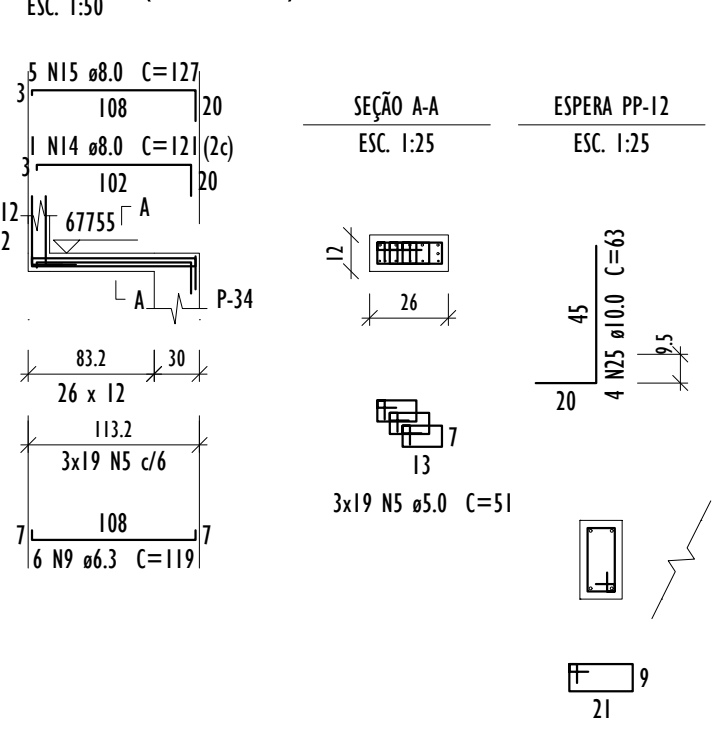
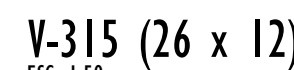
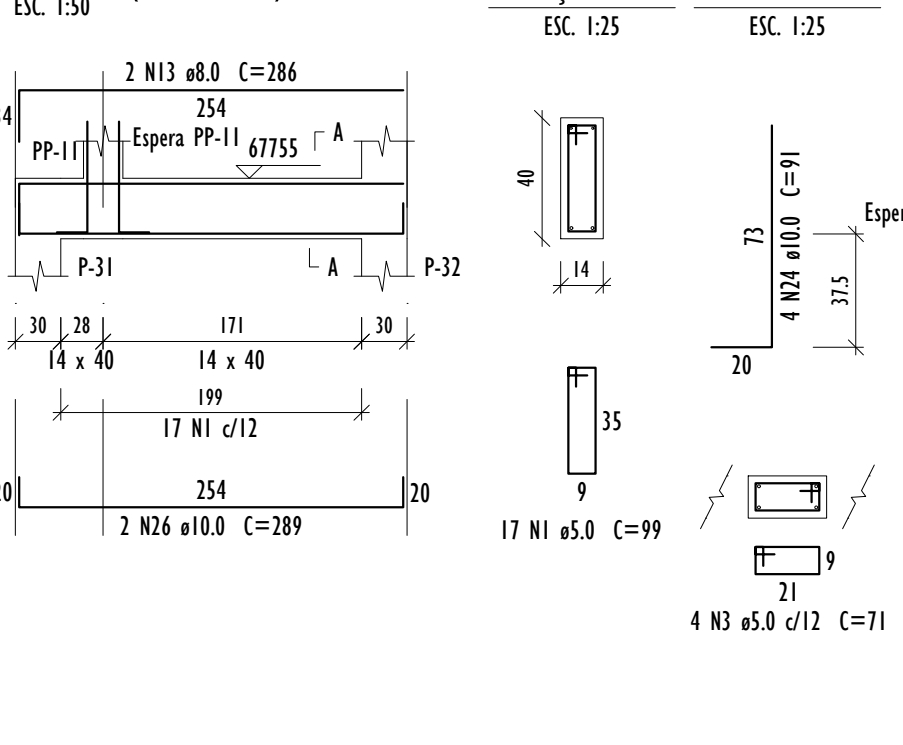
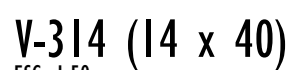
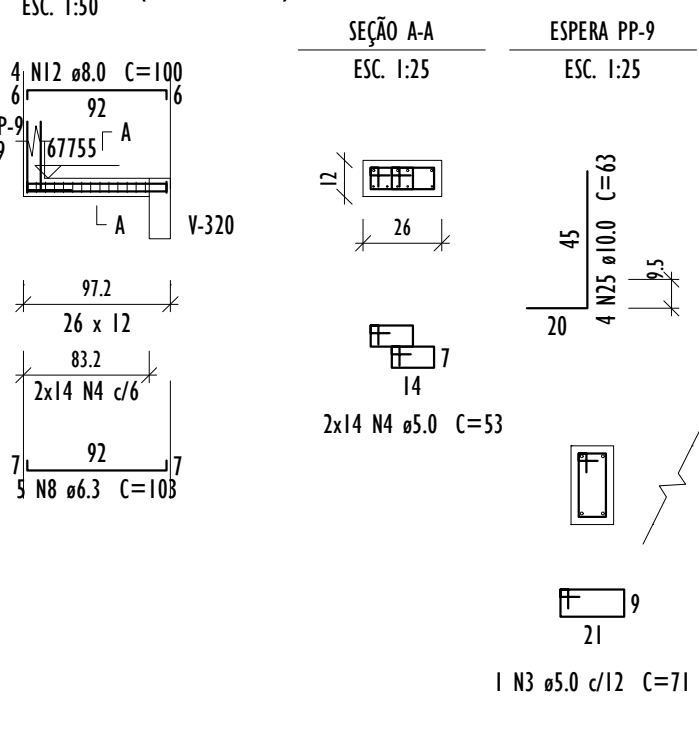
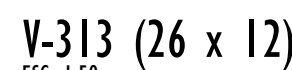
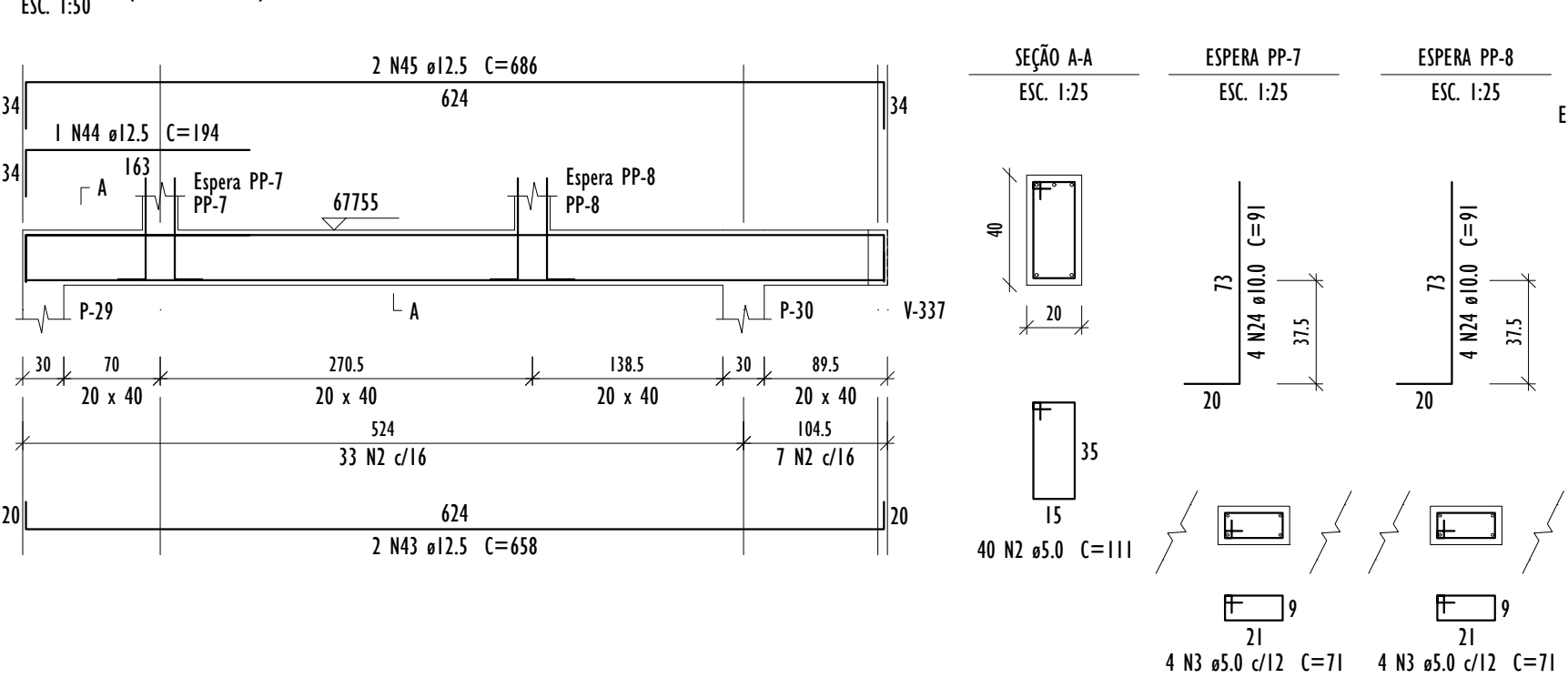
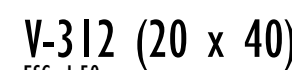
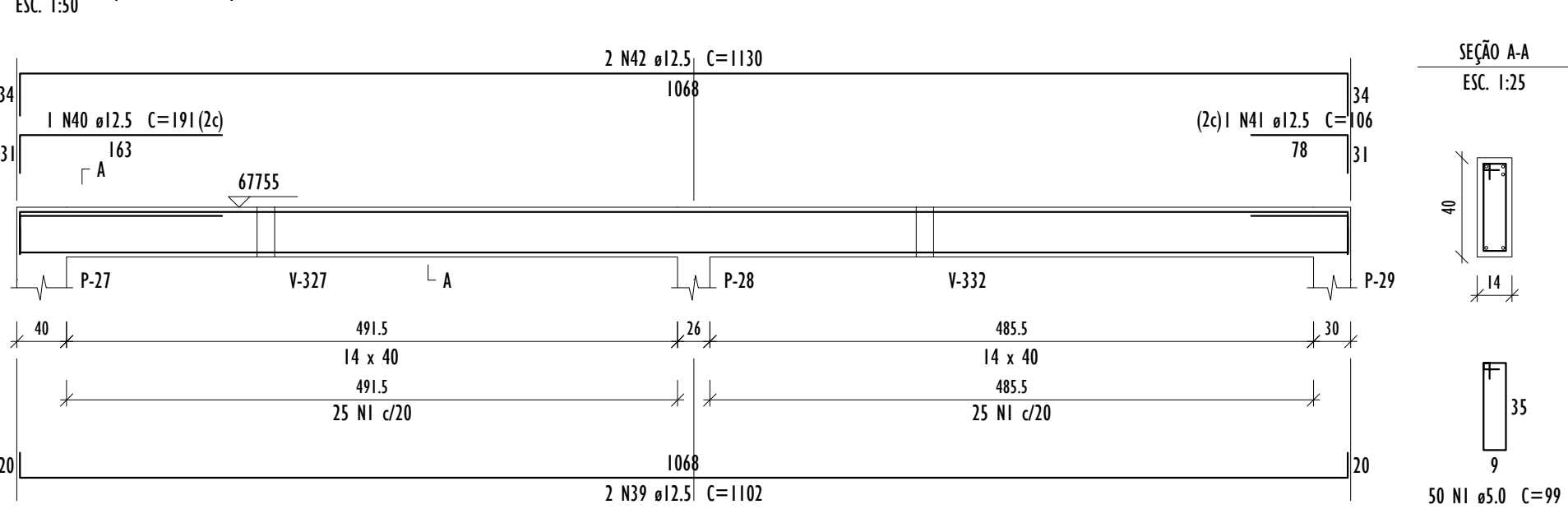
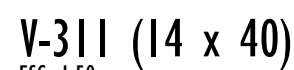
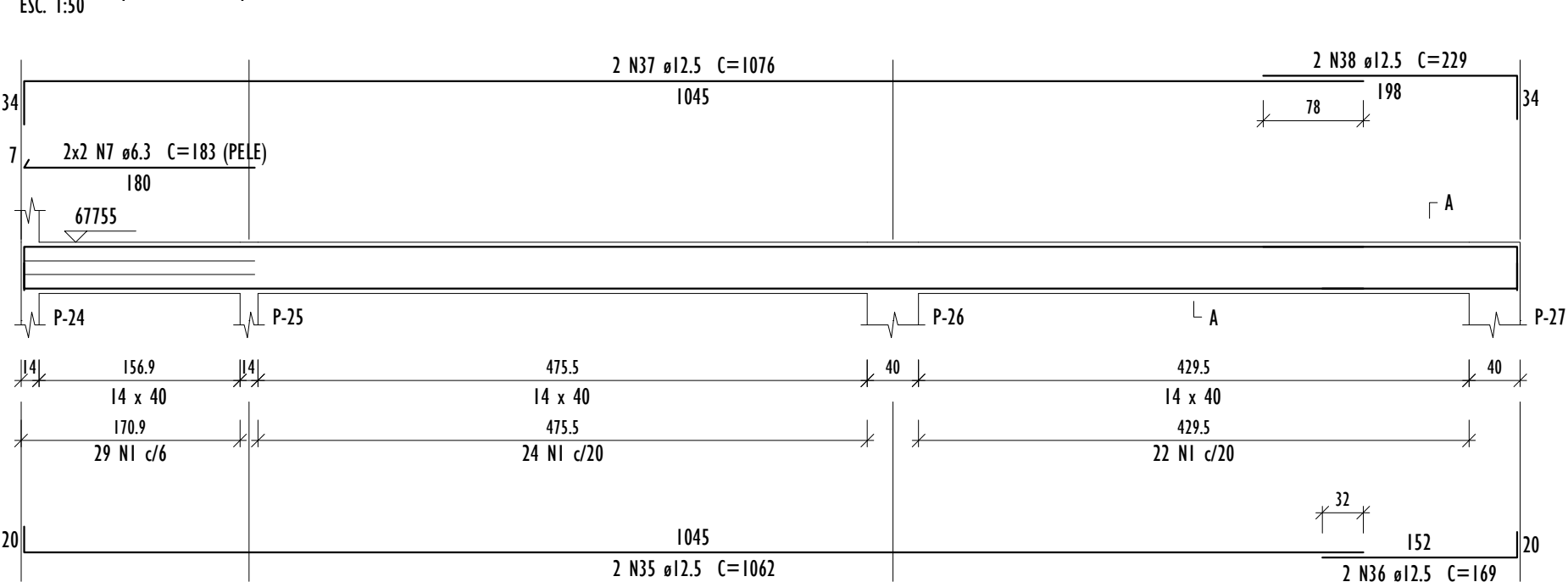
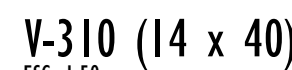
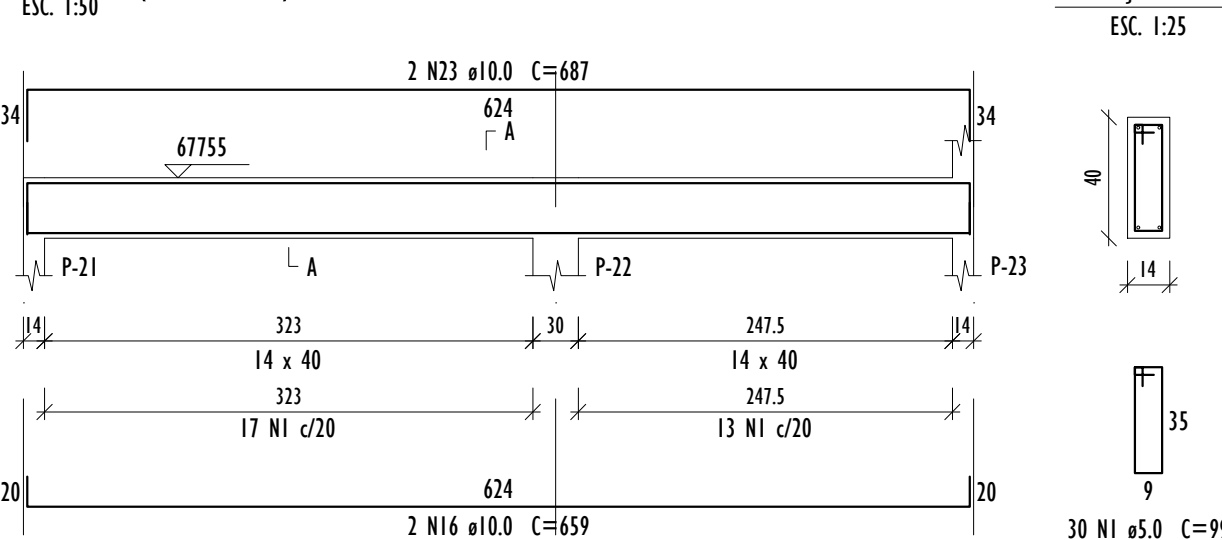
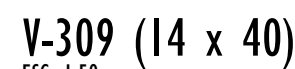
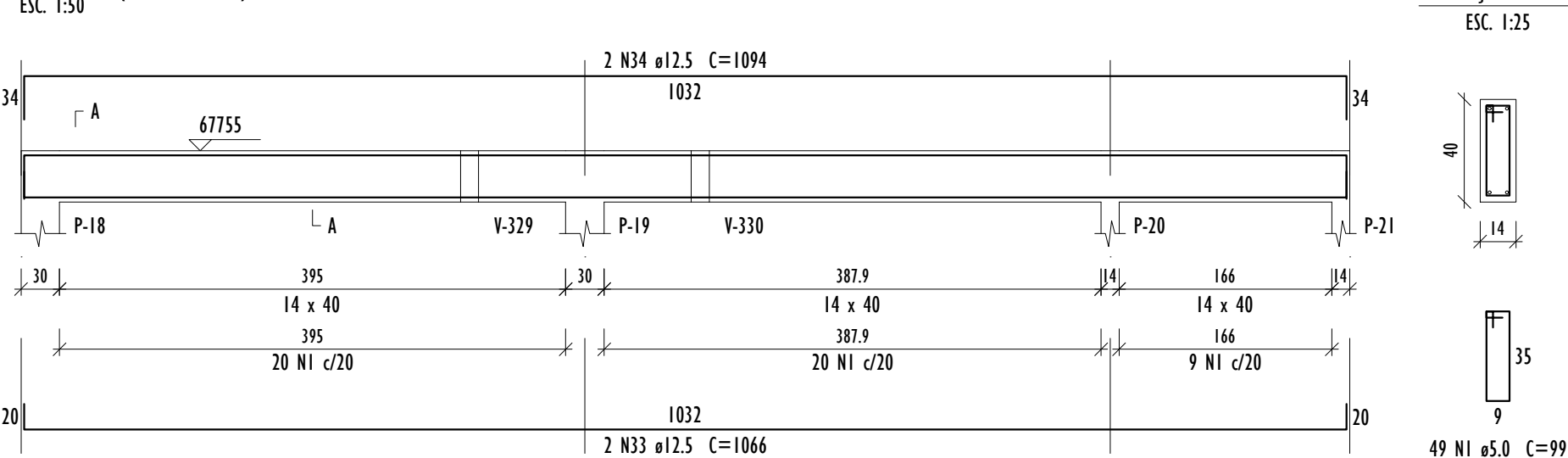
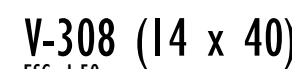
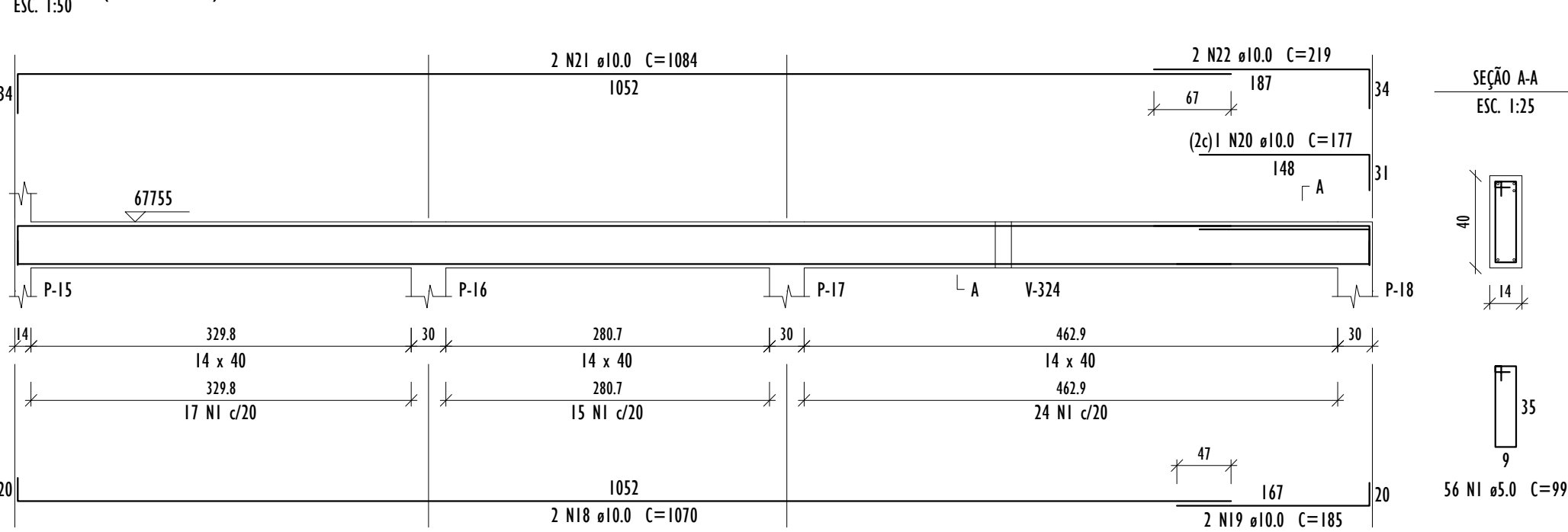
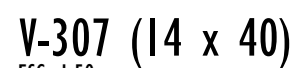
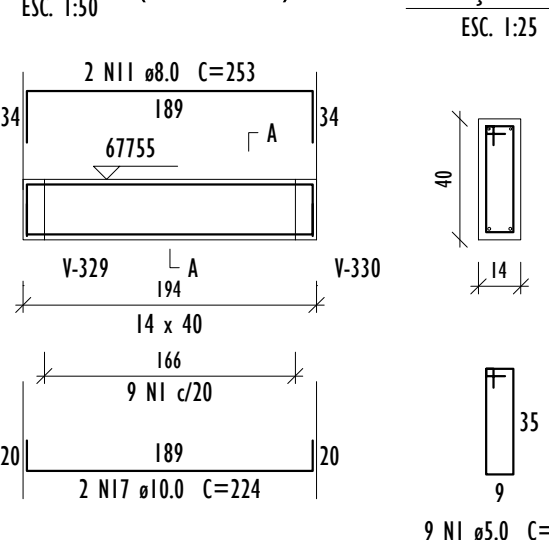
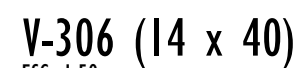
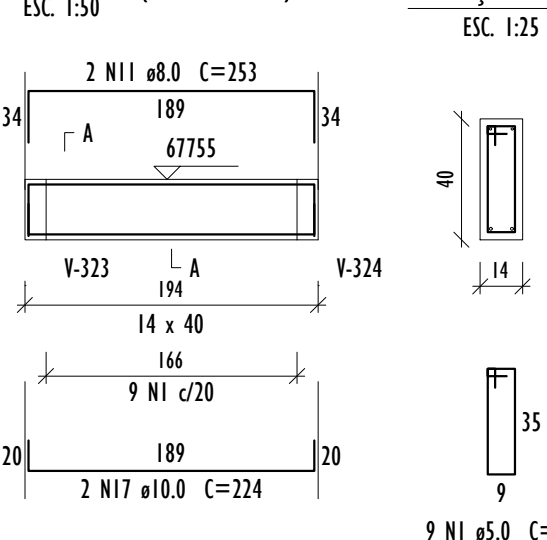
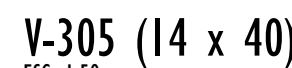
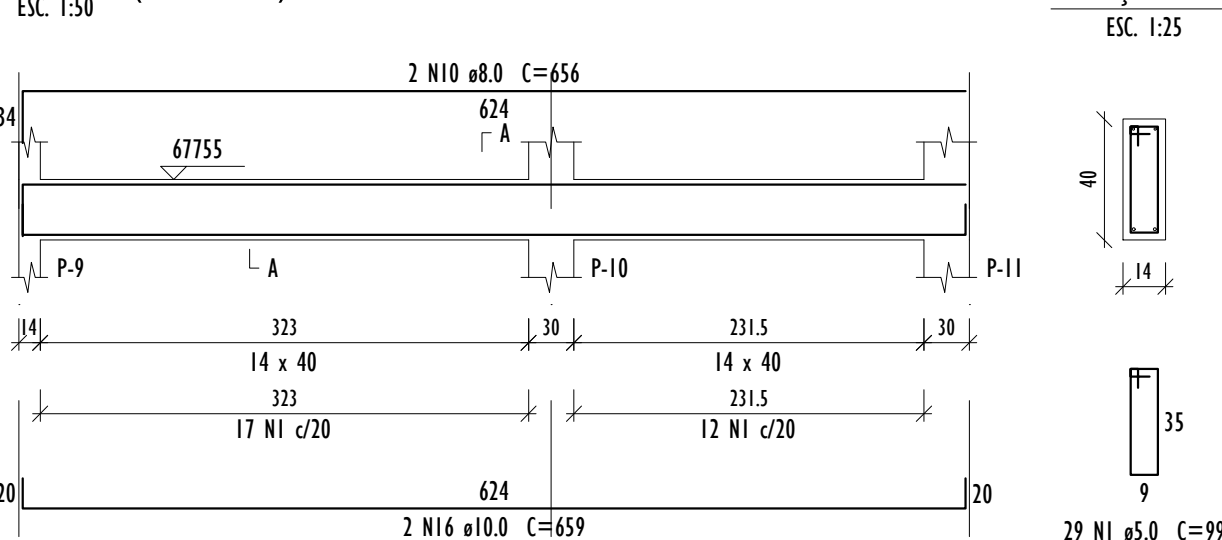
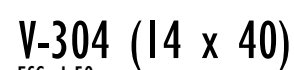
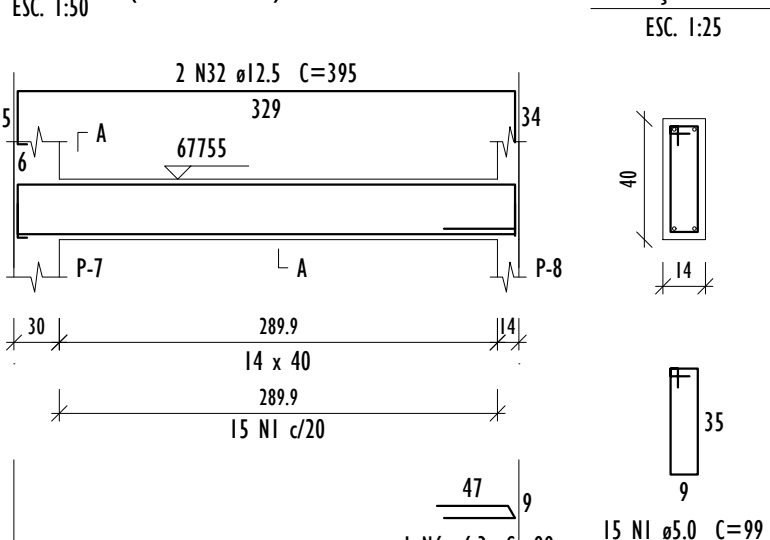
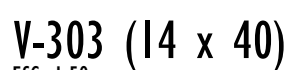
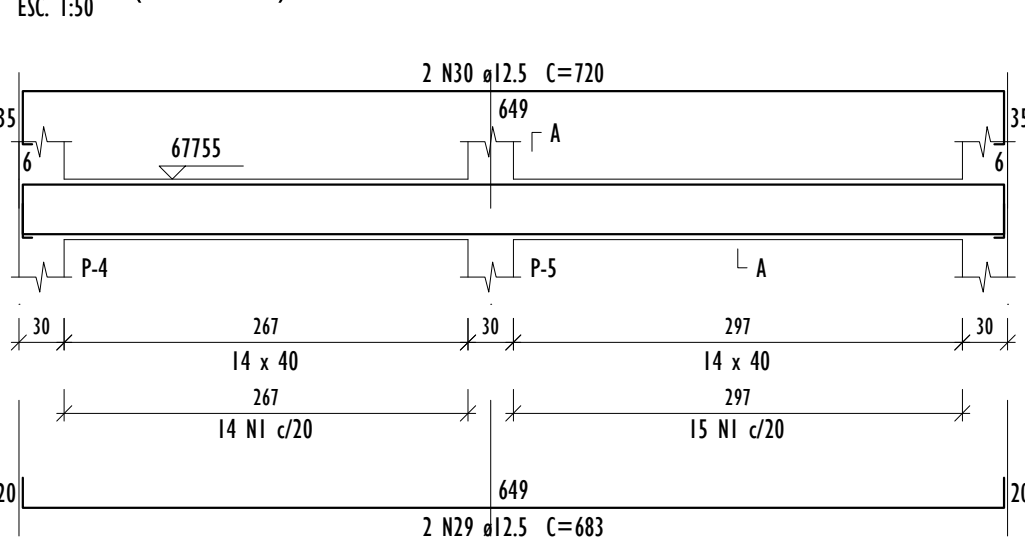
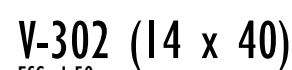
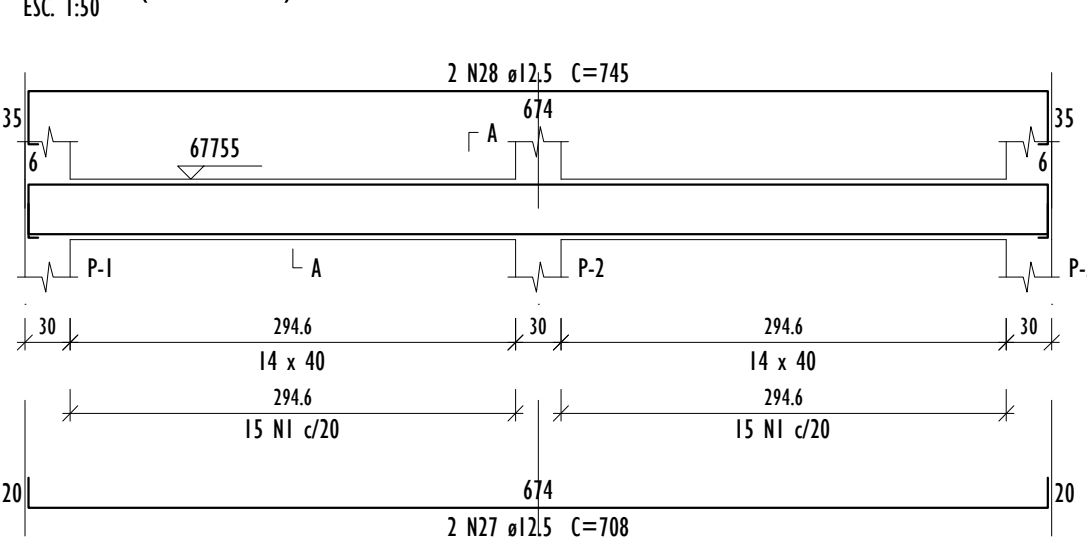
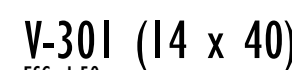




Relação do aço

V-301	V-302	V-303
V-304	V-305	V-306
V-307	V-308	V-309
V-310	V-311	V-312
V-313	V-314	V-315

AÇO	N	DIAM (mm)	QUANT	CUNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	398	99	39402
	2	5.0	40	111	4440
	3	5.0	14	71	994
	4	5.0	28	53	1484
	5	5.0	57	51	2907
CA50	6	6.3	1	99	99
	7	6.3	4	183	732
	8	6.3	5	103	515
	9	6.3	6	119	714
	10	8.0	2	656	1312
	11	8.0	4	253	1012
	12	8.0	4	100	400
	13	8.0	2	286	572
	14	8.0	1	121	121
	15	8.0	5	127	635
	16	10.0	4	659	2636
	17	10.0	4	224	896
	18	10.0	2	1070	2140
	19	10.0	2	185	370
	20	10.0	1	177	177
	21	10.0	2	1084	2168
	22	10.0	2	219	438
	23	10.0	2	687	1374
	24	10.0	12	91	1092
	25	10.0	8	63	504
	26	10.0	2	289	578
	27	12.5	2	708	1416
	28	12.5	2	745	1490
	29	12.5	2	683	1366
	30	12.5	2	720	1440
	31	12.5	2	363	726
	32	12.5	2	395	790
	33	12.5	2	1066	2132
	34	12.5	2	1094	2188
	35	12.5	2	1062	2124
	36	12.5	2	169	338
	37	12.5	2	1076	2152
	38	12.5	2	229	458
	39	12.5	2	1102	2204
	40	12.5	1	191	191
	41	12.5	1	106	106
	42	12.5	2	1130	2260
	43	12.5	2	658	1316
	44	12.5	1	194	194
	45	12.5	2	686	1372

Resumo do aço

Aço	DIAM (mm)	C.TOTAL (m)	QUANT (Barras)	PESO (kg)
CASO	6.3	20.6	2	5
	8.0	40.6	4	16
	10.0	123.8	11	76.3
	12.5	242.7	21	233.7
CASO	5.0	492.3	42	75.9
PESO TOTAL (kg)				
CASO	331			
CASO	75.9			

Volume de concreto (C-30) = 4.6 m³
Área de forma = 58.21 m²

NOTAS GERAIS

1. MEDIDAS EM CENTÍMETROS (cm).
2. TODAS AS MEDIDAS DEVERÃO SER VERIFICADAS NO LOCAL ANTES DO INÍCIO DA EXECUÇÃO.
3. A FUNDAÇÃO FOI DETERMINADA ATRAVÉS DO RELATÓRIO DE SONDAGEM NÚMERO 009/2026 REALIZADO PELA EMPRESA PORTICO ENGENHARIA & CONSULTORIA EM FEVEREIRO DE 2026;
4. CONCRETO:
 - $f_{ck} = 30 \text{ MPa}$;
 - $f_{cti} = 31 \text{ GPa}$;
 - FATOR A/C = 0,55;
5. AÇÓS:
 - CA-50($E_s=210000 \text{ MPa}$ E $f_{yk}=500\text{MPa}$);
 - CA-60($E_s=210000 \text{ MPa}$ E $f_{yk}=600\text{MPa}$);
6. CLASSE DE AGRESSIVIDADE AMBIENTAL II;
7. COBRIMENTO DAS ARMADURAS:
 - ESTACAS = 5,0 cm; BLOCOS = 5,0 cm; VIGAS = 2,5 cm; PILARES = 2,5 cm; LAJES = 2,0 cm;
8. IMPERMEABILIZAR AS ESTRUTURAS EM CONTATO COM O SOLO;
9. DEVERÁ SER EXECUTADA ALVENARIA DE EMBASAMENTO EM BLOCOS DE CONCRETO, COM ALTURA DE 40 CM, SOB AS PAREDES DA EDIFICAÇÃO. A EXECUÇÃO DEVERÁ GARANTIR O ADEQUADO APOIO DAS ALVENARIAS SUPERIORES OBSERVANDO O ALINHAMENTO E NIVELAMENTO DOS ELEMENTOS CONSTRUTIVOS;
10. O TEMPO DE ESCORAMENTO DAS ESTRUTURAS DE CONCRETO DEVE SER NO MÍNIMO DE 28 DIAS. OS DISPOSITIVOS UTILIZADOS DEVEM FACILITAR A REMOÇÃO DAS FORMAS DE MANEIRA A NÃO SUBMETER A ESTRUTURA A IMPACTOS SOBRECARGAS E OUTROS DANOS. NENHUMA CARGA DEVE SER IMPOSTA E NENHUM ESCORAMENTO DEVE SER REMOVIDO ANTES DO TEMPO MÍNIMO DE 28 DIAS;
11. OS NÍVEIS LANÇADOS NO PROJETO ESTRUTURAL FORAM DETERMINADOS A PARTIR DOS NÍVEIS PRESENTES NO PROJETO ARQUITETÔNICO.

REV.	DESCRIÇÃO	DATA	EXEC.	VERIF.	APROV.
01	REVISÃO DE PROJETO	06/2026	RF	LS	SL
00	EMIÇÃO INICIAL	05/2026	RF	LS	SL
CONTRATADA:		RT: Sinal Ladeira REG. CREA: 28.498/D ASS:			
CONTRATANTE:		PREFEITURA MUNICIPAL DE JUIZ DE FORA			
ENDEREÇO:		JUIZ DE FORA/MG			
PROGRAMA:		UBS VALADARES			
TÍTULO E CONTEÚDO:					
PROJETO EXECUTIVO ESTRUTURAL DETALHAMENTO DE VIGAS NÍVEL 677,55 - PARTE 01/03					
DATA: MAIO/2026		ESCALA: INDICADA		FOLHA: 18/23	
ARQUIVO: ESTC-PE-JF691-YLDR-052026-801					