

ESC 160

Timing diagram showing various signals and their timing parameters:

- 2 N10 ± 0.0 C=614** (Top signal)
- 1 N8 ± 0.0 C=171** (Signal 1)
- 1 N9 ± 0.0 C=171** (Signal 2)
- 559** (Time interval)
- 543** (Time interval)
- 143** (Time interval)
- 204** (Time interval)
- P6** (Signal)
- L_A** (Signal)
- 503** (Time interval)
- 503** (Time interval)
- 20 N1 c26** (Signal)
- 95** (Time interval)
- 1 N6 ± 0.0 C=373** (Signal 3)
- 559** (Time interval)
- 2 N7 ± 0.0 C=578** (Signal 4)

ESC 1:50

36

2 N12 ± 10.0 C=538

471

36

Γ_A

320

P22

L_A

40

410

25

410

26 N2 c/16

471

2 N12 ± 10.0 C=488

12

P11

Technical drawing of a rectangular plate. The top view shows a rectangle with dimensions 40 (height) and 25 (width). The side view shows a rectangle with dimensions 36 (height) and 21 (width). The drawing is labeled with the code 26 N2 ø5.0 C=125.

ESC 1:60

38 2 N14 ø10.0 C=626 559

38 N13 ø10.0 C=164 128 1 N15 ø10.0 C=180 148

Γ A 264

P7 V2 L A

20 150 523 373

19N 10r10 15 N1 ø26 2x26

15 2 N35 ø12.5 C=50.0 559

2 N35 ø12.5 C=583

A diagram of a rectangular prism. The front face is a rectangle with a height of 52 and a width of 15. The depth of the prism is 48.

RELACÃO DO AÇO						
V8	V10		V11			
V12	V13	V14	V15	V16	V17	
V18						
	AÇO	N	DIAM	Q	QUANT	C UNIT C TOTAL
CA60	1	10	5,0	110	129	14190
	2	5,0	52	125	129	14190
	3	4,0	63	24	156	17664
	4	4,0	63	24	156	29704
	5	6,3	24	156	197	
	6	10,0	1	373	373	
	7	10,0	1	373	373	
	8	10,0	1	171	171	
	9	10,0	1	171	171	
	10	10,0	2	634	1268	
	11	10,0	2	634	1268	
	12	10,0	2	634	1268	
	13	10,0	2	634	1268	
	14	10,0	2	634	1268	
	15	10,0	2	634	1268	
	16	10,0	2	634	1268	
	17	10,0	3	313	939	
	18	10,0	6	1084	6504	
	19	10,0	8	1128	9024	
	20	10,0	3	350	1050	
	21	10,0	3	350	1050	
	22	10,0	3	350	1050	
	23	10,0	4	421	1684	
	24	10,0	4	421	1684	
	25	10,0	2	316	632	
	26	10,0	2	316	632	
	27	10,0	1	250	250	
	28	10,0	1	250	250	
	29	10,0	2	1251	2502	
	30	10,0	2	1251	2502	
	31	10,0	1	180	180	
	32	10,0	1	180	180	
	33	10,0	2	104	208	
	34	10,0	2	104	208	
	35	12,5	4	408	1632	
	36	12,5	4	408	1632	

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	6.3	300.7	80.9
	10.0	350.9	238
	12.5	51.3	54.4
CA60	5.0	483.6	82
PESO TOTAL (kg)			
CA50		373.3	
CA60		82	

Volume de concreto (C-25) = 7.38 m³
 Área de forma = 91.78 m²

Technical drawing of a rectangular plate. The top view shows a rectangle with a length of 52 and a width of 15. The side view shows a rectangle with a height of 48 and a width of 11.

ESC 1:60

2 N22 @10.0 C=411

254 r^A

V2

414.5

384.5

15 N1 c/26

47.5

1 N23 @10.0 C=315

411

10

Technical drawing of a rectangular prism. The front view shows a rectangle with a height of 52 and a width of 15. The side view shows a rectangle with a height of 48 and a width of 11. The top view shows a rectangle with a length of 52 and a width of 15. The dimensions are labeled as 52, 15, and 48.

Figure 10 is an elevation view of the bridge deck and approach. The drawing shows the bridge deck with various reinforcement bars (N25, N27, N28, N29, N4, N5) and their spacing (C=149, C=290, C=250, C=1196, C=1084). The approach is shown with reinforcement bars (N25, N18) and their spacing (C=318, C=188). The drawing also shows the bridge piers (P19, P15) and the bridge abutment (A). The drawing is labeled 'ELEVATION' and 'SECTION'.

62
20
58
16

58 N3 ø5.0 C=159

[illegible]

52
15
48

Technical drawing of a rectangular plate. The top view shows a rectangle with a vertical dimension of 40 and a horizontal dimension of 25. The side view shows a rectangle with a vertical dimension of 36 and a horizontal dimension of 21. The drawing is labeled with the dimensions 25, 40, 36, and 21.

Technical drawing of a roof plan showing two sections, A-A and B-B, with dimensions and structural details.

Section A-A (Left):

- Top edge: 2 N33 ± 0.0 C=1194
- Right edge: 2 N34 ± 0.0 C=208
- Left edge: 1 N26 ± 0.0 C=149
- Bottom edge: 2 N18 ± 0.0 C=1084
- Internal dimensions: 1076, 100, 121, 121, 1193, 320, 562.5, 29 N3 ≤ 20 , 87.5, 1 N17 ± 0.0 C=313, 1076, 2 N18 ± 0.0 C=1084
- Labels: f A, P21, P16, L_A

Section B-B (Right):

- Top edge: 2 N34 ± 0.0 C=208
- Right edge: 1 N26 ± 0.0 C=149
- Bottom edge: 2 N18 ± 0.0 C=1084
- Internal dimensions: 60, 180, 100, 121, 1193, 320, 562.5, 29 N3 ≤ 20 , 205, 60, 180
- Labels: f B, P21, P16, L_B

62
20
58
16

58 N3 65.0 C=15

Notas e Revisões

N.º	Descrição	Data

Cliente / Proprietário: *Douglas Fontana*
 PREFEITO MUNICIPAL
 ESPUMOSO - RS
 Município de Espumoso - RS

Responsável pelo projeto:


Gerson L. Cecchele
Engenheiro Civil
CREA 13.441-U

Engenheiro Civil Gerson L. Cecchele
CREA / RS 054411

Projeto Tipo:	
ESTRUTURAL	
Descrição:	Folha:
CASA VELATÓRIA - 2ª Etapa Vigas de Forro	7
Desenho: Gerson	
Escala: 1/50	Data: Abril / 2021