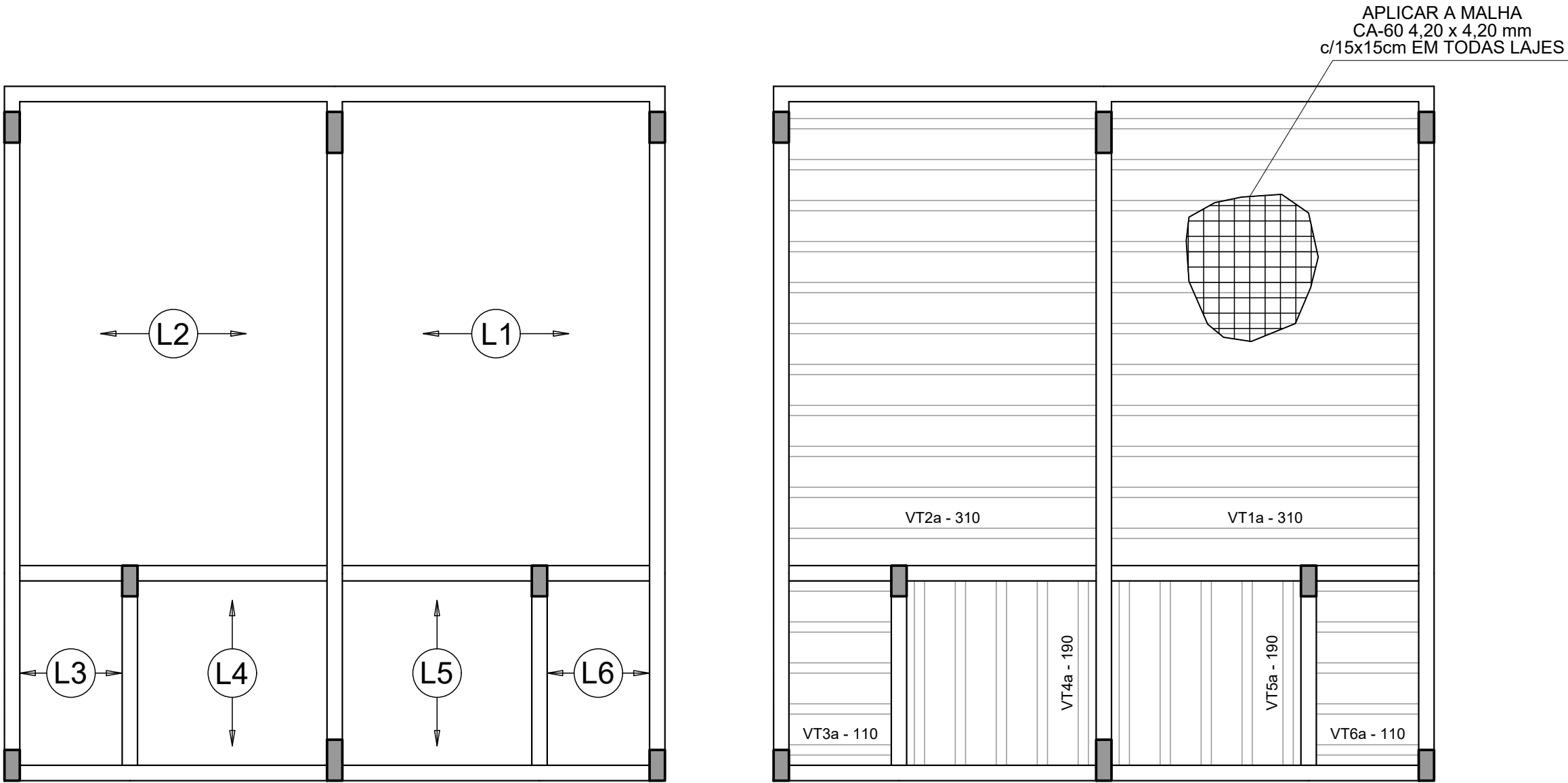
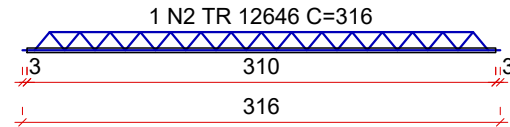
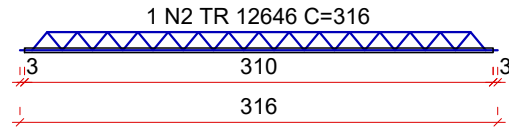




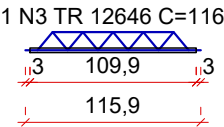
VT1a (11 unidades)  
(L1)  
ESC 1:50



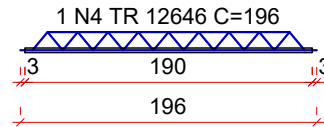
VT2a (11 unidades)  
(L2)  
ESC 1:50



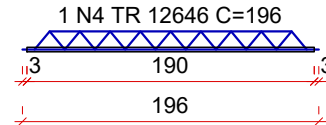
VT3a (5 unidades)  
(L3)  
ESC 1:50



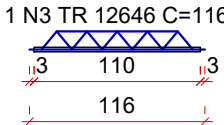
VT4a (5 unidades)  
(L4)  
ESC 1:50



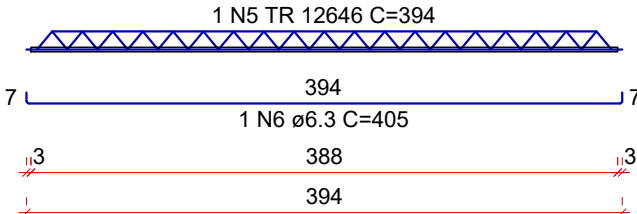
VT5a (5 unidades)  
(L5)  
ESC 1:50



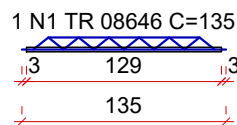
VT6a (5 unidades)  
(L6)  
ESC 1:50



VT7a (9 unidades)  
(L7)  
ESC 1:50



VTM1a (5 unidades)  
(LM1)  
ESC 1:50



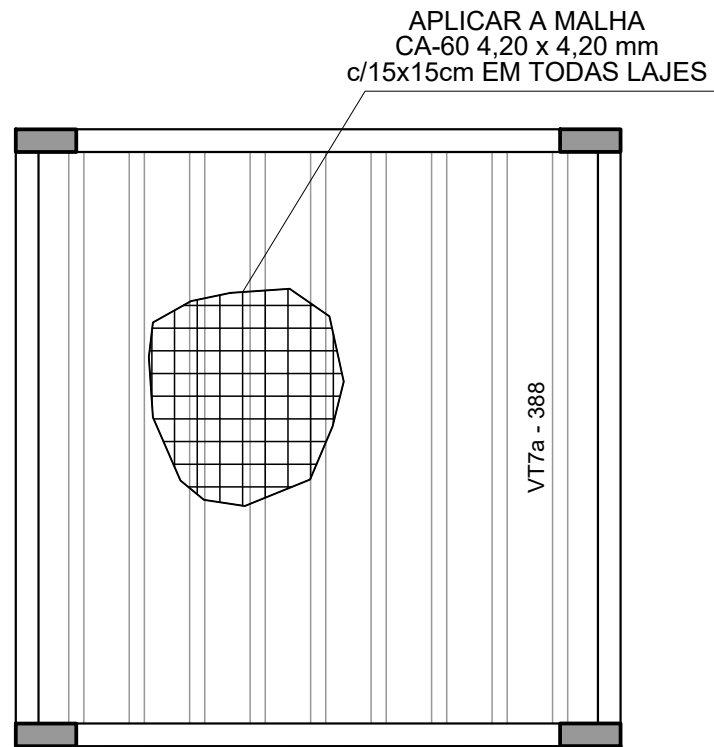
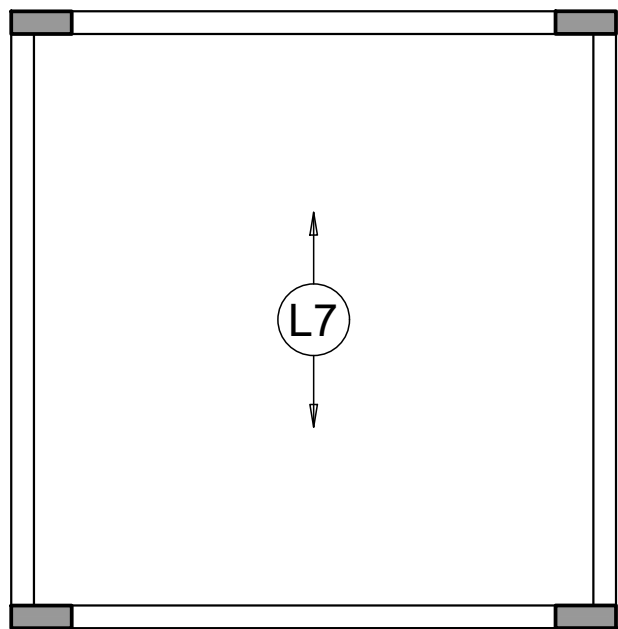
| RELAÇÃO DO AÇO              |                              |                  |       |                |                 |
|-----------------------------|------------------------------|------------------|-------|----------------|-----------------|
| 11xVT1a<br>5xVT4a<br>9xVT7a | 11xVT2a<br>5xVT5a<br>5xVTM1a | 5xVT3a<br>5xVT6a |       |                |                 |
| AÇO                         | N                            | DIAM<br>(mm)     | QUANT | C.UNIT<br>(cm) | C.TOTAL<br>(cm) |
| CA50                        | 1                            | TR 08646         | 5     | 135            | 675             |
|                             | 2                            | TR 12646         | 22    | 316            | 6952            |
|                             | 3                            | TR 12646         | 10    | 116            | 1160            |
|                             | 4                            | TR 12646         | 10    | 196            | 1960            |
| CA50                        | 5                            | TR 12646         | 9     | 394            | 3546            |
|                             | 6                            | 6.3              | 9     | 405            | 3645            |

| RESUMO DO AÇO      |              |                |                         |                    |
|--------------------|--------------|----------------|-------------------------|--------------------|
| AÇO                | DIAM<br>(mm) | C.TOTAL<br>(m) | QUANT + 10%<br>(Barras) | PESO + 10%<br>(kg) |
| CA50               | 6.3          | 36.5           | 4                       | 9.8                |
| CA80               | TR 08646     | 6.8            | -                       | 7.1                |
|                    | TR 12646     | 136.2          | -                       | 152.3              |
| PESO TOTAL<br>(kg) |              |                |                         |                    |
| CA50               | 9.8          |                |                         |                    |
| CA80               | 159.5        |                |                         |                    |

Volume de concreto (C-30) = 3.38 m³  
Área de forma = 0.00 m²

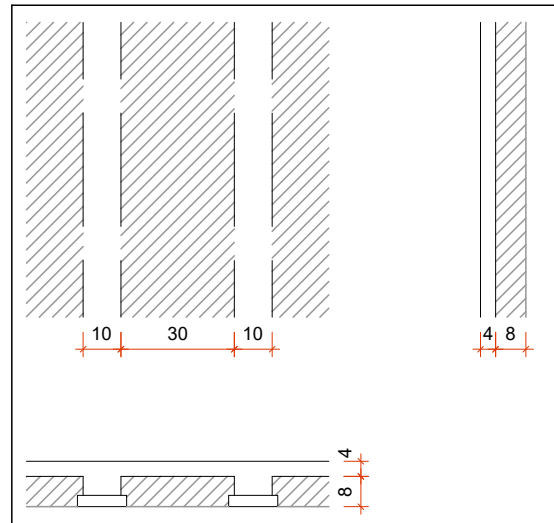
| Lajes |              |                |                     |              |       |            |
|-------|--------------|----------------|---------------------|--------------|-------|------------|
| Nome  | Tipo         | Dados          | Sobrecarga (kgf/m²) |              |       |            |
|       |              | Altura<br>(cm) | Elevação<br>(m)     | Nível<br>(m) | Total | Localizada |
| L1    | Treliçada 1D | 16             | 0.00                | 4.53         | 155   | -          |
| L2    | Treliçada 1D | 16             | 0.00                | 4.53         | 155   | -          |
| L3    | Treliçada 1D | 16             | 0.00                | 4.53         | 155   | -          |
| L4    | Treliçada 1D | 16             | 0.00                | 4.53         | 155   | -          |
| L5    | Treliçada 1D | 16             | 0.00                | 4.53         | 155   | -          |
| L6    | Treliçada 1D | 16             | 0.00                | 4.53         | 155   | -          |
| L7    | Treliçada 1D | 16             | 0.00                | 4.53         | 282   | -          |
| LM1   | Treliçada 1D | 12             | -0.85               | 3.68         | 155   | -          |

| Área de lajes |                |                        |              |
|---------------|----------------|------------------------|--------------|
| Tipo          | Altura<br>(cm) | Bloco de<br>Enchimento | Área<br>(m²) |
| Treliçada 1D  | 12             | B8/30/125              | 2.92         |
| Treliçada 1D  | 16             | B12/30/125             | 51.43        |



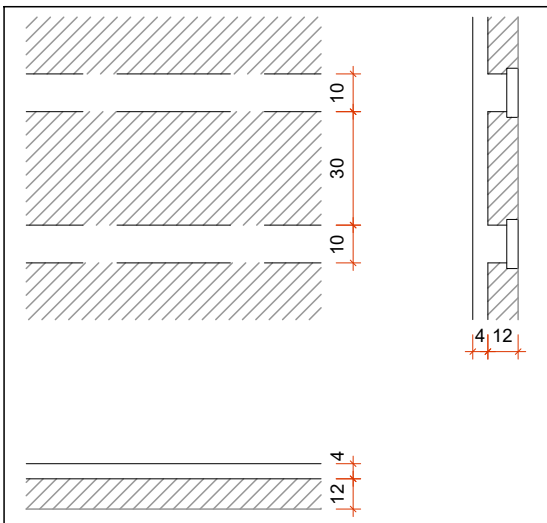
## LAJE - CASA DE MÁQUINAS

### VIGOTAS EM Y

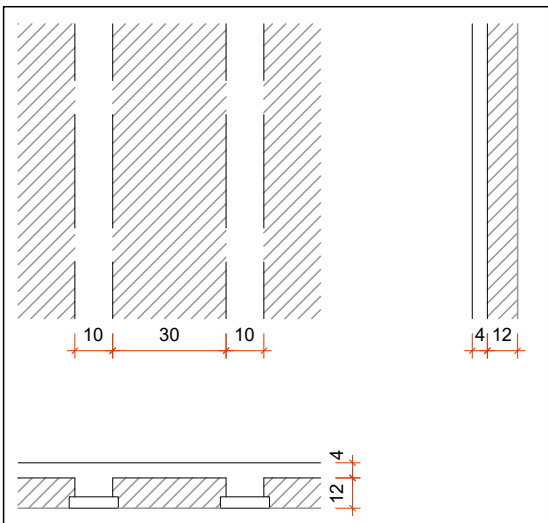


## LAJES - COBERTURA

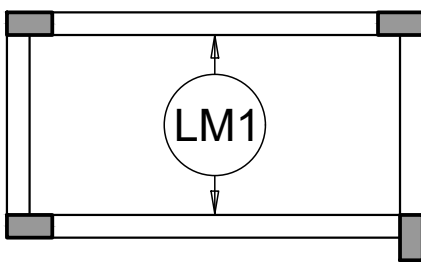
### VIGOTAS EM X



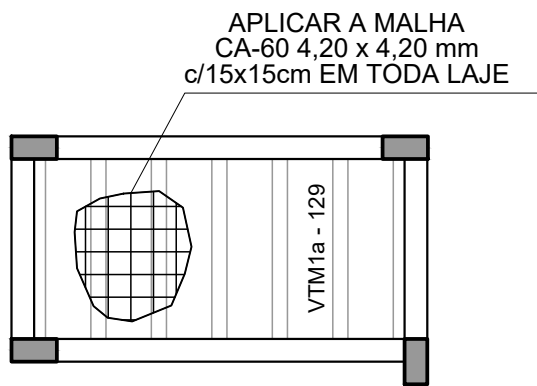
### VIGOTAS EM Y



ARMAÇÃO POSITIVA DAS LAJES DO PAVIMENTO COBERTURA  
Escala 1:50



PLANTA DE VIGOTAS PRÉ-MOLDADAS  
Escala 1:50



|                                                                                                                                                                                                                                     |                                                                           |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|
| <br>Rua Miguel Vianna, nº 81, Sala 12<br>Bairro Morro Chic<br>CEP: 37500-080 - Itajubá / MG<br>Tel: (35) 3623-5720<br>www.dacengenharia.com.br | GERÊNCIA DE PROJETOS<br>PEDRO HENRIQUE JUSTINIANO<br>ENG. CIVIL           |
|                                                                                                                                                                                                                                     | COORDENAÇÃO DE PROJETOS<br>ALOISIO CAETANO FERREIRA<br>CREA: MG-97.132/D  |
|                                                                                                                                                                                                                                     | RESPONSÁVEL TÉCNICO<br>ENGº CIVIL FLÁVIA C. BARBOSA<br>CREA: MG-187.842/D |
|                                                                                                                                                                                                                                     | PROJETO<br>ENG. CIVIL WILLIAM BARADEL LARI                                |
| DESENHO<br>DAVI VELOSO ALVES                                                                                                                                                                                                        |                                                                           |

|                                                                                                        |  |                              |                |
|--------------------------------------------------------------------------------------------------------|--|------------------------------|----------------|
| EMPREENDIMENTO<br>REFORMA E AMPLIAÇÃO DA E.M. DR. JOSÉ RIBEIRO DE CARVALHO                             |  |                              |                |
| ENDEREÇO<br>RUA DAS HORTÊNCIAS - B. CONJ. H. R. DAS MARGARIDAS<br>SANTA RITA DO SAPUCAÍ - MINAS GERAIS |  | DISCIPLINA<br>ESTRUTURAL     |                |
| ASSUNTO<br>PROJETO ESTRUTURAL<br>DETALHAMENTO DAS LAJES (COBERTURA E CASA DE MÁQUINAS)                 |  | FASE DO PROJETO<br>EXECUTIVO |                |
| DATA INICIAL<br>08/08/2022                                                                             |  | ESCALA<br>INDICADA           | REVISÃO<br>R00 |
| ARQUIVO<br>DAC-PMSRS-JRC-FSI-PE-EST-R00.DWG                                                            |  | FOLHA Nº.<br>11/12           |                |