

Memorial de Cálculo

PROJETO ESTRUTURAL – CONTENÇÃO (600)

CEI DULCE GODINHO NAZÁRIO
029-23-28-CEI DULCE-EST-PE-MDC-600-R01

GOVERNADOR CELSO RAMOS/SC
2026

 **(48) 3364-2209**

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 **CNPJ: 23.002.667/0001-29**

Rua Cristóvão Nunes Pires, 110 - Salas 101 e 903
Centro Florianópolis/SC - CEP 88010-120

REVISÃO	DATA	DESCRIÇÃO
R00	12/02/2026	EMIÇÃO INICIAL
R01	18/03/2026	DIVISÃO DE FASES

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Resumo de resultados

Cargas verticais:

Peso próprio = 77.16 tf

Total = 77.16 tf

Deslocamento horizontal máximo do centro de massa (Vento):

X+ = 0.00 cm (limite 0.30)

X- = 0.00 cm (limite 0.30)

Y+ = 0.00 cm (limite 0.30)

Y- = 0.00 cm (limite 0.30)

Deslocamento relativo máximo do centro de massa (Vento):

ESTACIONAMENTO - X+ = 0.00 cm (limite 0.02)

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Pavimento ESTACIONAMENTO

Relatório de Resultados das Sapatas

ESTACIONAMENTO	fck = 350.00 kgf/cm ²	E = 294029 kgf/cm ²	Peso Espec = 2500.00 kgf/m ³
Lance 1		cofr = 5.00 cm	

Nome	Dimensões		Armaduras inferiores		Armaduras superiores	
	B (cm) H (cm)	H0 (cm) H1 (cm)	Dir. B	Dir. H	Dir. B	Dir. H
S1	135.00	40.00	14 ø 10.0 c/11	12 ø 10.0 c/11	12 ø 10.0 c/13	10 ø 10.0 c/13
	160.00	40.00	(11.00 cm ²)	(9.42 cm ²)	(9.42 cm ²)	(7.85 cm ²)
S2	125.00	35.00	12 ø 10.0 c/12	10 ø 10.0 c/12	14 ø 8.0 c/10	12 ø 8.0 c/10
	150.00	35.00	(9.42 cm ²)	(7.85 cm ²)	(7.04 cm ²)	(6.03 cm ²)
S3	120.00	35.00	11 ø 10.0 c/12	10 ø 10.0 c/12	13 ø 8.0 c/10	11 ø 8.0 c/10
	140.00	35.00	(8.64 cm ²)	(7.85 cm ²)	(6.53 cm ²)	(5.53 cm ²)
S4	115.00	35.00	10 ø 10.0 c/12	14 ø 8.0 c/8	12 ø 8.0 c/10	11 ø 8.0 c/10
	130.00	35.00	(7.85 cm ²)	(7.04 cm ²)	(6.03 cm ²)	(5.53 cm ²)
S5	145.00	40.00	14 ø 10.0 c/11	13 ø 10.0 c/11	12 ø 10.0 c/13	11 ø 10.0 c/13
	155.00	40.00	(11.00 cm ²)	(10.21 cm ²)	(9.42 cm ²)	(8.64 cm ²)
S7	160.00	45.00	12 ø 12.5 c/15	15 ø 10.0 c/10	15 ø 10.0 c/12	13 ø 10.0 c/12
	180.00	45.00	(14.73 cm ²)	(11.78 cm ²)	(11.78 cm ²)	(10.21 cm ²)
S9	70.00	30.00	10 ø 10.0 c/12	14 ø 8.0 c/8	12 ø 8.0 c/10	11 ø 8.0 c/10
	90.00	40.00	(7.85 cm ²)	(7.04 cm ²)	(6.03 cm ²)	(5.53 cm ²)
S11	210.00	25.00	15 ø 12.5 c/15	13 ø 12.5 c/16		
	230.00	65.00	(18.41 cm ²)	(15.95 cm ²)		

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Resultados dos Pilares

ESTACIONAMENTO	fck = 350.00 kgf/cm ²	E = 294029 kgf/cm ²	Peso Espec = 2500.00 kgf/m ³
Lance 1		cobr = 2.50 cm	

Dados				Resultados					
Pilar	Seção (cm)	Nível Altura (cm)	leb vínc leh vínc (cm)	Nd máx Nd mín (tf)	MBd topo MBd base (tf.m)	MHd topo MHd base (tf.m)	As b Armaduras As h % armad total	Estribo Topo Base cota	Esb b Esb h
P1 1:25	25.00 X 50.00	205.00 200.00	894.00 EL 200.00 RR	9.67 6.59	0.48 0.49	4.24 5.39	1.57 2 ø 10.0 3.14 4 ø 10.0 0.5 8 ø 10.0	ø 5.0 c/12	123.73 13.84
P2 1:25	30.00 X 50.00	205.00 200.00	1076.00 EL 200.00 RR	14.93 10.69	1.07 1.12	5.69 6.88	1.57 2 ø 10.0 3.14 4 ø 10.0 0.4 8 ø 10.0	ø 5.0 c/10	124.10 13.84
P3 1:25	30.00 X 50.00	205.00 200.00	1076.00 EL 200.00 RR	18.05 13.02	1.25 1.91	5.95 7.19	1.57 2 ø 10.0 3.93 5 ø 10.0 0.5 10 ø 10.0	ø 5.0 c/10	124.10 13.84
P4 1:25	30.00 X 50.00	205.00 200.00	240.00 EL 120.00 RR	19.53 14.14	0.68 3.98	6.05 7.42	1.57 2 ø 10.0 3.14 4 ø 10.0 0.4 8 ø 10.0	ø 5.0 c/10	27.68 8.30
P5 1:25	30.00 X 50.00	205.00 200.00	240.00 EL 120.00 RR	11.02 7.73	1.04 3.45	5.77 7.31	2.36 3 ø 10.0 3.14 4 ø 10.0 0.5 10 ø 10.0	ø 5.0 c/10	27.68 8.30
P7 1:25	30.00 X 50.00	205.00 200.00	200.00 RR 200.00 RR	0.97 -0.73	2.54 4.30	0.16 0.47	1.57 2 ø 10.0 3.93 5 ø 10.0 0.5 10 ø 10.0	ø 5.0 c/10	23.07 13.84

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P9 1:25	30.00 X 50.00	205.00 200.00	200.00 RR 200.00 RR	0.00 -17.15	3.73 7.16	8.97 10.85	4.91 4 ø 12.5 9.82 8 ø 12.5 1.6 20 ø 12.5	ø 5.0 c/9	23.07 13.84
P11 1:25	25.00 X 55.00	205.00 200.00	200.00 RR 200.00 RR	43.07 30.37	1.35 5.08	15.20 24.82	6.03 3 ø 16.0 14.07 7 ø 16.0 2.3 16 ø 16.0	ø 6.3 c/11	27.68 12.58

Pavimento TÉRREO ADMINISTRATIVO

Resultados dos Pilares

TÉRREO ADMINISTRATIVO	fck = 350.00 kgf/cm ²	E = 294029 kgf/cm ²	Peso Espec = 2500.00 kgf/m ³
Lance 2		cofr = 2.50 cm	

Dados				Resultados					
Pilar	Seção (cm)	Nível Altura (cm)	leb vínc leh vínc (cm)	Nd máx Nd mín (tf)	MBd topo MBd base (tf.m)	MHd topo MHd base (tf.m)	As b Armaduras As h % armad total	Estribo Topo Base cota	Esb b Esb h
P1 1:25	25.00 X 50.00	452.00 247.00	894.00 EL 247.00 RR	3.97 -0.01	0.03 0.45	0.01 2.83	1.57 2 ø 10.0 3.14 4 ø 10.0 0.5 8 ø 10.0	ø 5.0 c/12	123.73 17.09
P2 1:25	30.00 X 50.00	543.00 338.00	1076.00 EL 247.00 RR	8.56 -0.05	0.02 0.83	0.01 3.16	1.57 2 ø 10.0 3.14 4 ø 10.0 0.4 8 ø 10.0	ø 5.0 c/10	124.10 17.09
P3 1:25	30.00 X 50.00	543.00 338.00	1076.00 EL 338.00 RR	10.51 -0.05	0.00 0.97	0.00 3.32	1.57 2 ø 10.0 3.14 4 ø 10.0 0.4 8 ø 10.0	ø 5.0 c/10	124.10 23.39

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Resultados do Reservatório

TÉRREO	fck = 300.00	E = 268384	Peso Espec = 2500.00
ADMINISTRATIVO	kgf/cm ²	kgf/cm ²	kgf/m ³
Lance 2		cobr = 3.00 cm	

Reservatório Contenções

ARMADURAS NA LAJE								
Esforços					Resultados			
Trecho	Ndx Rdx (tf)	Ndy Rdy (tf)	Mdx (tf.m/m)	Mdy (tf.m/m)	Armadura inferior		Armadura superior	
					Asx	Asy	Asx	Asy
VPAR 1	13.36 -6.60	8.99 -3.54	0.16	0.17	As = 2.51 cm ² /m ø8.0 c/20 (2.51 cm ² /m)	As = 2.51 cm ² /m ø8.0 c/20 (2.51 cm ² /m)	A's = 2.51 cm ² /m ø8.0 c/20 (2.51 cm ² /m)	A's = 2.51 cm ² /m ø8.0 c/20 (2.51 cm ² /m)
VPAR 2	12.87 -5.99	10.21 -3.10	0.26	0.20	As = 2.51 cm ² /m ø8.0 c/20 (2.51 cm ² /m)	As = 2.51 cm ² /m ø8.0 c/20 (2.51 cm ² /m)	A's = 2.51 cm ² /m ø8.0 c/20 (2.51 cm ² /m)	A's = 2.51 cm ² /m ø8.0 c/20 (2.51 cm ² /m)
VPAR 3	14.36 -6.92	11.20 -3.17	0.49	0.20	As = 2.51 cm ² /m ø8.0 c/20 (2.51 cm ² /m)	As = 2.51 cm ² /m ø8.0 c/20 (2.51 cm ² /m)	A's = 2.51 cm ² /m ø8.0 c/20 (2.51 cm ² /m)	A's = 2.51 cm ² /m ø8.0 c/20 (2.51 cm ² /m)
VPAR 4	13.74 -9.23	10.87 -1.97	0.96	0.87	As = 2.55 cm ² /m ø8.0 c/19 (2.65 cm ² /m)	As = 2.51 cm ² /m ø8.0 c/20 (2.51 cm ² /m)	A's = 2.51 cm ² /m ø8.0 c/20 (2.51 cm ² /m)	A's = 2.51 cm ² /m ø8.0 c/20 (2.51 cm ² /m)
VPAR 7- A	41.63 -13.78	40.22 -0.87	1.24	1.65	As = 3.46 cm ² /m ø8.0 c/14 (3.59 cm ² /m)	As = 2.51 cm ² /m ø8.0 c/20 (2.51 cm ² /m)	A's = 3.39 cm ² /m ø8.0 c/14 (3.59 cm ² /m)	A's = 2.51 cm ² /m ø8.0 c/20 (2.51 cm ² /m)
VPAR 7- B	20.79 0.00	6.05 -27.27	1.09	0.95	As = 2.51 cm ² /m ø10.0 c/20 (3.93 cm ² /m)	As = 4.21 cm ² /m ø8.0 c/11 (4.57 cm ² /m)	A's = 2.51 cm ² /m ø10.0 c/20 (3.93 cm ² /m)	A's = 5.13 cm ² /m ø10.0 c/15 (5.24 cm ² /m)

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VPAR 7-C	17.24 -7.05	2.68 -10.19	1.32	1.37	As = 2.55 cm ² /m ø10.0 c/20 (3.93 cm ² /m)	As = 2.51 cm ² /m ø6.3 c/12 (2.60 cm ² /m)	A's = 2.51 cm ² /m ø10.0 c/20 (3.93 cm ² /m)	A's = 3.22 cm ² /m ø6.3 c/9 (3.46 cm ² /m)
VPAR 7-D	16.25 -6.42	1.93 -2.44	1.37	0.82	As = 3.75 cm ² /m ø10.0 c/20 (3.93 cm ² /m)	As = 1.88 cm ² /m ø6.3 c/16 (1.95 cm ² /m)	A's = 3.75 cm ² /m ø10.0 c/20 (3.93 cm ² /m)	A's = 1.88 cm ² /m ø6.3 c/16 (1.95 cm ² /m)
VPAR 7-E	15.58 -6.72	2.96 -2.51	1.35	0.78	As = 3.75 cm ² /m ø10.0 c/20 (3.93 cm ² /m)	As = 1.88 cm ² /m ø8.0 c/26 (1.93 cm ² /m)	A's = 3.75 cm ² /m ø10.0 c/20 (3.93 cm ² /m)	A's = 1.88 cm ² /m ø8.0 c/26 (1.93 cm ² /m)
VPAR 7-F	11.50 -1.33	19.69 -0.28	1.33	0.87	As = 2.51 cm ² /m ø8.0 c/20 (2.51 cm ² /m)	As = 2.51 cm ² /m ø8.0 c/20 (2.51 cm ² /m)	A's = 2.51 cm ² /m ø8.0 c/20 (2.51 cm ² /m)	A's = 2.51 cm ² /m ø8.0 c/20 (2.51 cm ² /m)

ARMADURAS NA CONTINUIDADE					
Viga Trecho	Laje 1 Laje 2	Momentos fletores (tf.m/m)		Armaduras	
		Md negativo	Md positivo	As (superior)	A's (inferior)
Barra	VPAR 4 VPAR 7-F			As = 3.75 cm ² /m ø10.0 c/20 (3.93 cm ² /m)	
Barra	VPAR 7-F VPAR 4	-0.66		As = 3.75 cm ² /m ø10.0 c/20 (3.93 cm ² /m)	
Barra	VPAR 4 VPAR 3	-0.35		As = 3.75 cm ² /m ø10.0 c/20 (3.93 cm ² /m)	
Barra	VPAR 3 VPAR 4	-0.27		As = 3.75 cm ² /m ø10.0 c/20 (3.93 cm ² /m)	
Barra	VPAR 3 VPAR 2	-0.21		As = 3.75 cm ² /m ø10.0 c/20 (3.93 cm ² /m)	
Barra	VPAR 2 VPAR 3	-0.21		As = 3.75 cm ² /m ø10.0 c/20 (3.93 cm ² /m)	
Barra	VPAR 2 VPAR 1	-0.13		As = 3.75 cm ² /m ø10.0 c/20 (3.93 cm ² /m)	
Barra	VPAR 1 VPAR 2	-0.26		As = 3.75 cm ² /m ø10.0 c/20 (3.93 cm ² /m)	
Barra	VPAR 7-B VPAR 7-A	-0.82		As = 3.75 cm ² /m ø10.0 c/20 (3.93 cm ² /m)	
Barra	VPAR 7-A VPAR 7-B	-0.21		As = 3.75 cm ² /m ø10.0 c/20 (3.93 cm ² /m)	

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Barra	VPAR 7-C VPAR 7-B			As = 3.75 cm ² /m ø10.0 c/20 (3.93 cm ² /m)	
Barra	VPAR 7-B VPAR 7-C	-1.11		As = 3.75 cm ² /m ø10.0 c/20 (3.93 cm ² /m)	
Barra	VPAR 7-D VPAR 7-C	-0.29		As = 3.75 cm ² /m ø10.0 c/20 (3.93 cm ² /m)	
Barra	VPAR 7-C VPAR 7-D	-0.96		As = 3.75 cm ² /m ø10.0 c/20 (3.93 cm ² /m)	
Barra	VPAR 7-E VPAR 7-D			As = 3.75 cm ² /m ø10.0 c/20 (3.93 cm ² /m)	
Barra	VPAR 7-D VPAR 7-E	-1.00		As = 3.75 cm ² /m ø10.0 c/20 (3.93 cm ² /m)	
Barra	VPAR 7-F VPAR 7-E	-0.22		As = 3.75 cm ² /m ø10.0 c/20 (3.93 cm ² /m)	
Barra	VPAR 7-E VPAR 7-F	-0.99		As = 3.75 cm ² /m ø10.0 c/20 (3.93 cm ² /m)	
Barra	VPAR 7-B VPAR 7-A	-0.19		As = 3.75 cm ² /m ø10.0 c/20 (3.93 cm ² /m)	
Barra	VPAR 7-A VPAR 7-B	-0.07		As = 3.75 cm ² /m ø10.0 c/20 (3.93 cm ² /m)	
Barra	VPAR 7-C VPAR 7-B			As = 3.75 cm ² /m ø10.0 c/20 (3.93 cm ² /m)	
Barra	VPAR 7-B VPAR 7-C	-0.70		As = 3.75 cm ² /m ø10.0 c/20 (3.93 cm ² /m)	
Barra	VPAR 7-D VPAR 7-C			As = 3.75 cm ² /m ø10.0 c/20 (3.93 cm ² /m)	
Barra	VPAR 7-C VPAR 7-D	-1.12		As = 3.75 cm ² /m ø10.0 c/20 (3.93 cm ² /m)	
Barra	VPAR 7-E VPAR 7-D			As = 3.75 cm ² /m ø10.0 c/20 (3.93 cm ² /m)	
Barra	VPAR 7-D VPAR 7-E	-1.21		As = 3.75 cm ² /m ø10.0 c/20 (3.93 cm ² /m)	
Barra	VPAR 7-F VPAR 7-E			As = 3.75 cm ² /m ø10.0 c/20 (3.93 cm ² /m)	
Barra	VPAR 7-E VPAR 7-F	-1.25		As = 3.75 cm ² /m ø10.0 c/20 (3.93 cm ² /m)	
Barra	VPAR 4	-0.02		As = 3.75 cm ² /m	

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	VPAR 7-F			$\phi 10.0$ c/20 (3.93 cm ² /m)	
Barra	VPAR 7-F VPAR 4	-0.96		As = 3.75 cm ² /m $\phi 10.0$ c/20 (3.93 cm ² /m)	
Barra	VPAR 4 VPAR 3			As = 3.75 cm ² /m $\phi 10.0$ c/20 (3.93 cm ² /m)	
Barra	VPAR 3 VPAR 4	-0.60		As = 3.75 cm ² /m $\phi 10.0$ c/20 (3.93 cm ² /m)	
Barra	VPAR 3 VPAR 2	-0.27		As = 3.75 cm ² /m $\phi 10.0$ c/20 (3.93 cm ² /m)	
Barra	VPAR 2 VPAR 3	-0.09		As = 3.75 cm ² /m $\phi 10.0$ c/20 (3.93 cm ² /m)	

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Pavimento PISO QUADRA

Resultados dos Pilares

PISO QUADRA	fck = 350.00 kgf/cm ²	E = 294029 kgf/cm ²	Peso Espec = 2500.00 kgf/m ³
Lance 3		cobr = 2.50 cm	

Dados				Resultados					
Pilar	Seção (cm)	Nível Altura (cm)	leb vínc leh vínc (cm)	Nd máx Nd mín (tf)	MBd topo MBd base (tf.m)	MHd topo MHd base (tf.m)	As b Armaduras As h % armad total	Estribo Topo Base cota	Esb b Esb h
P4 1:25	30.00 X 50.00	609.80 404.80	137.60 EL 66.80 RR	12.01 0.08	0.09 0.60	0.10 3.30	1.57 2 ø 10.0 3.14 4 ø 10.0 0.4 8 ø 10.0	ø 5.0 c/10	15.87 4.62
P5 1:25	30.00 X 50.00	609.80 404.80	133.60 EL 66.80 RR	2.34 -0.05	0.02 0.89	0.01 1.85	1.57 2 ø 10.0 3.14 4 ø 10.0 0.4 8 ø 10.0	ø 5.0 c/10	15.41 4.62
P6 1:25	25.00 X 40.00	609.80 404.80	338.00 RR 338.00 RR	1.19 -0.33	0.03 0.22	0.00 0.14	1.57 2 ø 10.0 2.36 3 ø 10.0 0.5 6 ø 10.0	ø 5.0 c/12	46.78 29.24
P7 1:25	30.00 X 50.00	609.80 404.80	338.00 RR 338.00 RR	2.04 -0.02	0.04 2.14	0.00 0.18	1.57 2 ø 10.0 3.14 4 ø 10.0 0.4 8 ø 10.0	ø 5.0 c/10	38.98 23.39
P8 1:25	25.00 X 40.00	609.80 404.80	338.00 RR 338.00 RR	0.30 -0.48	0.03 0.32	0.01 0.06	1.57 2 ø 10.0 2.36 3 ø 10.0 0.5 6 ø 10.0	ø 5.0 c/12	46.78 29.24
P9 1:25	30.00 X 50.00	609.80 404.80	338.00 RR 338.00 RR	0.21 -5.72	0.01 2.94	0.03 5.11	2.45 2 ø 12.5 4.91 4 ø 12.5	ø 5.0 c/10	38.98 23.39

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							0.7 8 ø 12.5		
P10 1:25	25.00 X 40.00	609.80 404.80	338.00 RR 338.00 RR	3.54 -0.45	0.01 0.28	0.00 0.48	1.57 2 ø 10.0 2.36 3 ø 10.0 0.5 6 ø 10.0	ø 5.0 c/12	46.78 29.24
P11 1:25	25.00 X 55.00	695.00 490.00	85.20 RR 85.20 RR	20.83 -0.45	0.00 0.69	0.00 10.69	4.02 2 ø 16.0 6.03 3 ø 16.0 0.9 6 ø 16.0	ø 5.0 c/12	11.79 5.36

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Resultados do Reservatório

PISO QUADRA	fck = 300.00 kgf/cm ²	E = 268384 kgf/cm ²	Peso Espec = 2500.00 kgf/m ³
Lance 3		cobr = 3.00 cm	

Reservatório Contenções

ARMADURAS NA LAJE								
Esforços					Resultados			
Trecho	Ndx Rdx (tf)	Ndy Rdy (tf)	Mdx (tf.m/m)	Mdy (tf.m/m)	Armadura inferior		Armadura superior	
					Asx	Asy	Asx	Asy
VPAR 4	10.04 0.00	0.45 -0.33	1.95	0.49	As = 2.51 cm ² /m ø8.0 c/20 (2.51 cm ² /m)	As = 2.51 cm ² /m ø8.0 c/20 (2.51 cm ² /m)	A's = 2.51 cm ² /m ø8.0 c/20 (2.51 cm ² /m)	A's = 2.51 cm ² /m ø8.0 c/20 (2.51 cm ² /m)
VPAR 7-A	0.73 -2.07	1.20 -0.05	0.52	0.09	As = 2.51 cm ² /m ø8.0 c/20 (2.51 cm ² /m)	As = 2.51 cm ² /m ø8.0 c/20 (2.51 cm ² /m)	A's = 2.51 cm ² /m ø8.0 c/20 (2.51 cm ² /m)	A's = 2.51 cm ² /m ø8.0 c/20 (2.51 cm ² /m)
VPAR 7-B	4.87 -1.40	1.44 -0.28	1.08	0.25	As = 2.51 cm ² /m ø10.0 c/20 (3.93 cm ² /m)	As = 2.51 cm ² /m ø6.3 c/12 (2.60 cm ² /m)	A's = 2.51 cm ² /m ø10.0 c/20 (3.93 cm ² /m)	A's = 2.51 cm ² /m ø6.3 c/12 (2.60 cm ² /m)
VPAR 7-C	8.65 0.00	0.42 -0.28	1.50	0.25	As = 3.75 cm ² /m ø10.0 c/20 (3.93 cm ² /m)	As = 1.88 cm ² /m ø6.3 c/16 (1.95 cm ² /m)	A's = 3.75 cm ² /m ø10.0 c/20 (3.93 cm ² /m)	A's = 1.88 cm ² /m ø6.3 c/16 (1.95 cm ² /m)
VPAR 7-D	11.93 0.00	0.60 -0.17	1.43	0.10	As = 3.75 cm ² /m ø10.0 c/20 (3.93 cm ² /m)	As = 1.88 cm ² /m ø6.3 c/16 (1.95 cm ² /m)	A's = 3.75 cm ² /m ø10.0 c/20 (3.93 cm ² /m)	A's = 1.88 cm ² /m ø6.3 c/16 (1.95 cm ² /m)
VPAR 7-E	12.55 0.00	0.68 -0.23	1.71	0.26	As = 3.75 cm ² /m ø10.0 c/20 (3.93 cm ² /m)	As = 1.88 cm ² /m ø6.3 c/16 (1.95 cm ² /m)	A's = 3.75 cm ² /m ø10.0 c/20 (3.93 cm ² /m)	A's = 1.88 cm ² /m ø6.3 c/16 (1.95 cm ² /m)

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VPAR 7-F	12.16 0.00	0.56 -0.23	1.92	0.49	As = 2.51 cm ² /m ø8.0 c/20 (2.51 cm ² /m)	As = 2.51 cm ² /m ø8.0 c/20 (2.51 cm ² /m)	A's = 2.51 cm ² /m ø8.0 c/20 (2.51 cm ² /m)	A's = 2.51 cm ² /m ø8.0 c/20 (2.51 cm ² /m)
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ARMADURAS NA CONTINUIDADE					
Viga Trecho	Laje 1 Laje 2	Momentos fletores (tf.m/m)		Armaduras	
		Md negativo	Md positivo	As (superior)	A's (inferior)
Barra	VPAR 7-B VPAR 7-A	-0.56		As = 3.75 cm ² /m ø12.5 c/20 (6.14 cm ² /m)	
Barra	VPAR 7-A VPAR 7-B	-0.05		As = 3.75 cm ² /m ø12.5 c/20 (6.14 cm ² /m)	
Barra	VPAR 7-C VPAR 7-B	-0.13		As = 3.75 cm ² /m ø12.5 c/20 (6.14 cm ² /m)	
Barra	VPAR 7-B VPAR 7-C	-1.08		As = 3.75 cm ² /m ø12.5 c/20 (6.14 cm ² /m)	
Barra	VPAR 7-D VPAR 7-C			As = 3.75 cm ² /m ø12.5 c/20 (6.14 cm ² /m)	
Barra	VPAR 7-C VPAR 7-D	-1.50		As = 3.75 cm ² /m ø12.5 c/20 (6.14 cm ² /m)	
Barra	VPAR 7-E VPAR 7-D			As = 3.75 cm ² /m ø12.5 c/20 (6.14 cm ² /m)	
Barra	VPAR 7-D VPAR 7-E	-1.71		As = 3.75 cm ² /m ø12.5 c/20 (6.14 cm ² /m)	
Barra	VPAR 7-F VPAR 7-E			As = 3.75 cm ² /m ø12.5 c/20 (6.14 cm ² /m)	
Barra	VPAR 7-E VPAR 7-F	-1.92		As = 3.75 cm ² /m ø12.5 c/20 (6.14 cm ² /m)	
Barra	VPAR 4 VPAR 7-F	-0.57		As = 3.75 cm ² /m ø12.5 c/20 (6.14 cm ² /m)	
Barra	VPAR 7-F VPAR 4	-1.95		As = 3.75 cm ² /m ø12.5 c/20 (6.14 cm ² /m)	

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