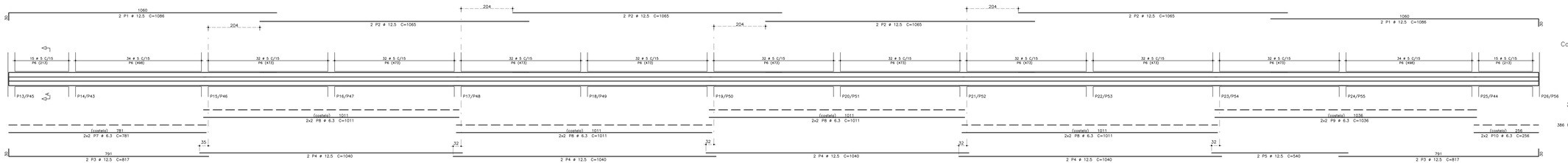
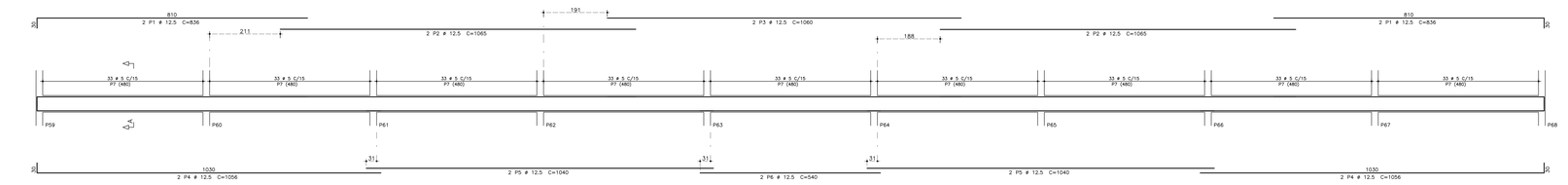
C4=C19 20/60



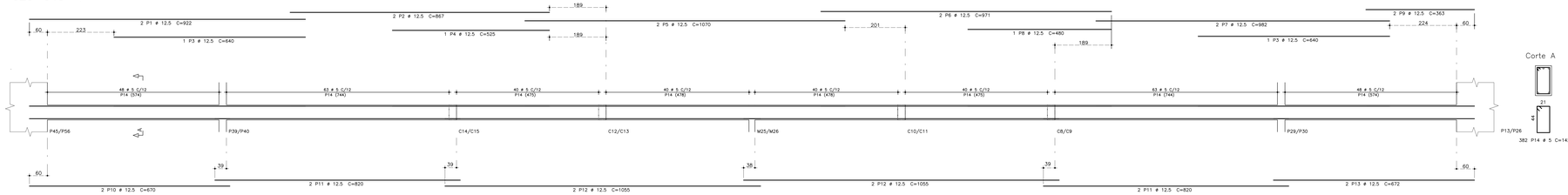
C21 14/50



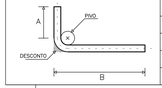
AÇO	POS	BIT (mm)	QUANT	COMPRIMENTO UNIT (cm)	COMPRIMENTO TOTAL (cm)
C4=C19 (X2)					
50	1	12.5	8	1086	8688
50	2	12.5	16	1065	17040
50	3	12.5	8	817	6536
50	4	12.5	16	1040	16640
50	5	12.5	4	540	2160
60	6	5	772	148	114256
50	7	6.3	8	781	6248
50	8	6.3	32	1011	32352
50	9	6.3	8	1036	8288
50	10	6.3	8	256	2048
C21					
50	1	12.5	4	836	3344
50	2	12.5	4	1065	4260
50	3	12.5	2	1060	2120
50	4	12.5	4	1056	4224
50	5	12.5	4	1040	4160
50	6	12.5	2	540	1080
60	7	5	297	116	34452

AÇO	POS	BIT (mm)	QUANT	COMPRIMENTO UNIT (cm)	COMPRIMENTO TOTAL (cm)
C23=C48 (X2)					
50	1	12.5	4	922	3688
50	2	12.5	4	867	3468
50	3	12.5	8	840	6720
50	4	12.5	2	525	1050
50	5	12.5	4	1070	4280
50	6	12.5	4	971	3884
50	7	12.5	4	982	3928
50	8	12.5	2	480	960
50	9	12.5	4	893	3572
50	10	12.5	4	930	3720
50	11	12.5	8	820	6560
50	12	12.5	8	1055	8440
50	13	12.5	4	672	2688
60	14	5	764	142	108488
C24=C46 (X2)					
50	1	12.5	4	689	2756
50	2	12.5	4	733	2932
50	3	12.5	4	457	1828
50	4	12.5	4	937	3748
60	5	5	166	148	24568
50	6	6.3	8	419	3352
50	7	6.3	8	899	7192
C25=C47 (X2)					
50	1	12.5	4	689	2756
50	2	12.5	4	733	2932
50	3	12.5	4	457	1828
50	4	12.5	4	937	3748
60	5	5	166	148	24568
50	6	6.3	8	419	3352
50	7	6.3	8	899	7192
C26=C28=C30=C32=C38=C40=C42=C44 (X8)					
50	1	12.5	16	946	15136
50	2	12.5	16	660	10560
50	3	12.5	8	480	3840
50	4	12.5	16	490	7840
50	5	12.5	16	1060	16960
60	6	5	646	148	95604
50	7	6.3	32	424	13568
50	8	6.3	32	877	28064

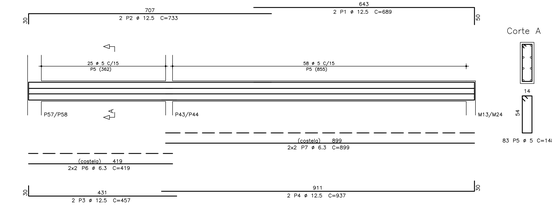
C23=C48 27/50



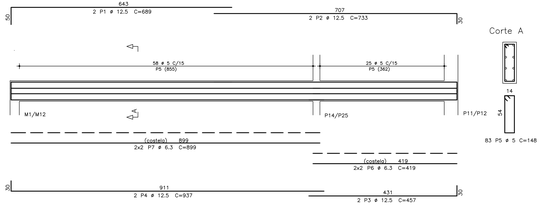
RESUMO AÇO CA 50-60			
AÇO	BIT (mm)	COMPR (m)	PESO (kg)
60	5	1122	644
50	6.3	1377	879
50	12.5	1909	1909
Peso Total	60 =		644 kg
Peso Total	50 =		2788 kg

DETALHE DE DOBRAMENTO DOS FERROS	Ø	RAIO (cm)	DESCONTO(cm)
	10.0	7.5	3.0
	12.5	9.3	4.0
	16.0	12.0	5.0
	20.0	15.0	6.0
	25.0	18.5	8.0

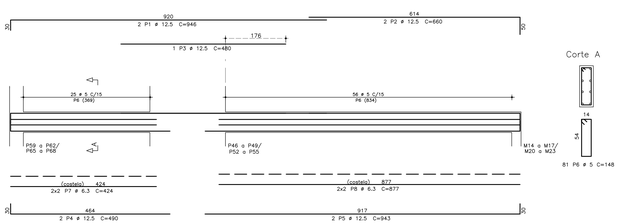
C24=C46 20/60



C25=C47 20/60



C26=C28=C30=C32=C38=C40=C42=C44 20/60



REVISÃO	DESCRIÇÃO	SOLICITADO POR	DATA	RESPONSÁVEL

TAUFIG ASFURA — CREA 7086 – PE/TN
GAMAL ASFURA — CREA 16973 – PE/TN
ITALO B. SCHMITZ — CREA 90340-MG

RUA ARNÔBIO MARQUES, 271 STO. AMARO RECIFE–PE – CEP:50.100–130.
FONE:(081)3222–6652 – FAX:3231–2500 E–MAIL:engestpe@terra.com.br

engest engenharia estrutural ltda.

OBRA	GINÁSIO DE ESPORTES LIMOEIRO – PE	(PREFEITURA DE LIMOEIRO)		
01/2017	RESP. TÉCNICO: GAMAL ASFURA	AÇO: CA– 50 e 60	ESCALA: 1:50	P 02/03
	PROJETO ESTRUTURAL	CONCRETO: fck > 35 MPa	DATA: ABRIL/2017	
	DESENHO: AMARO CORTEZ	ARQUIVO: P02–03.DWG	REVISÃO: 0	

FUNDAÇÃO – ARMAÇÃO DAS CINTAS (PARTE 02/03)