



**MEMORIAL DESCRITIVO
E DE CÁLCULO**
INSTALAÇÕES SANITÁRIAS

HOSPITAL DISTRITAL GONZAGA MOTA JOSÉ WALTER
(GONZAGUINHA JOSÉ WALTER)

NOVEMBRO/2019

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A. INTRODUÇÃO

1. IDENTIFICAÇÃO DO EMPREENDIMENTO

- Proprietário: PMF / SMS – Secretaria Municipal de Saúde
- Endereço: Rua do Rosário, 283 - Centro, Fortaleza - CE, 60055-090.
- Empreendimento: **Hospital Distrital Gonzaga Mota José Walter**
- Endereço: Av. C, s/nº, bairro Prefeito José Walter, Fortaleza – CE.
- Data: novembro de 2019

2. OBJETIVO

O presente documento tem por objetivo justificar as soluções adotadas no projeto de instalações sanitárias do Hospital Distrital Gonzaga Mota José Walter – Gonzaguinha José Walter.

3. DOCUMENTOS DE REFERÊNCIA

SMS-HDGMJW-SAN-PE-F01	Implantação
SMS-HDGMJW-SAN-PE-F02	Planta Baixa - Setores A1 e A2
SMS-HDGMJW-SAN-PE-F03	Planta Baixa - Setor A3
SMS-HDGMJW-SAN-PE-F04	Planta Baixa - Setor A4
SMS-HDGMJW-SAN-PE-F05	Planta Baixa - Setor A5
SMS-HDGMJW-SAN-PE-F06	Planta Baixa - Setor A6
SMS-HDGMJW-SAN-PE-F07	Planta Baixa - Setores B1 e B2
SMS-HDGMJW-SAN-PE-F08	Planta Baixa - Setores C e D
SMS-HDGMJW-SAN-PE-F09	Planta Baixa - Anexos
SMS-HDGMJW-SAN-PE-F10	Planta de Coberta - Setores A1 e A2
SMS-HDGMJW-SAN-PE-F11	Planta de Coberta - Setor A3
SMS-HDGMJW-SAN-PE-F12	Planta de Coberta - Setor A4
SMS-HDGMJW-SAN-PE-F13	Planta de Coberta - Setor A5
SMS-HDGMJW-SAN-PE-F14	Planta de Coberta - Setor A6
SMS-HDGMJW-SAN-PE-F15	Planta de Coberta - Setores B1 e B2
SMS-HDGMJW-SAN-PE-F16	Planta de Coberta - Setores C e D
SMS-HDGMJW-SAN-PE-F17	Planta de Coberta - Anexos
SMS-HDGMJW-SAN-PE-F18	Detalhes Sanitários
SMS-HDGMJW-SAN-PE-F19	Detalhes Sanitários
SMS-HDGMJW-SAN-PE-F20	Detalhes Sanitários
SMS-HDGMJW-SAN-PE-F21	Detalhes Sanitários

SMS-HDGMJW-SAN-PE-F22	Detalhes Sanitários
SMS-HDGMJW-SAN-PE-F23	Detalhes Sanitários
SMS-HDGMJW-SAN-PE-F24	Detalhes Executivos

B. O PROJETO

4. DESCRIÇÃO GERAL DAS INSTALAÇÕES SANITÁRIAS

As Normas que dão as diretrizes neste projeto são:

- NBR 7367:1988 (Projeto e assentamento de tubulações de PVC rígido para sistemas de esgoto sanitário);
- NBR 8160:1999 (Sistemas prediais de esgoto sanitário – Projeto e execução);
- NBR 9649:1986 (Projeto de redes coletoras de esgoto sanitário – procedimento);
- NBR 14486:2000 (Sistemas enterrados para condução de esgoto sanitário – projeto de redes coletoras com tubos de PVC).

As instalações sanitárias foram projetadas para atender as águas servidas geradas por todos os pontos de consumo (áreas molhadas) com água fria (pontos receptores de esgoto).

Todo o esgoto gerado no Gonzaguinha José Walter será coletado em caixas de inspeção, caixas de gordura, caixas de sabão, caixas separadoras e todas serão interligadas por tubulações de PVC, obedecendo as devidas inclinações sendo lançadas na rede pública de esgoto localizado na Av. C por ação da gravidade.

C. DIMENSIONAMENTO DO SISTEMA DE ESGOTO (PARÂMETROS)
5. PARÂMETROS
5.1. RAMAIS DE DESCARGA/ESGOTO

Os ramais de descarga foram dimensionados em conformidade com o item 5.1.2 da tabela 3 da NBR 8160:1999 abaixo:

APARELHO SANITÁRIO	UHC	Ø MIN.	
BACIA SANITÁRIA	6	100	
BANHEIRA DE RESIDÊNCIA	2	40	
BEBEDOURO	0,5		
BIDÊ	1		
CHUVEIRO DE RESIDÊNCIA	2		
CHUVEIRO COLETIVO	4		
LAVATÓRIO DE RESIDÊNCIA	1		
LAVATÓRIO DE USO GERAL	2		
TANQUE DE LAVAR ROUPAS	3		
MICTÓRIO COM VÁLVULA	6		75
MICTÓRIO COM CAIXA DESCARGA	5		50
MICTÓRIO COM DESCARGA AUTOMÁTICA	2	40	
MICTÓRIO CALHA (P/M)	2	50	
PIA DE COZINHA RESIDENCIAL	3		
PIA DE COZINHA INDUSTRIAL PREPARO	3		
PIA DE COZINHA INDUSTRIAL LAVANDERIA	4		
MÁQUINA DE LAVAR LOUÇAS	2		
MÁQUINA DE LAVAR ROUPAS	3		

5.2. RAMAL DE VENTILAÇÃO

Os ramais de ventilação foram dimensionados de acordo com a tabela 8 da NBR 8160:1999 abaixo:

GRUPO DE APARELHOS SEM BACIAS SANITÁRIAS		GRUPO DE APARELHOS COM BACIAS SANITÁRIAS	
NÚMERO DE UNIDADES DE HUNTER DE CONTRIBUIÇÃO	DIÂMETRO NOMINAL DO RAMAL DE VENTILAÇÃO	NÚMERO DE UNIDADES DE HUNTER DE CONTRIBUIÇÃO	DIÂMETRO NOMINAL DO RAMAL DE VENTILAÇÃO
Até 12	40	Até 17	50
13 a 18	50	18 a 60	75
19 a 36	75	-	-

5.3. COLUNAS E BARRILETES DE VENTILAÇÃO

As colunas e barriletes de ventilação foram dimensionados de acordo com a tabela 2 (trecho) da NBR 8160:1999 abaixo:

DIÂMETRO NOMINAL DO TUBO DE QUEDA OU RAMAL DE ESGOTO	UCH	DIÂMETRO NOMINAL MÍNIMO DO TUBO DE VENTILAÇÃO							
		40	50	75	100	150	200	250	300
		COMPRIMENTO PERMITIDO (m)							
50	12	23	64	-	-	-	-	-	-
50	20	15	46	-	-	-	-	-	-
75	21	10	33	247	-	-	-	-	-
75	53	8	29	207	-	-	-	-	-
75	102	8	26	189	-	-	-	-	-
100	43	-	11	76	299	-	-	-	-
100	140	-	8	61	229	-	-	-	-
100	320	-	7	52	195	-	-	-	-
100	530	-	6	46	177	-	-	-	-

5.4. CAIXAS DE GORDURA

As caixas de gorduras foram dimensionadas conforme as recomendações do item 5.1.5.1 da NBR 8160:1999 abaixo:

CAIXA DE GORDURA	DIÂMETRO INTERNO (m)	PARTE SUBMERSA DO SEPTO (m)	CAPACIDADE DE RETENÇÃO (litros)	Ø NOMINAL DE SAÍDA
PEQUENA (CGP)	0,3	0,2	18	75
SIMPLES (CGS)	0,4	0,2	31	75
DUPLA (CGD)	0,6	0,35	120	100
ESPECIAL (CGE)	*	0,4	**	100

5.5. SUBCOLETOR E COLETOR PREDIAL

O dimensionamento dos subcoletores e coletores prediais foram dimensionados de acordo com a tabela 7 da NBR 8160:1999 abaixo:

Diâmetro nominal do tubo DN	Número máximo de unidades de Hunter de contribuição em função das declividades mínimas (%)			
	0,5	1	2	4
100	-	180	216	250
150	-	700	840	1 000
200	1 400	1 600	1 920	2 300
250	2 500	2 900	3 500	4 200
300	3 900	4 600	5 600	6 700
400	7 000	8 300	10 000	12 000

D. DIMENSIONAMENTO DO SISTEMA DE ESGOTO (RESULTADOS)
6. RESULTADOS
6.1. RAMAIS DE DESCARGA/ESGOTO E RAMAIS DE VENTILAÇÃO

Os ramais de esgoto (RE) do pavimento térreo foram dimensionados de acordo com a tabela 3 da NBR 8160:1999. Os ramais de ventilação (RV) do pavimento térreo foram dimensionados de acordo com a tabela 2 da NBR 8160:1999. Seguem os resultados abaixo:

DET. ESGOTO	Aparelho Sanitário	Quant	UHC			Ø adotado	
			unit.	parcial	total	RE	RV
DE-01	Bacia sanitária	1,0	6,0	6,0	12,0	100	75
	Lavatório De uso geral	1,0	2,0	2,0			
	Chuveiro Coletivo	1,0	4,0	4,0			
	Bacia sanitária	1,0	6,0	6,0	12,0	100	
	Lavatório De uso geral	1,0	2,0	2,0			
	Chuveiro Coletivo	1,0	4,0	4,0			
DE-02	Pia de cozinha residencial	2,0	3,0	6,0	9,0	75	50
	Lavagem	1,0	3,0	3,0			
	Expurgo	1,0	5,0	5,0	5,0	100	
DE-03	Pia de cozinha residencial	1,0	3,0	3,0	3,0	50	50
DE-04	Lavatório De uso geral	1,0	2,0	2,0	2,0	50	50
DE-05	Bacia sanitária	1,0	6,0	6,0	12,0	100	50
	Lavatório De uso geral	1,0	2,0	2,0			
	Chuveiro Coletivo	1,0	4,0	4,0			
DE-06	Pia de cozinha residencial	1,0	3,0	3,0	3,0	50	50
DE-07	Bacia sanitária	2,0	6,0	12,0	26,0	100	75
	Lavatório De uso geral	3,0	2,0	6,0			
	Chuveiro Coletivo	2,0	4,0	8,0			
DE-08	Bacia sanitária	2,0	6,0	12,0	24,0	100	75
	Lavatório De uso geral	2,0	2,0	4,0			
	Chuveiro Coletivo	2,0	4,0	8,0			
DE-09	Bacia sanitária	1,0	6,0	6,0	12,0	100	75
	Lavatório De uso geral	1,0	2,0	2,0			
	Chuveiro Coletivo	1,0	4,0	4,0			
	Tanque de lavar roupas	1,0	3,0	3,0	6,0	50	
	Lavagem	1,0	3,0	3,0			
DE-10	Bacia sanitária	2,0	6,0	12,0	24,0	100	75
	Lavatório De uso geral	2,0	2,0	4,0			
	Chuveiro Coletivo	2,0	4,0	8,0			
DE-11	Lavatório De uso geral	1,0	2,0	2,0	2,0	40	50
	Banheira de residência	1,0	2,0	2,0	2,0	50	50
DE-12	Pia de cozinha residencial	1,0	3,0	3,0	3,0	50	50
	Lavatório De uso geral	1,0	2,0	2,0	2,0	50	50
DE-13	Bacia sanitária	1,0	6,0	6,0	12,0	100	50
	Lavatório De uso geral	1,0	2,0	2,0			
	Chuveiro Coletivo	1,0	4,0	4,0			
DE-14	Lavatório De uso geral	1,0	2,0	2,0	2,0	50	50
	Pia de cozinha residencial	1,0	3,0	3,0	3,0	50	50
DE-15	Expurgo	1,0	5,0	5,0	5,0	100	-

DE-16	Bacia sanitária	1,0	6,0	6,0	14,0	100	50
	Lavatório De uso geral	2,0	2,0	4,0			
	Chuveiro Coletivo	1,0	4,0	4,0			
	Banheira de residência	1,0	2,0	2,0	2,0	50	
DE-17	Bacia sanitária	1,0	6,0	6,0	14,0	100	50
	Lavatório De uso geral	2,0	2,0	4,0			
	Chuveiro Coletivo	1,0	4,0	4,0			
	Pia de cozinha residencial	1,0	3,0	3,0	6,0	50	50
	Lavagem	1,0	3,0	3,0			
18	Bacia sanitária	2,0	6,0	12,0	24,0	100	75
	Lavatório De uso geral	2,0	2,0	4,0			
	Chuveiro Coletivo	2,0	4,0	8,0			
DE-19	Tanque de lavar roupas	1,0	3,0	3,0	6,0	50	50
	Lavagem	1,0	3,0	3,0			
DE-20	Bacia sanitária	2,0	6,0	12,0	26,0	100	75
	Lavatório De uso geral	3,0	2,0	6,0			
	Chuveiro Coletivo	2,0	4,0	8,0			
DE-21	Bacia sanitária	1,0	6,0	6,0	6,0	100	50
	Lavatório De uso geral	1,0	2,0	2,0	2,0	50	
	Pia de cozinha residencial	1,0	3,0	3,0	3,0	50	
DE-22	Pia de cozinha residencial	1,0	3,0	3,0	3,0	50	50
	Expurgo	1,0	5,0	5,0	5,0	100	-
DE-23	Lavatório De uso geral	1,0	2,0	2,0	2,0	40	50
DE-24	Lavatório De uso geral	1,0	2,0	2,0	2,0	50	50
DE-25	Tanque de lavar roupas	1,0	3,0	3,0	6,0	50	50
	Lavagem	1,0	3,0	3,0			
DE-26	Bacia sanitária	1,0	6,0	6,0	13,0	100	50
	Lavatório De uso geral	2,0	2,0	4,0			
	Lavagem	1,0	3,0	3,0			
	Pia de cozinha residencial	1,0	3,0	3,0	3,0	50	50
DE-27	Lavatório De uso geral	2,0	2,0	4,0	4,0	50	50
DE-28	Bacia sanitária	1,0	6,0	6,0	13,0	100	50
	Lavatório De uso geral	2,0	2,0	4,0			
	Lavagem	1,0	3,0	3,0			
DE-29	Lavagem	2,0	3,0	6,0	6,0	50	50
DE-30	Pia de cozinha industrial Preparação	1,0	3,0	3,0	11,0	75	75
	Pia de cozinha industrial Lavagem de	2,0	4,0	8,0		40	
	Pia de cozinha industrial Preparação	2,0	3,0	6,0	6,0	50	
	Pia de cozinha residencial	1,0	3,0	3,0	3,0	40	
	Lavagem	2,0	3,0	6,0	6,0	50	
	Lavagem	6,0	3,0	18,0	18,0	75	
	Lavagem	1,0	3,0	3,0	3,0	50	
	Lavagem	1,0	3,0	3,0	5,0	50	
	Lavatório De uso geral	1,0	2,0	2,0		40	
DE-31	Pia de cozinha residencial	2,0	3,0	6,0	6,0	50	50
DE-32	Pia de cozinha residencial	1,0	3,0	3,0	5,0	50	50
	Lavatório De uso geral	1,0	2,0	2,0			
	Tanque de lavar roupas	1,0	3,0	3,0	6,0	50	
	Lavagem	1,0	3,0	3,0			
DE-33	Lavagem	1,0	3,0	3,0	3,0	50	50

DE-34	Bacia sanitária	4,0	6,0	24,0	65,0	100	75		
	Chuveiro Coletivo	4,0	4,0	16,0					
	Lavatório De uso geral	5,0	2,0	10,0			75		
	Mictório Caixa de descarga	3,0	5,0	15,0					
DE-35	Lavatório De uso geral	8,0	2,0	16,0	28,0	100	75		
	Chuveiro Coletivo	3,0	4,0	12,0			50		
DE-36	Bacia sanitária	5,0	6,0	30,0	44,0	100	75		
	Bacia sanitária	4,0	6,0	24,0			75		
	Chuveiro Coletivo	5,0	4,0	20,0			75		
DE-37	Bacia sanitária	2,0	6,0	12,0	22,0	100	75		
	Lavatório De uso geral	2,0	2,0	4,0					
	Lavagem	2,0	3,0	6,0					
DE-38	Bacia sanitária	1,0	6,0	6,0	14,0	100	50		
	Lavatório De uso geral	1,0	2,0	2,0					
	Lavagem	1,0	3,0	3,0					
	Pia de cozinha residencial	1,0	3,0	3,0				3,0	50
DE-39	Pia de cozinha residencial	1,0	3,0	3,0	3,0	50	50		
	Pia de cozinha residencial	1,0	3,0	3,0				3,0	50
DE-40	Lavatório De residência	1,0	1,0	1,0	1,0	40	50		
DE-41	Dreno da Autoclave	1,0	2,0	2,0	4,0	50	-		
	Dreno da Autoclave	1,0	2,0	2,0					
DE-42	Bacia sanitária	1,0	6,0	6,0	15,0	100	50		
	Lavatório De uso geral	1,0	2,0	2,0					
	Chuveiro Coletivo	1,0	4,0	4,0					
	Lavagem	1,0	3,0	3,0					
DE-43	Bacia sanitária	1,0	6,0	6,0	15,0	100	50		
	Lavatório De uso geral	1,0	2,0	2,0					
	Chuveiro Coletivo	1,0	4,0	4,0					
	Lavagem	1,0	3,0	3,0					
DE-44	Tanque de lavar roupas	1,0	3,0	3,0	6,0	50	50		
	Lavagem	1,0	3,0	3,0					
DE-45	Pia de cozinha residencial	1,0	3,0	3,0	3,0	50	50		
	Pia de cozinha residencial	1,0	3,0	3,0				3,0	50
	Expurgo	1,0	5,0	5,0			5,0	100	-
DE-46	Tanque de lavar roupas	1,0	3,0	3,0	6,0	50	50		
	Lavagem	1,0	3,0	3,0					
DE-47	Bacia sanitária	1,0	6,0	6,0	15,0	100	50		
	Lavatório De uso geral	1,0	2,0	2,0					
	Chuveiro Coletivo	1,0	4,0	4,0					
	Lavagem	1,0	3,0	3,0					
	Bacia sanitária	1,0	6,0	6,0	6,0	100	-		
	Lavatório De uso geral	1,0	2,0	2,0	2,0	50	50		
	Chuveiro Coletivo	1,0	4,0	4,0	4,0	50			
DE-48	Lavatório De uso geral	1,0	2,0	2,0	2,0	40	-		
	Lavatório De uso geral	1,0	2,0	2,0				2,0	40
DE-49	Tanque de lavar roupas	1,0	3,0	3,0	6,0	50	50		
	Lavagem	1,0	3,0	3,0					
	Pia de cozinha residencial	1,0	3,0	3,0				3,0	50
	Expurgo	1,0	5,0	5,0				5,0	100

DE-50	Bacia sanitária	2,0	6,0	12,0	27,0	100	75		
	Lavatório De uso geral	2,0	2,0	4,0					
	Chuveiro Coletivo	2,0	4,0	8,0					
	Lavagem	1,0	3,0	3,0					
DE-51	Bacia sanitária	2,0	6,0	12,0	27,0	100	75		
	Lavatório De uso geral	2,0	2,0	4,0					
	Chuveiro Coletivo	2,0	4,0	8,0					
	Lavagem	1,0	3,0	3,0					
DE-52	Banheira de residência	1,0	2,0	2,0	5,0	50	50		
	Pia de cozinha residencial	1,0	3,0	3,0					
	Lavatório De uso geral	1,0	2,0	2,0				2,0	50
DE-53	Lavatório De uso geral	1,0	2,0	2,0	2,0	40	50		
DE-54	Pia de cozinha residencial	2,0	3,0	6,0	9,0	75	50		
	Lavagem	1,0	3,0	3,0					
DE-55	Bacia sanitária	1,0	6,0	6,0	6,0	100	-		
	Lavatório De uso geral	2,0	2,0	4,0	4,0	50	50		
DE-56	Bacia sanitária	1,0	6,0	6,0	12,0	100	50		
	Lavatório De uso geral	1,0	2,0	2,0					
	Chuveiro Coletivo	1,0	4,0	4,0					
	Pia de cozinha residencial	1,0	3,0	3,0				3,0	50
DE-57	Lavatório De uso geral	1,0	2,0	2,0	2,0	40	50		
DE-58	Pia de cozinha residencial	1,0	3,0	3,0	3,0	50	50		
	Lavatório De uso geral	1,0	2,0	2,0	2,0	40			
DE-59	Bacia sanitária	1,0	6,0	6,0	12,0	100	75		
	Lavatório De uso geral	3,0	2,0	6,0					
	Pia de cozinha residencial	2,0	3,0	6,0				6,0	50
	Expurgo	2,0	5,0	10,0				10,0	100
DE-60	Bacia sanitária	1,0	6,0	6,0	10,0	100	50		
	Lavatório De uso geral	2,0	2,0	4,0					
	Tanque de lavar roupas	1,0	3,0	3,0				6,0	50
	Lavagem	1,0	3,0	3,0					
DE-61	Bacia sanitária	1,0	6,0	6,0	11,0	100	50		
	Lavatório De uso geral	1,0	2,0	2,0					
	Lavagem	1,0	3,0	3,0					
DE-62	Bacia sanitária	4,0	6,0	24,0	46,0	100	75		
	Lavatório De uso geral	6,0	2,0	12,0					
	Mictório Caixa de descarga	2,0	5,0	10,0					
DE-63	Pia de cozinha residencial	1,0	3,0	3,0	3,0	50	50		
DE-64	Lavatório De uso geral	3,0	2,0	6,0	12,0	75	50		
	Lavagem	2,0	3,0	6,0					
DE-65	Lavatório De uso geral	1,0	2,0	2,0	8,0	75	50		
	Lavagem	2,0	3,0	6,0					
DE-66	Bacia sanitária	2,0	6,0	12,0	26,0	100	75		
	Lavatório De uso geral	4,0	2,0	8,0					
	Lavagem	2,0	3,0	6,0					
DE-67	Lavatório De uso geral	1,0	2,0	2,0	2,0	40	50		
	Lavatório De uso geral	1,0	2,0	2,0	2,0	40			
DE-68	Pia de cozinha residencial	1,0	3,0	3,0	3,0	50	50		
DE-69	Pia de cozinha residencial	1,0	3,0	3,0	3,0	50	50		
	Pia de cozinha residencial	1,0	3,0	3,0	3,0	50			
	Expurgo	1,0	5,0	5,0	5,0	100			
DE-70	Lavatório De uso geral	1,0	2,0	2,0	2,0	50	50		

DE-71	Bacia sanitária	1,0	6,0	6,0	11,0	100	50
	Lavatório De uso geral	1,0	2,0	2,0			
	Lavagem	1,0	3,0	3,0			
DE-72	Tanque de lavar roupas	1,0	3,0	3,0	6,0	50	50
	Lavagem	1,0	3,0	3,0			
DE-73	Pia de cozinha residencial	1,0	3,0	3,0	3,0	50	50
DE-74	Pia de cozinha residencial	2,0	3,0	6,0	6,0	50	50
	Lavatório De uso geral	2,0	2,0	4,0	4,0	50	
DE-75	Lavatório De uso geral	1,0	2,0	2,0	5,0	50	50
	Pia de cozinha residencial	1,0	3,0	3,0	3,0	50	
DE-76	Pia de cozinha residencial	1,0	3,0	3,0	3,0	50	50
	Lavatório De uso geral	1,0	2,0	2,0	2,0	40	
DE-77	Pia de cozinha residencial	1,0	3,0	3,0	3,0	50	50
DE-78	Lavatório De uso geral	1,0	2,0	2,0	2,0	50	50
DE-79	Pia de cozinha residencial	1,0	3,0	3,0	3,0	50	50
	Expurgo	1,0	5,0	5,0	5,0	100	-
DE-80	Tanque de lavar roupas	1,0	3,0	3,0	6,0	50	50
	Lavagem	1,0	3,0	3,0	6,0	50	
DE-81	Pia de cozinha residencial	1,0	3,0	3,0	6,0	50	50
	Lavagem	1,0	3,0	3,0			
	Pia de cozinha residencial	1,0	3,0	3,0			
DE-82	Bacia sanitária	1,0	6,0	6,0	12,0	100	75
	Lavatório De uso geral	1,0	2,0	2,0			
	Chuveiro Coletivo	1,0	4,0	4,0			
	Bacia sanitária	1,0	6,0	6,0	12,0	100	
	Lavatório De uso geral	1,0	2,0	2,0			
	Chuveiro Coletivo	1,0	4,0	4,0			
DE-83	Bacia sanitária	1,0	6,0	6,0	14,0	100	50
	Lavatório De uso geral	2,0	2,0	4,0			
	Chuveiro Coletivo	1,0	4,0	4,0			
	Pia de cozinha residencial	1,0	3,0	3,0	3,0	3,0	75
	Bacia sanitária	1,0	6,0	6,0	16,0	100	
	Lavatório De uso geral	3,0	2,0	6,0			
	Chuveiro Coletivo	1,0	4,0	4,0			
	Pia de cozinha residencial	1,0	3,0	3,0	3,0	3,0	
DE-84	Bacia sanitária	1,0	6,0	6,0	14,0	100	50
	Lavatório De uso geral	2,0	2,0	4,0			
	Chuveiro Coletivo	1,0	4,0	4,0			
	Pia de cozinha residencial	1,0	3,0	3,0	3,0	3,0	50
	Bacia sanitária	1,0	6,0	6,0	14,0	100	
	Lavatório De uso geral	2,0	2,0	4,0			
	Chuveiro Coletivo	1,0	4,0	4,0			
	Pia de cozinha residencial	1,0	3,0	3,0	3,0	3,0	
DE-85	Bacia sanitária	2,0	6,0	12,0	24,0	100	75
	Lavatório De uso geral	2,0	2,0	4,0			
	Chuveiro Coletivo	2,0	4,0	8,0			
	Pia de cozinha residencial	1,0	3,0	3,0	3,0	50	
	Tanque de lavar roupas	1,0	3,0	3,0	6,0	50	
	Lavagem	1,0	3,0	3,0			

DE-86	Pia de cozinha residencial	2,0	3,0	6,0	6,0	50	50
	Expurgo	1,0	5,0	5,0	5,0	50	-
DE-87	Bacia sanitária	2,0	6,0	12,0	26,0	100	75
	Lavatório De uso geral	4,0	2,0	8,0			
	Lavagem	2,0	3,0	6,0			
DE-88	Lavatório De uso geral	1,0	2,0	2,0	2,0	40	50
DE-89	Bacia sanitária	1,0	6,0	6,0	6,0	100	50
	Lavatório De uso geral	2,0	2,0	4,0	8,0	75	
	Chuveiro Coletivo	1,0	4,0	4,0			
	Pia de cozinha residencial	1,0	3,0	3,0			
90	Bacia sanitária	1,0	6,0	6,0	13,0	100	50
	Lavatório De uso geral	2,0	2,0	4,0			
	Lavagem	1,0	3,0	3,0			
DE-91	Bacia sanitária	1,0	6,0	6,0	11,0	100	50
	Lavatório De uso geral	1,0	2,0	2,0			
	Lavagem	1,0	3,0	3,0			
DE-92	Lavagem	3,0	3,0	9,0	9,0	75	50

6.2. COLUNAS DE VENTILAÇÃO

As colunas de ventilação (CV) foram dimensionadas de acordo com a tabela 2 da NBR 8160:1999. Ver bitolas adotadas em planta baixa. Seguem os resultados abaixo.

COLUNA VENT.	Aparelho Sanitário	Quant	UHC			Coluna de Ventilação		
			unit.	parcial	total	Comp. De Projeto	Comp. Máx. (m)	Ø adotado (mm)
CV-01	Bacia sanitária	2,0	6,0	12,0	24,0	4,5	207	75
	Chuveiro Coletivo	2,0	4,0	8,0				
	Lavatório De uso geral	2,0	2,0	4,0				
CV-02	Pia de cozinha residencial	2,0	3,0	6,0	9,0	4,5	61	50
	Lavagem	1,0	3,0	3,0				
CV-03	Bacia sanitária	1,0	6,0	6,0	14,0	4,5	46	50
	Chuveiro Coletivo	1,0	4,0	4,0				
	Lavatório De uso geral	2,0	2,0	4,0				
CV-04	Pia de cozinha residencial	1,0	3,0	3,0	3,0	4,5	46	50
CV-05	Bacia sanitária	2,0	6,0	12,0	28,0	4,5	207	75
	Chuveiro Coletivo	2,0	4,0	8,0				
	Lavatório De uso geral	4,0	2,0	8,0				
CV-06	Pia de cozinha residencial	1,0	3,0	3,0	3,0	4,5	46	50
CV-07	Bacia sanitária	2,0	6,0	12,0	28,0	4,5	207	75
	Chuveiro Coletivo	2,0	4,0	8,0				
	Lavatório De uso geral	4,0	2,0	8,0				
CV-08	Bacia sanitária	1,0	6,0	6,0	20,0	4,5	317	75
	Chuveiro Coletivo	1,0	4,0	4,0				
	Lavatório De uso geral	2,0	2,0	4,0				
	Tanque de lavar roupas	1,0	3,0	3,0				
	Lavagem	1,0	3,0	3,0				
CV-09	Bacia sanitária	2,0	6,0	12,0	28,0	4,5	207	75
	Chuveiro Coletivo	2,0	4,0	8,0				
	Lavatório De uso geral	4,0	2,0	8,0				

CV-10	Bacia sanitária	2,0	6,0	12,0	24,0	4,5	247	75
	Chuveiro Coletivo	2,0	4,0	8,0				
	Lavatório De uso geral	2,0	2,0	4,0				
CV-11	Bacia sanitária	2,0	6,0	12,0	24,0	4,5	207	75
	Chuveiro Coletivo	2,0	4,0	8,0				
	Lavatório De uso geral	2,0	2,0	4,0				
CV-12	Pia de cozinha residencial	2,0	3,0	6,0	11,0	4,5	46	50
	Banheira de residência	1,0	2,0	2,0				
	Lavagem	1,0	3,0	3,0				
CV-13	Pia de cozinha residencial	1,0	3,0	3,0	7,0	4,5	46	50
	Lavatório De uso geral	2,0	2,0	4,0				
CV-14	Bacia sanitária	1,0	6,0	6,0	14,0	4,5	46	50
	Chuveiro Coletivo	1,0	4,0	4,0				
	Lavatório De uso geral	2,0	2,0	4,0				
CV-15	Pia de cozinha residencial	1,0	3,0	3,0	3,0	4,5	46	50
CV-16	Bacia sanitária	2,0	6,0	12,0	28,0	4,5	207	75
	Chuveiro Coletivo	2,0	4,0	8,0				
	Lavatório De uso geral	4,0	2,0	8,0				
CV-17	Pia de cozinha residencial	1,0	3,0	3,0	3,0	4,5	61	50
CV-18	Bacia sanitária	2,0	6,0	12,0	28,0	4,5	207	75
	Chuveiro Coletivo	2,0	4,0	8,0				
	Lavatório De uso geral	4,0	2,0	8,0				
CV-19	Bacia sanitária	1,0	6,0	6,0	20,0	4,5	317	75
	Chuveiro Coletivo	1,0	4,0	4,0				
	Lavatório De uso geral	2,0	2,0	4,0				
	Tanque de lavar roupas	1,0	3,0	3,0				
	Lavagem	1,0	3,0	3,0				
CV-20	Bacia sanitária	2,0	6,0	12,0	28,0	4,5	207	75
	Chuveiro Coletivo	2,0	4,0	8,0				
	Lavatório De uso geral	4,0	2,0	8,0				
CV-21	Bacia sanitária	2,0	6,0	12,0	24,0	4,5	247	75
	Chuveiro Coletivo	2,0	4,0	8,0				
	Lavatório De uso geral	2,0	2,0	4,0				
CV-22	Bacia sanitária	1,0	6,0	6,0	12,0	4,5	61	50
	Chuveiro Coletivo	1,0	4,0	4,0				
	Lavatório De uso geral	1,0	2,0	2,0				
CV-23	Bacia sanitária	2,0	6,0	12,0	28,0	4,5	207	75
	Chuveiro Coletivo	2,0	4,0	8,0				
	Lavatório De uso geral	4,0	2,0	8,0				
CV-24	Lavatório De uso geral	1,0	2,0	2,0	2,0	4,5	61	50
CV-25	Pia de cozinha residencial	1,0	3,0	3,0	3,0	4,5	61	50
CV-26	Pia de cozinha residencial	1,0	3,0	3,0	3,0	4,5	61	50
CV-27	Bacia sanitária	2,0	6,0	12,0	28,0	4,5	207	75
	Chuveiro Coletivo	2,0	4,0	8,0				
	Lavatório De uso geral	4,0	2,0	8,0				
CV-28	Bacia sanitária	2,0	6,0	12,0	28,0	4,5	207	75
	Chuveiro Coletivo	2,0	4,0	8,0				
	Lavatório De uso geral	4,0	2,0	8,0				
CV-29	Bacia sanitária	1,0	6,0	6,0	17,0	4,5	46	50
	Chuveiro Coletivo	1,0	4,0	4,0				
	Lavatório De uso geral	2,0	2,0	4,0				
	Pia de cozinha residencial	1,0	3,0	3,0				
CV-30	Bacia sanitária	2,0	6,0	12,0	24,0	4,5	207	75
	Chuveiro Coletivo	2,0	4,0	8,0				
	Lavatório De uso geral	2,0	2,0	4,0				

CV-31	Bacia sanitária	1,0	6,0	6,0	20,0	4,5	317	75
	Chuveiro Coletivo	1,0	4,0	4,0				
	Lavatório De uso geral	2,0	2,0	4,0				
	Pia de cozinha residencial	1,0	3,0	3,0				
	Lavagem	1,0	3,0	3,0				
CV-32	Tanque de lavar roupas	1,0	3,0	3,0	6,0	4,5	61	50
	Lavagem	1,0	3,0	3,0				
CV-33	Pia de cozinha residencial	1,0	3,0	3,0	3,0	4,5	61	50
CV-34	Pia de cozinha residencial	1,0	3,0	3,0	3,0	4,5	61	50
CV-35	Bacia sanitária	2,0	6,0	12,0	28,0	4,5	207	75
	Chuveiro Coletivo	2,0	4,0	8,0				
	Lavatório De uso geral	4,0	2,0	8,0				
CV-36	Bacia sanitária	2,0	6,0	12,0	28,0	4,5	207	75
	Chuveiro Coletivo	2,0	4,0	8,0				
	Lavatório De uso geral	4,0	2,0	8,0				
CV-37	Pia de cozinha residencial	1,0	3,0	3,0	3,0	4,5	61	50
CV-38	Bacia sanitária	2,0	6,0	12,0	28,0	4,5	207	75
	Chuveiro Coletivo	2,0	4,0	8,0				
	Lavatório De uso geral	4,0	2,0	8,0				
CV-39	Bacia sanitária	2,0	6,0	12,0	28,0	4,5	207	75
	Chuveiro Coletivo	2,0	4,0	8,0				
	Lavatório De uso geral	4,0	2,0	8,0				
CV-40	Bacia sanitária	1,0	6,0	6,0	12,0	4,5	61	50
	Chuveiro Coletivo	1,0	4,0	4,0				
	Lavatório De uso geral	1,0	2,0	2,0				
CV-41	Lavatório De uso geral	2,0	2,0	4,0	7,0	4,5	61	50
	Pia de cozinha residencial	1,0	3,0	3,0				
CV-42	Pia de cozinha residencial	1,0	3,0	3,0	3,0	4,5	61	50
CV-43	Lavatório De uso geral	1,0	2,0	2,0	2,0	4,5	61	50
	Tanque de lavar roupas	1,0	3,0	3,0				
	Lavagem	1,0	3,0	3,0				
CV-44	Lavatório De uso geral	1,0	2,0	2,0	9,0	4,5	61	50
	Pia de cozinha residencial	1,0	3,0	3,0				
	Lavagem	1,0	3,0	3,0				
CV-45	Bacia sanitária	1,0	6,0	6,0	13,0	4,5	46	50
	Lavatório De uso geral	2,0	2,0	4,0				
	Lavagem	1,0	3,0	3,0				
CV-46	Bacia sanitária	1,0	6,0	6,0	17,0	4,5	46	50
	Lavatório De uso geral	4,0	2,0	8,0				
	Lavagem	1,0	3,0	3,0				
CV-47	Pia de cozinha industrial Preparação	3,0	3,0	9,0	32,0	4,5	207	75
	Pia de cozinha industrial Lavagem de panela	2,0	4,0	8,0				
	Lavagem	5,0	3,0	15,0				
CV-48	Lavatório De uso geral	1,0	2,0	2,0	23,0	4,5	207	75
	Pia de cozinha residencial	1,0	3,0	3,0				
	Lavagem	6,0	3,0	18,0				
CV-49	Pia de cozinha residencial	2,0	3,0	6,0	6,0	4,5	61	50
CV-50	Pia de cozinha residencial	1,0	3,0	3,0	8,0	4,5	-	50
	Lavatório De uso geral	1,0	2,0	2,0				
	Lavagem	1,0	3,0	3,0				

CV-31	Bacia sanitária	1,0	6,0	6,0	20,0	4,5	317	75
	Chuveiro Coletivo	1,0	4,0	4,0				
	Lavatório De uso geral	2,0	2,0	4,0				
	Pia de cozinha residencial	1,0	3,0	3,0				
	Lavagem	1,0	3,0	3,0				
CV-32	Tanque de lavar roupas	1,0	3,0	3,0	6,0	4,5	61	50
	Lavagem	1,0	3,0	3,0				
CV-33	Pia de cozinha residencial	1,0	3,0	3,0	3,0	4,5	61	50
CV-34	Pia de cozinha residencial	1,0	3,0	3,0	3,0	4,5	61	50
CV-35	Bacia sanitária	2,0	6,0	12,0	28,0	4,5	207	75
	Chuveiro Coletivo	2,0	4,0	8,0				
	Lavatório De uso geral	4,0	2,0	8,0				
CV-36	Bacia sanitária	2,0	6,0	12,0	28,0	4,5	207	75
	Chuveiro Coletivo	2,0	4,0	8,0				
	Lavatório De uso geral	4,0	2,0	8,0				
CV-37	Pia de cozinha residencial	1,0	3,0	3,0	3,0	4,5	61	50
CV-38	Bacia sanitária	2,0	6,0	12,0	28,0	4,5	207	75
	Chuveiro Coletivo	2,0	4,0	8,0				
	Lavatório De uso geral	4,0	2,0	8,0				
CV-39	Bacia sanitária	2,0	6,0	12,0	28,0	4,5	207	75
	Chuveiro Coletivo	2,0	4,0	8,0				
	Lavatório De uso geral	4,0	2,0	8,0				
CV-40	Bacia sanitária	1,0	6,0	6,0	12,0	4,5	61	50
	Chuveiro Coletivo	1,0	4,0	4,0				
	Lavatório De uso geral	1,0	2,0	2,0				
CV-41	Lavatório De uso geral	2,0	2,0	4,0	7,0	4,5	61	50
	Pia de cozinha residencial	1,0	3,0	3,0				
CV-42	Pia de cozinha residencial	1,0	3,0	3,0	3,0	4,5	61	50
CV-43	Lavatório De uso geral	1,0	2,0	2,0	2,0	4,5	61	50
CV-44	Tanque de lavar roupas	1,0	3,0	3,0	9,0	4,5	61	50
	Lavagem	1,0	3,0	3,0				
	Pia de cozinha residencial	1,0	3,0	3,0				
CV-45	Bacia sanitária	1,0	6,0	6,0	13,0	4,5	46	50
	Lavatório De uso geral	2,0	2,0	4,0				
	Lavagem	1,0	3,0	3,0				
CV-46	Bacia sanitária	1,0	6,0	6,0	17,0	4,5	46	50
	Lavatório De uso geral	4,0	2,0	8,0				
	Lavagem	1,0	3,0	3,0				
CV-47	Pia de cozinha industrial Preparação	3,0	3,0	9,0	32,0	4,5	207	75
	Pia de cozinha industrial Lavagem de	2,0	4,0	8,0				
	Lavagem	5,0	3,0	15,0				
CV-48	Lavatório De uso geral	1,0	2,0	2,0	23,0	4,5	207	75
	Pia de cozinha residencial	1,0	3,0	3,0				
	Lavagem	6,0	3,0	18,0				
CV-49	Pia de cozinha residencial	2,0	3,0	6,0	6,0	4,5	61	50
CV-50	Pia de cozinha residencial	1,0	3,0	3,0	8,0	4,5	-	50
	Lavatório De uso geral	1,0	2,0	2,0				
	Lavagem	1,0	3,0	3,0				

COLUNA VENT.	Aparelho Sanitário	Quant	UHC			Coluna de Ventilação		
			unit.	parcial	total	Comp. De Projeto (m)	Comp. Máx. (m)	Ø adotado
								(mm)
CV-51	Bacia sanitária	2,0	6,0	12,0	28,0	4,5	207	75
	Chuveiro Coletivo	4,0	4,0	16,0				
CV-52	Chuveiro Coletivo	3,0	4,0	12,0	12,0	4,5	61	50
CV-53	Tanque de lavar roupas	1,0	3,0	3,0	6,0	4,5	61	50
	Lavagem	1,0	3,0	3,0				
CV-54	Bacia sanitária	2,0	6,0	12,0	37,0	4,5	207	75
	Lavatório De uso geral	5,0	2,0	10,0				
	Mictório Caixa de descarga	3,0	5,0	15,0				
CV-55	Lavatório De uso geral	8,0	2,0	16,0	16,0	4,5	247	75
CV-56	Bacia sanitária	4,0	6,0	24,0	24,0	4,5	207	75
CV-57	Chuveiro Coletivo	5,0	4,0	20,0	20,0	4,5	247	75
CV-58	Bacia sanitária	4,0	6,0	24,0	24,0	4,5	207	75
CV-59	Pia de cozinha residencial	1,0	3,0	3,0	3,0	4,5	61	50
CV-60	Bacia sanitária	1,0	6,0	6,0	16,0	4,5	46	50
	Lavatório De uso geral	2,0	2,0	4,0				
	Lavagem	2,0	3,0	6,0				
CV-61	Bacia sanitária	1,0	6,0	6,0	14,0	4,5	46	50
	Lavatório De uso geral	1,0	2,0	2,0				
	Lavagem	1,0	3,0	3,0				
	Pia de cozinha residencial	1,0	3,0	3,0				
CV-62	Pia de cozinha residencial	2,0	3,0	6,0	6,0	4,5	61	50
CV-63	Bacia sanitária	1,0	6,0	6,0	19,0	4,5	46	50
	Chuveiro Coletivo	1,0	4,0	4,0				
	Lavatório De uso geral	3,0	2,0	6,0				
	Lavagem	1,0	3,0	3,0				
CV-64	Bacia sanitária	1,0	6,0	6,0	17,0	4,5	46	50
	Chuveiro Coletivo	1,0	4,0	4,0				
	Lavatório De uso geral	2,0	2,0	4,0				
	Lavagem	1,0	3,0	3,0				
CV-65	Tanque de lavar roupas	1,0	3,0	3,0	6,0	4,5	61	50
	Lavagem	1,0	3,0	3,0				
CV-66	Lavatório De uso geral	1,0	2,0	2,0	15,0	4,5	46	50
	Chuveiro Coletivo	1,0	4,0	4,0				
	Lavagem	1,0	3,0	3,0				
	Pia de cozinha residencial	2,0	3,0	6,0				
CV-67	Bacia sanitária	1,0	6,0	6,0	15,0	4,5	46	50
	Lavatório De uso geral	1,0	2,0	2,0				
	Chuveiro Coletivo	1,0	4,0	4,0				
	Lavagem	1,0	3,0	3,0				
CV-68	Tanque de lavar roupas	1,0	3,0	3,0	6,0	4,5	61	50
	Lavagem	1,0	3,0	3,0				
CV-69	Pia de cozinha residencial	1,0	3,0	3,0	9,0	4,5	61	50
	Tanque de lavar roupas	1,0	3,0	3,0				
	Lavagem	1,0	3,0	3,0				
CV-70	Pia de cozinha residencial	1,0	3,0	3,0	10,0	4,5	61	50
	Banheira de residência	1,0	2,0	2,0				
	Lavatório De uso geral	1,0	2,0	2,0				
	Lavagem	1,0	3,0	3,0				

CV-71	Bacia sanitária	2,0	6,0	12,0	29,0	4,5	207	75
	Chuveiro Coletivo	2,0	4,0	8,0				
	Lavatório De uso geral	3,0	2,0	6,0				
	Lavagem	1,0	3,0	3,0				
CV-72	Bacia sanitária	2,0	6,0	12,0	27,0	4,5	207	75
	Chuveiro Coletivo	2,0	4,0	8,0				
	Lavatório De uso geral	2,0	2,0	4,0				
	Lavagem	1,0	3,0	3,0				
CV-73	Pia de cozinha residencial	2,0	3,0	6,0	9,0	4,5	61	50
	Lavagem	1,0	3,0	3,0				
CV-74	Lavatório De uso geral	2,0	2,0	4,0	8,0	4,5	61	50
	Chuveiro Coletivo	1,0	4,0	4,0				
CV-75	Bacia sanitária	1,0	6,0	6,0	19,0	4,5	317	75
	Lavatório De uso geral	3,0	2,0	6,0				
	Chuveiro Coletivo	1,0	4,0	4,0				
	Pia de cozinha residencial	1,0	3,0	3,0				
CV-76	Bacia sanitária	1,0	6,0	6,0	18,0	4,5	317	75
	Lavatório De uso geral	3,0	2,0	6,0				
	Pia de cozinha residencial	2,0	3,0	6,0				
CV-77	Lavatório De uso geral	3,0	2,0	6,0	12,0	4,5	61	50
	Lavagem	2,0	3,0	6,0				
CV-78	Lavatório De uso geral	1,0	2,0	2,0	8,0	4,5	61	50
	Lavagem	2,0	3,0	6,0				
CV-79	Pia de cozinha residencial	1,0	3,0	3,0	3,0	4,5	61	50
CV-80	Bacia sanitária	1,0	6,0	6,0	16,0	4,5	46	50
	Lavatório De uso geral	2,0	2,0	4,0				
	Lavagem	1,0	3,0	3,0				
	Tanque de lavar roupas	1,0	3,0	3,0				
CV-81	Bacia sanitária	1,0	6,0	6,0	11,0	4,5	61	50
	Lavatório De uso geral	1,0	2,0	2,0				
	Lavagem	1,0	3,0	3,0				
CV-82	Bacia sanitária	4,0	6,0	24,0	52,0	4,5	207	75
	Lavatório De uso geral	6,0	2,0	12,0				
	Lavagem	2,0	3,0	6,0				
	Mictório Caixa de descarga	2,0	5,0	10,0				
CV-83	Bacia sanitária	2,0	6,0	12,0	28,0	4,5	207	75
	Lavatório De uso geral	5,0	2,0	10,0				
	Lavagem	2,0	3,0	6,0				
CV-84	Bacia sanitária	1,0	6,0	6,0	11,0	4,5	61	50
	Lavatório De uso geral	1,0	2,0	2,0				
	Lavagem	1,0	3,0	3,0				
CV-85	Pia de cozinha residencial	3,0	3,0	9,0	11,0	4,5	46	50
	Lavatório De uso geral	1,0	2,0	2,0				
CV-86	Tanque de lavar roupas	1,0	3,0	3,0	6,0	4,5	61	50
	Lavagem	1,0	3,0	3,0				
CV-87	Lavatório De uso geral	1,0	2,0	2,0	8,0	4,5	61	50
	Pia de cozinha residencial	2,0	3,0	6,0				
CV-88	Lavatório De uso geral	2,0	2,0	4,0	13,0	4,5	33	50
	Lavagem	1,0	3,0	3,0				
	Pia de cozinha residencial	2,0	3,0	6,0				
CV-89	Lavatório De uso geral	1,0	2,0	2,0	5,0	4,5	61	50
	Pia de cozinha residencial	1,0	3,0	3,0				
CV-90	Pia de cozinha residencial	1,0	3,0	3,0	3,0	4,5	61	50

CV-91	Pia de cozinha residencial	3,0	3,0	9,0	18,0	4,5	317	75
	Tanque de lavar roupas	1,0	3,0	3,0				
	Lavagem	2,0	3,0	6,0				
CV-92	Bacia sanitária	2,0	6,0	12,0	24,0	4,5	207	75
	Chuveiro Coletivo	2,0	4,0	8,0				
	Lavatório De uso geral	2,0	2,0	4,0				
CV-93	Bacia sanitária	1,0	6,0	6,0	17,0	4,5	46	50
	Chuveiro Coletivo	1,0	4,0	4,0				
	Lavatório De uso geral	2,0	2,0	4,0				
	Pia de cozinha residencial	1,0	3,0	3,0				
CV-94	Bacia sanitária	1,0	6,0	6,0	19,0	4,5	317	75
	Chuveiro Coletivo	1,0	4,0	4,0				
	Lavatório De uso geral	3,0	2,0	6,0				
	Pia de cozinha residencial	1,0	3,0	3,0				
CV-95	Bacia sanitária	1,0	6,0	6,0	17,0	4,5	46	50
	Chuveiro Coletivo	1,0	4,0	4,0				
	Lavatório De uso geral	2,0	2,0	4,0				
	Pia de cozinha residencial	1,0	3,0	3,0				
CV-96	Bacia sanitária	1,0	6,0	6,0	17,0	4,5	46	50
	Chuveiro Coletivo	1,0	4,0	4,0				
	Lavatório De uso geral	2,0	2,0	4,0				
	Pia de cozinha residencial	1,0	3,0	3,0				
CV-97	Bacia sanitária	1,0	6,0	6,0	17,0	4,5	46	50
	Chuveiro Coletivo	1,0	4,0	4,0				
	Lavatório De uso geral	2,0	2,0	4,0				
	Pia de cozinha residencial	1,0	3,0	3,0				
CV-98	Bacia sanitária	1,0	6,0	6,0	17,0	4,5	46	50
	Chuveiro Coletivo	1,0	4,0	4,0				
	Lavatório De uso geral	2,0	2,0	4,0				
	Pia de cozinha residencial	1,0	3,0	3,0				
CV-99	Bacia sanitária	1,0	6,0	6,0	17,0	4,5	46	50
	Chuveiro Coletivo	1,0	4,0	4,0				
	Lavatório De uso geral	2,0	2,0	4,0				
	Pia de cozinha residencial	1,0	3,0	3,0				
CV-100	Bacia sanitária	1,0	6,0	6,0	17,0	4,5	46	50
	Chuveiro Coletivo	1,0	4,0	4,0				
	Lavatório De uso geral	2,0	2,0	4,0				
	Pia de cozinha residencial	1,0	3,0	3,0				
CV-101	Bacia sanitária	2,0	6,0	12,0	39,0	4,5	207	75
	Chuveiro Coletivo	2,0	4,0	8,0				
	Lavatório De uso geral	2,0	2,0	4,0				
	Pia de cozinha residencial	3,0	3,0	9,0				
	Tanque de lavar roupas	1,0	3,0	3,0				
	Lavagem	1,0	3,0	3,0				
CV-102	Bacia sanitária	2,0	6,0	12,0	26,0	4,5	207	75
	Lavatório De uso geral	4,0	2,0	8,0				
	Lavagem	2,0	3,0	6,0				
CV-103	Lavatório De uso geral	3,0	2,0	6,0	13,0	4,5	46	50
	Chuveiro Coletivo	1,0	4,0	4,0				
	Pia de cozinha residencial	1,0	3,0	3,0				
CV-104	Bacia sanitária	1,0	6,0	6,0	13,0	4,5	46	50
	Lavatório De uso geral	2,0	2,0	4,0				
	Lavagem	1,0	3,0	3,0				
CV-105	Bacia sanitária	1,0	6,0	6,0	11,0	4,5	61	50
	Lavatório De uso geral	1,0	2,0	2,0				
	Lavagem	1,0	3,0	3,0				
CV-106	Bacia sanitária	1,0	6,0	6,0	11,0	4,5	61	50
	Lavatório De uso geral	1,0	2,0	2,0				
	Lavagem	1,0	3,0	3,0				
CV-107	Lavagem	3,0	3,0	9,0	9,0	4,5	61	50

6.3. CAIXAS DE GORDURA

As caixas de gorduras/sabão/retenção foram dimensionadas conforme a tabela abaixo, porem fora adotado para todas as unidades o tipo caixa de gordura dupla, que garante uma uniformidade, facilitando futuras manutenções e limpeza.

NÚMERO DA CAIXA	NÚMERO DE COZINHAS	TIPO DE CAIXA	DIMENSÕES MÍNIMAS			
			Ø INTERNO	PARTE SUBMERSA DO SEPTO (m)	CAPACIDADE DE RETENÇÃO (litros)	Ø NOMINAL DE SAIDA
CGD-01	3	DUPLA (CGD)	0,6	0,35	120 (l)	100
CGD-02	1	DUPLA (CGD)	0,6	0,35	120 (l)	100
CGD-03	5	DUPLA (CGD)	0,6	0,35	120 (l)	100
CGD-04	1	DUPLA (CGD)	0,6	0,35	120 (l)	100
CGD-05	1	DUPLA (CGD)	0,6	0,35	120 (l)	100
CGD-06	1	DUPLA (CGD)	0,6	0,35	120 (l)	100
CGD-07	1	DUPLA (CGD)	0,6	0,35	120 (l)	100
CGD-08A	1	DUPLA (CGD)	0,6	0,35	120 (l)	100
CGD-08	3	DUPLA (CGD)	0,6	0,35	120 (l)	100
CGD-09	2	DUPLA (CGD)	0,6	0,35	120 (l)	100
CGD-10	2	DUPLA (CGD)	0,6	0,35	120 (l)	100
CGD-11	2	DUPLA (CGD)	0,6	0,35	120 (l)	100
CGD-12	2	DUPLA (CGD)	0,6	0,35	120 (l)	100
CGD-13	1	DUPLA (CGD)	0,6	0,35	120 (l)	100
CGD-14	3	DUPLA (CGD)	0,6	0,35	120 (l)	100
CGD-15	1	DUPLA (CGD)	0,6	0,35	120 (l)	100
CGD-16	2	DUPLA (CGD)	0,6	0,35	120 (l)	100
CGD-17	2	DUPLA (CGD)	0,6	0,35	120 (l)	100
CGD-18	3	DUPLA (CGD)	0,6	0,35	120 (l)	100
CGD-19	1	DUPLA (CGD)	0,6	0,35	120 (l)	100
CGD-20	2	DUPLA (CGD)	0,6	0,35	120 (l)	100
CGD-21	1	DUPLA (CGD)	0,6	0,35	120 (l)	100
CGD-22	1	DUPLA (CGD)	0,6	0,35	120 (l)	100
CGD-23	2	DUPLA (CGD)	0,6	0,35	120 (l)	100
CGD-24	1	DUPLA (CGD)	0,6	0,35	120 (l)	100
CGD-25	1	DUPLA (CGD)	0,6	0,35	120 (l)	100
CGD-26	2	DUPLA (CGD)	0,6	0,35	120 (l)	100
CGD-27	7	DUPLA (CGD)	0,6	0,35	120 (l)	100
CGD-28	8	DUPLA (CGD)	0,6	0,35	120 (l)	100
CGD-29	2	DUPLA (CGD)	0,6	0,35	120 (l)	100
CGD-30	1	DUPLA (CGD)	0,6	0,35	120 (l)	100
CGD-31	2	DUPLA (CGD)	0,6	0,35	120 (l)	100
CGD-32	2	DUPLA (CGD)	0,6	0,35	120 (l)	100
CGD-33	2	DUPLA (CGD)	0,6	0,35	120 (l)	100
CGD-34	1	DUPLA (CGD)	0,6	0,35	120 (l)	100
CGD-35	3	DUPLA (CGD)	0,6	0,35	120 (l)	100
CGD-36	1	DUPLA (CGD)	0,6	0,35	120 (l)	100

NÚMERO DA CAIXA	NÚMERO DE TANQUES	TIPO DE CAIXA	DIMENSÕES MÍNIMAS			
			Ø INTERNO	PARTE SUBMERSA DO SEPTO (m)	CAPACIDADE DE RETENÇÃO (litros)	Ø NOMINAL DE SAÍDA
CSD-01	1	DUPLA (CSD)	0,6	0,35	120 (l)	100
CSD-02	1	DUPLA (CSD)	0,6	0,35	120 (l)	100
CSD-03	1	DUPLA (CSD)	0,6	0,35	120 (l)	100
CSD-04	1	DUPLA (CSD)	0,6	0,35	120 (l)	100
CSD-05	1	DUPLA (CSD)	0,6	0,35	120 (l)	100
CSD-06	1	DUPLA (CSD)	0,6	0,35	120 (l)	100
CSD-07	1	DUPLA (CSD)	0,6	0,35	120 (l)	100
CSD-08	2	DUPLA (CSD)	0,6	0,35	120 (l)	100
CSD-09	1	DUPLA (CSD)	0,6	0,35	120 (l)	100
CSD-10	1	DUPLA (CSD)	0,6	0,35	120 (l)	100
CSD-11	1	DUPLA (CSD)	0,6	0,35	120 (l)	100
CSD-12	1	DUPLA (CSD)	0,6	0,35	120 (l)	100

6.4. SUBCOLETOR PREDIAL

O dimensionamento do subcoletores prediais foi feito de acordo com a tabela 7 da NBR 8160:1999. A tabela abaixo mostra trecho a trecho a contagem de UHC's.

TRECHO		UHC	i	Φ
Montante	Jusante			
CGD-01	CI-02	12	1%	100
CI-01	CI-02	5	1%	100
CI-02	CI-03	41	1%	100
CI-03	CI-04	41	1%	100
CI-04	CI-05	55	1%	100
CGD-02	CI-05	3	1%	100
CI-05	CI-06	86	1%	100
CSD-01	CI-06	6	1%	100
CI-06	CI-07	106	1%	100
CI-07	CI-08	106	1%	100
CI-08	CI-11	130	1%	100
CI-09	CI-10	28	1%	100
CI-10	CI-11	56	1%	100
CI-11	CI-18	186	1%	150
CGD-03	CI-13	17	1%	100
CI-12	CI-13	5	1%	100
CI-13	CI-14	46	1%	100
CI-14	CI-15	46	1%	100
CI-15	CI-16	60	1%	100
CGD-04	CI-16	3	1%	100
CI-16	CI-17	91	1%	100
CSD-02	CI-17	6	1%	100
CI-17	CI-18	111	1%	100

TRECHO		UHC	i	Φ
Montante	Jusante			
CI-18	CI-19	297	1%	150
CI-19	CI-22	321	1%	150
CI-20	CI-21	28	1%	100
CI-21	CI-22	56	1%	100
CI-22	CI-26	377	1%	150
CSD-03	CI-23	6	1%	100
CI-23	CI-25	34	1%	100
CI-24	CI-25	5	1%	100
CGD-05	CI-25	3	1%	100
CI-25	CI-26	58	1%	100
CI-26	CI-27	435	1%	150
CI-27	CI-30	447	1%	150
CGD-06	CI-28	3	1%	100
CI-28	CI-29	31	1%	100
CI-29	CI-30	59	1%	100
CI-30	CI-31	506	1%	150
CSD-04	CI-31	6	1%	100
CGD-07	CI-31	3	1%	100
CGD-08A	CI-31	3	1%	100
CI-31	CI-32	520	1%	150
CGD-08	CI-32	9	1%	100
CI-32	CI-33	538	1%	150
CGD-09	CI-33	6	1%	100
CI-33	CI-34	574	1%	150
CGD-10	CI-34	6	1%	100
CI-34	CI-35	608	1%	150
CGD-11	CI-35	6	1%	100
CI-35	CI-36	642	1%	150
CGD-12	CI-36	6	1%	100
CI-36	CI-37	676	1%	150
CGD-13	CI-37	3	1%	100
CI-37	CI-50	695	1%	150
CI-38	CI-40	11	1%	100
CI-39	CI-40	5	1%	100
CGD-14	CI-40	9	1%	100
CI-40	CI-42	27	1%	100
CGD-15	CI-41	3	1%	100
CSD-05	CI-41	6	1%	100
CI-41	CI-42	14	1%	100
CI-42	CI-44	43	1%	100
CGD-16	CI-44	6	1%	100
CGD-17	CI-44	9	1%	100
CGD-18	CI-43	12	1%	100

TRECHO		UHC	i	Φ
Montante	Jusante			
CI-43	CI-44	36	1%	100
CI-44	CI-45	94	1%	100
CGD-19	CI-45	3	1%	100
CSD-06	CI-45	6	1%	100
CI-45	CI-47	127	1%	100
CGD-20	CI-47	6	1%	100
CI-46	CI-47	5	1%	100
CI-47	CI-48	195	1%	150
CI-48	CI-49	195	1%	150
CI-49	CI-50	221	1%	150
CI-50	CI-52	929	1%	200
CI-51	CI-52	11	1%	100
CI-52	REDE	940	1%	200
CI-53	CI-54	4	1%	100
CI-54	CI-55	28	1%	100
CI-55	CI-57	56	1%	100
CGD-21	CI-57	3	1%	100
CI-56	CI-57	5	1%	100
CI-57	CI-58	92	1%	100
CI-58	CI-59	92	1%	100
CI-59	CI-66	104	1%	100
CGD-22	CI-60	3	1%	100
CI-60	CI-62	17	1%	100
CGD-23	CI-62	9	1%	100
CGD-24	CI-61	3	1%	100
CI-61	CI-62	36	1%	100
CI-62	CI-63	76	1%	100
CI-63	CI-64	104	1%	100
CGD-25	CI-64	3	1%	100
CGD-26	CI-64	6	1%	100
CI-64	CI-66	115	1%	100
CI-65	CI-66	5	1%	100
CI-66	CI-67	234	1%	150
CSD-07	CI-67	9	1%	100
CI-67	CI-68	243	1%	150
CI-68	CI-69	243	1%	150
CI-69	CI-70	243	1%	150
CGD-27	CI-70	23	1%	100
CGD-28	CI-70	27	1%	100
CI-70	CI-71	298	1%	150
CI-71	CI-72	363	1%	150
CI-72	CI-73	391	1%	150

TRECHO		UHC	i	Φ
Montante	Jusante			
CI-73	CI-74	415	1%	150
CI-74	CI-75	459	1%	150
CI-75	CI-91	470	1%	150
CGD-29	CI-76	6	1%	100
CI-76	CI-77	25	1%	100
CSE-01	CI-77	4	1%	100
CI-77	CI-79	48	1%	100
CSD-08	CI-79	12	1%	100
CGD-30	CI-79	3	1%	100
CI-78	CI-79	5	1%	100
CSE-02	CI-79	3	1%	100
CI-79	CI-81	100	1%	100
CI-80	CI-81	5	1%	100
CSD-09	CI-81	6	1%	100
CGD-31	CI-81	6	1%	100
CI-81	CI-82	144	1%	100
CSD-10	CI-82	9	1%	100
CI-82	CI-83	210	1%	150
CI-83	CI-84	226	1%	150
CGD-32	CI-84	6	1%	100
CI-84	CI-85	246	1%	150
CGD-33	CI-85	6	1%	100
CSD-11	CI-85	6	1%	100
CI-85	CI-87	271	1%	150
CGD-34	CI-87	6	1%	100
CI-86	CI-87	10	1%	100
CGD-35	CI-87	8	1%	100
CSD-12	CI-87	9	1%	100
CI-87	CI-89	316	1%	150
CGD-36	CI-89	3	1%	100
CI-88	CI-89	30	1%	100
CI-89	CI-90	369	1%	150
CI-90	CI-91	369	1%	150
CI-91	REDE	839	1%	200

6.5. COLETOR PREDIAL

O dimensionamento do coletor predial foi feito de acordo com a tabela 7 da NBR 8160:1999.

De acordo com indicado em planta baixa, a coleta de esgoto foi dividida em dois coletores prediais, sendo:

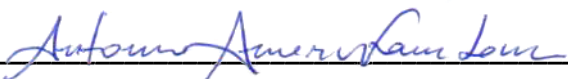
- O coletor predial que parte da CI-52 com 940 UHC será atendido por um tubo de esgoto com 200mm de diâmetro com inclinação de 1%;
- O coletor predial que parte da CI-91 com 839 UHC será atendido por um tubo de esgoto com 200mm de diâmetro com inclinação de 1%.

E. DESTINO FINAL DE ESGOTOS

O destino final de esgotos será a rede pública de esgoto que está localizada na Av. C, via a frente do hospital.

F. CATALOGAÇÃO

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