

DIMENSIONAMENTO DAS VIGAS

Cliente : Municipio de Barra do Rio Azul

Data : 06-10-2025

Obra : Habitao social modelo 2

Arquivo : HSOCVBAS\hsocvbas

CONFIGURACAO DE CALCULO

- Concreto fck : 25 MPa ACO-CA 50 A e 60 B

- Armaduras :

. #t < 5 > c/ espacamento variavel

. #l < 6.3 8 10 > c/ combinacao de bitolas

. montagem de # 6.3 e pele de # 6.3

- Vigas serao Calculadas :

. Nao adicionando Peso Proprio da viga no Carregamento

. Considerando reducao do cortante (item 4.1.4.3 NBR-6118)

. Considerando reducao dos momentos nos apoios (item 3.2.2.3.C NBR-6118)

. Cobrimento = 2 cm, d'= 4 cm, d''= 4 cm

Quantitativos para as 13 Vigas - arquivo: HSOCVBAS\hsocvbas

Volume de concreto 1.72 m3

Area de formas 30.86 m2

Resumo de Acos

Bitola	L(m)	Peso(kgf)
CA - 50 A		
# 6.3	256	62.6
# 8	32	12.6
CA - 60 B		
# 5	378	58.3

VF1 (14 x 25) 2 apoios HSOCVBAS\hsocvbas

Mep 5.3 -5.4
1 ----- 2

1 ----- 2
Mvao 7.9

Arm sup
1 ----- 2

Arm inf 1.30
2 # 8
+ 1 # 6.3

1 ----- 2
Reac 10.48 10.48
Corte * 9.6 9.6
Ast 1.9 1.9 1.9

Estribo # 5
c/10

Trechos 3

* Valores reduzidos de acordo com item 4.1.4.3 (NBR-6118)

VF2 (14 x 25) 3 apoios HSOCVBAS\hsocvbas

Mep 1 -1.1 2.2 -2.3
1 ----- 2 ----- 3

Mapoio 2.3
L barra .67 .62
1 ----- 2 ----- 3
Mvao .8 2.3

2 # 6.3
Arm sup 0.52
1 ----- 2 ----- 3
Arm inf 0.52 0.52
2 # 6.3 2 # 6.3

1 ----- 2 ----- 3
Reac 3 14.32 5.7

Corte *	2.1	5.4	7.1	4.8
Ast	1.9	1.9	1.9	1.9
Estribo	# 5		# 5	
	c/10		c/10	
Trechos	1.3		1.9	

* Valores reduzidos de acordo com item 4.1.4.3 (NBR-6118)

VF3=VF5 (14 x 25) 2 apoios HSOCVBAS\hsocvbas

Mep	5.3	-5.4
	1 -----	2
	1 -----	2
Mvao	7.9	
Arm sup	1 -----	2
Arm inf	1.30	
	2 # 8	
	+ 1 # 6.3	
	1 -----	2
Reac	10.48	10.48
Corte *	9.6	9.6
Ast	1.9	1.9
Estribo	# 5	
	c/10	
Trechos	3	

* Valores reduzidos de acordo com item 4.1.4.3 (NBR-6118)

VF4=VF6 (14 x 25) 2 apoios HSOCVBAS\hsocvbas

Mep	2.3	-2.4
	1 -----	2
	1 -----	2
Mvao	3.5	
Arm sup	1 -----	2
Arm inf	0.56	
	2 # 6.3	
	1 -----	2
Reac	7.01	7.01
Corte *	6.1	6.1
Ast	1.9	1.9
Estribo	# 5	
	c/10	
Trechos	2	

* Valores reduzidos de acordo com item 4.1.4.3 (NBR-6118)

VF7 (14 x 25) 2 apoios HSOCVBAS\hsocvbas

Mep	.8	-.9
	1 -----	2
	1 -----	2
Mvao	1.3	
Arm sup	1 -----	2
Arm inf	0.52	
	2 # 6.3	
	1 -----	2
Reac	4.29	4.29
Corte *	3.4	3.4

Ast 1.9 1.9 1.9

Estribo # 5
c/10
Trechos 1.2

* Valores reduzidos de acordo com item 4.1.4.3 (NBR-6118)
VF8 (14 x 25) 4 apoios HSOCVBAS\hsocvbas

Mep .2 -.3 1 -1.1 1 -1.1
1 ----- 2 ----- 3 ----- 4

Mapoio .7 1.2
L barra .52 2 .98 1.9
1 ----- 2 ----- 3 ----- 4
Mvao **.3 .5 .9

2 # 6.3 2 # 6.3 2 # 6.3
Arm sup 0.52 0.52 0.52
1 ----- 2 ----- 3 ----- 4
Arm inf 0.52 0.52
2 # 6.3 2 # 6.3

1 ----- 2 ----- 3 ----- 4
Reac .65 3.97 5.52 1.91
Corte * .4 1.4 2 2.4 2.6 1.6
Ast 1.9 1.9 1.9 1.9 1.9 1.9 1.9 1.9

Estribo # 5 # 5 # 5
c/10 c/10 c/10
Trechos 1.2 2.6 2.5

** Momento no vao de acordo com item 3.2.2.3.A.a (NBR-6118)
* Valores reduzidos de acordo com item 4.1.4.3 (NBR-6118)

VF9 (14 x 25) 5 apoios HSOCVBAS\hsocvbas

Mep 1.8 -1.9 1 -1.1 5.3 -5.4 5.8 -5.9
1 ----- 2 ----- 3 ----- 4 ----- 5

Mapoio 1.4 2.7 6.5
L barra .56 .57 .57 .62 .92 .86
1 ----- 2 ----- 3 ----- 4 ----- 5
Mvao 2.1 **.6 3.5 5.8

2 # 6.3 2 # 6.3 2 # 6.3 2 # 8
Arm sup 0.52 0.52 0.52 1.04
1 ----- 2 ----- 3 ----- 4 ----- 5
Arm inf 0.52 0.55 0.94
2 # 6.3 2 # 6.3 3 # 6.3

1 ----- 2 ----- 3 ----- 4 ----- 5
Reac 5.43 10.64 14.81 24.76 8.97
Corte * 4.5 6 2.8 4.7 8.3 10.8 12.1 8.1
Ast 1.9 1.9 1.9 1.9 1.9 1.9 1.9 1.9 1.9 1.9

Estribo # 5 # 5 # 5 # 5
c/10 c/10 c/10 c/10
Trechos 1.8 1.3 3 3.2

** Momento no vao de acordo com item 3.2.2.3.A.a (NBR-6118)
* Valores reduzidos de acordo com item 4.1.4.3 (NBR-6118)
VF10 (14 x 25) 2 apoios HSOCVBAS\hsocvbas

Mep 1.8 -1.9
1 ----- 2

1 ----- 2
Mvao 2.7

Arm sup
1 ----- 2

Arm inf 0.52
 2 # 6.3
 1 ----- 2
 Reac 6.18 6.18
 Corte * 5.3 5.3
 Ast 1.9 1.9 1.9

 Estribo # 5
 c/10
 Trechos 1.8

* Valores reduzidos de acordo com item 4.1.4.3 (NBR-6118)
 VF11 (14 x 25) 4 apoios HSOCVBAS\hsocvbas

Mep 5.3 -5.4 .6 -.7 2.6 -2.7
 1 ----- 2 ----- 3 ----- 4

Mapoio 5.1 1.8
 L barra .69 .43 .43 .57
 1 ----- 2 ----- 3 ----- 4
 Mvao 5.6 ** .4 3.1

 3 # 6.3 2 # 6.3 2 # 6.3
 Arm sup 0.80 0.52 0.52
 1 ----- 2 ----- 3 ----- 4
 Arm inf 0.91 0.52
 3 # 6.3 2 # 6.3

1 ----- 2 ----- 3 ----- 4
 Reac 8.83 18.92 8.61 6.59
 Corte * 7.9 11.2 5.9 -.5 7.3 5.7
 Ast 1.9 1.9 1.9 1.9 1.9 1.9 1.9 1.9 1.9

Estribo # 5 # 5 # 5
 c/10 c/10 c/10
 Trechos 3 1 2.1

** Momento no vao de acordo com item 3.2.2.3.A.a (NBR-6118)
 * Valores reduzidos de acordo com item 4.1.4.3 (NBR-6118)

VF12 (14 x 25) 3 apoios HSOCVBAS\hsocvbas

Mep 1.3 -1.4 3.7 -3.8
 1 ----- 2 ----- 3

Mapoio 3.7
 L barra .68 .68
 1 ----- 2 ----- 3
 Mvao ** 1.2 3.9

 2 # 6.3 2 # 6.3
 Arm sup 0.52 0.57
 1 ----- 2 ----- 3
 Arm inf 0.62
 2 # 6.3

1 ----- 2 ----- 3
 Reac 2.99 17.84 7.34
 Corte * 2.1 6.8 9.3 6.4
 Ast 1.9 1.9 1.9 1.9 1.9 1.9

Estribo # 5 # 5
 c/10 c/10
 Trechos 1.5 2.5

** Momento no vao de acordo com item 3.2.2.3.A.a (NBR-6118)
 * Valores reduzidos de acordo com item 4.1.4.3 (NBR-6118)

VF13 (14 x 25) 4 apoios HSOCVBAS\hsocvbas

Mep 5.6 -5.7 1.3 -1.4 3.7 -3.8
 1 ----- 2 ----- 3 ----- 4

** Momento no vao de acordo com item 3.2.2.3.A.a (NBR-6118)
* Valores reduzidos de acordo com item 4.1.4.3 (NBR-6118)

Viga	Reacoes				
VF1	P1 10.48	P2 10.48			
VF2	P3 3.00	P4 14.32	P5 5.70		
VF3	P6 10.48	P7 10.48			
VF4	P8 7.01	P9 7.01			
VF5	P10 10.48	P11 10.48			
VF7	P14 4.29	P15 4.29			
VF8	P19 0.65	P16 3.97	P17 5.52	P18 1.91	
VF9	P19 5.43	P14 10.64	P10 14.81	P6 24.76	P11 8.97
VF10	P16 6.18	P15 6.18			
VF11	P11 8.83	P7 18.92	P3 8.61	P2 6.59	
VF12	P12 2.99	P14 17.84	P4 7.34		
VF13	P18 9.24	P13 19.24	P9 13.64	P5 7.71	
VF6	P12 7.01	P13 7.01			

PILAR	VIGAS	TOTAL
P1 R1VF1		
10.48		10.48

P2	R2VF1	R4VF11	
	10.48	6.59	17.07
P3	R1VF2	R3VF11	
	3.00	8.61	11.61
P4	R2VF2	R3VF12	
	14.32	7.34	21.66
P5	R3VF2	R4VF13	
	5.70	7.71	13.41
P6	R1VF3	R4VF9	
	10.48	24.76	35.24
P7	R2VF3	R2VF11	
	10.48	18.92	29.40
P8	R1VF4		
	7.01		7.01
P9	R2VF4	R3VF13	
	7.01	13,64	20,65
P10	R1VF5	R3VF9	
	10.48	14.81	25.29
P11	R2VF5	R5VF9	R1VF11
	10.48	8.97	8.83
			28.28
P12	R1VF12	R1VF6	
	2.99	7.01	10.00
P13	R2VF13	R2VF6	
	19.24	7.01	26.25
P14	R1VF7	R2VF9	R2VF12
	4.29	10.64	17.84
			32.77
P15	R2VF7	R2VF10	
	4.29	6.18	10.47
P16	R2VF8	R1VF10	
	3.97	6.18	10.15
P17	R3VF8		
	5.52		5.52
P18	R4VF8	R1VF13	
	1.91	9.24	11.15
P19	R1VF8	R1VF9	R3VF13
	0.65	5.43	13.64
			19.72
Total			332.49


 João Jaime Detoni
 Eng. Civil
 CREA 27291
 Barra do Rio Azul-RS