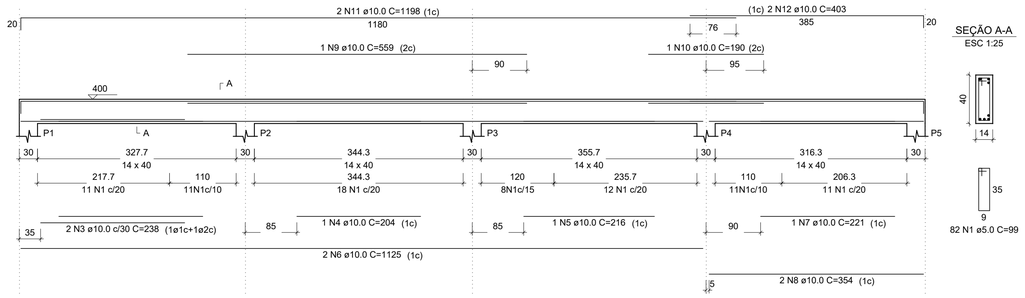
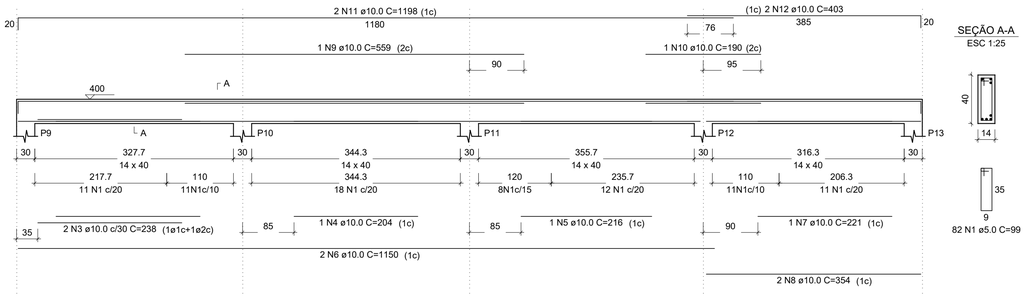
V1
ESC 1:50



SEÇÃO A-A
ESC 1:25

82 N1 ø5.0 C=99

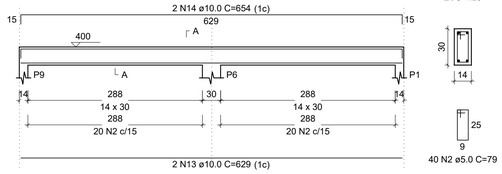
V2
ESC 1:50



SEÇÃO A-A
ESC 1:25

82 N1 ø5.0 C=99

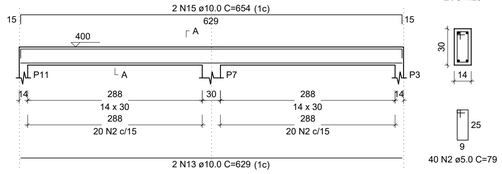
V3
ESC 1:50



SEÇÃO A-A
ESC 1:25

40 N2 ø5.0 C=79

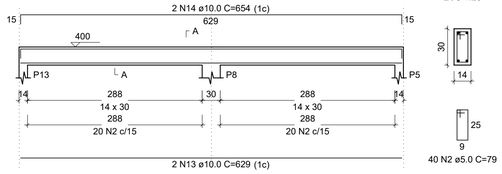
V4
ESC 1:50



SEÇÃO A-A
ESC 1:25

40 N2 ø5.0 C=79

V5
ESC 1:50



SEÇÃO A-A
ESC 1:25

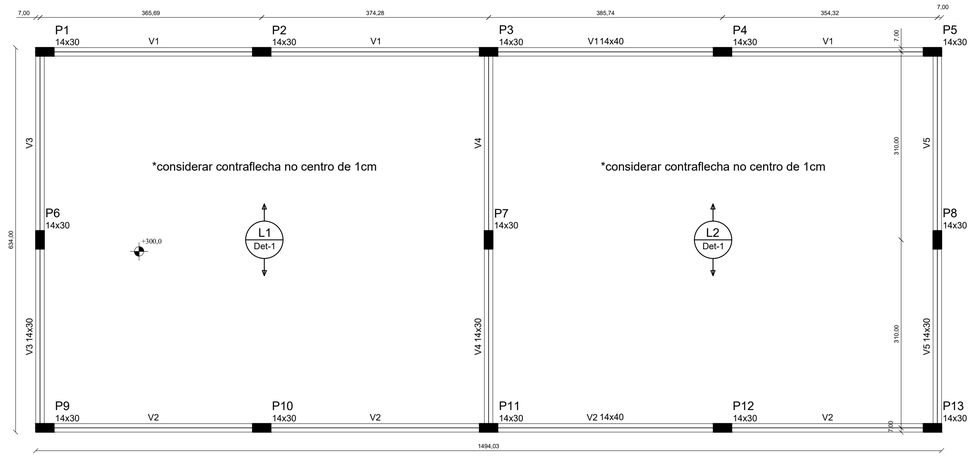
40 N2 ø5.0 C=79

RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	10.0	237.5	161.1
CA60	5.0	257.2	43.6

PESO TOTAL (kg)	
CA50	161.1
CA60	43.6

Volume de concreto (C-25) = 2.47 m³
Área de forma = 42.16 m²



Forma do pavimento Cobertura

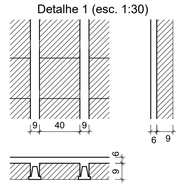
Características dos materiais

fck (MPa)
25

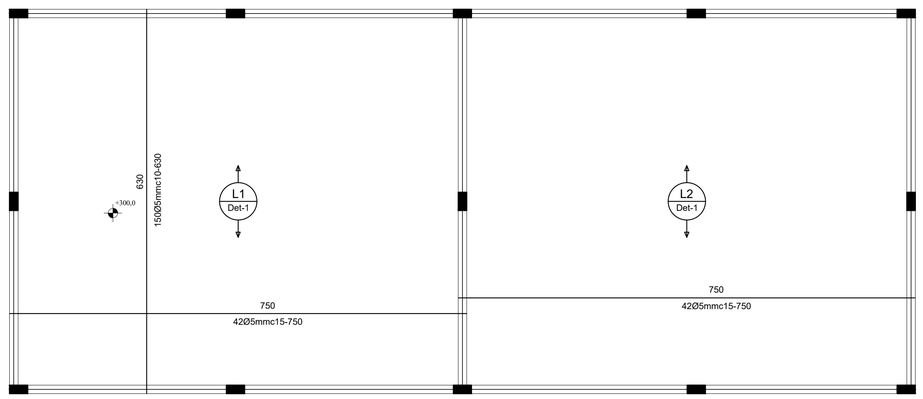
Dimensão máxima do agregado = 19 mm

Legenda dos pilares
Pilar que morre

Detalhe 1 (esc. 1:30)



*USAR TAVELA CERÂMICA (40cm)
CAPA CONCRETO 6cm
VIGOTA h=9cm (RESISTENCIA VÃO 7,0m, SOBRECARGA 3kN/m²)
H TOTAL LAJE 15cm



ARMAÇÃO DA LAJE DA COBERTURA

RESUMO MATERIAIS
AÇO CA60 Ø5,0mm - 1732,50m - 266,80kg

VOLUME CONCRETO Fck 25MPa - 7,40m³
FORMA - A=96,0m²

PREFEITURA MUNICIPAL DO RIO GRANDE
GABINETE DE PROGRAMAS E PROJETOS ESPECIAIS

EMEI Zelly Esmeraldo
PROJETO ESTRUTURAL

GPPE 12.2025

FORMAS E ARMAÇÃO DA COBERTURA

03

PAULO CESAR FERRARI PIRES
Eng Civil - CREA-RS 139940

Documento assinado em via eletrônica por **PAULO CESAR FERRARI PIRES,** em 25/03/2026 06:57:01
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