

MEMORIAL DE QUANTITATIVOS

OBRA: Reforma da Unidade Básica de Saúde - ESF Nossa Senhora Aparecida

ÁREA: 392,86 m²

PROPRIETÁRIO: Município de Guaporé - RS

LOCAL: Rua Dr. João Pedro Ortiz, nº 1085, Bairro Planalto, Guaporé-RS

PROPOSTA Nº: 11614.1750001/19-001 - Ministério da Saúde

1. PLACA DE OBRA

Dimensões da Placa 2,4m x 1,20m = **2,88m²**

2. REVESTIMENTOS EXTERNOS

2.1. REBOCO EXTERNO

Paredes Externas h=4,55m: 122,60m x 4,55m = **557,83m²**

Paredes Reservatório Baixo: (11,50m x 1,60m) x 2 lados = **36,80m²**

Volume Banheiros (diferença altura externa 0,65m): (5,45m x 0,65m) x 2 volumes = **7,10m²**

Volume Reservatório Alto: (10,55m x 3,60m) + (4,0m x 2,95m) + (7,60m x 3,66m) + ((7,60m x 1,03m)/2) + (7,60m x 3,66m) = **109,32m²**

PLATIBANDA EXTERNA PARTE INTERNA

Volume Banheiros: (1,70m x 2,25m) + (1,70m x 1,17m) + 2 x ((1,17m x 1,50m) + ((1,07m x 1,50m)/2)) = **10,94m²**

Volume Frente: (2,10m x 7,0m) + (1,02m x 7,00m) + 2x((7,30m x 2,10m)/2) = **37,17m²**

Paredes: (18,05m + 19,85m + 11,85m + 9,75m) x 1,25 + 4 x ((4,80m x 1,25m)/2) + 2 x ((3,825m x 1,25m)/2) + (9,80m x 0,20m) = **93,14m²**

Total Reboco Externo = 852,30m²

ABERTURAS

(14 x 1,40m²) + 22,11m² + (2 x 0,40m²) + (11 x 0,70m²) + 1,68m² + 2,31m² + 1,76m² + 3,70m² + 1,73m² + 1,73m² + 1,18m² + 1,05m² + 4,0m² + 1,05m² = **70,40m²**

TOTAL REBOCO EXTERNO COM ABERTURAS DESCONTADAS = 781,90m²

3. REVESTIMENTOS INTERNOS

3.1. REVESTIMENTOS PAREDE E PISO

Sala 01, 04, 05 e 06: Paredes = $12,20\text{m} \times 2,70\text{m} = 32,94\text{m}^2$

Aberturas = $0,90\text{m} \times 2,15\text{m} + 1,40\text{m}^2 = 3,34\text{m}^2$

Total Paredes = $29,60\text{m}^2 \times 4 \text{ salas} = 118,40\text{m}^2$

Total Piso = $9,10\text{m}^2 \times 4 \text{ salas} = 36,40\text{m}^2$

Sala 02 e 03: Paredes = $12,20\text{m} \times 2,70\text{m} = 32,94\text{m}^2$

Aberturas = $2 \times (0,90\text{m} \times 2,15\text{m}) + 1,40\text{m}^2 = 5,27\text{m}^2$

Total Paredes = $27,67\text{m}^2 \times 2 \text{ salas} = 55,34\text{m}^2$

Total Piso = $9,10\text{m}^2 \times 2 \text{ salas} = 18,20\text{m}^2$

Sala 07: Paredes = $16,10\text{m} \times 2,70\text{m} = 43,47\text{m}^2$

Aberturas = $0,90\text{m} \times 2,15\text{m} + 1,40\text{m}^2 + 0,70\text{m}^2 = 4,04\text{m}^2$

Total Paredes = $39,43\text{m}^2$

Total Piso = $15,92\text{m}^2$

Sala 08: Paredes = $14,80\text{m} \times 2,70\text{m} = 39,96\text{m}^2$

Aberturas = $0,90\text{m} \times 2,15\text{m} + 0,70\text{m}^2 = 2,64\text{m}^2$

Total Paredes = $37,32\text{m}^2$

Total Piso = $12,03\text{m}^2$

Sala 09: Paredes = $18,80\text{m} \times 2,70\text{m} = 50,76\text{m}^2$

Aberturas = $0,90\text{m} \times 2,15\text{m} + 0,70\text{m}^2 + 3,40\text{m}^2 = 6,04\text{m}^2$

Total Paredes = $44,72\text{m}^2$

Total Piso = $20,65\text{m}^2$

Sala 10: Paredes = $12,80\text{m} \times 2,70\text{m} = 34,56\text{m}^2$

Aberturas = $1,20\text{m} \times 2,15\text{m} + 0,90\text{m} \times 2,15\text{m} + 1,40\text{m}^2 = 5,92\text{m}^2$

Total Paredes = $28,64\text{m}^2$

Total Piso = $10,15\text{m}^2$

Sala 11: Paredes = $8,90\text{m} \times 2,70\text{m} = 24,03\text{m}^2$

Aberturas = $0,80\text{m} \times 2,15\text{m} + 0,70\text{m}^2 = 2,42\text{m}^2$

Total Paredes = 21,61m²

Total Piso = 4,62m²

Sala 12: Paredes = $9,40\text{m} \times 2,70\text{m} = 25,38\text{m}^2$

Aberturas = $0,80\text{m} \times 2,15\text{m} + 0,70\text{m}^2 = 2,42\text{m}^2$

Total Paredes = 22,96m²

Total Piso = 5,03m²

Sala 13: Paredes = $9,30\text{m} \times 2,70\text{m} = 25,11\text{m}^2$

Aberturas = $0,80\text{m} \times 2,15\text{m} + 0,70\text{m}^2 = 2,42\text{m}^2$

Total Paredes = 22,69m²

Total Piso = 4,88m²

Sala 14: Paredes = $7,00\text{m} \times 2,70\text{m} = 18,90\text{m}^2$

Aberturas = $0,80\text{m} \times 2,15\text{m} + 0,70\text{m}^2 = 2,42\text{m}^2$

Total Paredes = 16,48m²

Total Piso = 3,06m²

Parede Recepção: Parede = $7,05\text{m} \times 3,40\text{m} = 23,97\text{m}^2$

Aberturas = $0,90\text{m} \times 2,15\text{m} + 1,05\text{m}^2 = 2,99\text{m}^2$

Total Paredes = 20,98m²

TOTAL CHAPISCO = 428,57m²

TOTAL EMBOÇO E REVESTIMENTOS CERÂMICOS PAREDE = 407,59m²

TOTAL REVESTIMENTOS CERÂMICOS PISO = 130,94m²

TOTAL REVESTIMENTOS REBOCO PAREDE = 20,98m²

4. DRENAGEM E PISO EXTERNO

4.1. DRENO CEGO

Dreno: $8,12\text{m} + 6,40\text{m} + 20,05 + 6,60\text{m} + 4,72\text{m} + 5,55\text{m} + 4,72\text{m} + 6,1175\text{m} + 20,105\text{m} + 11,915\text{m} + 5,12\text{m} = 92,82\text{m} \times 0,60\text{m} \times 0,60\text{m} = 33,42\text{m}^3$

4.2. PISO EXTERNO

Demolição Piso: $98,54\text{m}^2 \times 0,10 = 9,85\text{m}^3$

Fôrmas Laterais: $100,75\text{m} \times 0,15\text{m} = 15,11\text{m}^2$

Concreto Piso: $98,54\text{m}^2 \times 0,10\text{m} = 9,85\text{m}^3$

Porcelanato Antiderrapante: $98,54\text{m}^2$

Rodapé: $2,00\text{m} + 1,65\text{m} + 1,50\text{m} + 12,00\text{m} + 3,80\text{m} + 3,40\text{m} + 1,95\text{m} + 3,40\text{m} + 11,80\text{m} + 8,05\text{m} + 11,40\text{m} + 4,00\text{m} + 3,75\text{m} + 1,65\text{m} + 2,55\text{m} + 1,40\text{m} + 12,55\text{m} + 3,80\text{m} + 1,50\text{m} + 1,95\text{m} + 1,50\text{m} + 3,80\text{m} + 9,90\text{m} + 1,50\text{m} + 1,65\text{m} + 2,00\text{m} = 119,25\text{m} - \text{Aberturas } (1,80\text{m} + 0,825\text{m} + 0,825\text{m} + 1,10\text{m} + 0,80\text{m} + 1,10\text{m}) = 119,25\text{m} - 6,45\text{m} = 112,80\text{m}$

4.3. PISO PODOTÁTIL INTERNO

Instalado nas áreas de Circulação, conforme projeto:

Quantidade: $1,50\text{m} + 0,50\text{m} + 1,0\text{m} + 3,0\text{m} + 0,75\text{m} + 3,0\text{m} + 0,75\text{m} + 6,50\text{m} + 1,0\text{m} + 1,50\text{m} + 1,0\text{m} + 0,50\text{m} + 0,75\text{m} + 3,50\text{m} + 1,0\text{m} + 1,0\text{m} + 0,75\text{m} + 0,75\text{m} + 2,25\text{m} + 1,0\text{m} + 1,0\text{m} + 0,75\text{m} + 0,75\text{m} + 2,25\text{m} + 1,0\text{m} + 1,0\text{m} + 0,75\text{m} + 0,75\text{m} + 3,75\text{m} + 1,0\text{m} + 1,0\text{m} + 0,75\text{m} + 0,75\text{m} + 5,50\text{m} + 1,0\text{m} + 1,0\text{m} + 0,75\text{m} + 0,75\text{m} + 0,75\text{m} + 1,0\text{m} + 0,5\text{m} + 1,0\text{m} + 1,75\text{m} + 0,75\text{m} + 0,75\text{m} + 9,75\text{m} + 0,75\text{m} = 73,50\text{m}$

5. IMPERMEABILIZAÇÃO

5.1. PAREDES EXTERNAS

Paredes Externas h=1,50m: $122,60\text{m} \times 1,50\text{m} = 183,90\text{m}^2$

Paredes Reservatório Baixo h=1,00m: $11,50\text{m} \times 1,00\text{m} \times 2 \text{ lados} = 23,00\text{m}^2$

Aberturas Parede altura até 1,50m: $10,88\text{m}^2 + 1,20\text{m}^2 + 1,65\text{m}^2 + 2,70\text{m}^2 + 1,24\text{m}^2 + 1,24\text{m}^2 + 1,99\text{m}^2 = 20,90\text{m}^2$

Aberturas Reservatório Baixo altura até 1,00m: $1,10\text{m}^2 \times 2 \text{ lados} = 2,20\text{m}^2$

TOTAL IMPERMEABILIZAÇÃO PAREDES EXTERNAS= 183,80m²

5.2. PAREDES INTERNAS

Paredes Internas h=1,50m: $177,35\text{m} \times 1,50\text{m} = 266,03\text{m}^2$

Aberturas altura até 1,50m: $(13 \times (0,9\text{m} \times 1,50\text{m})) + (1,20\text{m} \times 1,50\text{m}) + (4 \times (0,80\text{m} \times 1,50\text{m})) = 24,15\text{m}^2$

TOTAL IMPERMEABILIZAÇÃO PAREDES INTERNAS = 241,88m²

6. COBERTURA

Calhas: $1,60\text{m} + 1,60\text{m} + 6,90\text{m} + 9,70\text{m} + 12,55\text{m} + 1,80\text{m} + 6,25\text{m} + 8,05\text{m} + 11,80\text{m} + 11,80\text{m} + 7,55 = 79,60\text{m}$

Rufos: $101,45\text{m} + 5,30\text{m} + 5,30\text{m} + 29,70\text{m} = 141,75\text{m}$

Guaporé-RS, 10 de Setembro de 2020.

ELVIS BREGOLIN

Engenheiro Civil e de Segurança do Trabalho

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