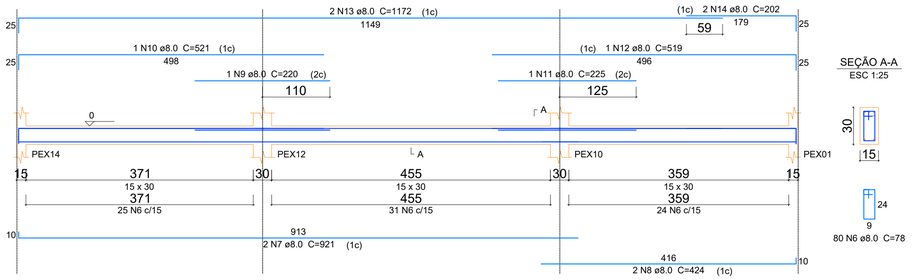
VEX04
ESC 1:50



SEÇÃO A-A
ESC 1:25

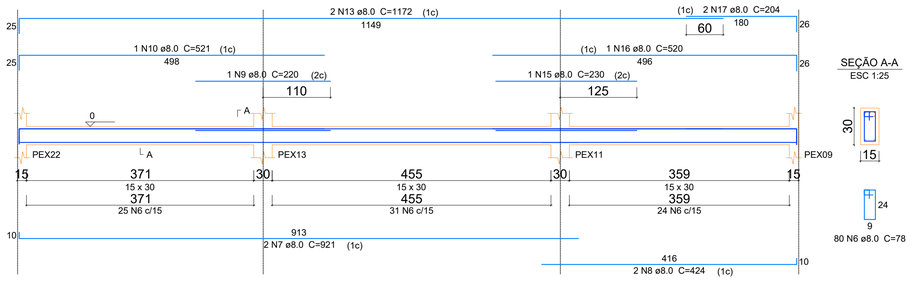


VEX02
ESC 1:50



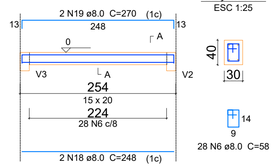
SEÇÃO A-A
ESC 1:25

VEX03
ESC 1:50



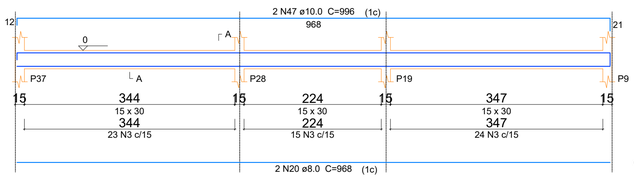
SEÇÃO A-A
ESC 1:25

V22
ESC 1:50

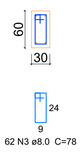


SEÇÃO A-A
ESC 1:25

V23
ESC 1:50



SEÇÃO A-A
ESC 1:25



01 VIGAS BALDRAME
1 : 25

Relação do aço

VEX01 VEX02 VEX03
VEX04

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA50	1	8.0	4	1119	4476
	2	8.0	2	1065	2130
	3	8.0	2	687	1374
	4	8.0	8	1200	9600
	5	8.0	2	581	1162
	6	8.0	516	78	40248
	7	8.0	4	921	3684
	8	8.0	4	424	1696
	9	8.0	2	220	440
	10	8.0	2	521	1042
	11	8.0	1	225	225
	12	8.0	1	519	519
	13	8.0	4	1172	4688
	14	8.0	2	202	404
	15	8.0	1	230	230
	16	8.0	1	520	520
	17	8.0	2	204	408
	18	8.0	2	1055	2110
	19	8.0	2	697	1394
	20	8.0	2	579	1158

Resumo do aço

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10 % (kg)
CA50	8.0	775.1	336.4

PESO TOTAL (kg)
CA50 336.4

Volume de concreto (C-25) = 3.75 m³
Área de forma = 62.58 m²

REV	DATA	AUTOR	PROJETISTA	SETOR/DEPART.	ÓRGÃO
03					
02					
01					

REVISÕES

SAÚDE INDÍGENA
MINISTÉRIO DA SAÚDE
SECRETARIA ESPECIAL DE SAÚDE INDÍGENA

DISTRITO SANITÁRIO ESPECIAL INDÍGENA DO XINGU
SERVIÇO DE EDIFICAÇÕES E SANEAMENTO AMBIENTAL INDÍGENA - SESANI/DSEI - XINGU

OBRA:
REFORMA E AMPLIAÇÃO DA CASA DE SAÚDE INDÍGENA DE CANARANA - CASAI CANARANA

ENDEREÇO:
RUA MONDAI, 1278, MORADA DO SOL, CANARANA - MT

PROPRIETÁRIO: MINISTÉRIO DA SAÚDE - DISTRITO SANITÁRIO ESPECIAL INDÍGENA DO XINGU
DATA: 25/08/25

AUTOR DO PROJETO: JOSÉ GUILHERME MIRANDA DAMOUS - ENGENHEIRO CIVIL
CREA/CAU: 2019066249/MT

PROJETISTA:
REVISADO POR:
CREA/CAU:

ASSINATURAS:
AUTOR DO PROJETO
PROPRIETÁRIO
QR CODE ART/RRT:

DISCIPLINA DO PROJETO: PROJETO ESTRUTURAL
QR CODE PROJETO:

CONTEÚDO: DETALHE DAS VAGAS BALDRAME

Nº: 25051.0009842022 - CASAI - EST - DE- R00

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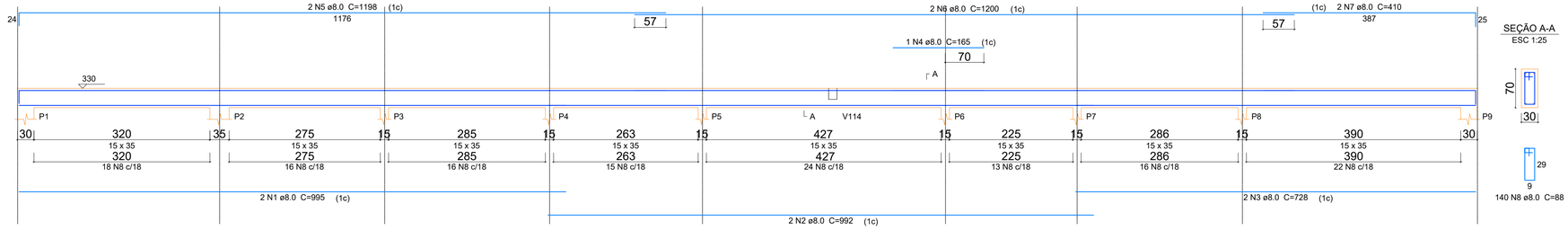
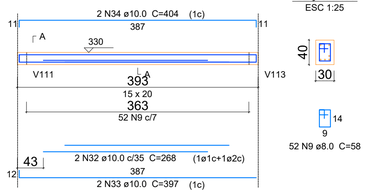
V101
ESC 1:50



SEÇÃO A-A
ESC 1:25

140 N8 ø8.0 C=88

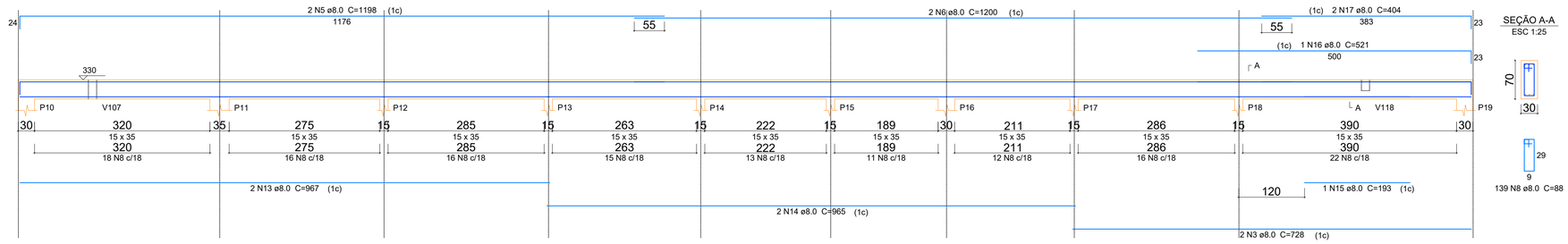
V104
ESC 1:50



SEÇÃO A-A
ESC 1:25

52 N9 ø8.0 C=58

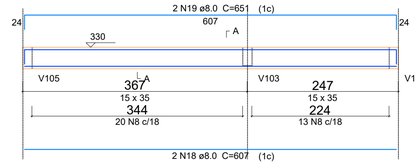
V102
ESC 1:50



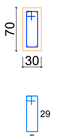
SEÇÃO A-A
ESC 1:25

139 N8 ø8.0 C=88

V107
ESC 1:50



SEÇÃO A-A
ESC 1:25



33 N8 ø8.0 C=88

Relação do aço

V101	V102	V103
V104	V105	V106
V107	V108	V109
V110	V111	V112
V113	V114	V115
V116	V117	V118
V119		

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA50	1	8.0	2	995	1990
	2	8.0	2	992	1984
	3	8.0	4	728	2912
	4	8.0	1	165	165
	5	8.0	4	1198	4792
	6	8.0	4	1200	4800
	7	8.0	2	410	820
	8	8.0	714	88	62832
	9	8.0	420	58	24360
	10	8.0	3	87	261
	11	8.0	2	985	1970
	12	8.0	4	1013	4052
	13	8.0	2	967	1934
	14	8.0	2	965	1930
	15	8.0	1	193	193
	16	8.0	1	521	521
	17	8.0	2	404	808
	18	8.0	2	607	1214
	19	8.0	2	651	1302
	20	8.0	2	417	834
	21	8.0	2	368	736
	22	8.0	2	390	780
	23	8.0	167	78	13026
	24	8.0	2	230	460
	25	8.0	1	169	169
	26	8.0	2	248	496
	27	8.0	2	270	540
	28	8.0	2	376	752
	29	8.0	4	969	3876
	30	8.0	2	976	1952
	31	8.0	2	1012	2024
	32	10.0	2	268	536
	33	10.0	2	397	794
	34	10.0	2	404	808
	35	10.0	2	390	780
	36	10.0	4	967	3868
	37	10.0	2	965	1930
	38	10.0	1	193	193
	39	10.0	4	728	2912
	40	10.0	1	145	145
	41	10.0	1	210	210
	42	10.0	3	185	555
	43	10.0	1	135	135
	44	10.0	2	1198	2396
	45	10.0	2	1200	2400
	46	10.0	2	451	902
	47	10.0	1	166	166
	48	10.0	4	969	3876
	49	10.0	2	454	908
	50	10.0	2	1029	2058
	51	10.0	4	371	1484
	52	10.0	2	415	830
	53	10.0	2	1035	2070
	54	10.0	2	1198	2396
	55	10.0	2	1109	2218
	56	10.0	2	117	234
	57	10.0	1	167	167
	58	10.0	1	169	169
	59	10.0	2	368	736
	60	10.0	2	415	830
	61	10.0	2	411	822
	62	10.0	2	1003	2006
	63	12.5	1	469	469
	64	12.5	2	1043	2086
	65	12.5	1	435	435
	66	12.5	2	442	884

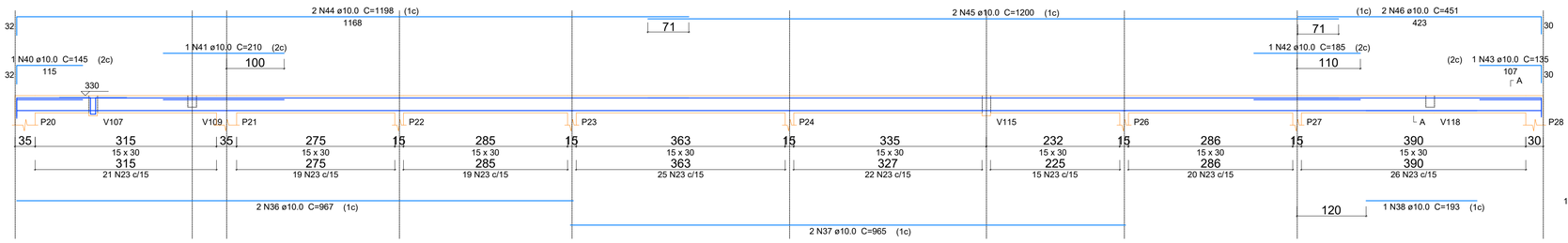
Resumo do aço

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10 % (kg)
CA50	8.0	1444.9	627.1
	10.0	395.4	268.1
	12.5	38.8	41.1

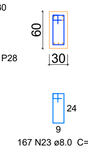
PESO TOTAL (kg)	
CA50	936.3

Volume de concreto (C-25) = 9.45 m³
Área de forma = 156.02 m²

V103
ESC 1:50

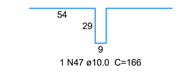


SEÇÃO A-A
ESC 1:25



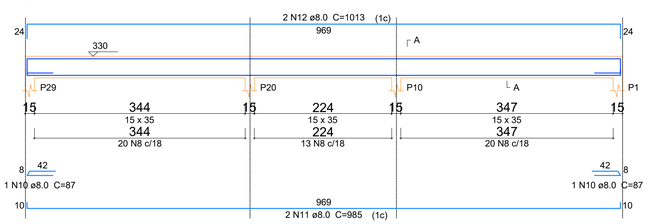
167 N23 ø8.0 C=78

SUSPENSÃO V107
ESC 1:25

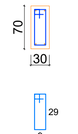


1 N47 ø10.0 C=166

V106
ESC 1:50

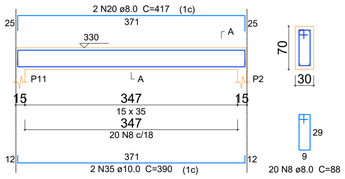


SEÇÃO A-A
ESC 1:25



53 N8 ø8.0 C=88

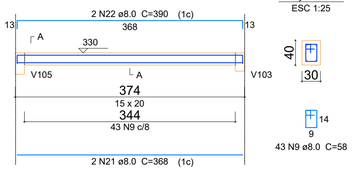
V108
ESC 1:50



SEÇÃO A-A
ESC 1:25

20 N8 ø8.0 C=88

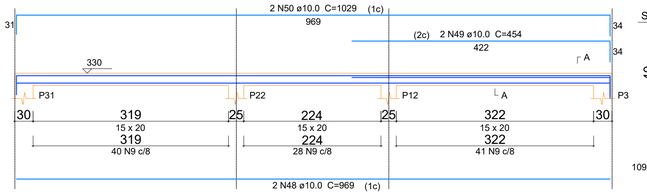
V109
ESC 1:50



SEÇÃO A-A
ESC 1:25

43 N9 ø8.0 C=58

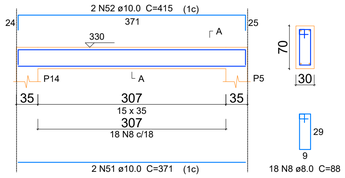
V110
ESC 1:50



SEÇÃO A-A
ESC 1:25

109 N9 ø8.0 C=58

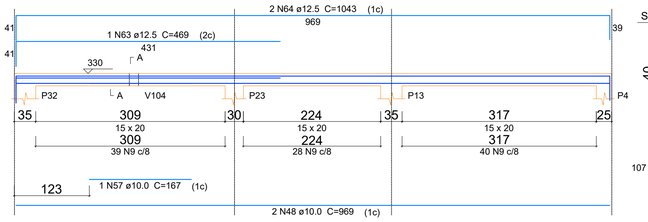
V112
ESC 1:50



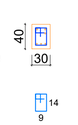
SEÇÃO A-A
ESC 1:25

18 N8 ø8.0 C=88

V111
ESC 1:50

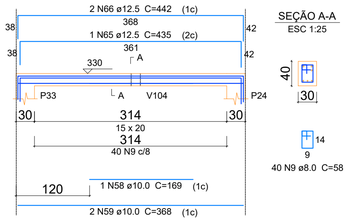


SEÇÃO A-A
ESC 1:25



107 N9 ø8.0 C=58

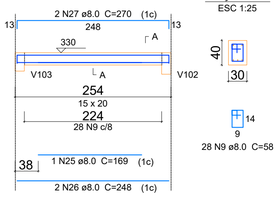
V113
ESC 1:50



SEÇÃO A-A
ESC 1:25

40 N9 ø8.0 C=58

V118
ESC 1:50



SEÇÃO A-A
ESC 1:25

28 N9 ø8.0 C=58

01 VIGAS DE RESPALDO
1 : 25

REV	DATA	AUTOR	PROJETISTA	SETOR/DEPART.	ÓRGÃO
03					
02					
01					

REVISÕES

SAÚDE INDÍGENA

MINISTÉRIO DA SAÚDE
SECRETARIA ESPECIAL DE SAÚDE INDÍGENA

DISTRITO SANITÁRIO ESPECIAL INDÍGENA DO XINGU
SERVIÇO DE EDIFICAÇÕES E SANEAMENTO AMBIENTAL INDÍGENA - SESANI/DSEI - XINGU

OBRA:
REFORMA E AMPLIAÇÃO DA CASA DE SAÚDE INDÍGENA DE CANARANA - CASAI CANARANA

ENDEREÇO:
RUA MONDAI, 1278, MORADA DO SOL, CANARANA - MT

PROPRIETÁRIO: MINISTÉRIO DA SAÚDE - DISTRITO SANITÁRIO ESPECIAL INDÍGENA DO XINGU
DATA: 25/08/25

AUTOR DO PROJETO: JOSÉ GUILHERME MIRANDA DAMOUS - ENGENHEIRO CIVIL
CREA/CAU: 2019066249/MT

PROJETISTA:
REVISADO POR:
CREA/CAU:

ASSINATURAS:
AUTOR DO PROJETO
PROPRIETÁRIO
QR CODE ART/RRT:

DISCIPLINA DO PROJETO:
PROJETO ESTRUTURAL
QR CODE PROJETO:

CONTEÚDO:
DETALHE DAS VIGAS DE RESPALDO

Nº: 25051.0009842022 - CASAI - EST - DE- R00

10/13

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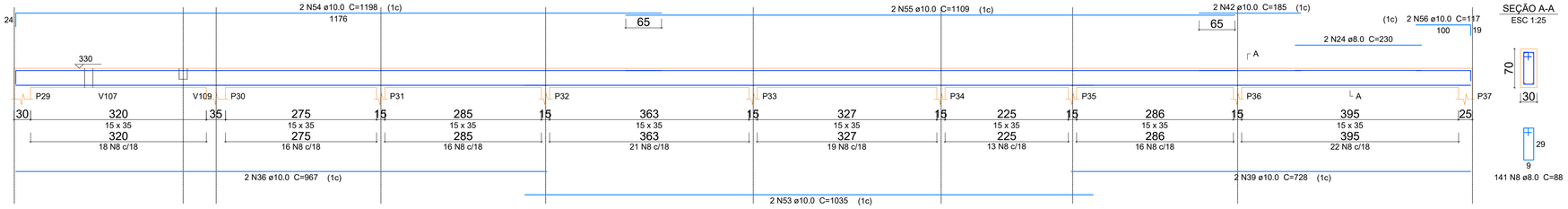
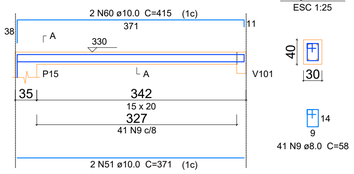
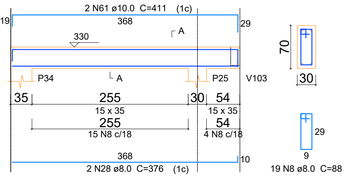
V105
ESC 1:50



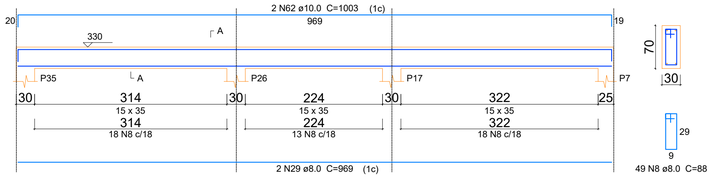
V114
ESC 1:50



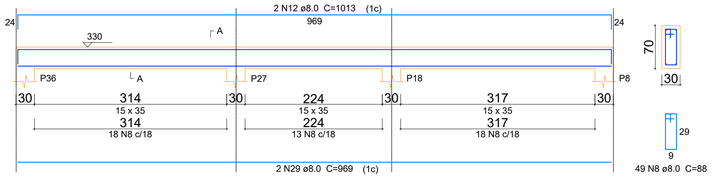
V115
ESC 1:50



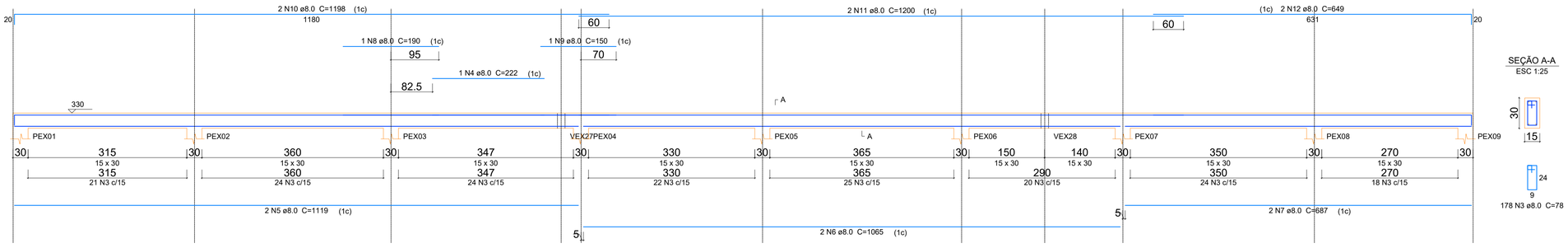
V116
ESC 1:50



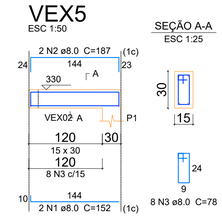
V117
ESC 1:50



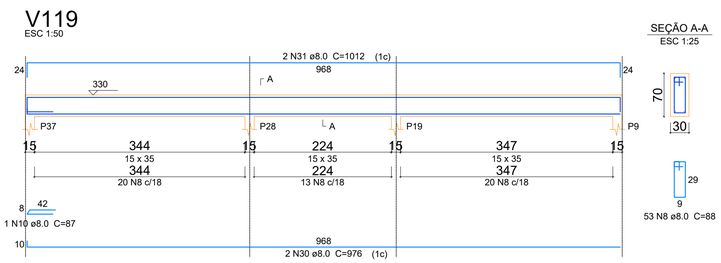
VEX01
ESC 1:50



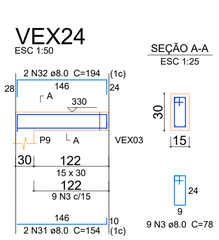
VEX5
ESC 1:50



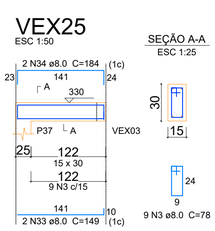
V119
ESC 1:50



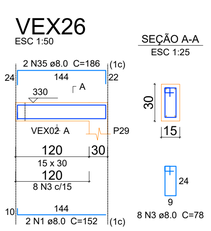
VEX24
ESC 1:50



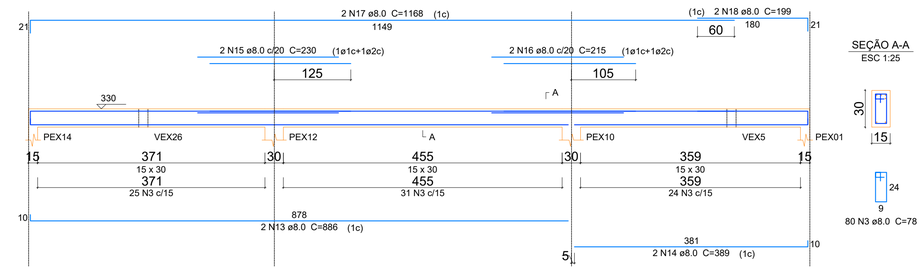
VEX25
ESC 1:50



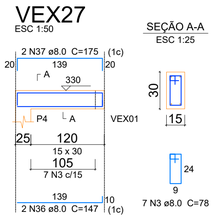
VEX26
ESC 1:50



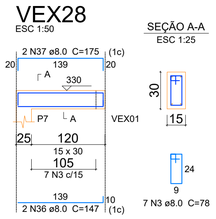
VEX02
ESC 1:50



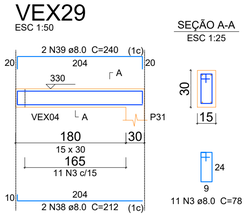
VEX27
ESC 1:50



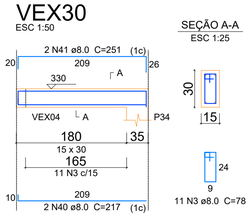
VEX28
ESC 1:50



VEX29
ESC 1:50



VEX30
ESC 1:50



01 VIGAS DE RESPALDO
1 : 25

Relação do aço

VEX5	VEX01	VEX02
VEX03	VEX04	VEX24
VEX25	VEX26	VEX27
VEX28	VEX29	VEX30

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA50	1	8.0	4	152	608
	2	8.0	2	187	374
	3	8.0	586	78	45708
	4	8.0	2	222	444
	5	8.0	4	1119	4476
	6	8.0	2	1065	2130
	7	8.0	2	687	1374
	8	8.0	1	190	190
	9	8.0	1	150	150
	10	8.0	4	1198	4792
	11	8.0	4	1200	4800
	12	8.0	2	649	1298
	13	8.0	2	886	1772
	14	8.0	2	389	778
	15	8.0	4	230	920
	16	8.0	4	215	860
	17	8.0	2	1168	2336
	18	8.0	2	199	398
	19	8.0	2	921	1842
	20	8.0	2	424	848
	21	8.0	2	1167	2334
	22	8.0	2	200	400
	23	8.0	1	217	217
	24	8.0	2	1055	2110
	25	8.0	2	697	1394
	26	8.0	1	145	145
	27	8.0	1	185	185
	28	8.0	1	565	565
	29	8.0	1	165	165
	30	8.0	2	651	1302
	31	8.0	2	154	308
	32	8.0	2	194	388
	33	8.0	2	149	298
	34	8.0	2	184	368
	35	8.0	2	186	372
	36	8.0	4	147	588
	37	8.0	4	175	700
	38	8.0	2	212	424
	39	8.0	2	240	480
	40	8.0	2	217	434
	41	8.0	2	251	502

Resumo do aço

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10 % (kg)
CA50	8.0	897.8	389.7
PESO TOTAL (kg)			
CA50	389.7		

Volume de concreto (C-25) = 4.35 m³
Área de forma = 72.44 m²

REV	DATA	AUTOR	PROJETISTA	SETOR/DEPART.	ÓRGÃO
03					
02					
01					

REVISÕES

SAÚDE INDÍGENA

MINISTÉRIO DA SAÚDE
SECRETARIA ESPECIAL DE SAÚDE INDÍGENA

DISTRITO SANITÁRIO ESPECIAL INDÍGENA DO XINGU
SERVIÇO DE EDIFICAÇÕES E SANEAMENTO AMBIENTAL INDÍGENA - SESANI/DSEI - XINGU

OBRA:
REFORMA E AMPLIAÇÃO DA CASA DE SAÚDE INDÍGENA DE CANARANA - CASAI CANARANA

ENDEREÇO:
RUA MONDAI, 1278, MORADA DO SOL, CANARANA - MT

PROPRIETÁRIO:
MINISTÉRIO DA SAÚDE - DISTRITO SANITÁRIO ESPECIAL INDÍGENA DO XINGU

DATA:
25/08/25

AUTOR DO PROJETO:
JOSÉ GUILHERME MIRANDA DAMOUS - ENGENHEIRO CIVIL

CREA/CAU:
2019066249/MT

PROJETISTA:

REVISADO POR:

CREA/CAU:

ASSINATURAS:

AUTOR DO PROJETO

PROPRIETÁRIO

QR CODE ART/RRT:

DISCIPLINA DO PROJETO:
PROJETO ESTRUTURAL

QR CODE PROJETO:

CONTEÚDO:
DETALHE DAS VIGAS DE RESPALDO

Nº: 25051.0009842022 - CASAI - EST - DE- R00

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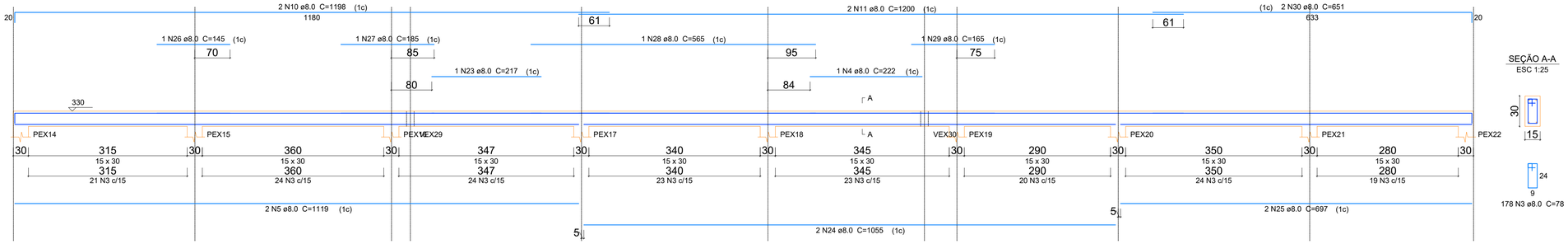
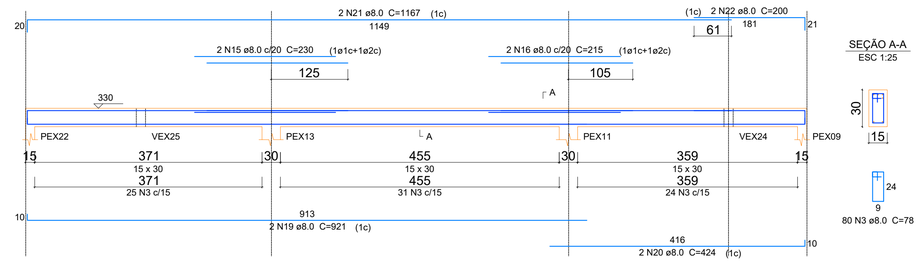
VEX04
ESC 1:50

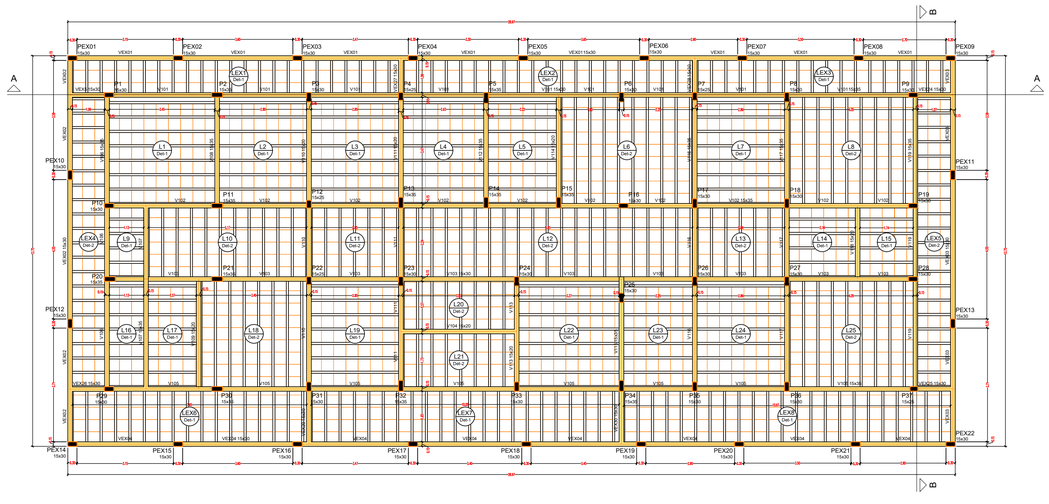


SEÇÃO A-A
ESC 1:25

VEX03
ESC 1:50



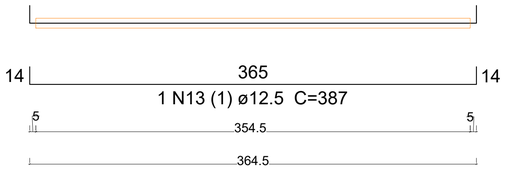
SEÇÃO A-A
ESC 1:25



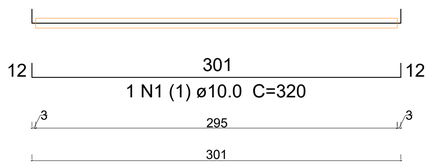
01 VIGAS DE RESPALDO
1 : 25

02 FORMA DO PAV. RESPALDO
1 : 50

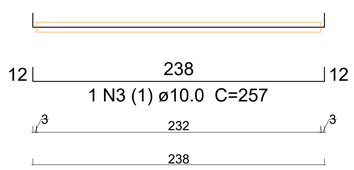
VP1a (7 unidades)
(L1)
ESC 1:50



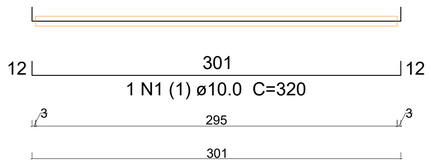
VP2a (7 unidades)
(L2)
ESC 1:50



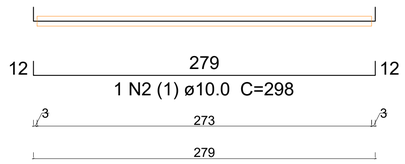
VP5a (7 unidades)
(L5)
ESC 1:50



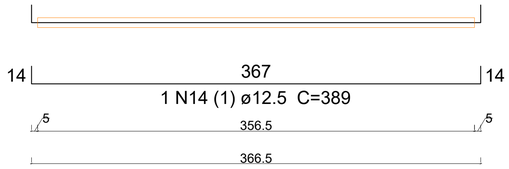
VP3a (7 unidades)
(L3)
ESC 1:50



VP4a (7 unidades)
(L4)
ESC 1:50



VP6a (9 unidades)
(L6)
ESC 1:50



03 VIGOTAS DE LAJE
1 : 25

Vigas			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
V101	15x30	0	330
V102	15x35	0	330
V103	15x30	0	330
V104	15x20	0	330
V105	15x35	0	330
V106	15x30	0	330
V107	15x35	0	330
V108	15x35	0	330
V109	15x20	0	330
V110	15x20	0	330
V111	15x35	0	330
V112	15x35	0	330
V113	15x20	0	330
V114	15x20	0	330
V115	15x35	0	330
V116	15x35	0	330
V117	15x35	0	330
V118	15x35	0	330
V119	15x35	0	330
VEX01	15x30	0	330
VEX02	15x30	0	330
VEX03	15x30	0	330
VEX04	15x30	0	330
VEX05	15x30	0	330
VEX06	15x30	0	330
VEX07	15x30	0	330
VEX08	15x30	0	330
VEX09	15x30	0	330
VEX10	15x30	0	330

Blocos de enchimento					
Detalhe	Tipo	Nome	Dimensões (cm)		Quantidade
			H	W	L
1U	EPS Unidirecional	BIMEPS1U	16	40	1250

Lajes							
Nome	Tipo	Altura (cm)	Elevação (cm)	Nível (cm)	Peso próprio (kgf/m²)	Sobrecarga (kgf/m²)	
						Adicional	Acidental
L1	Pré-moldada	13	0	330	156	10	204
L2	Pré-moldada	13	0	330	156	10	204
L3	Pré-moldada	13	0	330	156	10	204
L4	Pré-moldada	13	0	330	156	10	204
L5	Pré-moldada	13	0	330	156	10	204
L6	Pré-moldada	13	0	330	156	10	204
L7	Pré-moldada	13	0	330	156	10	204
L8	Pré-moldada	13	0	330	156	10	204
L9	Pré-moldada	13	0	330	156	10	204
L10	Pré-moldada	13	0	330	156	10	204
L11	Pré-moldada	13	0	330	156	10	204
L12	Pré-moldada	13	0	330	156	10	204
L13	Pré-moldada	13	0	330	156	10	204
L14	Pré-moldada	13	0	330	156	10	204
L15	Pré-moldada	13	0	330	156	10	204
L16	Pré-moldada	13	0	330	156	10	204
L17	Pré-moldada	13	0	330	156	10	204
L18	Pré-moldada	13	0	330	156	10	204
L19	Pré-moldada	13	0	330	156	10	204
L20	Pré-moldada	13	0	330	156	10	204
L21	Pré-moldada	13	0	330	156	10	204
L22	Pré-moldada	13	0	330	156	10	204
L23	Pré-moldada	13	0	330	156	10	204
L24	Pré-moldada	13	0	330	156	10	204
L25	Pré-moldada	13	0	330	156	10	204
LEX1	Pré-moldada	13	0	330	156	10	204
LEX2	Pré-moldada	13	0	330	156	10	204
LEX3	Pré-moldada	13	0	330	156	10	204
LEX4	Pré-moldada	13	0	330	156	10	204
LEX5	Pré-moldada	13	0	330	156	10	204
LEX6	Pré-moldada	13	0	330	156	10	204
LEX7	Pré-moldada	13	0	330	156	10	204
LEX8	Pré-moldada	13	0	330	156	10	204

Características dos materiais	
fck (kgf/cm²)	Eci (kgf/cm²)
250	241500

Dimensão máxima do agregado = 19 mm

Pilares			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
P1	15 x 35	0	330
P2	15 x 30	0	330
P3	15 x 25	0	330
P4	15 x 35	0	330
P5	15 x 35	0	330
P6	15 x 30	0	330
P7	15 x 20	0	330
P8	15 x 30	0	330
P9	15 x 30	0	330
P10	15 x 30	0	330
P11	15 x 35	0	330
P12	15 x 25	0	330
P13	15 x 30	0	330
P14	15 x 35	0	330
P15	15 x 35	0	330
P16	15 x 30	0	330
P17	15 x 30	0	330
P18	15 x 30	0	330
P19	15 x 30	0	330
P20	15 x 30	0	330
P21	15 x 35	0	330
P22	15 x 25	0	330
P23	15 x 30	0	330
P24	15 x 30	0	330
P25	15 x 30	0	330
P26	15 x 30	0	330
P27	15 x 30	0	330
P28	15 x 30	0	330
P29	15 x 30	0	330
P30	15 x 35	0	330
P31	15 x 30	0	330
P32	15 x 30	0	330
P33	15 x 30	0	330
P34	15 x 35	0	330
P35	15 x 30	0	330
P36	15 x 30	0	330
P37	15 x 30	0	330
PEX01	15 x 30	0	330
PEX02	15 x 30	0	330
PEX03	15 x 30	0	330
PEX04	15 x 30	0	330
PEX05	15 x 30	0	330
PEX06	15 x 30	0	330
PEX07	15 x 30	0	330
PEX08	15 x 30	0	330
PEX09	15 x 30	0	330
PEX10	15 x 30	0	330
PEX11	15 x 30	0	330
PEX12	15 x 30	0	330
PEX13	15 x 30	0	330
PEX14	15 x 30	0	330
PEX15	15 x 30	0	330
PEX16	15 x 30	0	330
PEX17	15 x 30	0	330
PEX18	15 x 30	0	330
PEX19	15 x 30	0	330
PEX20	15 x 30	0	330
PEX21	15 x 30	0	330
PEX22	15 x 30	0	330

Legenda dos Pilares
- Pilar que morre
- Pilar que passa
- Pilar que nasce
- Pilar com mudança de seção

Detalhe 1 (esc. 1:30)

Detalhe 2 (esc. 1:30)

REV	DATA	AUTOR	PROJETISTA	SETOR/DEPART.	ÓRGÃO
03					
02					
01					

REVISÕES

SAÚDE INDÍGENA

MINISTÉRIO DA SAÚDE
SECRETARIA ESPECIAL DE SAÚDE INDÍGENA

DISTRITO SANITÁRIO ESPECIAL INDÍGENA DO XINGU
SERVIÇO DE EDIFICAÇÕES E SANEAMENTO AMBIENTAL INDÍGENA - SESANI/DSEI - XINGU

OBRA:
REFORMA E AMPLIAÇÃO DA CASA DE SAÚDE INDÍGENA DE CANARANA - CASAI CANARANA

ENDEREÇO:
RUA MONDAI, 1278, MORADA DO SOL, CANARANA - MT

PROPRIETÁRIO:
MINISTÉRIO DA SAÚDE - DISTRITO SANITÁRIO ESPECIAL INDÍGENA DO XINGU

DATA:
25/08/25

AUTOR DO PROJETO:
JOSÉ GUILHERME MIRANDA DAMOUS - ENGENHEIRO CIVIL

CREA/CAU:
2019066249/MT

PROJETISTA:

REVISADO POR:

CREA/CAU:

ASSINATURAS:

AUTOR DO PROJETO

PROPRIETÁRIO

QR CODE ART/RRT:

DISCIPLINA DO PROJETO:
PROJETO ESTRUTURAL

QR CODE PROJETO:

CONTEÚDO:
DETALHE DAS VIGOTAS DE LAJE

Nº: 25051.0009842022 - CASAI - EST - DE- R00

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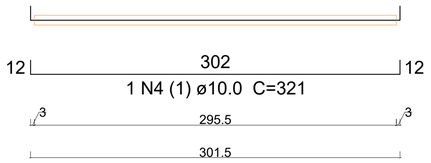
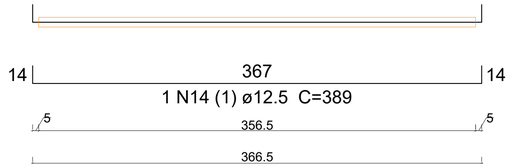
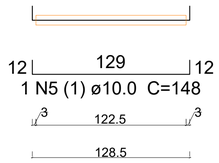
VP7a (7 unidades)
(L7)
ESC 1:50



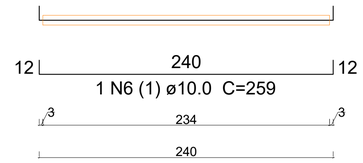
VP8a (8 unidades)
(L8)
ESC 1:50



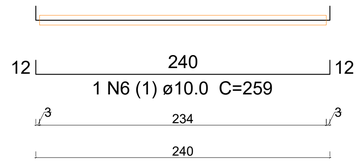
VP9a (4 unidades)
(L9)
ESC 1:50



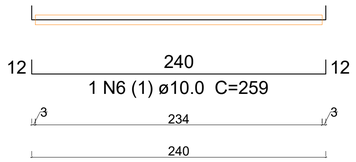
VP10a (10 unidades)
(L10)
ESC 1:50



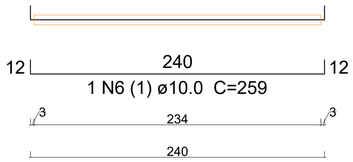
VP11a (5 unidades)
(L11)
ESC 1:50



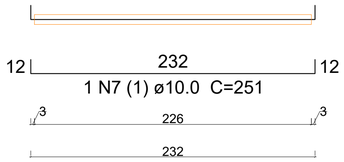
VP12a (20 unidades)
(L12)
ESC 1:50



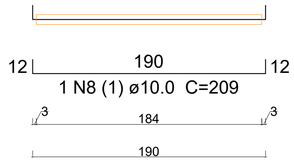
VP13a (6 unidades)
(L13)
ESC 1:50



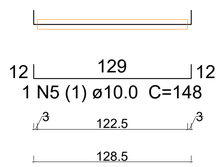
VP14a (4 unidades)
(L14)
ESC 1:50



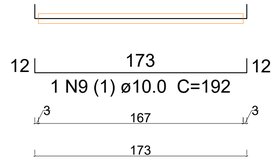
VP15a (4 unidades)
(L15)
ESC 1:50



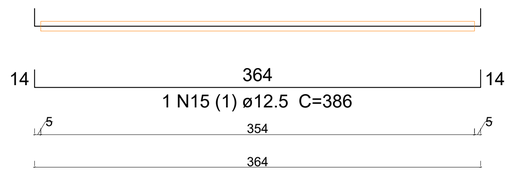
VP16a (7 unidades)
(L16)
ESC 1:50



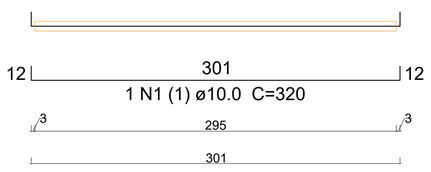
VP17a (7 unidades)
(L17)
ESC 1:50



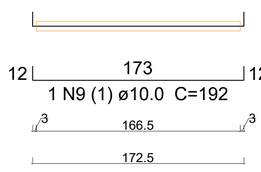
VP18a (7 unidades)
(L18)
ESC 1:50



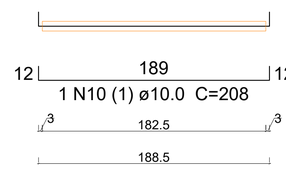
VP19a (7 unidades)
(L19)
ESC 1:50



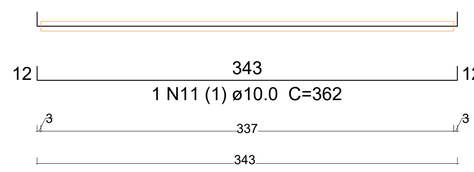
VP20a (7 unidades)
(L20)
ESC 1:50



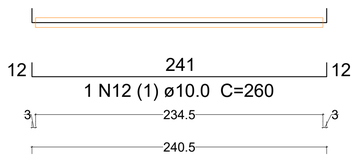
VP21a (7 unidades)
(L21)
ESC 1:50



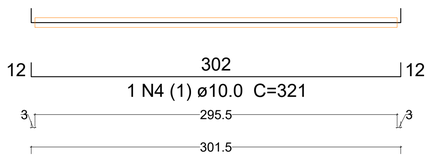
VP22a (7 unidades)
(L22)
ESC 1:50



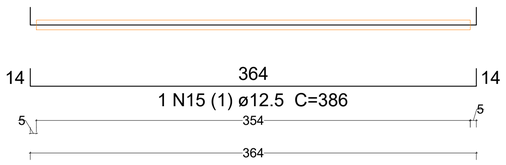
VP23a (7 unidades)
(L23)
ESC 1:50



VP24a (7 unidades)
(L24)
ESC 1:50



VP25a (8 unidades)
(L25)
ESC 1:50



01 VIGOTAS DE LAJE
1 : 25

Resumo do aço

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10 % (kg)
CA50	10.0	376.9	255.6
	12.5	151.2	160.1
PESO TOTAL (kg)			
CA50	415.7		

Relação do aço

7xVP1a	7xVP2a	7xVP3a
7xVP4a	7xVP5a	9xVP6a
7xVP7a	8xVP8a	4xVP9a
10xVP10a	5xVP11a	20xVP12a
6xVP13a	4xVP14a	4xVP15a
7xVP16a	7xVP17a	7xVP18a
7xVP19a	7xVP20a	7xVP21a
7xVP22a	7xVP23a	7xVP24a
8xVP25a		

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA50	1	10.0	21	320	6720
	2	10.0	7	298	2086
	3	10.0	7	257	1799
	4	10.0	14	321	4494
	5	10.0	11	148	1628
	6	10.0	41	259	10619
	7	10.0	4	251	1004
	8	10.0	4	209	836
	9	10.0	14	192	2688
	10	10.0	7	208	1456
	11	10.0	7	362	2534
	12	10.0	7	260	1820
	13	12.5	7	387	2709
	14	12.5	17	389	6613
	15	12.5	15	386	5790

REV	DATA	AUTOR	PROJETISTA	SETOR/DEPART.	ÓRGÃO
03					
02					
01					

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OBRA:
REFORMA E AMPLIAÇÃO DA CASA DE SAÚDE INDÍGENA DE CANARANA - CASAI CANARANA

ENDEREÇO:
RUA MONDAI, 1278, MORADA DO SOL, CANARANA - MT

PROPRIETÁRIO: MINISTÉRIO DA SAÚDE - DISTRITO SANITÁRIO ESPECIAL INDÍGENA DO XINGU — DATA: 25/08/25

AUTOR DO PROJETO: JOSÉ GUILHERME MIRANDA DAMOUS - ENGENHEIRO CIVIL — CREA/CAU: 2019066249/MT

PROJETISTA: — REVISADO POR: — CREA/CAU:

ASSINATURAS: — QR CODE ART/RRT:

AUTOR DO PROJETO — PROPRIETÁRIO

DISCIPLINA DO PROJETO: PROJETO ESTRUTURAL — QR CODE PROJETO:

CONTEÚDO: DETALHE DAS VIGOTAS DE LAJE

Nº: 25051.0009842022 - CASAI - EST - DE- R00

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