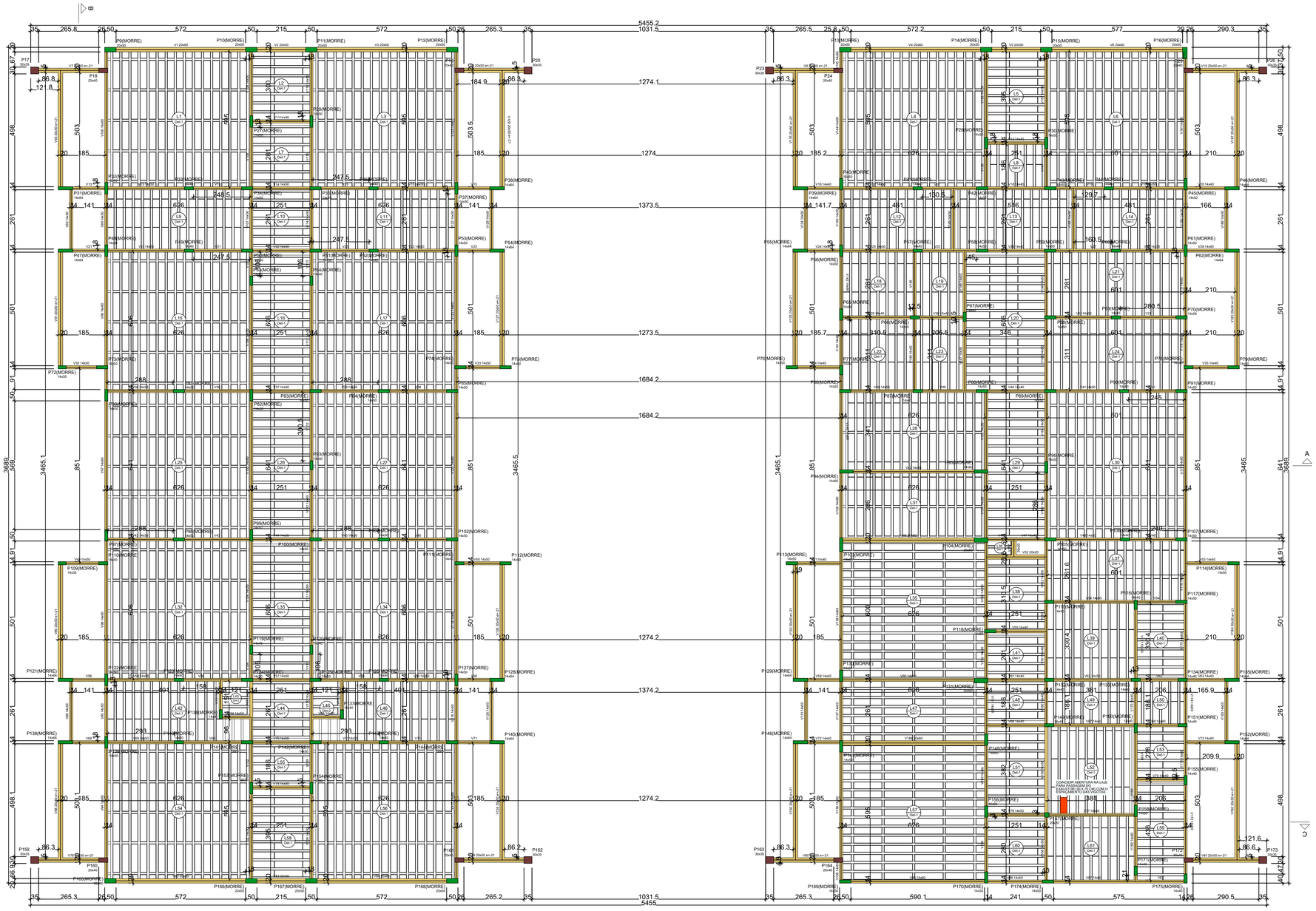



Forma do pavimento Laje (Nível 336)
escala 1:100

| Vigas | | | |
|---|---|---|---|
| Nome | Seção (cm) | Elevação (cm) | Nível (cm) |
| V1 | 20x60 | 0 | 336 |
| V2 | 20x50 | 0 | 336 |
| V3 | 20x60 | 0 | 336 |
| V4 | 20x60 | 0 | 336 |
| V5 | 20x50 | 0 | 336 |
| V6 | 20x60 | 0 | 336 |
| V7 | 20x50 | -21 | 315 |
| V8 | 20x50 | -21 | 315 |
| V9 | 20x50 | -21 | 315 |
| V10 | 20x50 | -21 | 315 |
| V11 | 14x50 | 0 | 336 |
| V12 | 14x40 | 0 | 336 |
| V13 | 14x50 | 0 | 336 |
| V14 | 14x50 | 0 | 336 |
| V15 | 14x50 | 0 | 336 |
| V16 | 14x40 | 0 | 336 |
| V17 | 14x50 | 0 | 336 |
| V18 | 14x40 | 0 | 336 |
| V19 | 14x50 | 0 | 336 |
| V20 | 14x40 | 0 | 336 |
| V21 | 14x50 | 0 | 336 |
| V22 | 14x50 | 0 | 336 |
| V23 | 14x50 | 0 | 336 |
| V24 | 14x40 | 0 | 336 |
| V25 | 14x50 | 0 | 336 |
| V26 | 14x40 | 0 | 336 |
| V27 | 14x50 | 0 | 336 |
| V28 | 14x40 | 0 | 336 |
| V29 | 14x40 | 0 | 336 |
| V30 | 14x40 | 0 | 336 |
| V31 | 14x50 | 0 | 336 |
| V32 | 14x50 | 0 | 336 |
| V33 | 14x50 | 0 | 336 |
| V34 | 14x40 | 0 | 336 |
| V35 | 14x50 | 0 | 336 |
| V36 | 14x50 | 0 | 336 |
| V37 | 14x50 | 0 | 336 |
| V38 | 14x50 | 0 | 336 |
| V39 | 14x50 | 0 | 336 |
| V40 | 14x40 | 0 | 336 |
| V41 | 14x50 | 0 | 336 |
| V42 | 14x60 | 0 | 336 |
| V43 | 14x50 | 0 | 336 |
| V44 | 14x50 | 0 | 336 |
| V45 | 14x50 | 0 | 336 |
| V46 | 20x60 | 0 | 336 |
| V47 | 14x40 | 0 | 336 |
| V48 | 14x50 | 0 | 336 |
| V49 | 14x50 | 0 | 336 |
| V50 | 14x50 | 0 | 336 |
| V51 | 14x40 | 0 | 336 |
| V52 | 20x20 | 0 | 336 |
| V53 | 14x40 | 0 | 336 |
| V54 | 14x50 | 0 | 336 |
| V55 | 14x40 | 0 | 336 |
| V56 | 14x50 | 0 | 336 |
| V57 | 14x50 | 0 | 336 |
| V58 | 14x50 | 0 | 336 |
| V59 | 14x40 | 0 | 336 |
| V60 | 14x60 | 0 | 336 |
| V61 | 14x40 | 0 | 336 |
| V62 | 14x50 | 0 | 336 |
| V63 | 14x40 | 0 | 336 |
| V64 | 14x50 | 0 | 336 |
| V65 | 14x50 | 0 | 336 |
| V66 | 14x40 | 0 | 336 |
| V67 | 14x40 | 0 | 336 |
| V68 | 14x40 | 0 | 336 |
| V69 | 14x50 | 0 | 336 |
| V70 | 14x50 | 0 | 336 |
| V71 | 14x50 | 0 | 336 |
| V72 | 14x40 | 0 | 336 |
| V73 | 14x40 | 0 | 336 |
| V74 | 14x50 | 0 | 336 |
| V75 | 14x40 | 0 | 336 |
| V76 | 14x50 | 0 | 336 |
| V77 | 14x50 | 0 | 336 |
| V78 | 20x50 | -21 | 315 |
| V79 | 20x50 | -21 | 315 |
| V80 | 20x50 | -21 | 315 |
| V81 | 20x50 | -21 | 315 |
| V82 | 20x60 | 0 | 336 |
| V83 | 20x50 | 0 | 336 |
| V84 | 20x60 | 0 | 336 |
| V85 | 14x60 | 0 | 336 |
| V86 | 14x50 | 0 | 336 |
| V87 | 14x50 | 0 | 336 |
| V88 | 20x50 | -21 | 315 |
| V89 | 14x50 | 0 | 336 |
| V90 | 20x50 | -21 | 315 |
| V91 | 20x50 | -21 | 315 |
| V92 | 14x50 | 0 | 336 |
| V93 | 20x50 | -21 | 315 |
| V94 | 14x50 | 0 | 336 |
| V95 | 14x50 | 0 | 336 |
| V96 | 14x60 | 0 | 336 |
| V97 | 14x60 | 0 | 336 |
| V98 | 14x60 | 0 | 336 |
| V99 | 14x50 | 0 | 336 |
| V100 | 14x60 | 0 | 336 |
| V101 | 14x50 | 0 | 336 |
| V102 | 14x50 | 0 | 336 |
| V103 | 14x50 | 0 | 336 |
| V104 | 14x50 | 0 | 336 |
| V105 | 14x60 | 0 | 336 |
| V106 | 14x50 | 0 | 336 |
| V107 | 14x50 | 0 | 336 |
| V108 | 14x50 | 0 | 336 |
| V109 | 14x50 | 0 | 336 |
| V110 | 14x50 | 0 | 336 |
| V111 | 14x50 | 0 | 336 |
| V112 | 14x50 | 0 | 336 |
| V113 | 14x50 | 0 | 336 |
| V114 | 14x50 | 0 | 336 |
| V115 | 14x50 | 0 | 336 |
| V116 | 14x50 | 0 | 336 |
| V117 | 14x50 | 0 | 336 |
| V118 | 14x50 | 0 | 336 |
| V119 | 14x50 | 0 | 336 |
| V120 | 14x50 | 0 | 336 |
| V121 | 14x60 | 0 | 336 |
| V122 | 14x50 | 0 | 336 |
| V123 | 14x60 | 0 | 336 |
| V124 | 20x50 | -21 | 315 |
| V125 | 14x50 | 0 | 336 |
| V126 | 20x50 | -21 | 315 |
| V127 | 20x50 | -21 | 315 |
| V128 | 14x50 | 0 | 336 |
| V129 | 20x50 | -21 | 315 |
| V130 | 20x50 | -21 | 315 |
| V131 | 14x50 | 0 | 336 |
| V132 | 20x50 | -21 | 315 |
| V133 | 20x50 | -21 | 315 |
| V134 | 14x50 | 0 | 336 |
| V135 | 20x50 | -21 | 315 |
| V136 | 14x50 | 0 | 336 |
| | 14x60 | 0 | 336 |
| V137 | 14x50 | 0 | 336 |
| V138 | 14x60 | 0 | 336 |
| V139 | 14x60 | 0 | 336 |
| V140 | 14x60 | 0 | 336 |
| V141 | 14x60 | 0 | 336 |
| V142 | 14x60 | 0 | 336 |
| V143 | 14x50 | 0 | 336 |
| V144 | 14x60 | 0 | 336 |
| V145 | 14x60 | 0 | 336 |
| V146 | 14x40 | 0 | 336 |
| V147 | 14x50 | 0 | 336 |
| V148 | 14x50 | 0 | 336 |
| V149 | 14x50 | 0 | 336 |
| V150 | 14x60 | 0 | 336 |
| V151 | 14x60 | 0 | 336 |
| V152 | 14x50 | 0 | 336 |
| V153 | 14x50 | 0 | 336 |
| V154 | 14x50 | 0 | 336 |
| V155 | 14x50 | 0 | 336 |
| V156 | 14x50 | 0 | 336 |
| V157 | 20x20 | 0 | 336 |
| V158 | 14x50 | 0 | 336 |
| V159 | 14x50 | 0 | 336 |
| V160 | 14x40 | 0 | 336 |
| V161 | 14x40 | 0 | 336 |
| V162 | 14x50 | 0 | 336 |
| V163 | 14x50 | 0 | 336 |
| V164 | 14x50 | 0 | 336 |
| V165 | 14x50 | 0 | 336 |
| V166 | 14x50 | 0 | 336 |
| V167 | 14x50 | 0 | 336 |
| V168 | 14x50 | 0 | 336 |
| V169 | 14x60 | 0 | 336 |
| V170 | 14x40 | 0 | 336 |
| V171 | 14x40 | 0 | 336 |
| V172 | 14x60 | 0 | 336 |
| V173 | 14x60 | 0 | 336 |
| V174 | 14x50 | 0 | 336 |
| V175 | 14x60 | 0 | 336 |
| V176 | 14x60 | 0 | 336 |
| V177 | 14x60 | 0 | 336 |
| V178 | 14x60 | 0 | 336 |
| V179 | 14x60 | 0 | 336 |
| V180 | 14x50 | 0 | 336 |
| V181 | 14x60 | 0 | 336 |
| V182 | 20x50 | -21 | 315 |
| V183 | 14x50 | 0 | 336 |
| V184 | 20x50 | -21 | 315 |
| V185 | 20x50 | -21 | 315 |
| V186 | 14x50 | 0 | 336 |
| V187 | 20x50 | -21 | 315 |
| V188 | 20x60 | 0 | 336 |

| Pilares | | | |
|---|---|---|---|
| Nome | Seção (cm) | Elevação (cm) | Nível (cm) |
| P9 | 20x50 | 0 | 336 |
| P10 | 20x50 | 0 | 336 |
| P11 | 20x50 | 0 | 336 |
| P12 | 20x50 | 0 | 336 |
| P13 | 20x50 | 0 | 336 |
| P14 | 20x50 | 0 | 336 |
| P15 | 20x50 | 0 | 336 |
| P16 | 20x50 | 0 | 336 |
| P17 | 30x35 | 0 | 336 |
| P18 | 20x40 | 0 | 336 |
| P19 | 20x40 | 0 | 336 |
| P20 | 30x35 | 0 | 336 |
| P23 | 30x35 | 0 | 336 |
| P24 | 20x40 | 0 | 336 |
| P25 | 20x40 | 0 | 336 |
| P26 | 30x35 | 0 | 336 |
| P27 | 14x50 | 0 | 336 |
| P28 | 14x50 | 0 | 336 |
| P29 | 14x50 | 0 | 336 |
| P30 | 14x40 | 0 | 336 |
| P31 | 14x64 | 0 | 336 |
| P32 | 14x50 | 0 | 336 |
| P33 | 14x40 | 0 | 336 |
| P34 | 14x50 | 0 | 336 |
| P35 | 14x50 | 0 | 336 |
| P36 | 14x40 | 0 | 336 |
| P37 | 14x50 | 0 | 336 |
| P38 | 14x64 | 0 | 336 |
| P39 | 14x64 | 0 | 336 |
| P40 | 14x50 | 0 | 336 |
| P41 | 14x40 | 0 | 336 |
| P42 | 14x50 | 0 | 336 |
| P43 | 14x50 | 0 | 336 |
| P44 | 14x40 | 0 | 336 |
| P45 | 14x50 | 0 | 336 |
| P46 | 14x64 | 0 | 336 |
| P47 | 14x64 | 0 | 336 |
| P48 | 14x50 | 0 | 336 |
| P49 | 14x40 | 0 | 336 |
| P50 | 14x50 | 0 | 336 |
| P51 | 14x50 | 0 | 336 |
| P52 | 14x64 | 0 | 336 |
| P53 | 14x50 | 0 | 336 |
| P54 | 14x64 | 0 | 336 |
| P55 | 14x64 | 0 | 336 |
| P56 | 14x50 | 0 | 336 |
| P57 | 14x40 | 0 | 336 |
| P58 | 14x50 | 0 | 336 |
| P59 | 14x40 | 0 | 336 |
| P60 | 14x40 | 0 | 336 |
| P61 | 14x40 | 0 | 336 |
| P62 | 14x64 | 0 | 336 |
| P63 | 14x40 | 0 | 336 |
| P64 | 14x40 | 0 | 336 |
| P65 | 14x50 | 0 | 336 |
| P66 | 14x40 | 0 | 336 |
| P67 | 14x50 | 0 | 336 |
| P68 | 14x40 | 0 | 336 |
| P69 | 14x40 | 0 | 336 |
| P70 | 14x50 | 0 | 336 |
| P71 | 14x50 | 0 | 336 |
| P72 | 14x35 | 0 | 336 |
| P73 | 14x50 | 0 | 336 |
| P74 | 14x50 | 0 | 336 |
| P75 | 14x50 | 0 | 336 |
| P76 | 14x50 | 0 | 336 |
| P77 | 14x40 | 0 | 336 |
| P78 | 14x40 | 0 | 336 |
| P79 | 14x50 | 0 | 336 |
| P80 | 14x50 | 0 | 336 |
| P81 | 14x50 | 0 | 336 |
| P82 | 14x50 | 0 | 336 |
| P83 | 14x50 | 0 | 336 |
| P84 | 14x50 | 0 | 336 |
| P85 | 14x50 | 0 | 336 |
| P86 | 14x50 | 0 | 336 |
| P87 | 14x40 | 0 | 336 |
| P88 | 14x50 | 0 | 336 |
| P89 | 14x50 | 0 | 336 |
| P90 | 14x40 | 0 | 336 |
| P91 | 14x50 | 0 | 336 |
| P93 | 14x40 | 0 | 336 |
| P94 | 14x60 | 0 | 336 |
| P95 | 14x60 | 0 | 336 |
| P96 | 14x60 | 0 | 336 |
| P97 | 14x50 | 0 | 336 |
| P98 | 14x50 | 0 | 336 |
| P99 | 14x50 | 0 | 336 |
| P100 | 14x50 | 0 | 336 |
| P101 | 14x50 | 0 | 336 |
| P102 | 14x50 | 0 | 336 |
| P103 | 14x60 | 0 | 336 |
| P104 | 20x60 | 0 | 336 |
| P105 | 14x50 | 0 | 336 |
| P106 | 14x40 | 0 | 336 |
| P107 | 14x50 | 0 | 336 |
| P108 | 14x50 | 0 | 336 |
| P109 | 14x50 | 0 | 336 |
| P110 | 14x50 | 0 | 336 |
| P111 | 14x40 | 0 | 336 |
| P112 | 14x50 | 0 | 336 |
| P113 | 14x40 | 0 | 336 |
| P114 | 14x50 | 0 | 336 |
| P115 | 14x50 | 0 | 336 |
| P116 | 14x40 | 0 | 336 |
| P117 | 14x50 | 0 | 336 |
| P118 | 14x50 | 0 | 336 |
| P119 | 14x40 | 0 | 336 |
| P120 | 14x40 | 0 | 336 |
| P121 | 14x64 | 0 | 336 |
| P122 | 14x50 | 0 | 336 |
| P123 | 14x40 | 0 | 336 |
| P124 | 14x50 | 0 | 336 |
| P125 | 14x50 | 0 | 336 |
| P126 | 14x40 | 0 | 336 |
| P127 | 14x50 | 0 | 336 |
| P128 | 14x64 | 0 | 336 |
| P129 | 14x64 | 0 | 336 |
| P130 | 14x50 | 0 | 336 |
| P131 | 20x60 | 0 | 336 |
| P132 | 14x40 | 0 | 336 |
| P133 | 14x40 | 0 | 336 |
| P134 | 14x40 | 0 | 336 |
| P135 | 14x64 | 0 | 336 |
| P136 | 14x40 | 0 | 336 |
| P137 | 14x40 | 0 | 336 |
| P138 | 14x64 | 0 | 336 |
| P139 | 14x50 | 0 | 336 |
| P140 | 14x40 | 0 | 336 |
| P141 | 14x50 | 0 | 336 |
| P142 | 14x50 | 0 | 336 |
| P143 | 14x40 | 0 | 336 |
| P144 | 14x50 | 0 | 336 |
| P145 | 14x64 | 0 | 336 |
| P146 | 14x64 | 0 | 336 |
| P147 | 14x50 | 0 | 336 |
| P148 | 14x50 | 0 | 336 |
| P149 | 14x40 | 0 | 336 |
| P150 | 14x40 | 0 | 336 |
| P151 | 14x40 | 0 | 336 |
| P152 | 14x64 | 0 | 336 |
| P153 | 14x50 | 0 | 336 |
| P154 | 14x50 | 0 | 336 |
| P155 | 14x40 | 0 | 336 |
| P156 | 14x50 | 0 | 336 |
| P157 | 20x20 | 0 | 336 |
| P158 | 14x50 | 0 | 336 |
| P159 | 30x35 | 0 | 336 |
| P160 | 20x40 | 0 | 336 |
| P161 | 20x40 | 0 | 336 |
| P162 | 30x35 | 0 | 336 |
| P163 | 30x35 | 0 | 336 |
| P164 | 20x40 | 0 | 336 |
| P165 | 20x50 | 0 | 336 |
| P166 | 20x50 | 0 | 336 |
| P167 | 20x50 | 0 | 336 |
| P168 | 20x50 | 0 | 336 |
| P169 | 14x50 | 0 | 336 |
| P170 | 14x50 | 0 | 336 |
| P171 | 14x40 | 0 | 336 |
| P172 | 20x40 | 0 | 336 |
| P173 | 30x35 | 0 | 336 |
| P174 | 14x50 | 0 | 336 |
| P175 | 14x40 | 0 | 336 |

| Lajes | | | | | | | |
|---|---|---|---|---|---|---|---|
| Dados | | | | | Sobrecarga (kgf/m²) | | |
| Nome | Tipo | Altura (cm) | Elevação (cm) | Nível (cm) | Peso próprio (kgf/m²) | Adicional | Acidental | Localizada |
| L1 | Treliçada 1D | 19 | 0 | 336 | 268 | 72 | 50 | - |
| L2 | Treliçada 1D | 19 | 0 | 336 | 252 | 72 | 50 | - |
| L3 | Treliçada 1D | 19 | 0 | 336 | 268 | 72 | 50 | - |
| L4 | Treliçada 1D | 19 | 0 | 336 | 268 | 72 | 50 | - |
| L5 | Treliçada 1D | 19 | 0 | 336 | 252 | 72 | 50 | - |
| L6 | Treliçada 1D | 19 | 0 | 336 | 268 | 72 | 50 | - |
| L7 | Treliçada 1D | 19 | 0 | 336 | 252 | 72 | 50 | - |
| L8 | Treliçada 1D | 19 | 0 | 336 | 252 | 72 | 50 | - |
| L9 | Treliçada 1D | 19 | 0 | 336 | 252 | 72 | 50 | - |
| L10 | Treliçada 1D | 19 | 0 | 336 | 252 | 72 | 50 | - |
| L11 | Treliçada 1D | 19 | 0 | 336 | 252 | 72 | 50 | - |
| L12 | Treliçada 1D | 19 | 0 | 336 | 252 | 72 | 50 | - |
| L13 | Treliçada 1D | 19 | 0 | 336 | 252 | 72 | 50 | - |
| L14 | Treliçada 1D | 19 | 0 | 336 | 252 | 72 | 50 | - |
| L15 | Treliçada 1D | 19 | 0 | 336 | 268 | 72 | 50 | - |
| L16 | Treliçada 1D | 19 | 0 | 336 | 252 | 72 | 50 | - |
| L17 | Treliçada 1D | 19 | 0 | 336 | 268 | 72 | 50 | - |
| L18 | Treliçada 1D | 19 | 0 | 336 | 252 | 72 | 50 | - |
| L19 | Treliçada 1D | 19 | 0 | 336 | 252 | 72 | 50 | - |
| L20 | Treliçada 1D | 19 | 0 | 336 | 252 | 72 | 50 | - |
| L21 | Treliçada 1D | 19 | 0 | 336 | 252 | 72 | 50 | - |
| L22 | Treliçada 1D | 19 | 0 | 336 | 252 | 72 | 50 | - |
| L23 | Treliçada 1D | 19 | 0 | 336 | 252 | 72 | 50 | - |
| L24 | Treliçada 1D | 19 | 0 | 336 | 252 | 72 | 50 | - |
| L25 | Treliçada 1D | 19 | 0 | 336 | 268 | 72 | 50 | - |
| L26 | Treliçada 1D | 19 | 0 | 336 | 252 | 72 | 50 | - |
| L27 | Treliçada 1D | 19 | 0 | 336 | 268 | 72 | 50 | - |
| L28 | Treliçada 1D | 19 | 0 | 336 | 260 | 72 | 50 | - |
| L29 | Treliçada 1D | 19 | 0 | 336 | 252 | 72 | 50 | - |
| L30 | Treliçada 1D | 19 | 0 | 336 | 268 | 72 | 50 | - |
| L31 | Treliçada 1D | 19 | 0 | 336 | 260 | 72 | 50 | - |
| L32 | Treliçada 1D | 19 | 0 | 336 | 268 | 72 | 50 | - |
| L33 | Treliçada 1D | 19 | 0 | 336 | 252 | 72 | 50 | - |
| L34 | Treliçada 1D | 19 | 0 | 336 | 268 | 72 | 50 | - |
| L35 | Treliçada 1D | 19 | 0 | 336 | 268 | 72 | 50 | - |
| L36 | Treliçada 1D | 19 | 0 | 336 | 252 | 72 | 50 | - |
| L37 | Treliçada 1D | 19 | 0 | 336 | 252 | 72 | 50 | - |
| L38 | Treliçada 1D | 19 | 0 | 336 | 252 | 72 | 50 | - |
| L39 | Treliçada 1D | 19 | 0 | 336 | 252 | 72 | 50 | - |
| L40 | Treliçada 1D | 19 | 0 | 336 | 252 | 72 | 50 | - |
| L41 | Treliçada 1D | 19 | 0 | 336 | 252 | 72 | 50 | - |
| L42 | Treliçada 1D | 19 | 0 | 336 | 252 | 72 | 50 | - |
| L43 | Treliçada 1D | 19 | 0 | 336 | 227 | 82 | 50 | - |
| L44 | Treliçada 1D | 19 | 0 | 336 | 252 | 72 | 50 | - |
| L45 | Treliçada 1D | 19 | 0 | 336 | 227 | 82 | 80 | - |
| L46 | Treliçada 1D | 19 | 0 | 336 | 252 | 72 | 50 | - |
| L47 | Treliçada 1D | 19 | 0 | 336 | 268 | 72 | 50 | - |
| L48 | Treliçada 1D | 19 | 0 | 336 | 252 | 72 | 50 | - |
| L49 | Treliçada 1D | 19 | 0 | 336 | 252 | 72 | 50 | - |
| L50 | Treliçada 1D | 19 | 0 | 336 | 252 | 72 | 50 | - |
| L51 | Treliçada 1D | 19 | 0 | 336 | 252 | 72 | 50 | - |
| L52 | Treliçada 1D | 19 | 0 | 336 | 252 | 72 | 50 | - |
| L53 | Treliçada 1D | 19 | 0 | 336 | 252 | 72 | 50 | - |
| L54 | Treliçada 1D | 19 | 0 | 336 | 268 | 72 | 50 | - |
| L55 | Treliçada 1D | 19 | 0 | 336 | 252 | 72 | 50 | - |
| L56 | Treliçada 1D | 19 | 0 | 336 | 268 | 72 | 50 | - |
| L57 | Treliçada 1D | 19 | 0 | 336 | 268 | 72 | 50 | - |
| L58 | Treliçada 1D | 19 | 0 | 336 | 252 | 72 | 50 | - |
| L59 | Treliçada 1D | 19 | 0 | 336 | 252 | 72 | 50 | - |
| L60 | Treliçada 1D | 19 | 0 | 336 | 252 | 72 | 50 | - |
| L61 | Treliçada 1D | 19 | 0 | 336 | 252 | 72 | 50 | - |

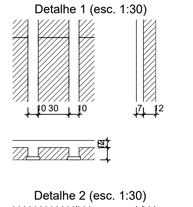
| Características dos materiais | |
|---|---|
| fck | Ecs |
| (kgf/cm²) | (kgf/cm²) |
| 300 | 268384 |

Dimensão máxima do agregado = 9,5 mm

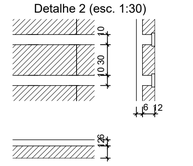
| Legenda dos pilares | Legenda das vigas e paredes |
|---|---|
| Pilar que morre | Viga |
| Pilar que passa | |

| Blocos de enchimento | | | | | | |
|---|---|---|---|---|---|---|
| Detalhe | Tipo | Nome | Dimensões(cm) | | | Quantidade |
| | | | hb | bx | by | |
| 1/2 | EPS Unidirecional | B12/30/125/5 | 12 | 30 | 125 | 2695 |

Detalhe 1 (esc. 1:30)




Detalhe 2 (esc. 1:30)




01–PROJETO EM CONSONÂNCIA COM AS NORMAS DA ABNT 6118/2023 E NBR 6120/2019
02–ADOTAR RESISTÊNCIA CARACTERÍSTICA DO CONCRETO fck=30Mpa
03–CLASSE DE AGRESSIVIDADE AMBIENTAL ADOTADA: TIPO II–(CAA II)–URBANA
04–OBSERVAR O COBRIMENTO MÍNIMO PARA CADA ELEMENTO ESTRUTURAL
a)vigas=3,0cm; b)pilares=3,0cm; c)lajes=2,5cm; d)blocos=4,5cm
05–ADOTAR ABATIMENTO DO CONCRETO(SLUMP) DE 10 MAIS OU MENOS 2–BRITA 0
06–O PRAZO MÍNIMO PARA DESFORMA E RETIRADA DAS ESCORAS NÃO PODERÁ SER INFERIOR A 28 DIAS
07–UTILIZAR FATOR ÁGUA CIMENTO DO CONCRETO MENOR OU IGUAL A 0,6
08–FLUIÊNCIA DO CONCRETO COM TEMPO DE VIDA ÚTIL PREVISTA: MAIO QUE 50 ANOS
09–NÃO É PERMITIDO O USO DE ADITIVOS CONTENDO CLORETOS NA SUA COMPOSIÇÃO EM ESTRUTURAS DE CONCRETO ARMADO
10–DEVE SER EVITADA A PRESCENÇA OU ACUMULAÇÃO DE ÁGUA SOBRE AS SUPERFÍCIES DAS ESTRUTURAS DE CONCRETO
11–DEIXAR COLCHÃO DE BRITA COM 5cm DE ESPESSURA ENTRE O SOLO E O CONTRA PISO PARA COMBATER A UMIDADE
12–EXECUTAR CONTRA PISO COM ESPESSURA DE 5cm
13–EXECUTAR LASTRO DE CONCRETO MAGRO, NA BASE DE TODOS OS BLOCOS.
14–DIMENSÕES E MEDIDAS EM CENTÍMETRO.
15–VERIFICAR TODAS AS MEDIDAS NA OBRA.
16–LINHAS DE CHAMADAS REFERENTES AS VIGAS, SALVO QUANDO INDICADO.
17–LINHAS DE COTA REFERENTES AS VIGAS, SALVO QUANDO INDICADO.
18–TODA E QUALQUER MODIFICAÇÃO EM OBRA, DEVERÁ OBTER A DEVIDA APROVAÇÃO DO AUTOR DO PROJETO.
19–EM CASO DE DÚVIDAS CONSULTAR O RESPONSÁVEL TÉCNICO PELA OBRA.

| REV | DATA | DESENHO | ALTERAÇÕES DE PROJETO | VERIFICAÇÃO |
|---|---|---|---|---|
| 00 | 21-11-2024 | PABLO | EMISSÃO INICIAL | AMVALI |

RESPONSÁVEL TÉCNICO:
PABLO VINICIUS RIGO
ENG. CIVIL
CREA/SC 164680-0
PABLO VINICIUS RIGO:06875439913
Assinado de forma digital por PABLO VINICIUS RIGO:06875439913
Dados: 2024.12.03 16:33:07 -03'00'

CONTRATANTE:
JOSE JAIR FRANZNER:35243953920
Assinado de forma digital por JOSE JAIR FRANZNER:35243953920
Dados: 2025.02.26 10:45:17 -03'00'

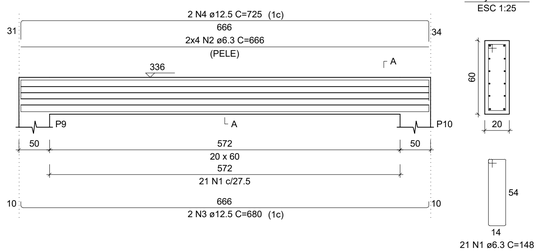
ELABORAÇÃO: Amvali
CONTRATANTE: PREFEITURA MUNICIPAL DE JARAGUÁ DO SUL

TÍTULO: PROJETO BÁSICO DE ENGENHARIA
CENTRO DE EDUCAÇÃO INFANTIL EM ALVENARIA

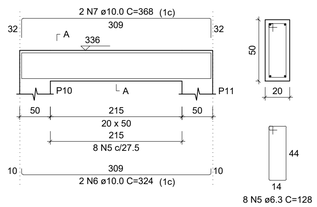
PROJETO: PROJETO ESTRUTURAL EM CONCRETO ARMADO
CONTEÚDO: PLANTA DE FORMA NIVEL LAJE
ESCALA: INDICADA
ENDEREÇO: RUA FREDERICO PIESKE, BARRA DO RIO CERRO
ESTACA: ---
CODIFICAÇÃO: AMV-JS-DE-EST-0242-R00 - NIVEL LAJE.DWG
FOLHA: 01-15

FORMATO A1 - 841x594mm

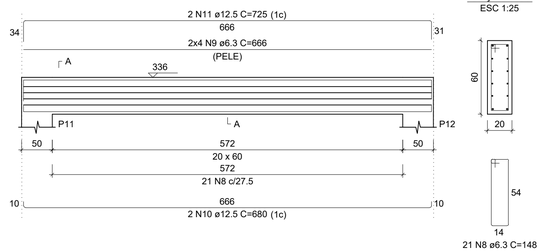
## V1 (20 x 60)
ESC 1:50



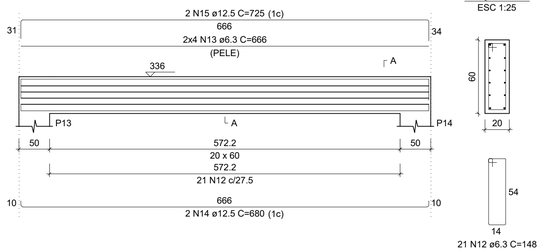

## V2 (20 x 50)
ESC 1:50



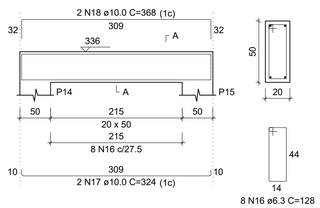

## V3 (20 x 60)
ESC 1:50



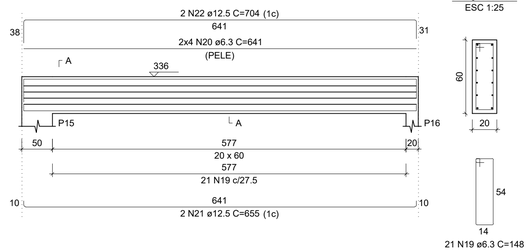

## V4 (20 x 60)
ESC 1:50



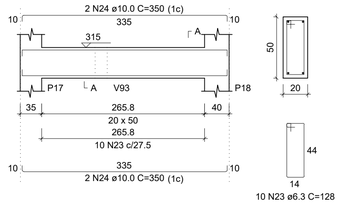

## V5 (20 x 50)
ESC 1:50



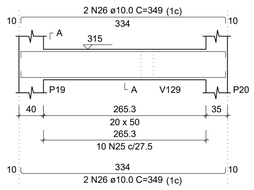

## V6 (20 x 60)
ESC 1:50



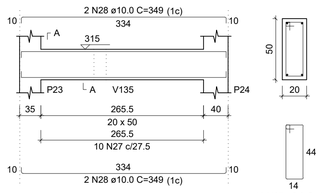

## V7 (20 x 50)
ESC 1:50



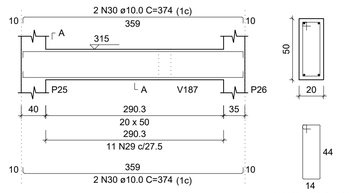

## V8 (20 x 50)
ESC 1:50



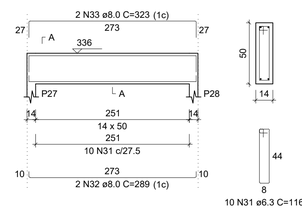

## V9 (20 x 50)
ESC 1:50



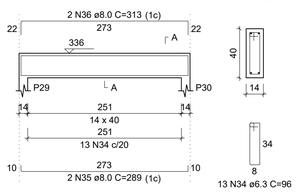

## V10 (20 x 50)
ESC 1:50



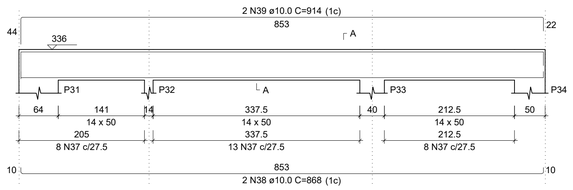

## V11 (14 x 50)
ESC 1:50



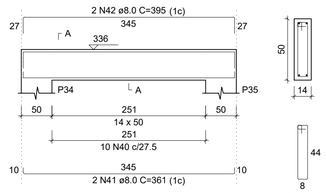

## V12 (14 x 40)
ESC 1:50



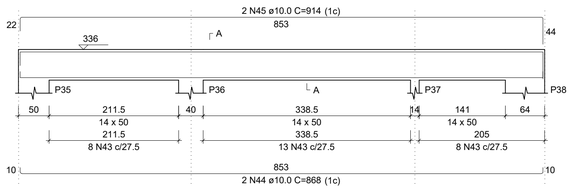

## V13 (14 x 50)
ESC 1:50



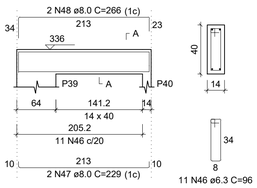

## V14 (14 x 50)
ESC 1:50



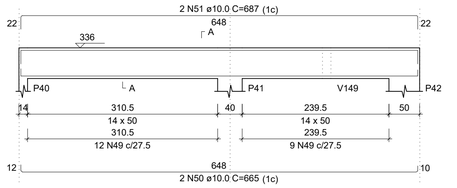

## V15 (14 x 50)
ESC 1:50



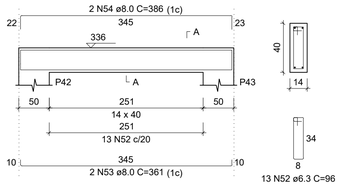

## V16 (14 x 40)
ESC 1:50



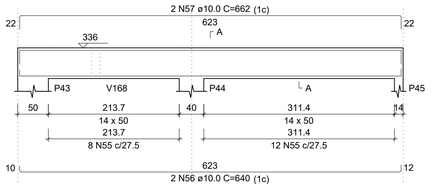

## V17 (14 x 50)
ESC 1:50



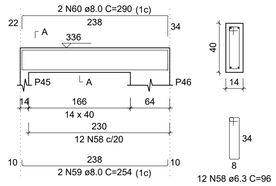

## V18 (14 x 40)
ESC 1:50



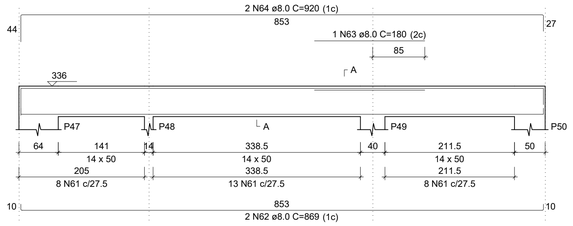

## V19 (14 x 50)
ESC 1:50



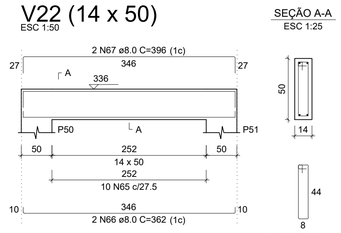

## V20 (14 x 40)
ESC 1:50



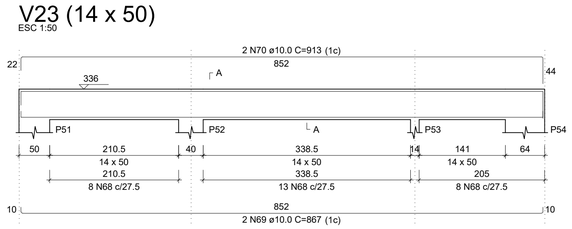

## V21 (14 x 50)
ESC 1:50




## V22 (14 x 50)
ESC 1:50




## V23 (14 x 50)
ESC 1:50




### RELAÇÃO DO AÇO

| ELEMENTO | AÇO | N | DIAM (mm) | QUANT | C.UNIT (cm) | C.TOTAL (cm) |
|---|---|---|---|---|---|---|
| V1 | CA50 | 1 | 6.3 | 21 | 148 | 3108 |
| | CA50 | 2 | 6.3 | 8 | 666 | 5328 |
| | CA50 | 3 | 12.5 | 2 | 680 | 1360 |
| | CA50 | 4 | 12.5 | 2 | 725 | 1450 |
| V2 | CA50 | 5 | 6.3 | 8 | 128 | 1024 |
| | CA50 | 6 | 10.0 | 2 | 324 | 648 |
| | CA50 | 7 | 10.0 | 2 | 368 | 736 |
| V3 | CA50 | 8 | 6.3 | 21 | 148 | 3108 |
| | CA50 | 9 | 6.3 | 8 | 666 | 5328 |
| | CA50 | 10 | 12.5 | 2 | 680 | 1360 |
| | CA50 | 11 | 12.5 | 2 | 725 | 1450 |
| V4 | CA50 | 12 | 6.3 | 21 | 148 | 3108 |
| | CA50 | 13 | 6.3 | 8 | 666 | 5328 |
| | CA50 | 14 | 12.5 | 2 | 680 | 1360 |
| | CA50 | 15 | 12.5 | 2 | 725 | 1450 |
| V5 | CA50 | 16 | 6.3 | 8 | 128 | 1024 |
| | CA50 | 17 | 10.0 | 2 | 324 | 648 |
| | CA50 | 18 | 10.0 | 2 | 368 | 736 |
| V6 | CA50 | 19 | 6.3 | 21 | 148 | 3108 |
| | CA50 | 20 | 6.3 | 8 | 641 | 5128 |
| | CA50 | 21 | 12.5 | 2 | 655 | 1310 |
| | CA50 | 22 | 12.5 | 2 | 704 | 1408 |
| V7 | CA50 | 23 | 6.3 | 10 | 128 | 1280 |
| | CA50 | 24 | 10.0 | 4 | 350 | 1400 |
| V8 | CA50 | 25 | 6.3 | 10 | 128 | 1280 |
| | CA50 | 26 | 10.0 | 4 | 349 | 1396 |
| V9 | CA50 | 27 | 6.3 | 10 | 128 | 1280 |
| | CA50 | 28 | 10.0 | 4 | 349 | 1396 |
| V10 | CA50 | 29 | 6.3 | 11 | 128 | 1408 |
| | CA50 | 30 | 10.0 | 4 | 374 | 1496 |
| V11 | CA50 | 31 | 6.3 | 10 | 116 | 1160 |
| | CA50 | 32 | 8.0 | 2 | 289 | 578 |
| | CA50 | 33 | 8.0 | 2 | 323 | 646 |
| V12 | CA50 | 34 | 6.3 | 13 | 96 | 1248 |
| | CA50 | 35 | 8.0 | 2 | 289 | 578 |
| | CA50 | 36 | 8.0 | 2 | 313 | 626 |
| V13 | CA50 | 37 | 6.3 | 29 | 116 | 3364 |
| | CA50 | 38 | 10.0 | 2 | 868 | 1736 |
| | CA50 | 39 | 10.0 | 2 | 914 | 1828 |
| V14 | CA50 | 40 | 6.3 | 10 | 116 | 1160 |
| | CA50 | 41 | 8.0 | 2 | 361 | 722 |
| | CA50 | 42 | 8.0 | 2 | 395 | 790 |
| V15 | CA50 | 43 | 6.3 | 29 | 116 | 3364 |
| | CA50 | 44 | 10.0 | 2 | 868 | 1736 |
| | CA50 | 45 | 10.0 | 2 | 914 | 1828 |
| V16 | CA50 | 46 | 6.3 | 11 | 96 | 1056 |
| | CA50 | 47 | 8.0 | 2 | 229 | 458 |
| | CA50 | 48 | 8.0 | 2 | 266 | 532 |
| V17 | CA50 | 49 | 6.3 | 21 | 116 | 2436 |
| | CA50 | 50 | 10.0 | 2 | 665 | 1330 |
| | CA50 | 51 | 10.0 | 2 | 687 | 1374 |
| V18 | CA50 | 52 | 6.3 | 13 | 96 | 1248 |
| | CA50 | 53 | 8.0 | 2 | 361 | 722 |
| | CA50 | 54 | 8.0 | 2 | 386 | 772 |
| V19 | CA50 | 55 | 6.3 | 20 | 116 | 2320 |
| | CA50 | 56 | 10.0 | 2 | 640 | 1280 |
| | CA50 | 57 | 10.0 | 2 | 662 | 1324 |
| V20 | CA50 | 58 | 6.3 | 12 | 96 | 1152 |
| | CA50 | 59 | 8.0 | 2 | 254 | 508 |
| | CA50 | 60 | 8.0 | 2 | 290 | 580 |
| V21 | CA50 | 61 | 6.3 | 29 | 116 | 3364 |
| | CA50 | 62 | 8.0 | 2 | 869 | 1738 |
| | CA50 | 63 | 8.0 | 1 | 180 | 180 |
| | CA50 | 64 | 8.0 | 2 | 920 | 1840 |
| V22 | CA50 | 65 | 6.3 | 10 | 116 | 1160 |
| | CA50 | 66 | 8.0 | 2 | 362 | 724 |
| | CA50 | 67 | 8.0 | 2 | 396 | 792 |
| V23 | CA50 | 68 | 6.3 | 29 | 116 | 3364 |
| | CA50 | 69 | 10.0 | 2 | 867 | 1734 |
| | CA50 | 70 | 10.0 | 2 | 913 | 1826 |

### RESUMO DO AÇO

| AÇO | DIAM (mm) | C.TOTAL (m) | PESO + 10% (kg) |
|---|---|---|---|
| CA50 | 6.3 | 672.4 | 181 |
| | 8.0 | 127.9 | 55.5 |
| | 10.0 | 244.5 | 165.8 |
| | 12.5 | 111.5 | 118.1 |
| PESO TOTAL (kg) | | | |
| CA50 | 520.4 | | |

Volume de concreto (C-30) = 7.94 m³
Área de forma = 87.87 m²

| REV | DATA | DESENHO | ALTERAÇÕES DE PROJETO | VERIFICAÇÃO |
|---|---|---|---|---|
| 00 | 21-11-2024 | PABLO | EMISSÃO INICIAL | AMVALI |

RESPONSÁVEL TÉCNICO: PABLO VINICIUS RIGO, ENG. CIVIL, CREA/SC 154680-0
Assinado de forma digital por PABLO VINICIUS RIGO:06875439913 Dados: 2024.12.03 16:33:28 -03'00'
CONTRATANTE:

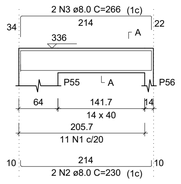
ELABORAÇÃO: Amvali
CONTRATANTE: PREFEITURA MUNICIPAL DE JARAGUÁ DO SUL

TÍTULO: PROJETO BÁSICO DE ENGENHARIA
CENTRO DE EDUCAÇÃO INFANTIL EM ALVENARIA

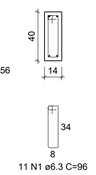
PROJETO: PROJETO ESTRUTURAL EM CONCRETO ARMADO
CONTEÚDO: DETALHAMENTO DAS ARMADURAS DAS VIGAS
ESCALA: INDICADA
ENDEREÇO: RUA FREDERICO PIESKE, BARRA DO RIO CERRO
ESTACA: ---
CODIFICAÇÃO: AMV-JS-DE-EST-0242-R00 - NIVEL LAJE.DWG
FOLHA: 02-15

FORMATO A1 - 841x594mm

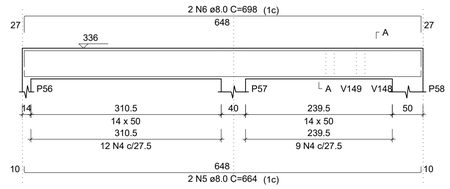
## V24 (14 x 40)
ESC 1:50



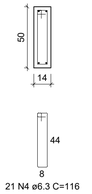

SEÇÃO A-A
ESC 1:25



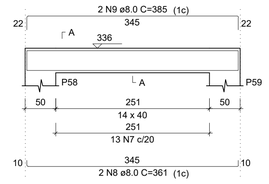

## V25 (14 x 50)
ESC 1:50



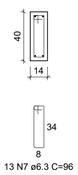

SEÇÃO A-A
ESC 1:25



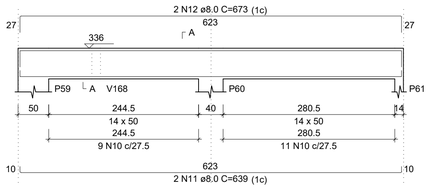

## V26 (14 x 40)
ESC 1:50



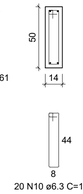

SEÇÃO A-A
ESC 1:25



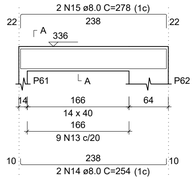

## V27 (14 x 50)
ESC 1:50



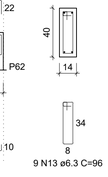

SEÇÃO A-A
ESC 1:25



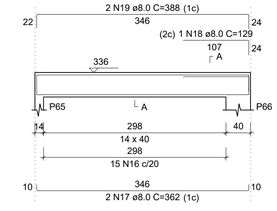

## V28 (14 x 40)
ESC 1:50



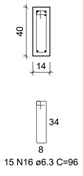

SEÇÃO A-A
ESC 1:25



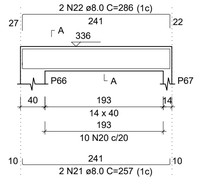

## V29 (14 x 40)
ESC 1:50



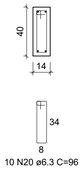

SEÇÃO A-A
ESC 1:25



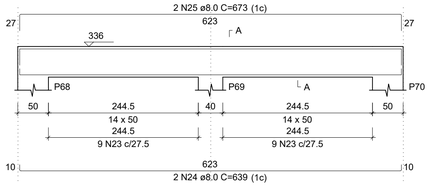

## V30 (14 x 40)
ESC 1:50



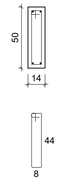

SEÇÃO A-A
ESC 1:25



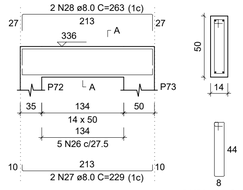

## V31 (14 x 50)
ESC 1:50




SEÇÃO A-A
ESC 1:25



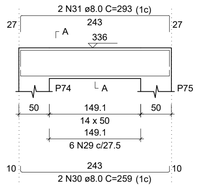

## V32 (14 x 50)
ESC 1:50



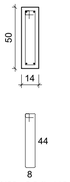

SEÇÃO A-A
ESC 1:25



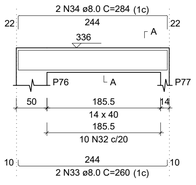

## V33 (14 x 50)
ESC 1:50



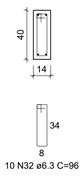

SEÇÃO A-A
ESC 1:25



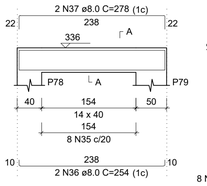

## V34 (14 x 40)
ESC 1:50



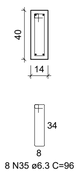

SEÇÃO A-A
ESC 1:25



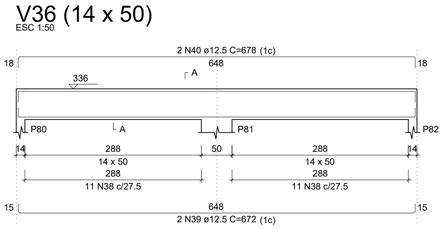

## V35 (14 x 40)
ESC 1:50



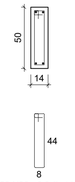

SEÇÃO A-A
ESC 1:25



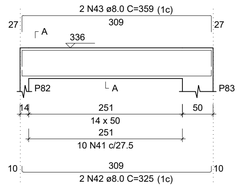

## V36 (14 x 50)
ESC 1:50



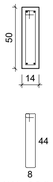

SEÇÃO A-A
ESC 1:25



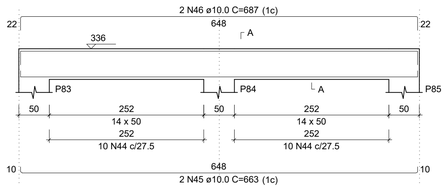

## V37 (14 x 50)
ESC 1:50




SEÇÃO A-A
ESC 1:25

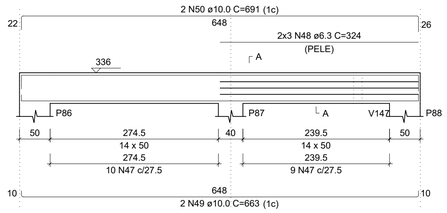



## V38 (14 x 50)
ESC 1:50



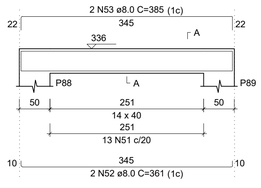

SEÇÃO A-A
ESC 1:25

## V39 (14 x 50)
ESC 1:50

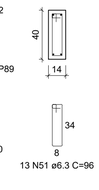



SEÇÃO A-A
ESC 1:25

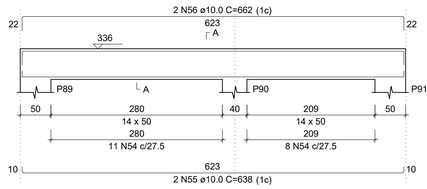
## V40 (14 x 40)
ESC 1:50




SEÇÃO A-A
ESC 1:25

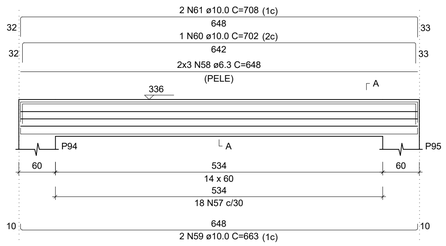



## V41 (14 x 50)
ESC 1:50

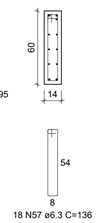



SEÇÃO A-A
ESC 1:25

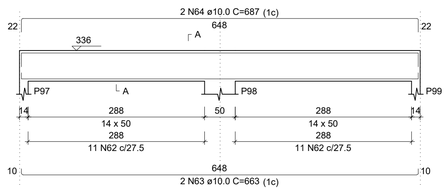
## V42 (14 x 60)
ESC 1:50



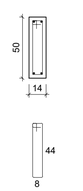

SEÇÃO A-A
ESC 1:25



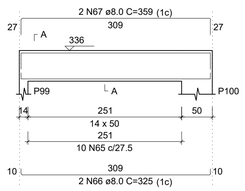

## V43 (14 x 50)
ESC 1:50



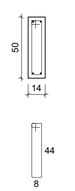

SEÇÃO A-A
ESC 1:25



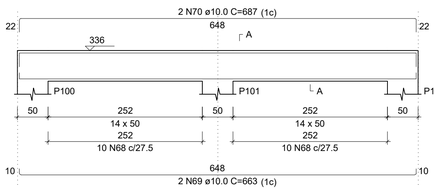

## V44 (14 x 50)
ESC 1:50



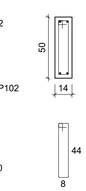

SEÇÃO A-A
ESC 1:25




## V45 (14 x 50)
ESC 1:50




SEÇÃO A-A
ESC 1:25




RELAÇÃO DO AÇO

| ELEMENTO | AÇO | N | DIAM (mm) | QUANT | C.UNIT (cm) | C.TOTAL (cm) |
|---|---|---|---|---|---|---|
| V24 | CA50 | 1 | 6.3 | 11 | 96 | 1056 |
| | CA50 | 2 | 8.0 | 2 | 230 | 460 |
| | CA50 | 3 | 8.0 | 2 | 266 | 532 |
| V25 | CA50 | 4 | 6.3 | 21 | 116 | 2436 |
| | CA50 | 5 | 8.0 | 2 | 664 | 1328 |
| | CA50 | 6 | 8.0 | 2 | 698 | 1396 |
| V26 | CA50 | 7 | 6.3 | 13 | 96 | 1248 |
| | CA50 | 8 | 8.0 | 2 | 361 | 722 |
| | CA50 | 9 | 8.0 | 2 | 385 | 770 |
| V27 | CA50 | 10 | 6.3 | 20 | 116 | 2320 |
| | CA50 | 11 | 8.0 | 2 | 639 | 1278 |
| | CA50 | 12 | 8.0 | 2 | 673 | 1346 |
| V28 | CA50 | 13 | 6.3 | 9 | 96 | 864 |
| | CA50 | 14 | 8.0 | 2 | 254 | 508 |
| | CA50 | 15 | 8.0 | 2 | 278 | 556 |
| V29 | CA50 | 16 | 6.3 | 15 | 96 | 1440 |
| | CA50 | 17 | 8.0 | 2 | 362 | 724 |
| | CA50 | 18 | 8.0 | 1 | 129 | 129 |
| | CA50 | 19 | 8.0 | 2 | 388 | 776 |
| V30 | CA50 | 20 | 6.3 | 10 | 96 | 960 |
| | CA50 | 21 | 8.0 | 2 | 257 | 514 |
| | CA50 | 22 | 8.0 | 2 | 286 | 572 |
| V31 | CA50 | 23 | 6.3 | 18 | 116 | 2088 |
| | CA50 | 24 | 8.0 | 2 | 639 | 1278 |
| | CA50 | 25 | 8.0 | 2 | 673 | 1346 |
| V32 | CA50 | 26 | 6.3 | 5 | 116 | 580 |
| | CA50 | 27 | 8.0 | 2 | 229 | 458 |
| | CA50 | 28 | 8.0 | 2 | 263 | 526 |
| V33 | CA50 | 29 | 6.3 | 6 | 116 | 696 |
| | CA50 | 30 | 8.0 | 2 | 259 | 518 |
| | CA50 | 31 | 8.0 | 2 | 293 | 586 |
| V34 | CA50 | 32 | 6.3 | 10 | 96 | 960 |
| | CA50 | 33 | 8.0 | 2 | 260 | 520 |
| | CA50 | 34 | 8.0 | 2 | 284 | 568 |
| V35 | CA50 | 35 | 6.3 | 8 | 96 | 768 |
| | CA50 | 36 | 8.0 | 2 | 254 | 508 |
| | CA50 | 37 | 8.0 | 2 | 278 | 556 |
| V36 | CA50 | 38 | 6.3 | 22 | 116 | 2552 |
| | CA50 | 39 | 12.5 | 2 | 672 | 1344 |
| | CA50 | 40 | 12.5 | 2 | 678 | 1356 |
| V37 | CA50 | 41 | 6.3 | 10 | 116 | 1160 |
| | CA50 | 42 | 8.0 | 2 | 325 | 650 |
| | CA50 | 43 | 8.0 | 2 | 359 | 718 |
| V38 | CA50 | 44 | 6.3 | 20 | 116 | 2320 |
| | CA50 | 45 | 10.0 | 2 | 663 | 1326 |
| | CA50 | 46 | 10.0 | 2 | 687 | 1374 |
| V39 | CA50 | 47 | 6.3 | 19 | 116 | 2204 |
| | CA50 | 48 | 6.3 | 6 | 324 | 1944 |
| | CA50 | 49 | 10.0 | 2 | 663 | 1326 |
| | CA50 | 50 | 10.0 | 2 | 691 | 1382 |
| V40 | CA50 | 51 | 6.3 | 13 | 96 | 1248 |
| | CA50 | 52 | 8.0 | 2 | 361 | 722 |
| | CA50 | 53 | 8.0 | 2 | 385 | 770 |
| V41 | CA50 | 54 | 6.3 | 19 | 116 | 2204 |
| | CA50 | 55 | 10.0 | 2 | 638 | 1276 |
| | CA50 | 56 | 10.0 | 2 | 662 | 1324 |
| V42 | CA50 | 57 | 6.3 | 18 | 136 | 2448 |
| | CA50 | 58 | 6.3 | 6 | 648 | 3888 |
| | CA50 | 59 | 10.0 | 2 | 663 | 1326 |
| | CA50 | 60 | 10.0 | 1 | 702 | 702 |
| | CA50 | 61 | 10.0 | 2 | 708 | 1416 |
| V43 | CA50 | 62 | 6.3 | 22 | 116 | 2552 |
| | CA50 | 63 | 10.0 | 2 | 663 | 1326 |
| | CA50 | 64 | 10.0 | 2 | 687 | 1374 |
| V44 | CA50 | 65 | 6.3 | 10 | 116 | 1160 |
| | CA50 | 66 | 8.0 | 2 | 325 | 650 |
| | CA50 | 67 | 8.0 | 2 | 359 | 718 |
| V45 | CA50 | 68 | 6.3 | 20 | 116 | 2320 |
| | CA50 | 69 | 10.0 | 2 | 663 | 1326 |
| | CA50 | 70 | 10.0 | 2 | 687 | 1374 |

RESUMO DO AÇO

| AÇO | DIAM (mm) | C.TOTAL (m) | PESO + 10% (kg) |
|---|---|---|---|
| CA50 | 6.3 | 414.2 | 111.5 |
| | 8.0 | 227 | 98.5 |
| | 10.0 | 168.5 | 114.3 |
| | 12.5 | 27 | 28.6 |
| PESO TOTAL (kg) | | | |
| CA50 | 352.9 | | |

Volume de concreto (C-30) = 5.23 m³
Área de forma = 59.74 m²

| REV | DATA | DESENHO | ALTERAÇÕES DE PROJETO | VERIFICAÇÃO |
|---|---|---|---|---|
| 00 | 21-11-2024 | PABLO | EMISSÃO INICIAL | AMVALI |

RESPONSÁVEL TÉCNICO:
PABLO VINICIUS RIGO
ENG. CIVIL
CREA/SC 164680-0
CONTRATANTE:

PABLO VINICIUS RIGO:06875439913
Assinado de forma digital por PABLO VINICIUS RIGO:06875439913
Dados: 2024.12.03 16:34:01 -03'00'

ELABORAÇÃO: Amvali

CONTRATANTE: PREFEITURA MUNICIPAL DE JARAGUÁ DO SUL

TÍTULO: PROJETO BÁSICO DE ENGENHARIA
CENTRO DE EDUCAÇÃO INFANTIL EM ALVENARIA

PROJETO: PROJETO ESTRUTURAL EM CONCRETO ARMADO

CONTEÚDO: DETALHAMENTO DAS ARMADURAS DAS VIGAS

ESCALA: INDICADA

ENDEREÇO: RUA FREDERICO PIESKE, BARRA DO RIO CERRO

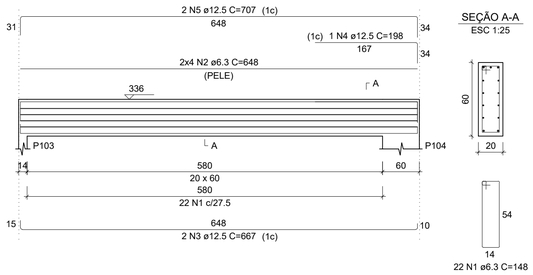
ESTACA: ---

CODIFICAÇÃO: AMV-JS-DE-EST-0242-R00 - NIVEL LAJE.DWG

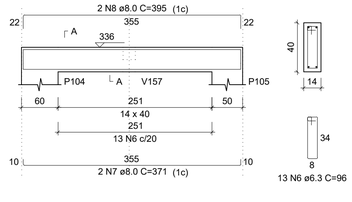
FOLHA: 03-15

FORMATO A1 - 841x594mm

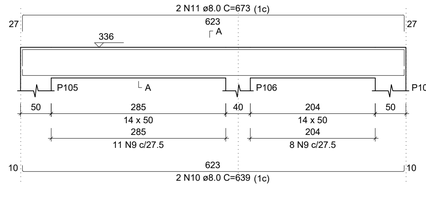
## V46 (20 x 60)
ESC 1:50



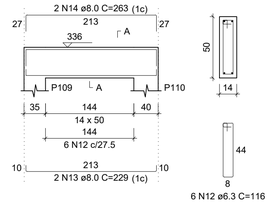

## V47 (14 x 40)
ESC 1:50



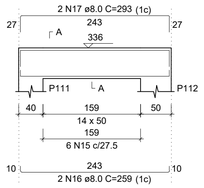

## V48 (14 x 50)
ESC 1:50



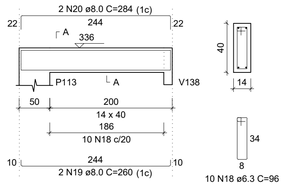

## V49 (14 x 50)
ESC 1:50



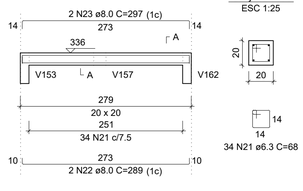

## V50 (14 x 50)
ESC 1:50



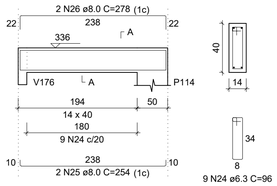

## V51 (14 x 40)
ESC 1:50



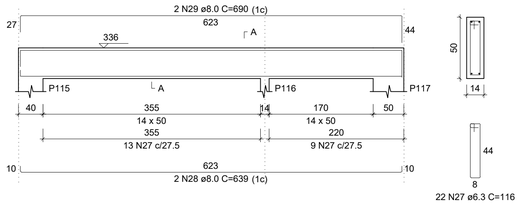

## V52 (20 x 20)
ESC 1:50



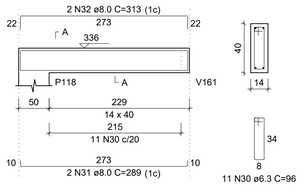

## V53 (14 x 40)
ESC 1:50



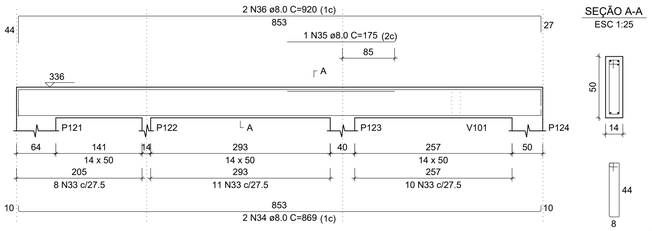

## V54 (14 x 50)
ESC 1:50



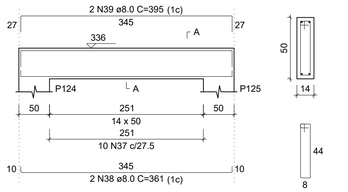

## V55 (14 x 40)
ESC 1:50



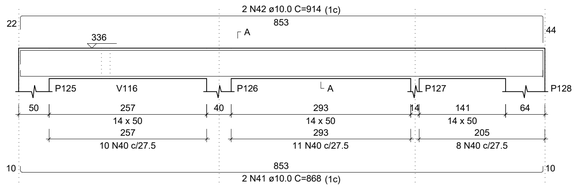

## V56 (14 x 50)
ESC 1:50



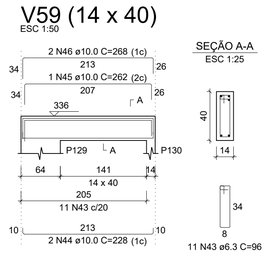

## V57 (14 x 50)
ESC 1:50



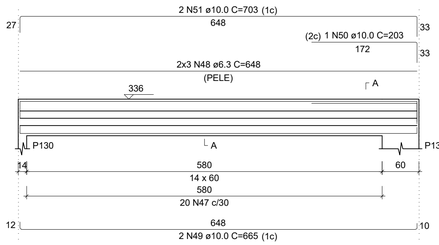

## V58 (14 x 50)
ESC 1:50



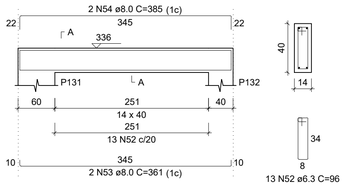

## V59 (14 x 40)
ESC 1:50



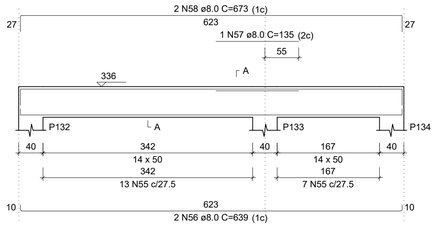

## V60 (14 x 60)
ESC 1:50



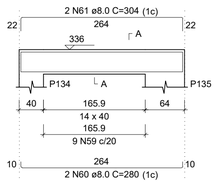

## V61 (14 x 40)
ESC 1:50



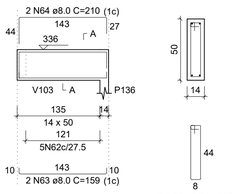

## V62 (14 x 50)
ESC 1:50



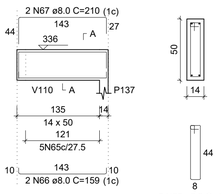

## V63 (14 x 40)
ESC 1:50



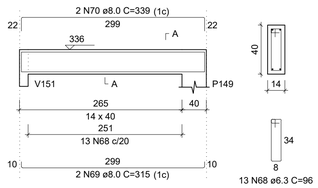

## V64 (14 x 50)
ESC 1:50




## V65 (14 x 50)
ESC 1:50




## V66 (14 x 40)
ESC 1:50




RELAÇÃO DO AÇO

| ELEMENTO | AÇO | N | DIAM (mm) | QUANT | C.UNIT (cm) | C.TOTAL (cm) |
|---|---|---|---|---|---|---|
| V46 | CA50 | 1 | 6.3 | 22 | 148 | 3256 |
| | CA50 | 2 | 6.3 | 8 | 648 | 5184 |
| | CA50 | 3 | 12.5 | 2 | 667 | 1334 |
| | CA50 | 4 | 12.5 | 1 | 198 | 198 |
| | CA50 | 5 | 12.5 | 2 | 707 | 1414 |
| V47 | CA50 | 6 | 6.3 | 13 | 96 | 1248 |
| | CA50 | 7 | 8.0 | 2 | 371 | 742 |
| | CA50 | 8 | 8.0 | 2 | 395 | 790 |
| V48 | CA50 | 9 | 6.3 | 19 | 116 | 2204 |
| | CA50 | 10 | 8.0 | 2 | 639 | 1278 |
| | CA50 | 11 | 8.0 | 2 | 673 | 1346 |
| V49 | CA50 | 12 | 6.3 | 6 | 116 | 696 |
| | CA50 | 13 | 8.0 | 2 | 229 | 458 |
| | CA50 | 14 | 8.0 | 2 | 263 | 526 |
| V50 | CA50 | 15 | 6.3 | 6 | 116 | 696 |
| | CA50 | 16 | 8.0 | 2 | 259 | 518 |
| | CA50 | 17 | 8.0 | 2 | 293 | 586 |
| V51 | CA50 | 18 | 6.3 | 10 | 96 | 960 |
| | CA50 | 19 | 8.0 | 2 | 260 | 520 |
| | CA50 | 20 | 8.0 | 2 | 284 | 568 |
| V52 | CA50 | 21 | 6.3 | 34 | 68 | 2312 |
| | CA50 | 22 | 8.0 | 2 | 289 | 578 |
| | CA50 | 23 | 8.0 | 2 | 297 | 594 |
| V53 | CA50 | 24 | 6.3 | 9 | 96 | 864 |
| | CA50 | 25 | 8.0 | 2 | 254 | 508 |
| | CA50 | 26 | 8.0 | 2 | 278 | 556 |
| V54 | CA50 | 27 | 6.3 | 22 | 116 | 2552 |
| | CA50 | 28 | 8.0 | 2 | 639 | 1278 |
| | CA50 | 29 | 8.0 | 2 | 690 | 1380 |
| V55 | CA50 | 30 | 6.3 | 11 | 96 | 1056 |
| | CA50 | 31 | 8.0 | 2 | 289 | 578 |
| | CA50 | 32 | 8.0 | 2 | 313 | 626 |
| V56 | CA50 | 33 | 6.3 | 29 | 116 | 3364 |
| | CA50 | 34 | 8.0 | 2 | 869 | 1738 |
| | CA50 | 35 | 8.0 | 1 | 175 | 175 |
| | CA50 | 36 | 8.0 | 2 | 920 | 1840 |
| V57 | CA50 | 37 | 6.3 | 10 | 116 | 1160 |
| | CA50 | 38 | 8.0 | 2 | 361 | 722 |
| | CA50 | 39 | 8.0 | 2 | 395 | 790 |
| V58 | CA50 | 40 | 6.3 | 29 | 116 | 3364 |
| | CA50 | 41 | 10.0 | 2 | 868 | 1736 |
| | CA50 | 42 | 10.0 | 2 | 914 | 1828 |
| V59 | CA50 | 43 | 6.3 | 11 | 96 | 1056 |
| | CA50 | 44 | 10.0 | 2 | 228 | 456 |
| | CA50 | 45 | 10.0 | 1 | 262 | 262 |
| | CA50 | 46 | 10.0 | 2 | 268 | 536 |
| V60 | CA50 | 47 | 6.3 | 20 | 136 | 2720 |
| | CA50 | 48 | 6.3 | 6 | 648 | 3888 |
| | CA50 | 49 | 10.0 | 2 | 665 | 1330 |
| | CA50 | 50 | 10.0 | 1 | 203 | 203 |
| | CA50 | 51 | 10.0 | 2 | 703 | 1406 |
| V61 | CA50 | 52 | 6.3 | 13 | 96 | 1248 |
| | CA50 | 53 | 8.0 | 2 | 361 | 722 |
| | CA50 | 54 | 8.0 | 2 | 385 | 770 |
| V62 | CA50 | 55 | 6.3 | 20 | 116 | 2320 |
| | CA50 | 56 | 8.0 | 2 | 639 | 1278 |
| | CA50 | 57 | 8.0 | 1 | 135 | 135 |
| | CA50 | 58 | 8.0 | 2 | 673 | 1346 |
| V63 | CA50 | 59 | 6.3 | 9 | 96 | 864 |
| | CA50 | 60 | 8.0 | 2 | 280 | 560 |
| | CA50 | 61 | 8.0 | 2 | 304 | 608 |
| V64 | CA50 | 62 | 6.3 | 5 | 116 | 580 |
| | CA50 | 63 | 8.0 | 2 | 159 | 318 |
| | CA50 | 64 | 8.0 | 2 | 210 | 420 |
| V65 | CA50 | 65 | 6.3 | 5 | 116 | 580 |
| | CA50 | 66 | 8.0 | 2 | 159 | 318 |
| | CA50 | 67 | 8.0 | 2 | 210 | 420 |
| V66 | CA50 | 68 | 6.3 | 13 | 96 | 1248 |
| | CA50 | 69 | 8.0 | 2 | 315 | 630 |
| | CA50 | 70 | 8.0 | 2 | 339 | 678 |

RESUMO DO AÇO

| AÇO | DIAM (mm) | C.TOTAL (m) | PESO + 10% (kg) |
|---|---|---|---|
| CA50 | 6.3 | 434.2 | 116.9 |
| | 8.0 | 269 | 116.7 |
| | 10.0 | 77.6 | 52.6 |
| | 12.5 | 29.5 | 31.2 |
| PESO TOTAL (kg) | | | |
| CA50 | 317.4 | | |

Volume de concreto (C-30) = 4.81 m³
Área de forma = 55.03 m²

| REV | DATA | DESENHO | ALTERAÇÕES DE PROJETO | VERIFICAÇÃO |
|---|---|---|---|---|
| 00 | 20-11-2024 | PABLO | EMISSÃO INICIAL | AMVALI |

RESPONSÁVEL TÉCNICO:
PABLO VINICIUS RIGO:06875439913
Assinado de forma digital por PABLO VINICIUS RIGO:06875439913 Dados: 2024.12.03 16:34:28 -03'00'
PABLO VINICIUS RIGO
ENG. CIVIL
CREA/SC 164680-0
CONTRATANTE:

ELABORAÇÃO: Amvali

CONTRATANTE: PREFEITURA MUNICIPAL DE JARAGUÁ DO SUL

TÍTULO: PROJETO BÁSICO DE ENGENHARIA
CENTRO DE EDUCAÇÃO INFANTIL EM ALVENARIA

PROJETO: PROJETO ESTRUTURAL EM CONCRETO ARMADO

CONTEÚDO: DETALHAMENTO DAS ARMADURAS DAS VIGAS

ESCALA: INDICADA

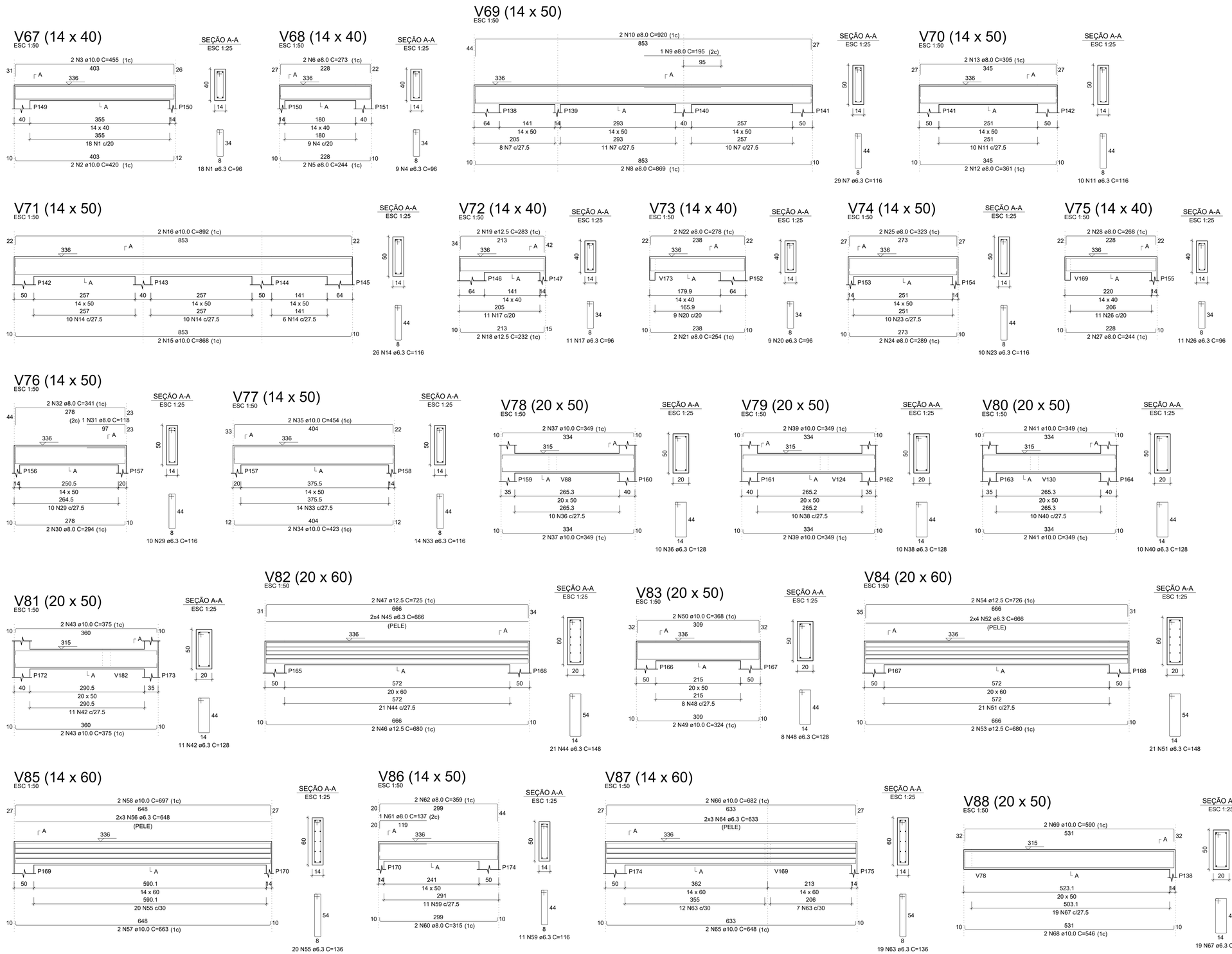
ENDEREÇO: RUA FREDERICO PIESKE, BARRA DO RIO CERRO

ESTACA: ---

CODIFICAÇÃO: AMV-JS-DE-EST-0242-R00 - NIVEL LAJE.DWG

FOLHA: 04-15

FORMATO A1 - 841x594mm




RELAÇÃO DO AÇO

| ELEMENTO | AÇO | N | DIAM (mm) | QUANT | C.UNIT (cm) | C.TOTAL (cm) |
|---|---|---|---|---|---|---|
| V67 | CA50 | 1 | 6.3 | 18 | 96 | 1728 |
| | CA50 | 2 | 10.0 | 2 | 420 | 840 |
| | CA50 | 3 | 10.0 | 2 | 455 | 910 |
| V68 | CA50 | 4 | 6.3 | 9 | 96 | 864 |
| | CA50 | 5 | 8.0 | 2 | 244 | 488 |
| | CA50 | 6 | 8.0 | 2 | 273 | 546 |
| V69 | CA50 | 7 | 6.3 | 29 | 116 | 3364 |
| | CA50 | 8 | 8.0 | 2 | 869 | 1738 |
| | CA50 | 9 | 8.0 | 1 | 195 | 195 |
| | CA50 | 10 | 8.0 | 2 | 920 | 1840 |
| V70 | CA50 | 11 | 6.3 | 10 | 116 | 1160 |
| | CA50 | 12 | 8.0 | 2 | 361 | 722 |
| | CA50 | 13 | 8.0 | 2 | 395 | 790 |
| V71 | CA50 | 14 | 6.3 | 26 | 116 | 3016 |
| | CA50 | 15 | 10.0 | 2 | 868 | 1736 |
| | CA50 | 16 | 10.0 | 2 | 892 | 1784 |
| V72 | CA50 | 17 | 6.3 | 11 | 96 | 1056 |
| | CA50 | 18 | 12.5 | 2 | 232 | 464 |
| | CA50 | 19 | 12.5 | 2 | 283 | 566 |
| V73 | CA50 | 20 | 6.3 | 9 | 96 | 864 |
| | CA50 | 21 | 8.0 | 2 | 254 | 508 |
| | CA50 | 22 | 8.0 | 2 | 278 | 556 |
| V74 | CA50 | 23 | 6.3 | 10 | 116 | 1160 |
| | CA50 | 24 | 8.0 | 2 | 289 | 578 |
| | CA50 | 25 | 8.0 | 2 | 323 | 646 |
| V75 | CA50 | 26 | 6.3 | 11 | 96 | 1056 |
| | CA50 | 27 | 8.0 | 2 | 244 | 488 |
| | CA50 | 28 | 8.0 | 2 | 268 | 536 |
| V76 | CA50 | 29 | 6.3 | 10 | 116 | 1160 |
| | CA50 | 30 | 8.0 | 2 | 294 | 588 |
| | CA50 | 31 | 8.0 | 1 | 118 | 118 |
| | CA50 | 32 | 8.0 | 2 | 341 | 682 |
| V77 | CA50 | 33 | 6.3 | 14 | 116 | 1624 |
| | CA50 | 34 | 10.0 | 2 | 423 | 846 |
| | CA50 | 35 | 10.0 | 2 | 454 | 908 |
| V78 | CA50 | 36 | 6.3 | 10 | 128 | 1280 |
| | CA50 | 37 | 10.0 | 4 | 349 | 1396 |
| V79 | CA50 | 38 | 6.3 | 10 | 128 | 1280 |
| | CA50 | 39 | 10.0 | 4 | 349 | 1396 |
| V80 | CA50 | 40 | 6.3 | 10 | 128 | 1280 |
| | CA50 | 41 | 10.0 | 4 | 349 | 1396 |
| V81 | CA50 | 42 | 6.3 | 11 | 128 | 1408 |
| | CA50 | 43 | 10.0 | 4 | 375 | 1500 |
| V82 | CA50 | 44 | 6.3 | 21 | 148 | 3108 |
| | CA50 | 45 | 6.3 | 8 | 666 | 5328 |
| | CA50 | 46 | 12.5 | 2 | 680 | 1360 |
| | CA50 | 47 | 12.5 | 2 | 725 | 1450 |
| V83 | CA50 | 48 | 6.3 | 8 | 128 | 1024 |
| | CA50 | 49 | 10.0 | 2 | 324 | 648 |
| | CA50 | 50 | 10.0 | 2 | 368 | 736 |
| V84 | CA50 | 51 | 6.3 | 21 | 148 | 3108 |
| | CA50 | 52 | 6.3 | 8 | 666 | 5328 |
| | CA50 | 53 | 12.5 | 2 | 680 | 1360 |
| | CA50 | 54 | 12.5 | 2 | 726 | 1452 |
| V85 | CA50 | 55 | 6.3 | 20 | 136 | 2720 |
| | CA50 | 56 | 6.3 | 6 | 648 | 3888 |
| | CA50 | 57 | 10.0 | 2 | 663 | 1326 |
| | CA50 | 58 | 10.0 | 2 | 697 | 1394 |
| V86 | CA50 | 59 | 6.3 | 11 | 116 | 1276 |
| | CA50 | 60 | 8.0 | 2 | 315 | 630 |
| | CA50 | 61 | 8.0 | 1 | 137 | 137 |
| | CA50 | 62 | 8.0 | 2 | 359 | 718 |
| V87 | CA50 | 63 | 6.3 | 19 | 136 | 2584 |
| | CA50 | 64 | 6.3 | 6 | 633 | 3798 |
| | CA50 | 65 | 10.0 | 2 | 648 | 1296 |
| | CA50 | 66 | 10.0 | 2 | 682 | 1364 |
| V88 | CA50 | 67 | 6.3 | 19 | 128 | 2432 |
| | CA50 | 68 | 10.0 | 2 | 546 | 1092 |
| | CA50 | 69 | 10.0 | 2 | 590 | 1180 |

RESUMO DO AÇO

| AÇO | DIAM (mm) | C.TOTAL (m) | PESO + 10% (kg) |
|---|---|---|---|
| CA50 | 6.3 | 568.9 | 153.1 |
| | 8.0 | 125 | 54.3 |
| | 10.0 | 217.5 | 147.5 |
| | 12.5 | 66.5 | 70.5 |
| PESO TOTAL (kg) | | | |
| CA50 | 425.4 | | |

Volume de concreto (C-30) = 6.66 m³
Área de forma = 77.83 m²

| REV | DATA | DESENHO | ALTERAÇÕES DE PROJETO | VERIFICAÇÃO |
|---|---|---|---|---|
| 00 | 21-11-2024 | PABLO | EMISSÃO INICIAL | ARVALI |

RESPONSÁVEL TÉCNICO:
PABLO VINICIUS RIGO
ENG. CIVIL
CREA/SC 164680-0
CONTRATANTE:

PABLO VINICIUS RIGO:06875439913
Assinado de forma digital por PABLO VINICIUS RIGO:06875439913
Dados: 2024.12.03 16:34:46 -03'00'

ELABORAÇÃO: Amvali

CONTRATANTE: PREFEITURA MUNICIPAL DE JARAGUÁ DO SUL

TÍTULO: PROJETO BÁSICO DE ENGENHARIA
CENTRO DE EDUCAÇÃO INFANTIL EM ALVENARIA

PROJETO: PROJETO ESTRUTURAL EM CONCRETO ARMADO

CONTEÚDO: DETALHAMENTO DAS ARMADURAS DAS VIGAS

ESCALA: INDICADA

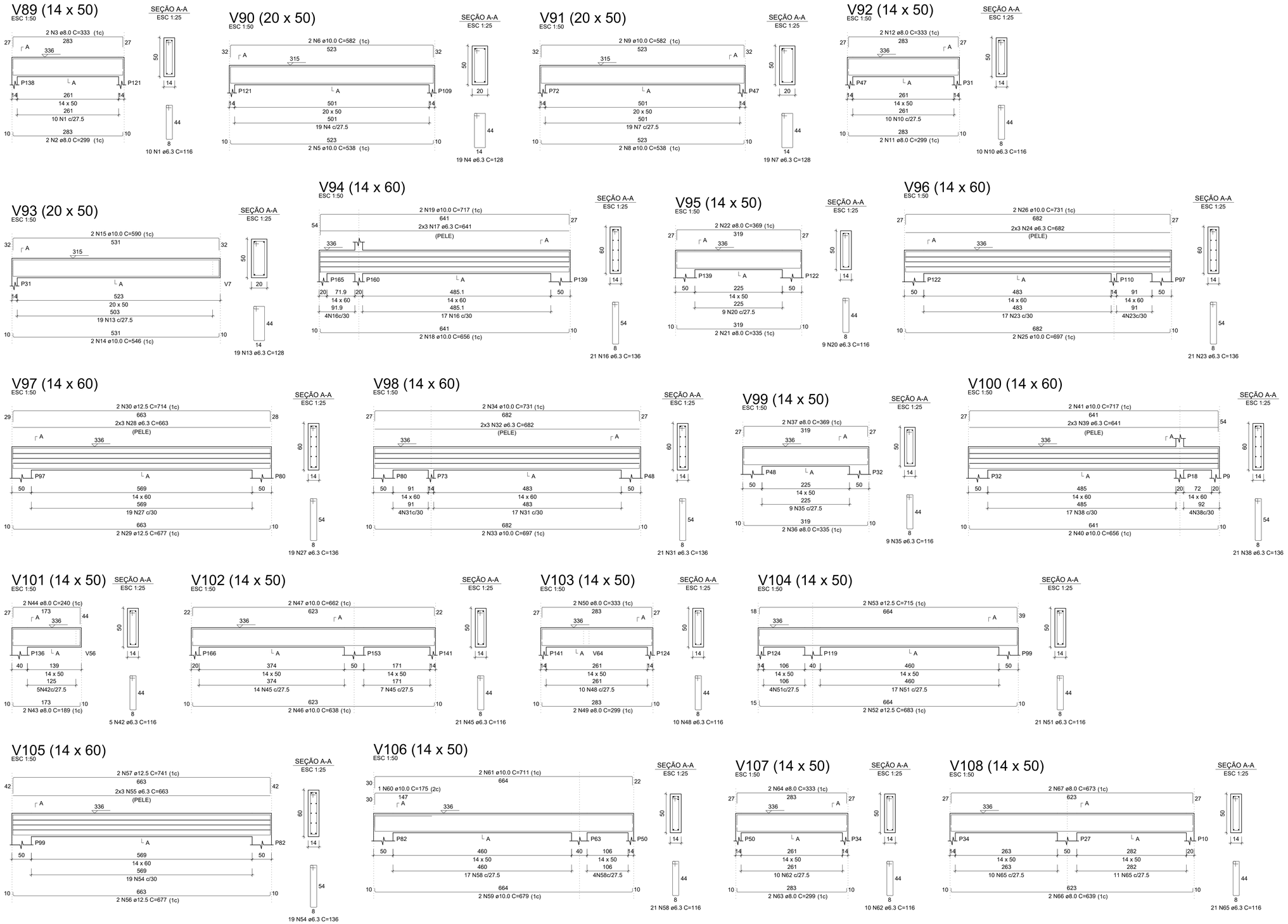
ENDEREÇO: RUA FREDERICO PIESKE, BARRA DO RIO CERRO

ESTACA: ---

CODIFICAÇÃO: AMV-JS-DE-EST-0242-R00 - NIVEL LAJE.DWG

FOLHA: 05-15

FORMATO A1 - 841x594mm




RELAÇÃO DO AÇO

| ELEMENTO | AÇO | N | DIAM (mm) | QUANT | C.UNIT (cm) | C.TOTAL (cm) |
|---|---|---|---|---|---|---|
| V89 | CA50 | 1 | 6.3 | 10 | 116 | 1160 |
| | CA50 | 2 | 8.0 | 2 | 299 | 598 |
| | CA50 | 3 | 8.0 | 2 | 333 | 666 |
| V90 | CA50 | 4 | 6.3 | 19 | 128 | 2432 |
| | CA50 | 5 | 10.0 | 2 | 538 | 1076 |
| | CA50 | 6 | 10.0 | 2 | 582 | 1164 |
| V91 | CA50 | 7 | 6.3 | 19 | 128 | 2432 |
| | CA50 | 8 | 10.0 | 2 | 538 | 1076 |
| | CA50 | 9 | 10.0 | 2 | 582 | 1164 |
| V92 | CA50 | 10 | 6.3 | 10 | 116 | 1160 |
| | CA50 | 11 | 8.0 | 2 | 299 | 598 |
| | CA50 | 12 | 8.0 | 2 | 333 | 666 |
| V93 | CA50 | 13 | 6.3 | 19 | 128 | 2432 |
| | CA50 | 14 | 10.0 | 2 | 546 | 1092 |
| | CA50 | 15 | 10.0 | 2 | 590 | 1180 |
| V94 | CA50 | 16 | 6.3 | 21 | 136 | 2856 |
| | CA50 | 17 | 6.3 | 6 | 641 | 3846 |
| | CA50 | 18 | 10.0 | 2 | 656 | 1312 |
| | CA50 | 19 | 10.0 | 2 | 717 | 1434 |
| V95 | CA50 | 20 | 6.3 | 9 | 116 | 1044 |
| | CA50 | 21 | 8.0 | 2 | 335 | 670 |
| | CA50 | 22 | 8.0 | 2 | 369 | 738 |
| V96 | CA50 | 23 | 6.3 | 21 | 136 | 2856 |
| | CA50 | 24 | 6.3 | 6 | 682 | 4092 |
| | CA50 | 25 | 10.0 | 2 | 697 | 1394 |
| | CA50 | 26 | 10.0 | 2 | 731 | 1462 |
| V97 | CA50 | 27 | 6.3 | 19 | 136 | 2584 |
| | CA50 | 28 | 6.3 | 6 | 663 | 3978 |
| | CA50 | 29 | 12.5 | 2 | 677 | 1354 |
| | CA50 | 30 | 12.5 | 2 | 714 | 1428 |
| V98 | CA50 | 31 | 6.3 | 21 | 136 | 2856 |
| | CA50 | 32 | 6.3 | 6 | 682 | 4092 |
| | CA50 | 33 | 10.0 | 2 | 697 | 1394 |
| | CA50 | 34 | 10.0 | 2 | 731 | 1462 |
| V99 | CA50 | 35 | 6.3 | 9 | 116 | 1044 |
| | CA50 | 36 | 8.0 | 2 | 335 | 670 |
| | CA50 | 37 | 8.0 | 2 | 369 | 738 |
| V100 | CA50 | 38 | 6.3 | 21 | 136 | 2856 |
| | CA50 | 39 | 6.3 | 6 | 641 | 3846 |
| | CA50 | 40 | 10.0 | 2 | 656 | 1312 |
| | CA50 | 41 | 10.0 | 2 | 717 | 1434 |
| V101 | CA50 | 42 | 6.3 | 5 | 116 | 580 |
| | CA50 | 43 | 8.0 | 2 | 189 | 378 |
| | CA50 | 44 | 8.0 | 2 | 240 | 480 |
| V102 | CA50 | 45 | 6.3 | 21 | 116 | 2436 |
| | CA50 | 46 | 10.0 | 2 | 638 | 1276 |
| | CA50 | 47 | 10.0 | 2 | 662 | 1324 |
| V103 | CA50 | 48 | 6.3 | 10 | 116 | 1160 |
| | CA50 | 49 | 8.0 | 2 | 299 | 598 |
| | CA50 | 50 | 8.0 | 2 | 333 | 666 |
| V104 | CA50 | 51 | 6.3 | 21 | 116 | 2436 |
| | CA50 | 52 | 12.5 | 2 | 683 | 1366 |
| | CA50 | 53 | 12.5 | 2 | 715 | 1430 |
| V105 | CA50 | 54 | 6.3 | 19 | 136 | 2584 |
| | CA50 | 55 | 6.3 | 6 | 663 | 3978 |
| | CA50 | 56 | 12.5 | 2 | 677 | 1354 |
| | CA50 | 57 | 12.5 | 2 | 741 | 1482 |
| V106 | CA50 | 58 | 6.3 | 21 | 116 | 2436 |
| | CA50 | 59 | 10.0 | 2 | 679 | 1358 |
| | CA50 | 60 | 10.0 | 1 | 175 | 175 |
| | CA50 | 61 | 10.0 | 2 | 711 | 1422 |
| V107 | CA50 | 62 | 6.3 | 10 | 116 | 1160 |
| | CA50 | 63 | 8.0 | 2 | 299 | 598 |
| | CA50 | 64 | 8.0 | 2 | 333 | 666 |
| V108 | CA50 | 65 | 6.3 | 21 | 116 | 2436 |
| | CA50 | 66 | 8.0 | 2 | 639 | 1278 |
| | CA50 | 67 | 8.0 | 2 | 673 | 1346 |

RESUMO DO AÇO

| AÇO | DIAM (mm) | C.TOTAL (m) | PESO + 10% (kg) |
|---|---|---|---|
| CA50 | 6.3 | 647.7 | 174.3 |
| | 8.0 | 113.5 | 49.3 |
| | 10.0 | 235.1 | 159.4 |
| | 12.5 | 84.1 | 89.2 |
| PESO TOTAL (kg) | | | |
| CA50 | 472.2 | | |

Volume de concreto (C-30) = 7.06 m³
Área de forma = 88.31 m²

| REV | DATA | DESENHO | ALTERAÇÕES DE PROJETO | VERIFICAÇÃO |
|---|---|---|---|---|
| 00 | 21-11-2024 | PABLO | EMISSÃO INICIAL | ARVALI |

RESPONSÁVEL TÉCNICO:
PABLO VINICIUS RIGO
ENG. CIVIL
CREA/SC 164680-0
PABLO VINICIUS RIGO:06875439913
Assinado de forma digital por PABLO VINICIUS RIGO:06875439913
Dados: 2024.12.03 16:35:04 -03'00'

CONTRATANTE:

ELABORAÇÃO: Amvali

CONTRATANTE: PREFEITURA MUNICIPAL DE JARAGUÁ DO SUL

TÍTULO: PROJETO BÁSICO DE ENGENHARIA
CENTRO DE EDUCAÇÃO INFANTIL EM ALVENARIA

PROJETO: PROJETO ESTRUTURAL EM CONCRETO ARMADO

CONTEÚDO: DETALHAMENTO DAS ARMADURAS DAS VIGAS

ESCALA: INDICADA

ENDEREÇO: RUA FREDERICO PIESKE, BARRA DO RIO CERRO

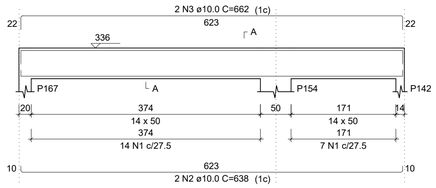
ESTACA: ---

CODIFICAÇÃO: AMV-JS-DE-EST-0242-R00 - NIVEL LAJE.DWG

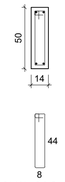
FOLHA: 06-15

FORMATO A1 - 841x594mm

## V109 (14 x 50)
ESC 1:50

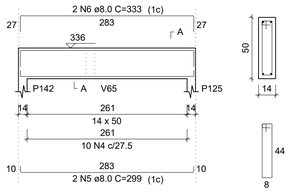



SEÇÃO A-A
ESC 1:25




21 N1 ø6.3 C=116

## V110 (14 x 50)
ESC 1:50

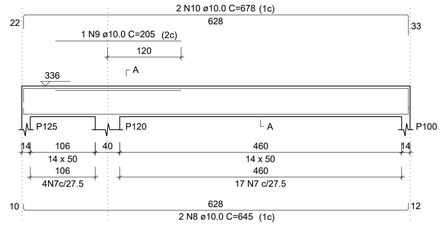



SEÇÃO A-A
ESC 1:25




10 N4 ø6.3 C=116

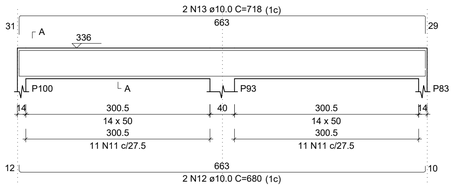
## V111 (14 x 50)
ESC 1:50



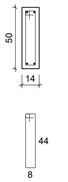

SEÇÃO A-A
ESC 1:25

21 N7 ø6.3 C=116

## V112 (14 x 50)
ESC 1:50

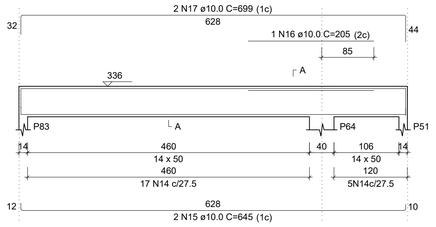



SEÇÃO A-A
ESC 1:25

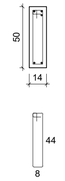



22 N11 ø6.3 C=116

## V113 (14 x 50)
ESC 1:50

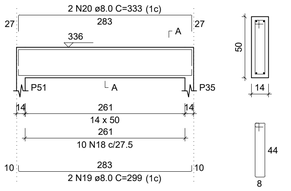



SEÇÃO A-A
ESC 1:25




22 N14 ø6.3 C=116

## V114 (14 x 50)
ESC 1:50

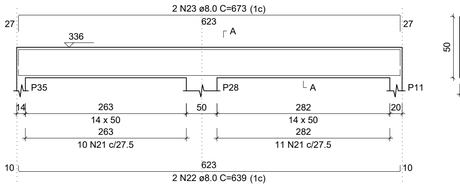



SEÇÃO A-A
ESC 1:25




10 N18 ø6.3 C=116

## V115 (14 x 50)
ESC 1:50

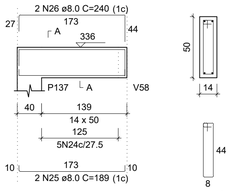



SEÇÃO A-A
ESC 1:25




21 N21 ø6.3 C=116

## V116 (14 x 50)
ESC 1:50

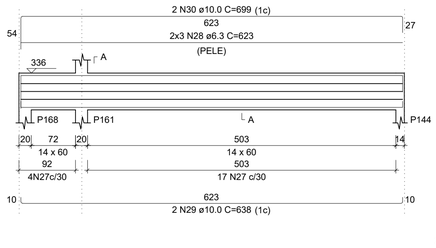



SEÇÃO A-A
ESC 1:25

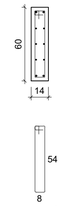



5 N24 ø6.3 C=116

## V117 (14 x 60)
ESC 1:50

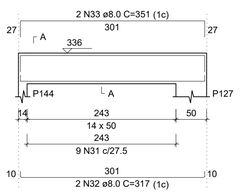



SEÇÃO A-A
ESC 1:25

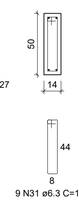



21 N27 ø6.3 C=136

## V118 (14 x 50)
ESC 1:50

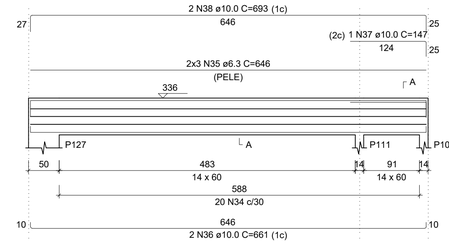



SEÇÃO A-A
ESC 1:25

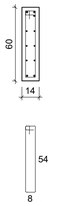



9 N31 ø6.3 C=116

## V119 (14 x 60)
ESC 1:50

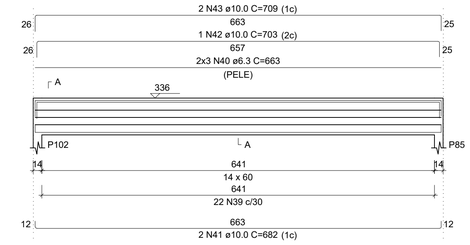



SEÇÃO A-A
ESC 1:25

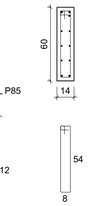



20 N34 ø6.3 C=136

## V120 (14 x 60)
ESC 1:50

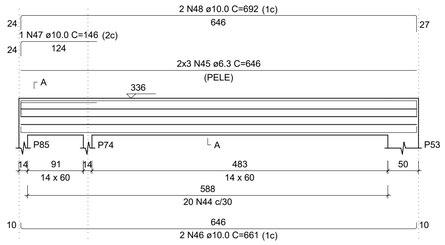



SEÇÃO A-A
ESC 1:25

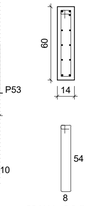



22 N39 ø6.3 C=136

## V121 (14 x 60)
ESC 1:50

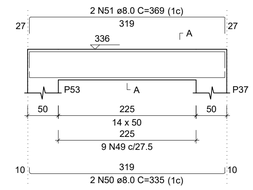



SEÇÃO A-A
ESC 1:25

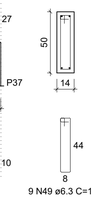



20 N44 ø6.3 C=136

## V122 (14 x 50)
ESC 1:50

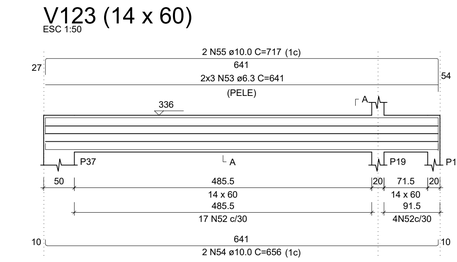



SEÇÃO A-A
ESC 1:25

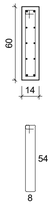



9 N49 ø6.3 C=116

## V123 (14 x 60)
ESC 1:50

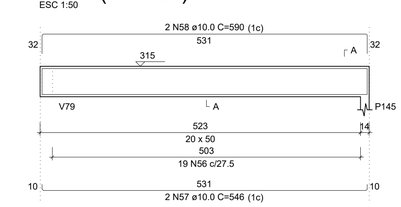



SEÇÃO A-A
ESC 1:25

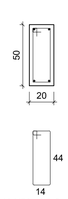



21 N52 ø6.3 C=136

## V124 (20 x 50)
ESC 1:50

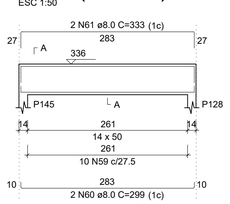



SEÇÃO A-A
ESC 1:25

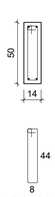



19 N56 ø6.3 C=128

## V125 (14 x 50)
ESC 1:50

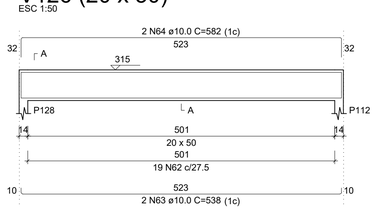



SEÇÃO A-A
ESC 1:25

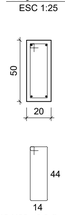



10 N59 ø6.3 C=116

## V126 (20 x 50)
ESC 1:50

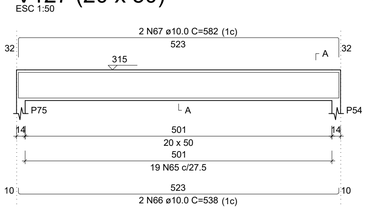



SEÇÃO A-A
ESC 1:25

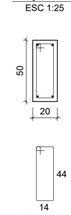



19 N62 ø6.3 C=128

## V127 (20 x 50)
ESC 1:50

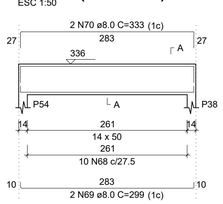



SEÇÃO A-A
ESC 1:25

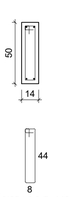



19 N65 ø6.3 C=128

## V128 (14 x 50)
ESC 1:50




SEÇÃO A-A
ESC 1:25




10 N68 ø6.3 C=116

RELAÇÃO DO AÇO

| ELEMENTO | AÇO | N | DIAM (mm) | QUANT | C.UNIT (cm) | C.TOTAL (cm) |
|---|---|---|---|---|---|---|
| V109 | CA50 | 1 | 6.3 | 21 | 116 | 2436 |
| | CA50 | 2 | 10.0 | 2 | 638 | 1276 |
| | CA50 | 3 | 10.0 | 2 | 662 | 1324 |
| V110 | CA50 | 4 | 6.3 | 10 | 116 | 1160 |
| | CA50 | 5 | 8.0 | 2 | 299 | 598 |
| | CA50 | 6 | 8.0 | 2 | 333 | 666 |
| V111 | CA50 | 7 | 6.3 | 21 | 116 | 2436 |
| | CA50 | 8 | 10.0 | 2 | 645 | 1290 |
| | CA50 | 9 | 10.0 | 1 | 205 | 205 |
| | CA50 | 10 | 10.0 | 2 | 678 | 1356 |
| V112 | CA50 | 11 | 6.3 | 22 | 116 | 2552 |
| | CA50 | 12 | 10.0 | 2 | 680 | 1360 |
| | CA50 | 13 | 10.0 | 2 | 718 | 1436 |
| V113 | CA50 | 14 | 6.3 | 22 | 116 | 2552 |
| | CA50 | 15 | 10.0 | 2 | 645 | 1290 |
| | CA50 | 16 | 10.0 | 1 | 205 | 205 |
| | CA50 | 17 | 10.0 | 2 | 699 | 1398 |
| V114 | CA50 | 18 | 6.3 | 10 | 116 | 1160 |
| | CA50 | 19 | 8.0 | 2 | 299 | 598 |
| | CA50 | 20 | 8.0 | 2 | 333 | 666 |
| V115 | CA50 | 21 | 6.3 | 21 | 116 | 2436 |
| | CA50 | 22 | 8.0 | 2 | 639 | 1278 |
| | CA50 | 23 | 8.0 | 2 | 673 | 1346 |
| V116 | CA50 | 24 | 6.3 | 5 | 116 | 580 |
| | CA50 | 25 | 8.0 | 2 | 189 | 378 |
| | CA50 | 26 | 8.0 | 2 | 240 | 480 |
| V117 | CA50 | 27 | 6.3 | 21 | 136 | 2856 |
| | CA50 | 28 | 6.3 | 6 | 623 | 3738 |
| | CA50 | 29 | 10.0 | 2 | 638 | 1276 |
| | CA50 | 30 | 10.0 | 2 | 699 | 1398 |
| V118 | CA50 | 31 | 6.3 | 9 | 116 | 1044 |
| | CA50 | 32 | 8.0 | 2 | 317 | 634 |
| | CA50 | 33 | 8.0 | 2 | 351 | 702 |
| V119 | CA50 | 34 | 6.3 | 20 | 136 | 2720 |
| | CA50 | 35 | 6.3 | 6 | 646 | 3876 |
| | CA50 | 36 | 10.0 | 2 | 661 | 1322 |
| | CA50 | 37 | 10.0 | 1 | 147 | 147 |
| | CA50 | 38 | 10.0 | 2 | 693 | 1386 |
| V120 | CA50 | 39 | 6.3 | 22 | 136 | 2992 |
| | CA50 | 40 | 6.3 | 6 | 663 | 3978 |
| | CA50 | 41 | 10.0 | 2 | 682 | 1364 |
| | CA50 | 42 | 10.0 | 1 | 703 | 703 |
| | CA50 | 43 | 10.0 | 2 | 709 | 1418 |
| V121 | CA50 | 44 | 6.3 | 20 | 136 | 2720 |
| | CA50 | 45 | 6.3 | 6 | 646 | 3876 |
| | CA50 | 46 | 10.0 | 2 | 661 | 1322 |
| | CA50 | 47 | 10.0 | 1 | 146 | 146 |
| | CA50 | 48 | 10.0 | 2 | 692 | 1384 |
| V122 | CA50 | 49 | 6.3 | 9 | 116 | 1044 |
| | CA50 | 50 | 8.0 | 2 | 335 | 670 |
| | CA50 | 51 | 8.0 | 2 | 369 | 738 |
| V123 | CA50 | 52 | 6.3 | 21 | 136 | 2856 |
| | CA50 | 53 | 6.3 | 6 | 641 | 3846 |
| | CA50 | 54 | 10.0 | 2 | 656 | 1312 |
| | CA50 | 55 | 10.0 | 2 | 717 | 1434 |
| V124 | CA50 | 56 | 6.3 | 19 | 128 | 2432 |
| | CA50 | 57 | 10.0 | 2 | 546 | 1092 |
| | CA50 | 58 | 10.0 | 2 | 590 | 1180 |
| V125 | CA50 | 59 | 6.3 | 10 | 116 | 1160 |
| | CA50 | 60 | 8.0 | 2 | 299 | 598 |
| | CA50 | 61 | 8.0 | 2 | 333 | 666 |
| V126 | CA50 | 62 | 6.3 | 19 | 128 | 2432 |
| | CA50 | 63 | 10.0 | 2 | 538 | 1076 |
| | CA50 | 64 | 10.0 | 2 | 582 | 1164 |
| V127 | CA50 | 65 | 6.3 | 19 | 128 | 2432 |
| | CA50 | 66 | 10.0 | 2 | 538 | 1076 |
| | CA50 | 67 | 10.0 | 2 | 582 | 1164 |
| V128 | CA50 | 68 | 6.3 | 10 | 116 | 1160 |
| | CA50 | 69 | 8.0 | 2 | 299 | 598 |
| | CA50 | 70 | 8.0 | 2 | 333 | 666 |

RESUMO DO AÇO

| AÇO | DIAM (mm) | C.TOTAL (m) | PESO + 10% (kg) |
|---|---|---|---|
| CA50 | 6.3 | 604.7 | 162.8 |
| | 8.0 | 112.8 | 49 |
| | 10.0 | 325 | 220.4 |
| PESO TOTAL (kg) | | | |
| CA50 | 432.2 | | |

Volume de concreto (C-30) = 7.09 m³
Área de forma = 88.62 m²

| REV | DATA | DESENHO | ALTERAÇÕES DE PROJETO | VERIFICAÇÃO |
|---|---|---|---|---|
| 00 | 20-11-2024 | PABLO | EMISSÃO INICIAL | AMVALI |

RESPONSÁVEL TÉCNICO:
PABLO VINICIUS RIGO
ENG. CIVIL
CREA/SC 164680-0
CONTRATANTE:

PABLO VINICIUS RIGO:06875439913
Assinado de forma digital por PABLO VINICIUS RIGO:06875439913
Dados: 2024.12.03 16:35:25 -03'00'

ELABORAÇÃO: Amvali

CONTRATANTE: PREFEITURA MUNICIPAL DE JARAGUÁ DO SUL

TÍTULO: PROJETO BÁSICO DE ENGENHARIA
CENTRO DE EDUCAÇÃO INFANTIL EM ALVENARIA

PROJETO: PROJETO ESTRUTURAL EM CONCRETO ARMADO

CONTEÚDO: DETALHAMENTO DAS ARMADURAS DAS VIGAS

ESCALA: INDICADA

ENDEREÇO: RUA FREDERICO PIESKE, BARRA DO RIO CERRO

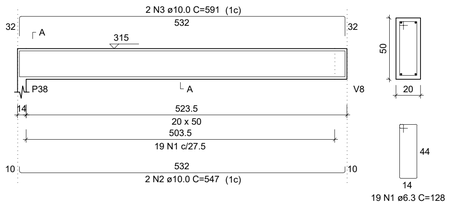
ESTACA: ---

CODIFICAÇÃO: AMV-JS-DE-EST-0242-R00 - NIVEL LAJE.DWG

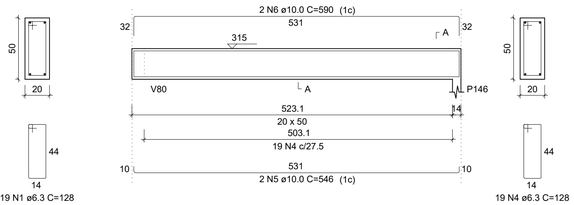
FOLHA: 07-15

FORMATO A1 - 841x594mm

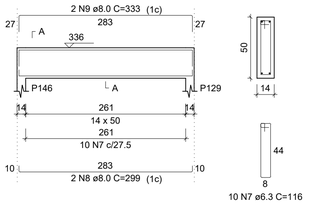
## V129 (20 x 50)
ESC 1:50



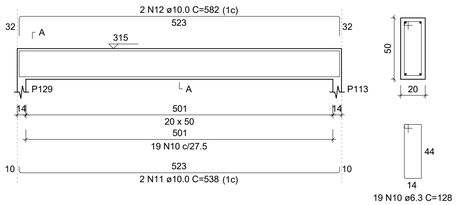

## V130 (20 x 50)
ESC 1:50



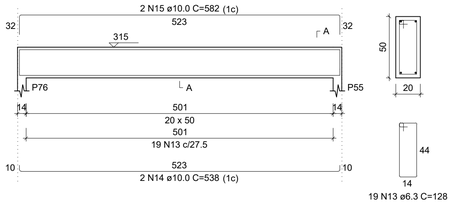

## V131 (14 x 50)
ESC 1:50



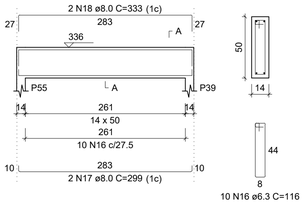

## V132 (20 x 50)
ESC 1:50



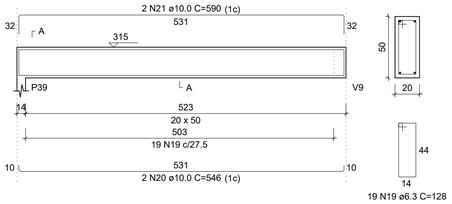

## V133 (20 x 50)
ESC 1:50



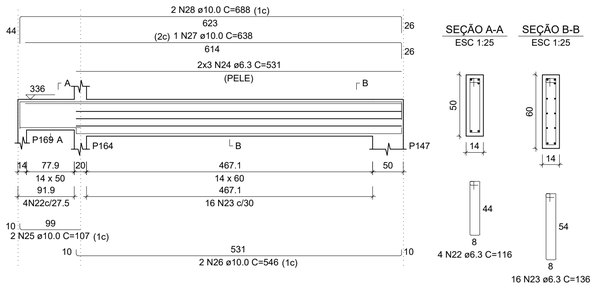

## V134 (14 x 50)
ESC 1:50



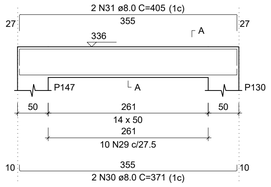

## V135 (20 x 50)
ESC 1:50



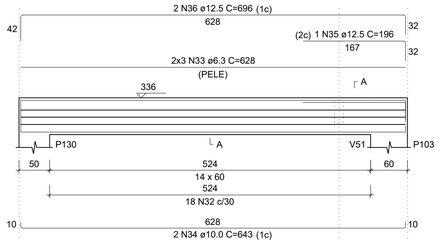

## V136 (var)
ESC 1:50



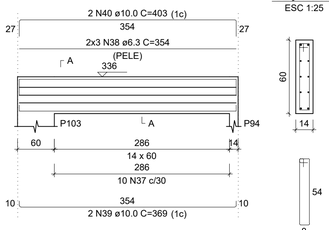

## V137 (14 x 50)
ESC 1:50



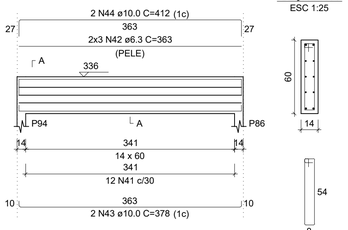

## V138 (14 x 60)
ESC 1:50



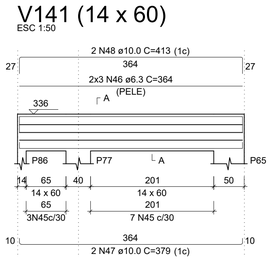

## V139 (14 x 60)
ESC 1:50



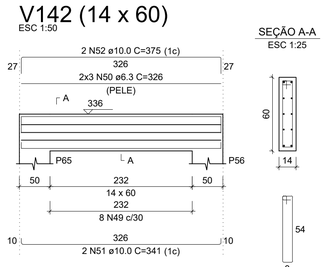

## V140 (14 x 60)
ESC 1:50



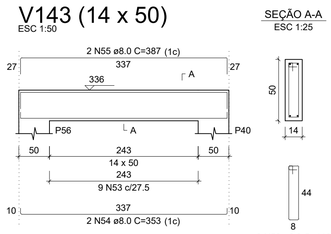

## V141 (14 x 60)
ESC 1:50



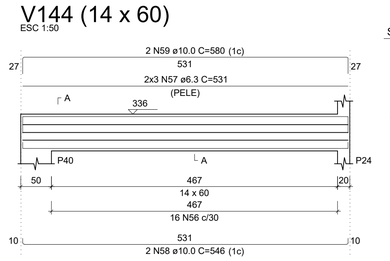

## V142 (14 x 60)
ESC 1:50



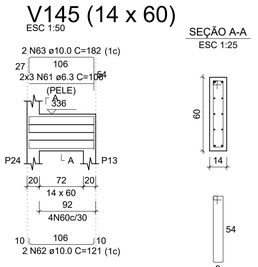

## V143 (14 x 50)
ESC 1:50



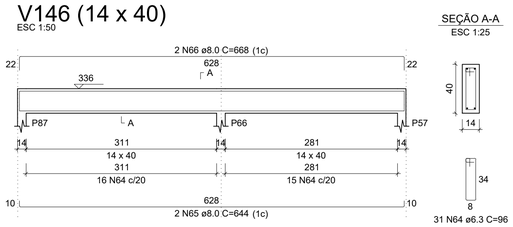

## V144 (14 x 60)
ESC 1:50



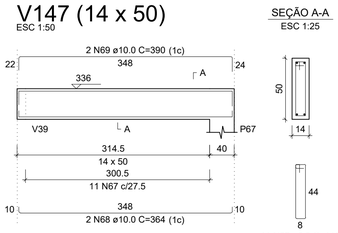

## V145 (14 x 60)
ESC 1:50



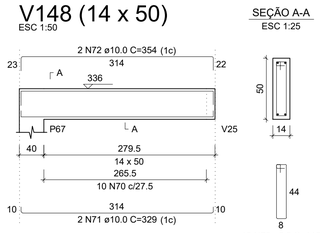

## V146 (14 x 40)
ESC 1:50



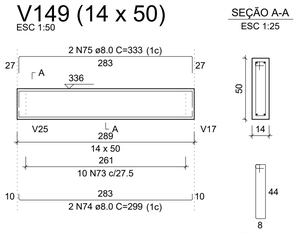

## V147 (14 x 50)
ESC 1:50




## V148 (14 x 50)
ESC 1:50




## V149 (14 x 50)
ESC 1:50




RELAÇÃO DO AÇO

| ELEMENTO | AÇO | N | DIAM (mm) | QUANT | C.UNIT (cm) | C.TOTAL (cm) |
|---|---|---|---|---|---|---|
| V129 | CA50 | 1 | 6.3 | 19 | 128 | 2432 |
| | CA50 | 2 | 10.0 | 2 | 547 | 1094 |
| | CA50 | 3 | 10.0 | 2 | 591 | 1182 |
| V130 | CA50 | 4 | 6.3 | 19 | 128 | 2432 |
| | CA50 | 5 | 10.0 | 2 | 546 | 1092 |
| | CA50 | 6 | 10.0 | 2 | 590 | 1180 |
| V131 | CA50 | 7 | 6.3 | 10 | 116 | 1160 |
| | CA50 | 8 | 8.0 | 2 | 299 | 598 |
| | CA50 | 9 | 8.0 | 2 | 333 | 666 |
| V132 | CA50 | 10 | 6.3 | 19 | 128 | 2432 |
| | CA50 | 11 | 10.0 | 2 | 538 | 1076 |
| | CA50 | 12 | 10.0 | 2 | 582 | 1164 |
| V133 | CA50 | 13 | 6.3 | 19 | 128 | 2432 |
| | CA50 | 14 | 10.0 | 2 | 538 | 1076 |
| | CA50 | 15 | 10.0 | 2 | 582 | 1164 |
| V134 | CA50 | 16 | 6.3 | 10 | 116 | 1160 |
| | CA50 | 17 | 8.0 | 2 | 299 | 598 |
| | CA50 | 18 | 8.0 | 2 | 333 | 666 |
| V135 | CA50 | 19 | 6.3 | 19 | 128 | 2432 |
| | CA50 | 20 | 10.0 | 2 | 546 | 1092 |
| | CA50 | 21 | 10.0 | 2 | 590 | 1180 |
| V136 | CA50 | 22 | 6.3 | 4 | 116 | 464 |
| | CA50 | 23 | 6.3 | 16 | 136 | 2176 |
| | CA50 | 24 | 6.3 | 6 | 531 | 3186 |
| | CA50 | 25 | 10.0 | 2 | 107 | 214 |
| | CA50 | 26 | 10.0 | 2 | 546 | 1092 |
| | CA50 | 27 | 10.0 | 1 | 638 | 638 |
| | CA50 | 28 | 10.0 | 2 | 688 | 1376 |
| V137 | CA50 | 29 | 6.3 | 10 | 116 | 1160 |
| | CA50 | 30 | 8.0 | 2 | 371 | 742 |
| | CA50 | 31 | 8.0 | 2 | 405 | 810 |
| V138 | CA50 | 32 | 6.3 | 18 | 136 | 2448 |
| | CA50 | 33 | 6.3 | 6 | 628 | 3768 |
| | CA50 | 34 | 10.0 | 2 | 643 | 1286 |
| | CA50 | 35 | 12.5 | 1 | 196 | 196 |
| | CA50 | 36 | 12.5 | 2 | 696 | 1392 |
| V139 | CA50 | 37 | 6.3 | 10 | 136 | 1360 |
| | CA50 | 38 | 6.3 | 6 | 354 | 2124 |
| | CA50 | 39 | 10.0 | 2 | 369 | 738 |
| | CA50 | 40 | 10.0 | 2 | 403 | 806 |
| V140 | CA50 | 41 | 6.3 | 12 | 136 | 1632 |
| | CA50 | 42 | 6.3 | 6 | 363 | 2178 |
| | CA50 | 43 | 10.0 | 2 | 378 | 756 |
| | CA50 | 44 | 10.0 | 2 | 412 | 824 |
| V141 | CA50 | 45 | 6.3 | 10 | 136 | 1360 |
| | CA50 | 46 | 6.3 | 6 | 364 | 2184 |
| | CA50 | 47 | 10.0 | 2 | 379 | 758 |
| | CA50 | 48 | 10.0 | 2 | 413 | 826 |
| V142 | CA50 | 49 | 6.3 | 8 | 136 | 1088 |
| | CA50 | 50 | 6.3 | 6 | 326 | 1956 |
| | CA50 | 51 | 10.0 | 2 | 341 | 682 |
| | CA50 | 52 | 10.0 | 2 | 375 | 750 |
| V143 | CA50 | 53 | 6.3 | 9 | 116 | 1044 |
| | CA50 | 54 | 8.0 | 2 | 353 | 706 |
| | CA50 | 55 | 8.0 | 2 | 387 | 774 |
| V144 | CA50 | 56 | 6.3 | 16 | 136 | 2176 |
| | CA50 | 57 | 6.3 | 6 | 531 | 3186 |
| | CA50 | 58 | 10.0 | 2 | 546 | 1092 |
| | CA50 | 59 | 10.0 | 2 | 580 | 1160 |
| V145 | CA50 | 60 | 6.3 | 4 | 136 | 544 |
| | CA50 | 61 | 6.3 | 6 | 106 | 636 |
| | CA50 | 62 | 10.0 | 2 | 121 | 242 |
| | CA50 | 63 | 10.0 | 2 | 182 | 364 |
| V146 | CA50 | 64 | 6.3 | 31 | 96 | 2976 |
| | CA50 | 65 | 8.0 | 2 | 644 | 1288 |
| | CA50 | 66 | 8.0 | 2 | 668 | 1336 |
| V147 | CA50 | 67 | 6.3 | 11 | 116 | 1276 |
| | CA50 | 68 | 10.0 | 2 | 364 | 728 |
| | CA50 | 69 | 10.0 | 2 | 390 | 780 |
| V148 | CA50 | 70 | 6.3 | 10 | 116 | 1160 |
| | CA50 | 71 | 10.0 | 2 | 329 | 658 |
| | CA50 | 72 | 10.0 | 2 | 354 | 708 |
| V149 | CA50 | 73 | 6.3 | 10 | 116 | 1160 |
| | CA50 | 74 | 8.0 | 2 | 299 | 598 |
| | CA50 | 75 | 8.0 | 2 | 333 | 666 |

RESUMO DO AÇO

| AÇO | DIAM (mm) | C.TOTAL (m) | PESO + 10% (kg) |
|---|---|---|---|
| CA50 | 6.3 | 557.2 | 150 |
| | 8.0 | 94.5 | 41 |
| | 10.0 | 277.8 | 188.4 |
| | 12.5 | 15.9 | 16.8 |

| PESO TOTAL (kg) | |
|---|---|
| CA50 | 396.2 |

Volume de concreto (C-30) = 6.47 m³
Área de forma = 82.32 m²

| REV | DATA | DESENHO | ALTERAÇÕES DE PROJETO | VERIFICAÇÃO |
|---|---|---|---|---|
| 00 | 21-11-2024 | PABLO | EMISSÃO INICIAL | ARVAL |

RESPONSÁVEL TÉCNICO:
PABLO VINICIUS RIGO
ENG. CIVIL
CREA/SC 164680-0
CONTRATANTE:

PABLO VINICIUS RIGO:06875439913
Assinado de forma digital por PABLO VINICIUS RIGO:06875439913
Dados: 2024.12.03 16:35:44 -03'00'

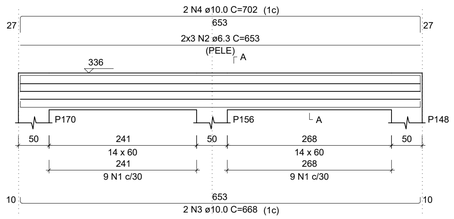
ELABORAÇÃO: Amvali
CONTRATANTE: PREFEITURA MUNICIPAL DE JARAGUÁ DO SUL

TÍTULO: PROJETO BÁSICO DE ENGENHARIA
CENTRO DE EDUCAÇÃO INFANTIL EM ALVENARIA

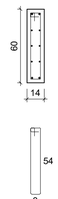
PROJETO: PROJETO ESTRUTURAL EM CONCRETO ARMADO
CONTEÚDO: DETALHAMENTO DAS ARMADURAS DAS VIGAS
ESCALA: INDICADA
ENDEREÇO: RUA FREDERICO PIESKE, BARRA DO RIO CERRO
ESTAÇA: ---
CODIFICAÇÃO: AMV-JS-DE-EST-0242-R00 - NIVEL LAJE.DWG
FOLHA: 08-15

FORMATO A1 - 841x594mm

## V150 (14 x 60)
ESC 1:50

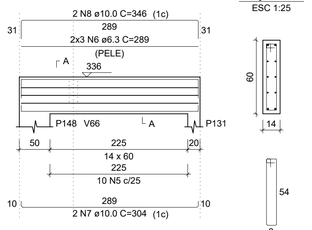



SEÇÃO A-A
ESC 1:25




18 N1 ø6.3 C=136

## V151 (14 x 60)
ESC 1:50

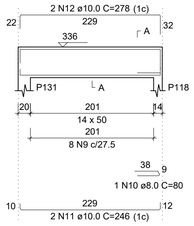



SEÇÃO A-A
ESC 1:25

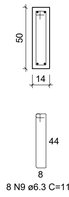



10 N5 ø6.3 C=136

## V152 (14 x 50)
ESC 1:50

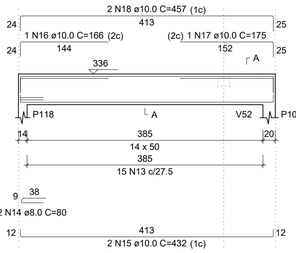



SEÇÃO A-A
ESC 1:25

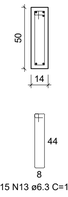



8 N9 ø6.3 C=116

## V153 (14 x 50)
ESC 1:50

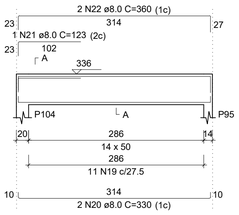



SEÇÃO A-A
ESC 1:25




15 N13 ø6.3 C=116

## V154 (14 x 50)
ESC 1:50

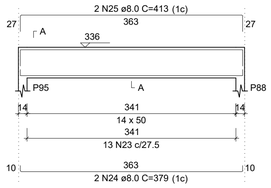



SEÇÃO A-A
ESC 1:25

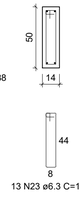



11 N19 ø6.3 C=116

## V155 (14 x 50)
ESC 1:50

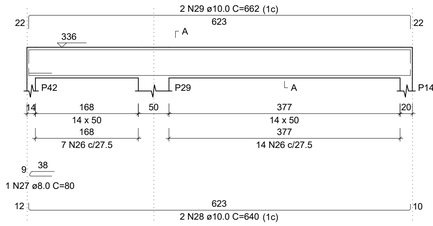



SEÇÃO A-A
ESC 1:25

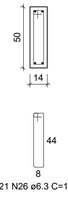



13 N23 ø6.3 C=116

## V156 (14 x 50)
ESC 1:50

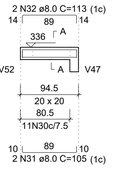



SEÇÃO A-A
ESC 1:25

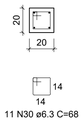



21 N26 ø6.3 C=116

## V157 (20 x 20)
ESC 1:50

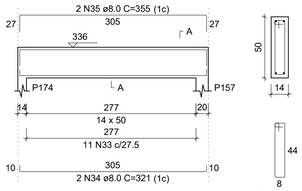



SEÇÃO A-A
ESC 1:25

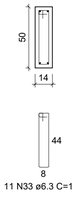



11 N30 ø6.3 C=68

## V158 (14 x 50)
ESC 1:50

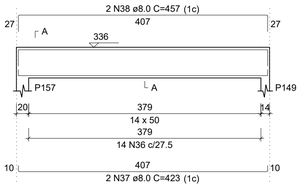



SEÇÃO A-A
ESC 1:25




11 N33 ø6.3 C=116

## V159 (14 x 50)
ESC 1:50

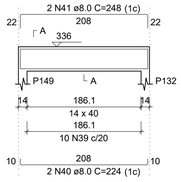



SEÇÃO A-A
ESC 1:25

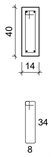



14 N36 ø6.3 C=116

## V160 (14 x 40)
ESC 1:50

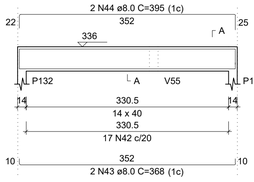



SEÇÃO A-A
ESC 1:25

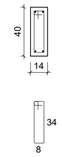



10 N39 ø6.3 C=96

## V161 (14 x 40)
ESC 1:50

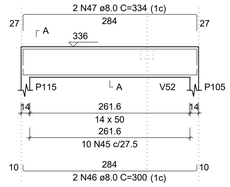



SEÇÃO A-A
ESC 1:25

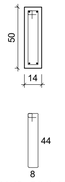



17 N42 ø6.3 C=96

## V162 (14 x 50)
ESC 1:50

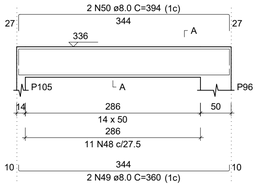



SEÇÃO A-A
ESC 1:25

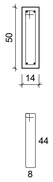



10 N45 ø6.3 C=116

## V163 (14 x 50)
ESC 1:50

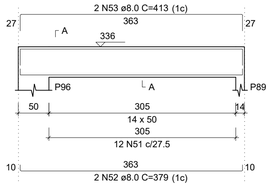



SEÇÃO A-A
ESC 1:25

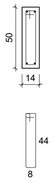



11 N48 ø6.3 C=116

## V164 (14 x 50)
ESC 1:50

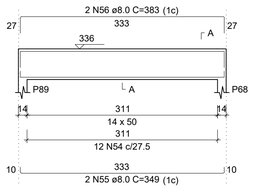



SEÇÃO A-A
ESC 1:25

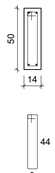



12 N51 ø6.3 C=116

## V165 (14 x 50)
ESC 1:50

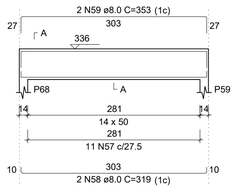



SEÇÃO A-A
ESC 1:25

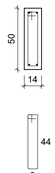



12 N54 ø6.3 C=116

## V166 (14 x 50)
ESC 1:50

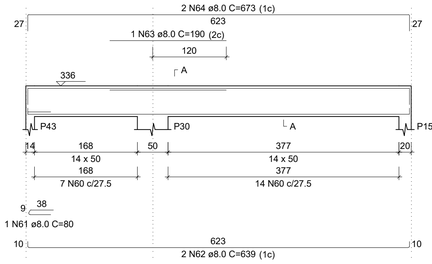



SEÇÃO A-A
ESC 1:25

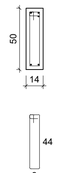



11 N57 ø6.3 C=116

## V167 (14 x 50)
ESC 1:50

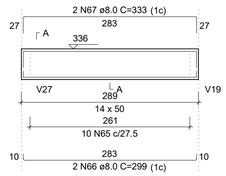



SEÇÃO A-A
ESC 1:25

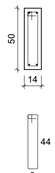



21 N60 ø6.3 C=116

## V168 (14 x 50)
ESC 1:50

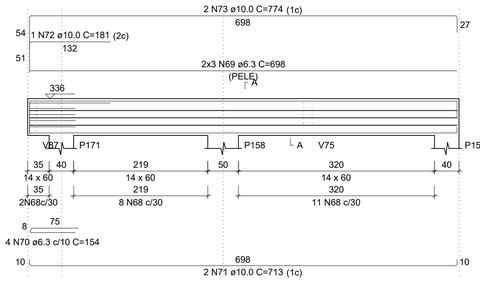



SEÇÃO A-A
ESC 1:25

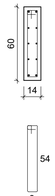



10 N65 ø6.3 C=116

## V169 (14 x 60)
ESC 1:50

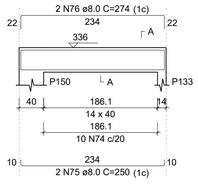



SEÇÃO A-A
ESC 1:25

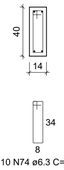



21 N68 ø6.3 C=136

## V170 (14 x 40)
ESC 1:50

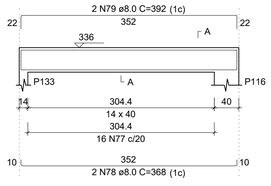



SEÇÃO A-A
ESC 1:25

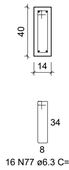



10 N74 ø6.3 C=96

## V171 (14 x 40)
ESC 1:50

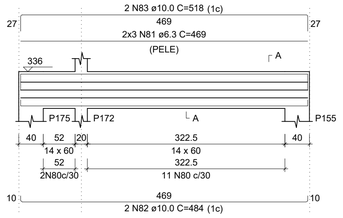



SEÇÃO A-A
ESC 1:25

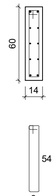



16 N77 ø6.3 C=96

## V172 (14 x 60)
ESC 1:50




SEÇÃO A-A
ESC 1:25




13 N80 ø6.3 C=136

RELAÇÃO DO AÇO

| ELEMENTO | AÇO | N | DIAM (mm) | QUANT | C.UNIT (cm) | C.TOTAL (cm) |
|---|---|---|---|---|---|---|
| V150 | CA50 | 1 | 6.3 | 18 | 136 | 2448 |
| | CA50 | 2 | 6.3 | 6 | 653 | 3918 |
| | CA50 | 3 | 10.0 | 2 | 668 | 1336 |
| | CA50 | 4 | 10.0 | 2 | 702 | 1404 |
| V151 | CA50 | 5 | 6.3 | 10 | 136 | 1360 |
| | CA50 | 6 | 6.3 | 6 | 289 | 1734 |
| | CA50 | 7 | 10.0 | 2 | 304 | 608 |
| | CA50 | 8 | 10.0 | 2 | 346 | 692 |
| V152 | CA50 | 9 | 6.3 | 8 | 116 | 928 |
| | CA50 | 10 | 8.0 | 1 | 80 | 80 |
| | CA50 | 11 | 10.0 | 2 | 246 | 492 |
| | CA50 | 12 | 10.0 | 2 | 278 | 556 |
| V153 | CA50 | 13 | 6.3 | 15 | 116 | 1740 |
| | CA50 | 14 | 8.0 | 2 | 80 | 160 |
| | CA50 | 15 | 10.0 | 2 | 432 | 864 |
| | CA50 | 16 | 10.0 | 1 | 166 | 166 |
| | CA50 | 17 | 10.0 | 1 | 175 | 175 |
| | CA50 | 18 | 10.0 | 2 | 457 | 914 |
| V154 | CA50 | 19 | 6.3 | 11 | 116 | 1276 |
| | CA50 | 20 | 8.0 | 2 | 330 | 660 |
| | CA50 | 21 | 8.0 | 1 | 123 | 123 |
| | CA50 | 22 | 8.0 | 2 | 360 | 720 |
| V155 | CA50 | 23 | 6.3 | 13 | 116 | 1508 |
| | CA50 | 24 | 8.0 | 2 | 379 | 758 |
| | CA50 | 25 | 8.0 | 2 | 413 | 826 |
| V156 | CA50 | 26 | 6.3 | 21 | 116 | 2436 |
| | CA50 | 27 | 8.0 | 1 | 80 | 80 |
| | CA50 | 28 | 10.0 | 2 | 640 | 1280 |
| | CA50 | 29 | 10.0 | 2 | 662 | 1324 |
| V157 | CA50 | 30 | 6.3 | 11 | 68 | 748 |
| | CA50 | 31 | 8.0 | 2 | 105 | 210 |
| | CA50 | 32 | 8.0 | 2 | 113 | 226 |
| V158 | CA50 | 33 | 6.3 | 11 | 116 | 1276 |
| | CA50 | 34 | 8.0 | 2 | 321 | 642 |
| | CA50 | 35 | 8.0 | 2 | 355 | 710 |
| V159 | CA50 | 36 | 6.3 | 14 | 116 | 1624 |
| | CA50 | 37 | 8.0 | 2 | 423 | 846 |
| | CA50 | 38 | 8.0 | 2 | 457 | 914 |
| V160 | CA50 | 39 | 6.3 | 10 | 96 | 960 |
| | CA50 | 40 | 8.0 | 2 | 224 | 448 |
| | CA50 | 41 | 8.0 | 2 | 248 | 496 |
| V161 | CA50 | 42 | 6.3 | 17 | 96 | 1632 |
| | CA50 | 43 | 8.0 | 2 | 368 | 736 |
| | CA50 | 44 | 8.0 | 2 | 395 | 790 |
| V162 | CA50 | 45 | 6.3 | 10 | 116 | 1160 |
| | CA50 | 46 | 8.0 | 2 | 300 | 600 |
| | CA50 | 47 | 8.0 | 2 | 334 | 668 |
| V163 | CA50 | 48 | 6.3 | 11 | 116 | 1276 |
| | CA50 | 49 | 8.0 | 2 | 360 | 720 |
| | CA50 | 50 | 8.0 | 2 | 394 | 788 |
| V164 | CA50 | 51 | 6.3 | 12 | 116 | 1392 |
| | CA50 | 52 | 8.0 | 2 | 379 | 758 |
| | CA50 | 53 | 8.0 | 2 | 413 | 826 |
| V165 | CA50 | 54 | 6.3 | 12 | 116 | 1392 |
| | CA50 | 55 | 8.0 | 2 | 349 | 698 |
| | CA50 | 56 | 8.0 | 2 | 383 | 766 |
| V166 | CA50 | 57 | 6.3 | 11 | 116 | 1276 |
| | CA50 | 58 | 8.0 | 2 | 319 | 638 |
| | CA50 | 59 | 8.0 | 2 | 353 | 706 |
| V167 | CA50 | 60 | 6.3 | 21 | 116 | 2436 |
| | CA50 | 61 | 8.0 | 1 | 80 | 80 |
| | CA50 | 62 | 8.0 | 2 | 639 | 1278 |
| | CA50 | 63 | 8.0 | 1 | 190 | 190 |
| | CA50 | 64 | 8.0 | 2 | 673 | 1346 |
| V168 | CA50 | 65 | 6.3 | 10 | 116 | 1160 |
| | CA50 | 66 | 8.0 | 2 | 299 | 598 |
| | CA50 | 67 | 8.0 | 2 | 333 | 666 |
| V169 | CA50 | 68 | 6.3 | 21 | 136 | 2856 |
| | CA50 | 69 | 6.3 | 6 | 698 | 4188 |
| | CA50 | 70 | 6.3 | 4 | 154 | 616 |
| | CA50 | 71 | 10.0 | 2 | 713 | 1426 |
| | CA50 | 72 | 10.0 | 1 | 181 | 181 |
| | CA50 | 73 | 10.0 | 2 | 774 | 1548 |
| V170 | CA50 | 74 | 6.3 | 10 | 96 | 960 |
| | CA50 | 75 | 8.0 | 2 | 250 | 500 |
| | CA50 | 76 | 8.0 | 2 | 274 | 548 |
| V171 | CA50 | 77 | 6.3 | 16 | 96 | 1536 |
| | CA50 | 78 | 8.0 | 2 | 368 | 736 |
| | CA50 | 79 | 8.0 | 2 | 392 | 784 |
| V172 | CA50 | 80 | 6.3 | 13 | 136 | 1768 |
| | CA50 | 81 | 6.3 | 6 | 469 | 2814 |
| | CA50 | 82 | 10.0 | 2 | 484 | 968 |
| | CA50 | 83 | 10.0 | 2 | 518 | 1036 |

RESUMO DO AÇO

| AÇO | DIAM (mm) | C.TOTAL (m) | PESO + 10% (kg) |
|---|---|---|---|
| CA50 | 6.3 | 484.2 | 130.3 |
| | 8.0 | 233.2 | 101.2 |
| | 10.0 | 149.7 | 101.5 |
| PESO TOTAL (kg) | | | |
| CA50 | 333.1 | | |

Volume de concreto (C-30) = 5.29 m³
Área de forma = 58.55 m²

| REV | DATA | DESENHO | ALTERAÇÕES DE PROJETO | VERIFICAÇÃO |
|---|---|---|---|---|
| 00 | 21-11-2024 | PABLO | EMISSÃO INICIAL | ARVAL |

RESPONSÁVEL TÉCNICO:
PABLO VINICIUS RIGO
ENG. CIVIL
CREA/SC 164680-0
Assinado de forma digital por PABLO VINICIUS RIGO:06875439913
Dados: 2024.12.03 16:36:01 -03'00'
CONTRATANTE:

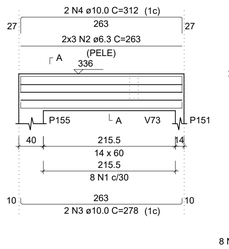
ELABORAÇÃO: Amvali
CONTRATANTE: PREFEITURA MUNICIPAL DE JARAGUÁ DO SUL

TÍTULO:
PROJETO BÁSICO DE ENGENHARIA
CENTRO DE EDUCAÇÃO INFANTIL EM ALVENARIA

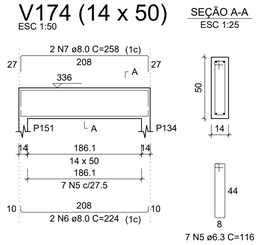
PROJETO: PROJETO ESTRUTURAL EM CONCRETO ARMADO
CONTEÚDO: DETALHAMENTO DAS ARMADURAS DAS VIGAS
ESCALA: INDICADA
ENDEREÇO: RUA FREDERICO PIESKE, BARRA DO RIO CERRO
ESTAÇA: ---
CODIFICAÇÃO: AMV-JS-DE-EST-0242-R00 - NIVEL LAJE.DWG
FOLHA: 09-15

FORMATO A1 - 841x594mm

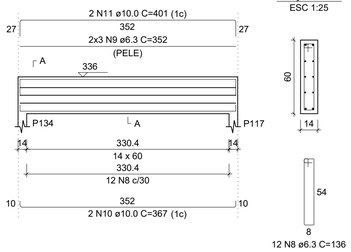
## V173 (14 x 60)
ESC 1:50



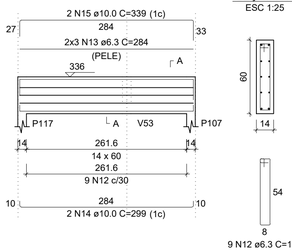

## V174 (14 x 50)
ESC 1:50



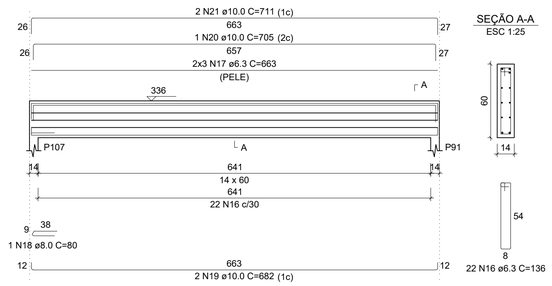

## V175 (14 x 60)
ESC 1:50



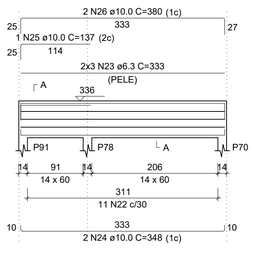

## V176 (14 x 60)
ESC 1:50



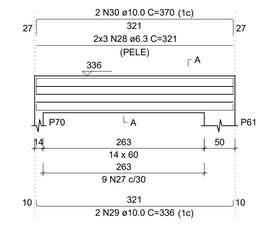

## V177 (14 x 60)
ESC 1:50



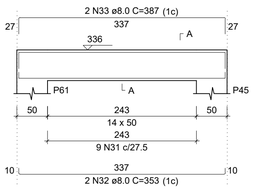

## V178 (14 x 60)
ESC 1:50



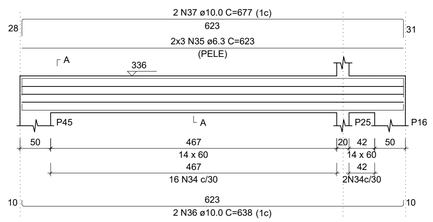

## V179 (14 x 60)
ESC 1:50



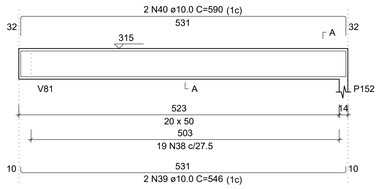

## V180 (14 x 50)
ESC 1:50



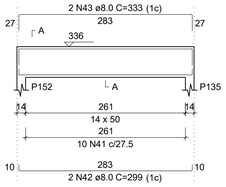

## V181 (14 x 60)
ESC 1:50



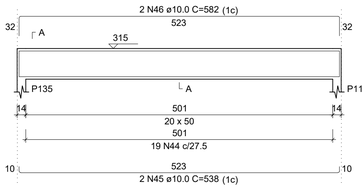

## V182 (20 x 50)
ESC 1:50



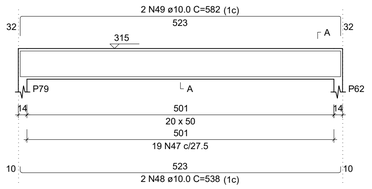

## V183 (14 x 50)
ESC 1:50



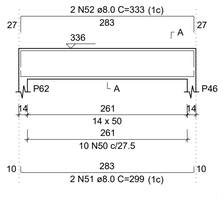

## V184 (20 x 50)
ESC 1:50



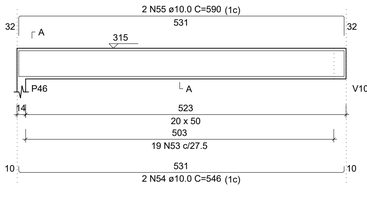

## V185 (20 x 50)
ESC 1:50



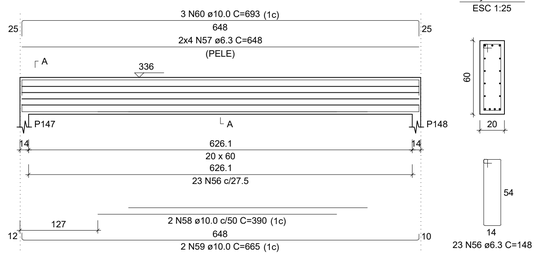

## V186 (14 x 50)
ESC 1:50




## V187 (20 x 50)
ESC 1:50




## V188 (20 x 60)
ESC 1:50




### RELAÇÃO DO AÇO

| ELEMENTO | AÇO | N | DIAM (mm) | QUANT | C.UNIT (cm) | C.TOTAL (cm) |
|---|---|---|---|---|---|---|
| V173 | CA50 | 1 | 6.3 | 8 | 136 | 1088 |
| | CA50 | 2 | 6.3 | 6 | 263 | 1578 |
| | CA50 | 3 | 10.0 | 2 | 278 | 556 |
| | CA50 | 4 | 10.0 | 2 | 312 | 624 |
| V174 | CA50 | 5 | 6.3 | 7 | 116 | 812 |
| | CA50 | 6 | 8.0 | 2 | 224 | 448 |
| | CA50 | 7 | 8.0 | 2 | 258 | 516 |
| V175 | CA50 | 8 | 6.3 | 12 | 136 | 1632 |
| | CA50 | 9 | 6.3 | 6 | 352 | 2112 |
| | CA50 | 10 | 10.0 | 2 | 367 | 734 |
| | CA50 | 11 | 10.0 | 2 | 401 | 802 |
| V176 | CA50 | 12 | 6.3 | 9 | 136 | 1224 |
| | CA50 | 13 | 6.3 | 6 | 284 | 1704 |
| | CA50 | 14 | 10.0 | 2 | 299 | 598 |
| | CA50 | 15 | 10.0 | 2 | 339 | 678 |
| V177 | CA50 | 16 | 6.3 | 22 | 136 | 2992 |
| | CA50 | 17 | 6.3 | 6 | 663 | 3978 |
| | CA50 | 18 | 8.0 | 1 | 80 | 80 |
| | CA50 | 19 | 10.0 | 2 | 682 | 1364 |
| | CA50 | 20 | 10.0 | 1 | 705 | 705 |
| | CA50 | 21 | 10.0 | 2 | 711 | 1422 |
| V178 | CA50 | 22 | 6.3 | 11 | 136 | 1496 |
| | CA50 | 23 | 6.3 | 6 | 333 | 1998 |
| | CA50 | 24 | 10.0 | 2 | 348 | 696 |
| | CA50 | 25 | 10.0 | 1 | 137 | 137 |
| | CA50 | 26 | 10.0 | 2 | 380 | 760 |
| V179 | CA50 | 27 | 6.3 | 9 | 136 | 1224 |
| | CA50 | 28 | 6.3 | 6 | 321 | 1926 |
| | CA50 | 29 | 10.0 | 2 | 336 | 672 |
| | CA50 | 30 | 10.0 | 2 | 370 | 740 |
| V180 | CA50 | 31 | 6.3 | 9 | 116 | 1044 |
| | CA50 | 32 | 8.0 | 2 | 353 | 706 |
| | CA50 | 33 | 8.0 | 2 | 387 | 774 |
| V181 | CA50 | 34 | 6.3 | 18 | 136 | 2448 |
| | CA50 | 35 | 6.3 | 6 | 623 | 3738 |
| | CA50 | 36 | 10.0 | 2 | 638 | 1276 |
| | CA50 | 37 | 10.0 | 2 | 677 | 1354 |
| V182 | CA50 | 38 | 6.3 | 19 | 128 | 2432 |
| | CA50 | 39 | 10.0 | 2 | 546 | 1092 |
| | CA50 | 40 | 10.0 | 2 | 590 | 1180 |
| V183 | CA50 | 41 | 6.3 | 10 | 116 | 1160 |
| | CA50 | 42 | 8.0 | 2 | 299 | 598 |
| | CA50 | 43 | 8.0 | 2 | 333 | 666 |
| V184 | CA50 | 44 | 6.3 | 19 | 128 | 2432 |
| | CA50 | 45 | 10.0 | 2 | 538 | 1076 |
| | CA50 | 46 | 10.0 | 2 | 582 | 1164 |
| V185 | CA50 | 47 | 6.3 | 19 | 128 | 2432 |
| | CA50 | 48 | 10.0 | 2 | 538 | 1076 |
| | CA50 | 49 | 10.0 | 2 | 582 | 1164 |
| V186 | CA50 | 50 | 6.3 | 10 | 116 | 1160 |
| | CA50 | 51 | 8.0 | 2 | 299 | 598 |
| | CA50 | 52 | 8.0 | 2 | 333 | 666 |
| V187 | CA50 | 53 | 6.3 | 19 | 128 | 2432 |
| | CA50 | 54 | 10.0 | 2 | 546 | 1092 |
| | CA50 | 55 | 10.0 | 2 | 590 | 1180 |
| V188 | CA50 | 56 | 6.3 | 23 | 148 | 3404 |
| | CA50 | 57 | 6.3 | 8 | 648 | 5184 |
| | CA50 | 58 | 10.0 | 2 | 390 | 780 |
| | CA50 | 59 | 10.0 | 2 | 665 | 1330 |
| | CA50 | 60 | 10.0 | 3 | 693 | 2079 |

### RESUMO DO AÇO

| AÇO | DIAM (mm) | C.TOTAL (m) | PESO + 10% (kg) |
|---|---|---|---|
| CA50 | 6.3 | 516.3 | 139 |
| | 8.0 | 50.5 | 21.9 |
| | 10.0 | 263.3 | 178.6 |

| PESO TOTAL (kg) | |
|---|---|
| CA50 | 339.5 |

Volume de concreto (C-30) = 5.56 m³
Área de forma = 69.70 m²

| REV | DATA | DESENHO | ALTERAÇÕES DE PROJETO | VERIFICAÇÃO |
|---|---|---|---|---|
| 00 | 20-11-2024 | PABLO | EMISSÃO INICIAL | AMVALI |

RESPONSÁVEL TÉCNICO:
PABLO VINICIUS RIGO
ENG. CIVIL
CREA/SC 164680-0
CONTRATANTE:

PABLO VINICIUS RIGO:06875439913
Assinado de forma digital por PABLO VINICIUS RIGO:06875439913
Dados: 2024.12.03 16:36:20 -03'00'

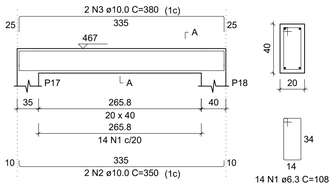
ELABORAÇÃO: Amvali
CONTRATANTE: PREFEITURA MUNICIPAL DE JARAGUÁ DO SUL

TÍTULO: PROJETO BÁSICO DE ENGENHARIA
CENTRO DE EDUCAÇÃO INFANTIL EM ALVENARIA

PROJETO: PROJETO ESTRUTURAL EM CONCRETO ARMADO
CONTEÚDO: DETALHAMENTO DAS ARMADURAS DAS VIGAS
ESCALA: INDICADA
ENDEREÇO: RUA FREDERICO PIESKE, BARRA DO RIO CERRO
ESTACA: ---
CODIFICAÇÃO: AMV-JS-DE-EST-0242-R00 - NIVEL LAJE.DWG
FOLHA: 10-15

FORMATO A1 - 841x594mm

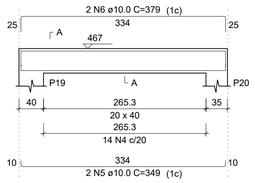
## VS1 (20 x 40)
ESC 1:50



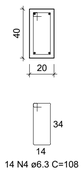

SEÇÃO A-A
ESC 1:25



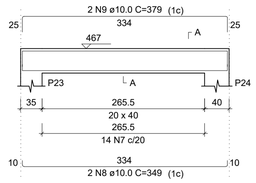

## VS2 (20 x 40)
ESC 1:50



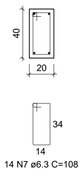

SEÇÃO A-A
ESC 1:25



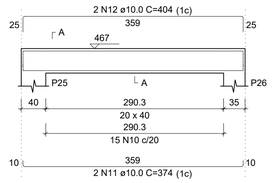

## VS3 (20 x 40)
ESC 1:50



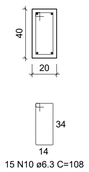

SEÇÃO A-A
ESC 1:25



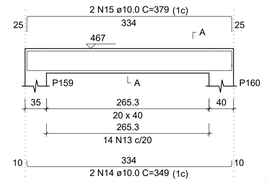

## VS4 (20 x 40)
ESC 1:50



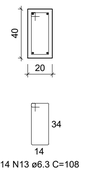

SEÇÃO A-A
ESC 1:25



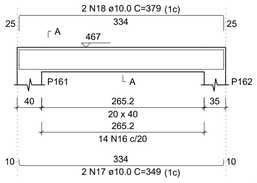

## VS5 (20 x 40)
ESC 1:50



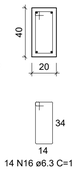

SEÇÃO A-A
ESC 1:25



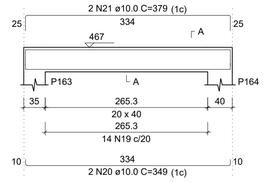

## VS6 (20 x 40)
ESC 1:50



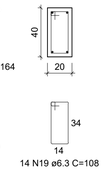

SEÇÃO A-A
ESC 1:25



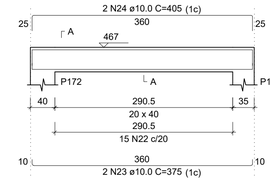

## VS7 (20 x 40)
ESC 1:50



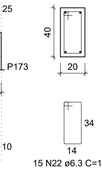

SEÇÃO A-A
ESC 1:25




## VS8 (20 x 40)
ESC 1:50




SEÇÃO A-A
ESC 1:25




RELAÇÃO DO AÇO

| ELEMENTO | AÇO | N | DIAM (mm) | QUANT | C.UNIT (cm) | C.TOTAL (cm) |
|---|---|---|---|---|---|---|
| VS1 | CA50 | 1 | 6.3 | 14 | 108 | 1512 |
| | CA50 | 2 | 10.0 | 2 | 350 | 700 |
| | CA50 | 3 | 10.0 | 2 | 380 | 760 |
| VS2 | CA50 | 4 | 6.3 | 14 | 108 | 1512 |
| | CA50 | 5 | 10.0 | 2 | 349 | 698 |
| | CA50 | 6 | 10.0 | 2 | 379 | 758 |
| VS3 | CA50 | 7 | 6.3 | 14 | 108 | 1512 |
| | CA50 | 8 | 10.0 | 2 | 349 | 698 |
| | CA50 | 9 | 10.0 | 2 | 379 | 758 |
| VS4 | CA50 | 10 | 6.3 | 15 | 108 | 1620 |
| | CA50 | 11 | 10.0 | 2 | 374 | 748 |
| | CA50 | 12 | 10.0 | 2 | 404 | 808 |
| VS5 | CA50 | 13 | 6.3 | 14 | 108 | 1512 |
| | CA50 | 14 | 10.0 | 2 | 349 | 698 |
| | CA50 | 15 | 10.0 | 2 | 379 | 758 |
| VS6 | CA50 | 16 | 6.3 | 14 | 108 | 1512 |
| | CA50 | 17 | 10.0 | 2 | 349 | 698 |
| | CA50 | 18 | 10.0 | 2 | 379 | 758 |
| VS7 | CA50 | 19 | 6.3 | 14 | 108 | 1512 |
| | CA50 | 20 | 10.0 | 2 | 349 | 698 |
| | CA50 | 21 | 10.0 | 2 | 379 | 758 |
| VS8 | CA50 | 22 | 6.3 | 15 | 108 | 1620 |
| | CA50 | 23 | 10.0 | 2 | 375 | 750 |
| | CA50 | 24 | 10.0 | 2 | 405 | 810 |

RESUMO DO AÇO

| AÇO | DIAM (mm) | C.TOTAL (m) | PESO + 10% (kg) |
|---|---|---|---|
| CA50 | 6.3 | 123.1 | 33.1 |
| | 10.0 | 118.6 | 80.4 |
| PESO TOTAL (kg) | | | |
| CA50 | 113.5 | | |

Volume de concreto (C-30) = 1.74 m³
Área de forma = 21.73 m²

| REV | DATA | DESENHO | ALTERAÇÕES DE PROJETO | VERIFICAÇÃO |
|---|---|---|---|---|
| 00 | 21-11-2024 | PABLO | EMISSÃO INICIAL | AMVALI |

RESPONSÁVEL TÉCNICO:
PABLO VINICIUS RIGO
ENG. CIVIL
CREA/SC 164680-0
PABLO VINICIUS RIGO:06875439913
Assinado de forma digital por PABLO VINICIUS RIGO:06875439913
Dados: 2024.12.03 16:36:39 -03'00'
CONTRATANTE:

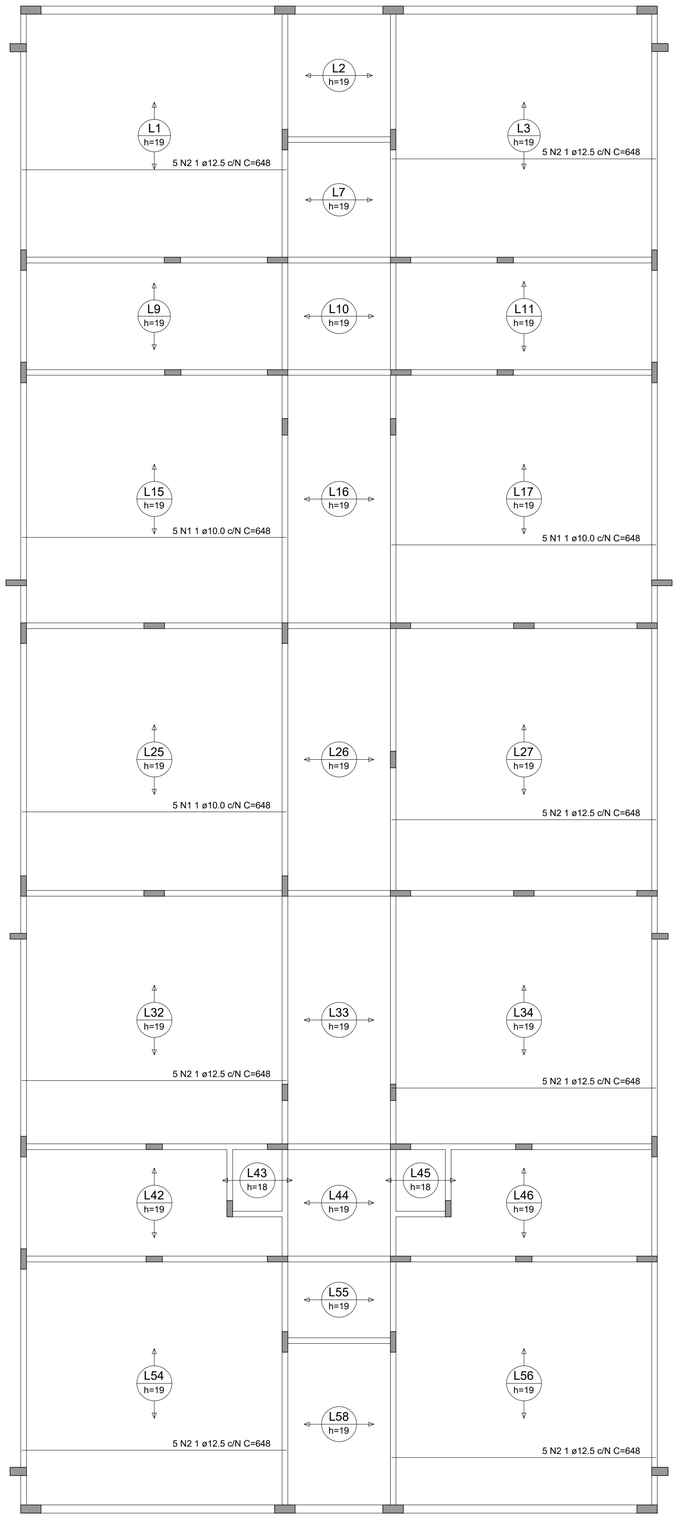
ELABORAÇÃO: Amvali

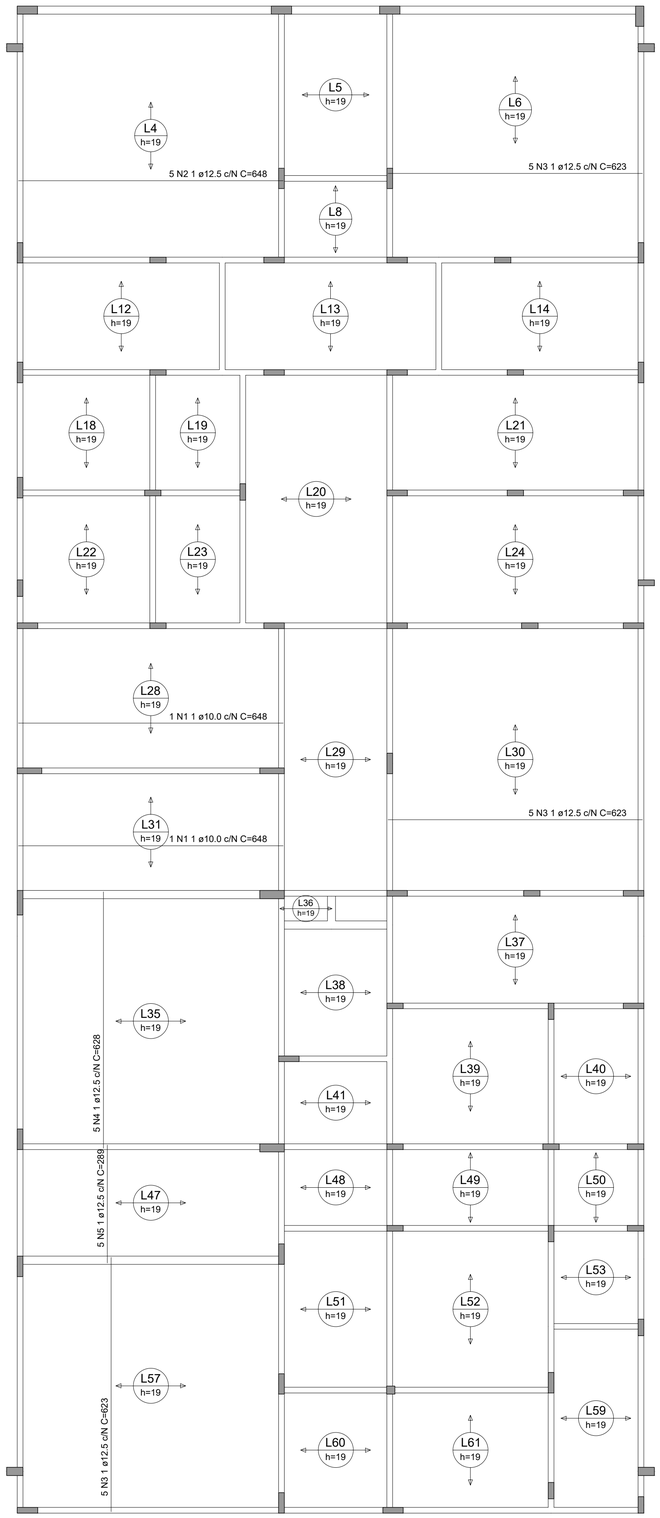
CONTRATANTE: PREFEITURA MUNICIPAL DE JARAGUÁ DO SUL

TÍTULO:
PROJETO BÁSICO DE ENGENHARIA
CENTRO DE EDUCAÇÃO INFANTIL EM ALVENARIA

PROJETO: PROJETO ESTRUTURAL EM CONCRETO ARMADO
CONTEÚDO: DETALHAMENTO DAS ARMADURAS DAS VIGAS
ESCALA: INDICADA
ENDEREÇO: RUA FREDERICO PIESKE, BARRA DO RIO CERRO
ESTACA: ---
CODIFICAÇÃO: AMV-JS-DE-EST-0242-R00 - NIVEL LAJE.DWG
FOLHA: 11-15

FORMATO A1 - 841x594mm




RELAÇÃO DO AÇO

| ELEMENTO | AÇO | N | DIAM (mm) | QUANT | C.UNIT (cm) | C.TOTAL (cm) |
|---|---|---|---|---|---|---|
| Positivos | CA50 | 1 | 10.0 | 17 | 648 | 11016 |
| | CA50 | 2 | 12.5 | 40 | 648 | 25920 |
| | CA50 | 3 | 12.5 | 15 | 623 | 9345 |
| | CA50 | 4 | 12.5 | 5 | 628 | 3140 |
| | CA50 | 5 | 12.5 | 5 | 289 | 1445 |

RESUMO DO AÇO

| AÇO | DIAM (mm) | C.TOTAL (m) | PESO + 10% (kg) |
|---|---|---|---|
| CA50 | 10.0 | 110.2 | 74.7 |
| | 12.5 | 398.5 | 422.3 |

| PESO TOTAL (kg) | |
|---|---|
| CA50 | 497 |

Volume de concreto (C-30) = 101.29 m³
Área de forma = 0.00 m²

Armação positiva das lajes do pavimento Laje
escala 1:75

| REV | DATA | DESENHO | ALTERAÇÕES DE PROJETO | VERIFICAÇÃO |
|---|---|---|---|---|
| 00 | 21-11-2024 | PABLO | EMISSÃO INICIAL | AMVALI |

RESPONSÁVEL TÉCNICO:
PABLO VINICIUS RIGO
ENG. CIVIL
CREA/SC 164680-0
Assinado de forma digital por PABLO VINICIUS RIGO:06875439913
Dados: 2024.12.03 16:37:01 -03'00'

CONTRATANTE:

ELABORAÇÃO: Amvali

CONTRATANTE: PREFEITURA MUNICIPAL DE JARAGUÁ DO SUL

TÍTULO: PROJETO BÁSICO DE ENGENHARIA
CENTRO DE EDUCAÇÃO INFANTIL EM ALVENARIA

PROJETO: PROJETO ESTRUTURAL EM CONCRETO ARMADO

CONTEÚDO: DETALHAMENTO DA ARMAÇÃO POSITIVA DA LJE

ESCALA: INDICADA

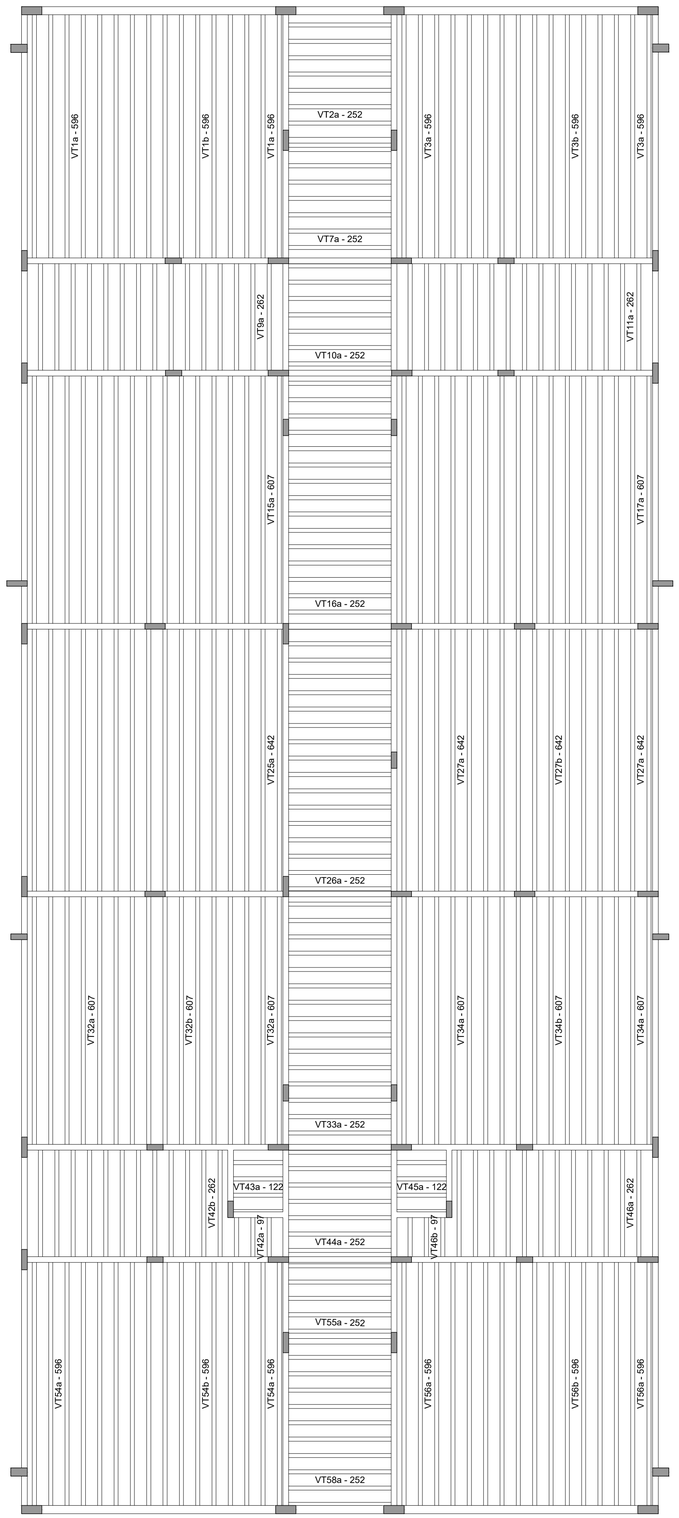
ENDEREÇO: RUA FREDERICO PIESKE, BARRA DO RIO CERRO

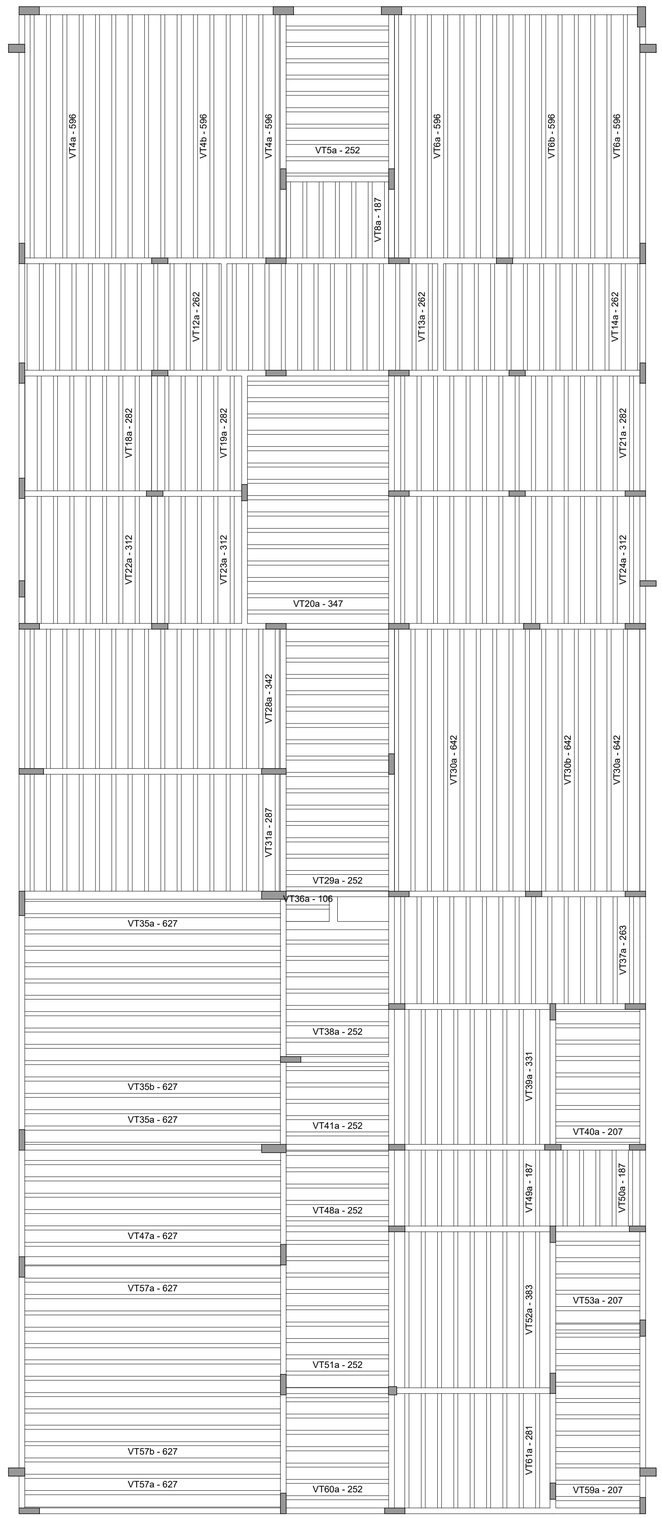
ESTACA: ---

CODIFICAÇÃO: AMV-JS-DE-EST-0242-R00 - NIVEL LAJE.DWG

FOLHA: 12-15

FORMATO A1 - 841x594mm




Planta de vigotas pré-moldadas
escala 1:75

RELAÇÃO DO AÇO

Volume de concreto (C-30) = 0.00 m³
Área de forma = 0.00 m²

| REV | DATA | DESENHO | ALTERAÇÕES DE PROJETO | VERIFICAÇÃO |
|---|---|---|---|---|
| 00 | 21-11-2024 | PABLO | EMISSÃO INICIAL | AMVALI |

RESPONSÁVEL TÉCNICO:
PABLO VINICIUS RIGO
ENG. CIVIL
CREA/SC 164680-0
CONTRATANTE:

PABLO VINICIUS RIGO:06875439913
Assinado de forma digital por PABLO VINICIUS RIGO:06875439913
Dados: 2024.12.03 16:37:19 -03'00'

ELABORAÇÃO: Amvali

CONTRATANTE: PREFEITURA MUNICIPAL DE JARAGUÁ DO SUL

TÍTULO:
PROJETO BÁSICO DE ENGENHARIA
CENTRO DE EDUCAÇÃO INFANTIL EM ALVENARIA

PROJETO: PROJETO ESTRUTURAL EM CONCRETO ARMADO

CONTEÚDO: PLANTA DE VIGOTAS PRÉ MOLDADA

ESCALA: INDICADA

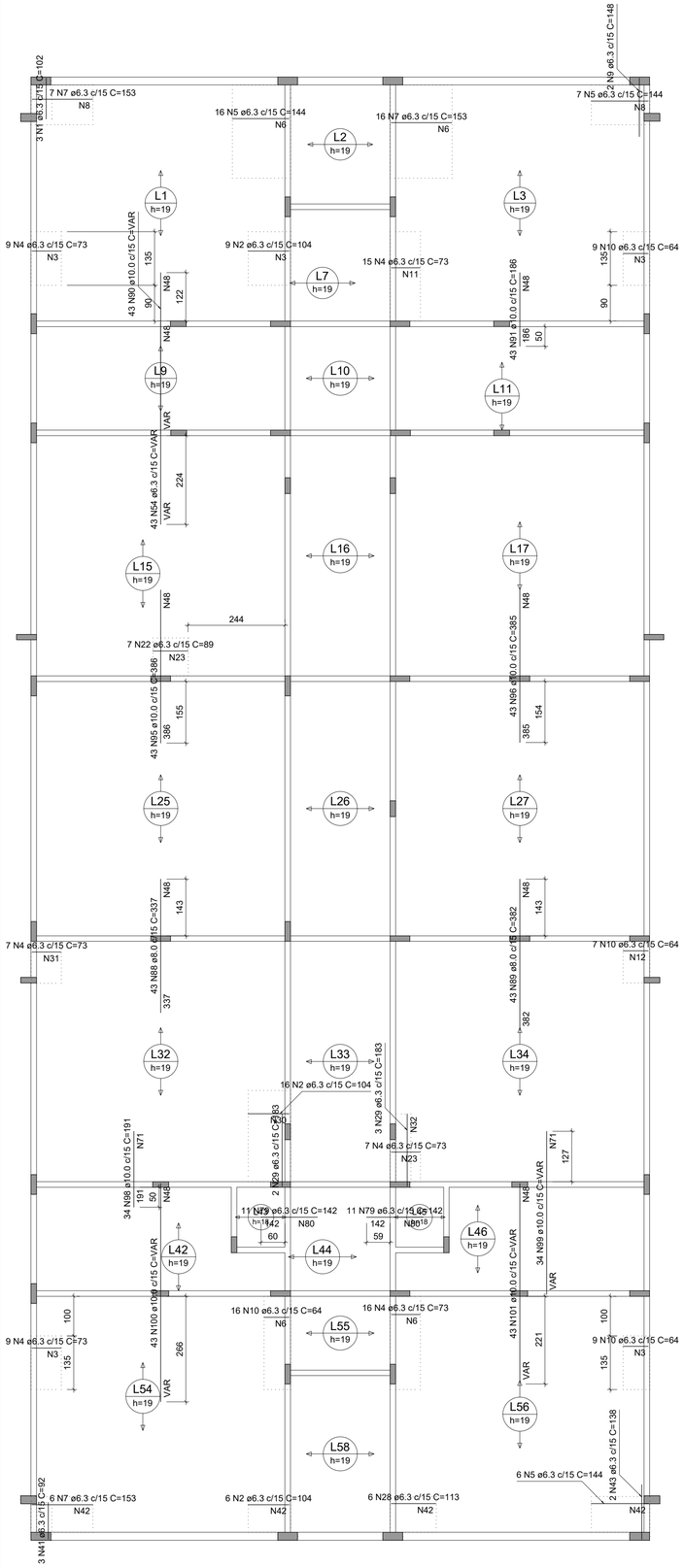
ENDEREÇO: RUA FREDERICO PIESKE, BARRA DO RIO CERRO

ESTACA: ---

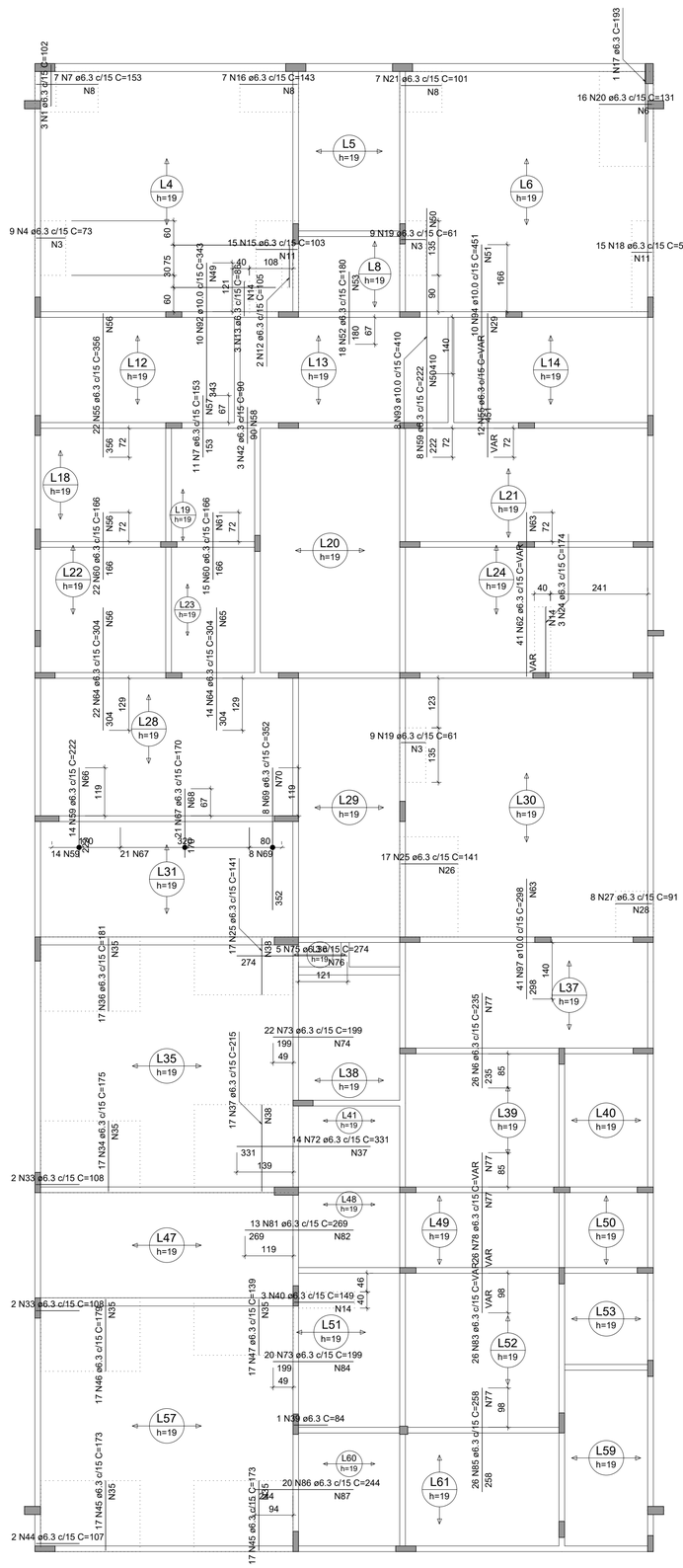
CODIFICAÇÃO: AMV-JS-DE-EST-0242-R00 - NIVEL LAJE.DWG

FOLHA: 13-15

FORMATO A1 - 841x594mm



Armação negativa das lajes do pavimento Laje
escala 1:75

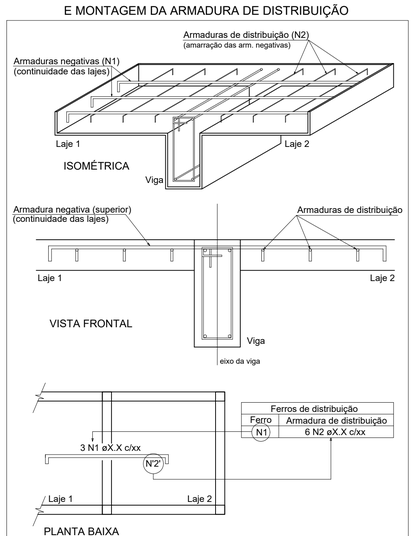


| Armaduras de distribuição | |
|---|---|
| Armadura | Armadura de distribuição |
| N2 | 7 N3 ø6.3 c/15 C=135 |
| N4 | 5 N3 ø6.3 c/15 C=135 |
| N5 | 10 N6 ø6.3 c/15 C=235 |
| N7 | 11 N8 ø6.3 c/15 C=100 |
| N10 | 5 N3 ø6.3 c/15 C=135 |
| N4 | 5 N11 ø6.3 c/15 C=225 |
| N5 | 10 N8 ø6.3 c/15 C=100 |
| N7 | 11 N6 ø6.3 c/15 C=235 |
| N13 | 6 N14 ø6.3 c/15 C=40 |
| N15 | 7 N11 ø6.3 c/15 C=225 |
| N4 | 5 N3 ø6.3 c/15 C=135 |
| N16 | 10 N8 ø6.3 c/15 C=100 |
| N7 | 11 N8 ø6.3 c/15 C=100 |
| N18 | 4 N11 ø6.3 c/15 C=225 |
| N19 | 4 N3 ø6.3 c/15 C=135 |
| N20 | 9 N6 ø6.3 c/15 C=235 |
| N21 | 7 N8 ø6.3 c/15 C=100 |
| N22 | 6 N23 ø6.3 c/15 C=96 |
| N24 | 12 N14 ø6.3 c/15 C=40 |
| N25 | 10 N26 ø6.3 c/15 C=248 |
| N27 | 6 N28 ø6.3 c/15 C=113 |
| N19 | 4 N3 ø6.3 c/15 C=135 |
| N2 | 7 N30 ø6.3 c/15 C=230 |
| N4 | 5 N31 ø6.3 c/15 C=106 |
| N29 | 13 N32 ø6.3 c/15 C=38 |
| N4 | 5 N23 ø6.3 c/15 C=96 |
| N10 | 5 N12 ø6.3 c/15 C=105 |
| N34 | 12 N35 ø6.3 c/15 C=246 |
| N36 | 12 N35 ø6.3 c/15 C=246 |
| N37 | 15 N38 ø6.3 c/15 C=245 |
| N25 | 10 N38 ø6.3 c/15 C=245 |
| N40 | 10 N14 ø6.3 c/15 C=40 |
| N2 | 7 N42 ø6.3 c/15 C=90 |
| N7 | 11 N42 ø6.3 c/15 C=90 |
| N10 | 5 N6 ø6.3 c/15 C=235 |
| N4 | 5 N3 ø6.3 c/15 C=135 |
| N5 | 10 N42 ø6.3 c/15 C=90 |
| N28 | 8 N42 ø6.3 c/15 C=90 |
| N4 | 5 N6 ø6.3 c/15 C=235 |
| N10 | 5 N3 ø6.3 c/15 C=135 |
| N45 | 12 N35 ø6.3 c/15 C=246 |
| N46 | 12 N35 ø6.3 c/15 C=246 |
| N45 | 12 N35 ø6.3 c/15 C=246 |
| N47 | 10 N35 ø6.3 c/15 C=246 |
| N90 | 28 N48 ø6.3 c/15 C=VAR |
| N91 | 13 N48 ø6.3 c/15 C=640 |
| N92 | 23 N49 ø6.3 c/15 C=153 |
| N93 | 28 N50 ø6.3 c/15 C=120 |
| N94 | 30 N51 ø6.3 c/15 C=152 |
| N52 | 12 N53 ø6.3 c/15 C=265 |
| N54 | 34 N48 ø6.3 c/15 C=VAR |
| N55 | 24 N56 ø6.3 c/15 C=325 |
| N7 | 11 N57 ø6.3 c/15 C=171 |
| N42 | 6 N58 ø6.3 c/15 C=50 |
| N59 | 15 N50 ø6.3 c/15 C=120 |
| N55 | 24 N29 ø6.3 c/15 C=VAR |
| N95 | 26 N48 ø6.3 c/15 C=640 |
| N96 | 26 N48 ø6.3 c/15 C=640 |
| N60 | 11 N56 ø6.3 c/15 C=324 |
| N60 | 11 N61 ø6.3 c/15 C=221 |
| N62 | 28 N63 ø6.3 c/15 C=VAR |
| N64 | 21 N56 ø6.3 c/15 C=325 |
| N64 | 21 N65 ø6.3 c/15 C=203 |
| N88 | 23 N48 ø6.3 c/15 C=640 |
| N89 | 26 N48 ø6.3 c/15 C=640 |
| N59 | 15 N66 ø6.3 c/15 C=205 |
| N67 | 12 N68 ø6.3 c/15 C=320 |
| N69 | 24 N70 ø6.3 c/15 C=115 |
| N97 | 20 N63 ø6.3 c/15 C=615 |
| N98 | 13 N71 ø6.3 c/15 C=505 |
| N99 | 28 N71 ø6.3 c/15 C=VAR |
| N72 | 22 N37 ø6.3 c/15 C=215 |
| N73 | 14 N74 ø6.3 c/15 C=328 |
| N75 | 19 N76 ø6.3 c/15 C=75 |
| N6 | 16 N77 ø6.3 c/15 C=395 |
| N78 | 20 N77 ø6.3 c/15 C=VAR |
| N100 | 37 N48 ø6.3 c/15 C=VAR |
| N79 | 10 N80 ø6.3 c/15 C=165 |
| N79 | 10 N80 ø6.3 c/15 C=165 |
| N101 | 34 N48 ø6.3 c/15 C=VAR |
| N81 | 18 N82 ø6.3 c/15 C=200 |
| N83 | 21 N77 ø6.3 c/15 C=VAR |
| N73 | 14 N84 ø6.3 c/15 C=296 |
| N85 | 18 N77 ø6.3 c/15 C=395 |
| N86 | 17 N87 ø6.3 c/15 C=294 |

RELAÇÃO DO AÇO
ELEMENTOS NEGATIVOS, AÇO CA 50

| N | DIAM (mm) | QUANT | C.UNIT (cm) | C.TOTAL (cm) |
|---|---|---|---|---|
| 1 | 6.3 | 6 | 102 | 612 |
| 2 | 6.3 | 31 | 104 | 3224 |
| 3 | 6.3 | 40 | 135 | 5400 |
| 4 | 6.3 | 72 | 73 | 5256 |
| 5 | 6.3 | 29 | 144 | 4176 |
| 6 | 6.3 | 66 | 235 | 15510 |
| 7 | 6.3 | 47 | 153 | 7191 |
| 8 | 6.3 | 49 | 100 | 4900 |
| 9 | 6.3 | 2 | 148 | 296 |
| 10 | 6.3 | 41 | 64 | 2624 |
| 11 | 6.3 | 16 | 225 | 3600 |
| 12 | 6.3 | 7 | 105 | 735 |
| 13 | 6.3 | 3 | 86 | 258 |
| 14 | 6.3 | 28 | 40 | 1120 |
| 15 | 6.3 | 15 | 103 | 1545 |
| 16 | 6.3 | 7 | 143 | 1001 |
| 17 | 6.3 | 1 | 193 | 193 |
| 18 | 6.3 | 15 | 51 | 765 |
| 19 | 6.3 | 18 | 61 | 1098 |
| 20 | 6.3 | 16 | 131 | 2096 |
| 21 | 6.3 | 7 | 101 | 707 |
| 22 | 6.3 | 7 | 89 | 623 |
| 23 | 6.3 | 11 | 96 | 1056 |
| 24 | 6.3 | 3 | 174 | 522 |
| 25 | 6.3 | 34 | 141 | 4794 |
| 26 | 6.3 | 10 | 248 | 2480 |
| 27 | 6.3 | 8 | 91 | 728 |
| 28 | 6.3 | 12 | 113 | 1356 |
| 29 | 6.3 | 29 | 183 | 5307 |
| 30 | 6.3 | 7 | 230 | 1610 |
| 31 | 6.3 | 5 | 106 | 530 |
| 32 | 6.3 | 13 | 38 | 494 |
| 33 | 6.3 | 4 | 108 | 432 |
| 34 | 6.3 | 17 | 175 | 2975 |
| 35 | 6.3 | 70 | 246 | 17220 |
| 36 | 6.3 | 17 | 181 | 3077 |
| 37 | 6.3 | 39 | 215 | 8385 |
| 38 | 6.3 | 25 | 245 | 6125 |
| 39 | 6.3 | 1 | 84 | 84 |
| 40 | 6.3 | 3 | 149 | 447 |
| 41 | 6.3 | 3 | 92 | 276 |
| 42 | 6.3 | 39 | 90 | 3510 |
| 43 | 6.3 | 2 | 138 | 276 |
| 44 | 6.3 | 2 | 107 | 214 |
| 45 | 6.3 | 34 | 173 | 5882 |
| 46 | 6.3 | 17 | 179 | 3043 |
| 47 | 6.3 | 17 | 139 | 2363 |
| 48 | 6.3 | 247 | VAR | VAR |
| 49 | 6.3 | 23 | 153 | 3519 |
| 50 | 6.3 | 43 | 120 | 5160 |
| 51 | 6.3 | 30 | 152 | 4560 |
| 52 | 6.3 | 18 | 180 | 3240 |
| 53 | 6.3 | 12 | 265 | 3180 |
| 54 | 6.3 | 43 | VAR | VAR |
| 55 | 6.3 | 34 | 356 | 12104 |
| 56 | 6.3 | 56 | 325 | 18200 |
| 57 | 6.3 | 11 | 171 | 1881 |
| 58 | 6.3 | 6 | 50 | 300 |
| 59 | 6.3 | 22 | 222 | 4884 |
| 60 | 6.3 | 37 | 166 | 6142 |
| 61 | 6.3 | 11 | 221 | 2431 |
| 62 | 6.3 | 41 | VAR | VAR |
| 63 | 6.3 | 48 | VAR | VAR |
| 64 | 6.3 | 36 | 304 | 10944 |
| 65 | 6.3 | 21 | 203 | 4263 |
| 66 | 6.3 | 15 | 205 | 3075 |
| 67 | 6.3 | 21 | 170 | 3570 |
| 68 | 6.3 | 12 | 320 | 3840 |
| 69 | 6.3 | 8 | 352 | 2816 |
| 70 | 6.3 | 24 | 115 | 2760 |
| 71 | 6.3 | 41 | 505 | 20705 |
| 72 | 6.3 | 14 | 331 | 4634 |
| 73 | 6.3 | 42 | 199 | 8358 |
| 74 | 6.3 | 14 | 328 | 4592 |
| 75 | 6.3 | 5 | 274 | 1370 |
| 76 | 6.3 | 19 | 75 | 1425 |
| 77 | 6.3 | 75 | 395 | 29625 |
| 78 | 6.3 | 26 | VAR | VAR |
| 79 | 6.3 | 22 | 142 | 3124 |
| 80 | 6.3 | 20 | 165 | 3300 |
| 81 | 6.3 | 13 | 269 | 3497 |
| 82 | 6.3 | 18 | 200 | 3600 |
| 83 | 6.3 | 26 | VAR | VAR |
| 84 | 6.3 | 14 | 296 | 4144 |
| 85 | 6.3 | 26 | 258 | 6708 |
| 86 | 6.3 | 20 | 244 | 4880 |
| 87 | 6.3 | 17 | 294 | 4998 |
| 88 | 8.0 | 43 | 337 | 14491 |
| 89 | 8.0 | 43 | 382 | 16426 |
| 90 | 10.0 | 43 | VAR | VAR |
| 91 | 10.0 | 43 | 186 | 7998 |
| 92 | 10.0 | 10 | 343 | 3430 |
| 93 | 10.0 | 8 | 410 | 3280 |
| 94 | 10.0 | 10 | 451 | 4510 |
| 95 | 10.0 | 43 | 386 | 16598 |
| 96 | 10.0 | 43 | 385 | 16555 |
| 97 | 10.0 | 41 | 298 | 12218 |
| 98 | 10.0 | 34 | 191 | 6494 |
| 99 | 10.0 | 34 | VAR | VAR |
| 100 | 10.0 | 43 | VAR | VAR |
| 101 | 10.0 | 43 | VAR | VAR |

DETALHE DA ARMADURA SUPERIOR DE CONTINUIDADE DA LAJE
E MONTAGEM DA ARMADURA DE DISTRIBUIÇÃO




| Ferros de distribuição | |
|---|---|
| Ferro | Armadura de distribuição |
| N1 | 6 N2 øX.X c/xx |

NOTA: A ARMADURA DE DISTRIBUIÇÃO DAS CONTINUIDADES DEVE SER ININTERRUPTA E COM TRASPASSE (CASO HAJA EMENDAS).

RESUMO DO AÇO

| AÇO | DIAM (mm) | C.TOTAL (m) | PESO + 10% (kg) |
|---|---|---|---|
| CA50 | 6.3 | 5798 | 1560.7 |
| | 8.0 | 309.2 | 134.2 |
| | 10.0 | 1479.7 | 1003.5 |

| PESO TOTAL (kg) | |
|---|---|
| CA50 | 2698.4 |

Volume de concreto (C-30) = 0.00 m³
Área de forma = 0.00 m²

| REV | DATA | DESENHO | ALTERAÇÕES DE PROJETO | VERIFICAÇÃO |
|---|---|---|---|---|
| 00 | 21-11-2024 | PABLO | EMISSÃO INICIAL | AMVALI |

RESPONSÁVEL TÉCNICO:
PABLO VINICIUS RIGO
ENG. CIVIL
CREA/SC 164680-0
CONTRATANTE:

PABLO VINICIUS RIGO:06875439913
Assinado de forma digital por PABLO VINICIUS RIGO:06875439913
Dados: 2024.12.03 16:37:40 -03'00'

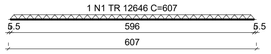
ELABORAÇÃO: Amvali
CONTRATANTE: PREFEITURA MUNICIPAL DE JARAGUÁ DO SUL

TÍTULO:
PROJETO BÁSICO DE ENGENHARIA
CENTRO DE EDUCAÇÃO INFANTIL EM ALVENARIA

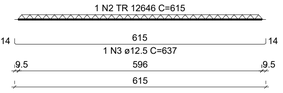
PROJETO: PROJETO ESTRUTURAL EM CONCRETO ARMADO
CONTEÚDO: DETALHAMENTO DA ARMAÇÃO NEGATIVA DAS LAJES
ESCALA: INDICADA
ENDEREÇO: RUA FREDERICO PIESKE, BARRA DO RIO CERRO
ESTACA: ---
CODIFICAÇÃO: AMV-JS-DE-EST-0242-R00 - NIVEL LAJE.DWG
FOLHA: 14-15

FORMATO A1 - 841x594mm

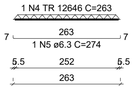
VT1a (8 unidades)
(L1)
ESC 1:75



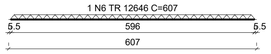

VT1b (8 unidades)
(L1)
ESC 1:75



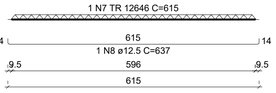

VT2a (7 unidades)
(L2)
ESC 1:75



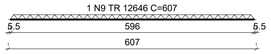

VT3a (7 unidades)
(L3)
ESC 1:75



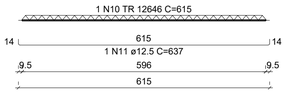

VT3b (9 unidades)
(L3)
ESC 1:75



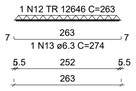

VT4a (8 unidades)
(L4)
ESC 1:75



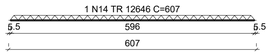

VT4b (8 unidades)
(L4)
ESC 1:75



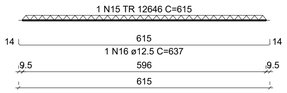

VT5a (9 unidades)
(L5)
ESC 1:75



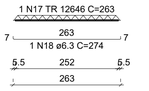

VT6a (8 unidades)
(L6)
ESC 1:75



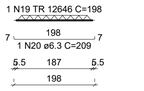

VT6b (7 unidades)
(L6)
ESC 1:75



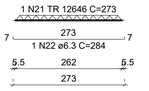

VT7a (7 unidades)
(L7)
ESC 1:75



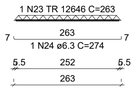

VT8a (7 unidades)
(L8)
ESC 1:75



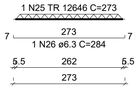

VT9a (15 unidades)
(L9)
ESC 1:75



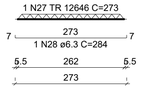

VT10a (7 unidades)
(L10)
ESC 1:75



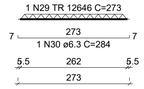

VT11a (15 unidades)
(L11)
ESC 1:75



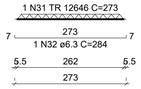

VT12a (11 unidades)
(L12)
ESC 1:75



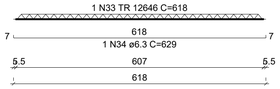

VT13a (13 unidades)
(L13)
ESC 1:75



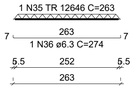

VT14a (11 unidades)
(L14)
ESC 1:75



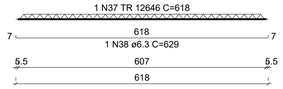

VT15a (16 unidades)
(L15)
ESC 1:75



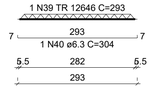

VT16a (15 unidades)
(L16)
ESC 1:75



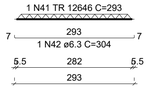

VT17a (16 unidades)
(L17)
ESC 1:75



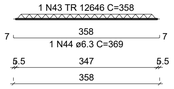

VT18a (7 unidades)
(L18)
ESC 1:75



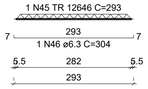

VT19a (5 unidades)
(L19)
ESC 1:75



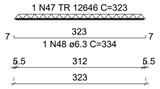

VT20a (15 unidades)
(L20)
ESC 1:75



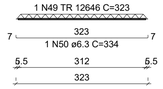

VT21a (15 unidades)
(L21)
ESC 1:75



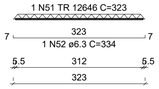

VT22a (7 unidades)
(L22)
ESC 1:75



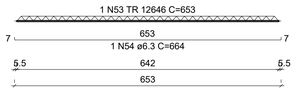

VT23a (5 unidades)
(L23)
ESC 1:75



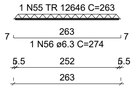

VT24a (15 unidades)
(L24)
ESC 1:75



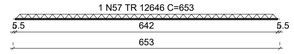

VT25a (16 unidades)
(L25)
ESC 1:75



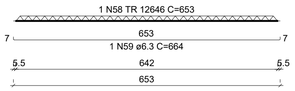

VT26a (16 unidades)
(L26)
ESC 1:75



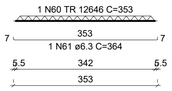

VT27a (10 unidades)
(L27)
ESC 1:75



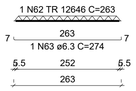

VT27b (6 unidades)
(L27)
ESC 1:75



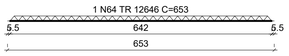

VT28a (16 unidades)
(L28)
ESC 1:75



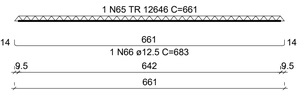

VT29a (16 unidades)
(L29)
ESC 1:75



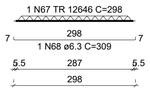

VT30a (8 unidades)
(L30)
ESC 1:75



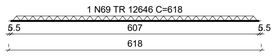

VT30b (7 unidades)
(L30)
ESC 1:75



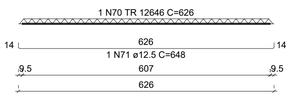

VT31a (16 unidades)
(L31)
ESC 1:75



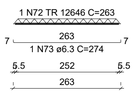

VT32a (10 unidades)
(L32)
ESC 1:75



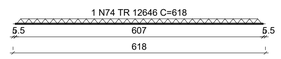

VT32b (6 unidades)
(L32)
ESC 1:75



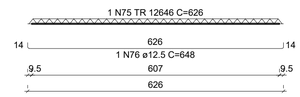

VT33a (15 unidades)
(L33)
ESC 1:75



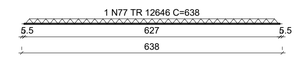

VT34a (10 unidades)
(L34)
ESC 1:75



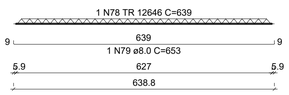

VT34b (6 unidades)
(L34)
ESC 1:75



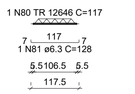

VT35a (4 unidades)
(L35)
ESC 1:75



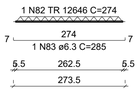

VT35b (10 unidades)
(L35)
ESC 1:75



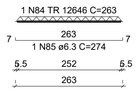

VT36a (1 unidades)
(L36)
ESC 1:75



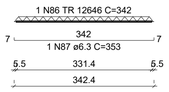

VT37a (15 unidades)
(L37)
ESC 1:75



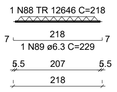

VT38a (7 unidades)
(L38)
ESC 1:75



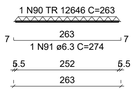

VT39a (9 unidades)
(L39)
ESC 1:75



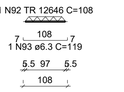

VT40a (8 unidades)
(L40)
ESC 1:75



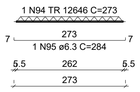

VT41a (5 unidades)
(L41)
ESC 1:75



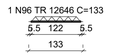

VT42a (3 unidades)
(L42)
ESC 1:75



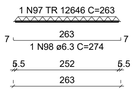

VT42b (12 unidades)
(L42)
ESC 1:75



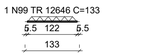

VT43a (3 unidades)
(L43)
ESC 1:75



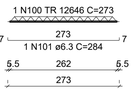

VT44a (7 unidades)
(L44)
ESC 1:75



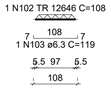

VT45a (3 unidades)
(L45)
ESC 1:75



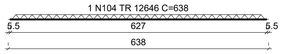

VT46a (12 unidades)
(L46)
ESC 1:75



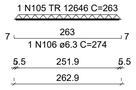

VT46b (3 unidades)
(L46)
ESC 1:75



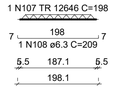

VT47a (6 unidades)
(L47)
ESC 1:75



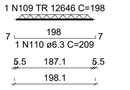

VT48a (5 unidades)
(L48)
ESC 1:75



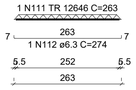

VT49a (9 unidades)
(L49)
ESC 1:75



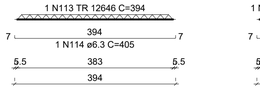

VT50a (5 unidades)
(L50)
ESC 1:75



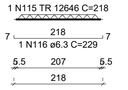

VT51a (9 unidades)
(L51)
ESC 1:75



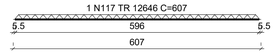

VT52a (9 unidades)
(L52)
ESC 1:75



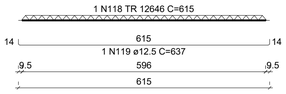

VT53a (5 unidades)
(L53)
ESC 1:75



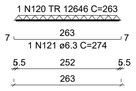

VT54a (7 unidades)
(L54)
ESC 1:75



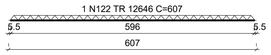

VT54b (9 unidades)
(L54)
ESC 1:75



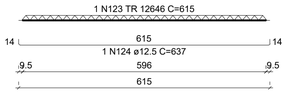

VT55a (5 unidades)
(L55)
ESC 1:75



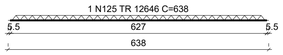

VT56a (7 unidades)
(L56)
ESC 1:75



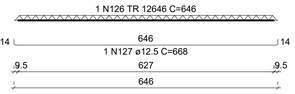

VT56b (9 unidades)
(L56)
ESC 1:75



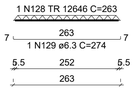

VT57a (4 unidades)
(L57)
ESC 1:75



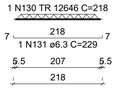

VT57b (10 unidades)
(L57)
ESC 1:75



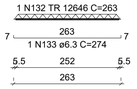

VT58a (9 unidades)
(L58)
ESC 1:75



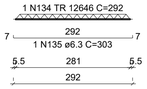

VT59a (11 unidades)
(L59)
ESC 1:75




VT60a (7 unidades)
(L60)
ESC 1:75




VT61a (9 unidades)
(L61)
ESC 1:75




RELAÇÃO DO AÇO

| ELEMENTO | AÇO | N | DIAM (mm) | QUANT | C.UNIT (cm) | C.TOTAL (cm) |
|---|---|---|---|---|---|---|
| 8xVT1a | CA60 | 1 | TR 12646 | 8 | 607 | 4856 |
| 8xVT1b | CA60 | 2 | TR 12646 | 8 | 615 | 4920 |
| | CA50 | 3 | 12.5 | 8 | 637 | 5096 |
| 7xVT2a | CA60 | 4 | TR 12646 | 7 | 263 | 1841 |
| | CA50 | 5 | 6.3 | 7 | 274 | 1918 |
| 7xVT3a | CA60 | 6 | TR 12646 | 7 | 607 | 4249 |
| 9xVT3b | CA60 | 7 | TR 12646 | 9 | 615 | 5535 |
| | CA50 | 8 | 12.5 | 9 | 637 | 5733 |
| 8xVT4a | CA60 | 9 | TR 12646 | 8 | 607 | 4856 |
| 8xVT4b | CA60 | 10 | TR 12646 | 8 | 615 | 4920 |
| | CA50 | 11 | 12.5 | 8 | 637 | 5096 |
| 9xVT5a | CA60 | 12 | TR 12646 | 9 | 263 | 2367 |
| | CA50 | 13 | 6.3 | 9 | 274 | 2466 |
| 8xVT6a | CA60 | 14 | TR 12646 | 8 | 607 | 4856 |
| 7xVT6b | CA60 | 15 | TR 12646 | 7 | 615 | 4305 |
| | CA50 | 16 | 12.5 | 7 | 637 | 4459 |
| 7xVT7a | CA60 | 17 | TR 12646 | 7 | 263 | 1841 |
| | CA50 | 18 | 6.3 | 7 | 274 | 1918 |
| 7xVT8a | CA60 | 19 | TR 12646 | 7 | 198 | 1386 |
| | CA50 | 20 | 6.3 | 7 | 209 | 1463 |
| 15xVT9a | CA60 | 21 | TR 12646 | 15 | 273 | 4095 |
| | CA50 | 22 | 6.3 | 15 | 284 | 4260 |
| 7xVT10a | CA60 | 23 | TR 12646 | 7 | 263 | 1841 |
| | CA50 | 24 | 6.3 | 7 | 274 | 1918 |
| 15xVT11a | CA60 | 25 | TR 12646 | 15 | 273 | 4095 |
| | CA50 | 26 | 6.3 | 15 | 284 | 4260 |
| 11xVT12a | CA60 | 27 | TR 12646 | 11 | 273 | 3003 |
| | CA50 | 28 | 6.3 | 11 | 284 | 3124 |
| 13xVT13a | CA60 | 29 | TR 12646 | 13 | 273 | 3549 |
| | CA50 | 30 | 6.3 | 13 | 284 | 3692 |
| 11xVT14a | CA60 | 31 | TR 12646 | 11 | 273 | 3003 |
| | CA50 | 32 | 6.3 | 11 | 284 | 3124 |
| 16xVT15a | CA60 | 33 | TR 12646 | 16 | 618 | 9888 |
| | CA50 | 34 | 6.3 | 16 | 629 | 10064 |
| 15xVT16a | CA60 | 35 | TR 12646 | 15 | 263 | 3945 |
| | CA50 | 36 | 6.3 | 15 | 274 | 4110 |
| 16xVT17a | CA60 | 37 | TR 12646 | 16 | 618 | 9888 |
| | CA50 | 38 | 6.3 | 16 | 629 | 10064 |
| 7xVT18a | CA60 | 39 | TR 12646 | 7 | 293 | 2051 |
| | CA50 | 40 | 6.3 | 7 | 304 | 2128 |
| 5xVT19a | CA60 | 41 | TR 12646 | 5 | 293 | 1465 |
| | CA50 | 42 | 6.3 | 5 | 304 | 1520 |
| 15xVT20a | CA60 | 43 | TR 12646 | 15 | 358 | 5370 |
| | CA50 | 44 | 6.3 | 15 | 369 | 5535 |
| 15xVT21a | CA60 | 45 | TR 12646 | 15 | 293 | 4395 |
| | CA50 | 46 | 6.3 | 15 | 304 | 4560 |
| 7xVT22a | CA60 | 47 | TR 12646 | 7 | 323 | 2261 |
| | CA50 | 48 | 6.3 | 7 | 334 | 2338 |
| 5xVT23a | CA60 | 49 | TR 12646 | 5 | 323 | 1615 |
| | CA50 | 50 | 6.3 | 5 | 334 | 1670 |
| 15xVT24a | CA60 | 51 | TR 12646 | 15 | 323 | 4845 |
| | CA50 | 52 | 6.3 | 15 | 334 | 5010 |
| 16xVT25a | CA60 | 53 | TR 12646 | 16 | 653 | 10448 |
| | CA50 | 54 | 6.3 | 16 | 664 | 10624 |
| 16xVT26a | CA60 | 55 | TR 12646 | 16 | 263 | 4208 |
| | CA50 | 56 | 6.3 | 16 | 274 | 4384 |
| 10xVT27a | CA60 | 57 | TR 12646 | 10 | 653 | 6530 |
| 6xVT27b | CA60 | 58 | TR 12646 | 6 | 653 | 3918 |
| | CA50 | 59 | 6.3 | 6 | 664 | 3984 |
| 16xVT28a | CA60 | 60 | TR 12646 | 16 | 353 | 5648 |
| | CA50 | 61 | 6.3 | 16 | 364 | 5824 |
| 16xVT29a | CA60 | 62 | TR 12646 | 16 | 263 | 4208 |
| | CA50 | 63 | 6.3 | 16 | 274 | 4384 |
| 8xVT30a | CA60 | 64 | TR 12646 | 8 | 653 | 5224 |
| 7xVT30b | CA60 | 65 | TR 12646 | 7 | 661 | 4627 |
| | CA50 | 66 | 12.5 | 7 | 683 | 4781 |
| 16xVT31a | CA60 | 67 | TR 12646 | 16 | 298 | 4768 |
| | CA50 | 68 | 6.3 | 16 | 309 | 4944 |
| 10xVT32a | CA60 | 69 | TR 12646 | 10 | 618 | 6180 |
| 6xVT32b | CA60 | 70 | TR 12646 | 6 | 626 | 3756 |
| | CA50 | 71 | 12.5 | 6 | 648 | 3888 |
| 15xVT33a | CA60 | 72 | TR 12646 | 15 | 263 | 3945 |
| | CA50 | 73 | 6.3 | 15 | 274 | 4110 |
| 10xVT34a | CA60 | 74 | TR 12646 | 10 | 618 | 6180 |
| 6xVT34b | CA60 | 75 | TR 12646 | 6 | 626 | 3756 |
| | CA50 | 76 | 12.5 | 6 | 648 | 3888 |
| 4xVT35a | CA60 | 77 | TR 12646 | 4 | 638 | 2552 |
| 10xVT35b | CA60 | 78 | TR 12646 | 10 | 639 | 6390 |
| | CA50 | 79 | 8.0 | 10 | 653 | 6530 |
| VT36a | CA60 | 80 | TR 12646 | 1 | 117 | 117 |
| | CA50 | 81 | 6.3 | 1 | 128 | 128 |
| 15xVT37a | CA60 | 82 | TR 12646 | 15 | 274 | 4110 |
| | CA50 | 83 | 6.3 | 15 | 285 | 4275 |
| 7xVT38a | CA60 | 84 | TR 12646 | 7 | 263 | 1841 |
| | CA50 | 85 | 6.3 | 7 | 274 | 1918 |
| 9xVT39a | CA60 | 86 | TR 12646 | 9 | 342 | 3078 |
| | CA50 | 87 | 6.3 | 9 | 353 | 3177 |
| 8xVT40a | CA60 | 88 | TR 12646 | 8 | 218 | 1744 |
| | CA50 | 89 | 6.3 | 8 | 229 | 1832 |
| 5xVT41a | CA60 | 90 | TR 12646 | 5 | 263 | 1315 |
| | CA50 | 91 | 6.3 | 5 | 274 | 1370 |
| 3xVT42a | CA60 | 92 | TR 12646 | 3 | 108 | 324 |
| | CA50 | 93 | 6.3 | 3 | 119 | 357 |
| 12xVT42b | CA60 | 94 | TR 12646 | 12 | 273 | 3276 |
| | CA50 | 95 | 6.3 | 12 | 284 | 3408 |
| 3xVT43a | CA60 | 96 | TR 12646 | 3 | 133 | 399 |
| 7xVT44a | CA60 | 97 | TR 12646 | 7 | 263 | 1841 |
| | CA50 | 98 | 6.3 | 7 | 274 | 1918 |
| 3xVT45a | CA60 | 99 | TR 12646 | 3 | 133 | 399 |
| 12xVT46a | CA60 | 100 | TR 12646 | 12 | 273 | 3276 |
| | CA50 | 101 | 6.3 | 12 | 284 | 3408 |
| 3xVT46b | CA60 | 102 | TR 12646 | 3 | 108 | 324 |
| | CA50 | 103 | 6.3 | 3 | 119 | 357 |
| 6xVT47a | CA60 | 104 | TR 12646 | 6 | 638 | 3828 |
| 5xVT48a | CA60 | 105 | TR 12646 | 5 | 263 | 1315 |
| | CA50 | 106 | 6.3 | 5 | 274 | 1370 |
| 9xVT49a | CA60 | 107 | TR 12646 | 9 | 198 | 1782 |
| | CA50 | 108 | 6.3 | 9 | 209 | 1881 |
| 5xVT50a | CA60 | 109 | TR 12646 | 5 | 198 | 990 |
| | CA50 | 110 | 6.3 | 5 | 209 | 1045 |
| 9xVT51a | CA60 | 111 | TR 12646 | 9 | 263 | 2367 |
| | CA50 | 112 | 6.3 | 9 | 274 | 2466 |
| 9xVT52a | CA60 | 113 | TR 12646 | 9 | 394 | 3546 |
| | CA50 | 114 | 6.3 | 9 | 405 | 3645 |
| 5xVT53a | CA60 | 115 | TR 12646 | 5 | 218 | 1090 |
| | CA50 | 116 | 6.3 | 5 | 229 | 1145 |
| 7xVT54a | CA60 | 117 | TR 12646 | 7 | 607 | 4249 |
| 9xVT54b | CA60 | 118 | TR 12646 | 9 | 615 | 5535 |
| | CA50 | 119 | 12.5 | 9 | 637 | 5733 |
| 5xVT55a | CA60 | 120 | TR 12646 | 5 | 263 | 1315 |
| | CA50 | 121 | 6.3 | 5 | 274 | 1370 |
| 7xVT56a | CA60 | 122 | TR 12646 | 7 | 607 | 4249 |
| 9xVT56b | CA60 | 123 | TR 12646 | 9 | 615 | 5535 |
| | CA50 | 124 | 12.5 | 9 | 637 | 5733 |
| 4xVT57a | CA60 | 125 | TR 12646 | 4 | 638 | 2552 |
| 10xVT57b | CA60 | 126 | TR 12646 | 10 | 646 | 6460 |
| | CA50 | 127 | 12.5 | 10 | 668 | 6680 |
| 9xVT58a | CA60 | 128 | TR 12646 | 9 | 263 | 2367 |
| | CA50 | 129 | 6.3 | 9 | 274 | 2466 |
| 11xVT59a | CA60 | 130 | TR 12646 | 11 | 218 | 2398 |
| | CA50 | 131 | 6.3 | 11 | 229 | 2519 |
| 7xVT60a | CA60 | 132 | TR 12646 | 7 | 263 | 1841 |
| | CA50 | 133 | 6.3 | 7 | 274 | 1918 |
| 9xVT61a | CA60 | 134 | TR 12646 | 9 | 292 | 2628 |
| | CA50 | 135 | 6.3 | 9 | 303 | 2727 |

RESUMO DO AÇO

| AÇO | DIAM (mm) | C.TOTAL (m) | PESO + 10% (kg) |
|---|---|---|---|
| CA50 | 6.3 | 1581 | 425.6 |
| | 8.0 | 65.3 | 28.3 |
| | 12.5 | 510.9 | 541.4 |
| CA60 | TR 12646 | 2696.7 | 3016.8 |

| PESO TOTAL (kg) | |
|---|---|
| CA50 | 995.3 |
| CA60 | 3016.8 |

Volume de concreto (C-30) = 0.00 m³
Área de forma = 0.00 m²

| REV | DATA | DESENHO | ALTERAÇÕES DE PROJETO | VERIFICAÇÃO |
|---|---|---|---|---|
| 00 | 21-11-2024 | PABLO | EMISSÃO INICIAL | AMVALI |

RESPONSÁVEL TÉCNICO:
PABLO VINICIUS RIGO
ENG. CIVIL
CREA/SC 164680-0
PABLO VINICIUS RIGO:06875439913
Assinado de forma digital por PABLO VINICIUS RIGO:06875439913
Dados: 2024.12.03 16:38:00 -03'00'

CONTRATANTE:
Documento assinado digitalmente
IRACI MULLER
Data: 12/12/2024 08:37:35-0300
Verifique em https://validar.iti.gov.br

ELABORAÇÃO: Amvali

CONTRATANTE: PREFEITURA MUNICIPAL DE JARAGUÁ DO SUL

TÍTULO: PROJETO BÁSICO DE ENGENHARIA
CENTRO DE EDUCAÇÃO INFANTIL EM ALVENARIA

PROJETO: PROJETO ESTRUTURAL EM CONCRETO ARMADO

CONTEÚDO: VIGOTAS PRÉ MOLDADAS

ESCALA: INDICADA

ENDEREÇO: RUA FREDERICO PIESKE, BARRA DO RIO CERRO

ESTACA: ---

CODIFICAÇÃO: AMV-JS-DE-EST-0242-R00 - NIVEL LAJE.DWG

FOLHA: 15-15

FORMATO A1 - 841x594mm