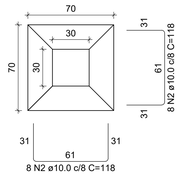
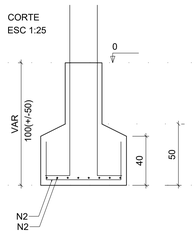
S1=S2=S3=S4=S5=S6=S7=S8=S9=S10=S11=S12 =S13=S24

PLANTA
ESC 1:25

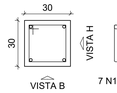


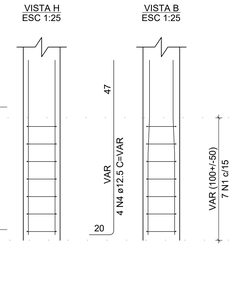
CORTE
ESC 1:25



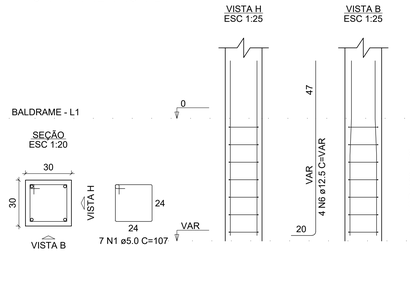
BALDRAME - L1

SEÇÃO
ESC 1:20

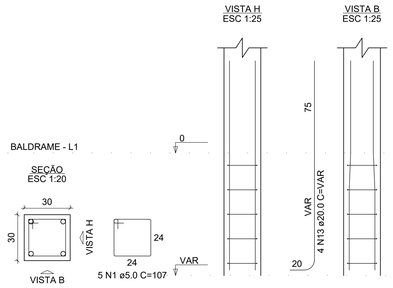




P1=P2=P3=P4=P5=P6=P7=P8=P9= =P10=P11=P12=P13=P24

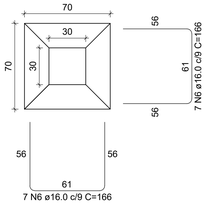


P14=P15=P16=P17=P18=P19=P20= =P21=P22=P23

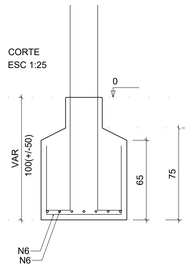


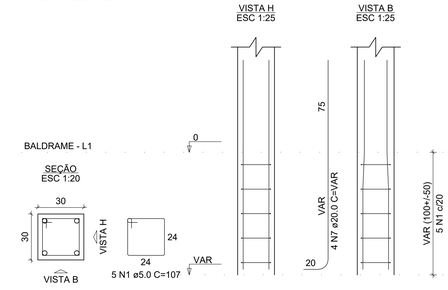
S14=S15=S16=S17=S18=S19=S20=S21=S22=S23

PLANTA
ESC 1:25



P14=P15=P16=P17=P18=P19=P20= =P21=P22=P23





RELAÇÃO DO AÇO

14xP1-L1	10xP14-L1	2xP25-L3
5xP27-L3	14xS1-L1	10xS14-L1
2xS25-L3	5xS27-L3	

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	211	107	22577
CA50	2	10.0	304	118	35872
	3	10.0	28	118	3304
	4	12.5	56	VAR	VAR
	5	12.5	28	VAR	VAR
	6	16.0	140	166	23240
	7	20.0	40	VAR	VAR

RESUMO DO AÇO

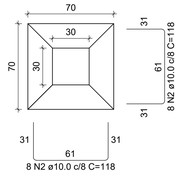
AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	10.0	391.8	265.7
	12.5	120.1	127.3
	16.0	232.4	403.5
	20.0	74	200.7
CA60	5.0	225.8	38.3

PESO TOTAL (kg)	
CA50	997.2
CA60	38.3

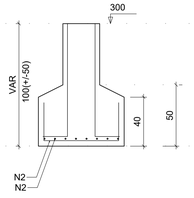
Volume de concreto (C-25) = 9.39 m³
Área de forma = 57.32 m²

S27=S28=S29=S30=S31

PLANTA
ESC 1:25



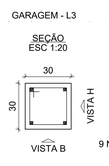
CORTE
ESC 1:25

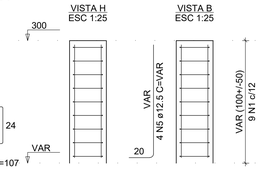


P27=P28=P29=P30=P31

GARAGEM - L3

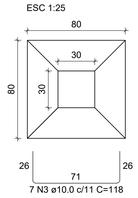
SEÇÃO
ESC 1:20



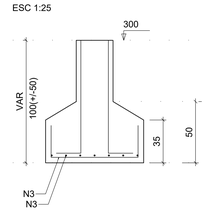


S25=S26

PLANTA
ESC 1:25



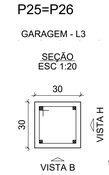
CORTE
ESC 1:25

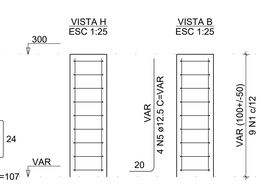


P25=P26

GARAGEM - L3

SEÇÃO
ESC 1:20

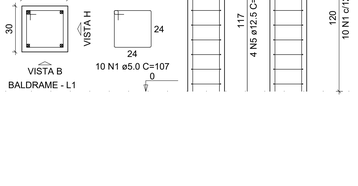




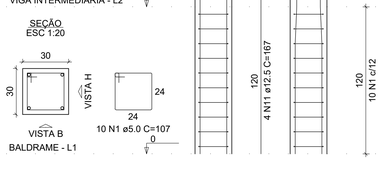
P1=P2=P3=P4=P5=P6=P7=P8=P9= =P10=P11=P12

VIGA INTERMEDIARIA - L2

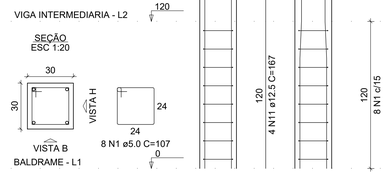
SEÇÃO
ESC 1:20



P13=P23=P24



P14=P15=P16=P17=P18=P19=P20=P21= =P22



RELAÇÃO DO AÇO

12xP1-L2	14xP1-L1	8xP13-L4
2xP13-L3	3xP13-L2	5xP14-L3
9xP14-L2	10xP14-L1	4xP15-L4
4xP15-L3	P18-L3	7xP25-L3

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	610	107	65270
	2	5.0	92	63	5796
CA50	3	10.0	16	97	1552
	4	10.0	16	75	1200
	5	12.5	48	117	5616
	6	12.5	56	VAR	VAR
	7	12.5	32	97	3104
	8	12.5	46	177	8142
	9	12.5	30	94	2820
	10	12.5	2	227	454
	11	12.5	48	167	8016
	12	12.5	28	VAR	VAR
	13	20.0	40	VAR	VAR

RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	10.0	27.5	18.7
	12.5	401.6	425.6
	20.0	74	200.7
CA60	5.0	710.7	120.5

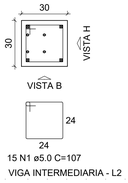
PESO TOTAL (kg)	
CA50	645
CA60	120.5

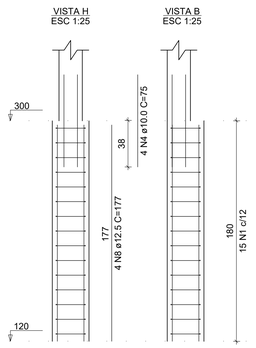
Volume de concreto (C-25) = 6.14 m³
Área de forma = 85.20 m²

P15=P16=P22=P23

GARAGEM - L3

SEÇÃO
ESC 1:20

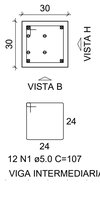


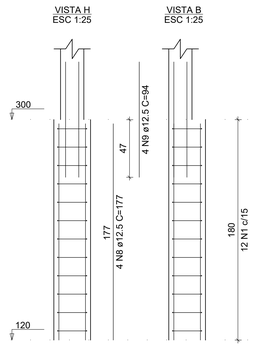


P18

GARAGEM - L3

SEÇÃO
ESC 1:20

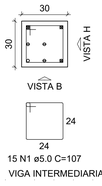


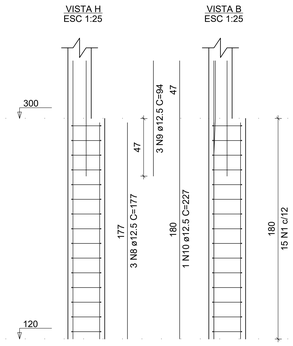


P13=P24

GARAGEM - L3

SEÇÃO
ESC 1:20

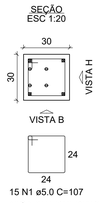


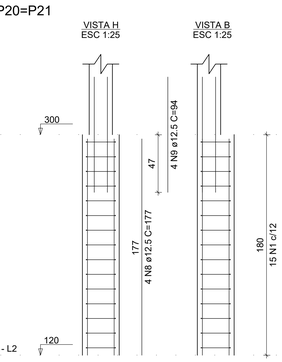


P14=P17=P19=P20=P21

GARAGEM - L3

SEÇÃO
ESC 1:20





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trmunchen@outlook.com (51) 9 9509 6182

OBRA: NOVA SEDE DEFESA CIVÍL E CORPO DE BOMBEIROS	ÁREA À CONSTRUIR: 644,46 m²
LOCAL: Rua Firmino Britz, S/N Centro - Feliz	EQUIPE TÉCNICA: TRMUNCHEN ENGENHARIA
PROPRIETARIO: MUNICÍPIO DE FELIZ CNPJ: 87.838.330/0001-39	RESP. TÉCNICO - ENGENHEIRO CIVIL: TIAGO RODRIGO MÜNCHEN CREA/RS: 251585
CONTEÚDO: MURO SAPATAS E PILARES	PROJETO: PROJETO ESTRUTURAL

ESCALA:	DESENHISTA:	DATA:	FOLHA:
INDICADA	TIAGO RODRIGO MÜNCHEN	JUL/2026	11/ 18

DIREITOS AUTORAIS RESERVADOS. PROIBIDA A REPRODUÇÃO TOTAL OU PARCIAL.