

Technical drawing of a beam cross-section and elevation. The cross-section (top) shows a rectangular beam with a total width of 24 inches. It features two rows of reinforcement: 2 N5 #8.0 C=1167 (top) and 2 N6 #8.0 C=196 (bottom). The elevation (bottom) shows a beam with a total length of 674.5 inches. It has three rows of reinforcement: 2 N3 #8.0 C=575 (top), 2 N4 #8.0 C=696 (bottom), and 2 N1 #5.0 C=8 (middle). The beam is supported by three points: P15, P16, and P17. The distance between P15 and P16 is 554 inches, and between P16 and P17 is 674.5 inches. The beam has a height of 30 inches and a width of 14 inches. The reinforcement is labeled with 'A' and 'B'.

Technical drawing of a roof structure showing a side elevation and a cross-section.

Side Elevation:

- Roof slope: 19%
- Roof structure: 2 N10 ø8.0 C=548
- Horizontal span: 474
- Vertical height: 19
- Roof length: 514
- Roof thickness: 490 / 415
- Support wall: 30
- Support wall opening: P15
- Roof edge opening: P1
- Roof edge opening: 4
- Roof edge opening: 40 N2 c/12
- Roof edge opening: 2 N9 ø8.0 C=514

Cross-section (SEÇÃO A-A):

- Scale: ESC 1:25
- Wall thickness: 25
- Wall opening: 14
- Roof thickness: 20
- Roof opening: 9
- Roof opening: 40 N2 ø5.0 C=70

VT1	VT2	VT3			
VT4	VT5	VT6			
	VT8	VT9			
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	82	80	6560
	2	5.0	407	70	28490
CA50	3	8.0	2	575	1150
	4	5.0	2	696	1392
	5	8.0	2	1167	2334
	6	8.0	2	196	392
	7	8.0	2	423	846
	8	8.0	2	458	916
	9	8.0	4	514	2056
	10	8.0	2	548	1096
	11	8.0	2	424	848
	12	8.0	2	460	920
	13	8.0	2	548	1096
	14	8.0	2	410	820
	15	8.0	2	446	892
	16	8.0	2	529	1058
	17	8.0	2	563	1126
	18	8.0	2	907	1814
	19	8.0	2	339	678
	20	8.0	4	1162	4648
	21	8.0	2	169	338
	22	8.0	2	945	1890
	23	8.0	2	352	704
	24	8.0	2	727	1454

AÇO	DIAM (mm)	C.TOTAL (m)	PESO (kg)
CA50	8.0	273.7	108
CA60	5.0	350.5	54
PESO TOTAL (kg)			
CA50	108		
CA60	54		

Volume de concreto (C-30) = 2.4 m³
Área de forma = 43.57 m²

Technical drawing of a reinforced concrete beam (L A) showing dimensions and reinforcement details. The beam has a total length of 424 cm and a clear span of 358 cm. It is supported by two columns, P16 and P12, with a 30 cm overhang on the left and a 40 cm overhang on the right. The beam is reinforced with 2 N12 bars at the top (C=460) and 2 N12 bars at the bottom (C=424). The cross-section is 20 cm high and 14 cm wide. The drawing includes a section line A-A and a scale of 1:25.


Technical drawing of a reinforced concrete beam (SEÇÃO A-A) showing dimensions and reinforcement details. The beam has a total length of 410 cm, with a top reinforcement of 2 N15 bars (C=446) and a bottom reinforcement of 2 N14 bars (C=410). The cross-section is 20 cm high and 14 cm wide. The drawing includes a longitudinal section view and a cross-section view (SEÇÃO A-A) showing the reinforcement layout.

Fig. 10.10

ESC 1:25

OBS.: TODAS AS MEDIDAS DEVEM SER CONFERIDAS EM OBRA. CASO SEJA NECESSÁRIO ALGUMA ALTERAÇÃO, ENTRAR EM CONTATO COM O PROJETISTA RESPONSÁVEL.

PROJETO ESTRUTURAL

	<h1>ENGEPLAN</h1> <h2>PROJETOS E SUPERVISÃO</h2>	
	<p>EngeplanTI Consultoria LTDA / CREA n° 163388-0 / CNPJ 23.002.667/0001-29 Rua Cristóvão Nunes Pires, 110 - CEP 88010-120 - Florianópolis / Fone: (48) 99869-3345 / e-mail: guilherme@engeplan.com.br</p>	
OBRA: CEIM SÃO TOMAZ DE AQUINO	INSCRIÇÃO IMOBILIÁRIA:	
ENDEREÇO: RUA ANTÔNIO JOSÉ ADÃO, S/N, BAIRRO ENCRUZILHADA, BIGUAÇU/SC		
CONTEÚDO: ARMAÇÃO PILARES/ VIGAS TELHADO REFEITÓRIO	ETAPA: PROJETO EXECUTIVO	PRANCHA: EST
ARQUIVO: 118-21_010_EST_PE_206_ARM-TELMH-R00	ESCALA: 1:50	016-R00

TELHADO - L3

COBERTURA - L2

SEÇÃO ESC 1:25

415

72

75

ESC 1:50

6 N4 ø10,0 C=72

14

40

34

8

7 N1 ø5,0 C=96

7 N2 ø5,0 C=23




N2

TELhado - L3
 490
 SEÇÃO
 ESC 1:25
 14
 30
 24
 8
 13 N3 Ø5.0 C=76
 COBERTURA - L2
 340
 147
 4 N5 Ø10.0 C=147
 150
 13 N3 c/12
 ESC 1:50

8xP1		3xP15			
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	56	96	5376
	2	5.0	56	23	1288
	3	5.0	39	76	2964
CA50	4	10.0	48	72	3456
	5	10.0	12	147	1764

AÇO	DIAM (mm)	C.TOTAL (m)	PESO (kg)
CA50	10.0	52.2	32.2
CA60	5.0	96.3	14.8
PESO TOTAL (kg)			
CA50	32.2		
CA60	14.8		

Volume de concreto (C-30) = 0.53 m³
Área de forma = 10.44 m²

 BARRA QUE NASCE
 BARRA QUE MORRE
 BARRA QUE SEGUE