

Technical drawing of a stepped profile with dimensions. The profile is defined by a solid black line. The overall width is 300. The profile has a total height of 1116. The dimensions are as follows:

- Overall width: 300
- Overall height: 1116
- Top horizontal segment: 300 (width), 100 (height)
- Second horizontal segment: 150 (width), 180 (height)
- Third horizontal segment: 150 (width), 180 (height)
- Fourth horizontal segment: 150 (width), 180 (height)
- Fifth horizontal segment: 150 (width), 180 (height)
- Sixth horizontal segment: 150 (width), 196 (height)
- Seventh horizontal segment: 150 (width), 100 (height)
- Bottom horizontal segment: 300 (width), 30 (height)

The drawing includes dashed lines indicating the internal structure and dimensions. The dimensions are labeled as follows:

- Overall width: 300
- Overall height: 1116
- Top horizontal segment: 300 (width), 100 (height)
- Second horizontal segment: 150 (width), 180 (height)
- Third horizontal segment: 150 (width), 180 (height)
- Fourth horizontal segment: 150 (width), 180 (height)
- Fifth horizontal segment: 150 (width), 180 (height)
- Sixth horizontal segment: 150 (width), 196 (height)
- Seventh horizontal segment: 150 (width), 100 (height)
- Bottom horizontal segment: 300 (width), 30 (height)

Technical drawing of a mechanical part with dimensions and labels. The drawing shows a cross-section of a part with a complex profile. The overall width is 251.5, and the overall height is 125. The part has a base width of 300 and a top width of 119. The height of the base is 162, and the height of the top section is 112. The part is labeled "LABIO POLIMERICO" and "VAR". The dimensions are as follows:

- Overall width: 251.5
- Overall height: 125
- Base width: 300
- Top width: 119
- Height of base: 162
- Height of top section: 112
- Base height: 125
- Top height: 162
- Base width segments: 50, 100, 100, 50
- Top width segments: 132.5, 35, 132.5, 5
- Base height segments: 30, 43, 30
- Top height segments: 5, 30, 43, 30
- Labels: LABIO POLIMERICO, VAR
- Angles: 15°

Technical drawing of a reinforced concrete slab with five T-beams. The drawing includes a top view showing dimensions (1116 total width, 162 beam height, 125 base width) and reinforcement details (N10, N11, N12, N3 bars). A side view shows the slab profile with reinforcement N10 and N11. A cross-section shows the slab thickness (162) and reinforcement N12. A detail view shows the reinforcement N12 at the bottom of the slab.

N	Ø	QUANT.	COMPRIMENTO (cm)	
			UNITÁRIO	TOTAL
1	20	88	1200	105600
2	16	40	1200	48000
3	16	40	388	15520
4	10	64	214	13696
5	10	40	1154	46160
6	12,5	116	0	0
7	12,5	116	0	0
8	16	224	846	189504
9	16	448	650	291200
10	20	6	728	4368
11	20	6	968	5808
12	10	4	1044	4176
13	10	212	191	40492
14	16	8	375	3000
16	8	36	372	13392
17	8	32	310	9920
18	12,5	36	390	14040
19	12,5	36	437	15732
20	10	8	361	2888

Ø	COMP. TOTAL (m)	PESO (kg)	
		UNITÁRIO	TOTAL
AÇO CA-50			
8	233	0.40	93
10	1074	0.63	677
12.5	297	1.00	298
16	5472	1.60	8756
20	1157	2.50	2894
PESO TOTAL = 12718 kg			

1. MEDIDAS NÃO INDICADAS, EM CENTÍMETROS. NÍVEIS EM METROS.
2. CLASSE DE AGRESSIVIDADE AMBIENTAL III.
3. CLASSE DA OBRA: TREM TIPO 45H.
4. CONCRETO ESTRUTURAL: $f_{ck} = 40\text{MPa}$ – ELEMENTOS PROTENDIDOS.
FATOR ÁGUA/CEMENTO EM MASSA $\leq 0,50$.
MÓDULO DE DEFORMAÇÃO SECANTE (E_{cs}) = 32000 MPa.
5. CONCRETO ESTRUTURAL: $f_{ck} = 30\text{MPa}$ – DEMAS ELEMENTOS.
FATOR ÁGUA/CEMENTO EM MASSA $\leq 0,55$.
MÓDULO DE DEFORMAÇÃO SECANTE (E_{cs}) = 26000 MPa.
6. COEFICIENTE NOMINAL = 4,0 cm.
7. NESTE PROJETO FOI CONSIDERADO UM CONTROLE RIGOROSO E LIMITES RÍGIDOS DE TOLERÂNCIA DA VARIABILIDADE DAS MEDIDAS.

- NBR 5739 (1918): CONCRETO – ENSAIO DE COMPRESSÃO DE CORPOS-DE-PROVA CILÍNDRICOS – MÉT. DE ENSAIO.
- NBR 6118 (2014): PROJETO DE ESTRUTURAS DE CONCRETO – PROCEDIMENTO.
- NBR 6120 (2019): CARGAS PARA O CÁLCULO DE ESTRUTURAS DE EDIFICAÇÕES – PROCEDIMENTO.
- NBR 6122 (2019): PROJETO E EXECUÇÃO DE FUNDAÇÕES – PROCEDIMENTO.
- NBR 6123 (1988): FÓRMULAS DEVIDAS AO VENTO EM EDIFICAÇÕES – PROCEDIMENTO.
- NBR 6081 (2004): AÇORES E SEGURANÇA NAS ESTRUTURAS – PROCEDIMENTO.
- NBR 6062 (2019): PROJETO E EXECUÇÃO DE ESTRUTURAS DE CONCRETO PRE-MOLDADO – PROCEDIMENTO.
- NBR 14931 (2010): EXECUÇÃO DE ESTRUTURAS DE CONCRETO – PROCEDIMENTO.
- NBR 1787 (2021): PROJETO DE PONTES, VIADUTOS E PASSARELAS DE CONCRETO.

PREFEITURA MUNICIPAL DE ARAMBARÉ

OBRA: NOVA PONTE JOÃO GOULART		FRANCHA: 0
ENDEREÇO: Ponte João Goulart - Aramaré/RS		
PROPRIETÁRIO: Município de Aramaré - CNPJ: 90.152.950/0001-24		
RESPONSÁVEL TÉCNICO: Eng.º Civil Paulo Henrique Westphal Corrêa - CREA RS203012	DESENHO: Bruna W. M. Mendes Tec. Edificações - CPT: 01130592057	
CONTEÚDO: Planta Baixa dos Encontros / Armadura dos Encontros / Corte Transversal	DATA: 18/07/2023	ESCALA: INDICADA