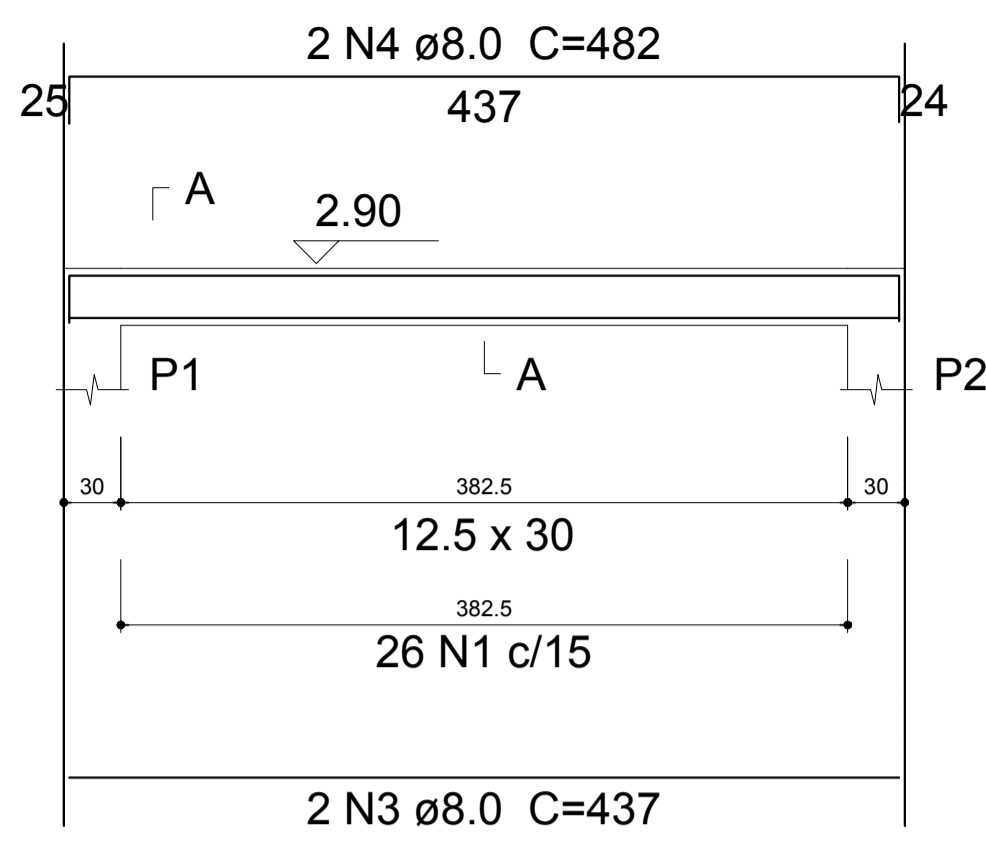


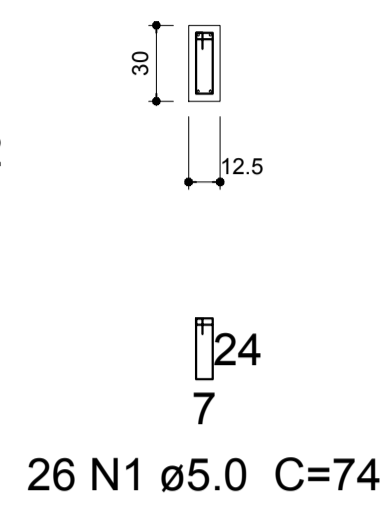
V1

ESC 1:40



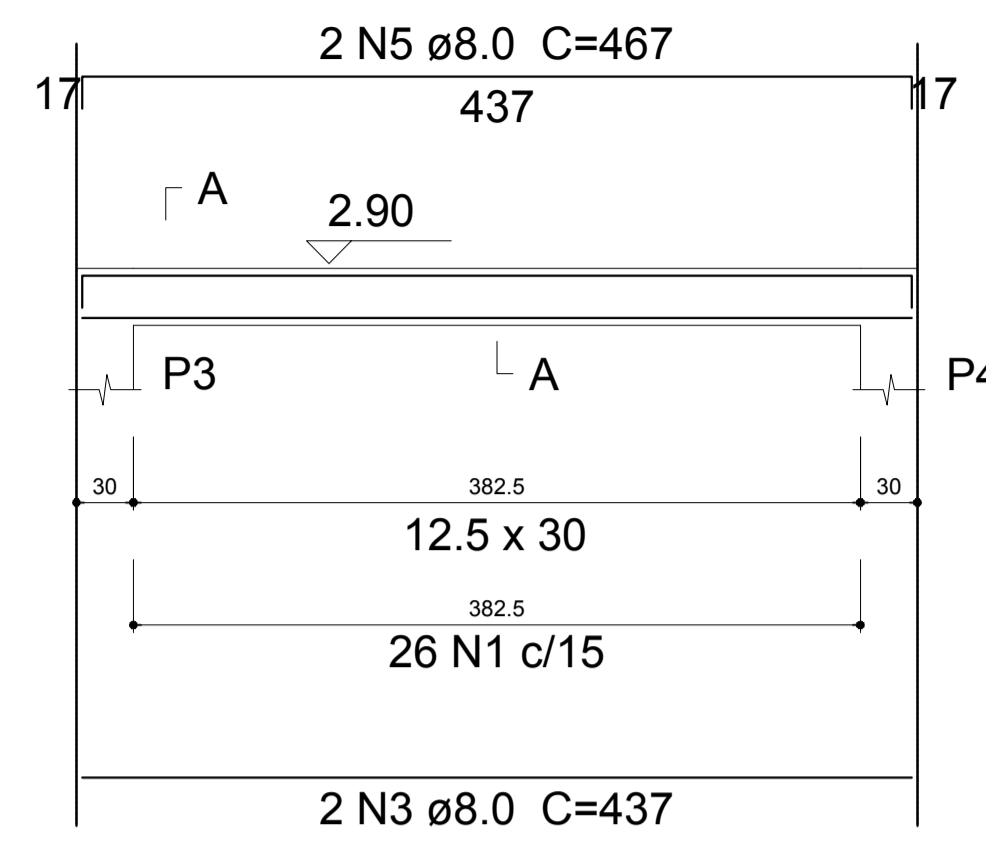
SEÇÃO A-A

ESC 1:30



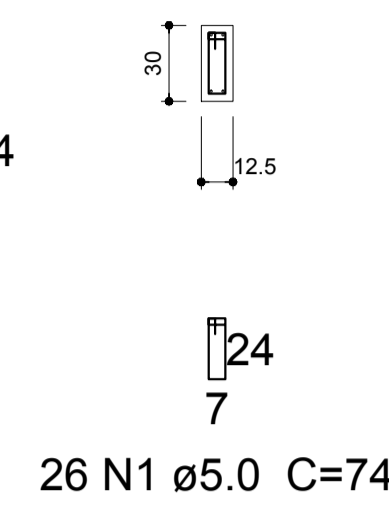
V2

ESC 1:40



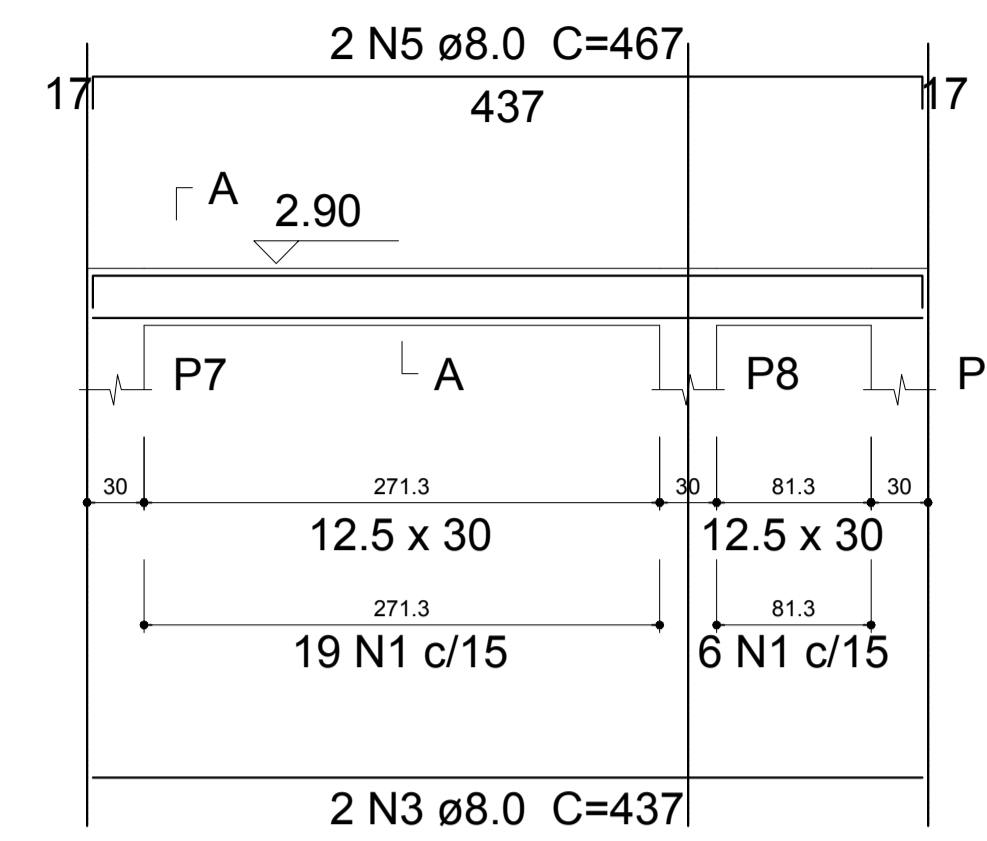
SEÇÃO A-A

ESC 1:30



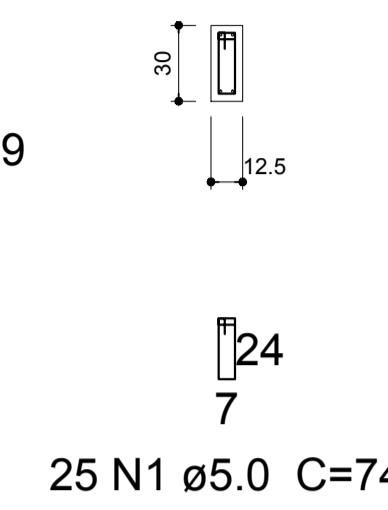
V3

ESC 1:40



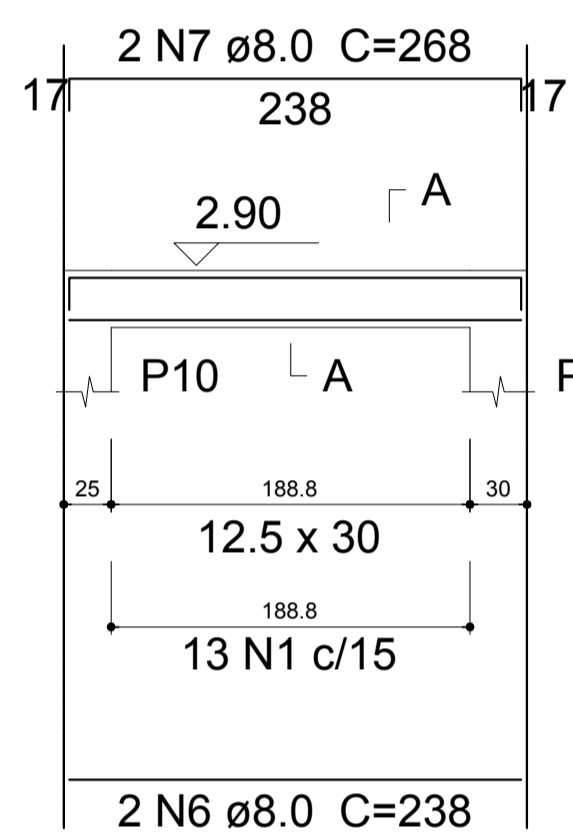
SEÇÃO A-A

ESC 1:30



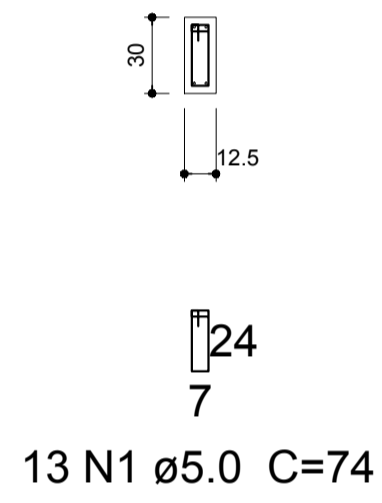
V4

ESC 1:40



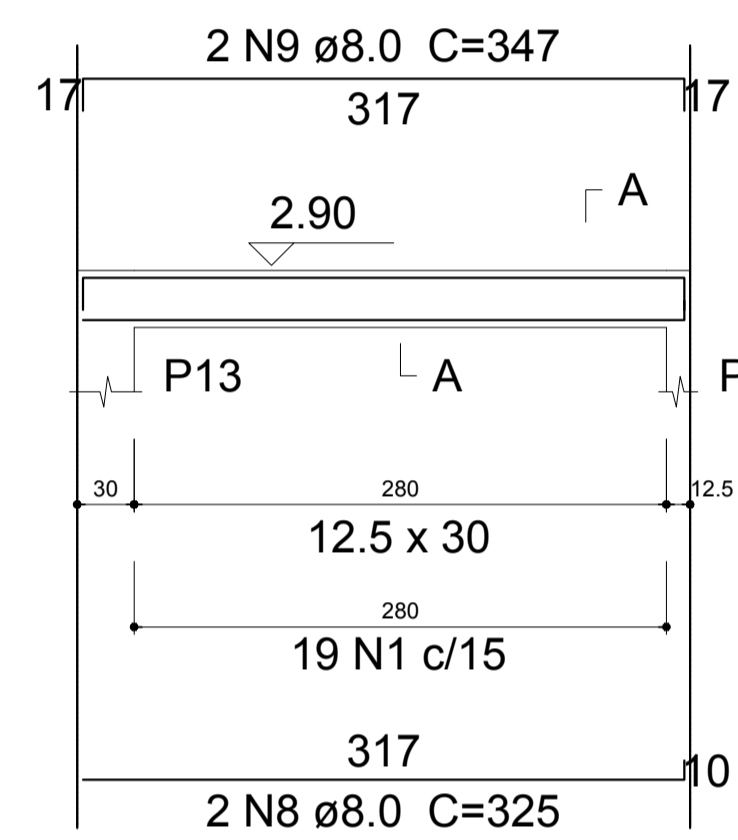
SEÇÃO A-A

ESC 1:30



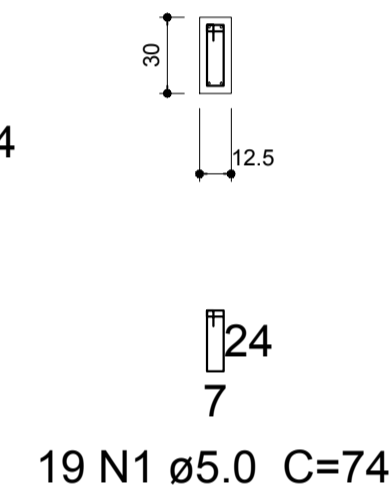
V5

ESC 1:40



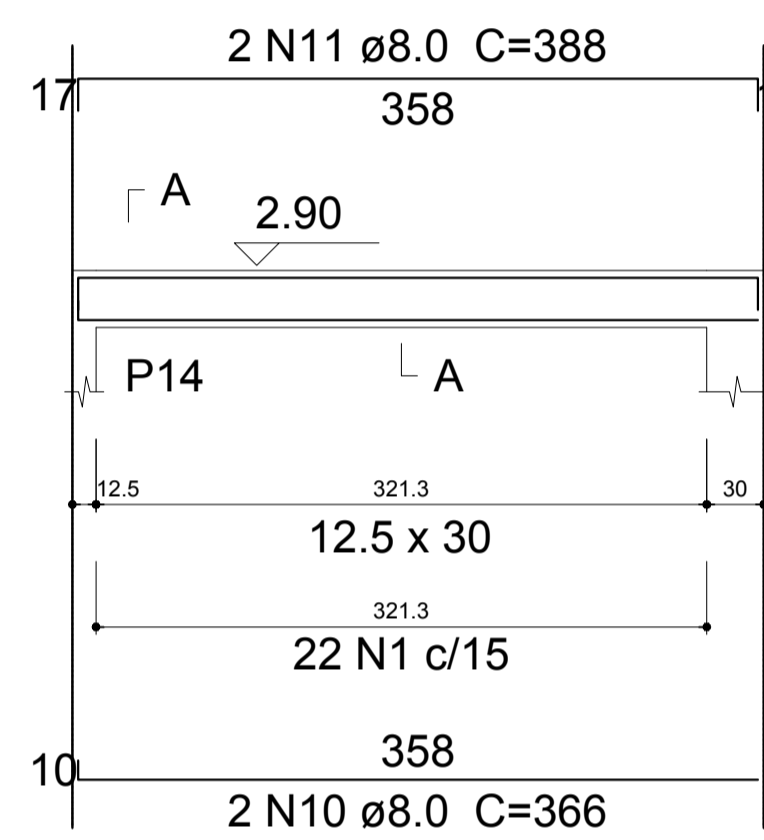
SEÇÃO A-A

ESC 1:30



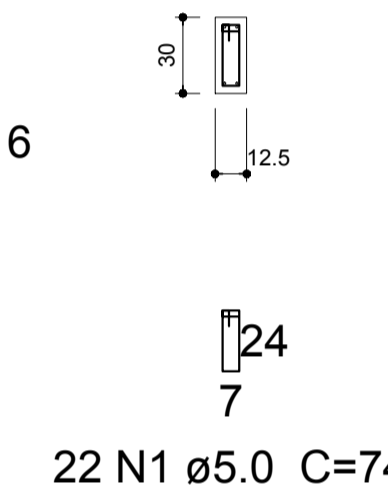
V6

ESC 1:40



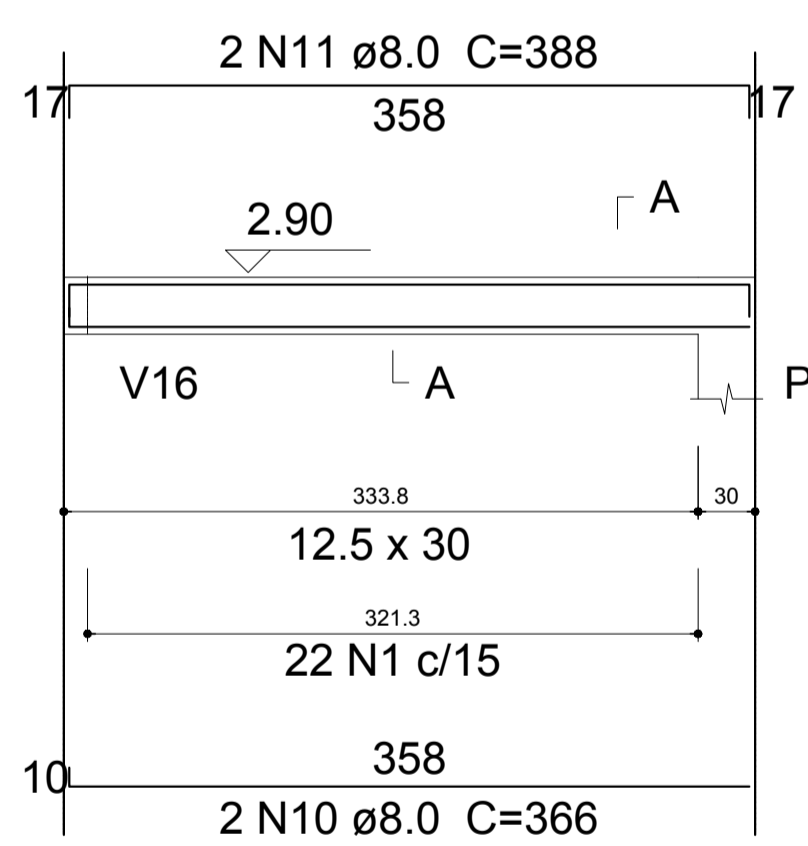
SEÇÃO A-A

ESC 1:30



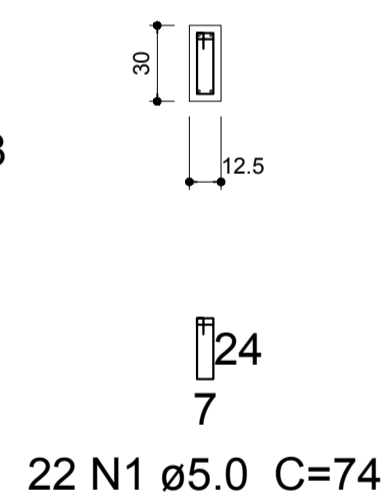
V7

ESC 1:40



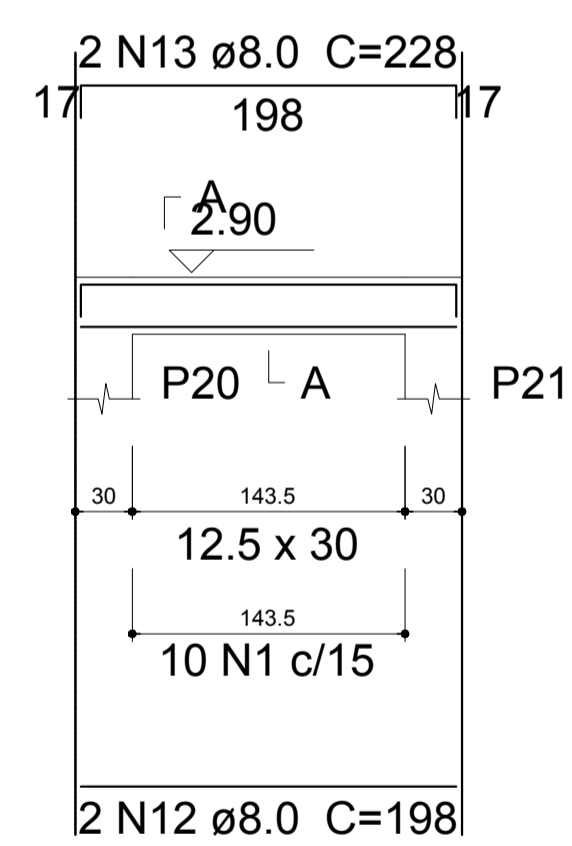
SEÇÃO A-A

ESC 1:30



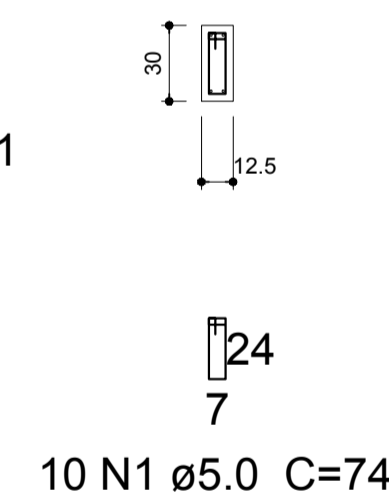
V8

ESC 1:40



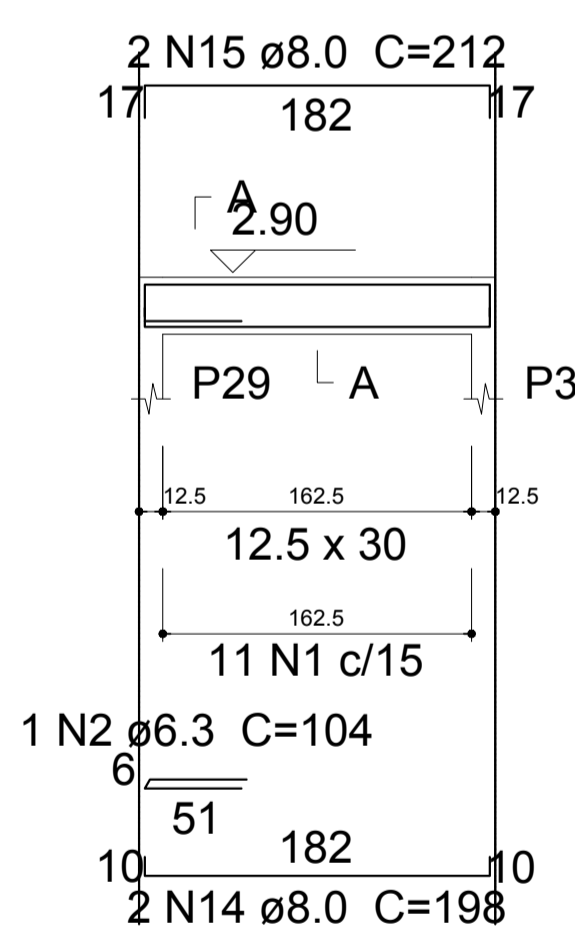
SEÇÃO A-A

ESC 1:30



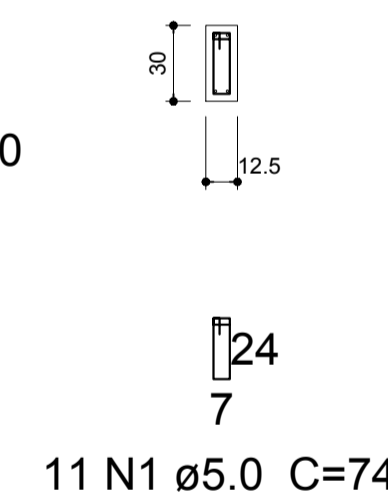
V9

ESC 1:40



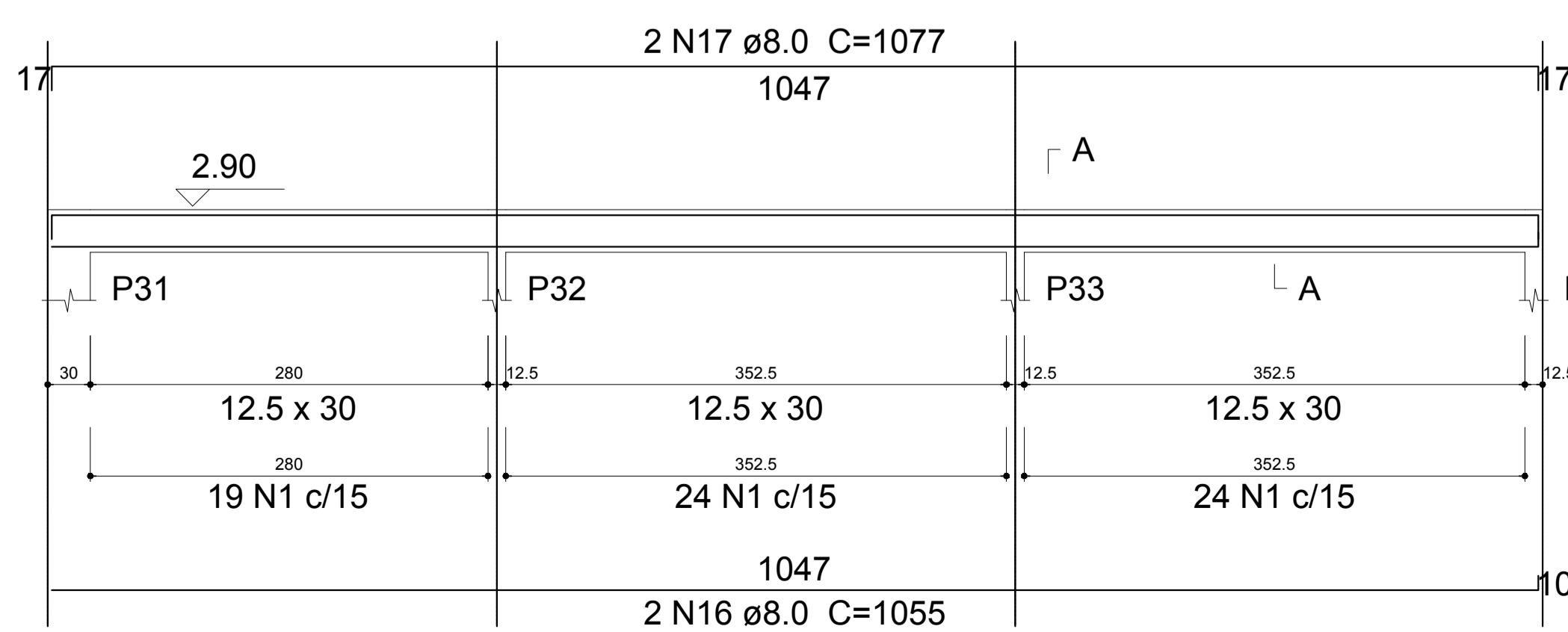
SEÇÃO A-A

ESC 1:30



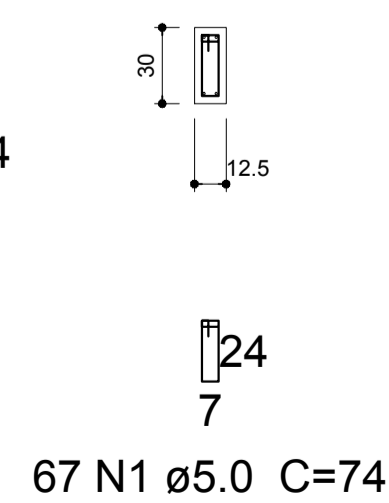
V10

ESC 1:40



SEÇÃO A-A

ESC 1:30



Relação do aço

ÁÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	241	74	17834
CA50	2	6.3	1	104	104
	3	8.0	6	437	2622
	4	8.0	2	482	964
	5	8.0	4	467	1868
	6	8.0	2	238	476
	7	8.0	2	268	536
	8	8.0	2	325	650
	9	8.0	2	347	694
	10	8.0	4	366	1464
	11	8.0	4	388	1552
	12	8.0	2	198	396
	13	8.0	2	228	456
	14	8.0	2	198	396
	15	8.0	2	212	424
	16	8.0	2	1055	2110
	17	8.0	2	1077	2154

Resumo do aço

ÁÇO	DIAM	C.TOTAL (m)	PESO + 10 % (kg)
CA50	6.3	1.1	0.3
	8.0	167.7	72.8
CA60	5.0	178.4	30.2
PESO TOTAL			
CA50	73		
CA60	30.2		

Vol. de concreto total (C-25) = 1.52 m³
 Área de forma total = 29.47 m²

PREFEITURA MUNICIPAL DE PARANAGUÁ
 ADMINISTRAÇÃO DR. EDISON DE OLIVEIRA KERSTEN
 SECRETARIA MUNICIPAL DE OBRAS PÚBLICAS

TÍTULO PROJETO DE ESTRUTURA DE CONCRETO ARMADO

OBRA REFORMA E AMPLIAÇÃO CMEI - ZULEIDE PINTO ROSA

CONTEÚDO - VIGAS - COBERTURA

PROPRIETÁRIO: PREFEITURA MUNICIPAL DE PARANAGUÁ
 C.N.P.J. 30.017.458/0001-15 AUTOR DO PROJETO: DEBORA TEMPORÃO DE AGUIAR RAMOS
 CREA: PR-25647-D

DATA: Julho/2016 ESCALA: indicada DESENHO: Debora ÁREA AMPL: 163,95m² PRANCHAS: 11/15