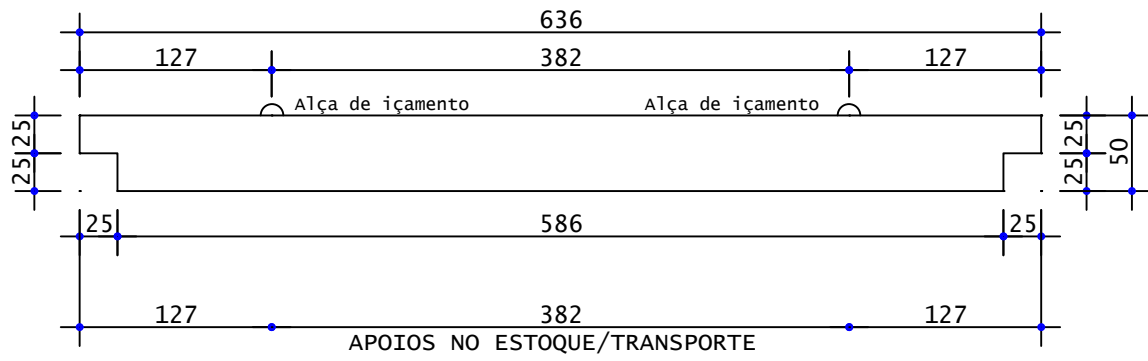
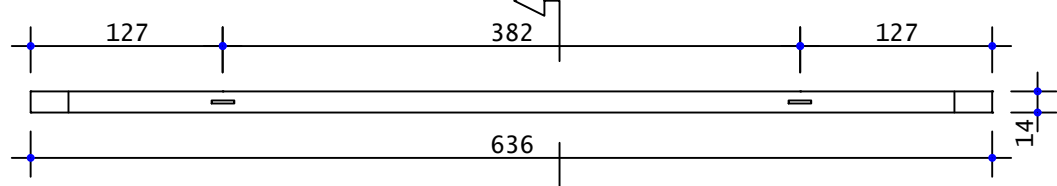


VP19

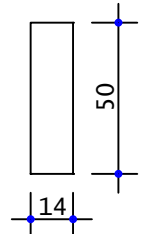
ELEVÇÃO



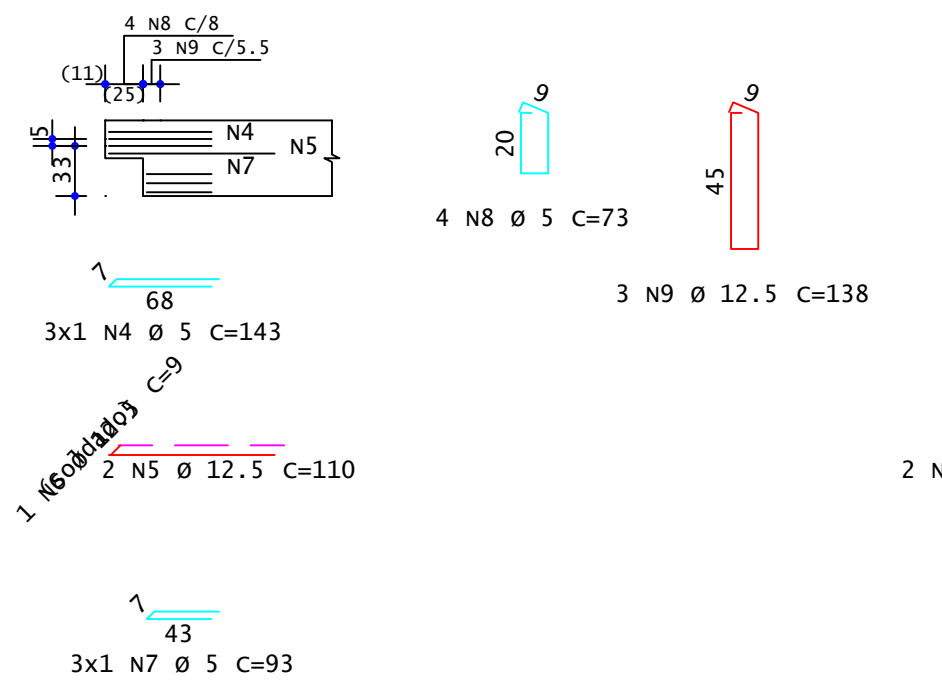
PLANTA



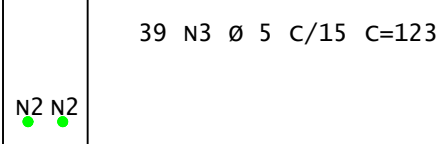
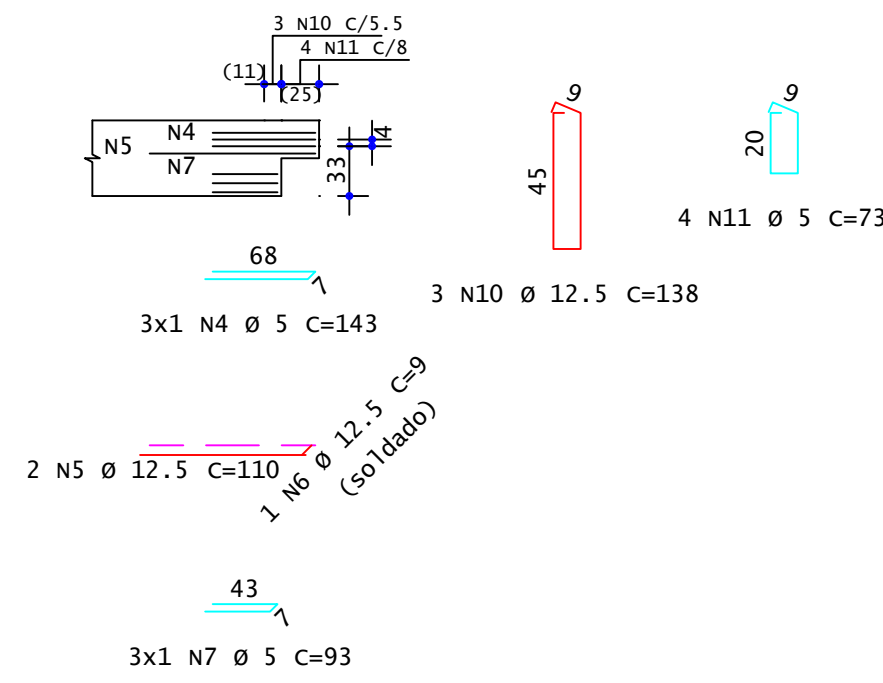
SEÇÃO



DETALHE INICIAL



DETALHE FINAL



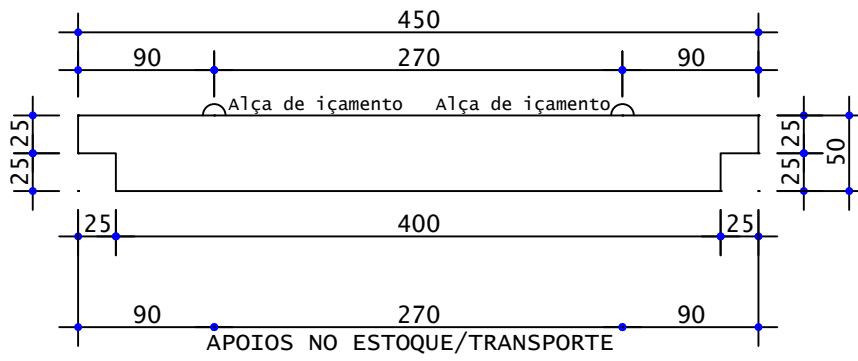
Pavimento	Quant	Volume unit (m³)	Volume total (m³)
Primeiro Lance(1x)	1	0.428	0.428
Térreo(1x)	1	0.428	0.428
TOTAIS	2		0.855

ACO	POS	BIT mm	QUANT	COMPRIMENTO UNIT cm	TOTAL cm
VP19 (X2)					
50A	1	10	4	655	2620
50A	2	12.5	4	615	2460
60A	3	5	78	123	9594
60A	4	5	12	143	1716
50A	5	12.5	8	110	880
50A	6	12.5	4	9	36
60A	7	5	12	93	1116
60A	8	5	8	73	584
50A	9	12.5	6	138	828
50A	10	12.5	6	138	828
60A	11	5	8	73	584

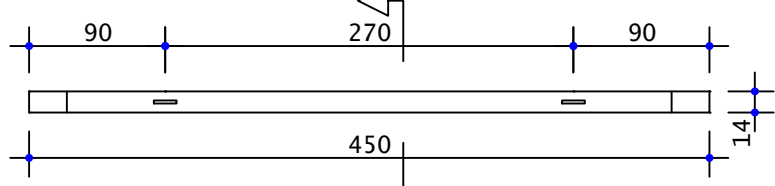
ACO	BIT mm	RESUMO DE ACO BIT COMPR m	PESO kgf
60A	5	136	21
50A	10	26	16
50A	12.5	50	48
Peso Total 60A =			21 kgf
Peso Total 50A =			65 kgf

VP20

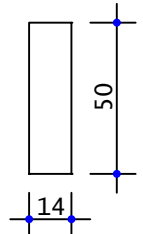
ELEVÇÃO



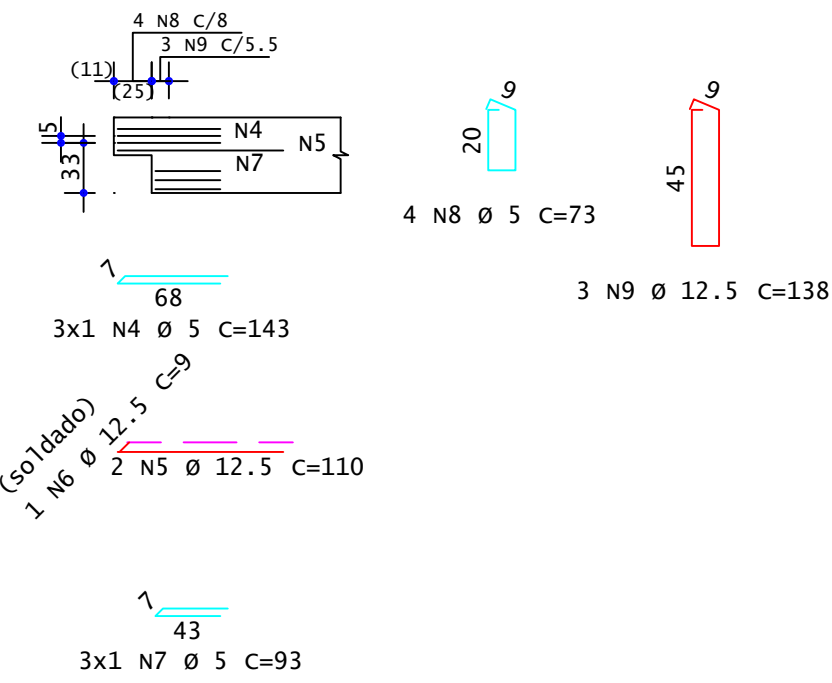
PLANTA



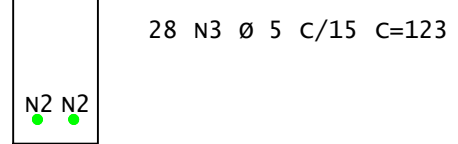
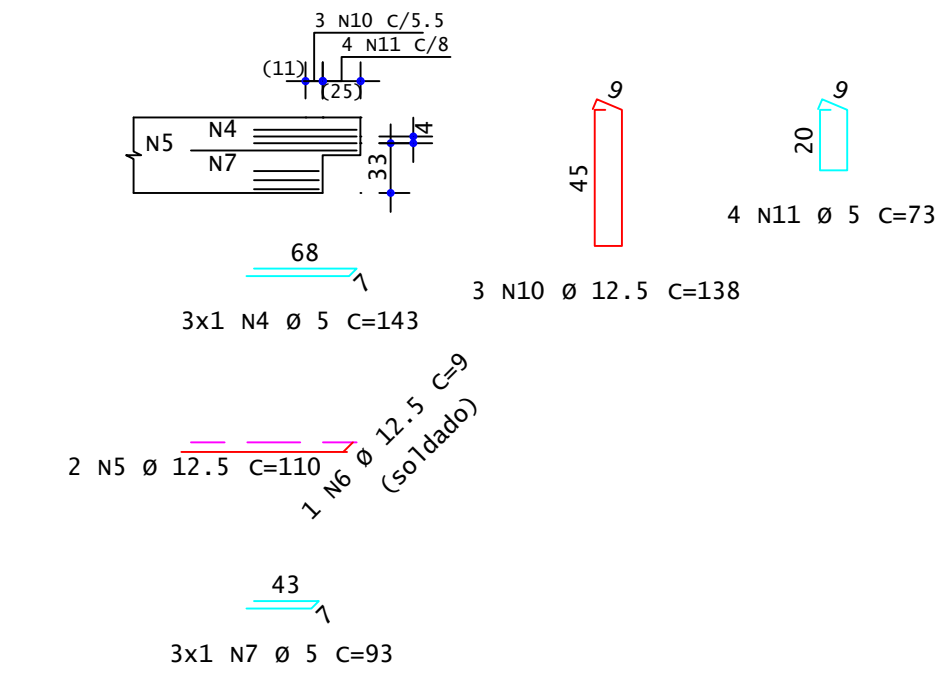
SEÇÃO



DETALHE INICIAL



DETALHE FINAL



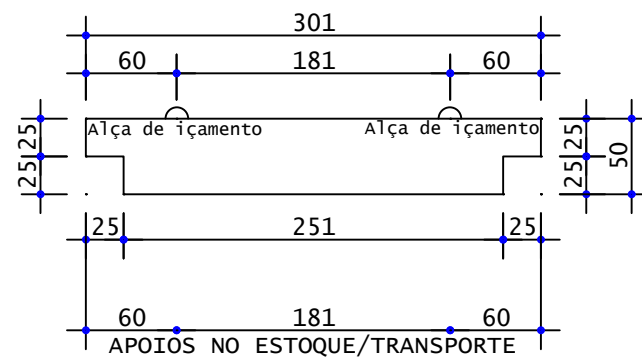
Pavimento	Quant	Volume unit (m³)	Volume total (m³)
Primeiro Lance(1x)	1	0.298	0.298
Térreo(1x)	1	0.298	0.298
TOTAIS	2		0.595

ACO	POS	BIT mm	QUANT	COMPRIMENTO UNIT cm	TOTAL cm
VP20 (X2)					
50A	1	10	4	469	1876
50A	2	10	4	425	1700
60A	3	5	56	123	6888
60A	4	5	12	143	1716
50A	5	12.5	8	110	880
50A	6	12.5	4	9	36
60A	7	5	12	93	1116
60A	8	5	8	73	584
50A	9	12.5	6	138	828
50A	10	12.5	6	138	828
60A	11	5	8	73	584

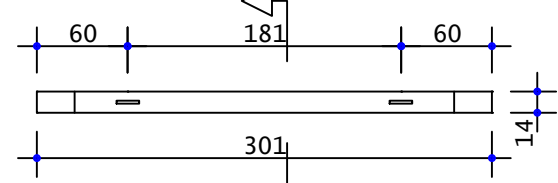
ACO	BIT mm	RESUMO DE ACO BIT COMPR m	PESO kgf
60A	5	109	17
50A	10	36	22
50A	12.5	76	25
Peso Total 60A =			17 kgf
Peso Total 50A =			47 kgf

VP21

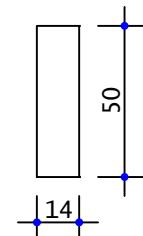
ELEVÇÃO



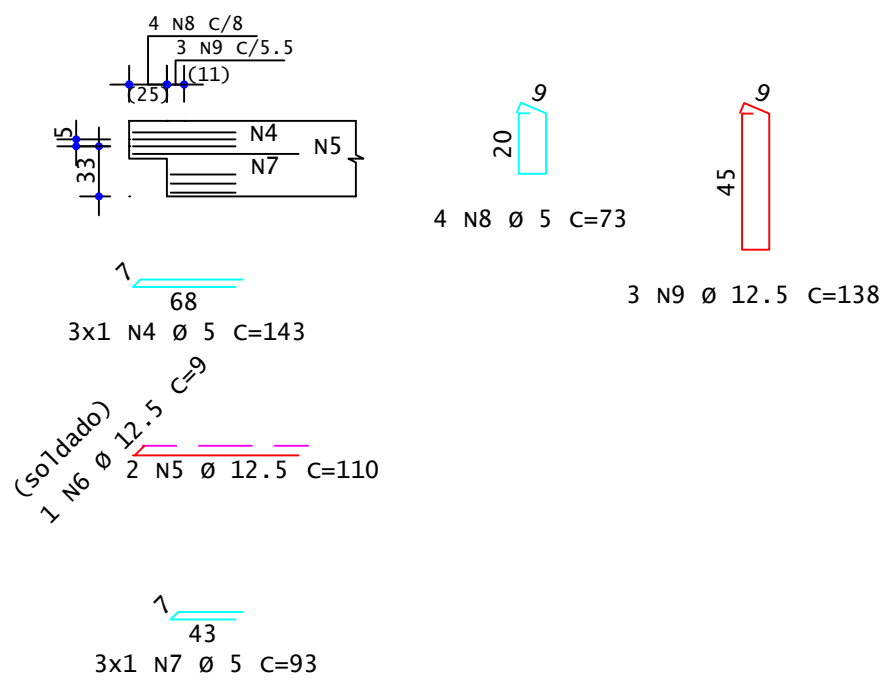
PLANTA



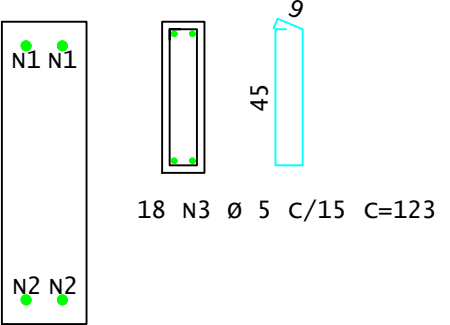
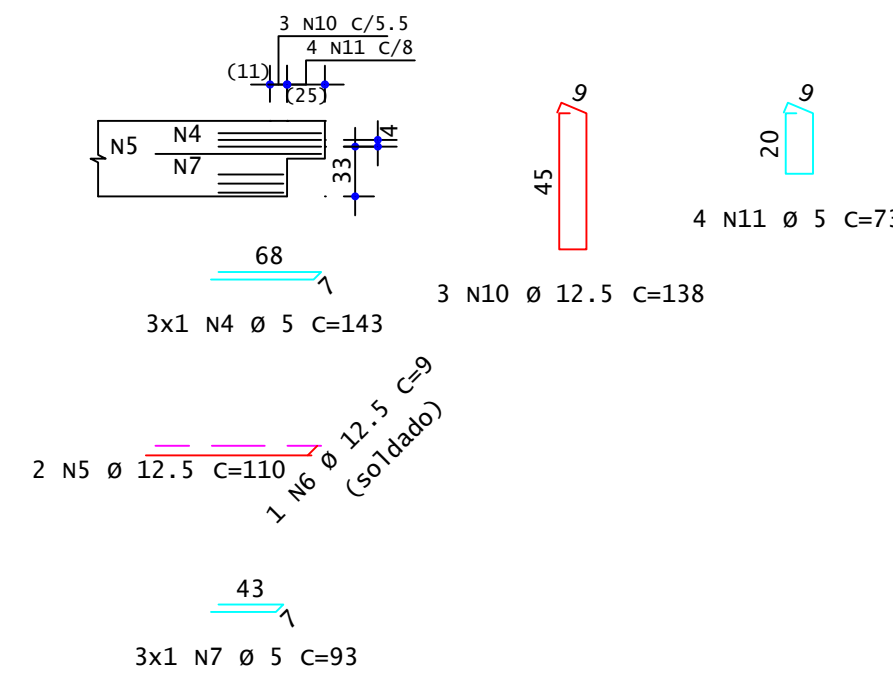
SEÇÃO



DETALHE INICIAL



DETALHE FINAL



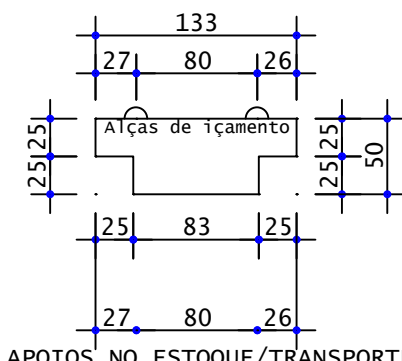
Pavimento	Quant	Volume unit (m³)	Volume total (m³)
Primeiro Lance(1x)	1	0.193	0.193
Térreo(1x)	1	0.193	0.193
TOTAIS	2		0.386

ACO	POS	BIT mm	QUANT	COMPRIMENTO UNIT cm	TOTAL cm
VP21 (X2)					
50A	1	10	4	320	1280
50A	2	10	4	276	1104
60A	3	5	36	123	4428
60A	4	5	12	143	1716
50A	5	12.5	8	110	880
50A	6	12.5	4	9	36
60A	7	5	12	93	1116
60A	8	5	8	73	584
50A	9	12.5	6	138	828
50A	10	12.5	6	138	828
60A	11	5	8	73	584

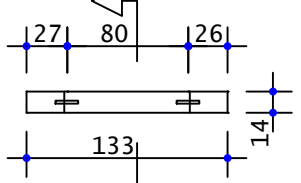
ACO	BIT mm	RESUMO DE ACO BIT COMPR m	PESO kgf
60A	5	84	13
50A	10	24	15
50A	12.5	26	25
Peso Total 60A =			13 kgf
Peso Total 50A =			39 kgf

VP22

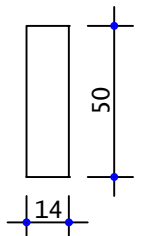
ELEVÇÃO



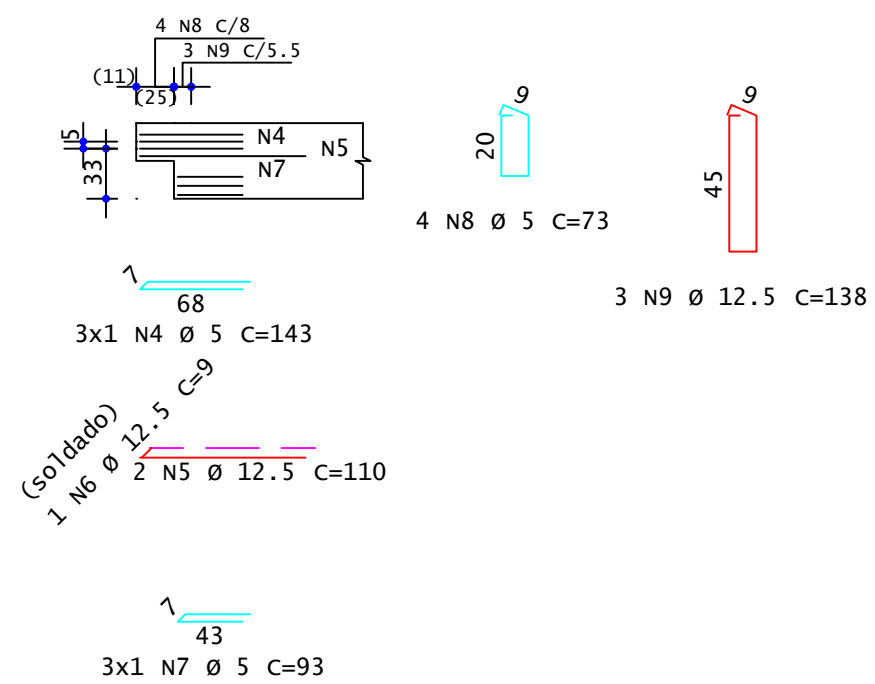
PLANTA



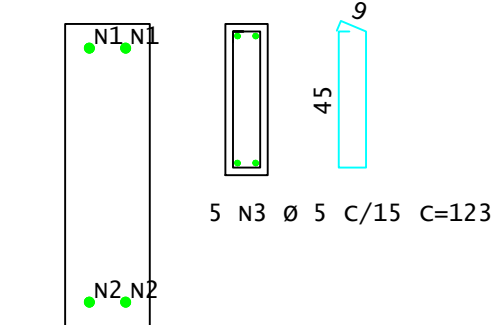
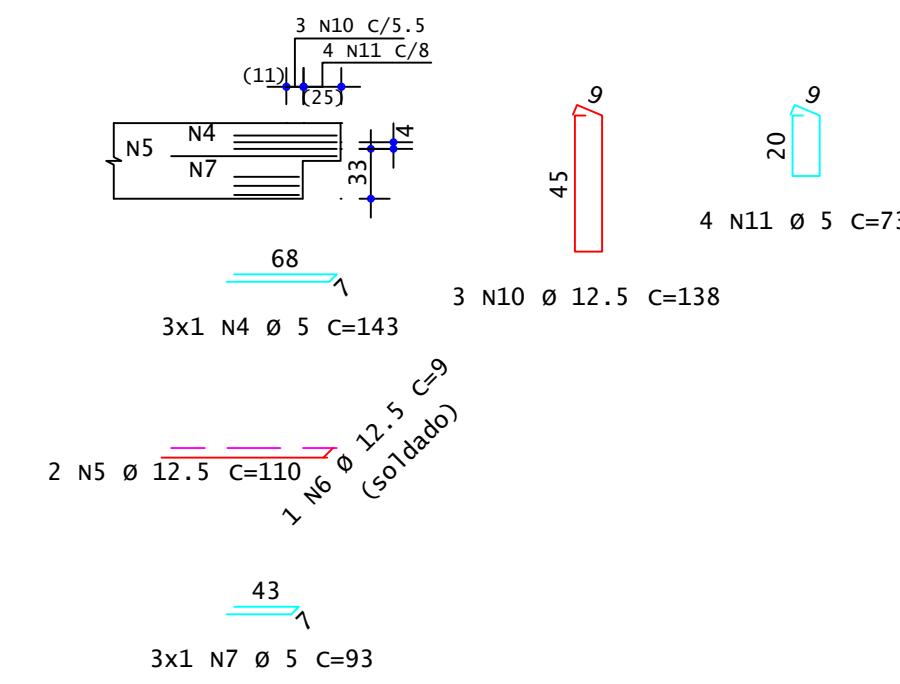
SEÇÃO



DETALHE INICIAL



DETALHE FINAL



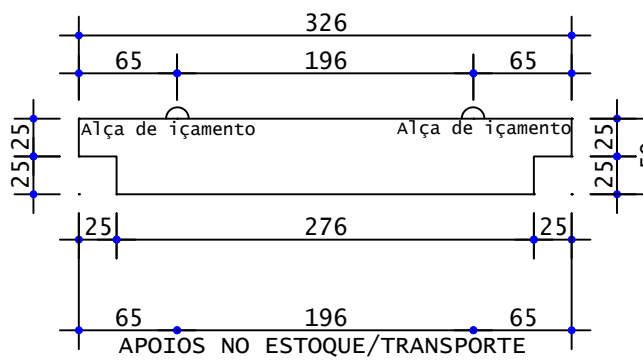
Pavimento	Quant	Volume unit (m³)	Volume total (m³)
Primeiro Lance(1x)	1	0.076	0.076
Térreo(1x)	1	0.076	0.076
TOTAIS	2		0.151

ACO	POS	BIT mm	QUANT	COMPRIMENTO UNIT cm	TOTAL cm
VP22 (X2)					
50A	1	10	4	153	612
50A	2	10	4	110	440
60A	3	5	10	123	1230
60A	4	5	12	143	1716
50A	5	12.5	8	110	880
50A	6	12.5	4	9	36
60A	7	5	12	93	1116
60A	8	5	8	73	584
50A	9	12.5	6	138	828
50A	10	12.5	6	138	828
60A	11	5	8	73	584

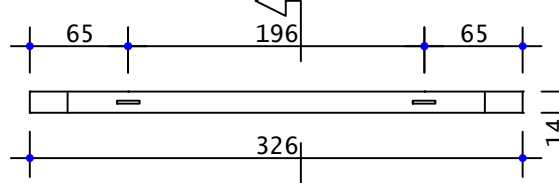
ACO	BIT mm	RESUMO DE ACO BIT COMPR m	PESO kgf
60A	5	52	8
50A	10	11	16
50A	12.5	26	25
Peso Total 60A =			8 kgf
Peso Total 50A =			31 kgf

VP23

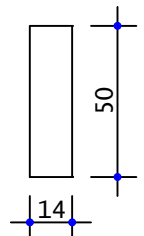
ELEVÇÃO



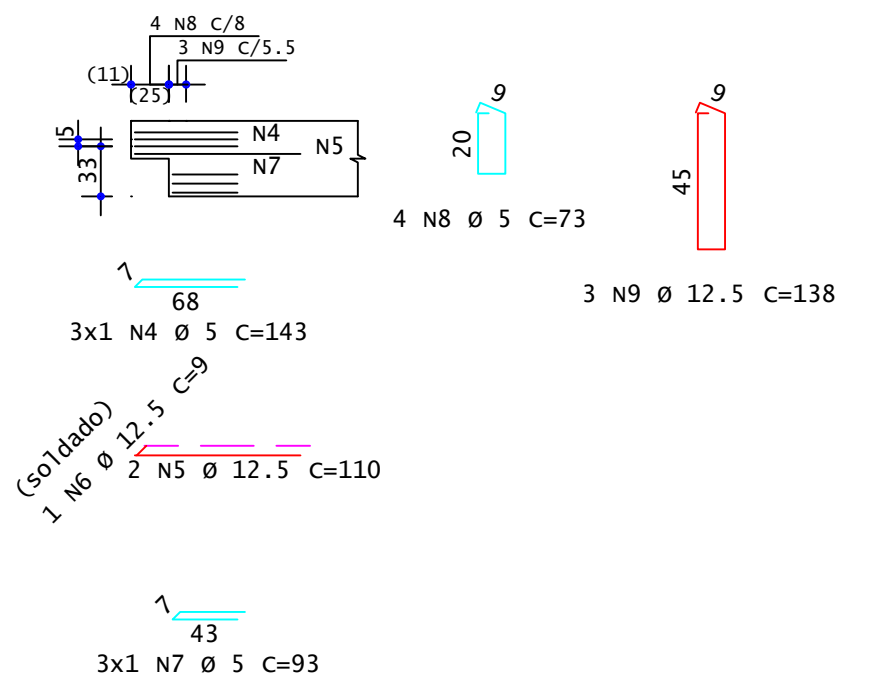
PLANTA



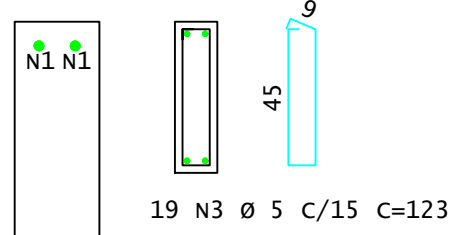
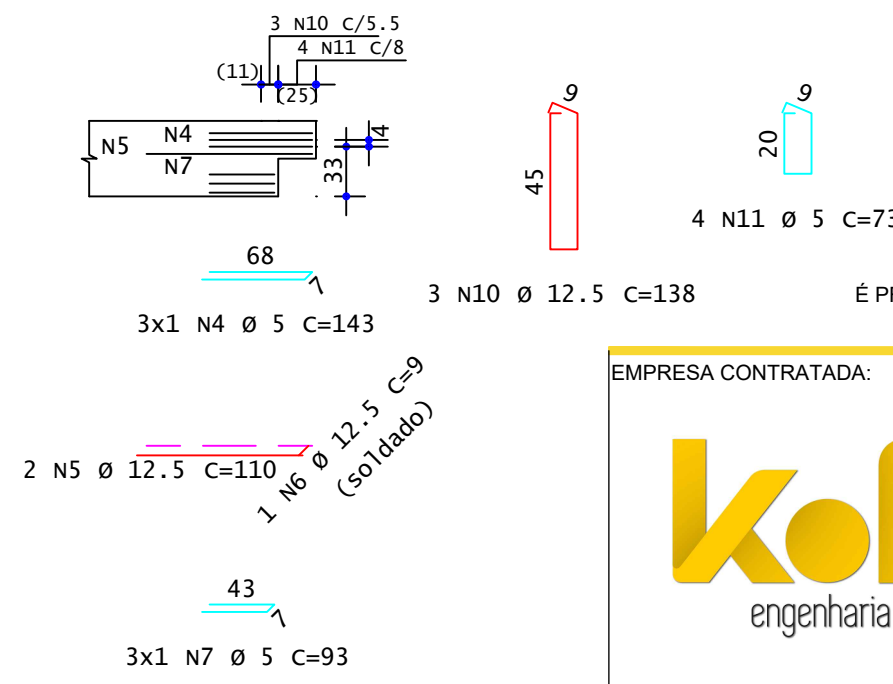
SEÇÃO



DETALHE INICIAL



DETALHE FINAL



Pavimento	Quant	Volume unit (m³)	Volume total (m³)
Primeiro Lance(1x)	1	0.211	0.211
Térreo(1x)	1	0.211	0.211
TOTAIS	2		0.421

ACO	POS	BIT mm	QUANT	COMPRIMENTO UNIT cm	TOTAL cm
VP23 (X2)					
50A	1	10	4	345	1380
50A	2	10	4	301	1204
60A	3	5	38	123	4674
60A	4	5	12	143	1716
50A	5	12.5	8	110	880
50A	6	12.5	4	9	36
60A	7	5	12	93	1116
60A	8	5	8	73	584
50A	9	12.5	6	138	828
50A	10	12.5	6	138	828
60A	11	5	8	73	584

ACO	BIT mm	RESUMO DE ACO BIT COMPR m	PESO kgf
60A	5	87	13
50A	10	26	16
50A	12.5	26	25
Peso Total 60A =			13 kgf
Peso Total 50A =			41 kgf

É PROIBIDA A REPRODUÇÃO DESTES PROJETOS, SEM A AUTORIZAÇÃO DO AUTOR  
LEIS Nº 5194 DE 24/12/1966 E Nº 9610 DE 18/02/98

EMPRESA CONTRATADA:		RESPONSÁVEL TÉCNICO:		PROPRIETÁRIO:	
		LUIZ FERNANDO C. MEGIOLARO ENGENHEIRO CIVIL CREA - PR 179004/D		PREFEITURA MUNICIPAL DE MARMELEIRO CNPJ: 76.205.665/0001-01	
OBR/ENDEREÇO:		RUA DAS GRAPIAS, 160, BAIRRO ARAUCÁRIA, MARMELEIRO - PR. CEP 85615-000			
<b>GINÁSIO EMEF PERSEVERANÇA</b>					
KOLF SERVIÇOS DE ENGENHARIA CNPJ: 07.555.412/0001-37 RUA FRIE EVERALDO, 5555, SALA 1 CHOPINZINHO - PR - 85560-000 (46) 9908-2448 GABRIEL@KOLF.FERRARI.ENG.BR		PROJETO:		DES. LUIZ	
		PROJETO ESTRUTURAL - PRÉ MOLDADO		ESCALA INDICADA	
		CONTEÚDO DA PRANCHA: DETALHAMENTO VIGAS;		DATA	OUT/2025
				FOLHA	REVISÃO
				13/16	01