



**PREFEITURA MUNICIPAL DE GUAÇUÍ**  
**SECRETARIA MUNICIPAL DE OBRAS,**  
**INFRAESTRUTURA E SERVIÇOS PÚBLICOS**

Guaçuí-ES, 05 de Agosto de 2019.

**OBRA:** Reforma do Prédio da Prefeitura Municipal

**LOCAL:** Praça João Acacinho, 01, Centro, Guaçuí-ES

## **MEMÓRIA DE CÁLCULO**

### **1.0 – INSTALAÇÃO DO CANTEIRO DE OBRAS**

#### **1.1 PLACA DE OBRA EM CHAPA DE AÇO GALVANIZADO**

→ (3,00m X 1,50m) = **4,50 m<sup>2</sup>**

**TOTAL DO ITEM = 4,50 m<sup>2</sup>**

### **2.0 – SERVIÇOS PRELIMINARES**

#### **2.1 Demolição de piso cimentado inclusive lastro de concreto**

Passeio Cimentado → [(11,34m<sub>comp</sub> X 0,70m<sub>larg</sub>) + (13,32m<sub>comp</sub> X 0,80m<sub>larg</sub>)] = **18,59 m<sup>2</sup>**

**TOTAL DO ITEM = 18,59 m<sup>2</sup>**

#### **2.2 Retirada de meio-fio de concreto**

Área 1 → (12,30m + 3,14m + 7,50m + 3,14m + 21,18m + 3,14m + 3,00m) = **53,40 m**

Área 2 → (12,30m + 3,14m + 9,48m + 3,14m + 51,12m + 3,14m + 6,42m + 1,57m + 8,10m) = **98,41 m**

Área 3 → (3,00m + 3,14m + 24,29m + 3,14m + 15,52m + 1,57m + 8,10m + 2,72m + 1,61m + 1,87m + 2,64m + 2,10m) = **69,70 m**

Frente → (0,47m + 0,47m + 3,40m + 28,94m + 3,40m + 0,47m + 0,47m) = **37,62 m**

Lateral Direita → (4,20m + 8,05m + 2,20m + 4,28m + 2,20m + 13,07m + 2,20m + 3,19m + 2,20m + 3,66m + 2,20m + 5,85m + 4,73m + 3,18m) = **61,21 m**

Fundos → (25,84m + 3,30m + 1,57m + 0,36m + 0,38m + 1,57m) = **33,02 m**

Lateral Esquerda → **67,82 m**

**TOTAL DO ITEM = 421,18 m**



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### **2.3 Retirada de portas e janelas de madeira, inclusive batentes**

Procuradoria →  $(0,70m_{\text{larg}} \times 2,10m_{\text{alt}}) = 1,47 \text{ m}^2$

Recursos Humanos →  $[2 \times (0,80m_{\text{larg}} \times 2,10m_{\text{alt}})] = 3,36 \text{ m}^2$

Arquivo →  $[(0,80m_{\text{larg}} \times 2,10m_{\text{alt}}) + (1,18m_{\text{larg}} \times 1,10m_{\text{alt}})] = 2,98 \text{ m}^2$

Administração →  $(0,80m_{\text{larg}} \times 2,10m_{\text{alt}}) = 1,68 \text{ m}^2$

Banheiro Feminino →  $[(0,70m_{\text{larg}} \times 2,10m_{\text{alt}}) + (2,37m_{\text{larg}} \times 0,65m_{\text{alt}})] = 3,01 \text{ m}^2$

Banheiro Masculino →  $[(0,70m_{\text{larg}} \times 2,10m_{\text{alt}}) + (1,20m_{\text{larg}} \times 0,63m_{\text{alt}})] = 2,23 \text{ m}^2$

Gabinete →  $[2 \times (0,80m_{\text{larg}} \times 2,10m_{\text{alt}})] + (0,70m_{\text{larg}} \times 2,10m_{\text{alt}}) = 4,83 \text{ m}^2$

Informática →  $[(0,80m_{\text{larg}} \times 2,10m_{\text{alt}}) + (1,00m_{\text{larg}} \times 1,25m_{\text{alt}})] = 2,93 \text{ m}^2$

**TOTAL DO ITEM = 22,49 m<sup>2</sup>**

### **2.4 Demolição de alvenaria**

Balcão da Recepção →  $(1,10m_{\text{alt}} \times 0,40m_{\text{larg}} \times 4,00m_{\text{comp}}) = 1,76 \text{ m}^3$

Banheiro Feminino →  $(2,10m_{\text{alt}} \times 0,15m_{\text{larg}} \times 0,10m_{\text{comp}}) = 0,03 \text{ m}^3$

Banheiro Masculino →  $(2,10m_{\text{alt}} \times 0,15m_{\text{larg}} \times 0,10m_{\text{comp}}) = 0,03 \text{ m}^3$

**TOTAL DO ITEM = 1,82 m<sup>3</sup>**

### **2.5 Retirada de divisórias com reaproveitamento**

Planejamento →  $(2,00m_{\text{alt}} \times 2,55m_{\text{larg}}) = 5,10 \text{ m}^2$

Licitação →  $(2,55m_{\text{alt}} \times 0,90m_{\text{larg}}) = 2,30 \text{ m}^2$

Banheiro Feminino →  $[(1,52m_{\text{larg}} \times 1,70m_{\text{alt}}) + (0,89m_{\text{larg}} \times 1,70m_{\text{alt}}) + (0,05m_{\text{larg}} \times 1,70m_{\text{alt}}) + (0,05m_{\text{larg}} \times 1,70m_{\text{alt}})] = 4,27 \text{ m}^2$

Banheiro Masculino →  $[(1,52m_{\text{larg}} \times 1,82m_{\text{alt}}) + (0,50m_{\text{larg}} \times 1,82m_{\text{alt}})] = 3,68 \text{ m}^2$

**TOTAL DO ITEM = 15,18 m<sup>2</sup>**

### **2.6 Retirada manual de blocos pré-moldados de concreto (Blokret), inclusive empilhamento para reaproveitamento**

Frente →  $[(2,35m_{\text{larg}} \times 29,04m_{\text{comp}}) + (2,00m_{\text{larg}} \times 7,35m_{\text{comp}})] = 82,94 \text{ m}^2$



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Lateral Direita →  $[(2,30\text{m}_{\text{larg}} \times 63,33\text{m}_{\text{comp}}) + (1,65\text{m}_{\text{larg}} \times 7,35\text{m}_{\text{comp}}) + (1,51\text{m}_{\text{larg}} \times 2,93\text{m}_{\text{comp}}) + (3,31\text{m}_{\text{larg}} \times 7,67\text{m}_{\text{comp}})] = 187,60 \text{ m}^2$

Lateral Esquerda →  $[(4,23\text{m}_{\text{larg}} \times 6,31\text{m}_{\text{comp}}) + (2,30\text{m}_{\text{larg}} \times 60,98\text{m}_{\text{comp}})] = 166,94 \text{ m}^2$

Fundos →  $[(2,20\text{m}_{\text{larg}} \times 27,09\text{m}_{\text{comp}}) + (1,00\text{m}_{\text{larg}} \times 9,01\text{m}_{\text{comp}})] = 68,61 \text{ m}^2$

**TOTAL DO ITEM = 506,09 m<sup>2</sup>**

### **2.7 Demolição de piso, soleira, peitoris e escadas em mármore ou granito, exclusive regularização**

Escada lateral →  $(7 \times 0,17\text{m}_{\text{espelho}}) + (6 \times 0,30\text{m}_{\text{piso}}) = 2,99 \text{ m}^2$

Banheiro Feminino →  $[2 \times (2,49\text{m} + 3,70\text{m})_{\text{larg}} \times 0,10\text{m}_{\text{alt}}] = 1,24 \text{ m}^2$

**TOTAL DO ITEM = 4,23 m<sup>2</sup>**

### **2.8 Retirada de vidros quebrados**

Portal Lateral →  $(1,50\text{m}_{\text{larg}} \times 2,50\text{m}_{\text{comp}}) = 3,75 \text{ m}^2$

Janela Comunicação →  $[2 \times (1,60\text{m}_{\text{larg}} \times 1,50\text{m}_{\text{comp}})] = 4,80 \text{ m}^2$

Janela Arquivo →  $(4,20\text{m}_{\text{larg}} \times 1,00\text{m}_{\text{comp}}) = 4,20 \text{ m}^2$

**TOTAL DO ITEM = 12,75 m<sup>2</sup>**

### **2.9 Lixamento de parede com pintura antiga PVA para recebimento de nova camada de tinta**

#### **Ambiente Interno:**

Protocolo →  $[(1,75\text{m} + 1,75\text{m} + 3,75\text{m})_{\text{comp}} \times (1,61\text{m}_{\text{alt}})] + [(9,08\text{m}_{\text{comp}} \times 1,61\text{m}_{\text{alt}}) - (1,85\text{m}_{\text{larg}} \times 1,20\text{m}_{\text{alt}})] = 24,07 \text{ m}^2$

Banheiro Funcionários →  $\{[2 \times (2,49\text{m}_{\text{larg}} + 3,70\text{m}_{\text{comp}})] \times (0,63\text{m}_{\text{alt}})\} - [(0,60\text{m}_{\text{larg}} \times 0,60\text{m}_{\text{comp}})] = 7,44 \text{ m}^2$

#### **Ambientes Externos:**

Frente →  $[(21,24\text{m}_{\text{larg}} \times 2,91\text{m}_{\text{alt}}) - (3,15\text{m}_{\text{larg}} \times 1,30\text{m}_{\text{comp}})] = 57,71 \text{ m}^2$

Lateral Direita →  $\{(31,77\text{m}_{\text{larg}} \times 2,91\text{m}_{\text{alt}}) - [(3,38\text{m}_{\text{larg}} \times 1,50\text{m}_{\text{alt}}) + (2,70\text{m}_{\text{larg}} \times 1,50\text{m}_{\text{alt}}) + (2,70\text{m}_{\text{larg}} \times 1,50\text{m}_{\text{alt}}) + (1,00\text{m}_{\text{larg}} \times 1,50\text{m}_{\text{alt}}) + (1,50\text{m}_{\text{larg}} \times 2,50\text{m}_{\text{alt}}) + (2,70\text{m}_{\text{larg}} \times 1,50\text{m}_{\text{alt}}) +$



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$$(2,70\text{m}_{\text{larg}} \times 1,50\text{m}_{\text{alt}}) + (2,70\text{m}_{\text{larg}} \times 1,50\text{m}_{\text{alt}}) + (2,70\text{m}_{\text{larg}} \times 1,50\text{m}_{\text{alt}}) + (2,70\text{m}_{\text{larg}} \times 1,50\text{m}_{\text{alt}}) + (3,80\text{m}_{\text{larg}} \times 1,50\text{m}_{\text{alt}}) = \mathbf{48,08 \text{ m}^2}$$

$$\text{Lateral Esquerda} \rightarrow \{(31,77\text{m}_{\text{larg}} \times 2,91\text{m}_{\text{alt}}) - [(3,50\text{m}_{\text{larg}} \times 1,50\text{m}_{\text{alt}}) + (2,70\text{m}_{\text{larg}} \times 1,50\text{m}_{\text{alt}}) + (2,25\text{m}_{\text{larg}} \times 1,50\text{m}_{\text{alt}}) + (2,70\text{m}_{\text{larg}} \times 1,50\text{m}_{\text{alt}}) + (2,70\text{m}_{\text{larg}} \times 1,50\text{m}_{\text{alt}}) + (2,70\text{m}_{\text{larg}} \times 1,50\text{m}_{\text{alt}}) + (2,70\text{m}_{\text{larg}} \times 1,50\text{m}_{\text{alt}}) + (2,70\text{m}_{\text{larg}} \times 1,50\text{m}_{\text{alt}}) + (2,70\text{m}_{\text{larg}} \times 1,50\text{m}_{\text{alt}}) + (3,60\text{m}_{\text{larg}} \times 1,50\text{m}_{\text{alt}})]\} = \mathbf{50,18 \text{ m}^2}$$

$$\text{Fundos} \rightarrow \{(21,24\text{m}_{\text{larg}} \times 1,91\text{m}_{\text{alt}}) - [(2,35\text{m}_{\text{larg}} \times 1,50\text{m}_{\text{alt}}) + (3,65\text{m}_{\text{larg}} \times 0,75\text{m}_{\text{alt}})]\} = \mathbf{34,31 \text{ m}^2}$$

$$\text{Fachada Contabilidade (2º Pav.)} \rightarrow [(4,25\text{m} + 2,80\text{m} + 3,79\text{m} + 8,10\text{m})_{\text{comp}} \times (3,35\text{m}_{\text{alt}})] - [(4,00\text{m} + 2,10\text{m} + 3,38\text{m} + 3,97\text{m})_{\text{larg}} \times (1,83\text{m}_{\text{alt}})] = \mathbf{38,84 \text{ m}^2}$$

$$\text{Fachada Câmara Municipal (2º Pav.)} \rightarrow \{[(1,78\text{m} + 3,30\text{m} + 0,90\text{m} + 0,40\text{m} + 2,20\text{m} + 4,30\text{m}) \times (4,15\text{m}_{\text{alt}})] + [(1,70\text{m} + 1,70\text{m} + 1,70\text{m} + 1,70\text{m}) \times (1,75\text{m}_{\text{alt}})] + [(1,50\text{m} \times 1,10\text{m}) + (0,80\text{m} \times 4,90\text{m}) + (2,20\text{m} \times 2,50\text{m}) + (7,70\text{m} \times 4,90\text{m})\} - \{[(1,80\text{m} \times 2,75\text{m}) + (1,85\text{m} \times 1,80\text{m}) + (1,85\text{m} \times 1,80\text{m}) + (1,85\text{m} \times 1,80\text{m}) + (1,85\text{m} \times 1,80\text{m}) + (1,08\text{m} \times 2,08\text{m})\} = \mathbf{98,13\text{m}^2}$$

$$\text{Rampa da Entrada Principal} \rightarrow \{2 \times [(12,20\text{m}_{\text{comp}} \times 0,90\text{m}_{\text{alt}}) / 2]\} = \mathbf{10,98 \text{ m}^2}$$

$$\text{Parte Elevada (Lateral Direita)} \rightarrow [(10,88\text{m} + 19,19\text{m})_{\text{comp}} \times (0,90\text{m}_{\text{larg}})] + [(10,88\text{m} + 19,19\text{m})_{\text{comp}} \times (0,50\text{m}_{\text{alt}})] = \mathbf{42,09 \text{ m}^2}$$

$$\text{Parte Elevada (Lateral Esquerda)} \rightarrow [(31,72\text{m})_{\text{comp}} \times (0,90\text{m}_{\text{larg}})] + [(31,72\text{m})_{\text{comp}} \times (0,50\text{m}_{\text{larg}})] = \mathbf{44,41 \text{ m}^2}$$

**TOTAL DO ITEM = 445,26 m<sup>2</sup>**

## **2.10 Demolição de revestimento com azulejos**

$$\text{Banheiro Feminino} \rightarrow [2 \times (2,49\text{m} + 3,70\text{m})_{\text{larg}} \times (1,82\text{m}_{\text{alt}})] + [2 \times (2,49\text{m} + 3,70\text{m})_{\text{larg}} \times (0,10\text{m}_{\text{alt}})] = \mathbf{22,53 \text{ m}^2}$$

**TOTAL DO ITEM = 23,77 m<sup>2</sup>**

## **2.11 REMOÇÃO DE LOUÇAS, DE FORMA MANUAL, SEM REAPROVEITAMENTO.**

**AF\_12/2017**



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Banheiro Feminino → 04 und

Banheiro Masculino → 01 und

**TOTAL DO ITEM = 05 und**

### **2.12 Remoção de pintura antiga a óleo ou esmalte**

Guarda-copo da entrada principal →  $\{2 \times [2 \times (2\pi \times 0,04m_{\text{raio}} \times 12,14m_{\text{comp}})] + [2 \times (2\pi \times 0,04m_{\text{raio}} \times 0,87m_{\text{alt}})]\} = 13,07 \text{ m}^2$

Grade da Escada →  $(0,39m \times 0,50m) + [(0,50m \times 0,28m) / 2] = 0,27 \text{ m}^2$

**TOTAL DO ITEM = 13,34 m<sup>2</sup>**

### **2.13 Retirada de bancada de pia**

Banheiro Feminino →  $(0,52m_{\text{larg}} \times 1,66m_{\text{comp}}) = 0,86 \text{ m}^2$

**TOTAL DO ITEM = 0,86 m<sup>2</sup>**

### **2.14 Retirada de torneiras e registros**

Recepção do Gabinete → 1 und

**TOTAL DO ITEM = 1 und**

### **2.15 Retirada de revestimento antigo em reboco**

Entrada Principal →  $[(3,96m + 7,23m + 3,33m + 0,30m + 1,75m + 3,75m + 3,60m)_{\text{comp}} \times (1,30m_{\text{alt}})] - [(1,10m + 0,80m + 1,85m)_{\text{larg}} \times 1,30m_{\text{alt}}] = 26,22 \text{ m}^2$

Entrada Lateral →  $[(4,20m + 1,50m + 4,20m)_{\text{comp}} \times (1,30m_{\text{alt}})] - [(1,50m_{\text{larg}} \times 1,30m_{\text{alt}})] = 10,92 \text{ m}^2$

Circulação Lateral Direita →  $[(1,95m + 3,55m + 12,91m + 16,06m + 0,10m)_{\text{comp}} \times (1,30m_{\text{alt}})] - [(0,90m + 0,80m + 1,85m + 0,80m + 0,80m + 1,00)_{\text{larg}} \times (1,30m_{\text{alt}})] = 36,94 \text{ m}^2$

Circulação dos Fundos →  $[(0,30m + 0,10m + 4,00m + 11,19m + 0,10m + 0,10m + 0,97m)_{\text{comp}} \times (1,30m_{\text{alt}})] - [(0,80m + 0,80m + 0,80m + 0,80m)_{\text{larg}} \times (1,30m_{\text{alt}})] = 17,63 \text{ m}^2$

Circulação Lateral Esquerda →  $[(1,47m + 17,32m + 12,88m)_{\text{comp}} \times (1,30m_{\text{alt}})] - [(0,80m + 0,80m + 2,05m + 0,80m + 1,90m + 0,80m)_{\text{larg}} \times (1,30m_{\text{alt}})] = 31,87 \text{ m}^2$



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Parede Externa Procuradoria (Quadro de Avisos) →  $(2,00m_{\text{larg}} \times 1,00m_{\text{alt}}) = 2,00 \text{ m}^2$

**TOTAL DO ITEM = 125,58 m<sup>2</sup>**

### **2.16 Demolição de piso revestido com cerâmica inclusive lastro de concreto**

Banheiro Feminino →  $(2,49m_{\text{larg}} \times 3,70m_{\text{comp}}) = 9,21 \text{ m}^2$

Porta Bandeira →  $(4,20m_{\text{larg}} \times 1,00m_{\text{comp}}) = 4,20 \text{ m}^2$

**TOTAL DO ITEM = 13,41 m<sup>2</sup>**

### **2.17 Retirada de rodapé de madeira ou cerâmica**

Entrada →  $(3,96m_{\text{comp}} + 7,23m_{\text{comp}} + 1,75m_{\text{comp}} + 3,75m_{\text{comp}} + 1,75m_{\text{comp}}) = 18,44 \text{ m}$

Circulação →  $[2,30m_{\text{comp}} + 3,55m_{\text{comp}} + 3,90m_{\text{comp}} + 3,90m_{\text{comp}} + [12,91m_{\text{comp}} - (4 \times 0,80m_{\text{comp}})] + [10,65m_{\text{comp}} - (2 \times 0,80m_{\text{comp}})] + 8,66m_{\text{comp}} + [11,19m_{\text{comp}} - (0,90m_{\text{comp}} + 0,70m_{\text{comp}} + 0,70m_{\text{comp}} + 0,80m_{\text{comp}})] + 0,97m_{\text{comp}} + 1,47m_{\text{comp}} + 8,66m_{\text{comp}} + [10,65m_{\text{comp}} - (2 \times 0,80m_{\text{comp}})] + [17,32m_{\text{comp}} - (2,05m_{\text{comp}} + 0,80m_{\text{comp}} + 0,80m_{\text{comp}} + 0,80m_{\text{comp}} + 0,80m_{\text{comp}})] = 77,48 \text{ m}$

**TOTAL DO ITEM = 99,82 m**

### **2.18 Retirada de pontos elétricos (luminárias, interruptores e tomadas)**

Circulação → 18 und

**TOTAL DO ITEM = 18 und**

## **3.0 – MOVIMENTO DE TERRA**

### **3.1 Escavação manual em material de 1a. categoria, até 1.50 m de profundidade**

Lateral Direita →  $[10 \times (1,40m_{\text{larg}} \times 0,10m_{\text{comp}} \times 0,20m_{\text{alt}})] + [10 \times (2,20m_{\text{larg}} \times 0,10m_{\text{comp}} \times 0,20m_{\text{alt}})] = 0,72 \text{ m}^3$

Lateral Esquerda →  $[6 \times (1,20m_{\text{larg}} \times 0,10m_{\text{comp}} \times 0,20m_{\text{alt}})] + [16 \times (2,20m_{\text{larg}} \times 0,10m_{\text{comp}} \times 0,20m_{\text{alt}})] + [4 \times (2,00m_{\text{larg}} \times 0,10m_{\text{comp}} \times 0,20m_{\text{alt}})] + [4 \times (1,50m_{\text{larg}} \times 0,10m_{\text{comp}} \times 0,20m_{\text{alt}})] + [2 \times (1,70m_{\text{larg}} \times 0,10m_{\text{comp}} \times 0,20m_{\text{alt}})] = 1,20 \text{ m}^3$

**TOTAL DO ITEM = 1,92 m<sup>3</sup>**



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#### **4.0 – PAREDES E PAINEIS**

**4.1 Alvenaria de blocos cerâmicos 10 furos 10x20x20cm, assentados c/argamassa de cimento, cal hidratada CH1 e areia traço 1:0,5:8, esp. das juntas 12mm e esp. das paredes s/revestimento, 10cm (bloco comprado na fábrica, posto obra)**

Planejamento →  $[(2,00m_{\text{larg}} \times 2,55m_{\text{alt}}) - (0,80m_{\text{larg}} \times 2,10m_{\text{alt}})] = 3,42 \text{ m}^2$

Procuradoria →  $(0,70m_{\text{larg}} \times 2,10m_{\text{alt}}) = 1,47 \text{ m}^2$

Recursos Humanos →  $[2 \times (0,80m_{\text{larg}} \times 2,10m_{\text{alt}})] = 3,36 \text{ m}^2$

Licitação →  $[(0,90m_{\text{larg}} \times 0,45m_{\text{alt}}) + (0,10m_{\text{larg}} \times 2,10m_{\text{alt}})] = 0,62 \text{ m}^2$

Banheiro Feminino →  $(1,70m_{\text{larg}} \times 0,05m_{\text{alt}})] = 0,09 \text{ m}^2$

Banheiro Masculino →  $(0,60m_{\text{larg}} \times 0,03m_{\text{alt}})] = 0,02 \text{ m}^2$

Arquivo →  $(1,18m_{\text{larg}} \times 1,10m_{\text{alt}})] = 1,30 \text{ m}^2$

Administração →  $(0,80m_{\text{larg}} \times 2,10m_{\text{alt}}) = 1,68 \text{ m}^2$

Gabinete →  $[2 \times (0,80m_{\text{larg}} \times 2,10m_{\text{alt}})] = 3,36 \text{ m}^2$

Informática →  $[(0,80m_{\text{larg}} \times 2,10m_{\text{alt}}) + (1,00m_{\text{larg}} \times 1,25m_{\text{alt}})] = 2,93 \text{ m}^2$

Balcão da Recepção (Entrada da Prefeitura) →  $(2,12m_{\text{comp}} \times 1,30m_{\text{alt}}) + (1,25m_{\text{comp}} \times 1,30m_{\text{alt}}) = 4,38 \text{ m}^2$

Balcão da Recepção (Gabinete) →  $(2,00m_{\text{comp}} \times 1,30m_{\text{alt}}) + (1,30m_{\text{comp}} \times 1,30m_{\text{alt}}) = 4,29 \text{ m}^2$

Balcão do Protocolo →  $(1,90m_{\text{comp}} \times 1,30m_{\text{alt}}) = 2,47 \text{ m}^2$

**TOTAL DO ITEM = 29,39 m<sup>2</sup>**

**4.2 Verga/contraverga reta de concreto armado 10 x 5 cm, Fck = 15 MPa, inclusive forma, armação e desforma**

Planejamento →  $(0,80m + 0,20m + 0,20m)_{\text{comp}} = 1,20 \text{ m}$

Licitação →  $(0,80m + 0,20m + 0,20m)_{\text{comp}} = 1,20 \text{ m}$

Banheiro Funcionários →  $[(0,60m + 0,20m + 0,20m)_{\text{comp}} \times 2] = 2,00 \text{ m}$

Banheiro Público →  $[(0,60m + 0,20m + 0,20m)_{\text{comp}} \times 2] = 2,00 \text{ m}$

**TOTAL DO ITEM = 6,40 m**



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**4.3 Alvenaria de blocos de concreto 9x19x39cm, c/ resist. mínimo a compres. 2.5 MPa, assent. c/ arg. De cimento, cal hidratada CH1 e areia no traço 1:0.5:8 esp. das juntas 10mm e esp. das paredes, s/ rev. 9cm**

Lateral Direita →  $[10 \times (1,40m_{\text{larg}} \times 0,60m_{\text{alt}})] + [10 \times (2,20m_{\text{larg}} \times 0,60m_{\text{alt}})] = 21,60 \text{ m}^2$

Lateral Esquerda →  $[6 \times (1,20m_{\text{larg}} \times 0,60m_{\text{alt}})] + [16 \times (2,20m_{\text{larg}} \times 0,60m_{\text{alt}})] + [4 \times (2,00m_{\text{larg}} \times 0,60m_{\text{alt}})] + [4 \times (1,50m_{\text{larg}} \times 0,60m_{\text{alt}})] + [2 \times (1,70m_{\text{larg}} \times 0,60m_{\text{alt}})] = 35,88 \text{ m}^2$

**TOTAL DO ITEM = 57,48 m<sup>2</sup>**

**4.4 Divisória de granito com 3 cm de espessura, assentada com argamassa de cimento e areia no traço 1:3, na cor cinza**

Banheiro Funcionários →  $[(1,50m_{\text{larg}} \times 1,70m_{\text{alt}}) + (0,77m_{\text{larg}} \times 1,70m_{\text{alt}}) + (0,69m_{\text{larg}} \times 1,70m_{\text{alt}}) + (1,29m_{\text{larg}} \times 1,70m_{\text{alt}})] = 7,22 \text{ m}^2$

**TOTAL DO ITEM = 7,22 m<sup>2</sup>**

## **5.0 – ESQUADRIAS**

**5.1 PORTA DE MADEIRA PARA PINTURA, SEMI-OCA (LEVE OU MÉDIA), 80X210CM, ESPESSURA DE 3,5CM, INCLUSO DOBRADIÇAS - FORNECIMENTO E INSTALAÇÃO.**

**AF\_08/2015**

Planejamento → **1 und**

Licitação → **1 und**

Arquivo → **1 und**

Banheiro Feminino → **1 und**

Banheiro Masculino → **1 und**

**TOTAL DO ITEM = 5 und**

**5.2 Bâscula para vidro em alumínio anodizado cor natural, linha 25, completa, com tranca, caixilho, alizar e contramarco, exclusive vidro**

Banheiro feminino →  $(0,60m_{\text{larg}} \times 0,60m_{\text{alt}}) = 0,36 \text{ m}^2$

Banheiro Masculino →  $(0,60m_{\text{larg}} \times 0,60m_{\text{alt}}) = 0,36 \text{ m}^2$





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**TOTAL DO ITEM = 0,72 m<sup>2</sup>**

**5.3 PORTA DE VIDRO TEMPERADO 0,70 X 1,30M, ESPESSURA 10MM, INCLUSIVE  
ACESSORIOS**

Recepção do Gabinete (Balcão) → **01 und**

**TOTAL DO ITEM = 01 und**

**5.4 PORTA DE VIDRO TEMPERADO 0,70 X 2,10M, ESPESSURA 10MM, INCLUSIVE  
ACESSORIOS**

Recepção do Gabinete → **01 und**

**TOTAL DO ITEM = 01 und**

**5.5 PORTA DE VIDRO TEMPERADO 0,90 X 1,30M, ESPESSURA 10MM, INCLUSIVE  
ACESSORIOS**

Balcão da Recepção (Entrada da Prefeitura) → **01 und**

**TOTAL DO ITEM = 01 und**

**5.6 Fechadura com maçaneta tipo alavanca e chave tipo yale, ref. IMAB, STAN,  
ALIANÇA ou equivalente**

Planejamento → **1 und**

Licitação → **1 und**

Arquivo → **1 und**

Banheiro Funcionários → **1 und**

**TOTAL DO ITEM = 4 und**

**5.7 Porta de abrir tipo veneziana em alumínio anodizado, linha 25, completa, incl.  
puxador com tranca, caixilho, alizar e contramarco**

Banheiro Funcionários →  $[2 \times (0,80m_{\text{larg}} \times 1,60m_{\text{alt}})] = 2,56 \text{ m}^2$

**TOTAL DO ITEM = 2,56 m<sup>2</sup>**



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**5.8 Fechadura com maçaneta tipo alavanca e chave tipo banheiro, ref. IMAB, STAN, ALIANÇA ou equivalente**

Banheiro Público → 1 und

**TOTAL DO ITEM = 1 und**

**5.9 Marco de madeira de lei de 1ª (Peroba, Ipê, Angelim Pedra ou equivalente) com 15x3 cm de batente, nas dimensões de 0.80 x 2.10 m**

Planejamento → 1 und

Licitação → 1 und

Arquivo → 1 und

Banheiro Feminino → 1 und

Banheiro Masculino → 1 und

**TOTAL DO ITEM = 5 und**

**5.10 Alizar de madeira de lei de 1ª (Peroba, Ipê, Angelim Pedra ou equivalente) de 5 x 1,5 cm**

Planejamento →  $[(2,10m_{alt} \times 2LADOS) + (0,80m_{larg})] = 5,00 \text{ m}$

Licitação →  $[(2,10m_{alt} \times 2LADOS) + (0,80m_{larg})] = 5,00 \text{ m}$

Arquivo →  $[(2,10m_{alt} \times 2LADOS) + (0,80m_{larg})] = 5,00 \text{ m}$

Banheiro Feminino →  $[(2,10m_{alt} \times 2LADOS) + (0,80m_{larg})] = 5,00 \text{ m}$

Banheiro Masculino →  $[(2,10m_{alt} \times 2LADOS) + (0,80m_{larg})] = 5,00 \text{ m}$

**TOTAL DO ITEM = 25 m**

**6.0 – VIDROS E ESPELHOS**

**6.1 Vidro fantasia mini-boreal, com 4 mm de espessura**

Porta Entrada Lateral →  $(1,50m_{larg} \times 2,50m_{alt}) = 3,75 \text{ m}^2$

Banheiro Funcionários →  $(0,60m_{larg} \times 0,60m_{alt}) = 0,36 \text{ m}^2$

Banheiro Público →  $(0,60m_{larg} \times 0,60m_{alt}) = 0,36 \text{ m}^2$

**TOTAL DO ITEM = 4,47 m²**

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**6.2 Vidro plano transparente liso, com 4 mm de espessura**

Janela Comunicação →  $[2 \times (1,60m_{\text{larg}} \times 1,50m_{\text{comp}})] = 4,80 \text{ m}^2$

Janela Arquivo →  $[2 \times (1,60m_{\text{larg}} \times 1,50m_{\text{comp}})] = 4,80 \text{ m}^2$

**TOTAL DO ITEM = 9,60 m<sup>2</sup>**

**6.3 Espelho para banheiros espessura 4 mm, incluindo chapa compensada 10 mm, moldura de alumínio em perfil L 3/4", fixado com parafusos cromados fina, diâmetro de 4.0 a 7.0mm**

Banheiro Funcionários →  $(0,80m_{\text{larg}} \times 0,80m_{\text{comp}}) = 0,64 \text{ m}^2$

Banheiro Público →  $(0,80m_{\text{larg}} \times 0,80m_{\text{comp}}) = 0,64 \text{ m}^2$

**TOTAL DO ITEM = 1,28 m<sup>2</sup>**

**7.0 FORRO**

**7.1 Forro PVC branco L = 20 cm, frisado, colocado**

Recepção Gabinete →  $[2 \times (3,11m_{\text{larg}} \times 4,92m_{\text{comp}})] = 30,60 \text{ m}^2$

**TOTAL DO ITEM = 30,60 m<sup>2</sup>**

**7.2 Forro de gesso acabamento tipo liso**

Circulação →  $[18 \times (0,25m_{\text{larg}} \times 1,30m_{\text{comp}})] = 5,85 \text{ m}^2$

**TOTAL DO ITEM = 30,60 m<sup>2</sup>**

**8.0 REVESTIMENTO**

**8.1 Chapisco de argamassa de cimento e areia média ou grossa lavada, no traço 1:3, espessura 5 mm**

Planejamento →  $[(2,00m_{\text{larg}} \times 2,55m_{\text{alt}}) - (0,80m_{\text{larg}} \times 2,10m_{\text{alt}})] = 3,42 \text{ m}^2$

Procuradoria →  $(0,70m_{\text{larg}} \times 2,10m_{\text{alt}}) = 1,47 \text{ m}^2$

Recursos Humanos →  $[2 \times (0,80m_{\text{larg}} \times 2,10m_{\text{alt}})] = 3,36 \text{ m}^2$

Licitação →  $[(0,90m_{\text{larg}} \times 0,45m_{\text{alt}}) + (0,10m_{\text{larg}} \times 2,10m_{\text{alt}})] = 0,62 \text{ m}^2$

Banheiro Feminino →  $[(1,70m_{\text{larg}} \times 0,05m_{\text{alt}})] = 0,09 \text{ m}^2$



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Banheiro Masculino →  $(0,60m_{larg} \times 0,03m_{alt}) = 0,02 m^2$

Arquivo →  $(1,18m_{larg} \times 1,10m_{alt}) = 1,30 m^2$

Administração →  $(0,80m_{larg} \times 2,10m_{alt}) = 1,68 m^2$

Gabinete →  $[2 \times (0,80m_{larg} \times 2,10m_{alt})] = 3,36 m^2$

Informática →  $[(0,80m_{larg} \times 2,10m_{alt}) + (1,00m_{larg} \times 1,25m_{alt})] = 2,93 m^2$

Lateral Direita →  $[10 \times (1,40m_{larg} \times 0,60m_{alt})] + [10 \times (2,20m_{larg} \times 0,60m_{alt})] = 21,60 m^2$

Lateral Esquerda →  $[6 \times (1,20m_{larg} \times 0,60m_{alt})] + [16 \times (2,20m_{larg} \times 0,60m_{alt})] + [4 \times (2,00m_{larg} \times 0,60m_{alt})] + [4 \times (1,50m_{larg} \times 0,60m_{alt})] + [2 \times (1,70m_{larg} \times 0,60m_{alt})] = 35,88 m^2$

Balcão da Recepção (Entrada da Prefeitura) →  $[2 \times (2,12m_{comp} \times 1,30m_{alt})] + [2 \times (1,25m_{comp} \times 1,30m_{alt})] = 8,76 m^2$

Balcão da Recepção (Gabinete) →  $[2 \times (2,00m_{comp} \times 1,30m_{alt})] + [2 \times (1,30m_{comp} \times 1,30m_{alt})] = 8,58 m^2$

Balcão do Protocolo →  $[2 \times (1,90m_{comp} \times 1,30m_{alt})] = 4,94 m^2$

**TOTAL DO ITEM = 86,87 m<sup>2</sup>**

**8.2 Reboco de argamassa de cimento, cal hidratada CH1 e areia média ou grossa lavada no traço 1:0.5:6, espessura 5mm**

Planejamento →  $[(2,00m_{larg} \times 2,55m_{alt}) - (0,80m_{larg} \times 2,10m_{alt})] = 3,42 m^2$

Procuradoria →  $(0,70m_{larg} \times 2,10m_{alt}) = 1,47 m^2$

Recursos Humanos →  $[2 \times (0,80m_{larg} \times 2,10m_{alt})] = 3,36 m^2$

Licitação →  $[(0,90m_{larg} \times 0,45m_{alt}) + (0,10m_{larg} \times 2,10m_{alt})] = 0,62 m^2$

Banheiro Feminino →  $(1,70m_{larg} \times 0,05m_{alt}) = 0,09 m^2$

Banheiro Masculino →  $(0,60m_{larg} \times 0,03m_{alt}) = 0,02 m^2$

Arquivo →  $(1,18m_{larg} \times 1,10m_{alt}) = 1,30 m^2$

Administração →  $(0,80m_{larg} \times 2,10m_{alt}) = 1,68 m^2$

Gabinete →  $[2 \times (0,80m_{larg} \times 2,10m_{alt})] = 3,36 m^2$

Informática →  $[(0,80m_{larg} \times 2,10m_{alt}) + (1,00m_{larg} \times 1,25m_{alt})] = 2,93 m^2$

Lateral Direita →  $[10 \times (1,40m_{larg} \times 0,60m_{alt})] + [10 \times (2,20m_{larg} \times 0,60m_{alt})] = 21,60 m^2$



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Lateral Esquerda →  $[6 \times (1,20\text{m}_{\text{larg}} \times 0,60\text{m}_{\text{alt}})] + [16 \times (2,20\text{m}_{\text{larg}} \times 0,60\text{m}_{\text{alt}})] + [4 \times (2,00\text{m}_{\text{larg}} \times 0,60\text{m}_{\text{alt}})] + [4 \times (1,50\text{m}_{\text{larg}} \times 0,60\text{m}_{\text{alt}})] + [2 \times (1,70\text{m}_{\text{larg}} \times 0,60\text{m}_{\text{alt}})] = \mathbf{35,88 \text{ m}^2}$

Balcão da Recepção (Entrada da Prefeitura) →  $(2,12\text{m}_{\text{comp}} \times 1,30\text{m}_{\text{alt}}) + (1,25\text{m}_{\text{comp}} \times 1,30\text{m}_{\text{alt}}) = \mathbf{4,38 \text{ m}^2}$

Balcão da Recepção (Gabinete) →  $(2,00\text{m}_{\text{comp}} \times 1,30\text{m}_{\text{alt}}) + (1,30\text{m}_{\text{comp}} \times 1,30\text{m}_{\text{alt}}) = \mathbf{4,29 \text{ m}^2}$

Balcão do Protocolo →  $(1,90\text{m}_{\text{comp}} \times 1,30\text{m}_{\text{alt}}) = \mathbf{2,47 \text{ m}^2}$

**TOTAL DO ITEM = 64,59 m<sup>2</sup>**

**8.3 Emboço de argamassa de cimento, cal hidratada CH1 e areia média ou grossa lavada no traço 1:0.5:6, espessura 20 mm**

Balcão da Recepção (Entrada da Prefeitura) →  $(2,12\text{m}_{\text{comp}} \times 1,30\text{m}_{\text{alt}}) + (1,25\text{m}_{\text{comp}} \times 1,30\text{m}_{\text{alt}}) = \mathbf{4,38 \text{ m}^2}$

Balcão da Recepção (Gabinete) →  $(2,00\text{m}_{\text{comp}} \times 1,30\text{m}_{\text{alt}}) + (1,30\text{m}_{\text{comp}} \times 1,30\text{m}_{\text{alt}}) = \mathbf{4,29 \text{ m}^2}$

Balcão do Protocolo →  $(1,90\text{m}_{\text{comp}} \times 1,30\text{m}_{\text{alt}}) = \mathbf{2,47 \text{ m}^2}$

Entrada Principal →  $[(3,96\text{m} + 7,23\text{m} + 3,33\text{m} + 0,30\text{m} + 1,75\text{m} + 3,75\text{m} + 3,60\text{m})_{\text{comp}} \times (1,30\text{m}_{\text{alt}})] - [(1,10\text{m} + 0,80\text{m} + 1,85\text{m})_{\text{larg}} \times 1,30\text{m}_{\text{alt}}] = \mathbf{26,22 \text{ m}^2}$

Entrada Lateral →  $[(4,20\text{m} + 1,50\text{m} + 4,20\text{m})_{\text{comp}} \times (1,30\text{m}_{\text{alt}})] - [(1,50\text{m}_{\text{larg}} \times 1,30\text{m}_{\text{alt}})] = \mathbf{10,92 \text{ m}^2}$

Circulação Lateral Direita →  $[(1,95\text{m} + 3,55\text{m} + 12,91\text{m} + 16,06\text{m} + 0,10\text{m})_{\text{comp}} \times (1,30\text{m}_{\text{alt}})] - [(0,90\text{m} + 0,80\text{m} + 1,85\text{m} + 0,80\text{m} + 0,80\text{m} + 1,00\text{m})_{\text{larg}} \times (1,30\text{m}_{\text{alt}})] = \mathbf{36,95 \text{ m}^2}$

Circulação dos Fundos →  $[(0,30\text{m} + 0,10\text{m} + 4,00\text{m} + 11,19\text{m} + 0,10\text{m} + 0,10\text{m} + 0,97\text{m})_{\text{comp}} \times (1,30\text{m}_{\text{alt}})] - [(0,80\text{m} + 0,80\text{m} + 0,80\text{m} + 0,80\text{m})_{\text{larg}} \times (1,30\text{m}_{\text{alt}})] = \mathbf{17,63 \text{ m}^2}$

Circulação Lateral Esquerda →  $[(1,47\text{m} + 17,32\text{m} + 12,88\text{m})_{\text{comp}} \times (1,30\text{m}_{\text{alt}})] - [(0,80\text{m} + 0,80\text{m} + 2,05\text{m} + 0,80\text{m} + 1,90\text{m} + 0,80\text{m})_{\text{larg}} \times (1,30\text{m}_{\text{alt}})] = \mathbf{31,87 \text{ m}^2}$

Banheiro Feminino →  $[(2,40\text{m} + 3,70\text{m} + 2,40\text{m} + 3,70\text{m})_{\text{larg}} \times (1,92\text{m}_{\text{alt}})] - [(0,80\text{m}_{\text{larg}} \times 1,92\text{m}_{\text{alt}})] = \mathbf{21,89 \text{ m}^2}$

Parede Externa Procuradoria (Quadro de Avisos) →  $(2,00\text{m}_{\text{larg}} \times 1,00\text{m}_{\text{alt}}) = \mathbf{2,00 \text{ m}^2}$

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**TOTAL DO ITEM = 158,62 m<sup>2</sup>**

**8.4 Cerâmica 10 x 10 cm, marcas de referência Eliane, Cecrisa ou Portobello, nas cores branco ou areia, com rejunte esp. 0.5 cm, empregando argamassa colante**

Balcão da Recepção (Entrada da Prefeitura) →  $(2,12m_{comp} \times 1,30m_{alt}) + (1,25m_{comp} \times 1,30m_{alt}) = 4,38 m^2$

Balcão da Recepção (Gabinete) →  $(2,00m_{comp} \times 1,30m_{alt}) + (1,30m_{comp} \times 1,30m_{alt}) = 4,29 m^2$

Balcão do Protocolo →  $(1,90m_{comp} \times 1,30m_{alt}) = 2,47 m^2$

Entrada Principal →  $[(3,96m + 7,23m + 3,33m + 0,30m + 1,75m + 3,75m + 3,60m)_{comp} \times (1,23m_{alt})] - [(1,10m + 0,80m + 1,85m)_{larg} \times (1,23m_{alt})] = 24,81 m^2$

Entrada Lateral →  $[(4,20m + 1,50m + 4,20m)_{comp} \times (1,23m_{alt})] - [(1,50m_{larg} \times 1,23m_{alt})] = 10,33 m^2$

Circulação Lateral Direita →  $[(1,95m + 3,55m + 12,91m + 16,06m + 0,10m)_{comp} \times (1,23m_{alt})] - [(0,90m + 0,80m + 1,85m + 0,80m + 0,80m + 1,00)_{larg} \times (1,23m_{alt})] = 34,96 m^2$

Circulação dos Fundos →  $[(0,30m + 0,10m + 4,00m + 11,19m + 0,10m + 0,10m + 0,97m)_{comp} \times (1,23m_{alt})] - [(0,80m + 0,80m + 0,80m + 0,80m)_{larg} \times (1,23m_{alt})] = 16,67 m^2$

Circulação Lateral Esquerda →  $[(1,47m + 17,32m + 12,88m)_{comp} \times (1,23m_{alt})] - [(0,80m + 0,80m + 2,05m + 0,80m + 1,90m + 0,80m)_{larg} \times (1,23m_{alt})] = 30,16 m^2$

Parede do Quadro de Avisos →  $[(1,47m + 17,32m + 12,88m)_{comp} \times (1,23m_{alt})] - [(0,80m + 0,80m + 2,05m + 0,80m + 1,90m + 0,80m)_{larg} \times (1,23m_{alt})] = 30,16 m^2$

Quadro de Avisos →  $(2,00m_{larg} \times 1,00m_{alt}) = 2,00 m^2$

**TOTAL DO ITEM = 141,21 m<sup>2</sup>**

**8.5 Roda parede em granito marrom 7x2cm, com acabamento abaulado nos dois lados**

Entrada Principal →  $[(3,96m + 7,23m + 3,33m + 0,30m + 1,75m + 3,75m + 3,60m)_{comp}] - [(1,10m + 0,80m + 1,85m)] = 20,17 m$

Entrada Lateral →  $[(4,20m + 1,50m + 4,20m)_{comp}] - (1,50m_{larg}) = 8,40 m$



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Circulação Lateral Direita →  $[(1,95\text{m} + 3,55\text{m} + 12,91\text{m} + 16,06\text{m} + 0,10\text{m})_{\text{comp}}] - [(0,90\text{m} + 0,80\text{m} + 1,85\text{m} + 0,80\text{m} + 0,80\text{m} + 1,00)_{\text{larg}}] = \mathbf{28,42\text{ m}}$

Circulação dos Fundos →  $[(0,30\text{m} + 0,10\text{m} + 4,00\text{m} + 11,19\text{m} + 0,10\text{m} + 0,10\text{m} + 0,97\text{m})_{\text{comp}}] - [(0,80\text{m} + 0,80\text{m} + 0,80\text{m} + 0,80\text{m})_{\text{larg}}] = \mathbf{13,56\text{ m}}$

Circulação Lateral Esquerda →  $[(1,47\text{m} + 17,32\text{m} + 12,88\text{m})_{\text{comp}}] - [(0,80\text{m} + 0,80\text{m} + 2,05\text{m} + 0,80\text{m} + 1,90\text{m} + 0,80\text{m})_{\text{larg}}] = \mathbf{24,52\text{ m}}$

Quadro de Avisos →  $[2 \times (2,00\text{m}_{\text{larg}} + 1,00\text{m}_{\text{alt}})] = 6,00\text{ m}$

**TOTAL DO ITEM = 101,07 m**

**8.6 REVESTIMENTO CERÂMICO PARA PAREDES INTERNAS COM PLACAS TIPO ESMALTADA EXTRA DE DIMENSÕES 25X35 CM APLICADAS EM AMBIENTES DE ÁREA MAIOR QUE 5 M<sup>2</sup> A MEIA ALTURA DAS PAREDES. AF\_06/2014**

Banheiro Feminino →  $[2 \times (2,49\text{m} + 3,70\text{m})_{\text{larg}} \times (1,85\text{m}_{\text{alt}})] = \mathbf{18,43\text{ m}^2}$

**TOTAL DO ITEM = 18,43 m<sup>2</sup>**

**8.7 Roda parede em granito cinza andorinha 7x2cm, com acabamento abaulado nos dois lados**

Banheiro Funcionários →  $[2 \times (2,49\text{m} + 3,70\text{m})_{\text{larg}}] = \mathbf{12,38\text{ m}}$

Banheiro Funcionários →  $(0,56\text{m}_{\text{larg}} + 0,80\text{m}_{\text{comp}}) = \mathbf{1,36\text{ m}}$

**TOTAL DO ITEM = 13,74 m**

**9.0 PISO E PASSEIO**

**9.1 Piso de cimentado camurçado executado com argamassa de cimento e areia no traço 1:3, esp. 3.0cm**

Frente →  $[4 \times (0,75\text{m}_{\text{comp}} \times 0,90\text{m}_{\text{larg}})] + (3,56\text{m}_{\text{comp}} \times 1,50\text{m}_{\text{larg}}) + (2,60\text{m}_{\text{comp}} \times 0,50\text{m}_{\text{larg}}) + (1,40\text{m}_{\text{comp}} \times 1,21\text{m}_{\text{larg}}) + (2,49\text{m}_{\text{comp}} \times 1,40\text{m}_{\text{larg}}) + (1,50\text{m}_{\text{comp}} \times 1,66\text{m}_{\text{larg}}) + (1,07\text{m}_{\text{comp}} \times 0,80\text{m}_{\text{larg}}) + (29,94\text{m}_{\text{comp}} \times 3,30\text{m}_{\text{larg}}) + (5,10\text{m}_{\text{comp}} \times 0,60\text{m}_{\text{larg}}) = \mathbf{117,42\text{ m}^2}$

Fundos →  $[2 \times (1,14\text{m}_{\text{comp}} \times 0,70\text{m}_{\text{larg}})] + (3,35\text{m}_{\text{comp}} \times 2,37\text{m}_{\text{larg}}) + (1,70\text{m}_{\text{comp}} \times 1,96\text{m}_{\text{larg}}) + (2,88\text{m}_{\text{comp}} \times 2,60\text{m}_{\text{larg}}) + (28,20\text{m}_{\text{comp}} \times 3,30\text{m}_{\text{larg}}) = \mathbf{112,62\text{ m}^2}$

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Lateral Direita →  $(3,30m_{comp} \times 2,91m_{larg}) + (2,60m_{comp} \times 1,63m_{larg}) + (5,63m_{comp} \times 3,30m_{larg}) + (2,60m_{comp} \times 2,20m_{larg}) + (3,26m_{comp} \times 3,30m_{larg}) + (2,60m_{comp} \times 2,20m_{larg}) + (2,79m_{comp} \times 3,30m_{larg}) + (2,60m_{comp} \times 2,40m_{larg}) + (12,67m_{comp} \times 3,30m_{larg}) + (1,60m_{comp} \times 1,65m_{larg}) + (2,60m_{comp} \times 2,20m_{larg}) + (3,88m_{comp} \times 3,30m_{larg}) + (2,60m_{comp} \times 2,20m_{larg}) + (6,45m_{comp} \times 3,30m_{larg}) = 160,04 m^2$

Lateral Esquerda →  $(1,99m_{comp} \times 3,30m_{larg}) + (2,60m_{comp} \times 2,40m_{larg}) + (3,02m_{comp} \times 3,30m_{larg}) + (2,60m_{comp} \times 2,10m_{larg}) + (5,34m_{comp} \times 3,30m_{larg}) + (2,60m_{comp} \times 1,90m_{larg}) + (4,36m_{comp} \times 3,30m_{larg}) + (2,60m_{comp} \times 2,10m_{larg}) + (13,89m_{comp} \times 3,30m_{larg}) + (2,60m_{comp} \times 1,60m_{larg}) + (5,06m_{comp} \times 3,30m_{larg}) + (2,60m_{comp} \times 2,40m_{larg}) + (5,30m_{comp} \times 2,95m_{larg}) = 159,54 m^2$

**TOTAL DO ITEM = 549,62 m<sup>2</sup>**

**9.2 Fornecimento e assentamento de ladrilho hidráulico pastilhado, vermelho, dim. 20x20 cm, esp. 1.5cm, assentado com pasta de cimento colante, exclusive regularização e lastro**

Frente →  $[(0,20m_{larg} \times 1,50m_{comp}) + (0,20m_{larg} \times 1,40m_{comp}) + (0,40m_{larg} \times 3,20m_{comp}) + (0,40m_{larg} \times 3,20m_{comp}) + (0,40m_{larg} \times 29,14m_{comp})] = 14,80 m^2$

Lateral Direita →  $[(0,40m_{larg} \times 3,48m_{comp}) + (0,20m_{larg} \times 0,97m_{comp}) + (0,20m_{larg} \times 0,97m_{comp}) + (0,20m_{larg} \times 1,07m_{comp}) + (0,40m_{larg} \times 8,05m_{comp}) + (0,20m_{larg} \times 1,10m_{comp}) + (0,20m_{larg} \times 1,10m_{comp}) + (0,20m_{larg} \times 2,60m_{comp}) + (0,40m_{larg} \times 4,28m_{comp}) + (0,20m_{larg} \times 1,10m_{comp}) + (0,20m_{larg} \times 1,10m_{comp}) + (0,20m_{larg} \times 2,60m_{comp}) + (0,40m_{larg} \times 13,07m_{comp}) + (0,20m_{larg} \times 0,90m_{comp}) + (0,20m_{larg} \times 0,90m_{comp}) + (0,20m_{larg} \times 2,60m_{comp}) + (0,40m_{larg} \times 3,19m_{comp}) + (0,20m_{larg} \times 1,10m_{comp}) + (0,20m_{larg} \times 1,10m_{comp}) + (0,20m_{larg} \times 2,60m_{comp}) + (0,40m_{larg} \times 3,66m_{comp}) + (0,20m_{larg} \times 1,10m_{comp}) + (0,20m_{larg} \times 1,10m_{comp}) + (0,20m_{larg} \times 2,60m_{comp}) + (0,40m_{larg} \times 5,85m_{comp}) + (0,20m_{larg} \times 0,97m_{comp}) + (0,20m_{larg} \times 0,97m_{comp}) + (0,20m_{larg} \times 1,07m_{comp}) + (0,40m_{larg} \times 4,73m_{comp}) + (0,40m_{larg} \times 3,18m_{comp})] = 25,72 m^2$

Fundos →  $[(0,20m_{larg} \times 0,97m_{comp}) + (0,20m_{larg} \times 0,97m_{comp}) + (0,20m_{larg} \times 1,07m_{comp}) + (0,40m_{larg} \times 26,33m_{comp}) + (0,40m_{larg} \times 3,30m_{comp}) + (0,40m_{larg} \times 1,57m_{comp}) + (0,40m_{larg} \times$





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$$1,57m_{\text{comp}}) + (0,20m_{\text{larg}} \times 0,97m_{\text{comp}}) + (0,20m_{\text{larg}} \times 0,97m_{\text{comp}}) + (0,20m_{\text{larg}} \times 1,07m_{\text{comp}})] =$$

**14,31 m<sup>2</sup>**

$$\text{Lateral Esquerda} \rightarrow [(0,40m_{\text{larg}} \times 2,21m_{\text{comp}}) + (0,20m_{\text{larg}} \times 0,90m_{\text{comp}}) + (0,20m_{\text{larg}} \times 0,90m_{\text{comp}}) + (0,20m_{\text{larg}} \times 2,60m_{\text{comp}}) + (0,40m_{\text{larg}} \times 5,84m_{\text{comp}}) + (0,20m_{\text{larg}} \times 0,90m_{\text{comp}}) + (0,20m_{\text{larg}} \times 0,90m_{\text{comp}}) + (0,20m_{\text{larg}} \times 2,60m_{\text{comp}}) + (0,40m_{\text{larg}} \times 5,46m_{\text{comp}}) + (0,20m_{\text{larg}} \times 1,70m_{\text{comp}}) + (0,20m_{\text{larg}} \times 1,70m_{\text{comp}}) + (0,20m_{\text{larg}} \times 2,60m_{\text{comp}}) + (0,40m_{\text{larg}} \times 14,29m_{\text{comp}}) + (0,20m_{\text{larg}} \times 1,20m_{\text{comp}}) + (0,20m_{\text{larg}} \times 1,20m_{\text{comp}}) + (0,20m_{\text{larg}} \times 2,60m_{\text{comp}}) + (0,40m_{\text{larg}} \times 4,76m_{\text{comp}}) + (0,20m_{\text{larg}} \times 1,40m_{\text{comp}}) + (0,20m_{\text{larg}} \times 1,40m_{\text{comp}}) + (0,20m_{\text{larg}} \times 2,60m_{\text{comp}}) + (0,40m_{\text{larg}} \times 5,74m_{\text{comp}}) + (0,20m_{\text{larg}} \times 1,20m_{\text{comp}}) + (0,20m_{\text{larg}} \times 1,20m_{\text{comp}}) + (0,20m_{\text{larg}} \times 2,60m_{\text{comp}}) + (0,40m_{\text{larg}} \times 3,42m_{\text{comp}}) + (0,20m_{\text{larg}} \times 0,90m_{\text{comp}}) + (0,20m_{\text{larg}} \times 0,90m_{\text{comp}}) + (0,20m_{\text{larg}} \times 2,60m_{\text{comp}}) + (0,40m_{\text{larg}} \times 4,32m_{\text{comp}}) + (0,20m_{\text{larg}} \times 1,70m_{\text{comp}}) + (0,20m_{\text{larg}} \times 1,70m_{\text{comp}}) + (0,20m_{\text{larg}} \times 2,60m_{\text{comp}}) + (0,40m_{\text{larg}} \times 2,94m_{\text{comp}})] =$$

**27,71 m<sup>2</sup>**

**TOTAL DO ITEM = 82,54 m<sup>2</sup>**

**9.3 Meio-fio de concreto moldado in-loco com formas de chapa compensada resinada 6mm, nas dimensões 10 x 30 cm, incl. escavação, reaterro e bota-fora**

$$\text{Área 1} \rightarrow (10,90m + 3,14m + 6,20m + 3,14m + 21,27m + 0,72m + 3,00m) =$$

**48,37 m**

$$\text{Área 2} \rightarrow (10,90m + 3,14m + 8,08m + 3,14m + 48,22m + 3,14m + 22,24m + 3,14m + 5,70m + 18,58m + 0,72m + 3,27m + 3,27m) =$$

**133,54 m**

$$\text{Frente} \rightarrow (0,47m + 0,47m + 3,40m + 28,94m + 3,40m + 0,47m + 0,47m + 7,92m) =$$

**45,54 m**

$$\text{Lateral Direita} \rightarrow (4,20m + 8,05m + 2,20m + 4,28m + 2,20m + 13,07m + 2,20m + 3,19m + 2,20m + 3,66m + 2,20m + 5,85m + 4,73m + 3,18m) =$$

**61,21 m**

$$\text{Fundos} \rightarrow (25,84m + 3,30m + 1,57m + 0,36m + 0,38 + 1,57m) =$$

**33,02 m**

$$\text{Lateral Esquerda} \rightarrow (67,82m + 12,43m) =$$

**80,25 m**

**TOTAL DO ITEM = 401,93 m**



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**9.4 Blocos pré-moldados de concreto tipo pavi-s ou equivalente, espessura de 8 cm e resistência a compressão mínima de 35MPa, assentados sobre colchão de pó de pedra na espessura de 10 cm**

$$\text{Lateral} \rightarrow [(3,60\text{m}_{\text{larg}} \times 19,01\text{m}_{\text{comp}})] = \mathbf{68,44 \text{ m}^2}$$

**TOTAL DO ITEM = 68,44 m<sup>2</sup>**

**9.5 Revestimento de pisos com granito cinza andorinha apicoado, em placas, com espessura de 3cm, assentado sobre terreno nivelado, com nata de cimento sobre argamassa de cimento e areia, no traço 1:3**

$$\text{Escada lateral} \rightarrow (7 \times 0,17\text{m}_{\text{espelho}}) + (6 \times 0,30\text{m}_{\text{piso}}) = \mathbf{2,99 \text{ m}^2}$$

$$\text{Porta Bandeira} \rightarrow (4,20\text{m}_{\text{larg}} \times 1,00\text{m}_{\text{comp}}) = \mathbf{4,20 \text{ m}^2}$$

**TOTAL DO ITEM = 7,19 m<sup>2</sup>**

**9.6 Regularização de base p/ revestimento cerâmico, com argamassa de cimento e areia no traço 1:5, espessura 3cm**

$$\text{Banheiro Funcionários} \rightarrow (2,49\text{m}_{\text{larg}} \times 3,70\text{m}_{\text{comp}}) = \mathbf{9,21 \text{ m}^2}$$

**TOTAL DO ITEM = 9,21 m<sup>2</sup>**

**9.7 Piso cerâmico 45x45cm, PEI 5, Cargo Plus Gray, marcas de referência Eliane, Cecrisa ou Portobello, assentado com argamassa de cimento colante, inclusive rejuntamento**

$$\text{Banheiro Feminino} \rightarrow (2,49\text{m}_{\text{larg}} \times 3,70\text{m}_{\text{comp}}) = \mathbf{9,21 \text{ m}^2}$$

**TOTAL DO ITEM = 9,21 m<sup>2</sup>**

## **10.0 INSTALAÇÕES HIDROSSANITÁRIAS**

**10.1 Ponto de água fria (lavatório, tanque, pia de cozinha, etc...)**

Banheiro Funcionários = **1 pt**

**TOTAL DO ITEM = 1 pt**



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**10.2 Ponto para esgoto primário (vaso sanitário)**

Banheiro Funcionários = 2 pt

**TOTAL DO ITEM = 2 pt**

**10.3 Ponto de válvula de descarga, inclusive válvula e acabamento anti-vandalismo cromado referência Docol, Fabrimar e Deca**

Banheiro Funcionários → 2 und

**TOTAL DO ITEM = 2 und**

**10.4 Ponto para esgoto secundário (pia, lavatório, mictório, tanque, bidê, etc...)**

Banheiro Funcionários = 1 pt

**TOTAL DO ITEM = 1 pt**

**11.0 APARELHOS HIDROSSANITÁRIOS**

**11.1 Cuba louça branca oval, de embutir, Mod. L37, marca de ref. Deca incl. válvula e sifão, exclusive torneira.**

Banheiro Funcionários → 1 und

**TOTAL DO ITEM = 1 und**

**11.2 Torneira pressão cromada diâm. 1/2" para lavatório, marcas de referência Fabrimar, Deca ou Docol**

Banheiro Funcionários → 1 und

**TOTAL DO ITEM = 1 und**

**11.3 Registro de gaveta com canopla cromada diam. 15mm (1/2"), marcas de referência Fabrimar, Deca ou Docol**

Recepção do Gabinete → 1 und

**TOTAL DO ITEM = 1 und**



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**11.4 Porta-toalha de papel em plástico ABS. FORNECIMENTO e COLOCAÇÃO**

Banheiro Funcionários → 1 und

Banheiro Público → 1 und

**TOTAL DO ITEM = 2 und**

**11.5 SABONETEIRA PLASTICA TIPO DISPENSER PARA SABONETE LIQUIDO COM  
RESERVATORIO 800 A 1500 ML, INCLUSO FIXAÇÃO. AF\_10/2016**

Banheiro Funcionários → 1 und

Banheiro Público → 1 und

**TOTAL DO ITEM = 2 und**

**11.6 Vaso sanitário padrão popular completo com acessórios para ligação, marcas  
de referência Deca, Celite ou Ideal Standard, inclusive assento plástico**

Banheiro Funcionários → 2 und

**TOTAL DO ITEM = 2 und**

**11.7 PAPELEIRA DE PAREDE EM METAL CROMADO SEM TAMPA, INCLUSO  
FIXAÇÃO. AF\_10/2016**

Banheiro Funcionários → 2 und

Banheiro Público → 1 und

**TOTAL DO ITEM = 3 und**

**11.8 Válvula de descarga com canopla cromada de 32mm (1 1/4"), marcas de  
referência Fabrimar, Deca ou Docol**

Banheiro Funcionários → 2 und

**TOTAL DO ITEM = 2 und**

**11.9 Ponto para ralo sifonado, inclusive ralo sifonado 100 x 40 mm c/ grelha em aço  
inox**

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Banheiro Funcionários → **1 und**

**TOTAL DO ITEM = 1 und**

## **12.0 INSTALAÇÕES ELÉTRICAS**

**12.1 Ponto padrão de luz no teto - considerando eletroduto PVC rígido de 3/4" inclusive conexões (4.5m), fio isolado PVC de 2.5mm<sup>2</sup> (16.2m) e caixa estampada 4x4" (1 und)**

Recepção do Gabinete → **01 und**

Balcão da Recepção do Gabinete → **01 und**

**TOTAL DO ITEM = 02 und**

**12.2 Ponto padrão de interruptor de 1 tecla paralelo - considerando eletroduto PVC rígido de 3/4" inclusive conexões (8.5m), fio isolado PVC de 2.5mm<sup>2</sup> (28.8m) e caixa estampada 4x2" (1 und)**

Recepção do Gabinete → **01 und**

Balcão da Recepção do Gabinete → **01 und**

**TOTAL DO ITEM = 02 und**

**12.3 Ponto padrão de luz na parede - considerando eletroduto PVC rígido de 3/4" inclusive conexões (4.5m), fio isolado PVC de 2.5mm<sup>2</sup> (16.2m) e caixa estampada 4x4" (1 und)**

Por Baixo da Prefeitura → **18 und**

**TOTAL DO ITEM = 18 und**

**12.4 Ponto padrão de tomada 2 pólos mais terra - considerando eletroduto PVC rígido de 3/4" inclusive conexões (5.0m), fio isolado PVC de 2.5mm<sup>2</sup> (16.5m) e caixa estampada 4x2" (1 und)**

Balcão da Recepção do Gabinete → **3 und**

Balcão da Recepção (Entrada da Prefeitura) → **2 und**



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Balcão do Protocolo → **4 und**

**TOTAL DO ITEM = 9 und**

### **13.0 APARELHOS ELÉTRICOS**

**13.1 Tomada padrão brasileiro linha branca, NBR 14136 2 polos + terra 10A/250V, com placa 4x2"**

Balcão da Recepção do Gabinete → **3 und**

Balcão da Recepção (Entrada da Prefeitura) → **2 und**

Balcão do Protocolo → **4 und**

**TOTAL DO ITEM = 9 und**

**13.2 Interruptor de uma tecla paralelo 10A/250V, com placa 4x2"**

Recepção do Gabinete → **01 und**

Balcão da Recepção do Gabinete → **1 und**

**TOTAL DO ITEM = 02 und**

**13.3 LUMINÁRIA ARANDELA TIPO TARTARUGA, COM GRADE, PARA 1 LÂMPADA DE 15 W FORNECIMENTO E INSTALAÇÃO. AF\_11/2017**

Por Baixo da Prefeitura → **18 und**

**TOTAL DO ITEM = 18 und**

**13.4 Lâmpada LED, bulbo, A60/DY, 10,5W, 100/240V, base E-26/E27, FORNECIMENTO e COLOCAÇÃO**

Por Baixo da Prefeitura → **18 und**

**TOTAL DO ITEM = 18 und**

**13.5 Luminária LED Sobrepor Retangular - 48 W, nas dimensões de 30 x 120 cm, Branco Frio, FORNECIMENTO e COLOCAÇÃO**

Circulação → **18 und**



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Recepção do Gabinete → **01 und**

Balcão da Recepção do Gabinete → **01 und**

**TOTAL DO ITEM = 20 und**

## **14.0 PINTURA**

**14.1 Pintura com tinta látex PVA, marcas de referência Suvinil, Coral ou Metalatex, inclusive selador, em paredes e forros, a duas demãos**

### **Ambientes Internos:**

Planejamento →  $[(2,00m + 3,00m + 4,08m + 3,70m + 6,08m + 6,65m) \times (2,55m_{alt})] - [(3,50m_{larg} \times 1,50m_{comp}) + (0,80m_{larg} \times 2,10m_{comp}) + (0,80m_{larg} \times 2,10m_{comp})] + [(6,08m_{comp} \times 3,70m_{larg})_{TETO} + (3,00m_{comp} \times 2,00m_{larg})_{TETO}] = \mathbf{84,94 m^2}$

Planejamento →  $\{[2 \times (2,85m_{comp} + 3,78m_{larg})] \times (2,55m_{alt})\} + [(1,00m_{comp} + 1,00m_{comp} + 0,50m_{larg}) \times (1,00m_{alt})] - [(0,80m_{larg} \times 2,10m_{comp}) + (2,70m_{larg} \times 1,50m_{comp})] + [(3,78m_{comp} \times 2,85m_{larg})_{TETO}] = \mathbf{45,23 m^2}$

MEI →  $\{[2 \times (2,29m_{larg} + 3,78m_{comp})] \times (2,55m_{alt})\} - [(0,80m_{larg} \times 2,10m_{comp}) + (2,25m_{larg} \times 1,50m_{comp}) + (1,20m_{larg} \times 2,10m_{comp})] + [(3,78m_{comp} \times 2,29m_{larg})_{TETO}] = \mathbf{32,04 m^2}$

Recepção Controladoria →  $\{[2 \times (2,86m_{larg} + 3,78m_{comp})] \times (2,55m_{alt})\} - [(0,80m_{larg} \times 2,10m_{comp}) + (2,70m_{larg} \times 1,50m_{comp})] + [(3,78m_{comp} \times 2,86m_{larg})_{TETO}] = \mathbf{38,94 m^2}$

Secretaria de Controladoria →  $\{[2 \times (2,79m_{larg} + 3,78m_{comp})] \times (2,55m_{alt})\} - [(0,70m_{larg} \times 2,10m_{comp}) + (2,70m_{larg} \times 1,50m_{comp})] + [(3,78m_{comp} \times 2,79m_{larg})_{TETO}] = \mathbf{38,54 m^2}$

Gabinete da Prefeita →  $\{[2 \times (3,78m_{larg} + 8,93m_{comp}) \times (2,55m_{alt})] + (1,89m + 1,89m + 0,15m)\} - [(2,70m_{larg} \times 1,50m_{comp}) + (2,70m_{larg} \times 1,50m_{comp}) + (2,70m_{larg} \times 1,50m_{comp}) + (2,05m_{larg} \times 2,30m_{comp}) + (0,80m_{larg} \times 2,10m_{comp}) + (0,80m_{larg} \times 2,10m_{comp})] + [(8,93m_{comp} \times 3,78m_{larg})_{TETO}] = \mathbf{82,29 m^2}$

Gabinete da Prefeita →  $[(6,12m + 6,65m + 5,15m + 0,97m + 0,97m + 1,75m + 0,97m + 2,10m + 0,97m + 1,83m) \times (2,58m_{alt})] - [(3,60m_{larg} \times 1,50m_{comp}) + (2,70m_{larg} \times 1,50m_{comp}) + (0,80m_{larg} \times 2,10m_{comp}) + (0,70m_{larg} \times 2,10m_{comp}) + (0,65m_{larg} \times 2,10m_{comp})] + [(6,65m_{comp} \times 5,15m_{larg})_{TETO} + (1,75m_{comp} \times 0,97m_{larg})_{TETO} + (1,83m_{comp} \times 0,97m_{larg})_{TETO}] = \mathbf{94,65 m^2}$



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Banheiro do Gabinete →  $[(2,02\text{m} + 1,65\text{m} + 0,40\text{m} + 0,22\text{m} + 0,34\text{m} + 0,22\text{m} + 1,28\text{m} + 1,65\text{m}) \times (2,58\text{m}_{\text{alt}})] - [(0,65\text{m}_{\text{larg}} \times 2,10\text{m}_{\text{comp}}) + (0,95\text{m}_{\text{larg}} \times 0,65\text{m}_{\text{comp}})] + [(2,02\text{m}_{\text{comp}} \times 1,65\text{m}_{\text{larg}})_{\text{TETO}}] = \mathbf{21,42 \text{ m}^2}$

Banheiro Público →  $[(1,23\text{m} + 1,95\text{m} + 1,35\text{m} + 1,75\text{m} + 2,59\text{m} + 3,70\text{m}) \times (0,63\text{m}_{\text{alt}})] - [(0,60\text{m}_{\text{larg}} \times 0,60\text{m}_{\text{comp}})] + [(1,95\text{m}_{\text{comp}} \times 1,23\text{m}_{\text{larg}})_{\text{TETO}} + (2,52\text{m}_{\text{comp}} \times 1,75\text{m}_{\text{larg}})_{\text{TETO}}] = \mathbf{14,37 \text{ m}^2}$

Banheiro Funcionários →  $\{[2 \times (2,49\text{m}_{\text{larg}} + 3,70\text{m}_{\text{comp}})] \times (0,63\text{m}_{\text{alt}})\} - [(0,60\text{m}_{\text{larg}} \times 0,60\text{m}_{\text{comp}})] + [(3,70\text{m}_{\text{comp}} \times 2,49\text{m}_{\text{larg}})_{\text{TETO}}] = \mathbf{16,65 \text{ m}^2}$

Cozinha →  $[2 \times (2,58\text{m}_{\text{larg}} + 1,83\text{m}_{\text{comp}})] \times (2,93\text{m}_{\text{alt}}) + [(5,14\text{m} + 1,83\text{m} + 2,79\text{m} + 3,90\text{m} + 2,35\text{m} + 5,68\text{m}) \times (2,93\text{m}_{\text{alt}})] - [(3,65\text{m}_{\text{larg}} \times 0,75\text{m}_{\text{comp}}) + (0,70\text{m}_{\text{larg}} \times 2,10\text{m}_{\text{comp}}) + (0,95\text{m}_{\text{larg}} \times 0,65\text{m}_{\text{comp}}) + (0,60\text{m}_{\text{larg}} \times 0,60\text{m}_{\text{comp}}) + (0,80\text{m}_{\text{larg}} \times 2,10\text{m}_{\text{comp}}) + (0,60\text{m}_{\text{larg}} \times 0,60\text{m}_{\text{comp}}) + (2,35\text{m}_{\text{larg}} \times 1,50\text{m}_{\text{comp}}) + (0,80\text{m}_{\text{larg}} \times 2,10\text{m}_{\text{comp}})] + [(5,67\text{m}_{\text{comp}} \times 1,83\text{m}_{\text{larg}})_{\text{TETO}} + (5,68\text{m}_{\text{comp}} \times 2,35\text{m}_{\text{larg}})_{\text{TETO}}] = \mathbf{92,78 \text{ m}^2}$

Hall →  $[(1,25\text{m}_{\text{larg}} + 1,25\text{m}_{\text{larg}} + 1,98\text{m}_{\text{comp}}) \times (2,55\text{m}_{\text{alt}})] - [(0,80\text{m}_{\text{larg}} \times 2,10\text{m}_{\text{comp}})] + [(1,98\text{m}_{\text{comp}} \times 1,25\text{m}_{\text{larg}})_{\text{TETO}}] = \mathbf{12,22 \text{ m}^2}$

Licitação →  $[2 \times (3,80\text{m}_{\text{larg}} + 6,20\text{m}_{\text{comp}}) \times (2,55\text{m}_{\text{alt}})] - [(3,80\text{m}_{\text{larg}} \times 1,50\text{m}_{\text{comp}}) + (0,60\text{m}_{\text{larg}} \times 2,10\text{m}_{\text{comp}}) + (0,80\text{m}_{\text{larg}} \times 2,10\text{m}_{\text{comp}})] + [(5,90\text{m}_{\text{comp}} \times 3,80\text{m}_{\text{larg}})_{\text{TETO}}] = \mathbf{64,78 \text{ m}^2}$

Setor Compras →  $[(4,55\text{m} + 1,93\text{m} + 0,95\text{m} + 0,99\text{m} + 3,60\text{m} + 2,92\text{m}) \times (2,55\text{m}_{\text{alt}})] - [(2,70\text{m}_{\text{larg}} \times 1,50\text{m}_{\text{comp}}) + (0,70\text{m}_{\text{larg}} \times 2,10\text{m}_{\text{comp}}) + (0,70\text{m}_{\text{larg}} \times 2,10\text{m}_{\text{comp}}) + (0,80\text{m}_{\text{larg}} \times 2,10\text{m}_{\text{comp}})] + [(3,60\text{m}_{\text{comp}} \times 2,92\text{m}_{\text{larg}})_{\text{TETO}} + (1,93\text{m}_{\text{comp}} \times 0,95\text{m}_{\text{larg}})_{\text{TETO}}] = \mathbf{41,78 \text{ m}^2}$

Administração →  $[2 \times (3,60\text{m}_{\text{larg}} + 2,84\text{m}_{\text{comp}}) \times (2,55\text{m}_{\text{alt}})] - [(2,70\text{m}_{\text{larg}} \times 1,50\text{m}_{\text{comp}}) + (0,70\text{m}_{\text{larg}} \times 2,10\text{m}_{\text{comp}})] + [(3,60\text{m}_{\text{comp}} \times 2,84\text{m}_{\text{larg}})_{\text{TETO}}] = \mathbf{37,54 \text{ m}^2}$

Superintendente Recursos Humanos →  $[2 \times (3,60\text{m}_{\text{larg}} + 2,73\text{m}_{\text{comp}}) \times (2,55\text{m}_{\text{alt}})] - [(2,70\text{m}_{\text{larg}} \times 1,50\text{m}_{\text{comp}}) + (0,70\text{m}_{\text{larg}} \times 2,10\text{m}_{\text{comp}})] + [(3,60\text{m}_{\text{comp}} \times 2,73\text{m}_{\text{larg}})_{\text{TETO}}] = \mathbf{36,59 \text{ m}^2}$

Recepção Recursos Humanos →  $[2 \times (3,60\text{m}_{\text{larg}} + 2,85\text{m}_{\text{comp}}) \times (2,55\text{m}_{\text{alt}})] - [(2,70\text{m}_{\text{larg}} \times 1,50\text{m}_{\text{comp}}) + (0,70\text{m}_{\text{larg}} \times 2,10\text{m}_{\text{comp}}) + (0,70\text{m}_{\text{larg}} \times 2,10\text{m}_{\text{comp}}) + (0,80\text{m}_{\text{larg}} \times 2,10\text{m}_{\text{comp}})] + [(3,60\text{m}_{\text{comp}} \times 2,85\text{m}_{\text{larg}})_{\text{TETO}}] = \mathbf{34,49 \text{ m}^2}$





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Arquivos Recursos Humanos →  $[2 \times (3,60m_{\text{larg}} + 2,80m_{\text{comp}}) \times (2,55m_{\text{alt}})] - [(2,70m_{\text{larg}} \times 1,50m_{\text{comp}}) + (0,70m_{\text{larg}} \times 2,10m_{\text{comp}})] + [(3,60m_{\text{comp}} \times 2,80m_{\text{larg}})_{\text{TETO}}] = \mathbf{37,20 \text{ m}^2}$

Procuradoria →  $[(3,90m + 0,15m + 4,06m + 3,40m + 3,04m + 0,71m + 0,26m + 0,26m + 0,26m + 0,26m + 0,15m) \times (2,55m_{\text{alt}})] - [(1,00m_{\text{larg}} \times 1,50m_{\text{comp}}) + (2,70m_{\text{larg}} \times 1,50m_{\text{comp}})] + [(3,90m_{\text{comp}} \times 3,40m_{\text{larg}})_{\text{TETO}} + (3,50m_{\text{comp}} \times 2,74m_{\text{larg}})_{\text{TETO}} + (3,50m_{\text{comp}} \times 3,01m_{\text{larg}})_{\text{TETO}}] = \mathbf{69,79 \text{ m}^2}$

Arquivo Procuradoria →  $[2 \times (2,74m_{\text{larg}} + 2,79m_{\text{comp}}) \times (2,55m_{\text{alt}})] - [(2,70m_{\text{larg}} \times 1,50m_{\text{comp}}) + (0,70m_{\text{larg}} \times 2,10m_{\text{comp}})] + [(6,20m_{\text{comp}} \times 3,38m_{\text{larg}})_{\text{TETO}}] = \mathbf{43,64 \text{ m}^2}$

Procuradoria →  $[(2,30m + 3,50m + 3,01m + 3,65m) \times (2,55m_{\text{alt}})] + [2 \times (0,71m_{\text{larg}} \times 0,45m_{\text{alt}})] - [(0,90m_{\text{larg}} \times 2,10m_{\text{comp}}) + (0,70m_{\text{larg}} \times 2,10m_{\text{comp}})] = \mathbf{29,05 \text{ m}^2}$

Procuradoria →  $[2 \times (6,20m_{\text{larg}} + 3,38m_{\text{comp}}) \times (2,55m_{\text{alt}})] - [(3,38m_{\text{larg}} \times 1,50m_{\text{comp}}) + (0,70m_{\text{larg}} \times 2,10m_{\text{comp}}) + (0,70m_{\text{larg}} \times 2,10m_{\text{comp}})] = \mathbf{40,85 \text{ m}^2}$

Informática →  $[2 \times (3,35m_{\text{larg}} + 3,38m_{\text{comp}}) \times (2,55m_{\text{alt}})] + [2 \times (4,31m_{\text{larg}} + 3,21m_{\text{comp}}) \times (2,55m_{\text{alt}})] - [(0,80m_{\text{larg}} \times 2,10m_{\text{comp}}) + (0,89m_{\text{larg}} \times 2,10m_{\text{comp}}) + (0,89m_{\text{larg}} \times 2,10m_{\text{comp}})] + [(3,75m_{\text{comp}} \times 3,38m_{\text{larg}})_{\text{TETO}} + (4,31m_{\text{comp}} \times 3,21m_{\text{larg}})_{\text{TETO}}] = \mathbf{93,77 \text{ m}^2}$

Comunicação →  $[2 \times (4,16m_{\text{larg}} + 5,64m_{\text{comp}}) \times (2,81m_{\text{alt}})] + [2 \times (4,16m_{\text{larg}} + 1,22m_{\text{comp}}) \times (2,55m_{\text{alt}})] + [(1,34m + 1,34m + 0,75m + 0,75m + 0,41m + 0,41m + 0,30m + 0,30m) \times (2,81m_{\text{alt}})] - [(1,60m_{\text{larg}} \times 1,50m_{\text{comp}}) + (1,60m_{\text{larg}} \times 1,50m_{\text{comp}}) + (0,80m_{\text{larg}} \times 2,10m_{\text{comp}}) + (2,07m_{\text{larg}} \times 2,10m_{\text{comp}})] + [(6,86m_{\text{comp}} \times 4,16m_{\text{larg}})_{\text{TETO}}] = \mathbf{114,41 \text{ m}^2}$

Arquivo →  $[2 \times (3,75m_{\text{larg}} + 3,72m_{\text{comp}}) \times (2,81m_{\text{alt}})] + [2 \times (3,75m_{\text{larg}} + 1,22m_{\text{comp}}) \times (2,55m_{\text{alt}})] + (0,41m + 0,41m + 0,30m + 0,30m) \times (2,81m_{\text{alt}}) - [(1,60m_{\text{larg}} \times 1,50m_{\text{comp}}) + (1,60m_{\text{larg}} \times 1,50m_{\text{comp}}) + (0,80m_{\text{larg}} \times 2,10m_{\text{comp}})] + [(4,94m_{\text{comp}} \times 3,75m_{\text{larg}})_{\text{TETO}}] = \mathbf{83,37 \text{ m}^2}$

Protocolo →  $[(4,40m_{\text{larg}} + 4,65m_{\text{larg}} + 1,90m_{\text{comp}}) \times (2,55m_{\text{alt}})] - [(1,90m_{\text{larg}} \times 2,50m_{\text{comp}}) + [(4,40m_{\text{comp}} \times 1,90m_{\text{larg}})_{\text{TETO}}] = \mathbf{31,53 \text{ m}^2}$

Entrada Principal →  $[(3,96m + 7,23m + 3,33m + 0,30m + 1,75m + 3,75m + 3,60m)_{\text{comp}} \times (1,61m_{\text{alt}})] - \{[(1,10m + 0,80m)_{\text{comp}} \times (0,80m_{\text{alt}})] + [(1,85m_{\text{larg}} \times 1,20m_{\text{alt}})] + [(3,15m_{\text{larg}} \times 1,30m_{\text{alt}})]\} + [(10,83m_{\text{comp}} \times 3,96m_{\text{larg}})_{\text{TETO}}] = \mathbf{73,57 \text{ m}^2}$

Entrada Lateral →  $[(4,20m + 1,50m + 4,20m)_{\text{comp}} \times (1,61m_{\text{alt}})] - [(1,50m_{\text{larg}} \times 1,20m_{\text{alt}})] + [(4,20m_{\text{comp}} \times 1,50m_{\text{larg}})_{\text{TETO}}] = \mathbf{20,44 \text{ m}^2}$



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Balcão da Recepção (Entrada da Prefeitura) →  $(2,12m_{comp} \times 1,30m_{alt}) + (1,25m_{comp} \times 1,30m_{alt}) = 4,38 m^2$

Balcão da Recepção (Gabinete) →  $(2,00m_{comp} \times 1,30m_{alt}) + (1,30m_{comp} \times 1,30m_{alt}) = 4,29 m^2$

Balcão do Protocolo →  $(1,90m_{comp} \times 1,30m_{alt}) = 2,47 m^2$

Circulação Lateral Direita →  $[(1,95m + 3,55m + 12,91m + 16,06m + 0,10m)_{comp} \times (1,25m_{alt})] - \{[(0,90m + 0,80m + 0,80m + 0,80m)_{larg} \times (0,80m_{alt})] + (1,85m_{larg} \times 1,20m_{alt}) + (1,00m_{larg} \times 0,50m_{alt}) + (2,00m_{larg} \times 1,00m_{alt})\} + [(16,06m_{comp} \times 1,95m_{larg})_{TETO}] = 67,17 m^2$

Circulação dos Fundos →  $[(0,30m + 0,10m + 4,00m + 11,19m + 0,10m + 0,10m + 0,97m)_{comp} \times (1,25m_{alt})] - [(0,80m + 0,80m + 0,80m + 0,80m)_{larg} \times (0,80m_{alt})] + [(11,19m_{comp} \times 2,00m_{larg})_{TETO}] = 40,77 m^2$

Circulação Lateral Esquerda →  $[(1,47m + 17,32m + 12,88m)_{comp} \times (1,25m_{alt})] - \{[(0,80m + 0,80m + 0,80m + 0,80m)_{larg} \times (0,80m_{alt})] + (1,90m_{larg} \times 1,20m_{alt}) + (2,05m_{larg} \times 1,00m_{alt})\} + [(16,39m_{comp} \times 2,00m_{larg})_{TETO}] = 65,48 m^2$

Escada da Contabilidade →  $\{[(0,9m \times 3,43m)] + [(3,43m \times 1,50m) / 2]\} - \{(0,39m \times 0,50m) + [(0,50m \times 0,28m) / 2]\} = 5,31 m^2$

**Ambientes Externos:**

Muretas da Lateral Direita →  $[10 \times (1,40m_{larg} \times 0,60m_{alt})] + [10 \times (2,20m_{larg} \times 0,60m_{alt})] = 21,60 m^2$

Muretas da Lateral Esquerda →  $[6 \times (1,20m_{larg} \times 0,60m_{alt})] + [16 \times (2,20m_{larg} \times 0,60m_{alt})] + [4 \times (2,00m_{larg} \times 0,60m_{alt})] + [4 \times (1,50m_{larg} \times 0,60m_{alt})] + [2 \times (1,70m_{larg} \times 0,60m_{alt})] = 35,88 m^2$

Fachada Câmara Municipal (2º Pav.) →  $\{[(1,78m + 3,30m + 0,90m + 0,40m + 2,20m + 4,30m) \times (4,15m_{alt})] + [(1,70m + 1,70m + 1,70m + 1,70m) \times (1,75m_{alt})] + [(1,50m \times 1,10m) + (0,80m \times 4,90m) + (2,20m \times 2,50m) + (7,70m \times 4,90m)]\} - \{[(1,80m \times 2,75m) + (1,85m \times 1,80m) + (1,85m \times 1,80m) + (1,85m \times 1,80m) + (1,85m \times 1,80m) + (1,08m \times 2,08m)]\} = 98,13m^2$

Marquise Lateral Direita →  $(31,72m_{comp} \times 1,80m_{larg}) = 57,01 m^2$



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Fachada Contabilidade (2º Pav.) →  $[(4,25m + 2,80m + 3,79m + 8,10m)_{comp} \times (3,35m_{alt})] - [(4,00m + 2,10m + 3,38m + 3,97m)_{larg} \times (1,83m_{alt})] = 38,84 m^2$

Rampa da Entrada Principal →  $\{2 \times [(12,20m_{comp} \times 0,90m_{alt}) / 2]\} = 10,98 m^2$

Parte Elevada (Lateral Direita) →  $[(10,88m + 19,19m)_{comp} \times (0,90m_{larg})] + [(10,88m + 19,19m)_{comp} \times (0,50m_{alt})] = 42,09 m^2$

Parte Elevada (Lateral Esquerda) →  $[(31,72m)_{comp} \times (0,90m_{larg})] + [(31,72m)_{comp} \times (0,50m_{larg})] = 44,41 m^2$

**TOTAL DO ITEM = 1.965,68 m<sup>2</sup>**

**14.2 Pintura com tinta esmalte sintético, marcas de referência Suvinil, Coral ou Metalatex, a duas demãos, inclusive fundo anticorrosivo a uma demão, em metal**

Guarda-copo da entrada principal →  $\{2 \times [2 \times (2\pi \times 0,04m_{raio} \times 12,14m_{comp})] + [2 \times (2\pi \times 0,04m_{raio} \times 0,87m_{alt})]\} = 13,07 m^2$

Grade da Escada →  $(0,39m \times 0,50m) + [(0,50m \times 0,28m) / 2] = 0,27 m^2$

**TOTAL DO ITEM = 13,34 m<sup>2</sup>**

**14.3 Pintura com tinta esmalte sintético, marcas de referência Suvinil, Coral ou Metalatex, inclusive fundo branco nivelador, em madeira, a duas demãos**

Procuradoria →  $[2 \times (0,70m_{larg} \times 2,10m_{alt})] + (0,90m_{larg} \times 2,10m_{alt}) = 4,83 m^2$

Recursos Humanos →  $(0,70m_{larg} \times 2,10m_{alt}) + (0,80m_{larg} \times 2,10m_{alt}) = 3,15 m^2$

Hall →  $(0,80m_{larg} \times 2,10m_{alt}) = 1,68 m^2$

Setor Compras →  $(0,70m_{larg} \times 2,10m_{alt}) = 1,47 m^2$

Licitação →  $(0,80m_{larg} \times 2,10m_{alt}) + (0,60m_{larg} \times 2,10m_{alt}) = 2,94 m^2$

Cozinha →  $[2 \times (0,80m_{larg} \times 2,10m_{alt})] = 3,36 m^2$

Banheiro Funcionários →  $(0,80m_{larg} \times 2,10m_{alt}) = 1,68 m^2$

Banheiro Público →  $(0,80m_{larg} \times 2,10m_{alt}) = 1,68 m^2$

Banheiro Gabinete →  $(0,65m_{larg} \times 2,10m_{alt}) = 1,37 m^2$

Gabinete da Prefeita →  $(0,80m_{larg} \times 2,10m_{alt}) + (0,70m_{larg} \times 2,10m_{alt}) = 3,15 m^2$

Controladoria →  $(0,80m_{larg} \times 2,10m_{alt}) + (0,70m_{larg} \times 2,10m_{alt}) = 3,15 m^2$



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MEI →  $(0,80m_{\text{larg}} \times 2,10m_{\text{alt}}) = 1,68 \text{ m}^2$

Planejamento →  $[2 \times (0,80m_{\text{larg}} \times 2,10m_{\text{alt}})] = 3,36 \text{ m}^2$

Informática →  $(0,80m_{\text{larg}} \times 2,10m_{\text{alt}}) = 1,68 \text{ m}^2$

Comunicação →  $(0,80m_{\text{larg}} \times 2,10m_{\text{alt}}) = 1,68 \text{ m}^2$

Arquivo →  $(0,80m_{\text{larg}} \times 2,10m_{\text{alt}}) = 1,68 \text{ m}^2$

**TOTAL DO ITEM = 38,54 m<sup>2</sup>**

### **15.0 SERVIÇOS COMPLEMENTARES**

**15.1 Guarda corpo de tubo de ferro galvanizado, diâm. 3" e 2", h=0.8 m inclusive pintura a óleo ou esmalte**

Escada Lateral →  $(2 \times 2,10m_{\text{comp}}) = 4,20 \text{ m}$

**TOTAL DO ITEM = 4,20 m**

**15.2 Bancada de granito com espessura de 2 cm**

Banheiro Funcionários →  $(0,56m_{\text{larg}} \times 0,80m_{\text{comp}}) = 0,45 \text{ m}^2$

**TOTAL DO ITEM = 0,45 m<sup>2</sup>**

**15.3 Índice de preço para remoção de entulho decorrente da execução de obras (Classe A CONAMA - NBR 10.004 - Classe II-B), incluindo aluguel da caçamba, carga, transporte e descarga em área licenciada**

Balcão da Recepção →  $(1,10m_{\text{alt}} \times 0,40m_{\text{larg}} \times 4,00m_{\text{comp}}) = 1,76 \text{ m}^3$

Banheiro Feminino →  $(2,10m_{\text{alt}} \times 0,15m_{\text{larg}} \times 0,10m_{\text{comp}}) = 0,03 \text{ m}^3$

Banheiro Masculino →  $(2,10m_{\text{alt}} \times 0,15m_{\text{larg}} \times 0,10m_{\text{comp}}) = 0,03 \text{ m}^3$

Passeio Cimentado →  $[(11,34m_{\text{comp}} \times 0,70m_{\text{larg}} \times 0,06m_{\text{alt}}) + (13,32m_{\text{comp}} \times 0,80m_{\text{larg}} \times 0,06m_{\text{alt}})] = 1,12 \text{ m}^2$

Porta Bandeira →  $(4,20m_{\text{larg}} \times 1,00m_{\text{comp}} \times 0,005m_{\text{alt}}) = 0,021 \text{ m}^3$

Escada lateral →  $(7 \times 0,17m_{\text{espelho}} \times 0,005m_{\text{alt}}) + (6 \times 0,30m_{\text{pisso}} \times 0,005m_{\text{alt}}) = 0,002 \text{ m}^3$

Banheiro Feminino →  $[2 \times (2,49m + 3,70m)_{\text{larg}} \times 0,10m_{\text{alt}} \times 0,005m_{\text{alt}}] = 0,006 \text{ m}^3$

Banheiro Feminino →  $(2,49m_{\text{larg}} \times 3,70m_{\text{comp}} \times 0,005m_{\text{alt}}) = 0,046 \text{ m}^3$

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Área 1 →  $(10,90\text{m} + 3,14\text{m} + 6,20\text{m} + 3,14\text{m} + 21,27\text{m} + 0,72\text{m} + 3,00\text{m})_{\text{comp}} \times 0,10\text{m}_{\text{larg}} \times 0,30\text{m}_{\text{alt}} = \mathbf{1,45 \text{ m}^3}$

Área 2 →  $(10,90\text{m} + 3,14\text{m} + 8,08\text{m} + 3,14\text{m} + 48,22\text{m} + 3,14\text{m} + 22,24\text{m} + 3,14\text{m} + 5,70\text{m} + 18,58\text{m} + 0,72\text{m} + 3,27\text{m} + 3,27\text{m})_{\text{comp}} \times 0,10\text{m}_{\text{larg}} \times 0,30\text{m}_{\text{alt}} = \mathbf{4,01 \text{ m}^3}$

Frente →  $(0,47\text{m} + 0,47\text{m} + 3,40\text{m} + 28,94\text{m} + 3,40\text{m} + 0,47\text{m} + 0,47\text{m} + 7,92\text{m})_{\text{comp}} \times 0,10\text{m}_{\text{larg}} \times 0,30\text{m}_{\text{alt}} = \mathbf{1,37 \text{ m}^3}$

Lateral Direita →  $(4,20\text{m} + 8,05\text{m} + 2,20\text{m} + 4,28\text{m} + 2,20\text{m} + 13,07\text{m} + 2,20\text{m} + 3,19\text{m} + 2,20\text{m} + 3,66\text{m} + 2,20\text{m} + 5,85\text{m} + 4,73\text{m} + 3,18\text{m})_{\text{comp}} \times 0,10\text{m}_{\text{larg}} \times 0,30\text{m}_{\text{alt}} = \mathbf{1,84 \text{ m}^3}$

Fundos →  $(25,84\text{m} + 3,30\text{m} + 1,57\text{m} + 0,36\text{m} + 0,38 + 1,57\text{m})_{\text{comp}} \times 0,10\text{m}_{\text{larg}} \times 0,30\text{m}_{\text{alt}} = \mathbf{1,00 \text{ m}^3}$

Lateral Esquerda →  $(67,82 \text{ m} + 12,43\text{m})_{\text{comp}} \times 0,10\text{m}_{\text{larg}} \times 0,30\text{m}_{\text{alt}} = \mathbf{2,41 \text{ m}^3}$

**TOTAL DO ITEM = 15,10 m<sup>3</sup>**

**15.4 Bancada de Granito Marrom Polido, esp. 2 cm, com acabamento nos dois lados**

Balcão da Recepção (Entrada da Prefeitura) →  $(2,12\text{m}_{\text{comp}} \times 0,20\text{m}_{\text{larg}}) + (1,25\text{m}_{\text{comp}} \times 0,20\text{m}_{\text{larg}}) + (2,12\text{m}_{\text{comp}} \times 0,40\text{m}_{\text{larg}}) + (1,25\text{m}_{\text{comp}} \times 0,40\text{m}_{\text{larg}}) = \mathbf{2,02 \text{ m}^2}$

Balcão da Recepção (Gabinete) →  $(2,00\text{m}_{\text{comp}} \times 0,20\text{m}_{\text{larg}}) + (1,30\text{m}_{\text{comp}} \times 0,20\text{m}_{\text{larg}}) + (2,00\text{m}_{\text{comp}} \times 0,40\text{m}_{\text{larg}}) + (1,30\text{m}_{\text{comp}} \times 0,40\text{m}_{\text{larg}}) = \mathbf{1,98 \text{ m}^2}$

Balcão do Protocolo →  $(1,90\text{m}_{\text{comp}} \times 0,25\text{m}_{\text{larg}}) + (1,90\text{m}_{\text{comp}} \times 0,40\text{m}_{\text{larg}}) = \mathbf{1,24 \text{ m}^2}$

**TOTAL DO ITEM = 5,24 m<sup>2</sup>**

**15.5 Fornecimento, preparo e aplicação de concreto magro com consumo mínimo de cimento de 250 kg/m<sup>3</sup> (brita 1 e 2) - (5% de perdas já incluído no custo)**

Lateral Direita →  $[10 \times (1,40\text{m}_{\text{larg}} \times 0,10\text{m}_{\text{comp}} \times 0,20\text{m}_{\text{alt}})] + [10 \times (2,20\text{m}_{\text{larg}} \times 0,10\text{m}_{\text{comp}} \times 0,20\text{m}_{\text{alt}})] = \mathbf{0,72 \text{ m}^3}$

Lateral Esquerda →  $[6 \times (1,20\text{m}_{\text{larg}} \times 0,10\text{m}_{\text{comp}} \times 0,20\text{m}_{\text{alt}})] + [16 \times (2,20\text{m}_{\text{larg}} \times 0,10\text{m}_{\text{comp}} \times 0,20\text{m}_{\text{alt}})] + [4 \times (2,00\text{m}_{\text{larg}} \times 0,10\text{m}_{\text{comp}} \times 0,20\text{m}_{\text{alt}})] + [4 \times (1,50\text{m}_{\text{larg}} \times 0,10\text{m}_{\text{comp}} \times 0,20\text{m}_{\text{alt}})] + [2 \times (1,70\text{m}_{\text{larg}} \times 0,10\text{m}_{\text{comp}} \times 0,20\text{m}_{\text{alt}})] = \mathbf{1,20 \text{ m}^3}$

**TOTAL DO ITEM = 1,92 m<sup>3</sup>**

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**15.6 Bicicletário em tubo de ferro galvanizado 1" e ferro liso 1/2", inclusive pintura, conforme projeto padrão SEDU**

Lateral Direita → **5,70 m**

**TOTAL DO ITEM = 5,70 m**

**15.7 1.2 Locação de andaime metálico para fachada - tipo torre (aluguel mensal)**

Frente → **21,24 m**

Laterais → (31,77m + 31,77m) = **63,54 m**

Fundos → **21,24 m**

**TOTAL DO ITEM = 106,02 m**

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