

Elemento	Pos.	Diám.	No.	Pat. Recta (cm)	Pat. Long. (cm)	Total (cm)	AH-500 (kg)	
C1	16	Ø16	6	30	221	30	281	
	17	Ø10	4	30	222	30	282	
	18	Ø10	4	30	222	30	282	
	19	Ø10	9	286	286	2574	15.9	
	20	Ø16	8	30	217	347	2776	
	21	Ø6	3	134	134	402	0.9	
	Total+10%:						114.4	
C2=C3	22	Ø16	6	30	221	30	281	
	23	Ø10	4	30	222	30	282	
	24	Ø10	4	30	222	30	282	
	25	Ø10	9	286	286	2574	15.9	
	26	Ø16	8	30	217	347	2776	
	27	Ø6	3	134	134	402	0.9	
	Total+10%:						114.4	
C4	28	Ø16	6	30	221	30	281	
	29	Ø10	4	30	222	30	282	
	30	Ø10	4	30	222	30	282	
	31	Ø10	9	286	286	2574	15.9	
	32	Ø16	6	30	297	327	1962	
	33	Ø6	3	134	134	402	0.9	
	Total+10%:						100.3	
C12=C13	34	Ø16	6	30	221	30	281	
	35	Ø10	4	30	222	30	282	
	36	Ø10	4	30	222	30	282	
	37	Ø10	9	306	306	2754	17.0	
	38	Ø16	10	30	307	337	3037	
	39	Ø6	3	134	134	402	0.9	
	Total+10%:						126.0	
C14	40	Ø16	6	30	221	30	281	
	41	Ø10	4	30	222	30	282	
	42	Ø10	4	30	222	30	282	
	43	Ø10	9	306	306	2754	17.0	
	44	Ø12	6	30	289	319	1914	
	45	Ø16	4	30	310	340	1360	
	46	Ø6	4	114	114	456	1.0	
Total+10%:						109.9		
C15	47	Ø16	6	30	221	30	281	
	48	Ø10	4	30	222	30	282	
	49	Ø10	4	30	222	30	282	
	50	Ø10	9	286	286	2574	15.9	
	51	Ø12	6	30	279	309	1854	
	52	Ø6	4	94	94	376	0.8	
	Total+10%:						84.3	
C16=C18=C40	53	Ø16	6	30	221	30	281	
	54	Ø10	4	30	222	30	282	
	55	Ø10	4	30	222	30	282	
	56	Ø10	9	306	306	2754	17.0	
	57	Ø16	6	30	310	340	2040	
	58	Ø12	2	30	289	319	638	
	59	Ø6	4	114	114	456	1.0	
	Total+10%:						109.2	
	(x3)						327.6	
	C17	60	Ø16	6	30	221	30	281
		61	Ø10	4	30	222	30	282
62		Ø10	4	30	222	30	282	
63		Ø10	9	286	286	2574	15.9	
64		Ø12	2	30	297	327	1962	
65		Ø16	4	30	300	330	1320	
66		Ø6	4	94	94	376	0.8	
Total+10%:						95.4		
C19	67	Ø16	6	30	221	30	281	
	68	Ø10	4	30	222	30	282	
	69	Ø10	4	30	222	30	282	
	70	Ø10	9	306	306	2754	17.0	
	71	Ø12	4	30	308	338	1352	
	72	Ø16	4	30	310	340	1360	
	73	Ø6	4	114	114	456	1.0	
Total+10%:						104.4		
C21=C53	74	Ø16	6	30	221	30	281	
	75	Ø10	4	30	222	30	282	
	76	Ø10	4	30	222	30	282	
	77	Ø10	9	286	286	2574	15.9	
	78	Ø16	6	30	300	330	1980	
	79	Ø12	2	30	279	309	618	
	80	Ø6	4	114	114	456	1.0	
Total+10%:						106.8		
C24=C27=C36	81	Ø16	6	30	221	30	281	
	82	Ø10	4	30	222	30	282	
	83	Ø10	4	30	222	30	282	
	84	Ø10	9	306	306	2754	17.0	
	85	Ø16	8	30	237	357	2856	
	86	Ø6	3	134	134	402	0.9	
	Total+10%:						117.0	
C33	87	Ø16	6	30	221	30	281	
	88	Ø10	4	30	222	30	282	
	89	Ø10	4	30	222	30	282	
	90	Ø10	9	286	286	2574	15.9	
	91	Ø16	8	30	317	347	2776	
	92	Ø6	3	134	134	402	0.9	
	Total+10%:						114.4	
C44	93	Ø16	6	30	221	30	281	
	94	Ø10	4	30	222	30	282	
	95	Ø10	4	30	222	30	282	
	96	Ø10	9	286	286	2574	15.9	
	97	Ø12	2	30	297	327	1962	
	98	Ø16	4	30	306	330	1320	
	99	Ø6	4	94	94	376	0.8	
Total+10%:						95.4		
C42=C43=C46 C47	100	Ø16	6	30	221	30	281	
	101	Ø10	4	30	222	30	282	
	102	Ø10	4	30	222	30	282	
	103	Ø10	9	286	286	2574	15.9	
	104	Ø12	2	30	297	327	1962	
	105	Ø16	4	30	300	330	1320	
	106	Ø6	4	94	94	376	0.8	
Total+10%:						95.4		
C54	107	Ø16	6	30	221	30	281	
	108	Ø10	4	30	222	30	282	
	109	Ø10	4	30	222	30	282	
	110	Ø10	9	306	306	2754	17.0	
	111	Ø16	6	30	310	340	2040	
	112	Ø12	2	30	289	319	638	
	113	Ø6	4	114	114	456	1.0	
Total+10%:						109.2		
C51=C52=C55 C56	114	Ø16	6	30	221	30	281	
	115	Ø10	4	30	222	30	282	
	116	Ø10	4	30	222	30	282	
	117	Ø10	9	286	286	2574	15.9	
	118	Ø12	2	30	297	327	1962	
	119	Ø16	4	30	300	330	1320	
	120	Ø6	4	94	94	376	0.8	
Total+10%:						95.4		
(C10-CC6)	121	Ø16	5	30	226	30	286	
	122	Ø12	5	30	227	30	287	
	123	Ø10	4	404	404	1616	10.7	
	124	Ø10	9	326	326	2934	18.1	
	125	Ø12	6	30	318	348	2088	
	126	Ø6	5	94	94	470	1.0	
	127	Ø12	10	257	257	2870	25.5	
Total+10%:						120.6		
C45	1	Ø16	6	30	221	30	281	
	2	Ø10	4	30	222	30	282	
	3	Ø10	4	30	222	30	282	
	4	Ø10	9	286	286	2574	15.9	
	5	Ø12	2	30	297	327	1962	
	6	Ø16	4	30	300	330	1320	
	7	Ø6	4	94	94	376	0.8	
Total+10%:						95.4		
(C11-CC9)	8	Ø16	5	30	226	30	286	
	9	Ø12	5	30	227	30	287	
	10	Ø10	4	404	404	1616	10.7	
	11	Ø10	9	326	326	2934	18.1	
	12	Ø16	10	30	317	347	2088	
	13	Ø6	4	134	134	536	1.2	
	14	Ø12	10	30	257	287	2870	
Total+10%:						160.7		
(C5-CC1)	129	Ø16	5	30	226	30	286	
	130	Ø12	5	30	227	30	287	
	131	Ø10	4	404	404	1616	10.7	
	132	Ø10	9	326	326	2934	18.1	
	133	Ø12	6	30	317	347	2082	
	134	Ø6	5	94	94	470	1.0	
	135	Ø12	10	30	297	327	1962	
Total+10%:						124.4		
C38=C39=C49 C50=C57	72	Ø16	6	30	221	30	281	
	73	Ø10	4	30	222	30	282	
	74	Ø10	4	30	222	30	282	
	75	Ø10	9	286	286	2574	15.9	
	76	Ø12	6	30	297	327	1962	
	77	Ø6	4	94	94	376	0.8	
	Total+10%:						85.3	
C48	78	Ø16	6	30	221	30	281	
	79	Ø10	4	30	222	30	282	
	80	Ø10	9	286	286	2574	15.9	
	81	Ø10	9	286	286	2574	15.9	
	82	Ø12	6	30	297	327	1962	
	83	Ø6	4	94	94	376	0.8	
	Total+10%:						85.3	
C20=C23=C28 C29=C30=C32 C37	150	Ø16	6	30	221	30	281	
	151	Ø10	4	30	222	30	282	
	152	Ø10	4	30	222	30	282	
	153	Ø10	9	286	286	2574	15.9	
	154	Ø16	6	30	300	330	1980	
	155	Ø12	2	30	279	309	618	
	156	Ø6	4	114	114	456	1.0	
Total+10%:						106.8		
(x7)						747.6		
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PLANO DE CIMENTACIONES
(DESPIECE DE ENCEPADOS)
ESCALA 1:60

Elemento	Pos.	Diám.	No.	Pat. Recta Pat. (cm)	Long. (cm)	Total (cm)	AH-500 (kg)
C25=C34	48	Ø12	8	VAR.	VAR.	1744	15.5
	49	Ø12	9	VAR.	VAR.	1782	15.8
	50	Ø10	8	VAR.	VAR.	1744	10.8
	51	Ø10	9	VAR.	VAR.	1782	11.0
	52	Ø10	3	40	186	40	266 798 4.9
	53	Ø10	3	40	186	40	266 798 4.9
	54	Ø10	3	40	186	40	266 798 4.9
	55	Ø16	8	30	325	355	2840 44.8
	56	Ø6	3		134		134 402 0.9
	57	Ø16	4	50	206	50	306 1224 19.3
	58	Ø16	4	50	206	50	306 1224 19.3
	59	Ø16	4	50	206	50	306 1224 19.3
	Total+10%: 188.5 (x2) 377.0						
C26=C35	60	Ø12	8	VAR.	VAR.	1744	15.5
	61	Ø12	9	VAR.	VAR.	1782	15.8
	62	Ø10	8	VAR.	VAR.	1744	10.8
	63	Ø10	9	VAR.	VAR.	1782	11.0
	64	Ø10	3	40	186	40	266 798 4.9
	65	Ø10	3	40	186	40	266 798 4.9
	66	Ø10	3	40	186	40	266 798 4.9
	67	Ø16	8	30	325	355	2840 44.8
	68	Ø6	3		134		134 402 0.9
	69	Ø16	4	50	206	50	306 1224 19.3
	70	Ø16	4	50	206	50	306 1224 19.3
	71	Ø16	4	50	206	50	306 1224 19.3
	Total+10%: 188.5 (x2) 377.0						
CC7=CC8 CC10=CC13	84	Ø16	6	30	221	30	281 1686 26.6
	85	Ø10	3	40	222	30	282 1128 7.0
	86	Ø10	4		399		399 1596 9.8
	87	Ø10	9		286		286 2574 15.9
	88	Ø12	10	30	237		267 2670 23.7
	89	Ø6	4		108		108 432 1.0
	Total+10%: 92.4 (x4) 369.6						
C6=CC2	90	Ø12	9	VAR.	VAR.	2106	18.7
	91	Ø12	10	VAR.	VAR.	2110	18.7
	92	Ø12	10	VAR.	VAR.	2340	20.8
	93	Ø12	12	VAR.	VAR.	2544	22.6
	94	Ø10	4	40	193	40	273 1092 6.7
	95	Ø10	4	40	193	40	273 1092 6.7
	96	Ø10	4	40	193	40	273 1092 6.7
	97	Ø12	4	30	306	336	1344 11.9
	98	Ø16	4	30	308	338	1352 21.3
	99	Ø6	4		114		114 456 1.0
	100	Ø12	10	30	245		275 2750 24.4
	101	Ø6	4		108		108 432 1.0
	102	Ø16	5	49	226	49	324 1620 25.6
	103	Ø16	5	49	226	49	324 1620 25.6
	104	Ø16	5	49	226	49	324 1620 25.6
	Total+10%: 261.0						
C7=CC3	105	Ø12	9	VAR.	VAR.	2106	18.7
	106	Ø12	10	VAR.	VAR.	2110	18.7
	107	Ø12	10	VAR.	VAR.	2340	20.8
	108	Ø12	12	VAR.	VAR.	2544	22.6
	109	Ø10	4	40	193	40	273 1092 6.7
	110	Ø10	4	40	193	40	273 1092 6.7
	111	Ø10	4	40	193	40	273 1092 6.7
	112	Ø12	4	30	306	336	1344 11.9
	113	Ø16	4	30	308	338	1352 21.3
	114	Ø6	4		114		114 456 1.0
	115	Ø12	10	30	245		275 2750 24.4
	116	Ø6	4		108		108 432 1.0
	117	Ø16	5	49	226	49	324 1620 25.6
	118	Ø16	5	49	226	49	324 1620 25.6
	119	Ø16	5	49	226	49	324 1620 25.6
	Total+10%: 261.0						
C8=CC4	120	Ø12	9	VAR.	VAR.	2106	18.7
	121	Ø12	10	VAR.	VAR.	2110	18.7
	122	Ø12	10	VAR.	VAR.	2340	20.8
	123	Ø12	12	VAR.	VAR.	2544	22.6
	124	Ø10	4	40	193	40	273 1092 6.7
	125	Ø10	4	40	193	40	273 1092 6.7
	126	Ø10	4	40	193	40	273 1092 6.7
	127	Ø12	4	30	306	336	1344 11.9
	128	Ø16	4	30	308	338	1352 21.3
	129	Ø6	4		114		114 456 1.0
	130	Ø12	10	30	245		275 2750 24.4
	131	Ø6	4		108		108 432 1.0
	132	Ø16	5	49	226	49	324 1620 25.6
	133	Ø16	5	49	226	49	324 1620 25.6
	134	Ø16	5	49	226	49	324 1620 25.6
	Total+10%: 261.0						
C9=CC5	135	Ø12	9	VAR.	VAR.	2106	18.7
	136	Ø12	10	VAR.	VAR.	2110	18.7
	137	Ø12	10	VAR.	VAR.	2340	20.8
	138	Ø12	12	VAR.	VAR.	2544	22.6
	139	Ø10	4	40	193	40	273 1092 6.7
	140	Ø10	4	40	193	40	273 1092 6.7
	141	Ø10	4	40	193	40	273 1092 6.7
	142	Ø12	4	30	306	336	1344 11.9
	143	Ø16	4	30	308	338	1352 21.3
	144	Ø6	4		114		114 456 1.0
	145	Ø12	10	30	245		275 2750 24.4
	146	Ø6	4		108		108 432 1.0
	147	Ø16	5	49	226	49	324 1620 25.6
	148	Ø16	5	49	226	49	324 1620 25.6
	149	Ø16	5	49	226	49	324 1620 25.6
	Total+10%: 261.0						
C22=CC11	157	Ø16	5	30	226	30	286 1430 22.6
	158	Ø12	5	30	227	30	287 1435 12.7
	159	Ø10	4	40	227	30	287 1435 12.7
	160	Ø10	9		326		326 2934 18.1
	161	Ø12	6	30	317		347 2082 18.5
	162	Ø6	5		94		94 470 1.0
	163	Ø12	10	30	257		287 2870 25.5
	164	Ø6	5		108		108 540 1.2
	Total+10%: 120.6						
C63=CC20	165	Ø12	9	VAR.	VAR.	2106	18.7
	166	Ø12	10	VAR.	VAR.	2110	18.7
	167	Ø12	10	VAR.	VAR.	2340	20.8
	168	Ø12	12	VAR.	VAR.	2544	22.6
	169	Ø10	4	40	193	40	273 1092 6.7
	170	Ø10	4	40	193	40	273 1092 6.7
	171	Ø10	4	40	193	40	273 1092 6.7
	172	Ø12	6	30	305	335	2010 17.8
	173	Ø6	4		94		94 376 0.8
	174	Ø12	10	30	245		275 2750 24.4
	175	Ø6	4		108		108 432 1.0
	176	Ø16	5	49	226	49	324 1620 25.6
	177	Ø16	5	49	226	49	324 1620 25.6
	178	Ø16	5	49	226	49	324 1620 25.6
	Total+10%: 243.9						

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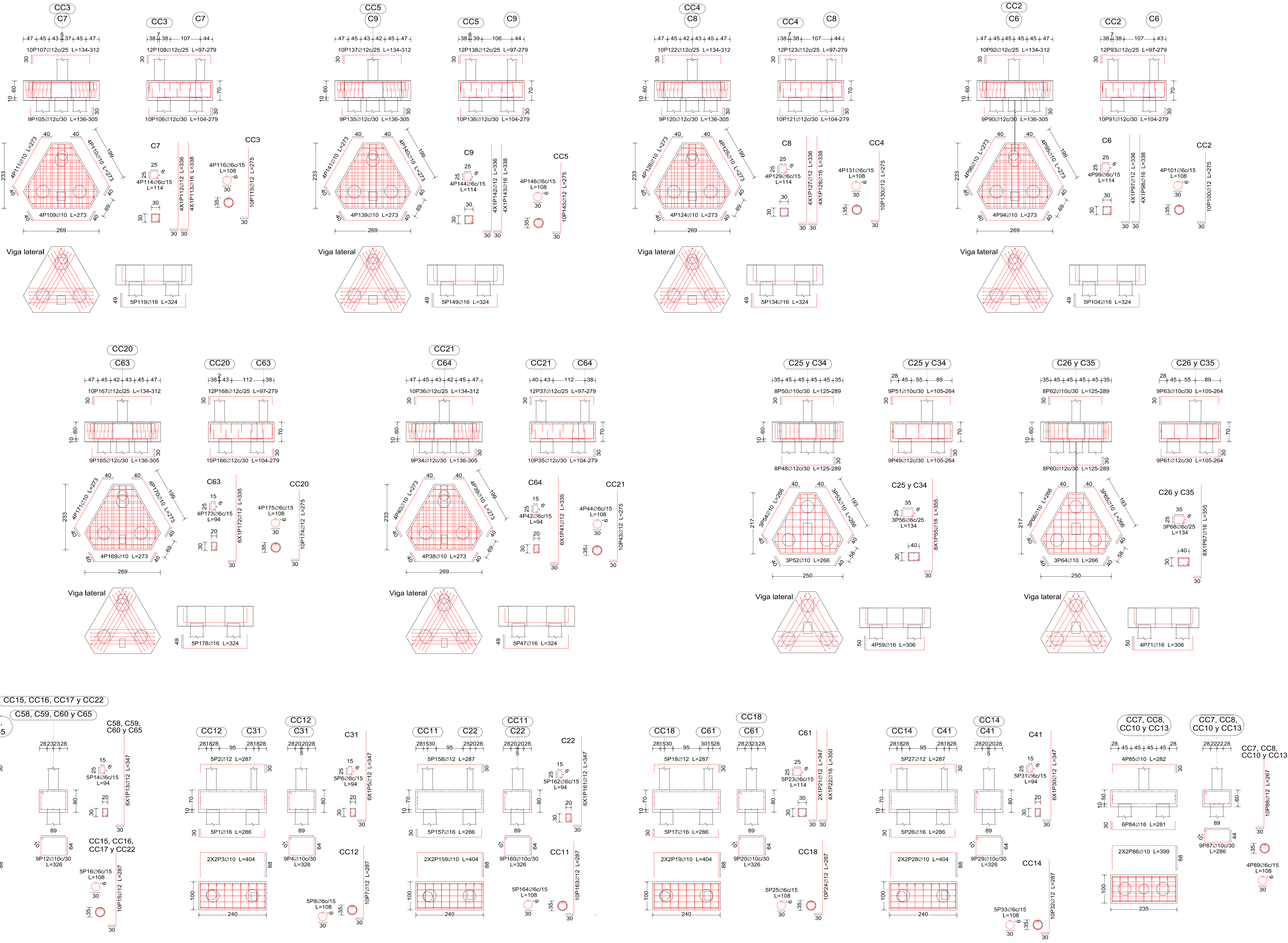
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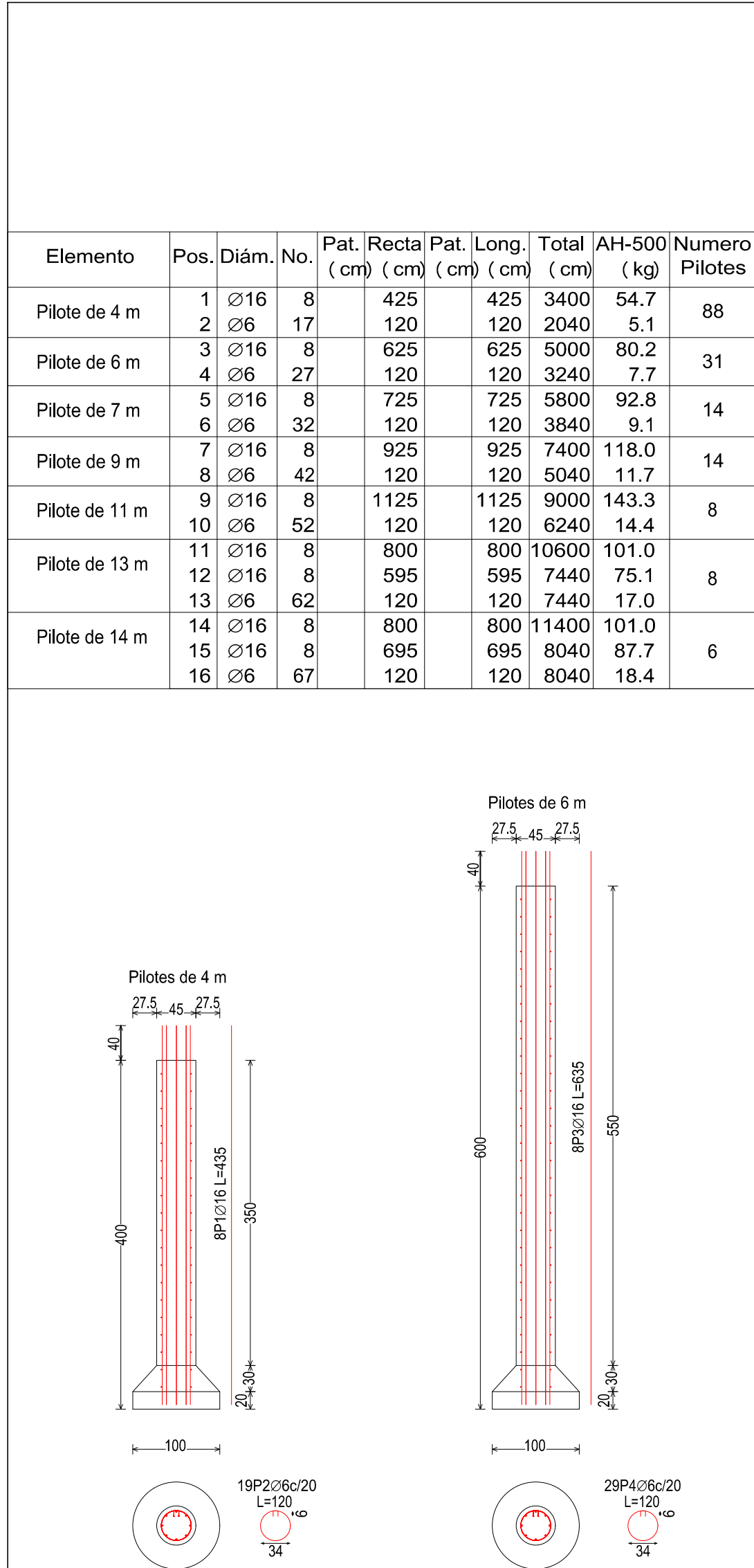
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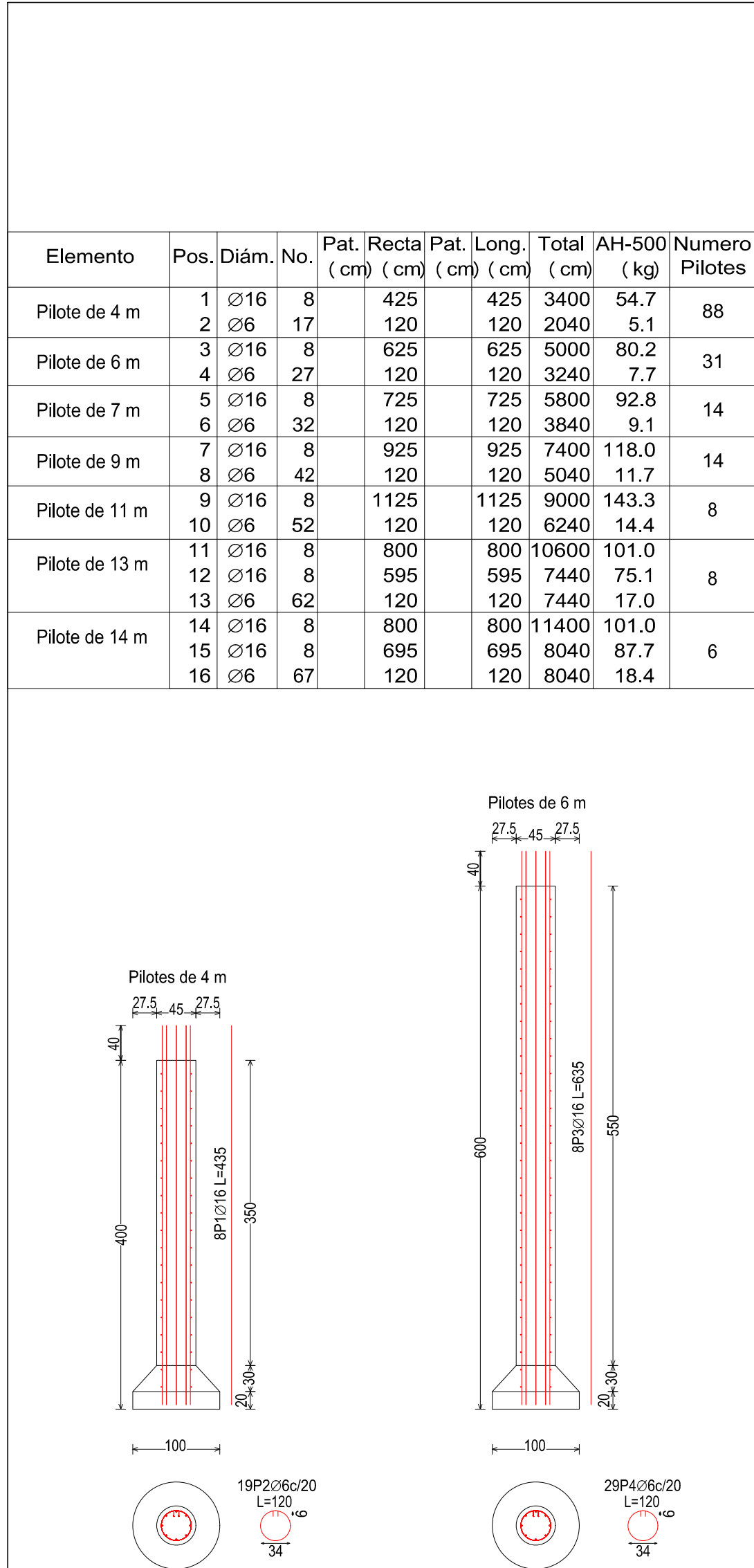


Elemento	Pos.	Diám.	No.	Pat. (cm)	Recta (cm)	Pat. (cm)	Long. (cm)	Total (cm)	AH-500 (kg)	Numero Pilotes
Pilote de 4 m	1	Ø16	8	425	425	3400	54.7	120	2040	5.1
Pilote de 6 m	3	Ø16	8	625	625	5000	80.2	120	3240	7.7
Pilote de 7 m	5	Ø16	8	725	725	5800	92.8	120	3840	9.1
Pilote de 9 m	7	Ø16	8	925	925	7400	118.0	120	5040	11.7
Pilote de 11 m	9	Ø16	8	1125	1125	9000	143.3	120	6240	14.4
Pilote de 13 m	11	Ø16	8	800	800	10600	101.0	120	7440	17.0
Pilote de 14 m	12	Ø16	8	595	595	7440	75.1	120	7440	17.0
	13	Ø6	62	120	120	8000	101.0	695	8040	18.4
	14	Ø16	8	695	695	8040	87.7	120	8040	18.4
	15	Ø16	8	695	695	8040	87.7	120	8040	18.4
	16	Ø6	67	120	120	8040	18.4			



PLANO DE DESPIECE PILOTES

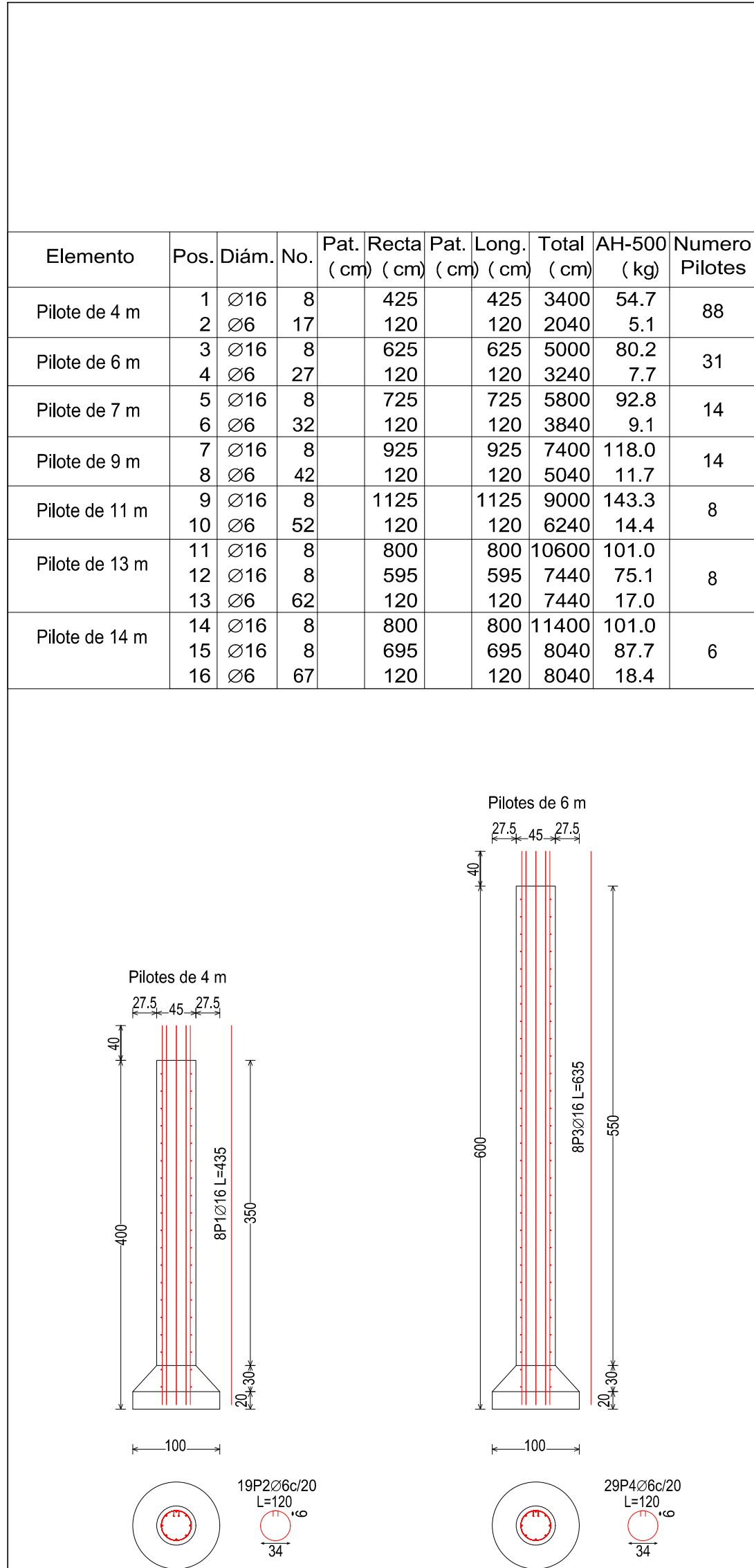
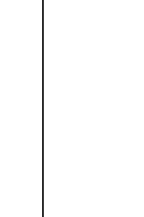
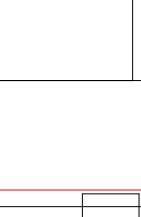
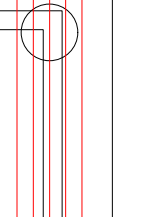
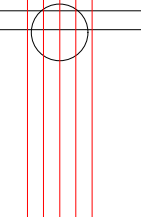
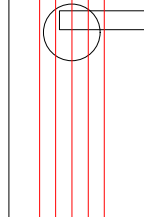
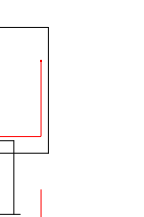
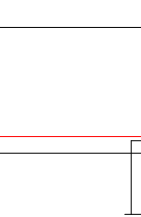
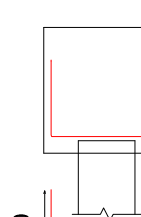
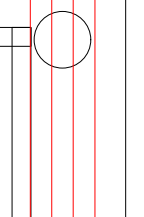
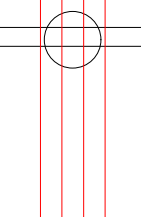
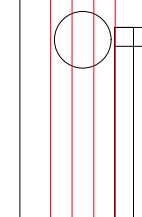
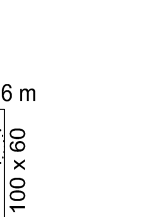
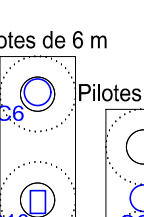
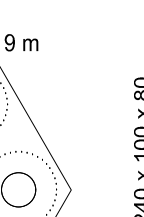
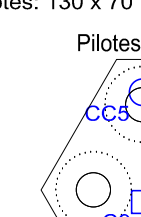
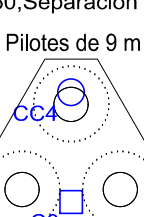
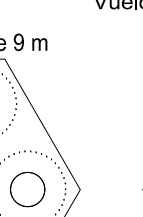
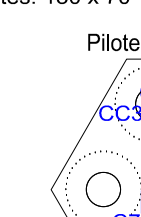
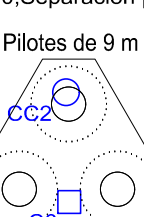
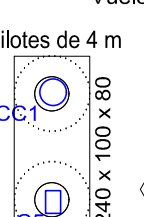
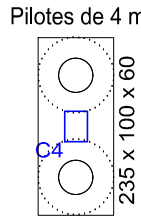
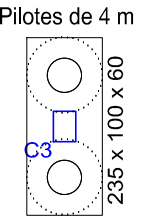
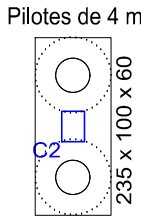
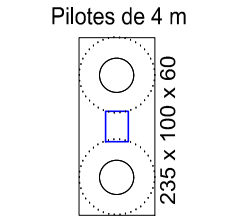
ESCALA 1:60



PLANO DEL TIPO DE PILOTES EMPLEADOS

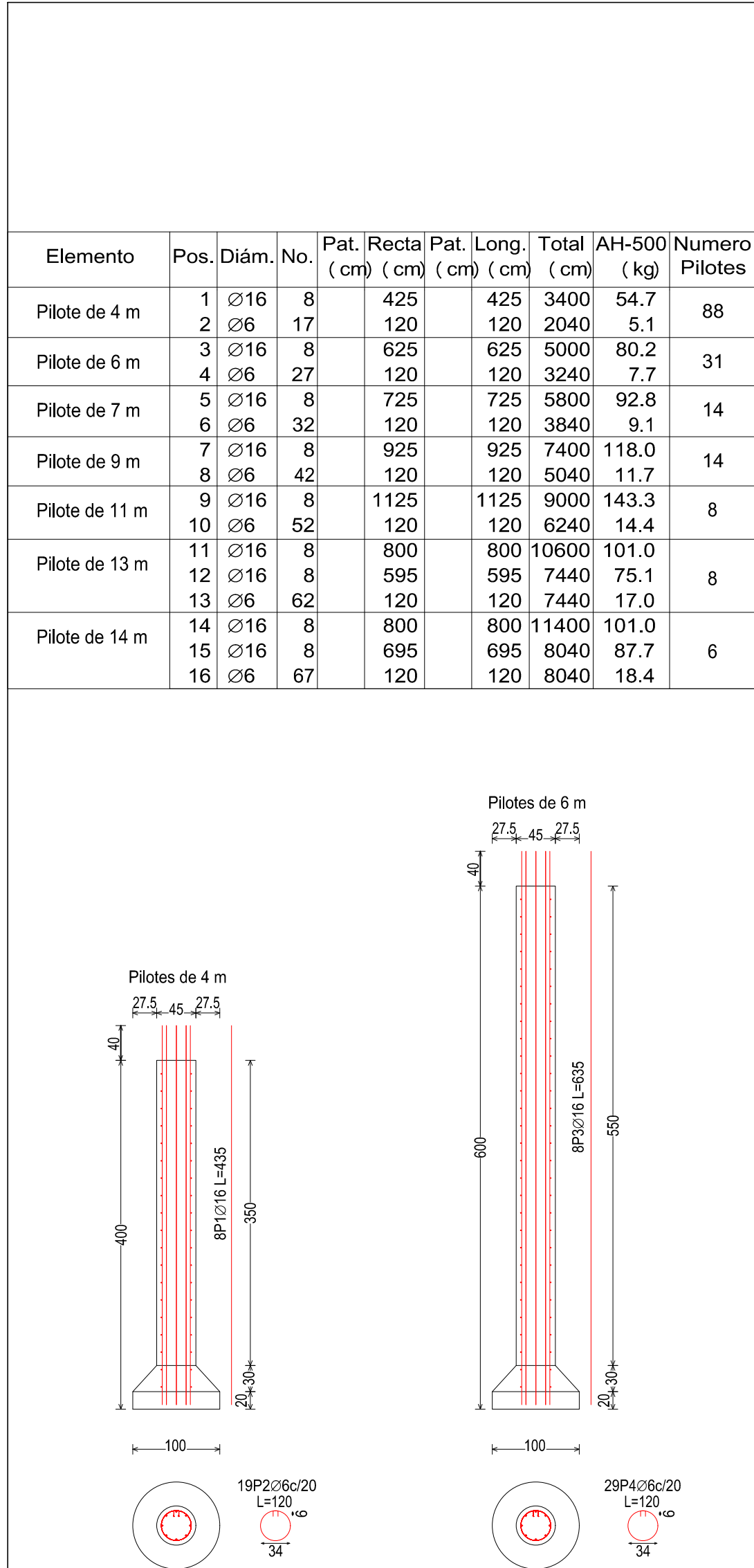
ESCALA 1:100

Cota de fundación 2.1



PLANO DE DESPIECE PILOTES

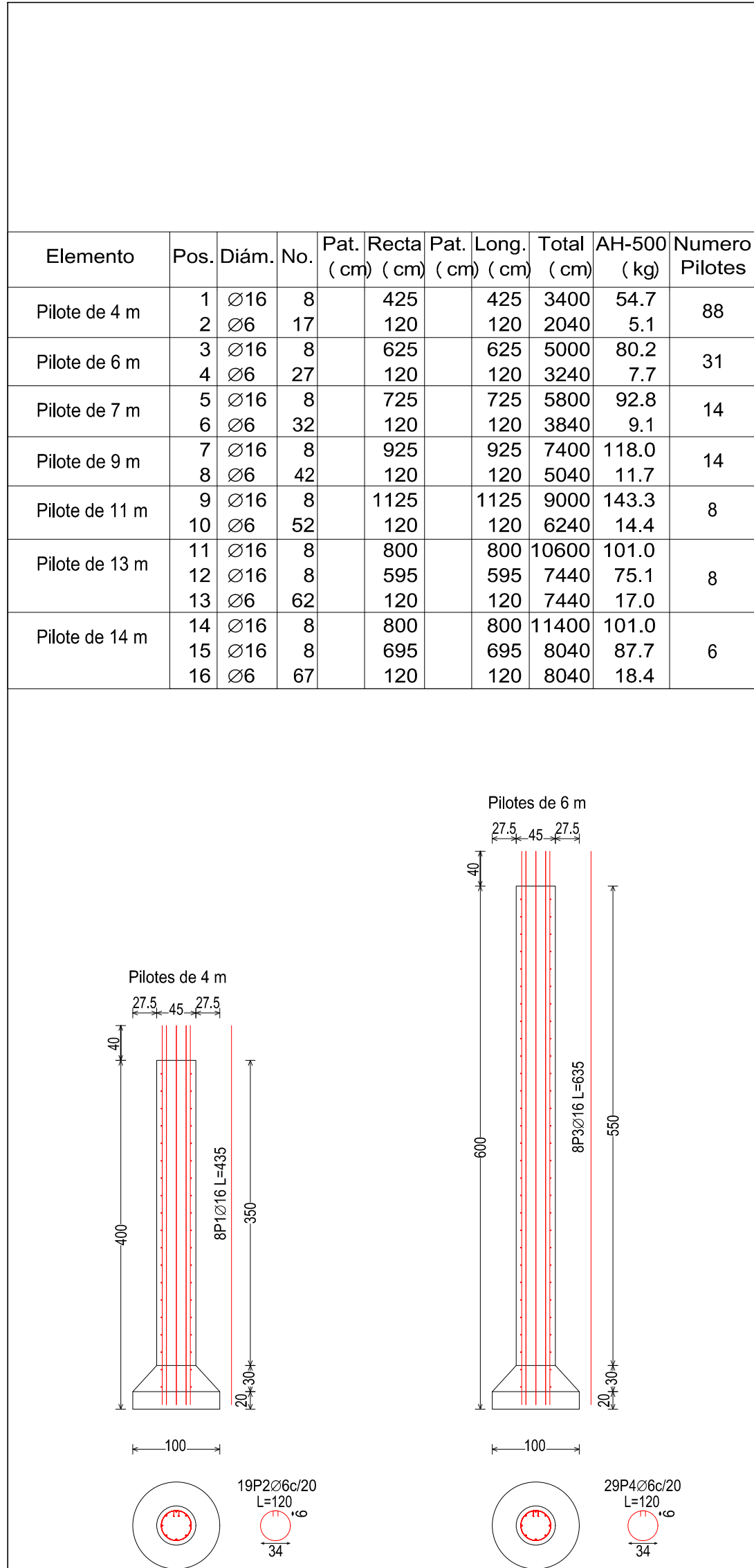
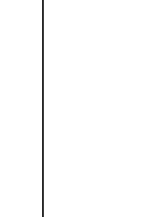
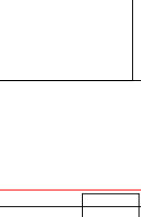
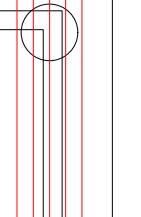
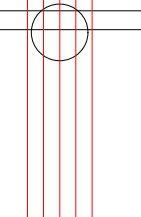
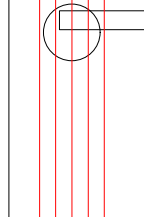
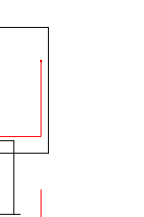
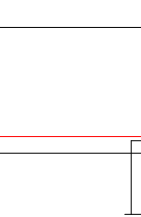
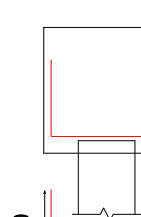
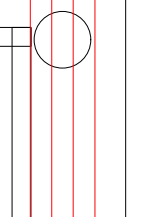
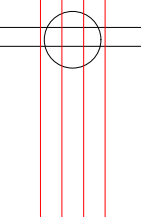
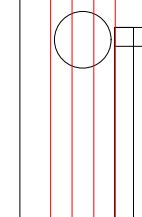
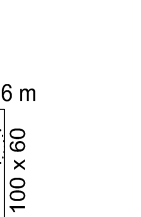
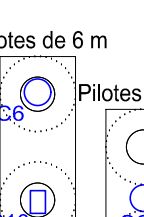
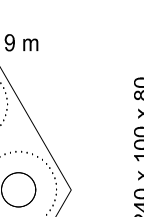
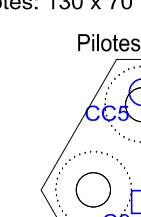
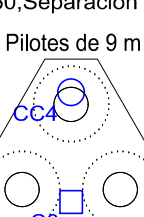
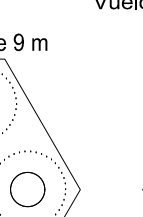
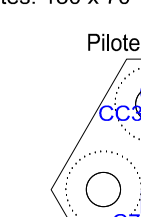
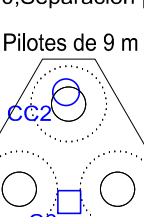
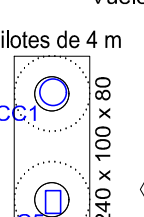
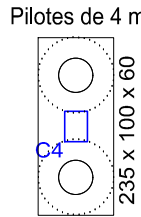
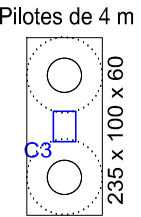
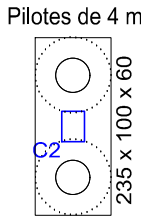
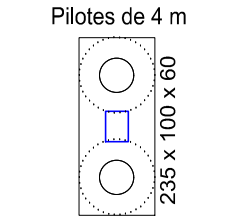
ESCALA 1:60



PLANO DEL TIPO DE PILOTES EMPLEADOS

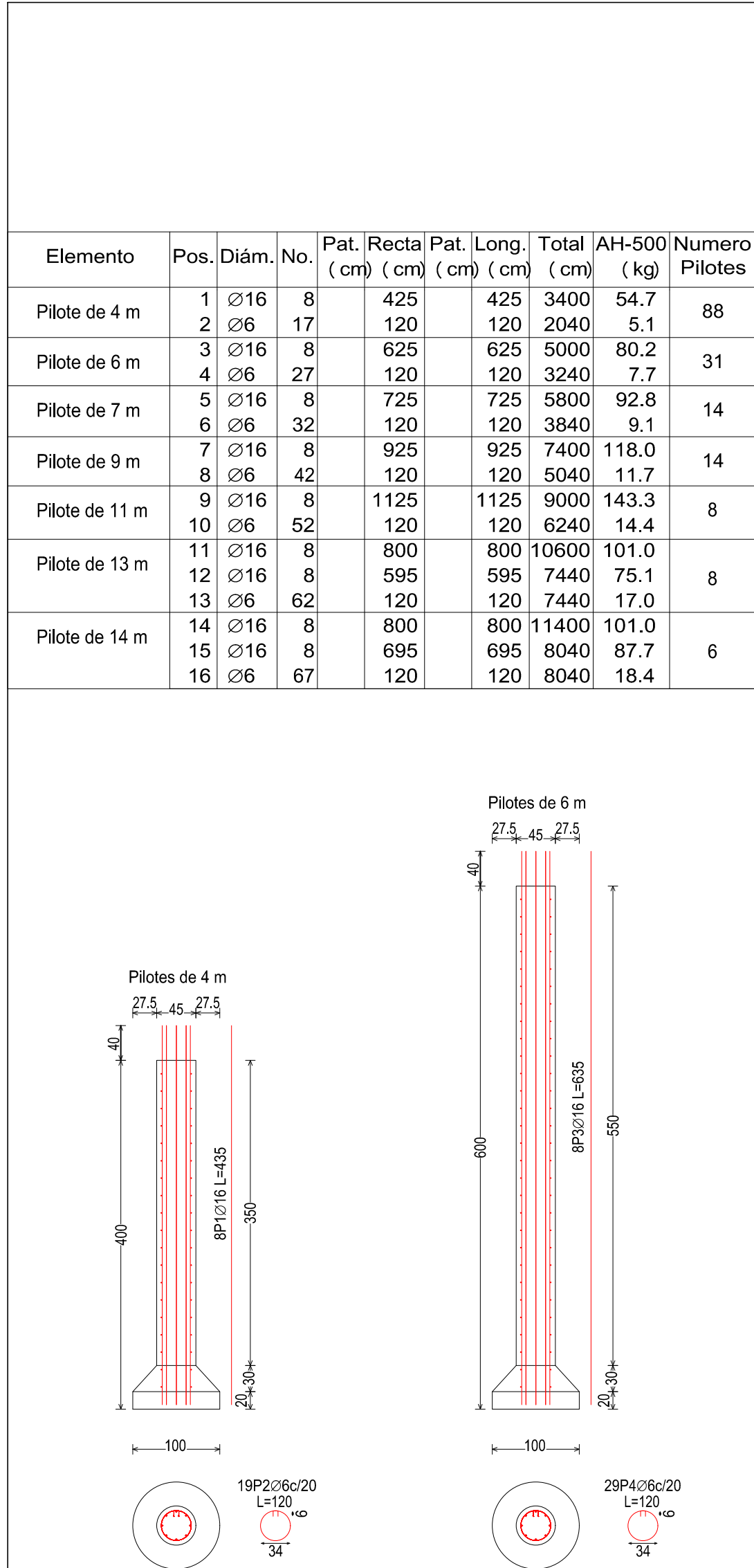
ESCALA 1:100

Cota de fundación 2.1



PLANO DE DESPIECE PILOTES

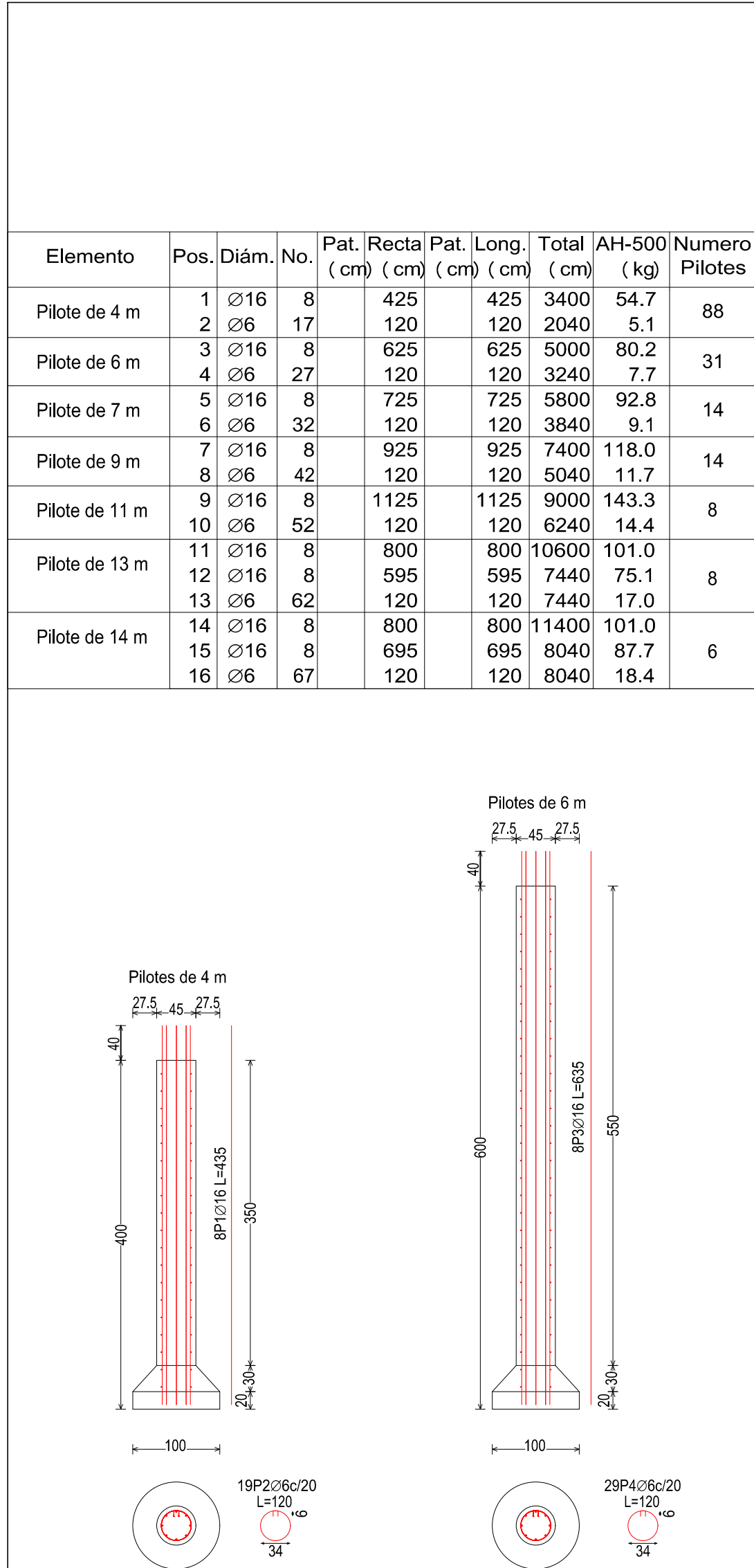
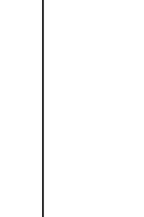
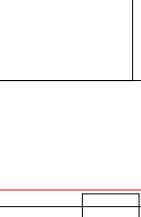
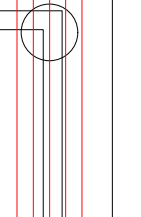
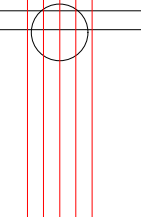
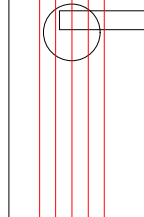
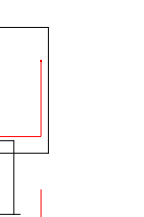
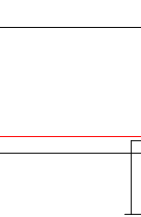
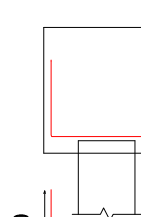
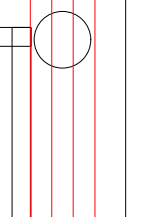
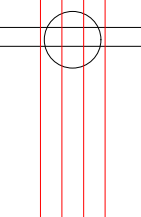
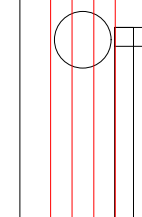
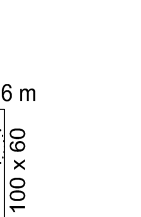
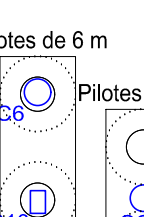
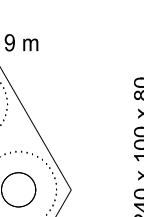
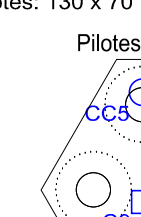
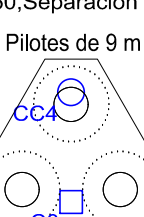
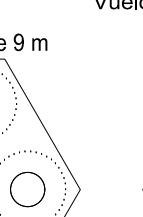
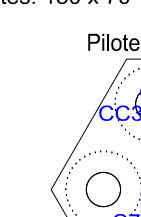
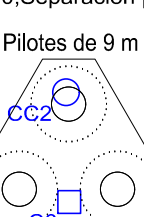
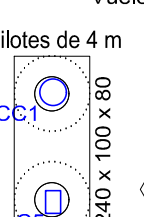
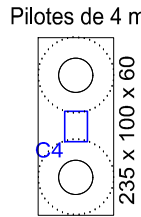
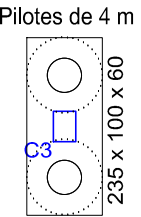
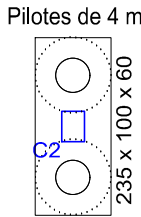
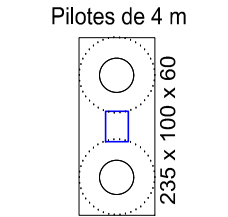
ESCALA 1:60



PLANO DEL TIPO DE PILOTES EMPLEADOS

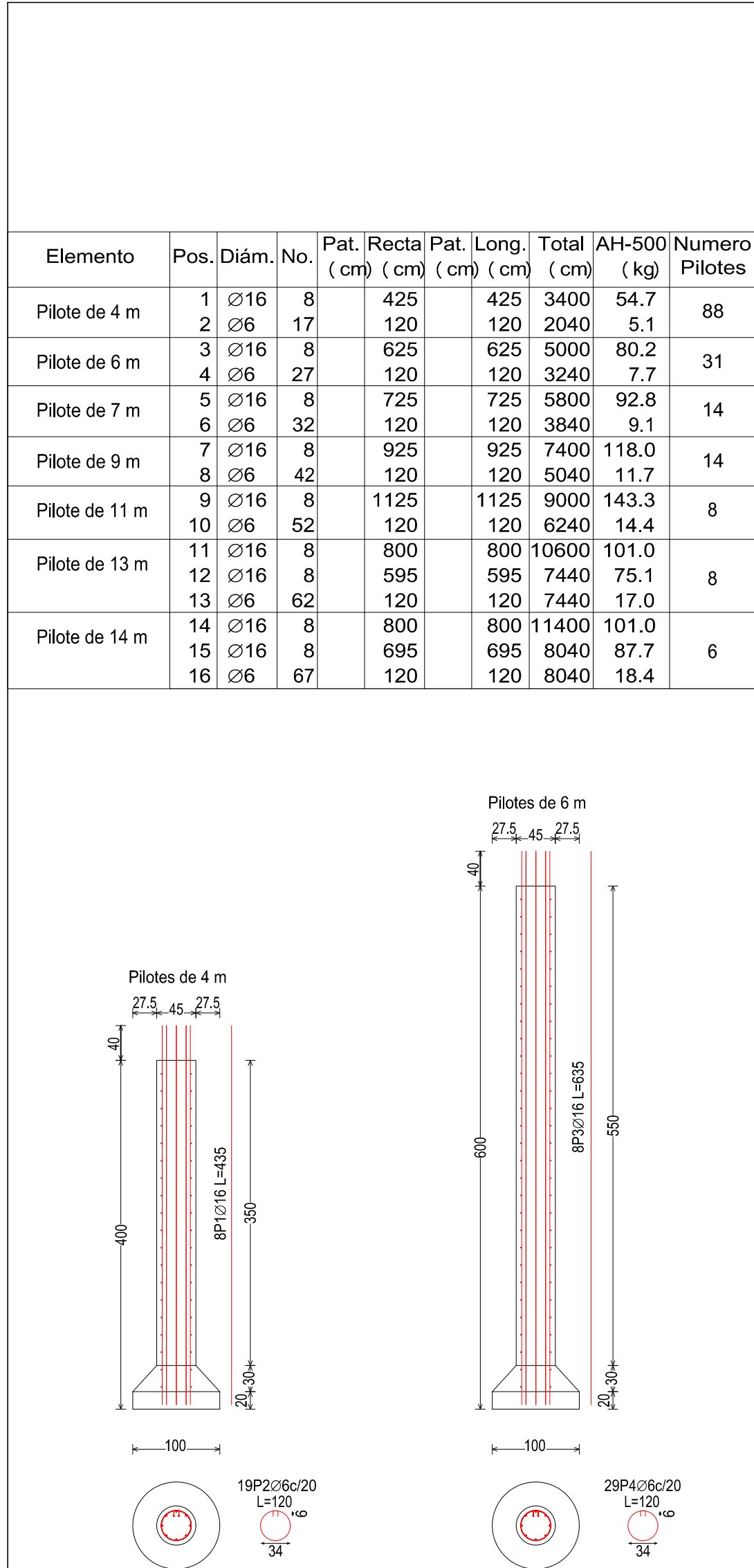
ESCALA 1:100

Cota de fundación 2.1



PLANO DE DESPIECE PILOTES

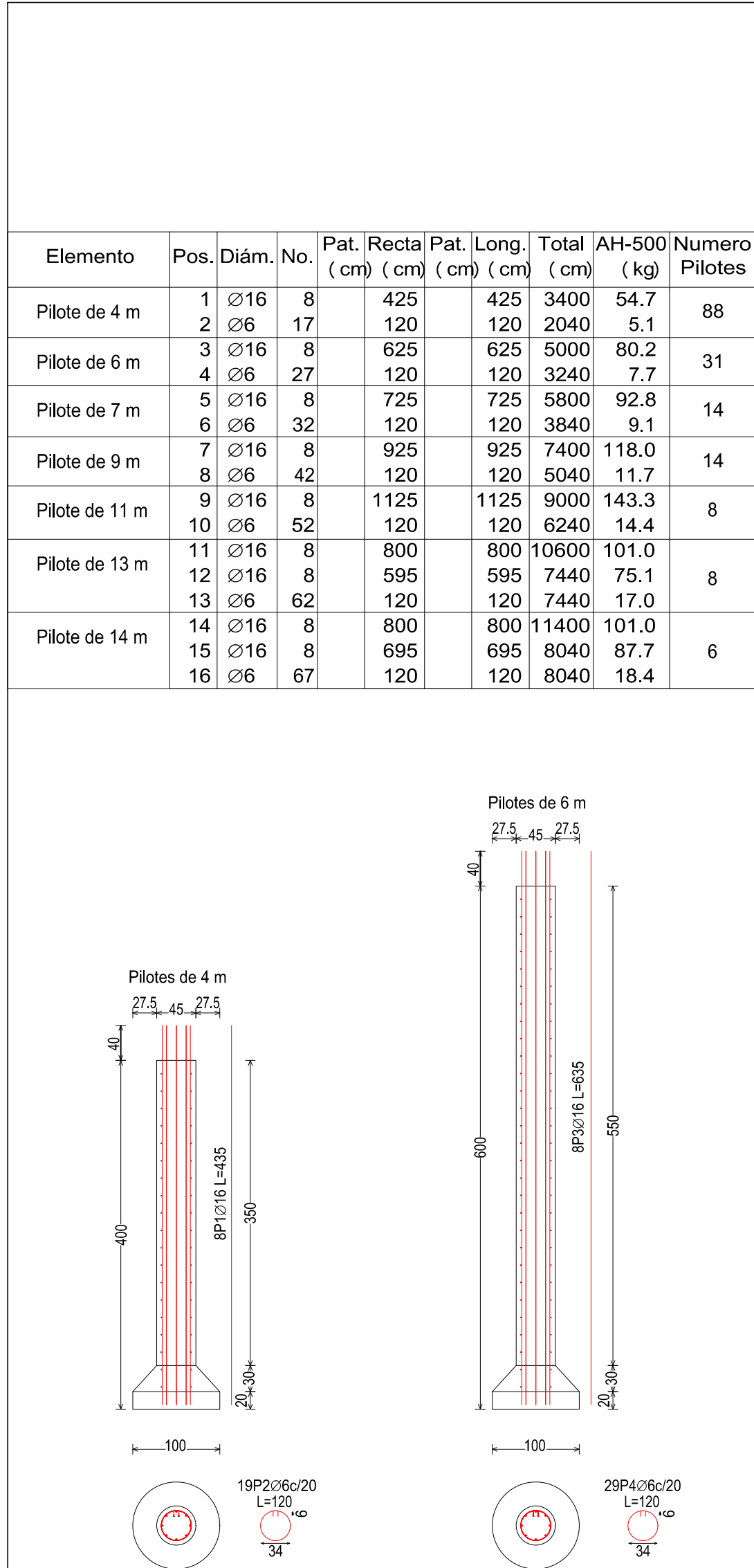
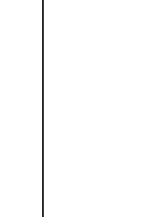
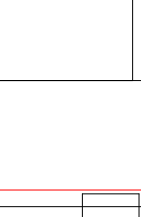
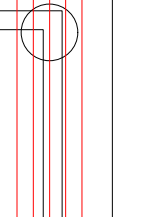
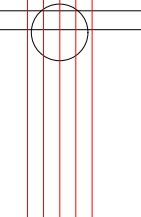
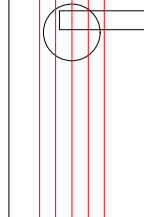
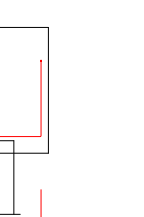
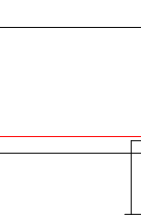
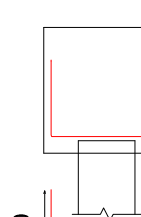
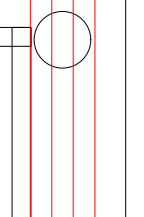
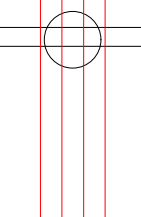
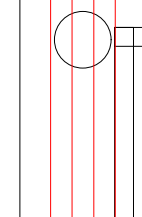
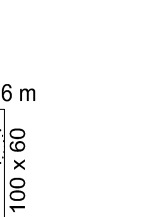
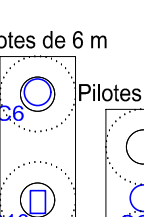
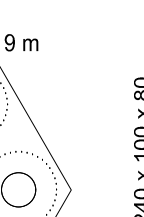
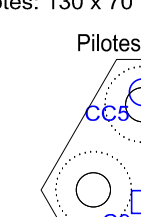
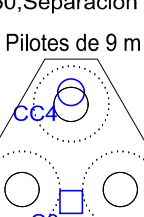
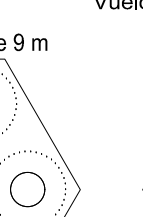
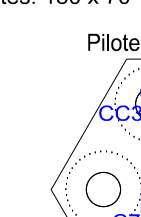
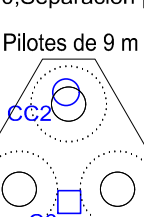
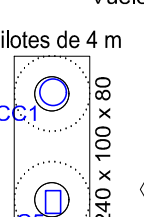
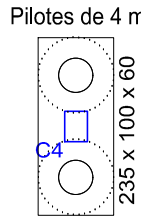
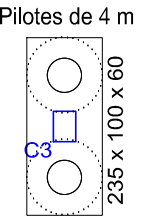
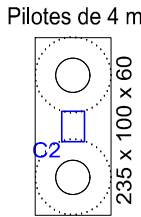
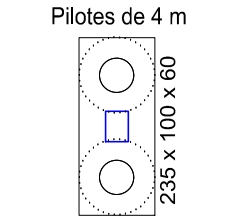
ESCALA 1:60



PLANO DEL TIPO DE PILOTES EMPLEADOS

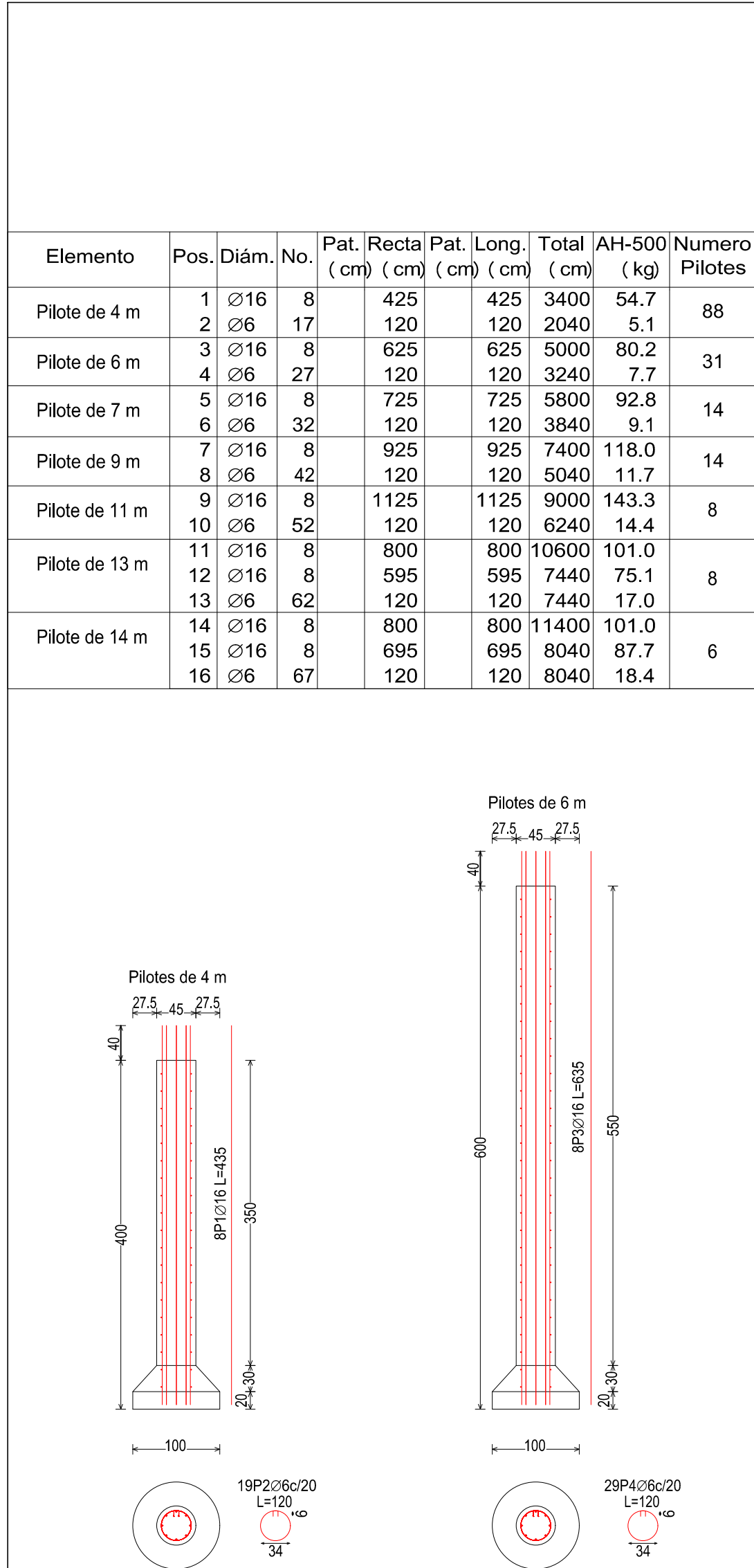
ESCALA 1:100

Cota de fundación 2.1



PLANO DE DESPIECE PILOTES

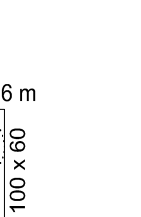
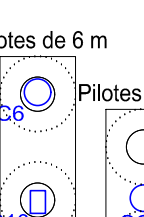
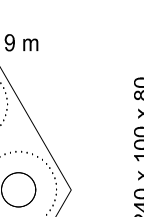
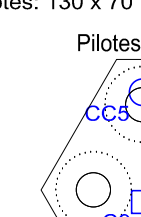
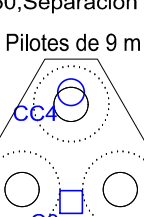
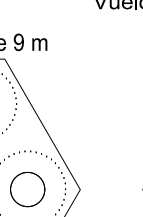
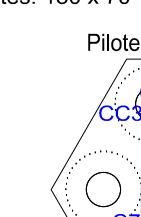
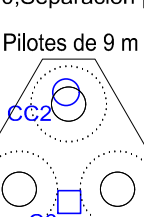
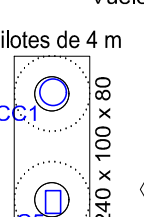
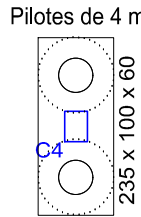
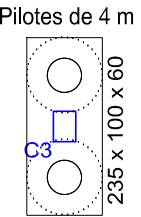
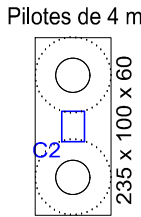
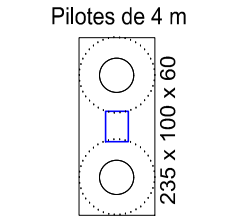
ESCALA 1:60



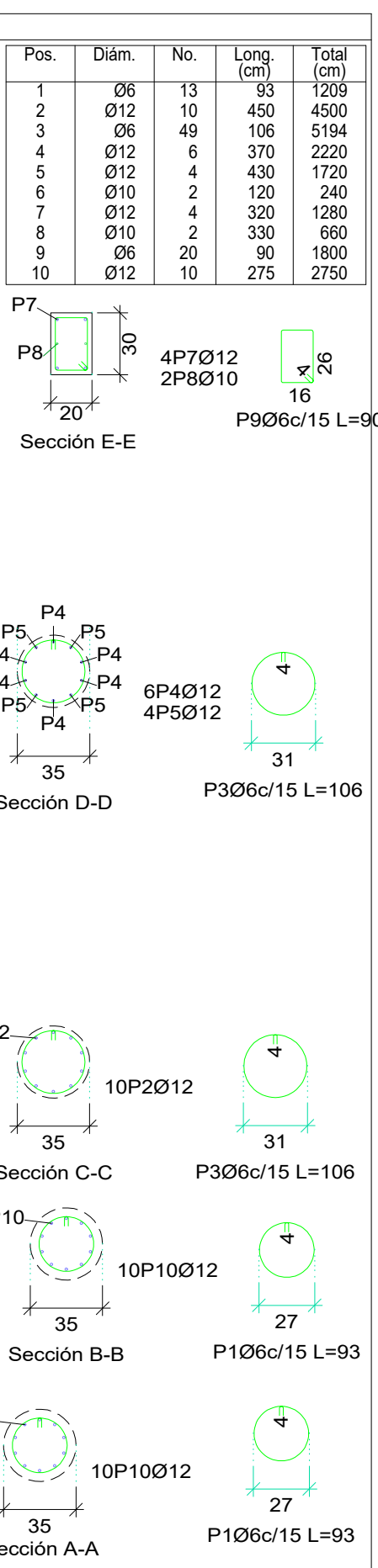
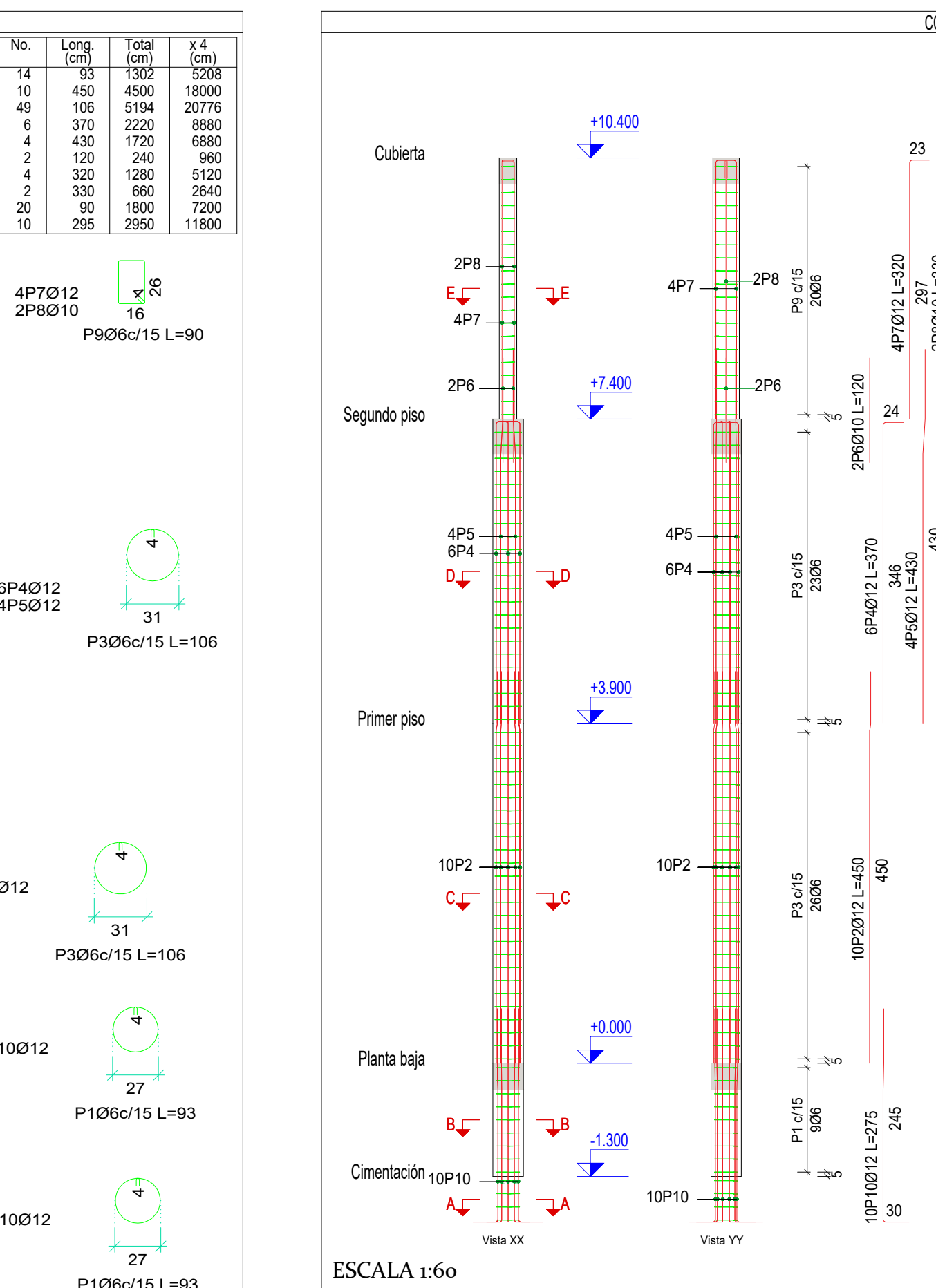
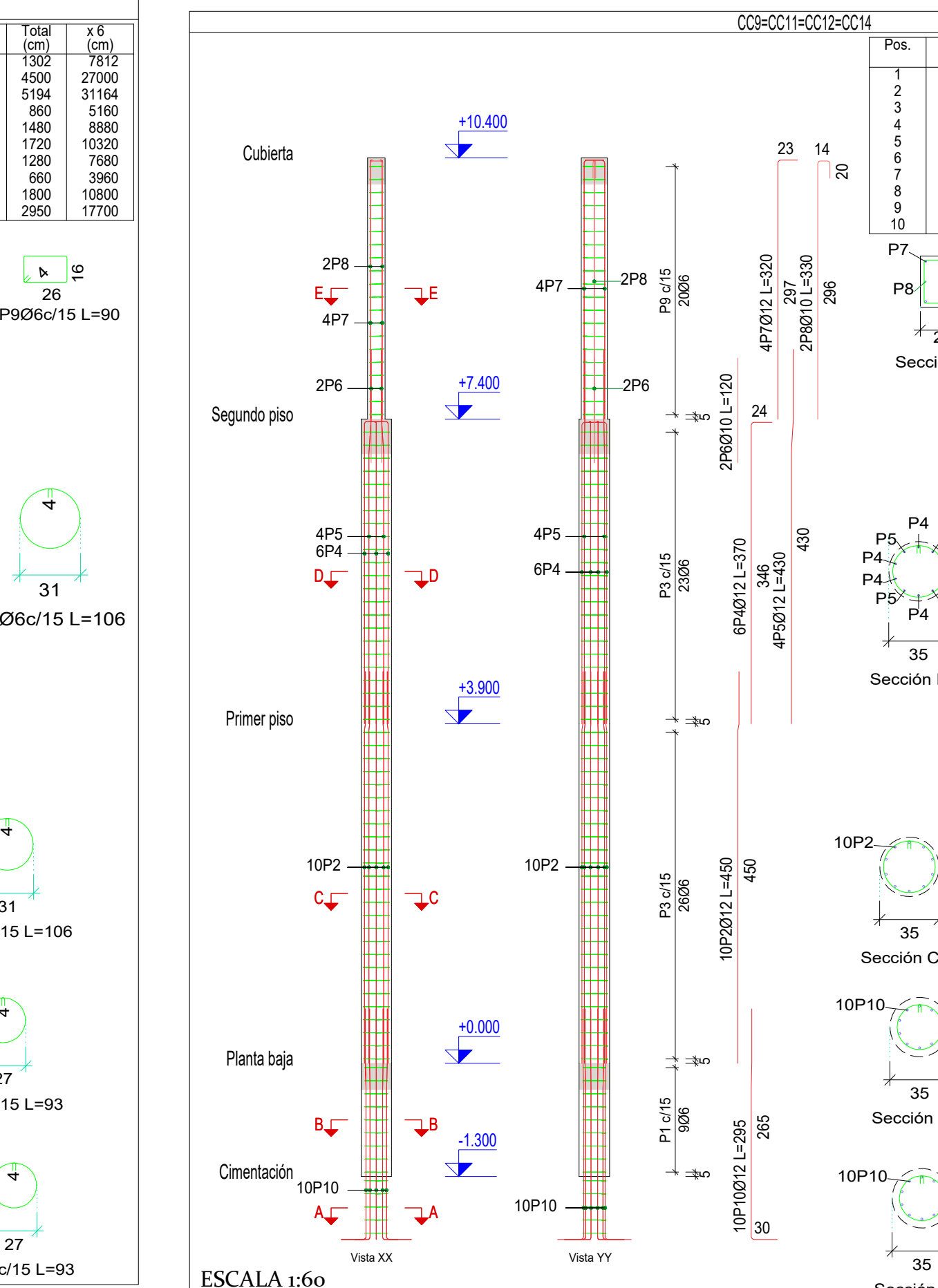
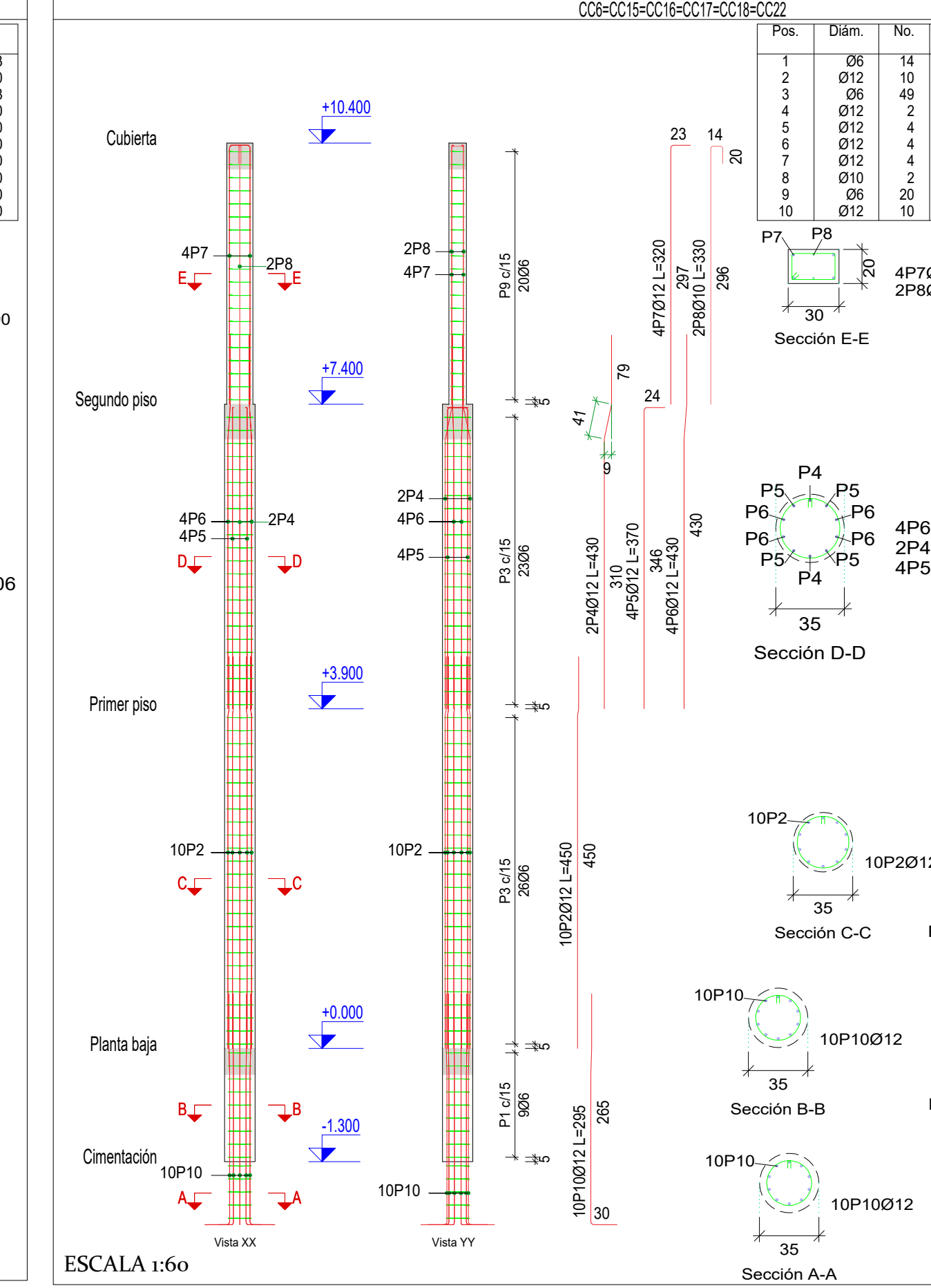
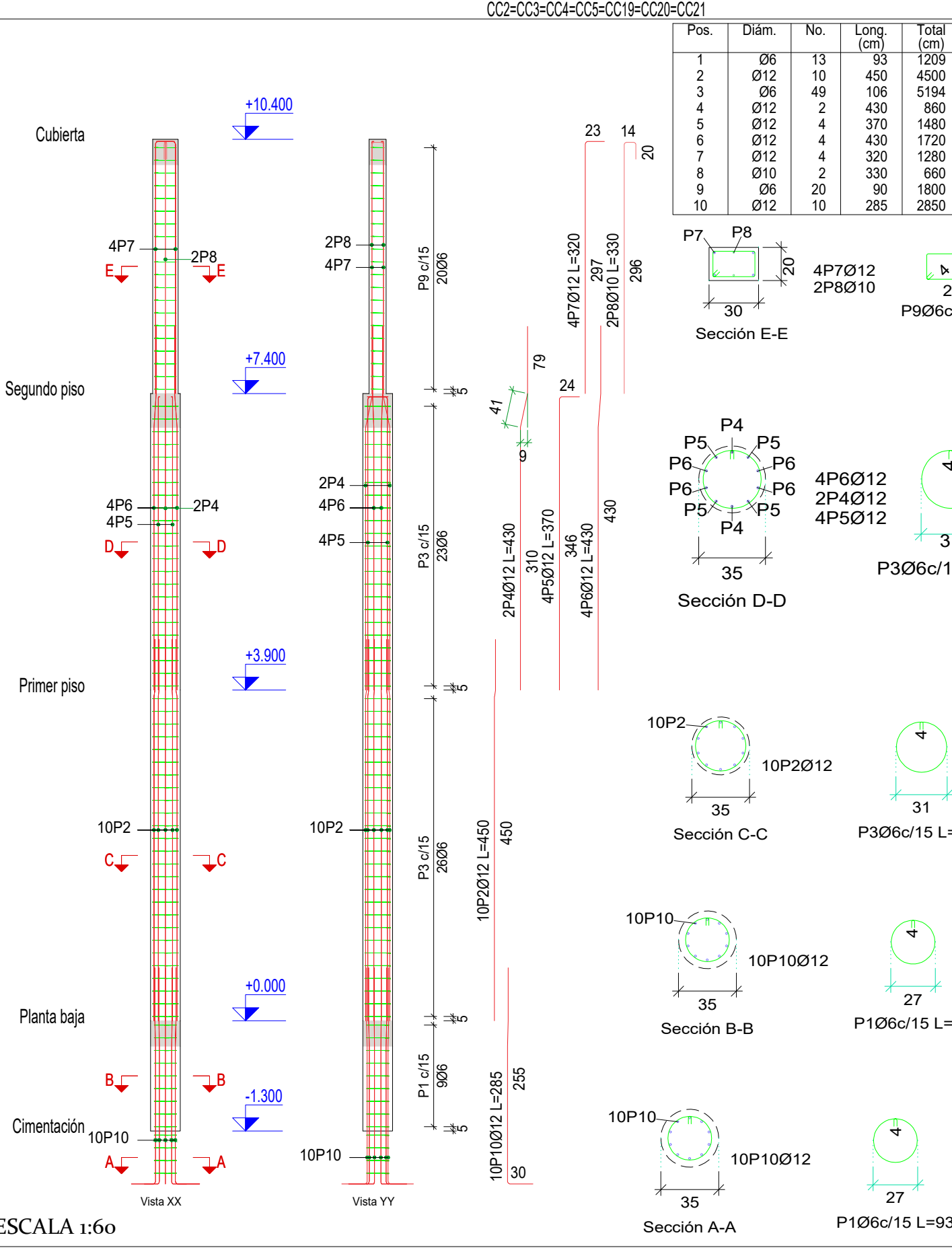
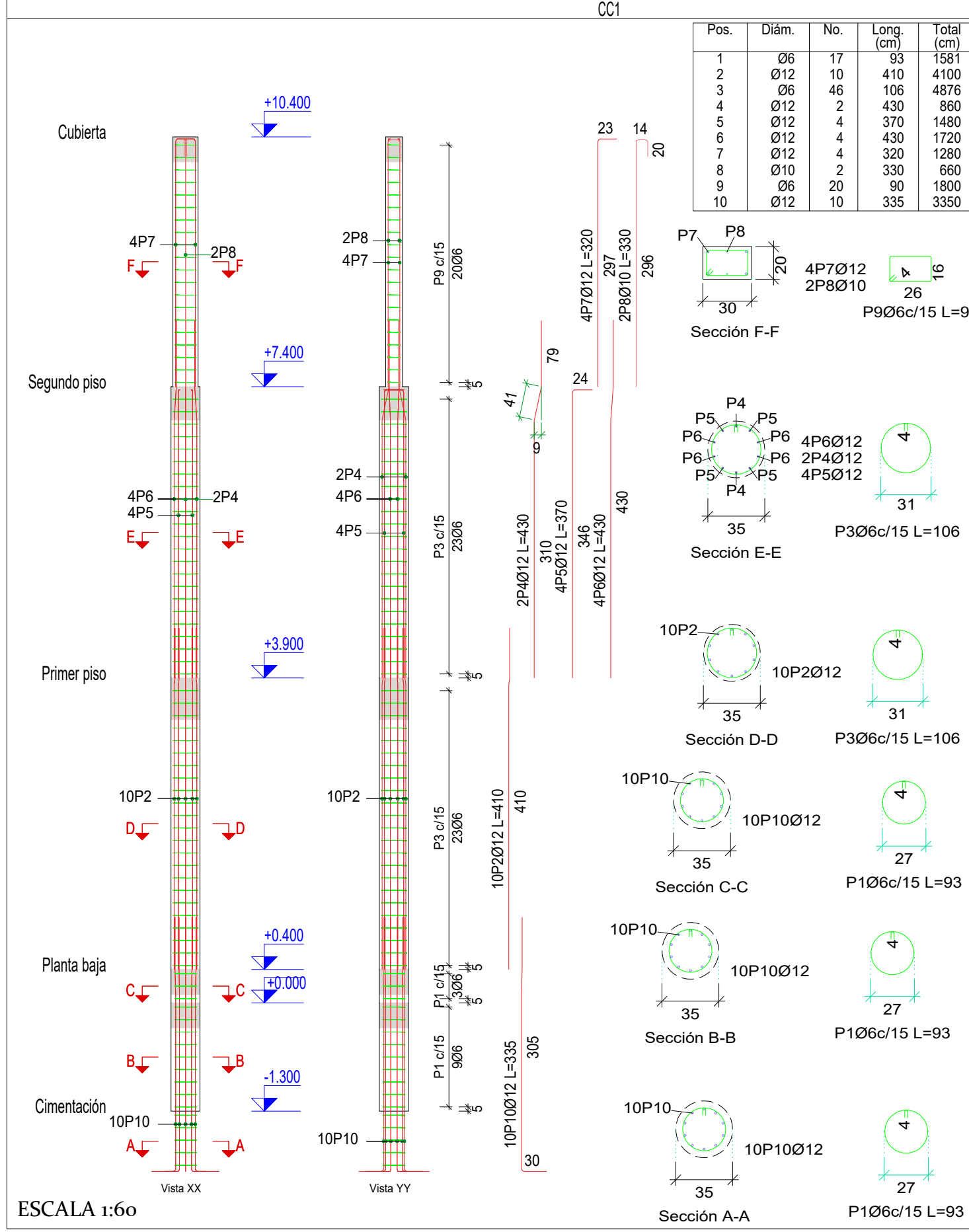
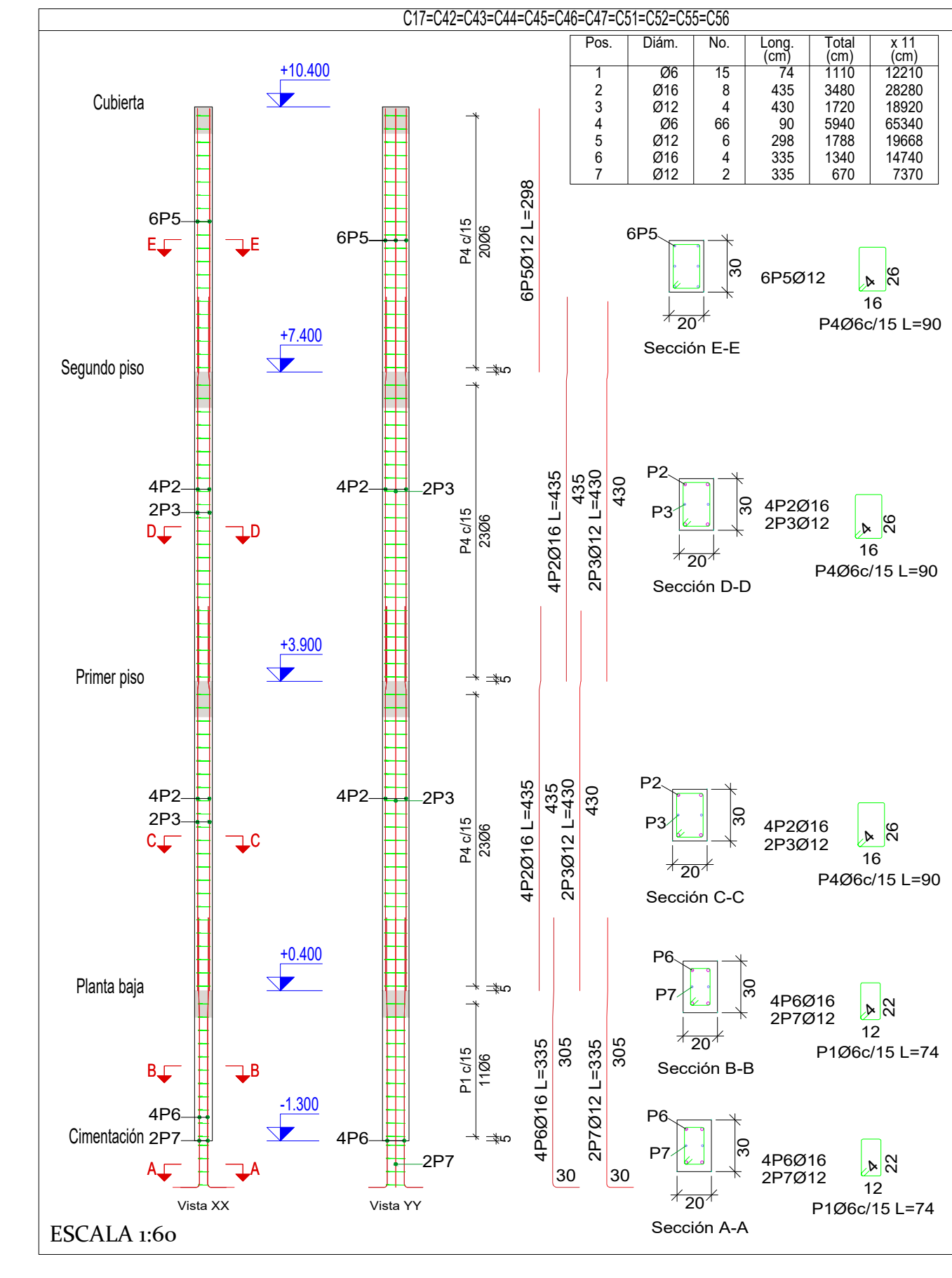
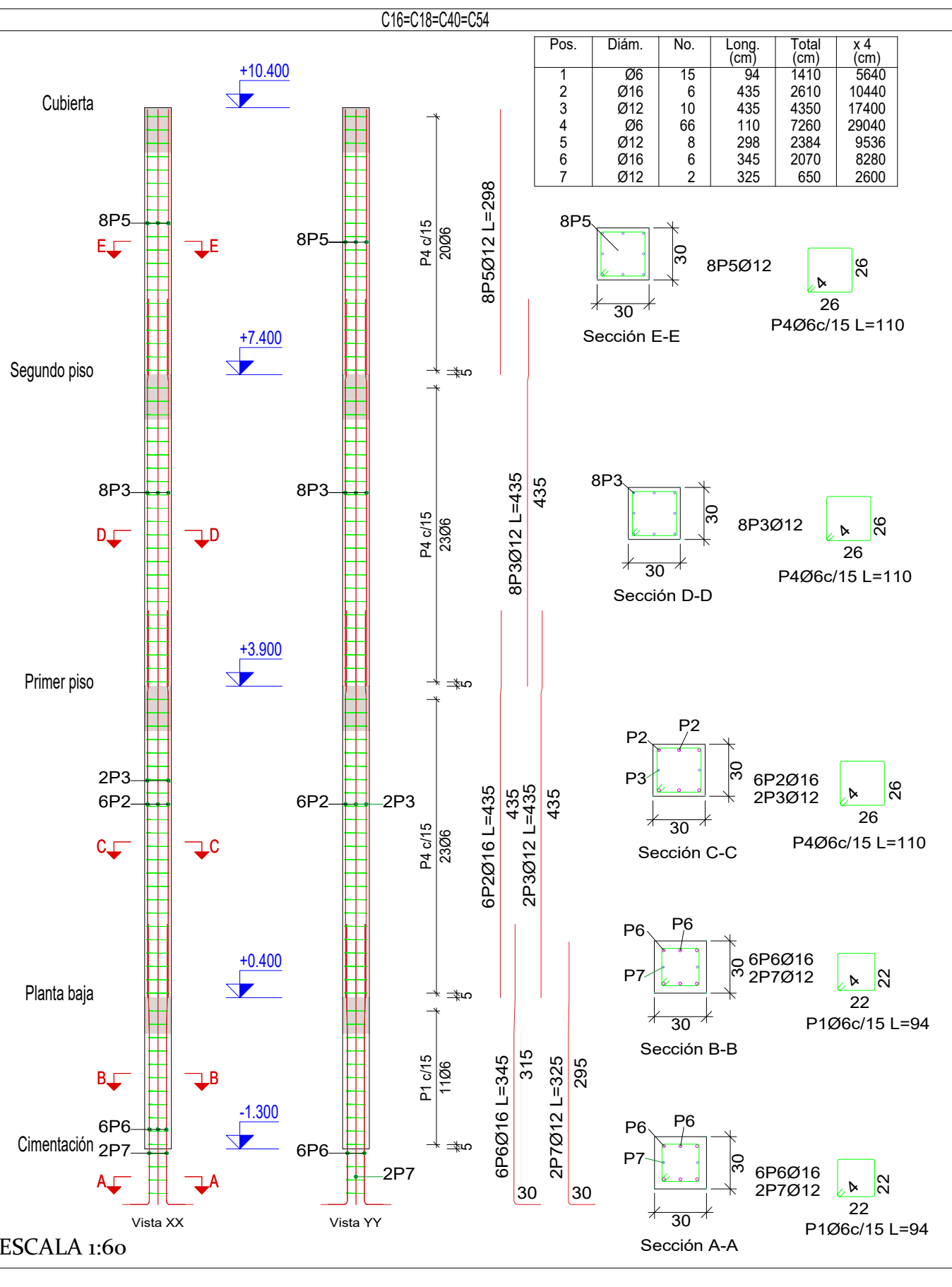
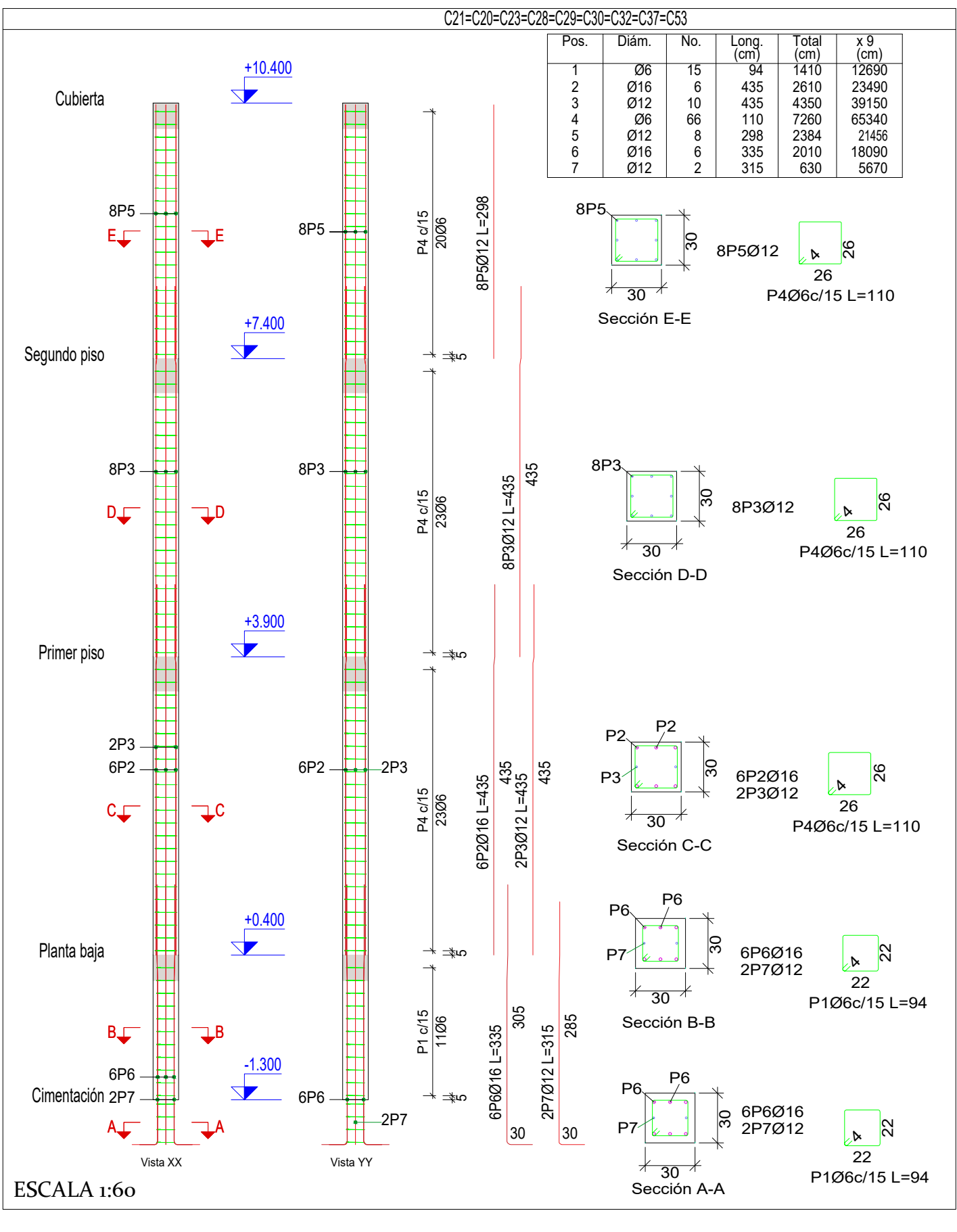
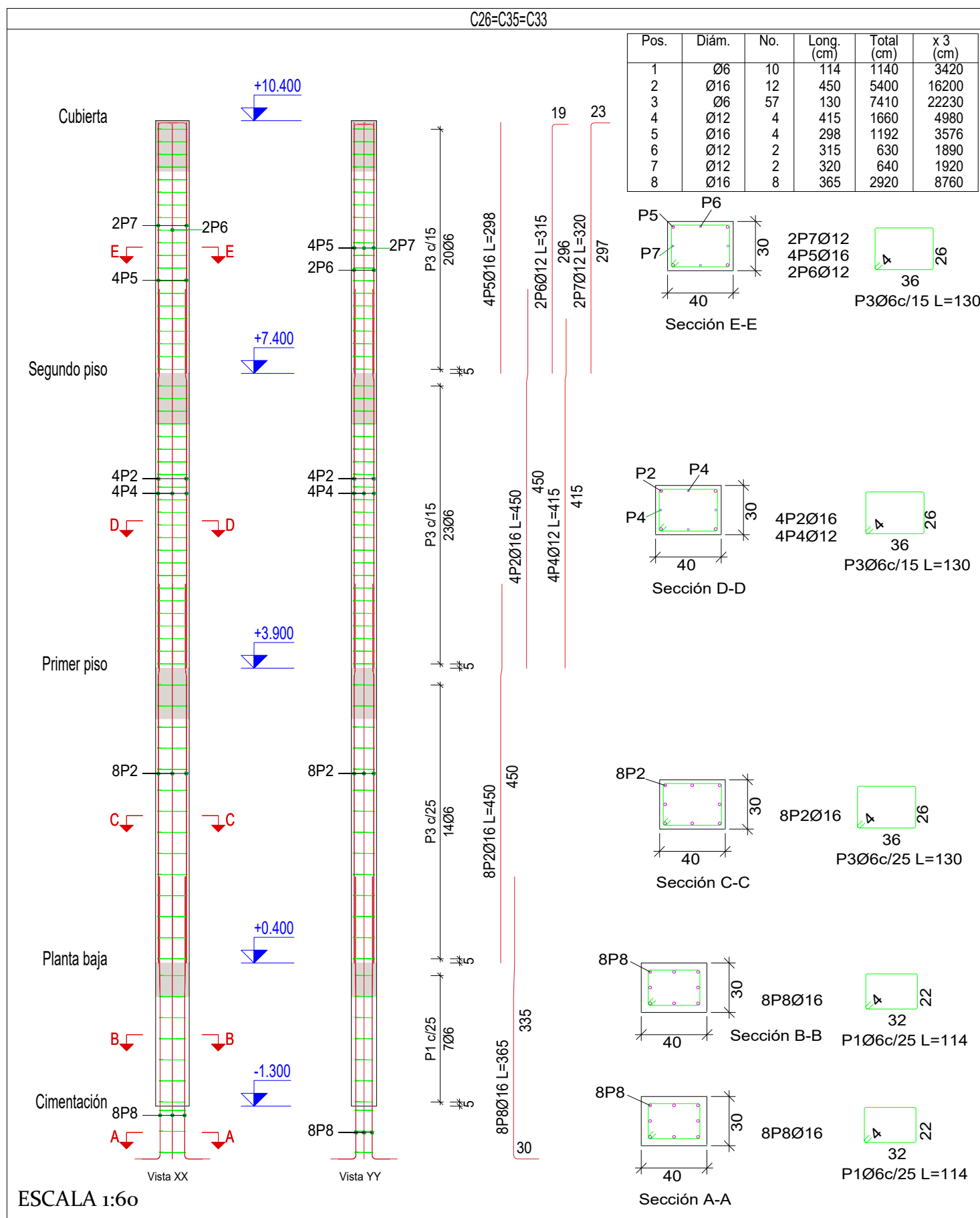
PLANO DEL TIPO DE PILOTES EMPLEADOS

ESCALA 1:100

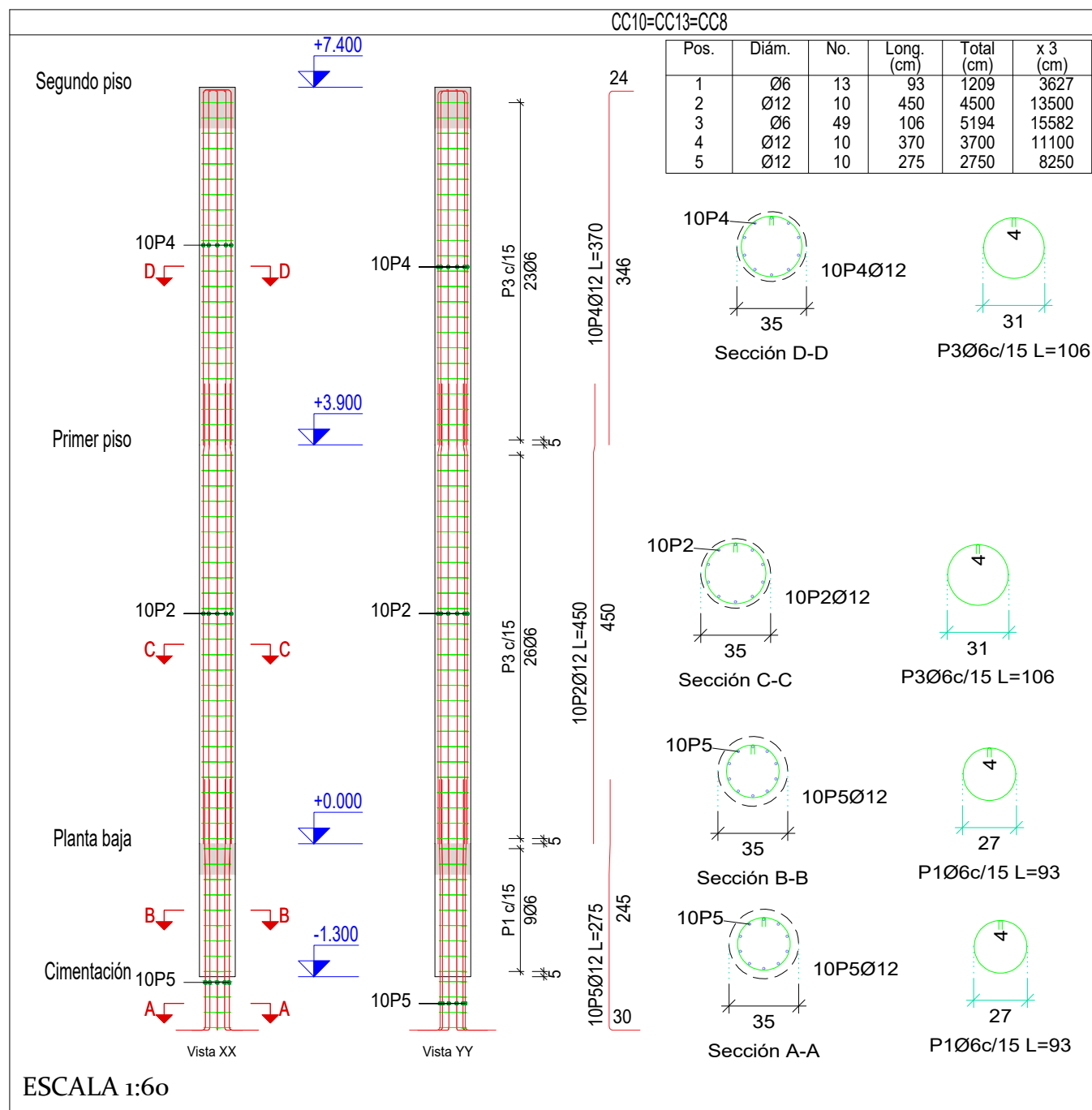
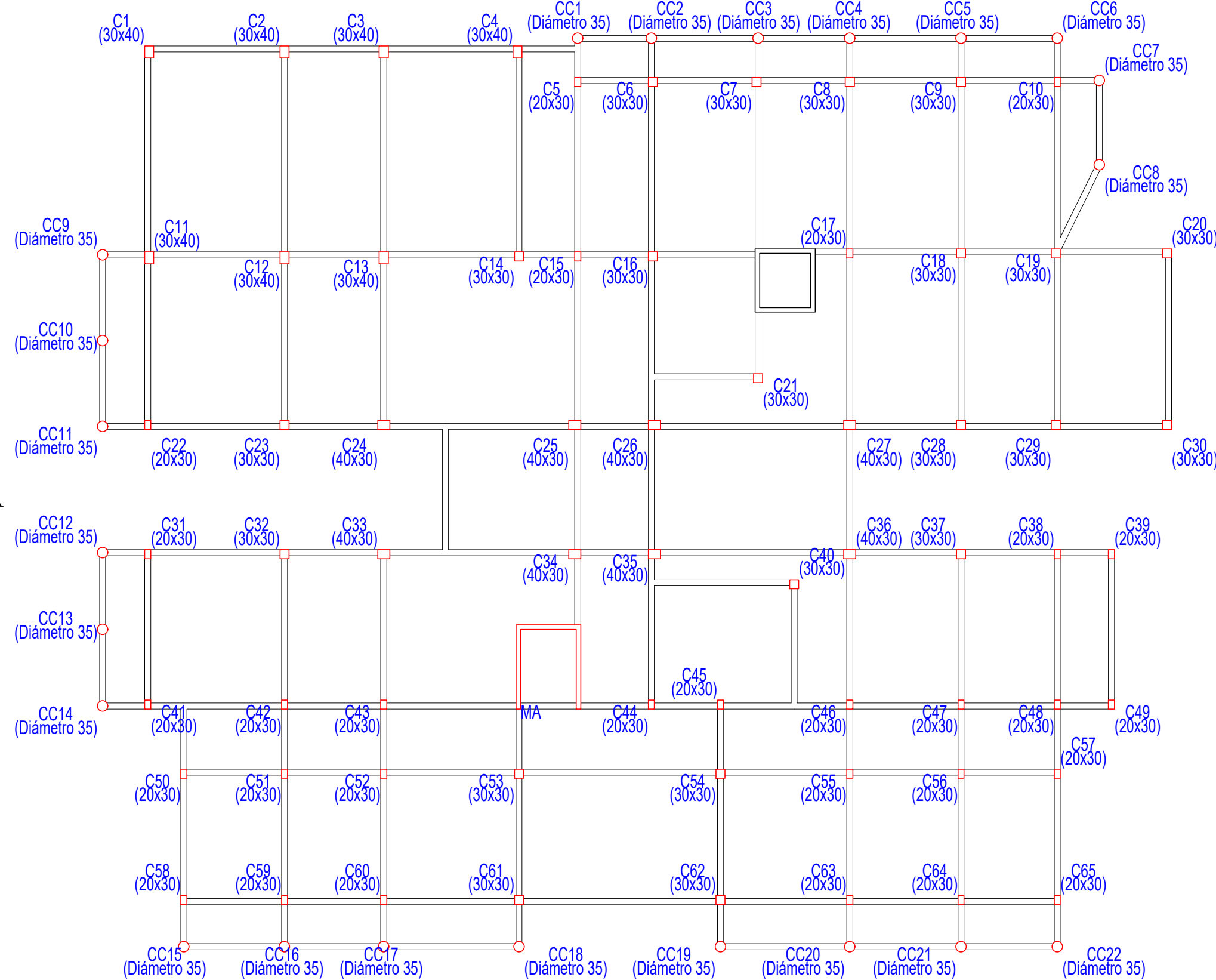
Cota de fundación 2.1



PLANO DE COLUMNAS
ESCALA 1:60



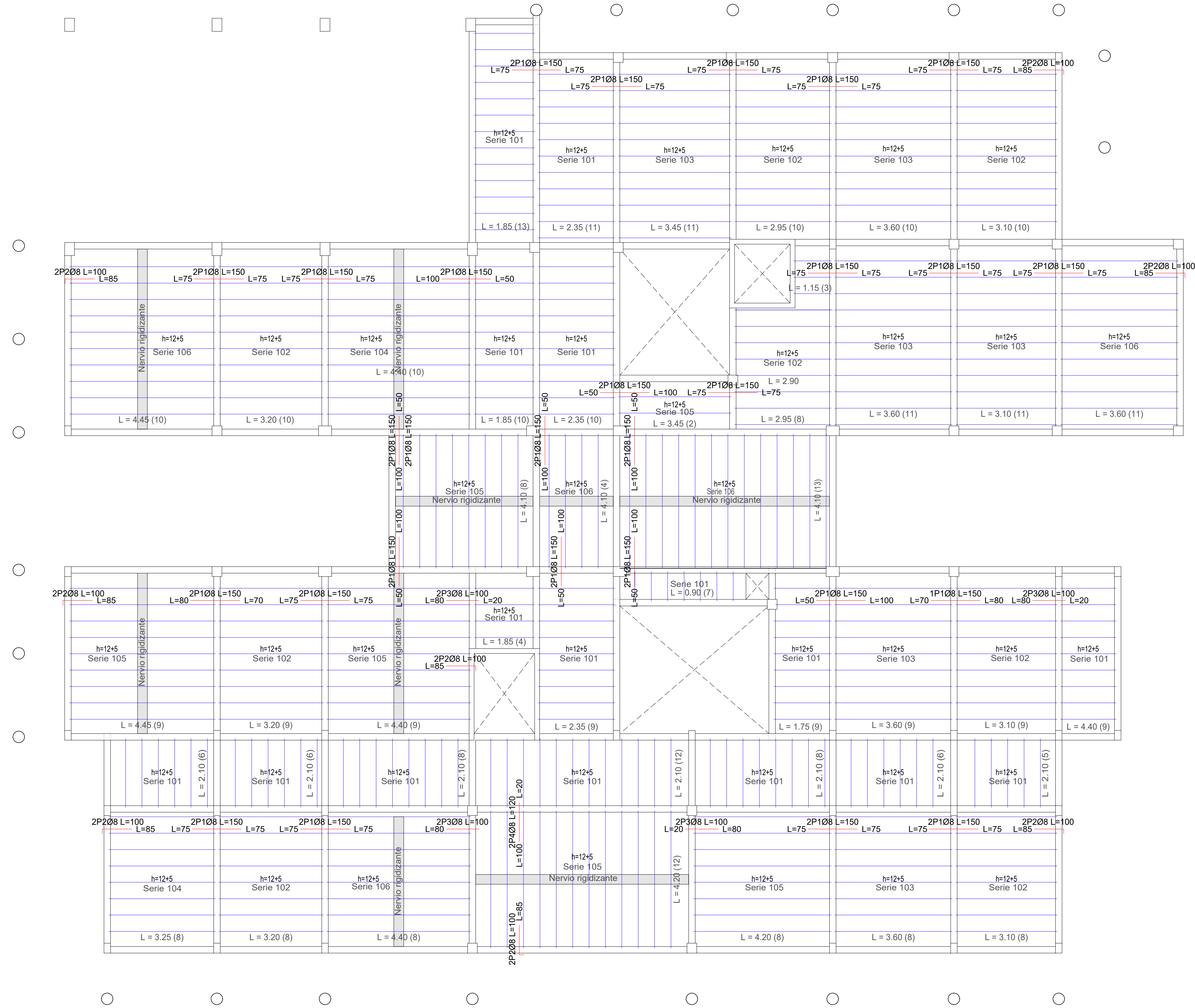
VISTA EN PLANTA
ESCALA 1:150



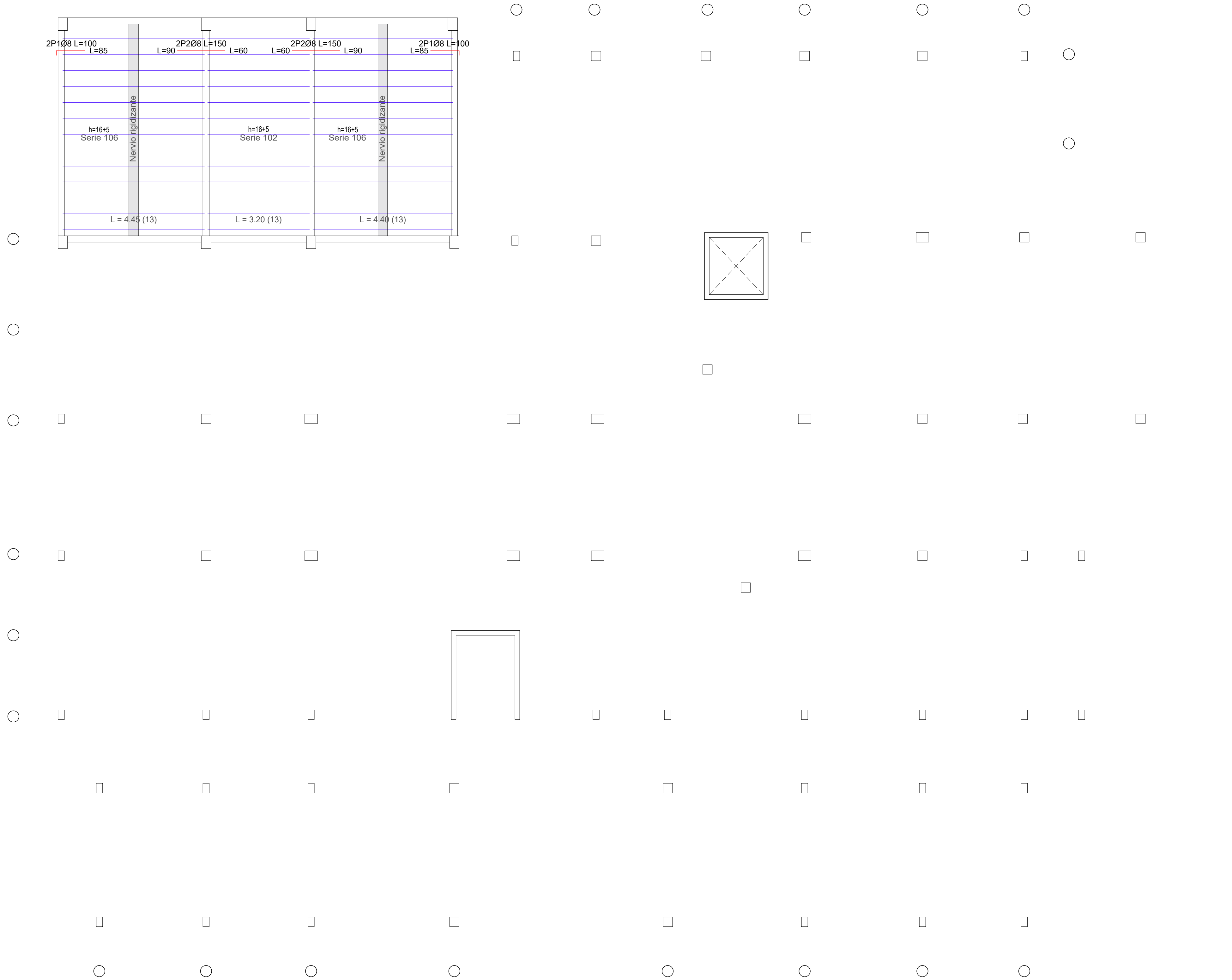
PLANO DE LOSAS

ESCALA 1:75

PRIMER PISO



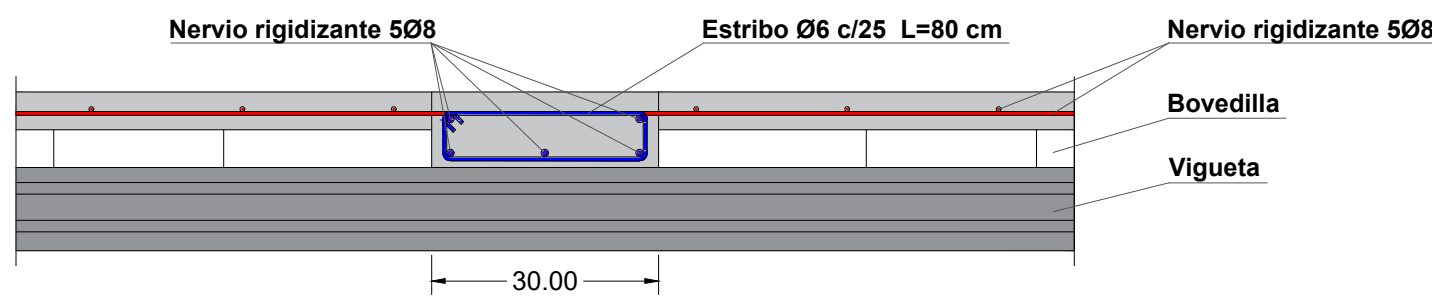
AUDITORIO



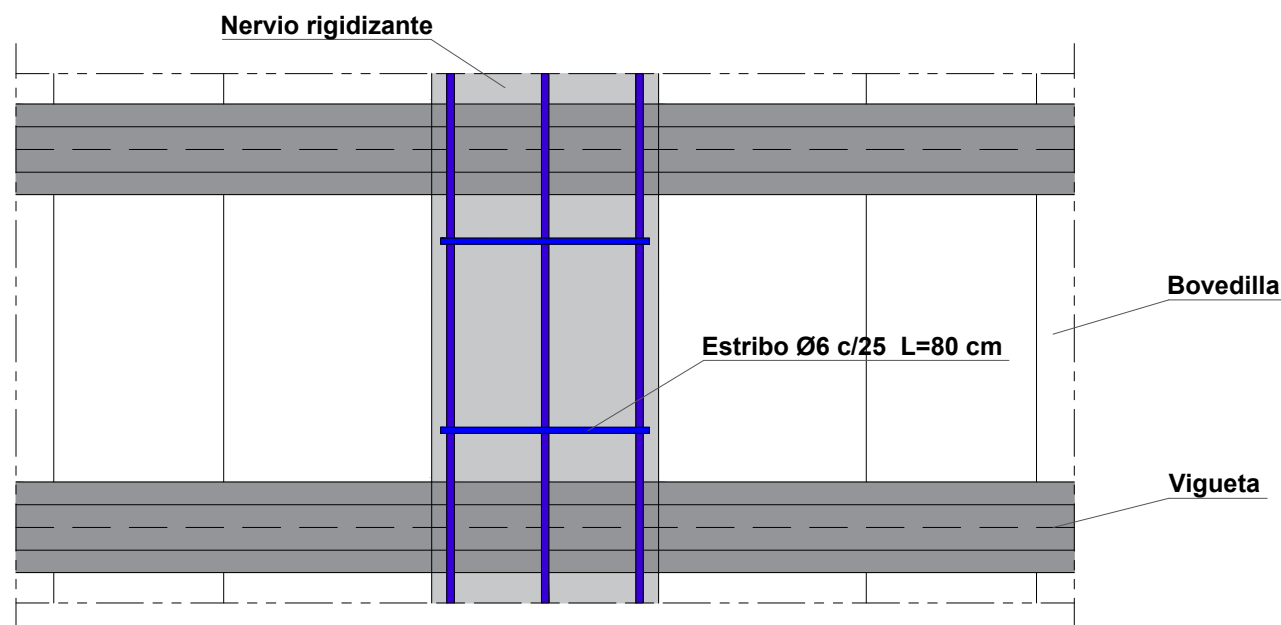
DETALLES DE LOSAS

ESCALA 1:10

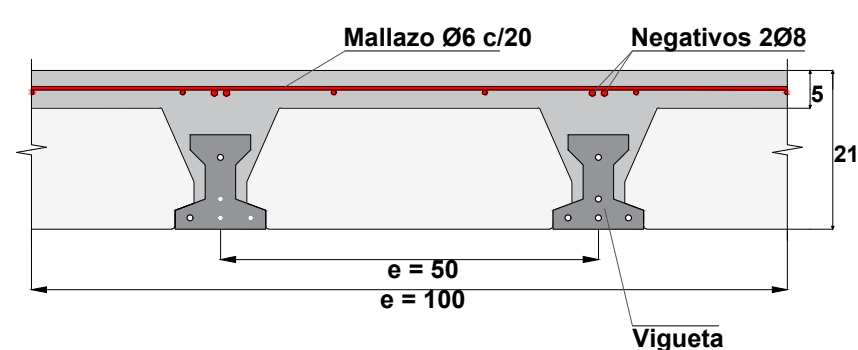
NERVIO RIGIDIZANTE
(CORTE)



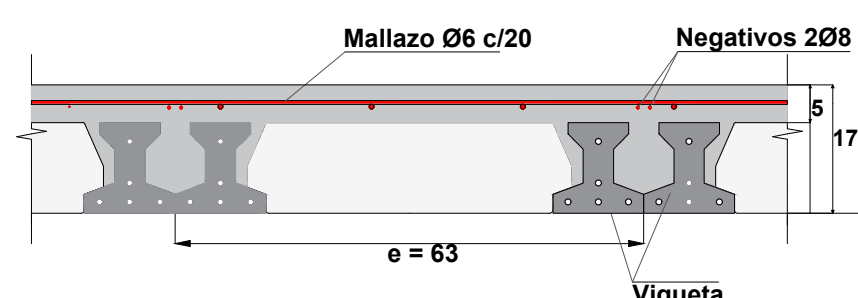
(VISTA EN PLANTA)



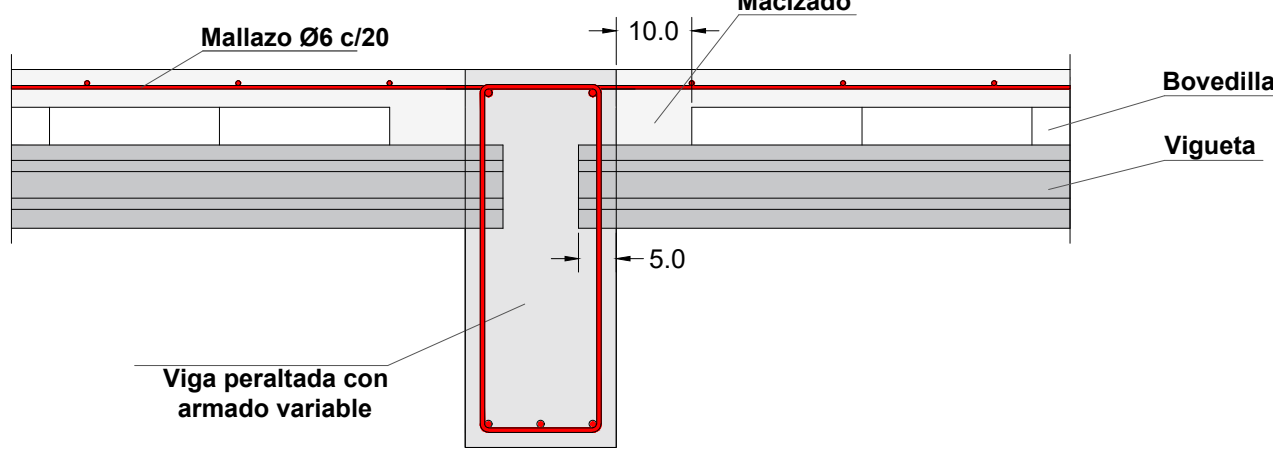
DISPOSICIÓN DE VIGUETAS
VIGUETAS SIMPLES



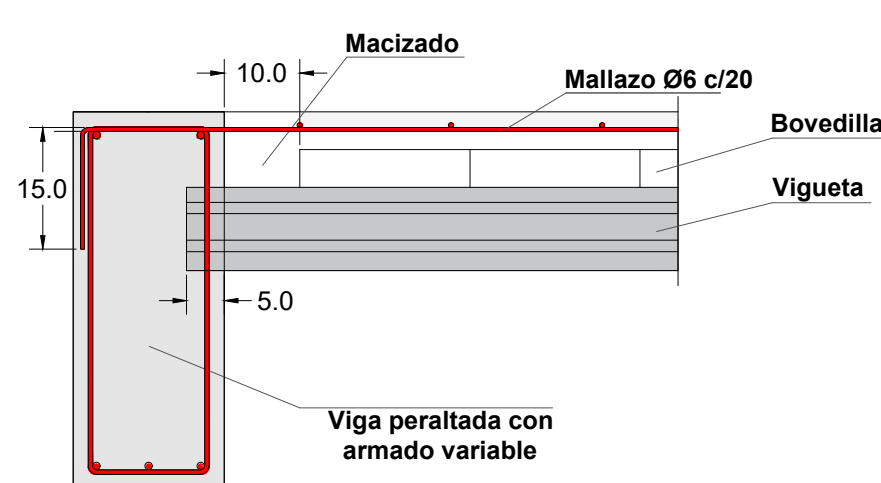
VIGUETAS DOBLES



DISPOSICIÓN DE VIGUETAS
APOYO EN VIGA INTERIOR



APOYO EN VIGA EXTERIOR

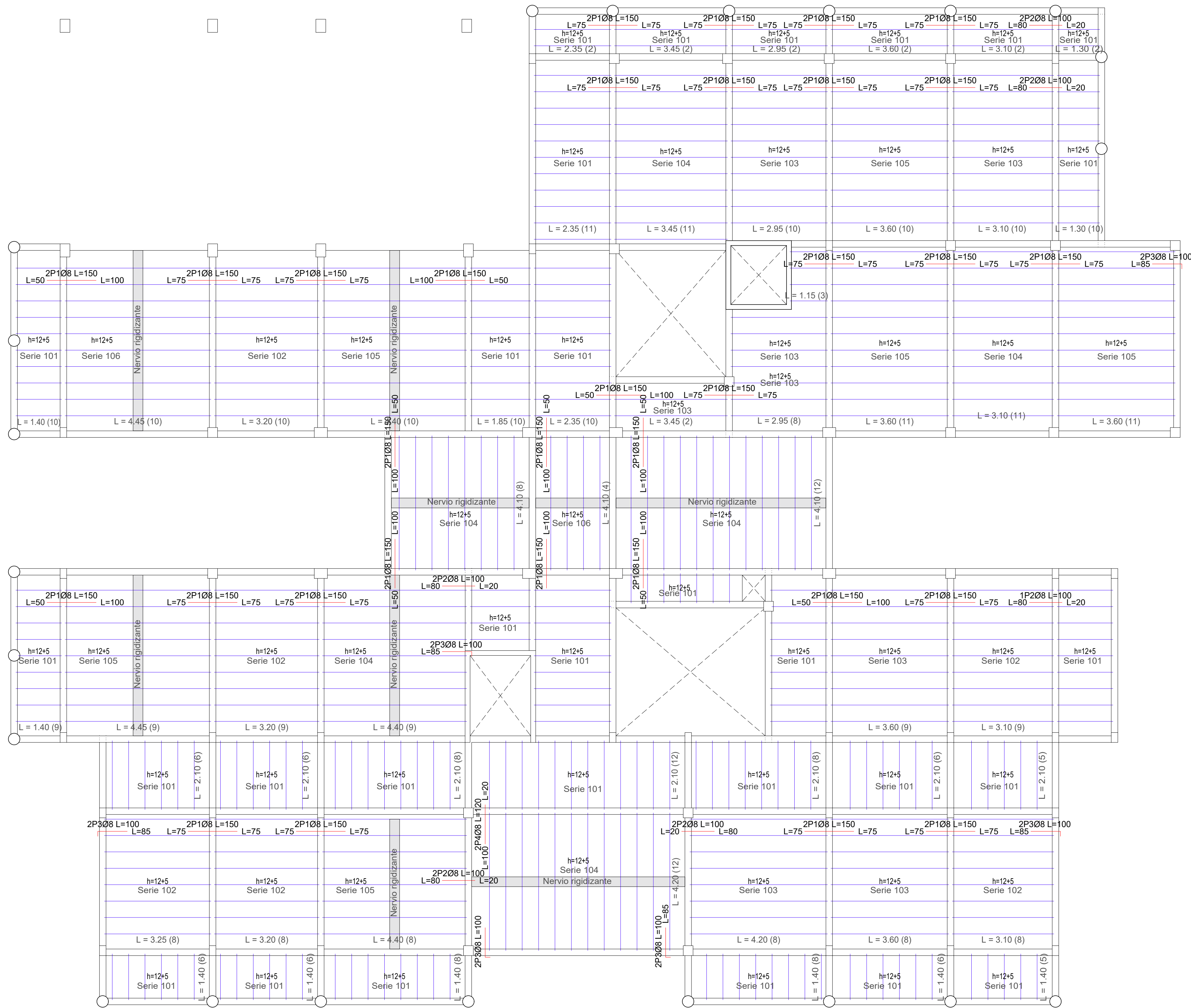


UNIVERSIDAD AUTÓNOMA "JUAN MISAEL SARACHO" FACULTAD DE CIENCIAS Y TECNOLOGÍA INGENIERÍA CIVIL			
PROYECTO: ANÁLISIS, CÁLCULO Y DISEÑO ESTRUCTURAL DE LA ESTACIÓN POLICIAL INTEGRAL (EPI) Y CUARTO DE BOMBIEROS DEL MUNICIPIO DE SAN LORENZO		CONTENIDO: PLANO DE LOSAS	
ESTUDIANTE: JULIO CESAR RODRIGUEZ POQUECHOQUE		ESCALA: INDICADA	LAMINA: 6 / 20
VoBo		FECHA: ABRIL/2026	

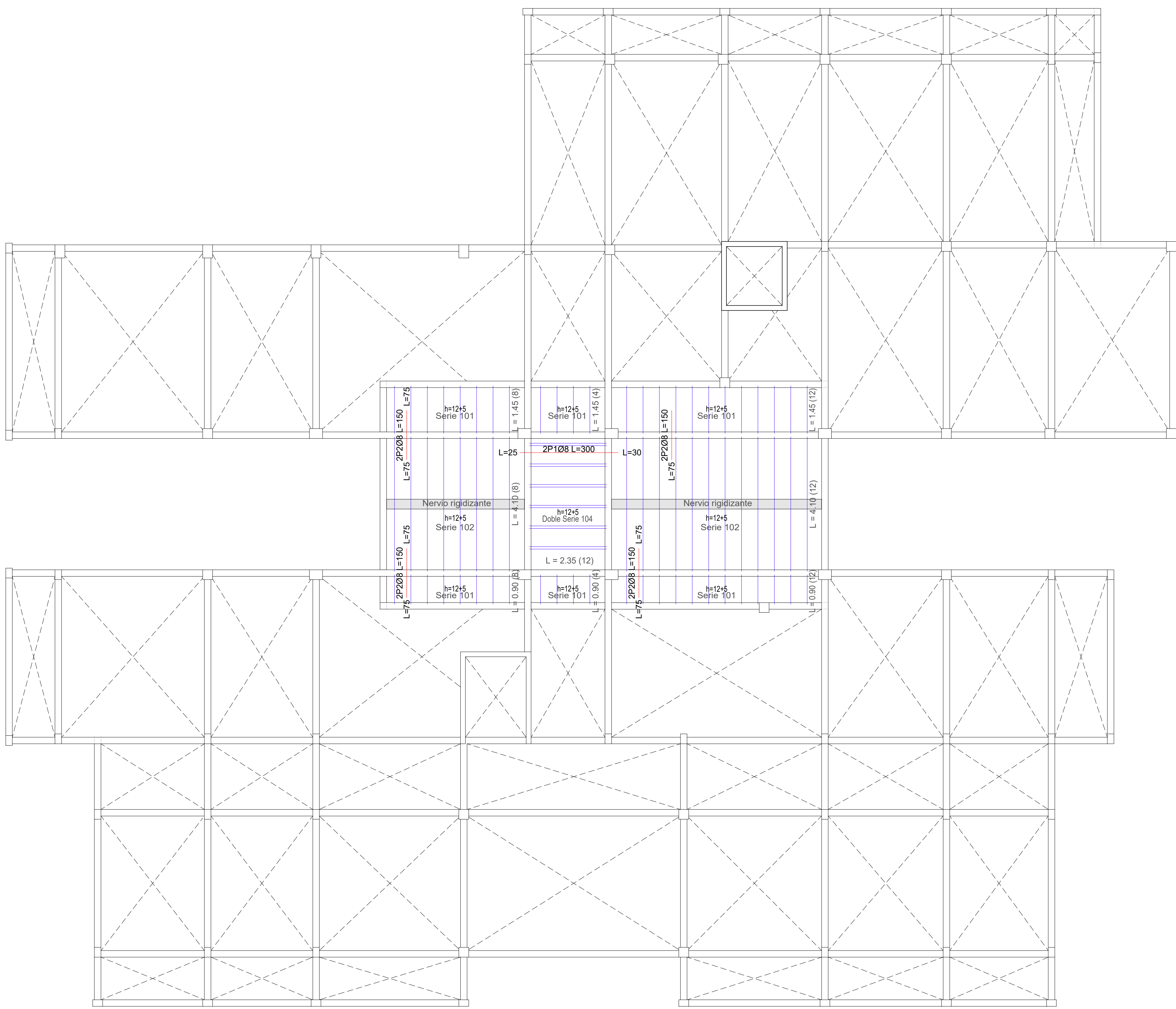
PLANO DE LOSAS

ESCALA 1:75

SEGUNDO PISO



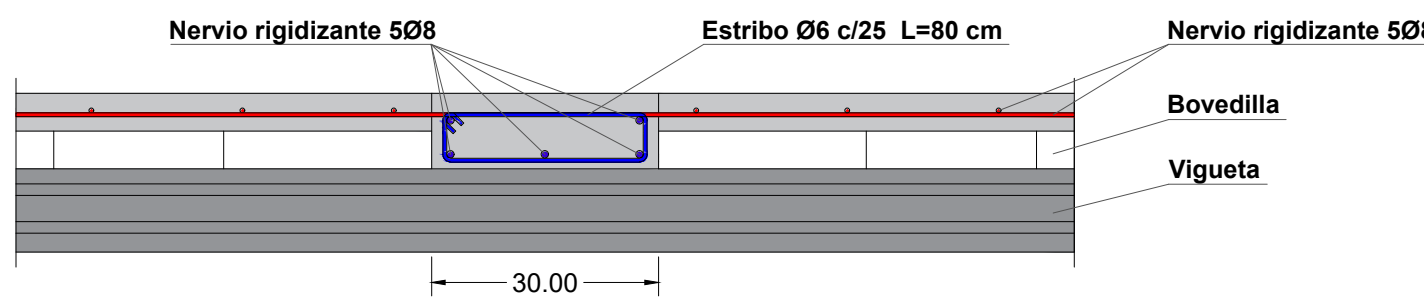
CUBIERTA



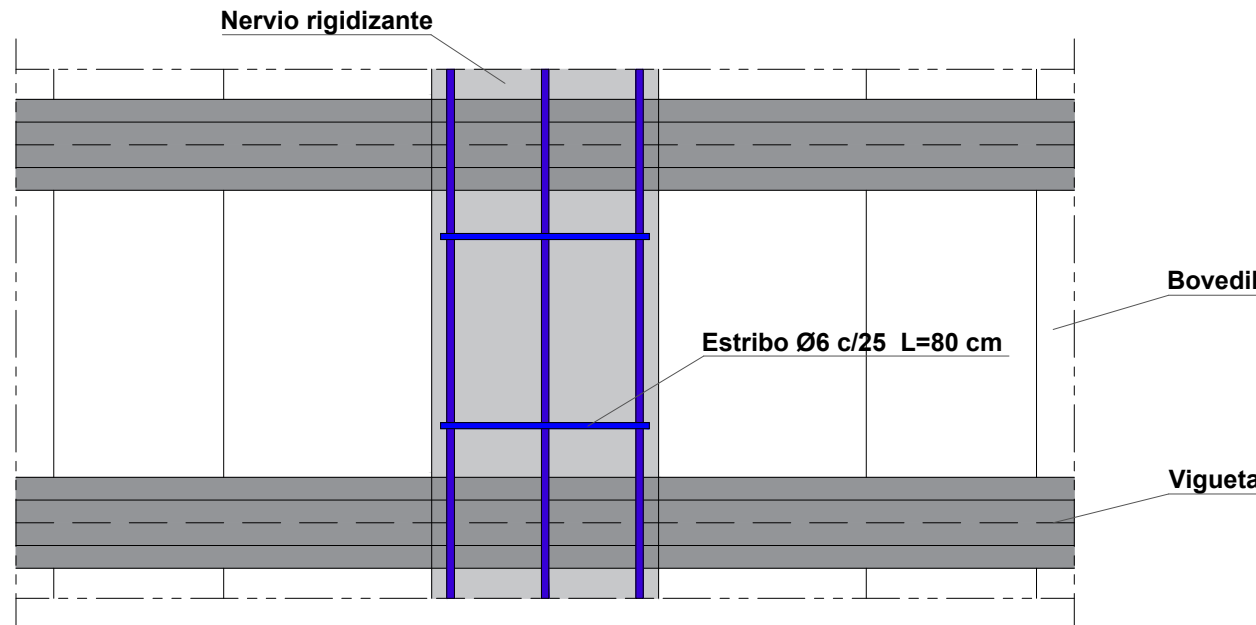
DETALLES DE LOSAS

ESCALA 1:30

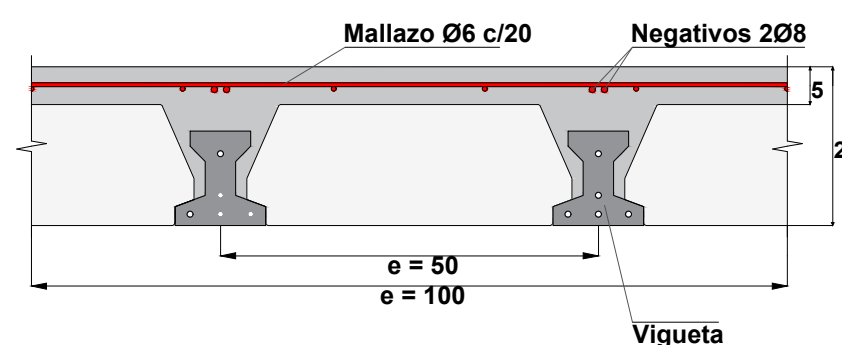
NERVIO RIGIDIZANTE
(CORTE)



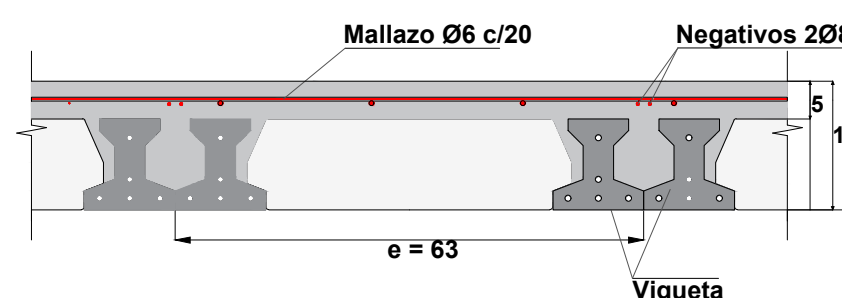
(VISTA EN PLANTA)



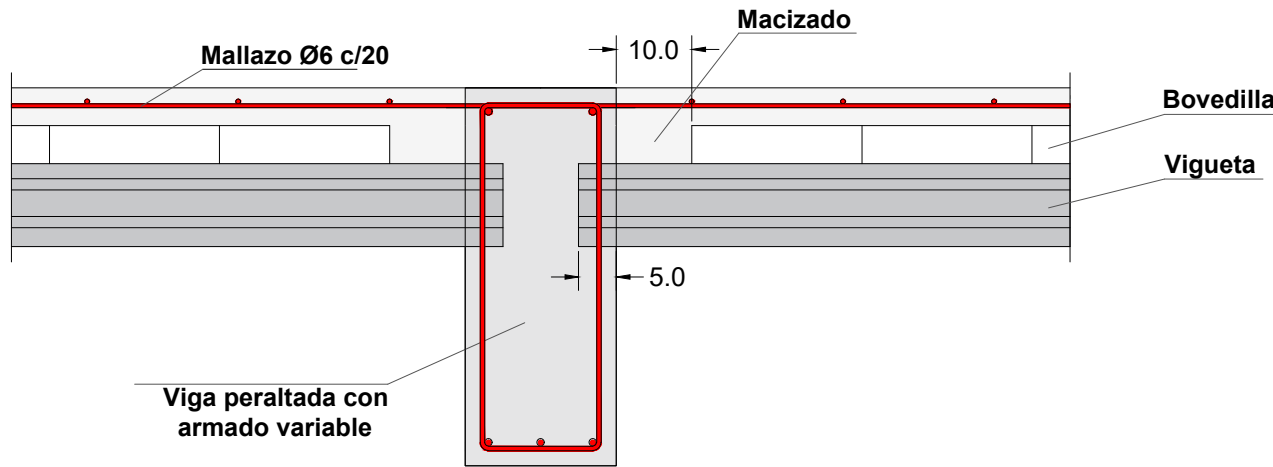
DISPOSICIÓN DE VIGUETAS
VIGUETAS SIMPLES



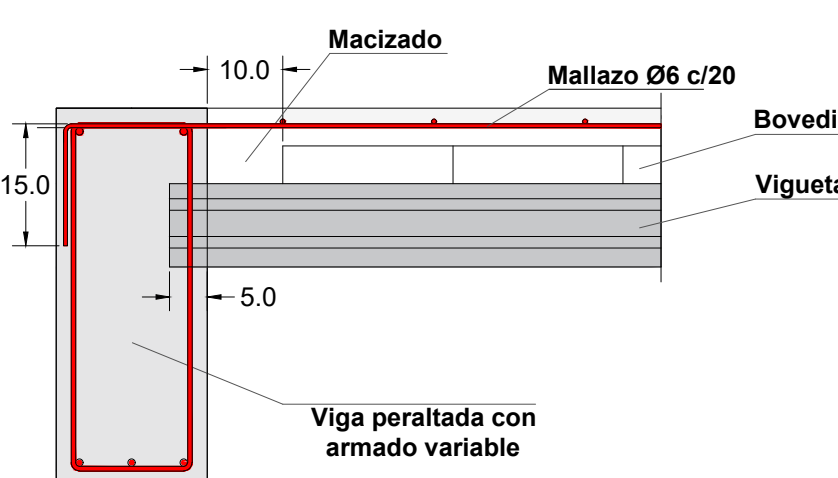
VIGUETAS DOBLES



DISPOSICIÓN DE VIGUETAS
APOYO EN VIGA INTERIOR



APOYO EN VIGA EXTERIOR



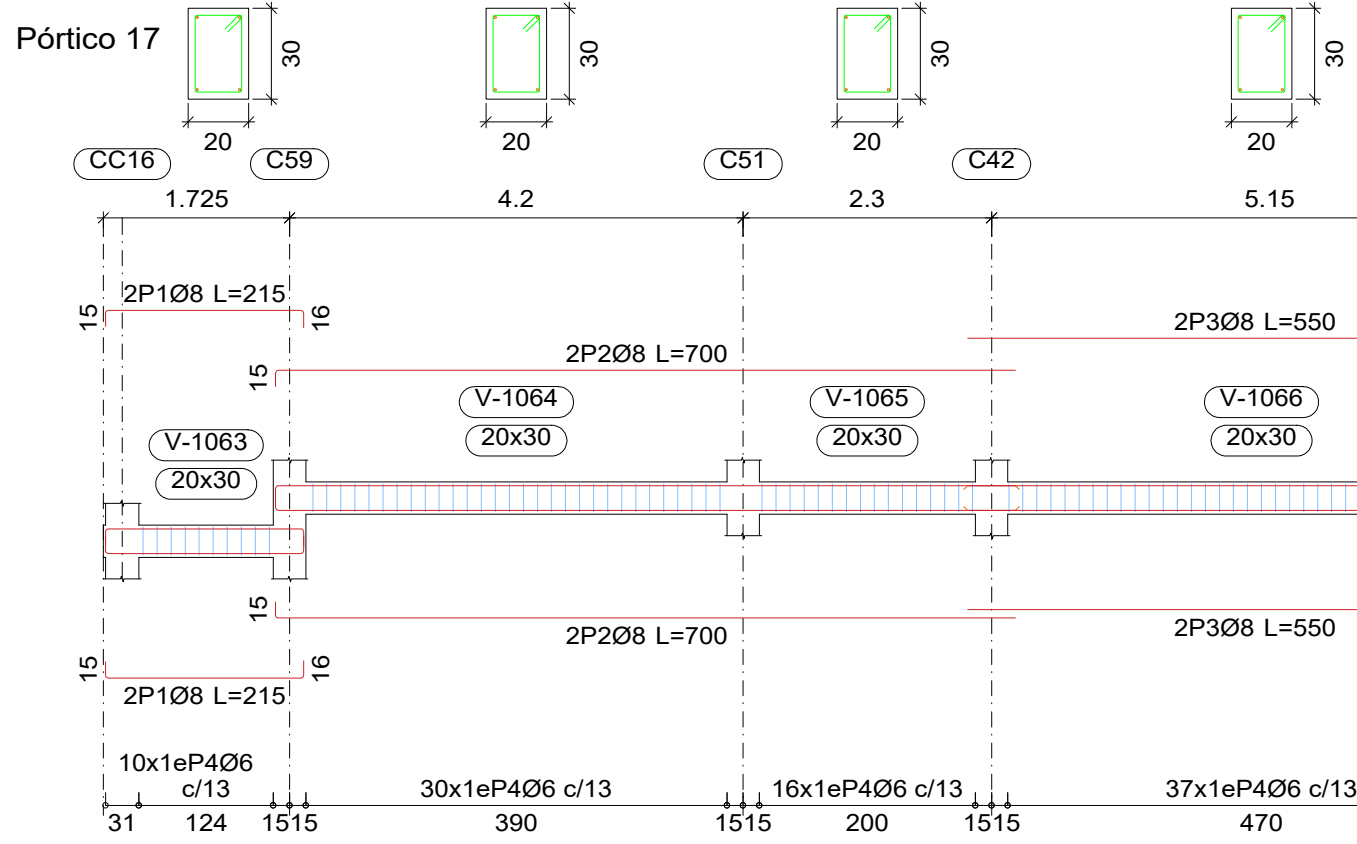
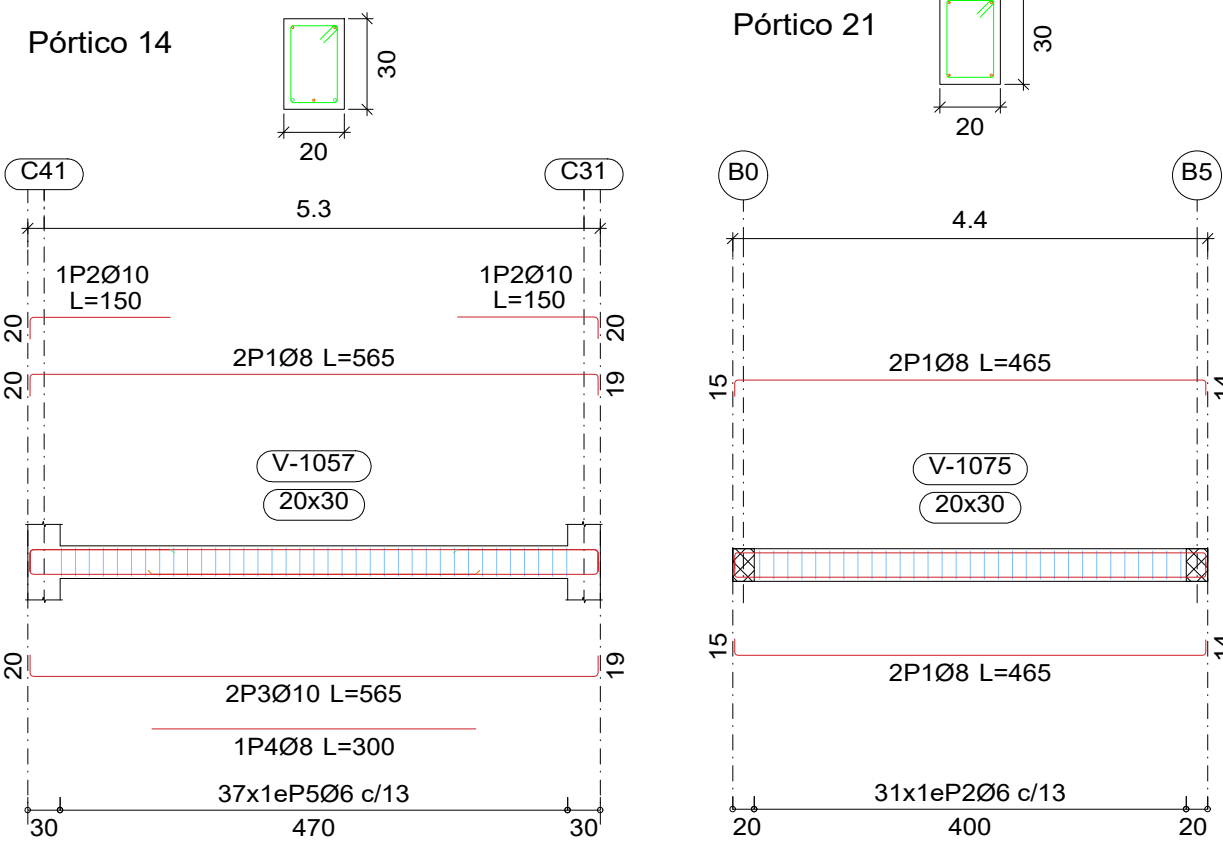
UNIVERSIDAD AUTÓNOMA "JUAN MISAEL SARACHO"		FACULTAD DE CIENCIAS Y TECNOLOGÍA	
		INGENIERÍA CIVIL	
PROYECTO: ANÁLISIS, CÁLCULO Y DISEÑO ESTRUCTURAL DE LA ESTACIÓN POLICIAL INTEGRAL EPTI Y CUARTEL DE BOMBEROS DEL MUNICIPIO DE SAN LORENZO		CONTENIDO: PLANO DE LOSAS	
ESTUDIANTE: JULIO CESAR RODRIGUEZ POQUECHOQUE		ESCALA: INDICADA	LAMINA: 7/20
VoBo		FECHA: ABRIL/2026	

Elemento	Pos.	Diám.	No.	Esquema (cm)	Long (cm)	Total (cm)	AH-500 (kg)
Pórtico 1	1	Ø8	2		815	830	1660 6.6
	2	Ø10	2		700	1400	8.6
	3	Ø8	2		200	400	1.6
	4	Ø10	2		845	1690	6.7
	5	Ø8	2		700	1400	8.6
Total+10%:					94	9682	21.5
Pórtico 2	1	Ø8	2		960	1930	7.6
	2	Ø10	2		755	1510	9.3
	3	Ø8	2		194	388	1.5
	4	Ø8	2		200	400	1.6
	5	Ø10	2		960	1920	11.8
	6	Ø8	2		740	1480	9.1
	7	Ø10	2		184	368	2.3
	8	Ø8	1		250	250	1.0
	9	Ø6	124		94	11656	25.9
Total+10%:					94	11656	25.9
Pórtico 3	1	Ø8	2		860	1730	6.8
	2	Ø8	2		410	820	3.4
	3	Ø8	2		240	480	1.9
	4	Ø10	2		960	1920	11.8
	5	Ø10	2		150	300	0.9
	6	Ø10	2		860	1720	10.6
	7	Ø10	2		410	820	5.3
	8	Ø8	1		250	250	1.0
	9	Ø8	1		200	200	0.8
	10	Ø6	92		94	8648	19.2
Total+10%:					94	8648	19.2
Pórtico 4	1	Ø8	2		184	368	2.3
	2	Ø8	2		835	1670	6.6
	3	Ø8	2		950	1900	7.5
	4	Ø8	2		385	770	3.2
	5	Ø10	2		200	400	2.5
	6	Ø8	3		200	600	2.4
	7	Ø8	1		115	230	0.5
	8	Ø8	2		114	228	0.5
	9	Ø10	2		840	1680	10.4
	10	Ø10	2		950	1900	11.7
	11	Ø10	2		385	770	3.2
	12	Ø8	1		250	250	1.0
	13	Ø6	157		94	14758	32.8
Total+10%:					94	14758	32.8
Pórtico 5	1	Ø10	2		376	752	5.1
	2	Ø12	2		170	340	3.6
	3	Ø12	2		314	628	7.5
	4	Ø12	2		300	600	5.3
	5	Ø6	29		114	3306	7.3
Total+10%:					114	3306	7.3
Pórtico 6	1	Ø8	2		114	228	1.7
	2	Ø10	2		800	1600	10.5
	3	Ø10	2		960	1920	11.8
	4	Ø8	2		1100	2200	8.7
	5	Ø8	2		560	1120	4.4
	6	Ø8	1		130	260	0.6
	7	Ø8	5		250	1250	4.9
	8	Ø8	2		300	600	2.4
	9	Ø8	1		200	200	0.8
	10	Ø10	2		114	228	2.7
	11	Ø10	2		840	1680	10.4
	12	Ø10	2		950	1900	11.7
	13	Ø10	2		1060	2120	13.1
	14	Ø10	2		550	1100	6.8
	15	Ø8	1		450	450	1.8
	16	Ø6	240		94	22560	50.1
Total+10%:					94	22560	50.1
Pórtico 7	1	Ø12	2		496	992	9.8
	2	Ø12	2		190	380	3.4
	3	Ø12	2		545	1090	9.7
	4	Ø10	2		350	700	4.3
	5	Ø6	37		114	4218	9.4
Total+10%:					114	4218	9.4
Pórtico 10	1	Ø8	2		1146	2292	9.3
	2	Ø8	2		1146	2292	9.4
	3	Ø6	80		94	7520	16.7
Total+10%:					94	7520	16.7
Pórtico 11	1	Ø8	4		1151	2302	18.6
	2	Ø6	81		94	7614	16.9
Total+10%:					94	7614	16.9
Pórtico 12	1	Ø8	4		541	1082	9.0
	2	Ø6	36		94	3384	7.5
Total+10%:					94	3384	7.5
Pórtico 13	1	Ø8	4		601	1202	9.9
	2	Ø6	40		94	3760	8.3
Total+10%:					94	3760	8.3
Pórtico 14	1	Ø8	2		526	1052	4.5
	2	Ø10	2		150	300	1.8
	3	Ø10	2		526	1052	7.0
	4	Ø8	1		300	300	1.2
	5	Ø6	37		94	3478	7.7
Total+10%:					94	3478	7.7
Pórtico 15	1	Ø10	4		596	1192	15.4
	2	Ø10	4		721	1442	18.7
	3	Ø10	1		150	150	0.9
	4	Ø10	1		200	200	1.2
	5	Ø12	2		180	360	3.6
	6	Ø8	1		445	445	1.8
	7	Ø8	1		350	350	1.4
	8	Ø6	90		94	8460	18.8
Total+10%:					94	8460	18.8
Pórtico 16	1	Ø8	2		184	368	1.7
	2	Ø8	2		696	1392	5.5
	3	Ø10	1		200	200	1.2
	4	Ø10	1		150	150	0.9
	5	Ø10	2		184	368	2.7
	6	Ø10	2		706	1412	8.7
	7	Ø6	56		94	5264	11.7
Total+10%:					94	5264	11.7
Pórtico 18	1	Ø8	2		596	1192	4.9
	2	Ø10	4		721	1442	18.7
	3	Ø10	1		170	170	1.0
	4	Ø12	3		200	600	5.3
	5	Ø10	2		625	1250	7.7
	6	Ø6	1		425	425	1.7
	7	Ø6	90		94	8460	18.8
Total+10%:					94	8460	18.8
Pórtico 17	1	Ø8	4		184	368	3.4
	2	Ø8	4		700	2800	11.0
	3	Ø8	4		550	2200	8.7
	4	Ø6	93		94	8742	19.4
Total+10%:					94	8742	19.4

PLANO DE VIGAS PLANTA BAJA

ESCALA 1:70

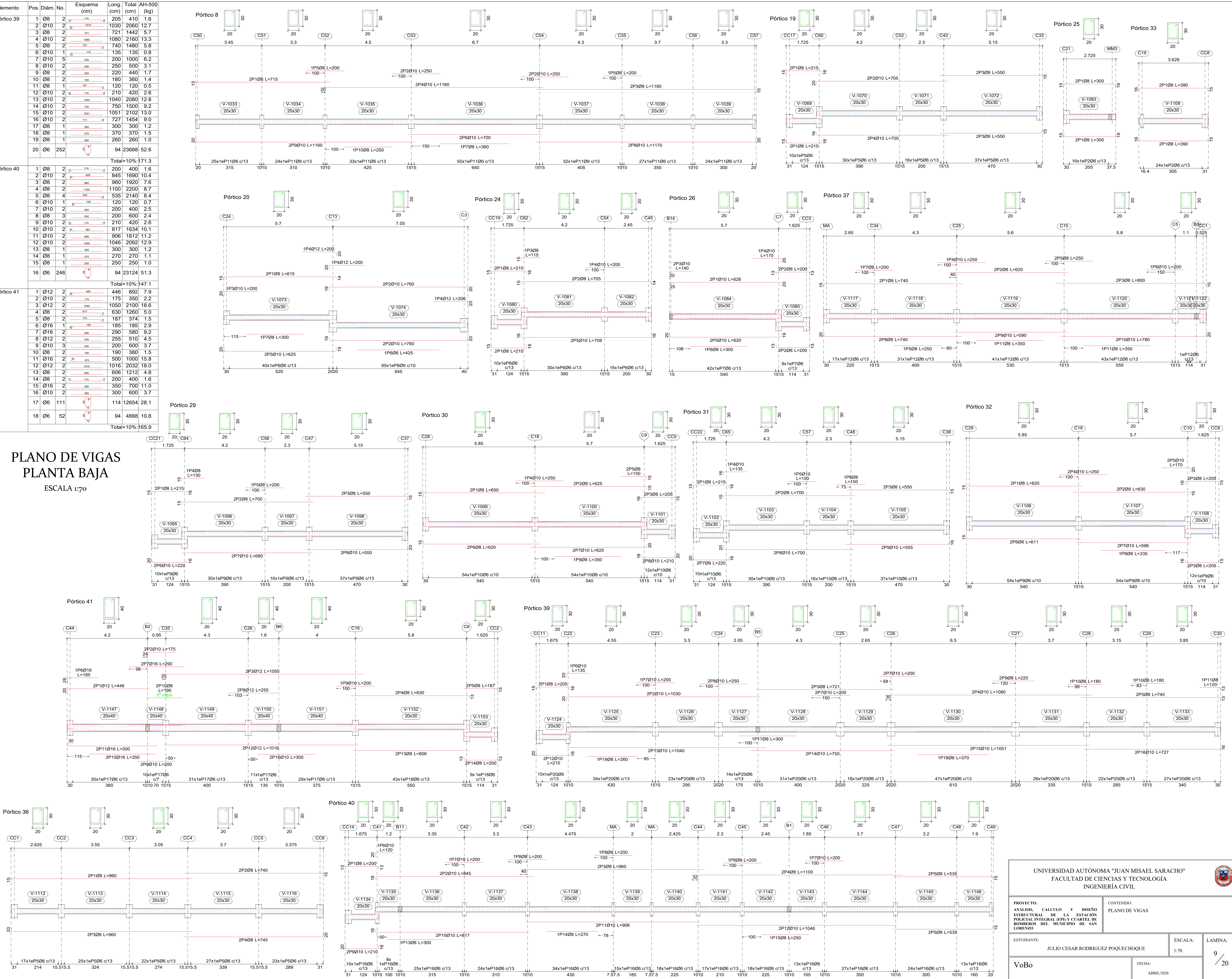
Elemento	Pos.	Diám.	No.	Esquema (cm)	Long. (cm)	Total (cm)	AH-500 (kg)
Pórtico 9	1	Ø10	2		745	1490	9.2
	2	Ø10	1		200	200	1.2
	3	Ø10	4		300	1200	7.4
	4	Ø8	2		200	400	1.6
	5	Ø8	4		1160	4640	18.3
	6	Ø8	1		115	115	0.5
	7	Ø8	1		150	150	0.6
	8	Ø10	2		696	1392	8.6
	9	Ø10	1		450	450	2.8
	10	Ø10	2		1161	2322	14.3
	11	Ø10	2		1156	2312	14.3
	12	Ø6	165		94	15510	34.4
13	Ø6	50		114	5700	12.6	
Total+10%:					138.4		
Pórtico 21	1	Ø8	4		465	1860	7.3
	2	Ø6	31		94	2914	6.5
Total+10%:					15.2		
Pórtico 27	1	Ø10	2		446	892	5.5
	2	Ø10	2		150	300	1.8
	3	Ø10	2		466	932	5.7
	4	Ø10	1		355	355	2.2
	5	Ø6	30		94	2820	6.3
Total+10%:					23.7		
Pórtico 23	1	Ø8	2		750	1500	5.9
	2	Ø8	2		740	1480	5.8
	3	Ø6	50		94	4700	10.4
Total+10%:					24.3		

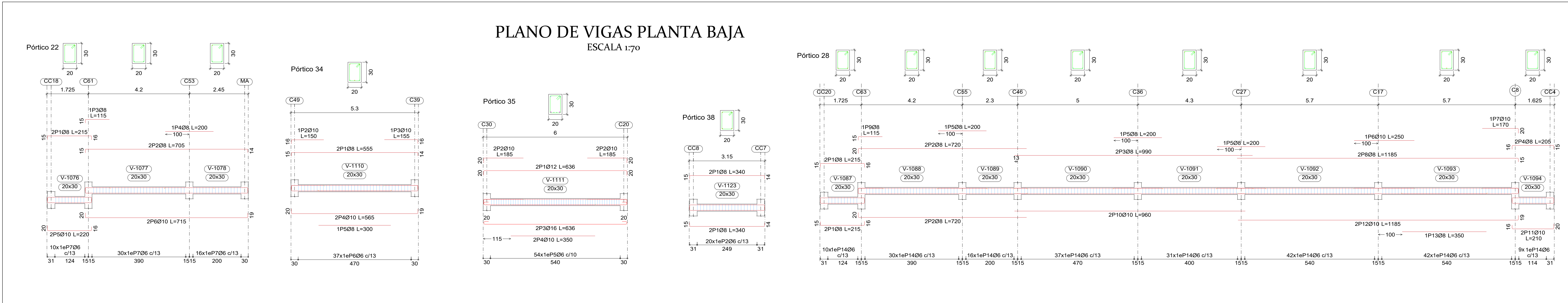


Elemento	Pos.	Diám.	No.	Esquema (cm)	Long. (cm)	Total (cm)	AH-500 (kg)
Pórtico 19	1	Ø8	4		184	215	860 3.4
	2	Ø10	2		985	705	1410 8.7
	3	Ø8	4		545	550	2200 8.7
	4	Ø10	2		985	705	1410 8.7
	5	Ø6	93		94	8742	19.4
Total+10%:						53.8	
Pórtico 20	1	Ø8	2		586	615	1230 4.9
	2	Ø10	4		711	760	3040 18.7
	3	Ø8	1		382	200	200 1.2
	4	Ø12	3		180	200	600 5.3
	5	Ø10	2		626	625	1250 7.7
	6	Ø8	1		425	425	1.7
	7	Ø8	1		300	300	300 1.2
	8	Ø6	105		94	9870	21.9
Total+10%:						68.9	
Pórtico 24	1	Ø8	4		184	215	860 3.4
	2	Ø8	2		676	705	1410 5.6
	3	Ø8	1		130	115	115 0.5
	4	Ø10	1		200	200	200 1.2
	5	Ø10	2		676	708	1416 8.7
	6	Ø6	56		94	5264	11.7
Total+10%:						34.2	
Pórtico 25	1	Ø8	4		288	300	1200 4.7
	2	Ø6	16		94	1504	3.3
Total+10%:						8.8	
Pórtico 8	1	Ø8	2		700	715	1430 5.6
	2	Ø10	4		290	250	1000 6.2
	3	Ø8	2		1140	1160	2320 9.2
	4	Ø10	2		1180	1160	2320 14.3
	5	Ø8	2		290	200	400 1.6
	6	Ø10	2		790	700	1400 8.6
	7	Ø8	1		360	360	360 1.4
	8	Ø10	2		1190	1170	2340 14.4
	9	Ø10	2		1140	1160	2320 14.3
	10	Ø8	1		290	250	250 1.0
	11	Ø6	215		94	20210	44.8
Total+10%:						133.5	
Pórtico 26	1	Ø10	2		581	626	1252 7.7
	2	Ø8	4		714	200	800 3.2
	3	Ø10	2		130	140	280 1.7
	4	Ø10	1		150	170	170 1.0
	5	Ø10	2		581	620	1240 7.6
	6	Ø8	1		300	300	300 1.2
	7	Ø6	51		94	4794	10.6
Total+10%:						36.3	
Pórtico 29	1	Ø8	2		184	215	430 1.7
	2	Ø8	2		685	700	1400 5.5
	3	Ø8	2		530	550	1100 4.3
	4	Ø8	1		115	130	130 0.5
	5	Ø8	1		200	200	200 0.8
	6	Ø10	2		184	220	440 2.7
	7	Ø10	2		680	680	1360 8.4
	8	Ø10	2		530	550	1100 6.8
	9	Ø6	93		94	8742	19.4
Total+10%:						55.1	
Pórtico 30	1	Ø8	2		690	650	1300 5.1
	2	Ø8	2		610	625	1250 4.9
	3	Ø8	2		174	205	410 1.6
	4	Ø10	1		290	250	250 1.5
	5	Ø8	2		130	150	300 1.2
	6	Ø8	2		605	620	1240 4.9
	7	Ø10	2		690	625	1250 7.7
	8	Ø10	2		174	210	420 2.6
	9	Ø8	1		300	350	350 1.4
	10	Ø6	120		94	11280	25.0
Total+10%:						61.5	
Pórtico 31	1	Ø8	2		184	215	430 1.7
	2	Ø8	2		685	700	1400 5.5
	3	Ø8	2		530	550	1100 4.3
	4	Ø10	1		110	135	135 0.8
	5	Ø10	1		150	150	150 0.9
	6	Ø8	1		150	150	150 0.6
	7	Ø8	2		184	220	440 1.7
	8	Ø10	2		690	700	1400 8.6
	9	Ø10	2		530	555	1110 6.8
	10	Ø6	93		94	8742	19.4
Total+10%:						55.3	
Pórtico 36	1	Ø8	2		985	960	1920 7.6
	2	Ø8	2		770	740	1480 5.8
	3	Ø8	2		980	960	1920 7.6
	4	Ø8	2		725	745	1490 5.9
	5	Ø6	114		94	10716	23.8
Total+10%:						55.8	
Pórtico 32	1	Ø8	2		605	620	1240 4.9
	2	Ø8	2		615	630	1260 5.0
	3	Ø8	4		174	205	820 3.2
	4	Ø10	2		290	250	500 3.1
	5	Ø10	2		180	170	340 2.1
	6	Ø8	2		596	611	1222 4.8
	7	Ø10	2		596	596	1192 7.3
	8	Ø8	1		335	335	335 1.3
	9	Ø6	120		94	11280	25.0
Total+10%:						62.4	
Pórtico 33	1	Ø8	4		398	390	1560 6.2
	2	Ø6	24		94	2256	5.0
Total+10%:						12.3	
Pórtico 37	1	Ø8	2		750	740	1480 5.8
	2	Ø8	2		600	620	1240 4.9
	3	Ø8	2		750	800	1600 6.3
	4	Ø10	1		290	250	250 1.5
	5	Ø8	3		290	250	750 3.0
	6	Ø10	1		290	200	200 1.2
	7	Ø8	1		750	200	200 0.8
	8	Ø8	2		750	740	1480 5.8
	9	Ø10	2		590	590	1180 7.3
	10	Ø10	2		760	780	1560 9.6
	11	Ø8	2		390	350	700 2.8
	12	Ø6	141		94	13254	29.4
Total+10%:						86.2	

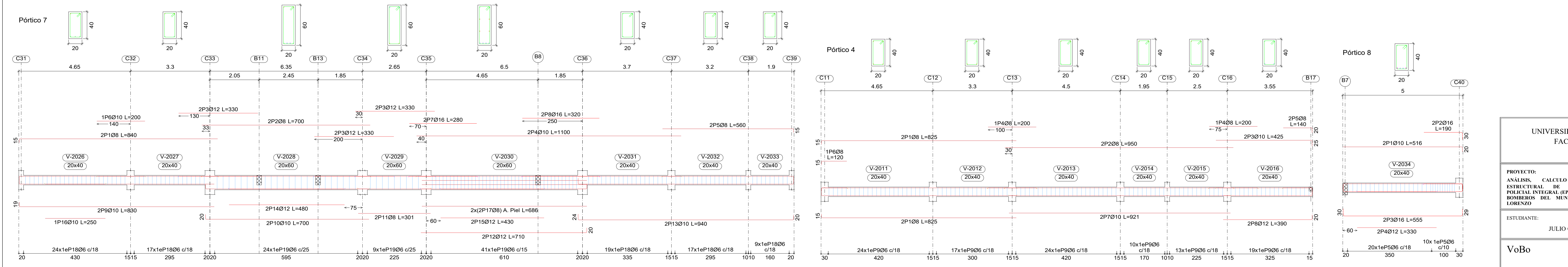
PLANO DE VIGAS PLANTA BAJA

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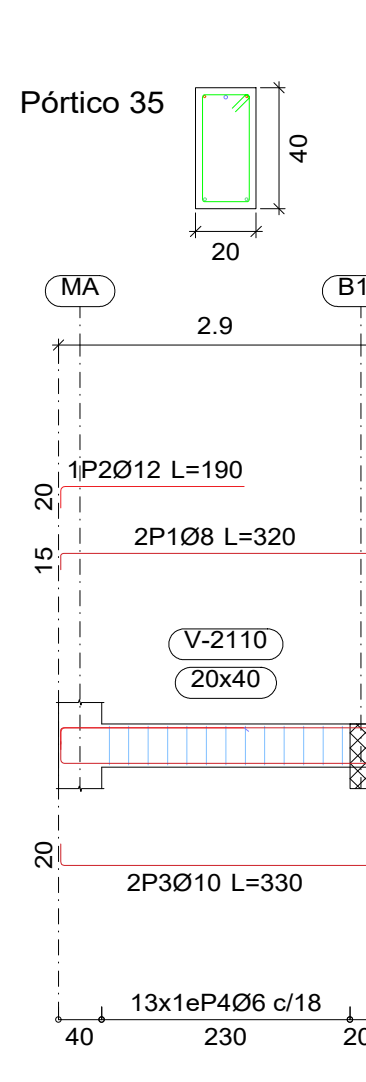
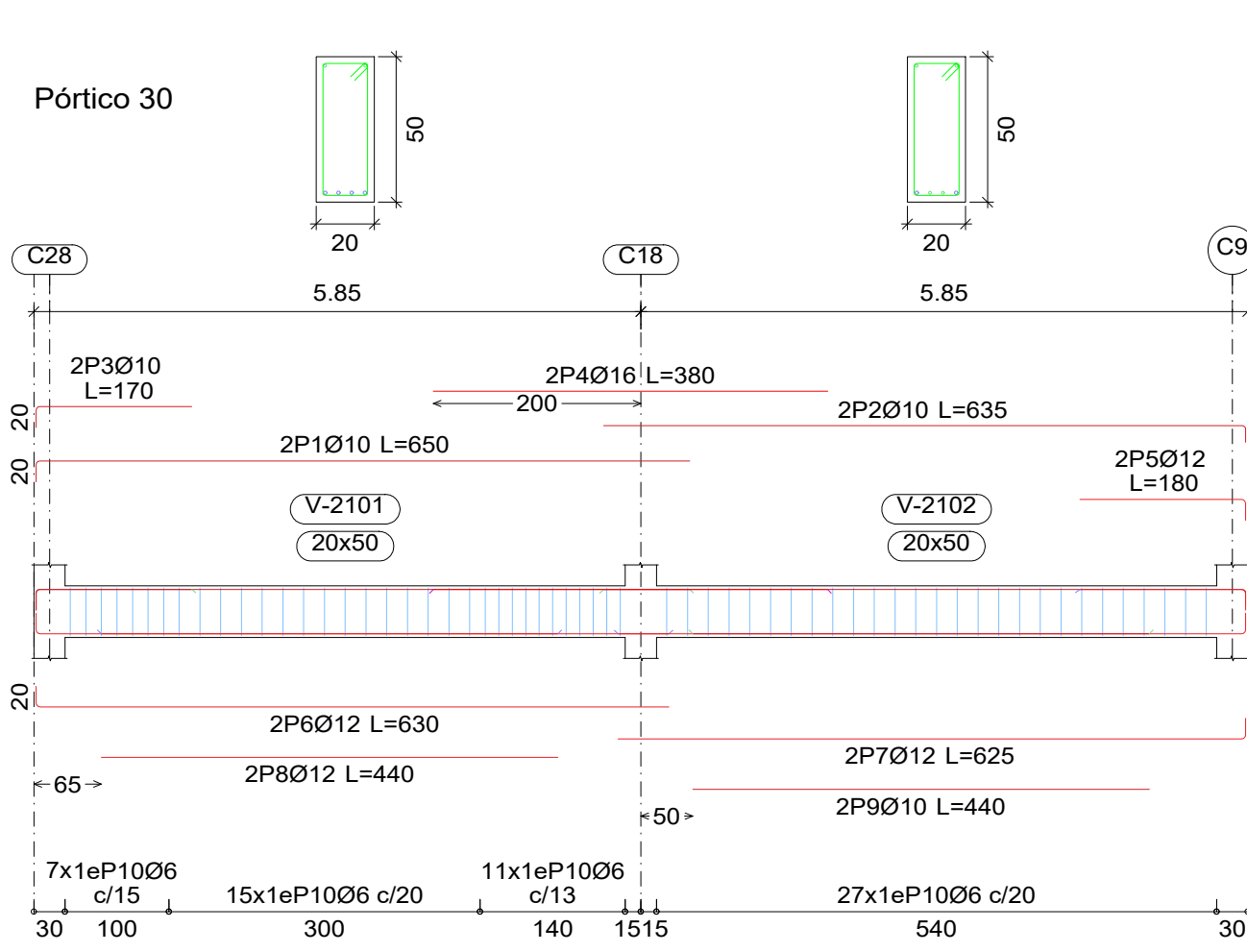
Elemento	Pos.	Diám.	No.	Esquema (cm)	Long. (cm)	Total (cm)	AH-500 (kg)
Pórtico 1	1 Ø8	2	250	500	2.0		
	2 Ø8	2	260	520	2.1		
	3 Ø6	10	114	1140	2.5		
Total+10%:					7.3		
Pórtico 2	1 Ø8	2	950	1900	7.5		
	2 Ø8	2	760	1520	6.0		
	3 Ø8	4	200	800	3.2		
	4 Ø10	2	946	1892	11.7		
	5 Ø10	2	731	1462	9.0		
	6 Ø6	83	114	9462	21.0		
Total+10%:					64.2		
Pórtico 3	1 Ø8	2	860	1720	6.8		
	2 Ø10	2	425	850	5.2		
	3 Ø10	2	178	356	2.2		
	4 Ø10	1	200	200	1.2		
	5 Ø8	1	145	145	0.6		
	6 Ø10	2	842	1684	10.4		
	7 Ø10	2	435	870	5.4		
	8 Ø10	1	270	270	1.7		
	9 Ø6	4	396	1584	3.5		
	10 Ø6	76	114	8664	19.2		
Total+10%:					61.8		
Pórtico 4	1 Ø8	4	825	3300	13.0		
	2 Ø8	2	950	1900	7.5		
	3 Ø10	2	425	850	5.2		
	4 Ø8	2	200	400	1.6		
	5 Ø8	2	140	280	1.1		
	6 Ø8	1	120	120	0.5		
	7 Ø10	2	921	1842	11.4		
	8 Ø12	2	390	780	6.9		
	9 Ø6	107	114	12198	27.1		
Total+10%:					81.7		
Pórtico 5	1 Ø10	2	396	792	4.9		
	2 Ø12	2	170	340	3.0		
	3 Ø12	4	420	1680	14.9		
	4 Ø6	23	114	2622	5.8		
Total+10%:					31.5		
Pórtico 6	1 Ø8	2	840	1680	6.6		
	2 Ø10	2	700	1400	8.6		
	3 Ø16	2	365	730	11.5		
	4 Ø12	2	730	1460	13.0		
	5 Ø8	2	1120	2240	8.8		
	6 Ø8	1	150	150	0.6		
	7 Ø10	1	200	200	1.2		
	8 Ø12	2	280	560	5.0		
	9 Ø16	2	280	560	8.8		
	10 Ø16	2	230	460	7.3		
	11 Ø16	2	300	600	9.5		
	12 Ø8	2	200	400	1.6		
	13 Ø10	2	850	1700	10.5		
	14 Ø12	2	711	1422	12.6		
	15 Ø10	2	310	620	3.8		
	16 Ø16	2	686	1372	21.7		
	17 Ø10	2	735	1470	9.1		
	18 Ø10	2	430	860	5.3		
	19 Ø12	2	450	900	8.0		
	20 Ø12	2	550	1100	9.8		
	21 Ø6	4	686	2744	6.1		
	22 Ø6	95	114	10830	24.0		
	23 Ø6	82	154	12628	28.0		
Total+10%:					243.5		



Elemento	Pos.	Diám.	No.	Esquema (cm)	Long. (cm)	Total (cm)	AH-500 (kg)
Pórtico 28	1 Ø8	4	215	860	3.4		
	2 Ø8	4	720	2880	11.4		
	3 Ø8	2	990	1980	7.8		
	4 Ø8	2	205	410	1.6		
	5 Ø8	3	200	600	2.4		
	6 Ø10	1	250	250	1.5		
	7 Ø10	1	170	170	1.0		
	8 Ø8	2	1185	2370	9.4		
	9 Ø8	1	115	115	0.5		
	10 Ø10	2	960	1920	11.8		
	11 Ø10	2	210	420	2.6		
	12 Ø10	2	1185	2370	14.6		
	13 Ø8	1	350	350	1.4		
	14 Ø6	217	94	20398	45.3		
Total+10%:					126.2		
Pórtico 38	1 Ø8	4	340	1360	5.4		
Pórtico 35	1 Ø12	2	636	1272	11.3		
Pórtico 35	2 Ø10	4	185	740	4.6		
Pórtico 35	3 Ø16	2	636	1272	20.1		
Pórtico 35	4 Ø10	2	350	700	4.3		
Pórtico 35	5 Ø6	54	94	5078	11.3		
Total+10%:					56.8		
Pórtico 34	1 Ø8	2	555	1110	4.4		
Pórtico 34	2 Ø10	1	150	150	0.9		
Pórtico 34	3 Ø10	1	155	155	1.0		
Pórtico 34	4 Ø10	2	565	1130	7.0		
Pórtico 34	5 Ø8	1	300	300	1.2		
Pórtico 34	6 Ø6	37	94	3478	7.7		
Total+10%:					24.4		
Pórtico 22	1 Ø8	2	215	430	1.7		
Pórtico 22	2 Ø8	2	705	1410	5.6		
Pórtico 22	3 Ø8	1	115	115	0.5		
Pórtico 22	4 Ø8	1	200	200	0.8		
Pórtico 22	5 Ø10	2	220	440	2.7		
Pórtico 22	6 Ø10	2	715	1430	8.8		
Pórtico 22	7 Ø6	56	94	5264	11.7		
Total+10%:					35.0		

Elemento	Pos.	Diám.	No.	Esquema (cm)	Long. (cm)	Total (cm)	AH-500 (kg)
Pórtico 11	1	Ø10	2		730	1460	9.0
	2	Ø12	4		300	1200	10.7
	3	Ø8	2		1155	2310	9.1
	4	Ø8	2		1160	2320	9.2
	5	Ø8	4		200	800	3.2
	6	Ø12	2		488	1512	13.4
	7	Ø12	2		510	1020	9.1
	8	Ø10	2		1150	2300	14.2
	9	Ø10	2		1155	2310	14.2
	10	Ø6	120		154	13680	30.6
	11	Ø6	28		154	4312	9.4
Total+10%:145.3							
Pórtico 12	1	Ø8	2		555	1110	4.4
	2	Ø10	4		165	660	4.1
	3	Ø10	2		565	1130	7.0
	4	Ø10	2		380	760	4.7
	5	Ø6	21		134	2814	6.2
Total+10%: 29.0							
Pórtico 13	1	Ø8	2		616	1232	4.9
	2	Ø12	2		170	340	3.0
	3	Ø16	2		220	440	6.9
	4	Ø10	2		618	1236	7.6
	5	Ø10	2		400	800	4.9
	6	Ø6	23		134	3082	6.8
Total+10%: 37.5							
Pórtico 14	1	Ø8	2		700	1400	5.5
	2	Ø8	2		140	280	1.1
	3	Ø10	2		320	640	3.9
	4	Ø10	2		710	1420	8.8
	5	Ø8	2		320	640	2.5
	6	Ø6	36		114	4104	9.1
Total+10%: 34.0							
Pórtico 15	1	Ø8	2		490	980	3.9
	2	Ø12	2		350	700	6.2
	3	Ø8	2		570	1140	4.5
	4	Ø10	2		160	320	2.0
	5	Ø12	4		200	800	7.1
	6	Ø12	2		180	360	3.2
	7	Ø10	2		470	940	5.8
	8	Ø8	2		256	512	2.0
	9	Ø16	2		560	1120	17.7
	10	Ø16	1		360	360	5.7
	11	Ø12	2		420	840	7.5
	12	Ø6	69		114	7866	17.5
Total+10%: 91.4							
Pórtico 16	1	Ø8	2		615	1230	4.9
	2	Ø12	2		190	380	3.4
	3	Ø16	2		210	420	6.6
	4	Ø10	2		618	1236	7.6
	5	Ø16	1		465	465	7.3
	6	Ø6	26		134	3484	7.7
Total+10%: 41.3							
Pórtico 17	1	Ø8	2		480	960	3.8
	2	Ø12	2		340	680	6.0
	3	Ø10	2		570	1140	7.0
	4	Ø10	2		170	340	2.1
	5	Ø10	4		200	800	4.9
	6	Ø12	2		170	340	3.0
	7	Ø10	2		480	960	5.9
	8	Ø8	2		260	520	2.1
	9	Ø16	2		552	1104	17.4
	10	Ø10	2		300	600	3.7
	11	Ø10	1		420	420	2.6
	12	Ø6	64		114	7296	16.2
Total+10%: 82.2							
Pórtico 18	1	Ø10	4		625	2500	15.4
	2	Ø12	2		180	360	2.2
	3	Ø12	2		225	450	4.0
	4	Ø12	2		420	840	7.5
	5	Ø6	27		134	3618	8.0
Total+10%: 40.8							
Pórtico 19	1	Ø8	2		465	930	3.7
	2	Ø10	2		475	950	5.9
	3	Ø10	1		360	360	2.2
	4	Ø6	23		114	2622	5.8
Total+10%: 19.4							
Pórtico 20	1	Ø8	2		720	1440	5.7
	2	Ø10	2		160	320	2.0
	3	Ø12	1		220	220	2.0
	4	Ø10	2		725	1450	8.9
	5	Ø10	1		320	320	2.0
	6	Ø6	34		114	3876	8.6
Total+10%: 32.1							
Pórtico 21	1	Ø8	2		620	1240	4.9
	2	Ø8	2		740	1480	5.8
	3	Ø16	2		355	710	11.2
	4	Ø12	2		200	400	3.6
	5	Ø12	2		620	1240	11.0
	6	Ø10	2		745	1490	9.2
	7	Ø10	2		450	900	5.5
	8	Ø10	1		410	410	2.5
	9	Ø6	54		134	7236	16.1
Total+10%: 76.8							
Pórtico 22	1	Ø8	2		750	1500	5.9
	2	Ø10	2		630	1260	7.8
	3	Ø10	2		660	1320	8.1
	4	Ø10	2		220	440	2.7
	5	Ø10	2		290	580	2.8
	6	Ø12	2		330	660	5.8
	7	Ø12	2		350	700	6.2
	8	Ø10	2		736	1472	9.1
	9	Ø10	2		620	1240	7.6
	10	Ø10	2				

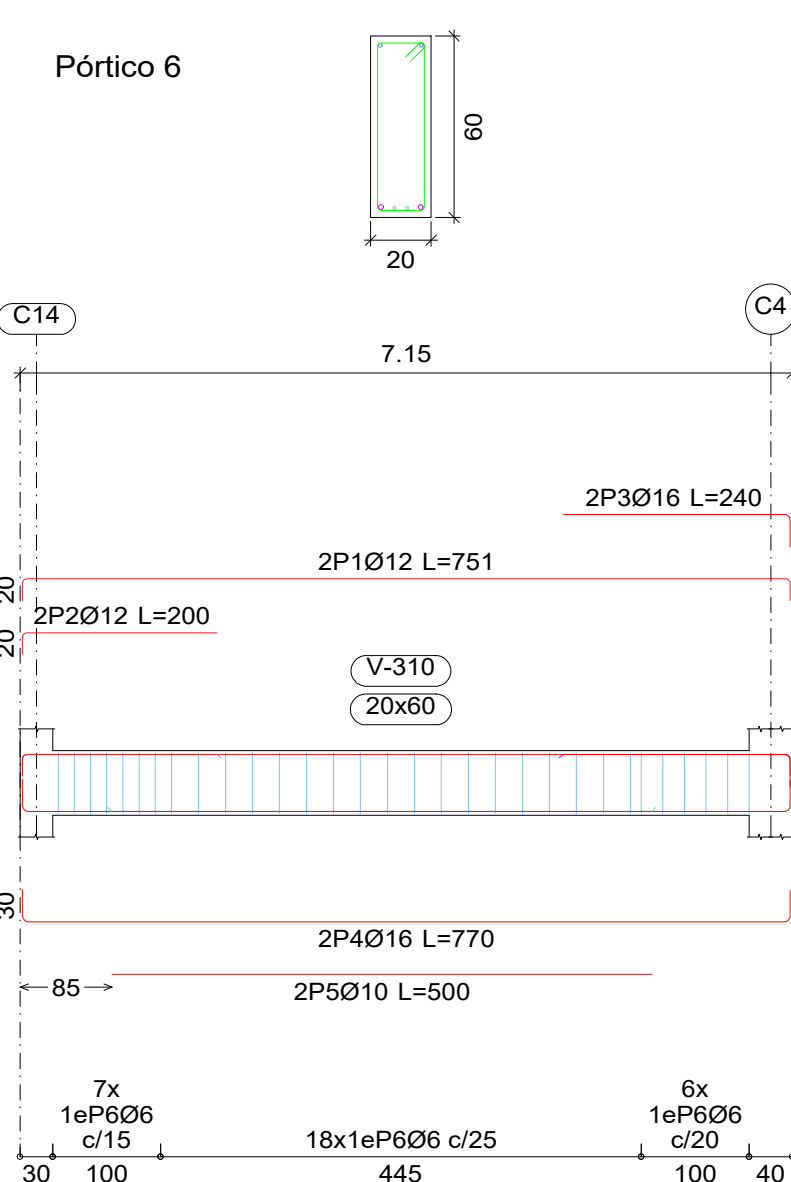
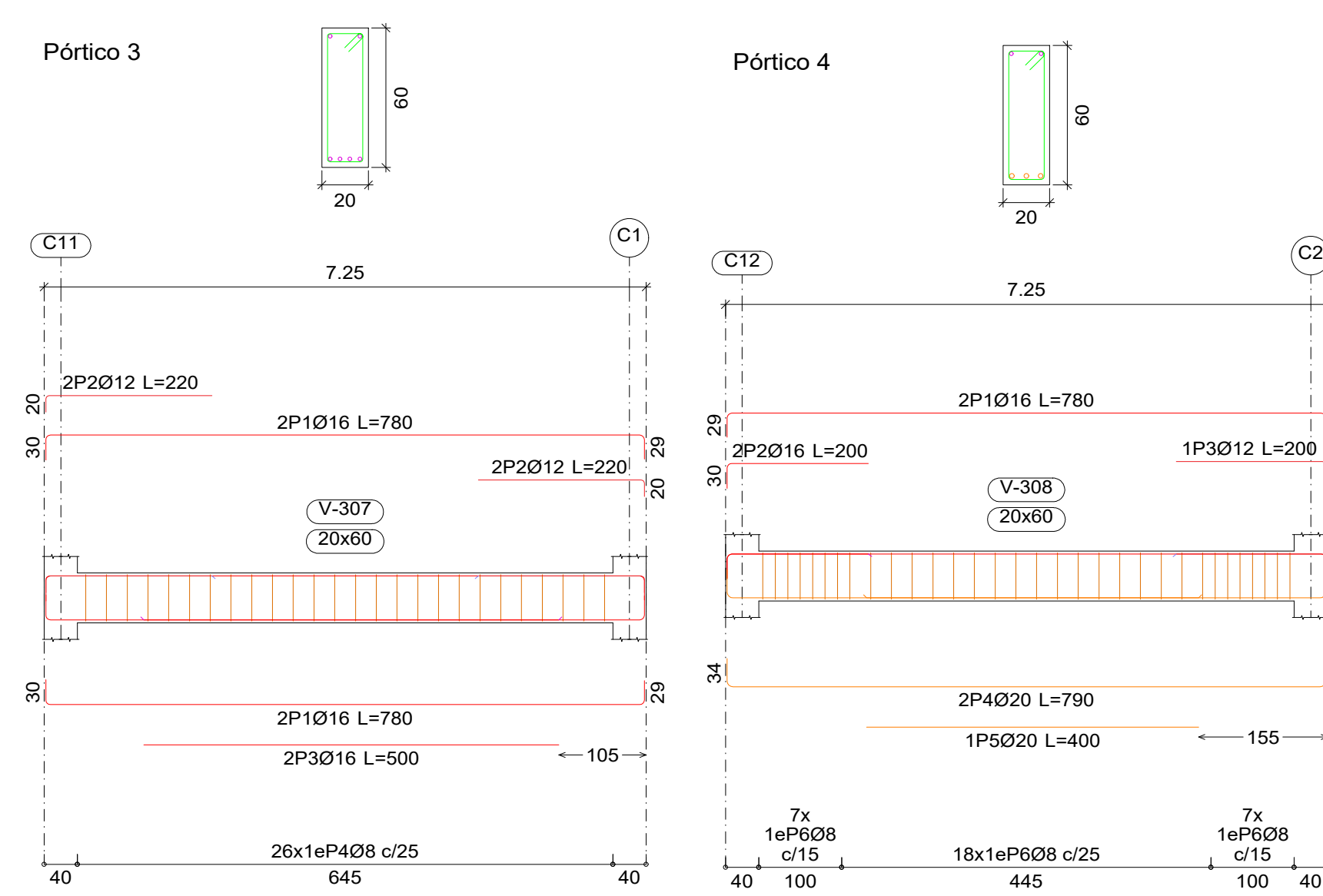
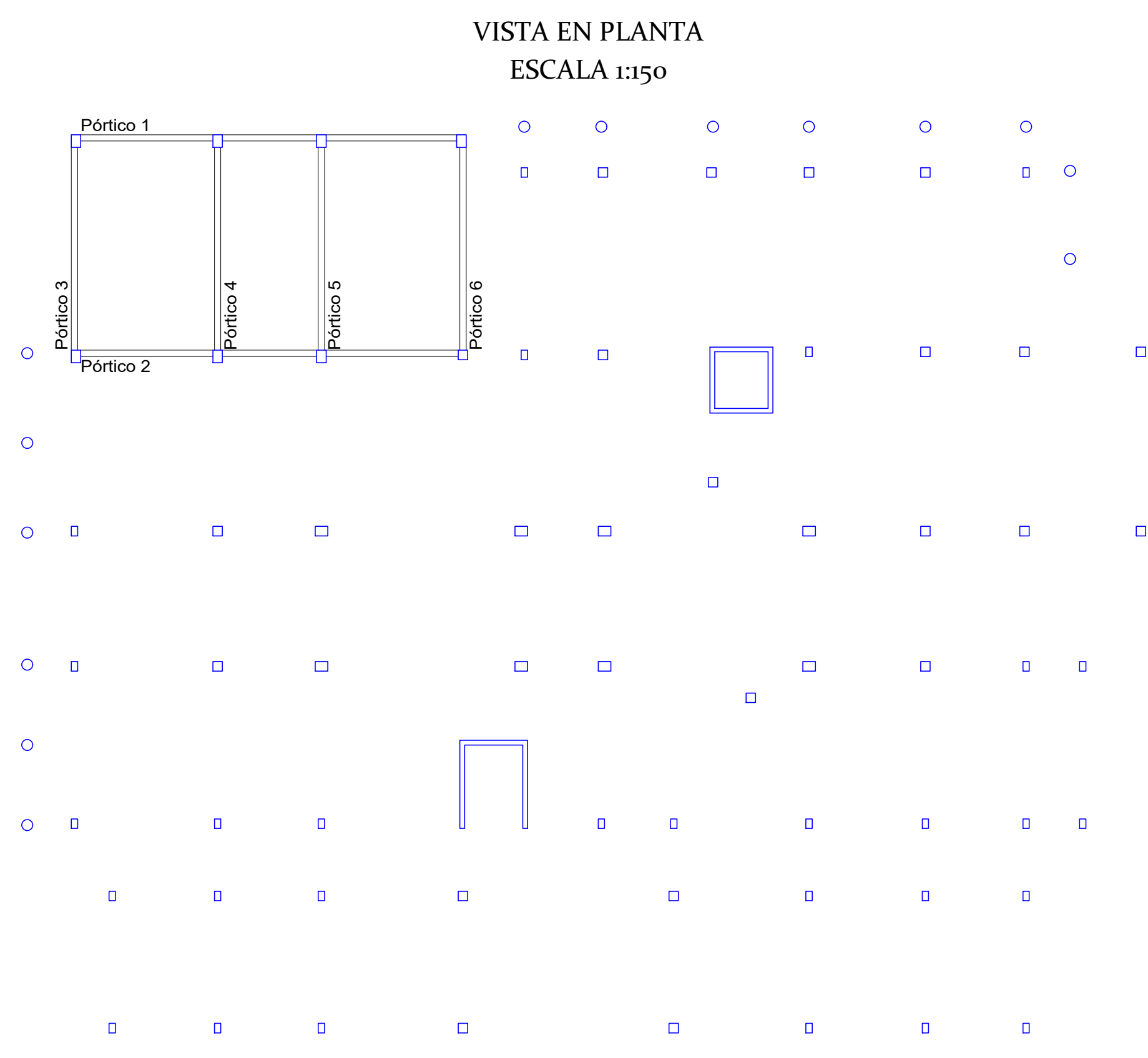
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Elemento							Elemento										
Pos.	Díam.	No.	Esquema (cm)	Long (cm)	Total (kg)	AH-500 (kg)	Pos.	Díam.	No.	Esquema (cm)	Long (cm)	Total (kg)	AH-500 (kg)				
Pórtico 28	1	Ø8	2		1000	2000	7.9	Pórtico 31	1	Ø10	2		730	790	1580	9.7	
	2	Ø10	2		150	170	10.1		2	Ø8	1		150	150	150	0.6	
	3	Ø16	2		230	460	7.3		3	Ø10	2		170	170	340	2.1	
	4	Ø12	2		255	510	4.5		4	Ø8	2		240	480	1.9		
	5	Ø12	2		280	560	5.0		5	Ø12	1		180	170	170	1.5	
	6	Ø16	2		340	680	10.7		6	Ø8	2		500	500	3.9		
	7	Ø10	2		184	380	2.3		7	Ø12	2		446	466	932	5.7	
	8	Ø10	2		720	1440	9.1		8	Ø8	2		256	556	512	2.8	
	9	Ø10	2		1170	2340	14.7		9	Ø10	2		530	1120	6.8		
	10	Ø10	2		860	1720	11.8		10	Ø10	1		320	320	2.0		
	11	Ø10	2		380	760	4.7		11	Ø8	2		400	800	3.2		
	12	Ø10	2		370	740	4.6		12	Ø6	61		114	6954	15.4		
	13	Ø16	2		460	920	14.5										
	14	Ø16	2		510	1020	16.1										
	15	Ø12	2		1170	2340	21.1										
	16	Ø10	2		680	1360	8.6										
	17	Ø6	85		114	9690	21.5										
	18	Ø6	53		134	7102	15.8										
					Total+10%:	199.3											
Pórtico 29	1	Ø8	2		495	990	3.8	Pórtico 32	1	Ø12	2		636	650	1300	11.5	
	2	Ø12	2		300	600	5.3		2	Ø10	2		1280	640	1280	7.9	
	3	Ø10	2		575	1150	7.1		3	Ø12	2		150	170	340	3.0	
	4	Ø10	2		145	290	2.0		4	Ø16	2		400	800	12.6		
	5	Ø12	2		230	460	4.1		5	Ø10	1		150	170	170	1.0	
	6	Ø12	2		240	480	4.3		6	Ø16	2		686	1310	20.7		
	7	Ø12	2		190	380	3.0		7	Ø12	2		610	630	1260	11.2	
	8	Ø10	2		450	900	5.8		8	Ø12	1		300	300	3.0	2.7	
	9	Ø8	2		586	1172	18.5		9	Ø12	2		380	350	700	6.2	
	10	Ø16	2		330	660	4.1		10	Ø8	14		15	217	2198	8.7	
	11	Ø10	2		240	480	4.3		11	Ø6	17		15	154	2618	5.8	
	12	Ø16	2		450	900	5.8		12	Ø6	27		15	134	3618	8.0	
	13	Ø6	67		114	7638	17.9										
					Total+10%:	93.5											
Pórtico 30	1	Ø10	2		636	1300	8.0	Pórtico 33	1	Ø8	2		636	555	1110	4.4	
	2	Ø10	2		635	1270	7.8		2	Ø8	4		130	150	600	2.4	
	3	Ø10	2		150	170	340		2.1	3	Ø10	2		130	570	1140	7.0
	4	Ø16	2		380	760	12.0		4	Ø10	1		130	370	370	2.0	
	5	Ø12	2		190	380	3.2		5	Ø6	27		15	114	3078	6.8	
	6	Ø12	2		610	1260	11.1										
	7	Ø12	2		625	1250	11.1										
	8	Ø12	2		440	880	7.8										
	9	Ø10	2		440	880	5.4										
	10	Ø6	60		134	8040	17.8										
					Total+10%:	95.0											
Pórtico 34	1	Ø10	2		636	1300	8.0	Pórtico 35	1	Ø8	2		280	320	640	2.5	
	2	Ø10	2		150	170	340		2.1	2	Ø12	1		170	190	190	1.7
	3	Ø16	2		380	760	12.0		3	Ø10	2		280	330	660	4.1	
	4	Ø12	2		190	380	3.2		4	Ø6	13		15	114	1482	3.3	
	5	Ø12	2		610	1260	11.1										
	6	Ø12	2		625	1250	11.1										
	7	Ø12	2		440	880	7.8										
	8	Ø10	2		440	880	5.4										
	9	Ø10	2		150	170	340		2.1								
	10	Ø16	2		380	760	12.0										
					Total+10%:	54.3											
					Total+10%:	12.1											

Elemento	Pos.	Diám.	No.	Esquema (cm)	Long. (cm)	Total (cm)	AH-500 (kg)
Pértico 1	1	Ø8	2		805	840	1680 6.6
	2	Ø8	2		1020	150	1020 4.0
	3	Ø8	1		135	150	150 0.6
	4	Ø8	2		230	230	460 1.8
	5	Ø10	1		135	200	155 0.6
	6	Ø10	2		840	840	1680 10.4
	7	Ø10	2		500	500	1000 6.2
	8	Ø6	65		114	114	7410 16.4
						Total+10%:	51.7
Pértico 2	1	Ø8	2		815	830	1660 6.6
	2	Ø8	2		515	515	1030 4.1
	3	Ø8	1		145	145	145 0.6
	4	Ø8	2		200	200	400 1.6
	5	Ø8	1		135	130	130 0.5
	6	Ø10	2		830	830	1660 10.2
	7	Ø10	2		500	500	1000 6.2
	8	Ø6	65		114	114	7410 16.4
						Total+10%:	50.8
Pértico 3	1	Ø16	4		725	780	3120 49.2
	2	Ø12	4		220	220	880 8.8
	3	Ø16	2		500	1000	15.8
	4	Ø6	26		157	157	4082 16.1
Pértico 4						Total+10%:	97.8
	1	Ø16	2		725	780	1560 24.6
	2	Ø16	2		200	400	6.3
	3	Ø12	1		180	200	1.8
	4	Ø20	2		725	790	1580 39.0
	5	Ø20	1		400	400	9.9
	6	Ø8	32		157	157	5024 19.8
						Total+10%:	111.5
Pértico 5							
	1	Ø16	2		725	781	1562 24.7
	2	Ø16	2		200	240	480 7.6
	3	Ø12	2		230	230	460 4.1
	4	Ø20	2		725	791	1582 39.0
	5	Ø12	2		350	500	1000 8.9
	6	Ø8	34		157	157	5338 21.1
						Total+10%:	115.9
Pértico 6							
	1	Ø12	2		715	751	1502 13.3
	2	Ø12	2		380	200	400 3.6
	3	Ø16	2		215	240	480 7.6
	4	Ø16	2		715	770	1540 24.3
	5	Ø16	2		390	500	1000 6.2
	6	Ø6	31		154	154	4774 10.6
						Total+10%:	72.2
					Ø6:	47.7	
					Ø8:	91.6	
					Ø10:	44.3	
					Ø12:	43.5	
					Ø16:	776.1	
					Ø20:	96.9	
					Total:	999.7	

AUDITOR



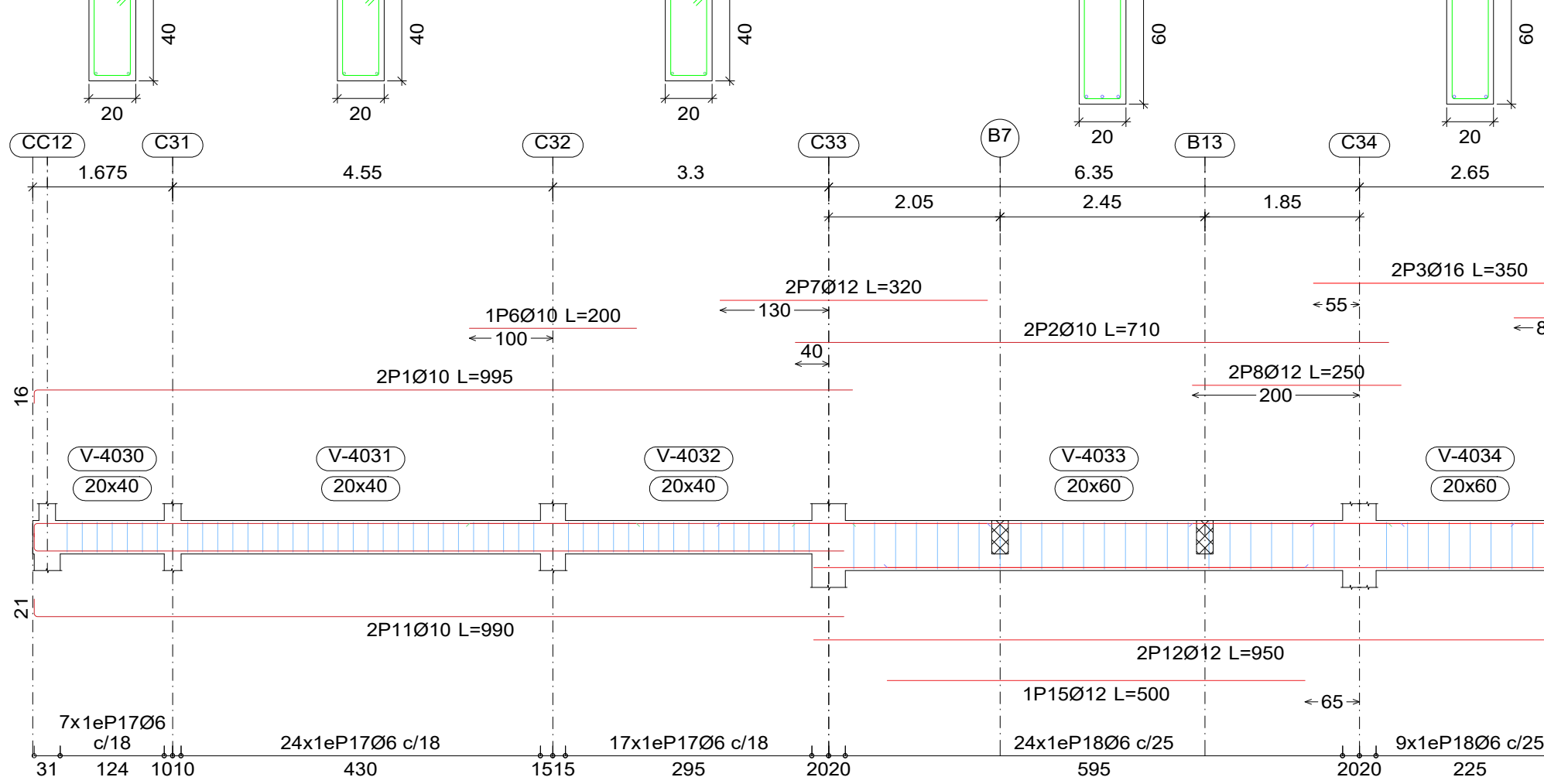
UNIVERSIDAD AUTÓNOMA "JUAN MISAEL SARACHO" FACULTAD DE CIENCIAS Y TECNOLOGÍA INGENIERÍA CIVIL			
PROYECTO: ANALISIS, CALCULO Y DISEÑO ESTRUCTURAL DE LA ESTACIÓN POLICIAL INTEGRAL (EPI) Y CUARTEL DE BOMBIEROS DEL MUNICIPIO DE SAN LORENZO		CONTENIDO: PLANO DE VIGAS	
ESTUDIANTE: JULIO CESAR RODRIGUEZ POQUECHOQUE		ESCALA: INDICADA	LAMINA: 12 / 20
VoBo		FECHA: ABRIL/2026	

Elemento	Pos.	Diám.	No.	Esquema (cm)	Long (cm)	Total (cm)	AH-500 (kg)
Pórtico 1	1	Ø8	2		960	1920	7.6
	2	Ø8	4		890	3560	14.0
	3	Ø8	3		200	600	2.4
	4	Ø10	2		960	1920	11.8
	5	Ø6	91		114	10374	23.0
Total+10%:					64.7		
Pórtico 2	1	Ø8	2		960	1900	7.5
	2	Ø8	2		880	1760	6.9
	3	Ø10	2		950	1900	11.7
	4	Ø10	2		885	1770	10.9
	5	Ø6	90		114	10260	22.8
Total+10%:					65.8		
Pórtico 3	1	Ø8	2		850	1700	6.7
	2	Ø8	2		420	840	3.3
	3	Ø12	2		170	340	3.0
	4	Ø8	1		180	180	0.7
	5	Ø8	1		150	150	0.6
	6	Ø10	2		855	1710	10.5
	7	Ø10	2		425	850	5.2
	8	Ø8	1		150	150	0.6
	9	Ø6	61		114	6954	15.4
Total+10%:					50.6		
Pórtico 4	1	Ø8	2		210	420	1.7
	2	Ø10	2		220	440	2.7
	3	Ø6	7		114	798	1.8
Total+10%:					6.8		
Pórtico 5	1	Ø8	2		650	1300	5.1
	2	Ø8	2		150	300	1.2
	3	Ø10	2		650	1300	8.0
	4	Ø6	32		114	3648	8.1
Total+10%:					24.6		
Pórtico 6	1	Ø8	2		405	810	3.2
	2	Ø10	2		170	340	1.0
	3	Ø10	2		415	830	5.1
	4	Ø6	19		114	2166	4.8
Total+10%:					15.5		
Pórtico 7	1	Ø8	2		995	1990	7.9
	2	Ø10	2		700	1400	8.6
	3	Ø10	2		320	640	3.9
	4	Ø8	2		1090	2180	9.5
	5	Ø8	2		745	1490	5.9
	6	Ø8	1		150	150	0.6
	7	Ø8	1		190	190	0.7
	8	Ø12	2		335	670	5.9
	9	Ø16	2		310	620	9.8
	10	Ø12	2		230	460	4.1
	11	Ø12	2		300	600	5.3
	12	Ø10	2		1010	2020	12.5
	13	Ø10	2		671	1342	8.3
	14	Ø8	2		301	602	2.4
	15	Ø10	2		710	1420	8.8
	16	Ø12	2		540	1080	9.6
	17	Ø12	1		470	470	4.2
	18	Ø10	2		1100	2200	13.6
	19	Ø6	102		114	11628	25.8
	20	Ø6	62		154	9548	21.2
Total+10%:					184.5		
Pórtico 8	1	Ø10	2		995	1990	12.3
	2	Ø10	2		710	1420	8.8
	3	Ø16	2		350	700	11.0
	4	Ø8	2		720	1440	12.8
	5	Ø8	2		925	1850	7.3
	6	Ø10	1		200	200	1.2
	7	Ø12	2		320	640	5.7
	8	Ø12	2		250	500	4.4
	9	Ø12	2		260	520	4.6
	10	Ø10	2		300	600	3.7
	11	Ø10	2		990	1980	12.2
	12	Ø12	2		950	1900	16.9
	13	Ø10	2		686	1372	8.5
	14	Ø10	2		935	1870	11.5
	15	Ø12	1		500	500	4.4
	16	Ø12	1		430	430	3.8
	17	Ø6	93		114	10602	23.5
	18	Ø6	58		154	8932	19.8
Total+10%:					189.6		
Pórtico 9	1	Ø8	2		525	1050	4.1
	2	Ø10	2		170	340	2.1
	3	Ø10	2		535	1070	6.6
	4	Ø8	1		310	310	1.2
	5	Ø6	25		114	2850	6.3
Total+10%:					22.3		
Pórtico 10	1	Ø8	2		990	1980	7.8
	2	Ø8	2		960	1920	7.6
	3	Ø8	2		1075	2150	8.5
	4	Ø8	2		560	1120	4.4
	5	Ø8	2		200	400	1.6
	6	Ø12	2		250	500	4.4
	7	Ø10	2		255	510	3.1
	8	Ø10	2		270	540	3.3
	9	Ø10	2		260	520	3.2
	10	Ø8	1		210	210	0.8
	11	Ø10	2		990	1980	12.2
	12	Ø10	2		930	1860	11.5
	13	Ø10	2		1060	2120	13.1
	14	Ø10	2		550	1100	6.8
	15	Ø8	1		270	270	1.1
	16	Ø8	1		300	300	1.2
	17	Ø10	2		330	660	4.1
Total+10%:					154.0		
Pórtico 11	1	Ø10	2		755	1510	9.3
	2	Ø10	1		230	230	1.4
	3	Ø8	1		205	205	0.8
	4	Ø16	4		300	1200	18.9
	5	Ø8	4		200	800	3.2
	6	Ø8	2		1165	2330	9.2
	7	Ø8	2		1180	2360	9.3
	8	Ø16	2		755	1510	23.8
	9	Ø12	1		480	480	4.3
	10	Ø10	2		1175	2350	14.5
	11	Ø10	2		1180	2360	14.6
	12	Ø6	120		114	13680	30.4
	13	Ø6	33		154	5082	11.3
Total+10%:					166.1		

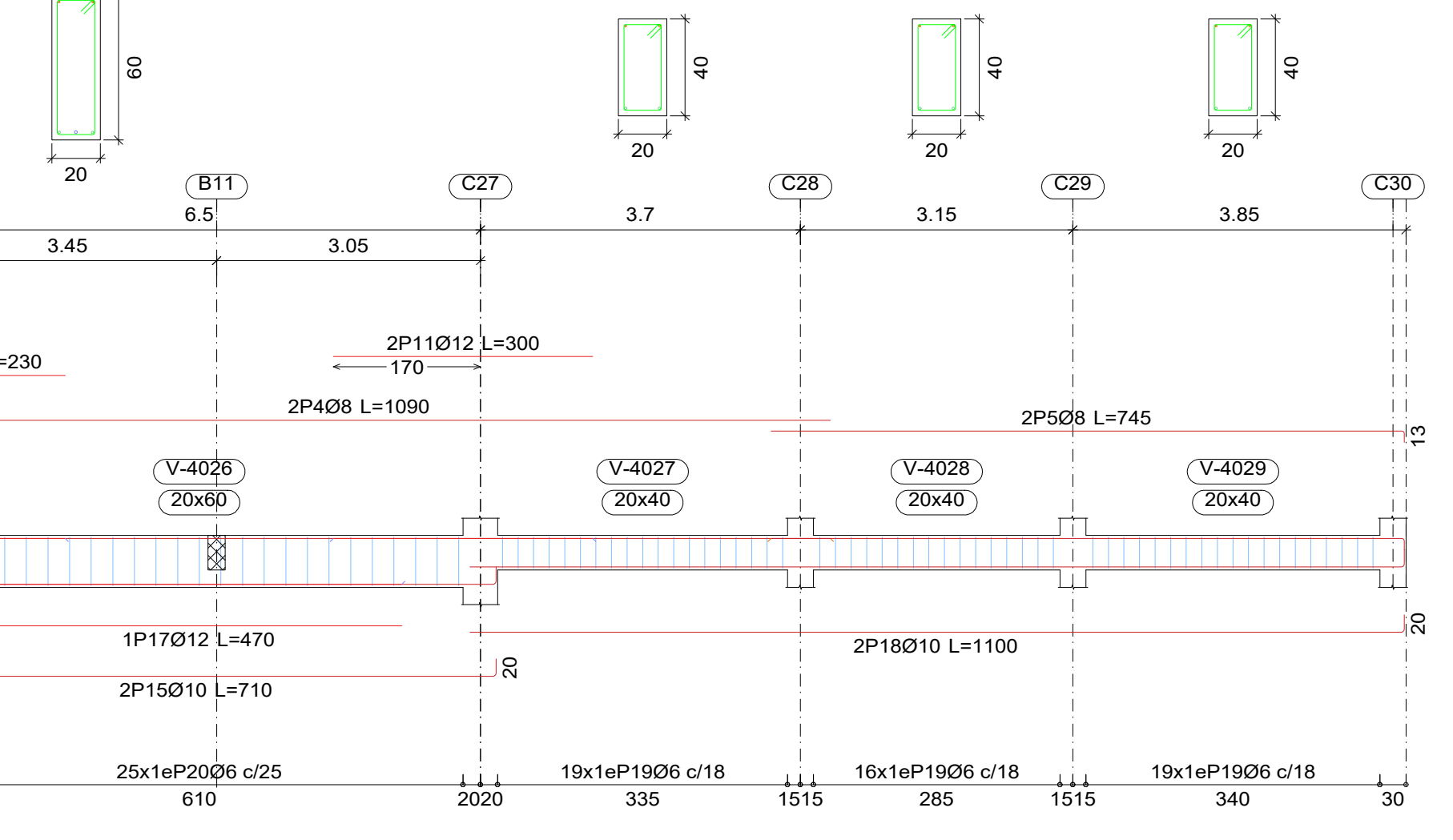
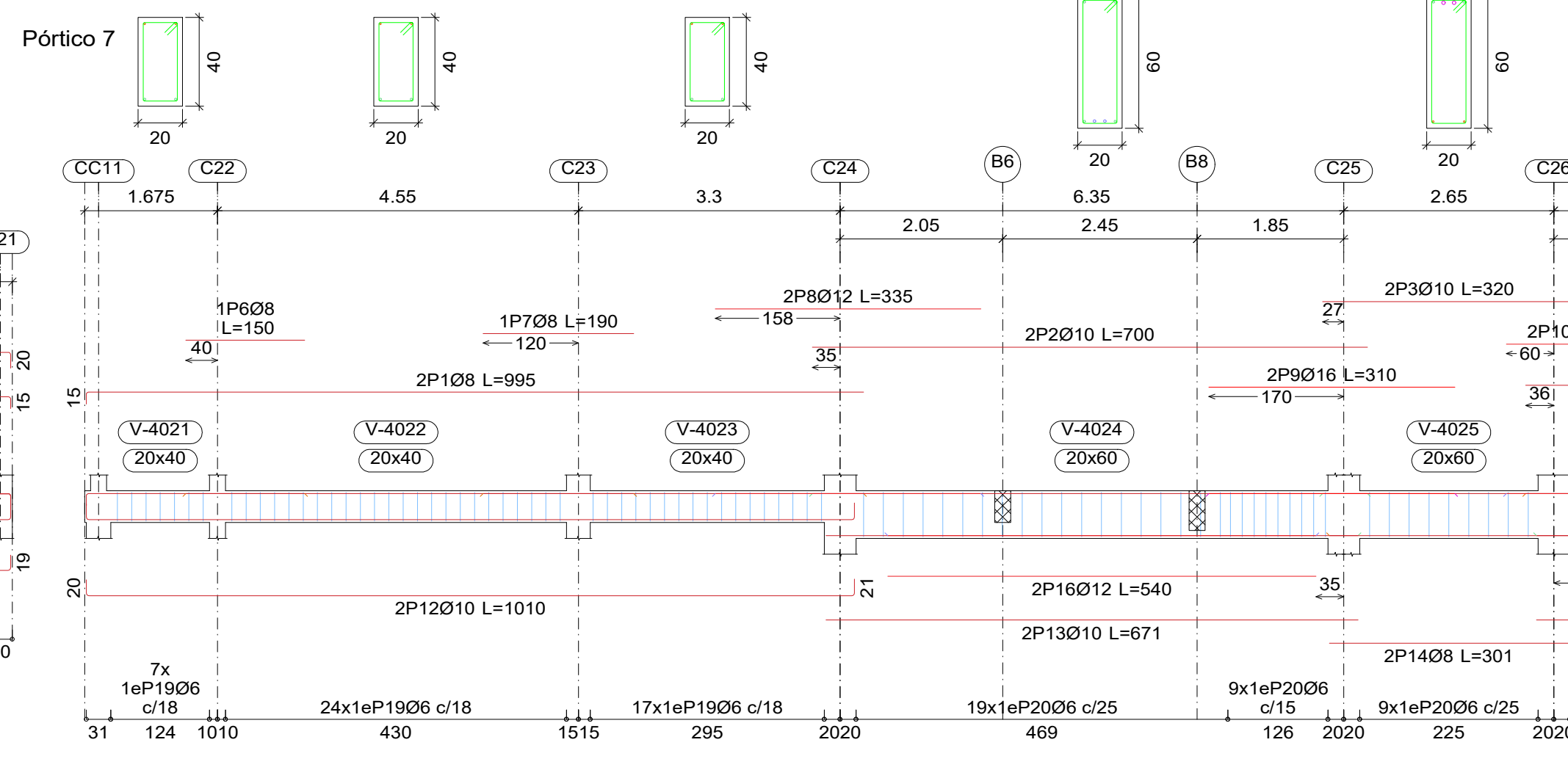
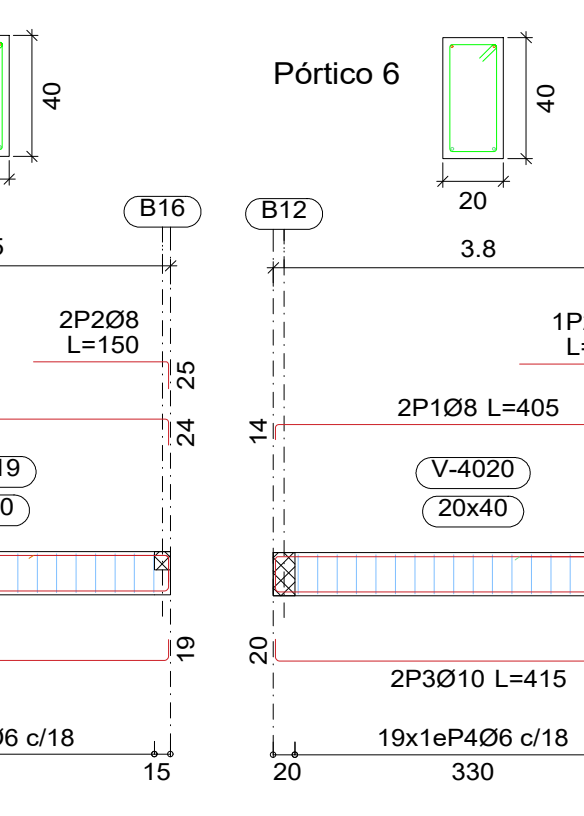
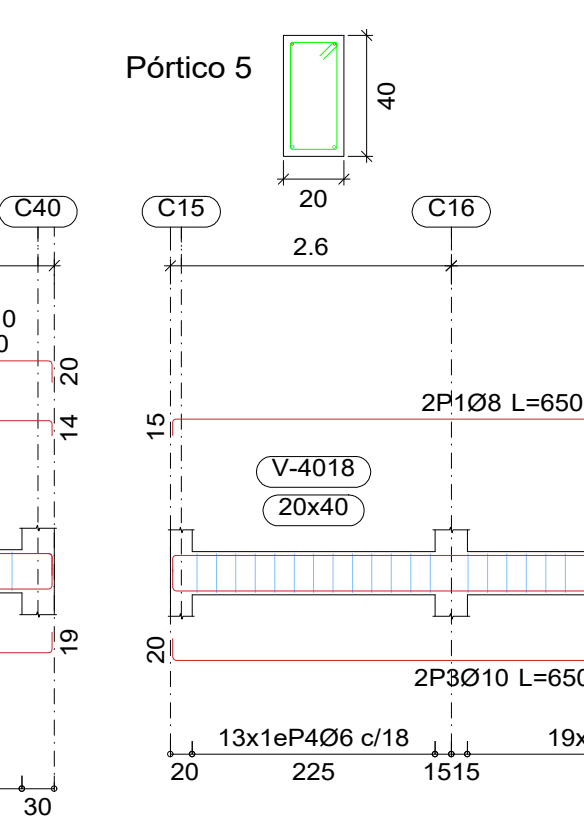
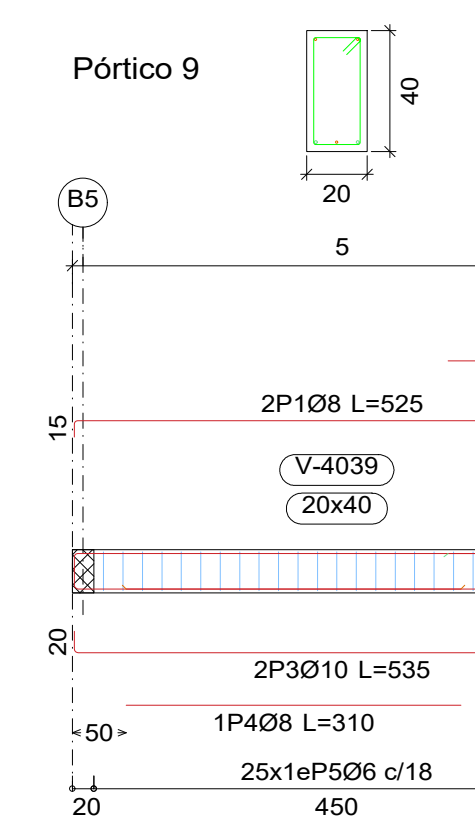
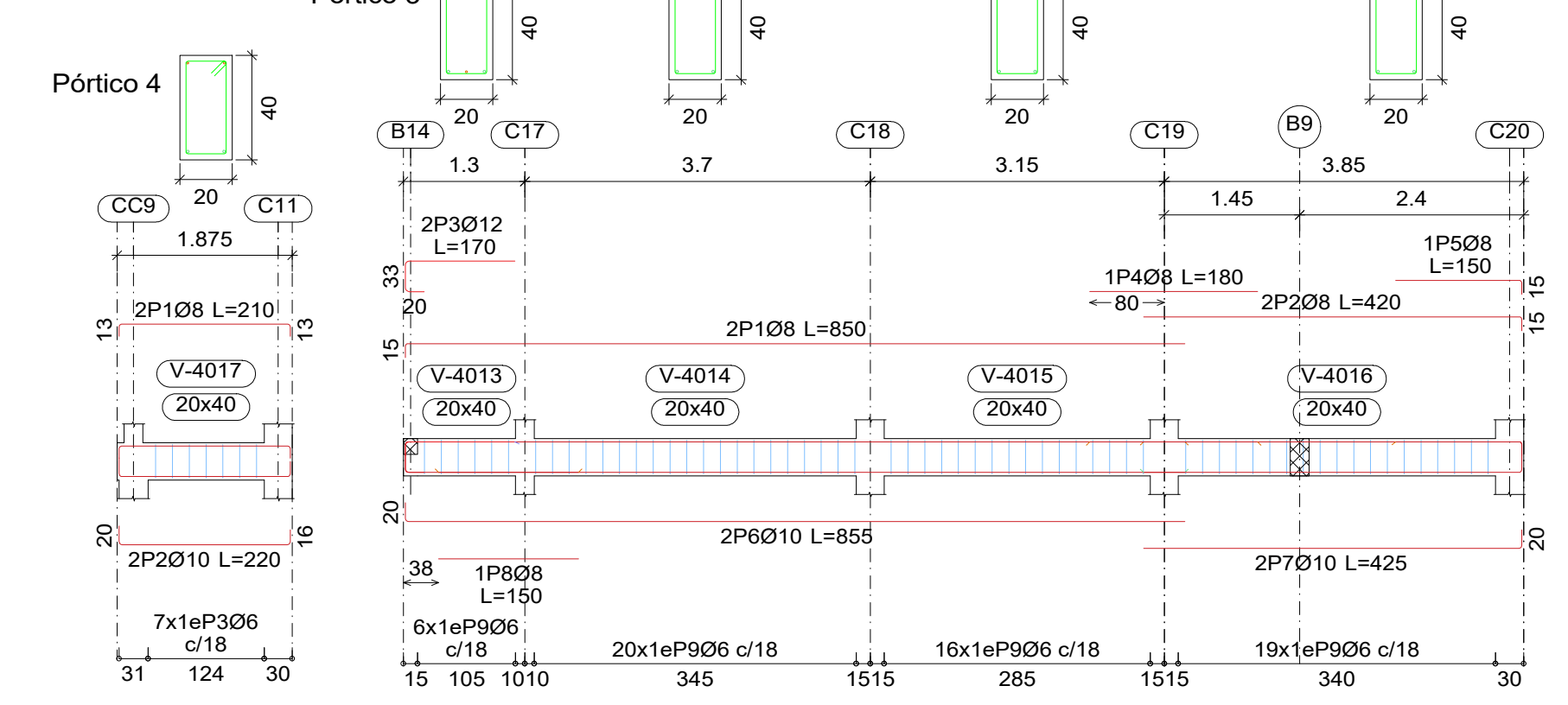
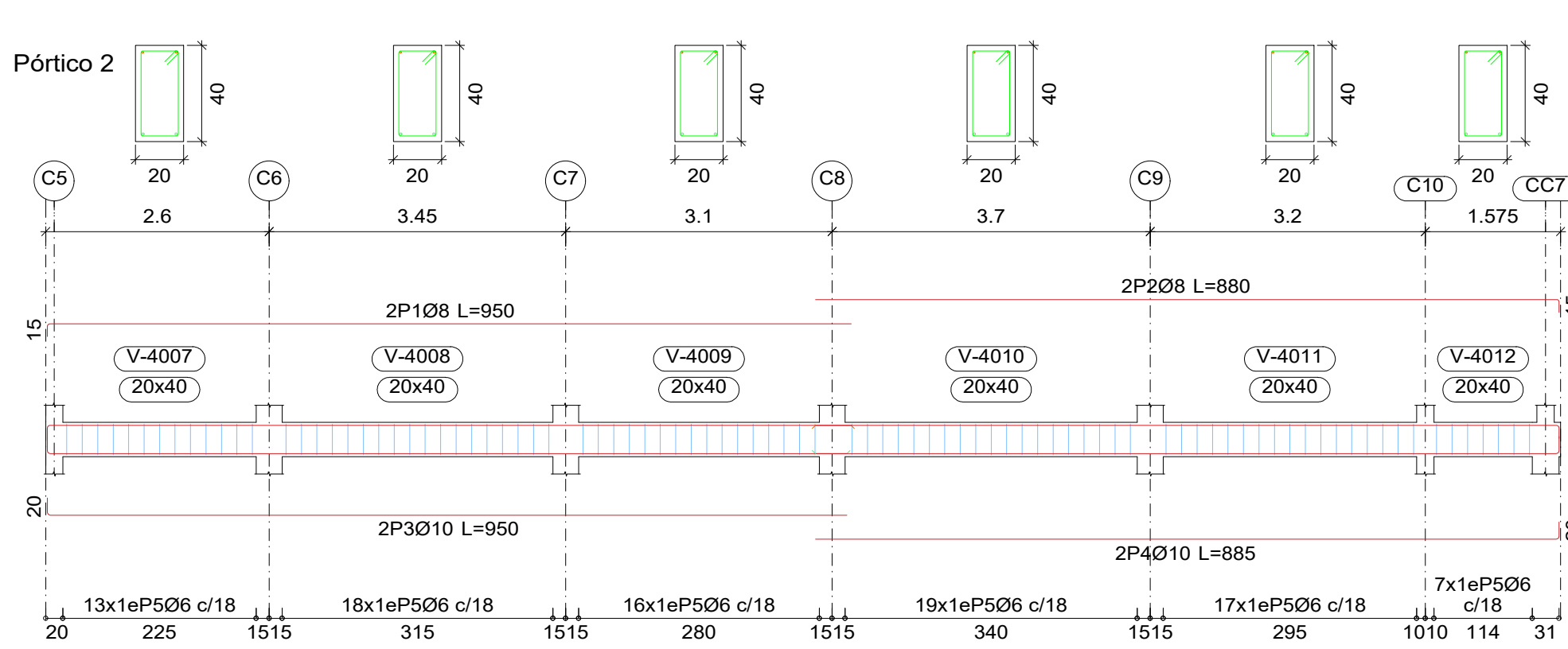
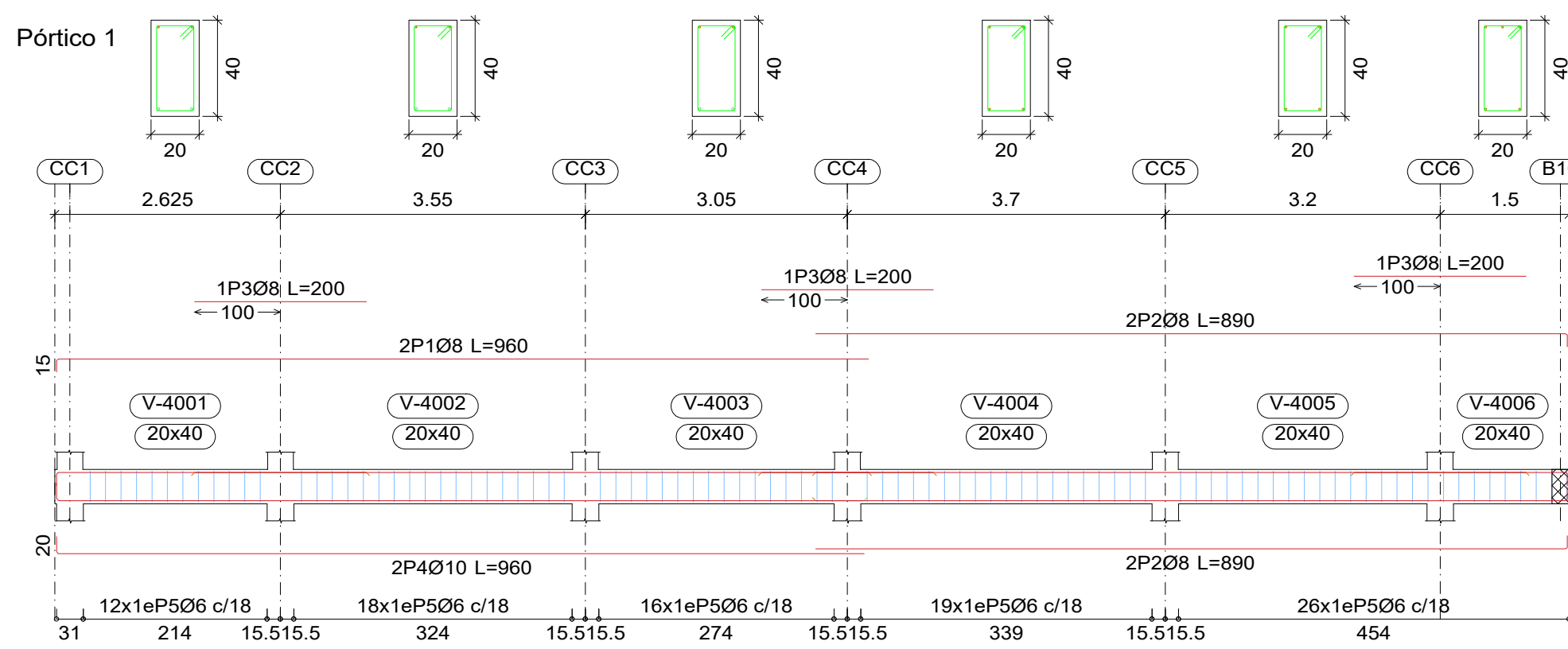
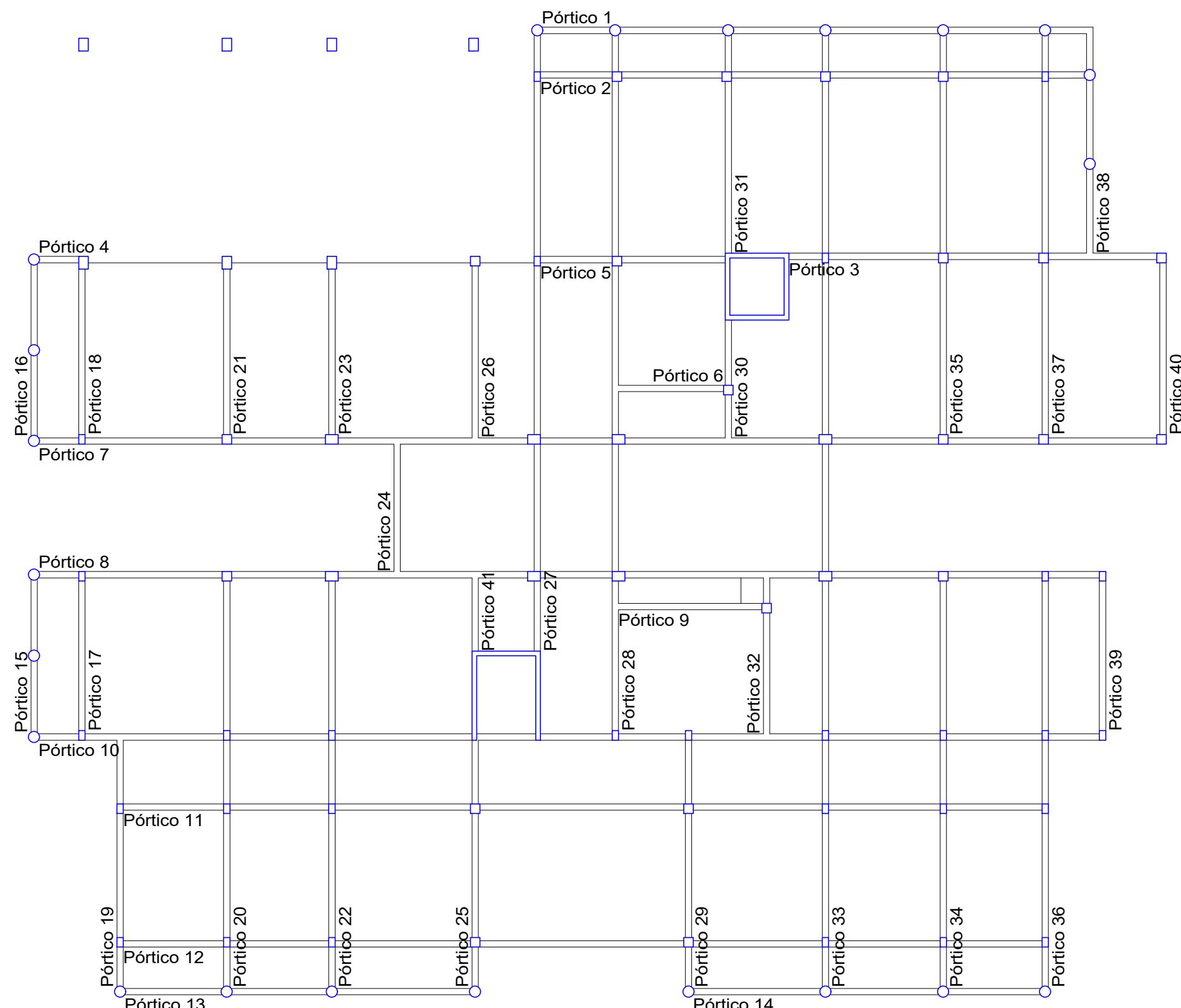
PLANO DE VIGAS SEGUNDO PISO

ESCALA 1:70

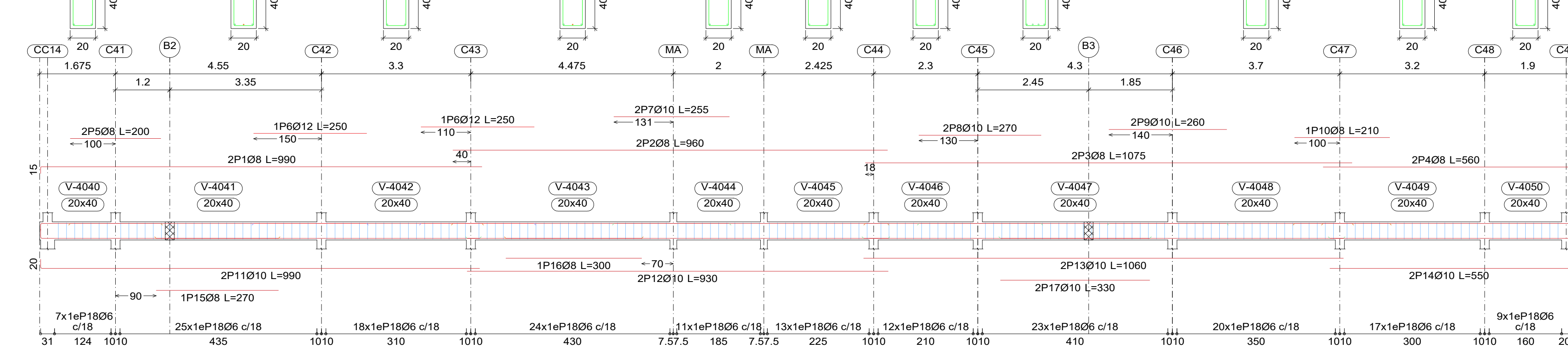
Pórtico 8



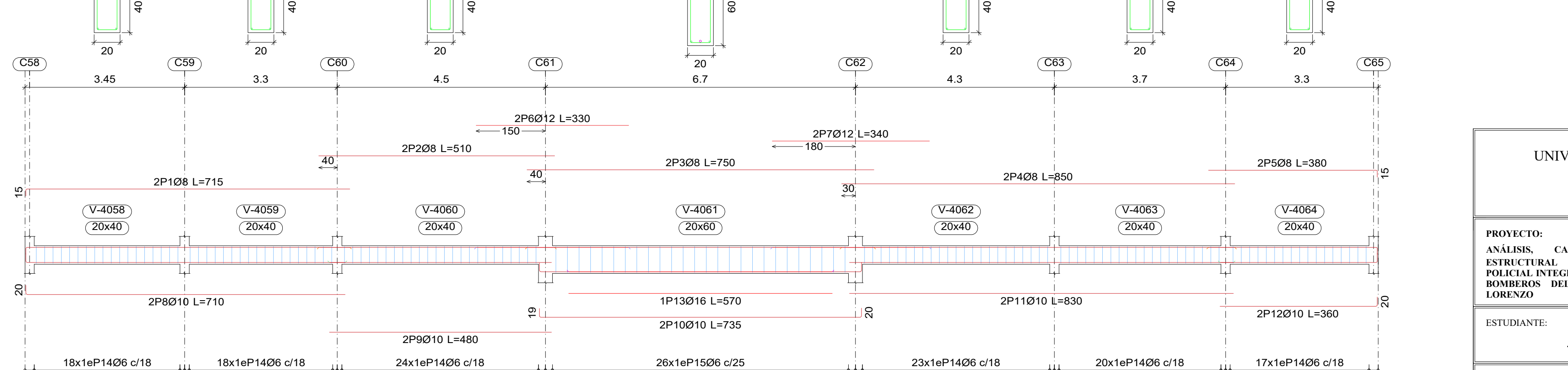
VISTA EN PLANTA ESCALA 1:50



Pórtico 10



Pórtico 12



UNIVERSIDAD AUTÓNOMA "JUAN MISAEL SARACHO"			
FACULTAD DE CIENCIAS Y TECNOLOGÍA		INGENIERÍA CIVIL	
PROYECTO: ANÁLISIS, CÁLCULO Y DISEÑO ESTRUCTURAL DE LA ESTACIÓN POLICIAL INTEGRAL EPTI Y CUARTO DE BOMBOS DEL MUNICIPIO DE SAN LORENZO		CONTENIDO: PLANO DE VIGAS	
ESTUDIANTE: JULIO CESAR RODRIGUEZ POQUECHOQUE		ESCALA: INDICADA	LAMINA: 13 / 20
VoBo		FECHA: ABRIL/2026	

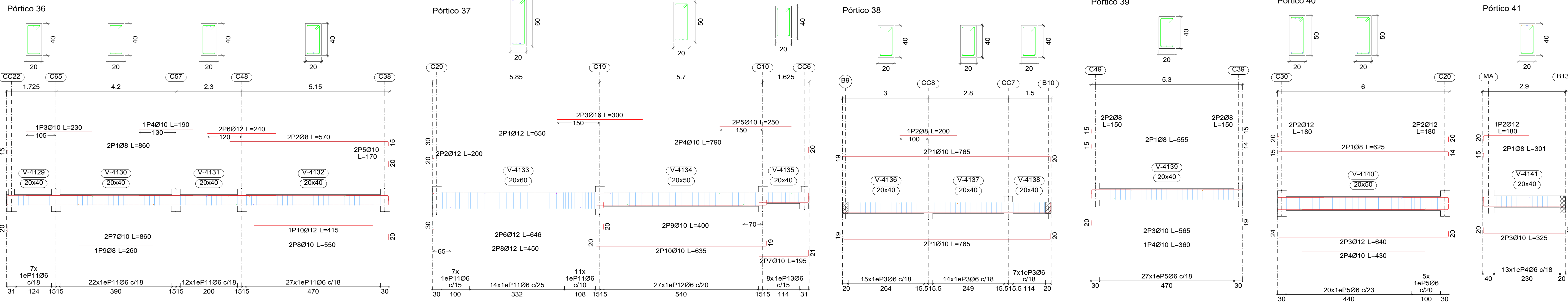
Elemento	Pos.	Diám.	No.	Esquema (cm)	Long. (cm)	Total (cm)	AH-500 (kg)
Pórtico 13	1	Ø8	2		720	1440	5.7
	2	Ø8	2		520	1040	4.1
	3	Ø8	2		210	420	1.7
	4	Ø10	2		720	1440	8.9
	5	Ø10	2		499	998	6.2
	6	Ø6	1		260	260	1.0
	7	Ø6	58		114	6612	14.7
Total+10%:					46.5		
Pórtico 14	1	Ø8	2		860	1720	6.8
	2	Ø8	2		390	780	3.1
	3	Ø12	1		220	220	1.4
	4	Ø10	2		860	1720	10.6
	5	Ø10	2		369	738	4.6
	6	Ø6	59		114	6726	14.9
	Total+10%:				45.5		
Pórtico 15	1	Ø8	2		570	1140	4.5
	2	Ø10	2		580	1160	7.2
	3	Ø6	26		114	2964	6.6
	Total+10%:				20.1		
Pórtico 16	1	Ø8	2		630	1260	5.0
	2	Ø10	2		640	1280	7.9
	3	Ø6	30		114	3420	7.6
	Total+10%:				22.6		
Pórtico 17	1	Ø8	2		555	1110	4.4
	2	Ø8	2		150	300	1.2
	3	Ø8	2		150	300	1.2
	4	Ø10	2		565	1130	7.0
	5	Ø10	2		380	760	4.7
	6	Ø6	21		134	2814	6.2
Total+10%:					27.2		
Pórtico 18	1	Ø8	2		615	1230	4.9
	2	Ø12	2		200	400	3.7
	3	Ø12	2		180	360	3.2
	4	Ø12	2		625	1250	7.7
	5	Ø10	2		400	800	4.9
	6	Ø6	23		134	3082	6.8
Total+10%:					34.2		
Pórtico 19	1	Ø8	2		855	1710	6.7
	2	Ø8	2		160	320	1.3
	3	Ø12	1		300	300	6.7
	4	Ø10	2		860	1720	10.6
	5	Ø8	1		270	270	1.1
	6	Ø6	43		114	4902	10.9
Total+10%:					36.6		
Pórtico 20	1	Ø8	2		865	1730	6.8
	2	Ø10	2		220	440	2.7
	3	Ø12	2		480	960	8.5
	4	Ø10	2		170	340	1.0
	5	Ø12	2		570	1140	10.1
	6	Ø10	2		854	1708	10.5
	7	Ø12	2		310	620	2.4
	8	Ø12	2		300	600	5.3
	9	Ø16	2		570	1140	18.0
	10	Ø6	71		114	8094	18.0
Total+10%:					92.8		
Pórtico 21	1	Ø8	2		620	1240	4.9
	2	Ø12	2		190	380	6.7
	3	Ø10	2		625	1250	7.7
	4	Ø12	2		430	860	7.6
	5	Ø6	25		134	3350	7.4
Total+10%:					37.7		
Pórtico 22	1	Ø8	2		635	1270	5.0
	2	Ø10	2		280	560	3.5
	3	Ø10	4		560	2240	13.8
	4	Ø10	2		250	500	3.1
	5	Ø10	2		160	320	2.0
	6	Ø12	2		240	480	4.3
	7	Ø12	2		170	340	3.0
	8	Ø10	2		630	1260	7.8
	9	Ø12	2		256	512	2.0
	10	Ø8	2		320	640	2.5
	11	Ø10	2		350	700	4.3
	12	Ø6	68		114	7752	17.2
Total+10%:					75.4		
Pórtico 23	1	Ø8	2		620	1240	4.9
	2	Ø12	4		200	800	7.1
	3	Ø12	2		630	1260	11.2
	4	Ø12	2		400	800	7.1
	5	Ø6	27		134	3618	8.0
Total+10%:					42.1		
Pórtico 24	1	Ø8	2		465	930	3.7
	2	Ø10	2		475	950	5.9
	3	Ø8	1		320	320	1.3
	4	Ø6	23		114	2622	5.8
Total+10%:					18.4		
Pórtico 25	1	Ø8	2		875	1750	6.9
	2	Ø12	1		220	220	2.0
	3	Ø12	1		250	250	2.2
	4	Ø10	2		880	1760	10.9
	5	Ø10	1		300	300	1.8
	6	Ø6	41		114	4674	10.4
Total+10%:					37.6		
Pórtico 26	1	Ø8	2		600	1200	4.7
	2	Ø16	2		210	420	6.6
	3	Ø16	2		645	1290	20.4
	4	Ø12	2		480	960	8.5
	5	Ø6	26		134	3484	7.7
Total+10%:					52.7		
Pórtico 27	1	Ø8	2		740	1480	5.8
	2	Ø10	2		700	1400	8.6
	3	Ø8	2		785	1570	6.2
	4	Ø8	1		150	150	0.6
	5	Ø10	2		300	600	3.7
	6	Ø12	2		310	620	5.5
	7	Ø10	2		250	500	3.1
	8	Ø10	2		735	1470	9.1
	9	Ø10	2		600	1200	7.4
	10	Ø10	2		615	1230	7.6
	11	Ø10	2		174	348	2.3
Pórtico 28	1	Ø8	2		420	840	5.2
	2	Ø12	1		400	400	3.6
	3	Ø12	1		400	400	3.6
	4	Ø6	43		114	4902	10.9
	5	Ø6	48		134	6432	14.3
	Total+10%:				103.3		
Pórtico 29	1	Ø8	2		870	1740	6.9
	2	Ø12	2		220	440	3.9
	3	Ø10	2		870	1740	10.7
	4	Ø10	1		280	280	1.7
	5	Ø6	41		114	4674	10.4
Total+10%:					37.0		

PLANO DE VIGAS SEGUNDO PISO

ESCALA 1:70

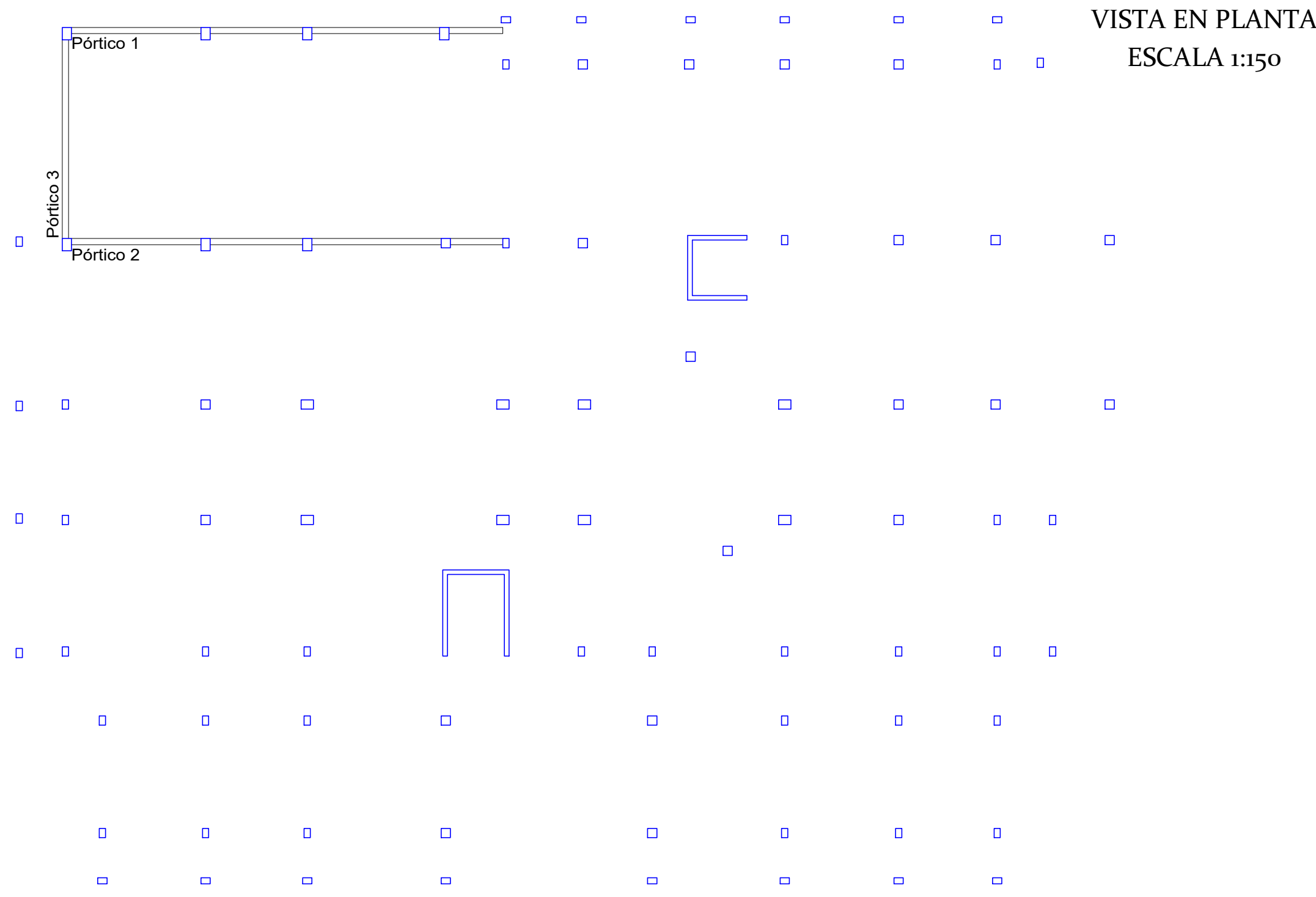
Elemento	Pos.	Diám.	No.	Esquema (cm)	Long. (cm)	Total (cm)	AH-500 (kg)
Pórtico 28	1	Ø8	2		980	1960	7.7
	2	Ø10	2		700	1400	8.6
	3	Ø10	2		170	340	2.1
	4	Ø10	2		230	460	2.8
	5	Ø10	2		300	600	3.7
	6	Ø12	2		350	700	6.2
	7	Ø12	2		350	700	6.2
	8	Ø10	2		780	1560	9.6
	9	Ø10	2		980	1960	12.1
	10	Ø10	2		605	1210	7.5
	11	Ø10	2		645	1290	8.0
	12	Ø8	2		205	410	1.6
	13	Ø10	1		360	360	2.2
	14	Ø8	2		370	740	2.9
	15	Ø12	2		420	840	7.5
	16	Ø6	87		114	9918	22.0
	17	Ø6	30		134	4020	8.9
Total+10%:					131.6		
Pórtico 30	1	Ø10	2		468	936	5.8
	2	Ø10	2		150	300	1.0
	3	Ø8	2		125	250	1.0
	4	Ø10	2		440	880	5.4
	5	Ø6	22		114	2508	5.6
Total+10%:					21.6		
Pórtico 31	1	Ø12	2		670	1340	11.9
	2	Ø10	2		210	420	2.6
	3	Ø16	2		240	480	7.6
	4	Ø12	2		250	500	10.4
	5	Ø12	2		605	1210	4.7
	6	Ø8	2		189	378	1.5
	7	Ø12	2		380	760	6.7
	8	Ø8	10		137	1370	5.4
	9	Ø6	15		134	2010	4.5
Total+10%:					114	798	1.8
Pórtico 32	1	Ø10	4		565	2260	13.9
	2	Ø10	2		270	540	3.3
	3	Ø6	29		114	3306	7.3
Total+10%:					27.0		
Pórtico 34	1	Ø8	2		640	1280	5.1
	2	Ø12	2		280	560	5.0
	3	Ø10	2		580	1160	7.2
	4	Ø10	2		220	440	2.7
	5	Ø10	2		180	360	2.2
	6	Ø10	2		230	460	2.8
	7	Ø12	2		170	340	3.0
	8	Ø10	2		630	1260	7.8
	9	Ø8	2		256	512	2.0
	10	Ø16	2		560	1120	17.7
	11	Ø8	2		310	620	2.4
	12	Ø16	2		390	780	12.3
	13	Ø6	71		114	8094	18.0
Total+10%:					100.0		
Pórtico 33	1	Ø8	2		640	1280	5.1
	2	Ø10	2		330	660	4.1
	3	Ø8	2		1030	2060	8.1
	4	Ø10	2		220	440	2.7
	5	Ø10	2		280	560	3.5
	6	Ø16	1		230	230	3.6
	7	Ø10	2		190	380	4.3
	8	Ø16	1		270	270	4.3
	9	Ø12	2		300	600	5.3
	10	Ø16	2		380	760	12.0
	11	Ø12	2		270	540	4.8
	12	Ø10	2		1190	2380	14.7
	13	Ø10	2		630	1260	7.8
	14	Ø8	2		256	512	2.0
	15	Ø10	2		870	1740	12.0
	16	Ø12	4		620	2480	22.0
	17	Ø8	2		190	380	1.5
18	Ø10	2		340	680	4.2	
19	Ø16	2		360	720	2.8	
20	Ø12	4		440	1760	15.6	
21	Ø6	99		114	11286	25.0	
22	Ø6	46		134	6164	13.7	
23	Ø8	10		137	1370	5.4	
Total+10%:					130.0		
Pórtico 35	1	Ø12	2		680	1360	12.8
	2	Ø10	2		700	1400	8.6
	3	Ø10	2		220	440	2.7
	4	Ø12	2		200	400	3.6
	5	Ø16	2		400	800	12.6
	6	Ø12	2		280	560	5.0
	7	Ø12	2		630	1260	19.9
	8	Ø16	2		596	1192	19.0
	9	Ø8	2		114	228	1.5
	10	Ø12	2		350	700	6.2
	11	Ø12	2		400	800	7.1
	12	Ø6	39		134	5226	11.6
13	Ø8	21		137	2877	11.4	
14	Ø6	7		114	798	1.8	
Total+10%:					126.4		
Pórtico 33							

PLANO DE VIGAS
SEGUNDO PISO
ESCALA 1:70

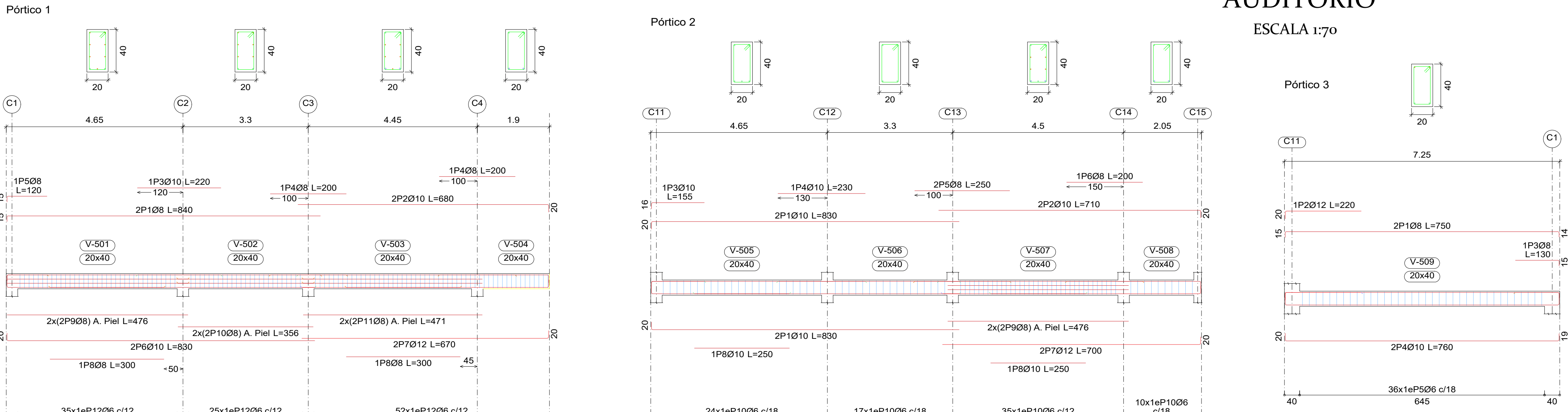


Elemento	Pos.	Diám.	No.	Esquema (cm)	Long. (cm)	Total (cm)	AH-500 (kg)
Pórtico 38	1	Ø10	4		765	3060	18.9
	2	Ø8	1		200	200	0.8
	3	Ø6	36		114	4104	9.1
					Total+10%: 31.7		
Pórtico 36	1	Ø8	2		860	1720	6.8
	2	Ø8	2		860	1720	6.8
	3	Ø10	1		190	190	1.2
	4	Ø10	1		190	190	1.2
	5	Ø10	2		190	380	2.4
	6	Ø12	2		240	480	4.3
	7	Ø10	2		240	480	4.3
	8	Ø10	2		240	480	4.3
	9	Ø8	1		260	260	1.0
	10	Ø12	1		415	415	3.7
	11	Ø6	68		114	7752	17.2
					Total+10%: 65.6		

Elemento	Pos.	Diám.	No.	Esquema (cm)	Long. (cm)	Total (cm)	AH-500 (kg)
Pórtico 41	1	Ø8	2		301	602	2.4
	2	Ø12	1		180	180	1.6
	3	Ø10	2		325	650	4.0
	4	Ø6	13		114	1482	3.3
					Total+10%: 12.4		
Pórtico 40	1	Ø8	2		625	1250	4.9
	2	Ø12	4		720	2880	6.4
	3	Ø12	2		640	1280	11.4
	4	Ø10	2		430	860	5.3
	5	Ø6	25		134	3350	7.4
					Total+10%: 38.9		
Pórtico 39	1	Ø8	2		301	602	2.4
	2	Ø8	1		150	150	0.8
	3	Ø10	2		114	228	1.6
	4	Ø10	1		114	114	0.8
	5	Ø6	27		114	3078	6.8
					Total+10%: 25.1		
Pórtico 37	1	Ø12	2		625	1250	4.9
	2	Ø12	2		625	1250	4.9
	3	Ø10	2		180	360	2.4
	4	Ø10	2		180	360	2.4
	5	Ø10	2		180	360	2.4
	6	Ø12	2		240	480	4.3
	7	Ø10	2		240	480	4.3
	8	Ø12	2		240	480	4.3
	9	Ø8	1		260	260	1.0
	10	Ø12	1		415	415	3.7
	11	Ø6	68		114	7752	17.2
					Total+10%: 65.6		

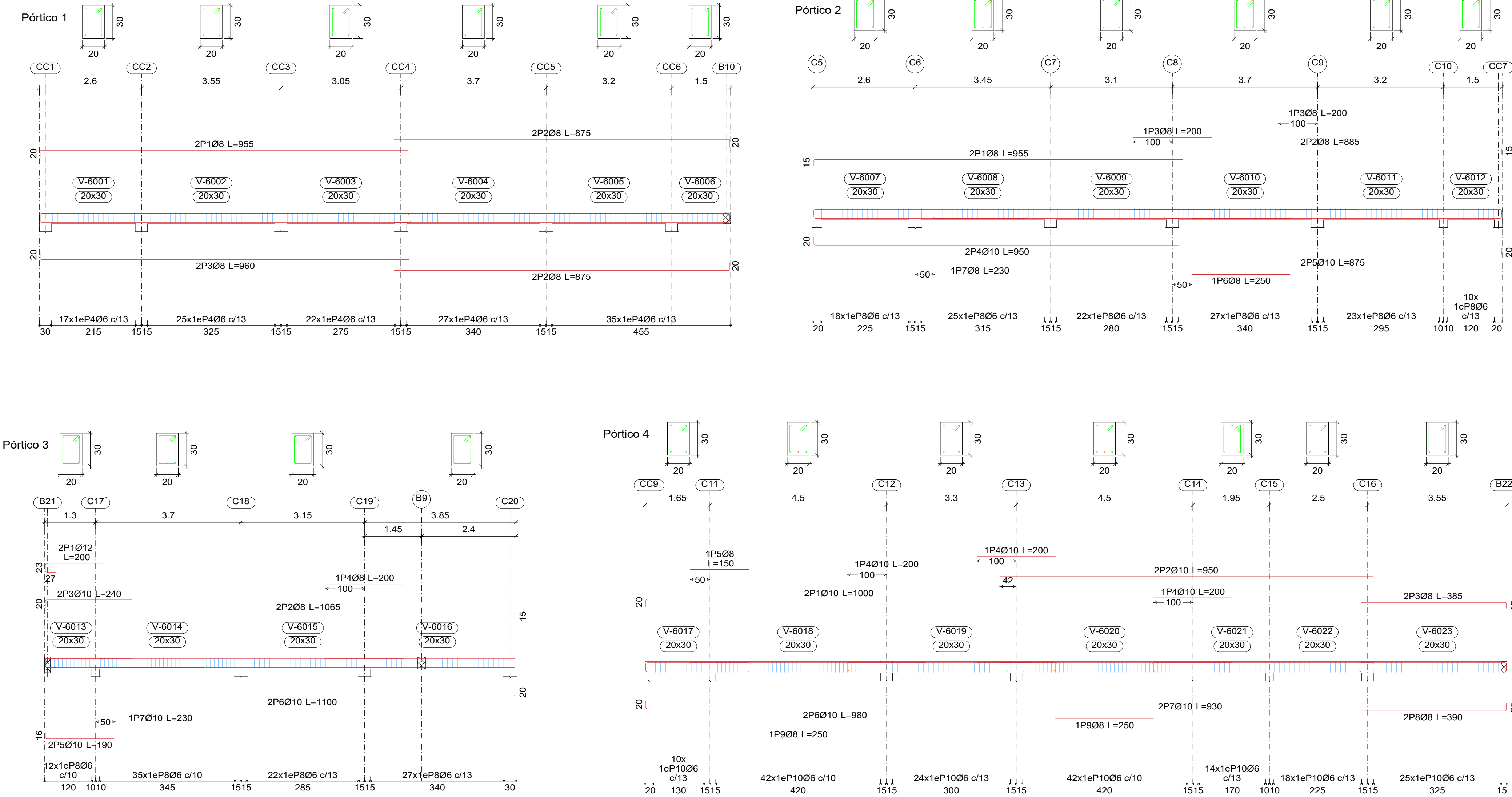
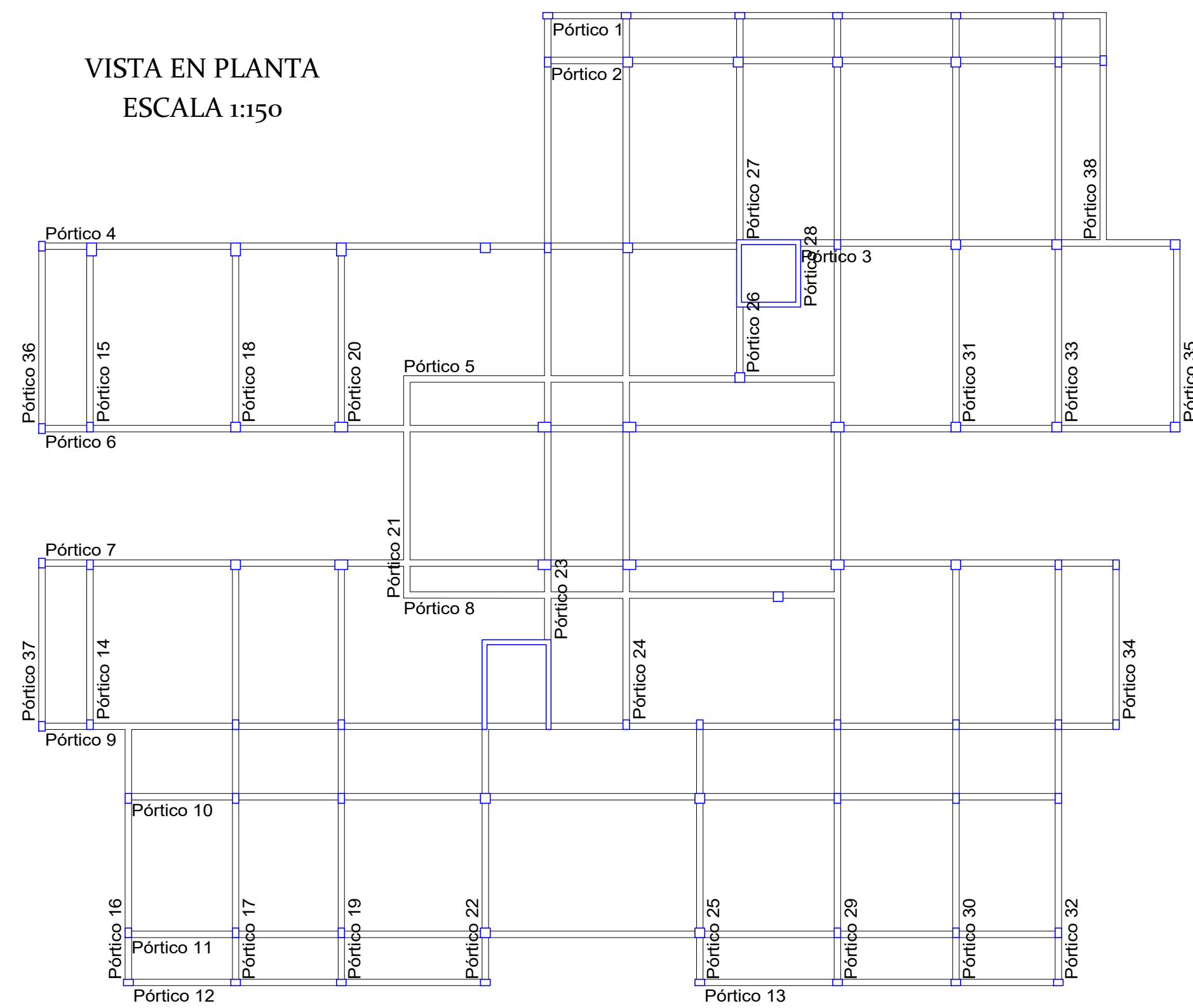


PLANO DE VIGAS CUBIERTA
AUDITORIO
ESCALA 1:70



Elemento	Pos.	Diám.	No.	Esquema (cm)	Long. (cm)	Total (cm)	AH-500 (kg)
Pórtico 1	1	Ø8	2		825	1650	6.6
	2	Ø10	2		825	1650	6.6
	3	Ø10	1		220	220	1.4
	4	Ø8	2		200	400	1.6
	5	Ø8	1		120	120	0.5
	6	Ø10	2		810	1620	10.2
	7	Ø12	2		670	1340	11.9
	8	Ø8	2		300	600	2.4
	9	Ø8	4		476	1904	5.6
	10	Ø8	4		356	1424	5.6
	11	Ø8	4		471	1884	7.4
	12	Ø6	112		114	12768	28.3
					Total+10%: 101.0		
Pórtico 2	1	Ø10	4		810	3240	20.5
	2	Ø10	2		890	1780	8.8
	3	Ø10	1		139	139	1.0
	4	Ø10	1		230	230	1.4
	5	Ø8	2		250	500	2.0
	6	Ø8	1		200	200	0.8
	7	Ø12	2		700	1400	12.4
	8	Ø10	2		250	500	3.1
	9	Ø8	4		476	1904	7.5
	10	Ø6	86		114	9804	21.8
					Total+10%: 87.2		
Pórtico 3	1	Ø8	2		750	1500	5.9
	2	Ø12	1		220	220	2.0
	3	Ø8	1		115	115	0.5
	4	Ø10	2		721	1442	9.4
	5	Ø6	36		114	4104	9.1
					Total+10%: 29.6		
					Ø6: 65.0		
					Ø8: 53.1		
					Ø10: 70.7		
					Ø12: 29.0		
					Total: 217.8		

PLANO DE VIGAS CUBIERTA
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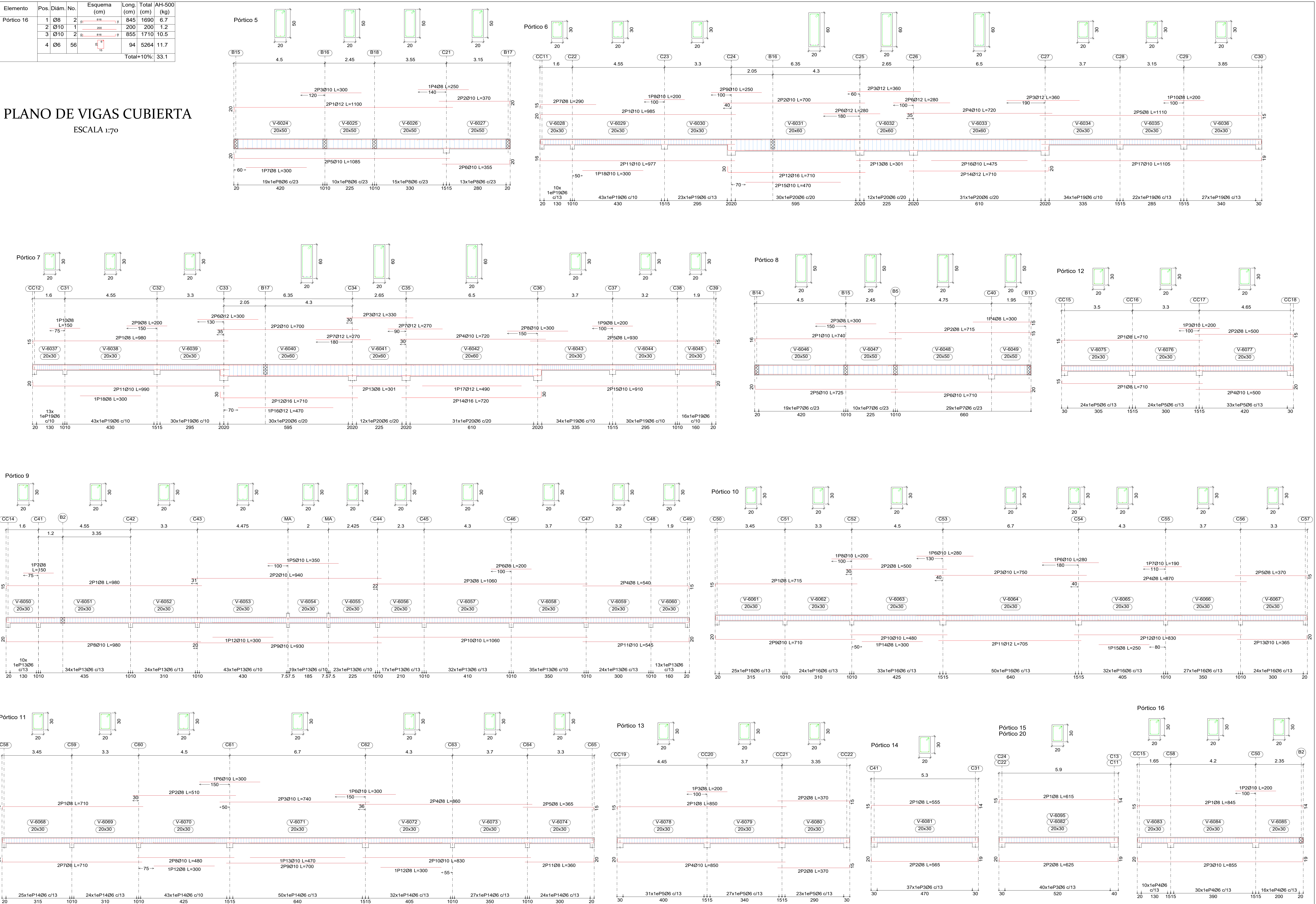


Elemento	Pos.	Diám.	No.	Esquema (cm)	Long. (cm)	Total (cm)	AH-500 (kg)
Pórtico 1	1	Ø8	2		955	1910	7.5
	2	Ø8	2		875	1750	7.0
	3	Ø8	2		940	1880	7.6
	4	Ø6	126		94	11844	26.3
					Total+10%: 60.7		
Pórtico 2	1	Ø8	2		955	1910	7.5
	2	Ø8	2		875	1750	7.0
	3	Ø8	2		200	400	1.6
	4	Ø10	2		950	1900	11.7
	5	Ø10	2		875	1750	10.8
	6	Ø8	1		250	250	1.0
	7	Ø8	1		230	230	0.9
	8	Ø6	125		94	11750	26.1
					Total+10%: 73.3		
Pórtico 3	1	Ø12	2		1065	2130	8.4
	2	Ø10	2		1065	2130	8.4
	3	Ø10	2		230	460	3.0
	4	Ø8	1		190	380	2.3
	5	Ø10	2		1100	2200	13.6
	6	Ø10	1		230	230	1.4
	7	Ø8	96		94	9024	20.0
	8	Ø6	96		94	9024	20.0
					Total+10%: 58.4		
Pórtico 4	1	Ø10	2		950	1900	11.7
	2	Ø10	2		950	1900	11.7
	3	Ø8	2		385	770	3.0
	4	Ø10	3		200	600	3.7
	5	Ø8	1		150	150	0.6
	6	Ø10	2		980	1960	12.1
	7	Ø10	2		930	1860	11.5
	8	Ø8	2		390	780	3.1
	9	Ø8	2		250	500	2.0
	10	Ø6	175		94	16450	36.5
					Total+10%: 106.2		

Elemento	Pos.	Diám.	No.	Esquema (cm)	Long. (cm)	Total (cm)	AH-500 (kg)
Pórtico 9	1	Ø8	2		985	980	1960 7.7
	2	Ø10	2		980	940	1880 11.6
	3	Ø8	2		1060	1060	2120 8.4
	4	Ø8	2		525	540	1080 4.3
	5	Ø10	1		350	350	700 2.2
	6	Ø8	2		300	200	400 1.5
	7	Ø8	1		150	150	300 0.6
	8	Ø10	2		980	980	1960 12.1
	9	Ø10	2		930	930	1860 11.5
	10	Ø10	2		1060	1060	2120 13.1
	11	Ø10	2		525	545	1090 6.7
	12	Ø10	1		300	300	600 1.8
	13	Ø6	274		94	25756	57.2
Total+10%:					152.7		
Pórtico 10	1	Ø8	2		700	715	1430 5.6
	2	Ø8	2		500	500	1000 3.9
	3	Ø10	2		750	750	1500 9.2
	4	Ø8	2		870	870	1740 6.9
	5	Ø8	2		355	370	740 2.9
	6	Ø10	2		280	280	560 3.5
	7	Ø10	1		190	190	380 1.2
	8	Ø10	1		200	200	400 1.2
	9	Ø10	2		980	710	1420 8.8
	10	Ø10	2		480	480	960 5.9
	11	Ø12	2		705	705	1410 12.5
	12	Ø10	2		830	830	1660 10.2
	13	Ø10	2		365	365	730 4.5
	14	Ø8	1		250	300	600 1.2
	15	Ø8	1		250	250	500 1.0
	16	Ø6	215		94	20210	44.8
Total+10%:					135.6		
Pórtico 6	1	Ø10	2		985	985	1970 12.1
	2	Ø10	2		700	700	1400 8.6
	3	Ø12	4		360	360	720 12.8
	4	Ø10	2		700	720	1440 8.9
	5	Ø8	2		1000	1110	2220 8.8
	6	Ø12	4		280	280	560 9.9
	7	Ø8	2		275	290	580 2.3
	8	Ø10	1		200	200	400 1.2
	9	Ø10	2		250	250	500 3.1
	10	Ø10	1		200	200	400 0.8
	11	Ø10	2		961	977	1954 12.0
	12	Ø16	2		710	710	1420 22.4
	13	Ø8	2		301	301	602 2.4
	14	Ø12	2		480	710	1420 12.6
	15	Ø10	2		470	470	940 5.8
	16	Ø10	2		475	475	950 5.9
	17	Ø10	2		1088	1105	2210 13.6
	18	Ø10	1		300	300	600 1.8
	19	Ø6	159		94	14946	33.2
	20	Ø6	73		154	11242	24.9
Total+10%:					223.4		
Pórtico 7	1	Ø8	2		985	980	1960 7.7
	2	Ø10	2		700	700	1400 8.6
	3	Ø10	2		330	330	660 5.9
	4	Ø12	2		720	720	1440 8.9
	5	Ø8	2		510	930	1860 7.3
	6	Ø12	2		300	300	600 5.3
	7	Ø12	4		270	270	540 9.6
	8	Ø10	2		300	300	600 3.7
	9	Ø8	3		200	600	2.4
	10	Ø8	1		190	150	300 0.6
	11	Ø10	2		970	950	1900 12.2
	12	Ø16	2		710	710	1420 22.4
	13	Ø8	2		301	301	602 2.4
	14	Ø16	2		880	720	1440 22.7
	15	Ø10	2		880	910	1820 11.2
	16	Ø12	1		470	470	940 4.2
	17	Ø12	1		490	490	980 4.4
	18	Ø8	1		300	300	600 1.2
	19	Ø6	166		94	15604	34.6
	20	Ø6	73		154	11242	24.9
Total+10%:					220.2		
Pórtico 11	1	Ø8	2		695	710	1420 5.6
	2	Ø8	2		510	510	1020 4.0
	3	Ø10	2		740	740	1480 9.1
	4	Ø8	2		860	860	1720 6.8
	5	Ø8	2		365	365	730 2.9
	6	Ø10	2		300	300	600 3.7
	7	Ø8	2		980	710	1420 5.6
	8	Ø10	2		480	480	960 5.9
	9	Ø10	2		700	700	1400 8.6
	10	Ø10	2		830	830	1660 10.2
	11	Ø8	2		360	360	720 2.8
	12	Ø8	2		300	300	600 2.4
	13	Ø10	1		470	470	940 2.9
	14	Ø6	225		94	21150	46.9
Total+10%:					129.1		
Pórtico 12	1	Ø8	4		695	710	2840 11.2
	2	Ø8	2		485	500	1000 3.9
	3	Ø10	1		200	200	400 1.2
	4	Ø10	2		480	500	1000 6.2
	5	Ø6	81		94	7614	16.9
Total+10%:					43.3		
Pórtico 13	1	Ø8	2		600	850	1700 6.7
	2	Ø8	4		355	370	740 5.8
	3	Ø8	1		200	200	400 0.8
	4	Ø10	2		680	850	1700 10.5
	5	Ø6	81		94	7614	16.9
Total+10%:					44.8		
Pórtico 14	1	Ø8	2		525	555	1110 4.4
	2	Ø8	2		528	565	1130 4.5
	3	Ø6	37		94	3478	7.7
Total+10%:					18.3		
Pórtico 5	1	Ø12	2		1080	1100	2200 19.5
	2	Ø10	2		350	370	740 4.6
	3	Ø10	2		300	300	600 3.7
	4	Ø8	1		250	250	500 1.0
	5	Ø10	2		1085	2170	13.4
	6	Ø10	2		355	710	4.4
	7	Ø6	1		300	300	600 1.2
	8	Ø6	57		134	7638	17.0
Total+10%:					71.3		
Pórtico 8	1	Ø10	2		724	740	1480 9.1
	2	Ø8	2		700	715	1430 5.6
	3	Ø8	2		300	300	600 2.4
	4	Ø8	1		285	300	600 1.2
	5	Ø10	2		725	1450	8.9
	6	Ø10	2		680	710	1420 8.8
	7	Ø6	58		134	7772	17.2
Total+10%:					58.5		
Pórtico 15	1	Ø8	2		586	615	1230 4.9
	2	Ø8	2		584	625	1250 4.9
	3	Ø6	40		94	3760	8.3
Total+10%:					19.9		
(x2):					39.8		

PLANO DE VIGAS CUBIERTA

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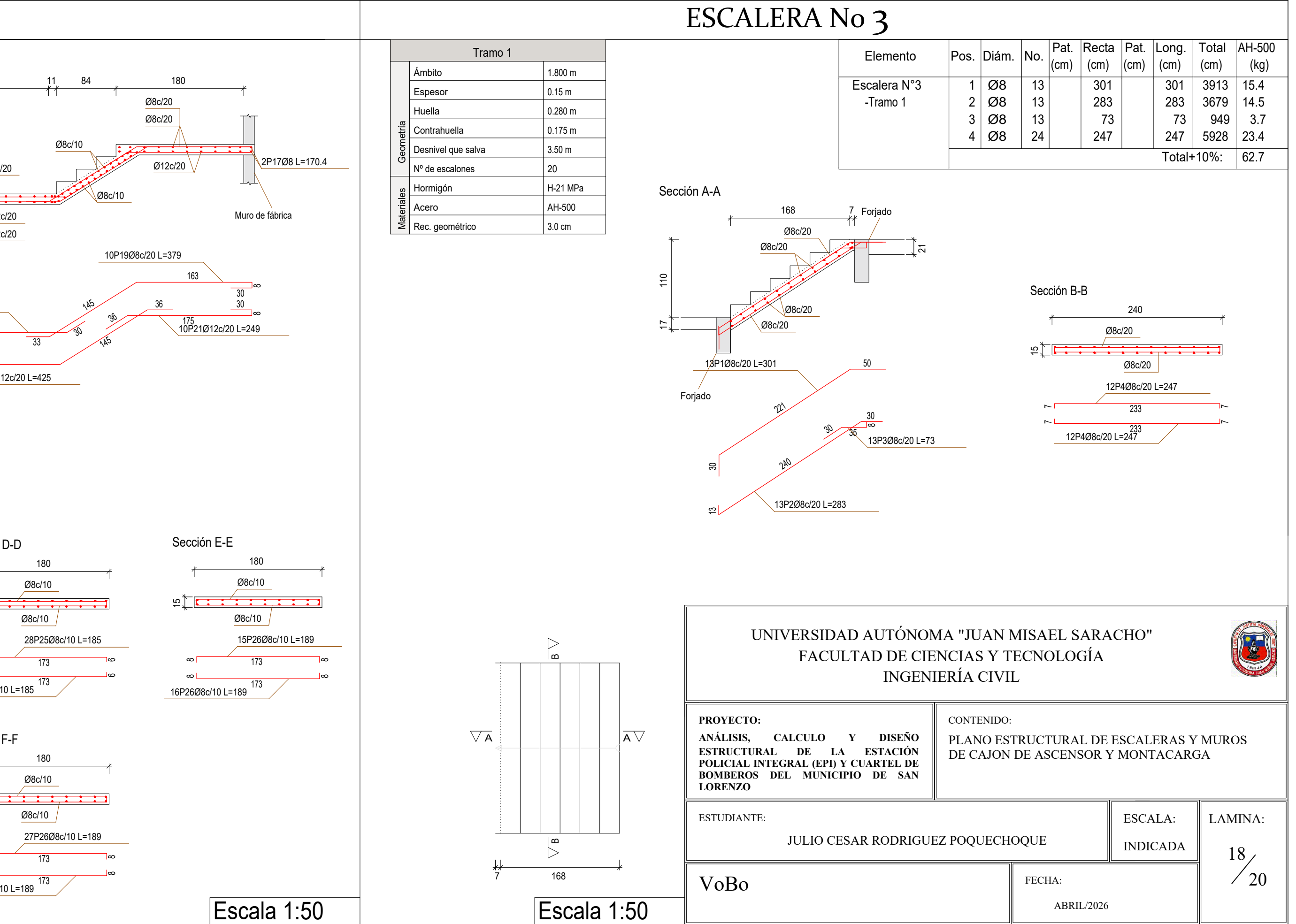
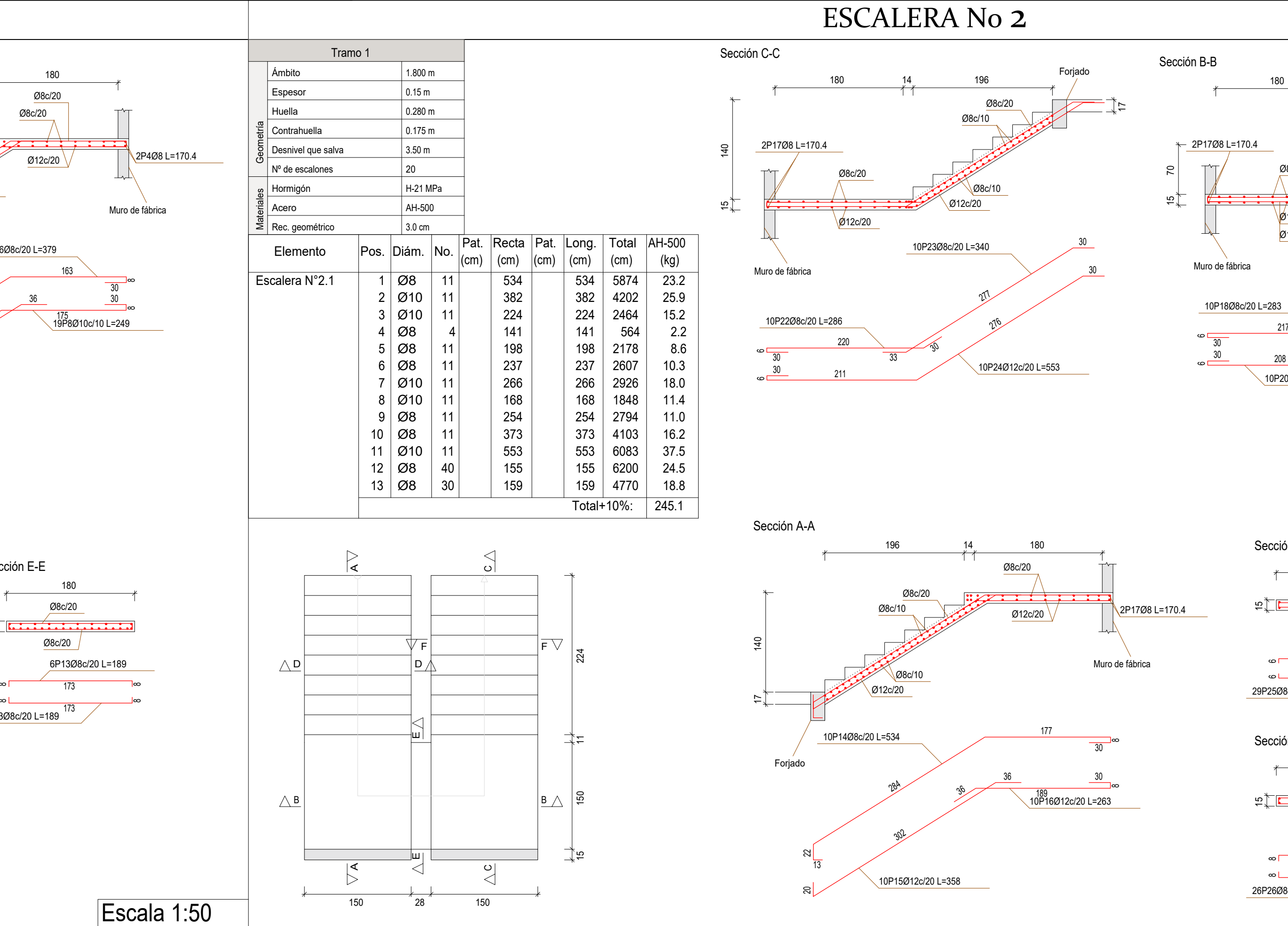
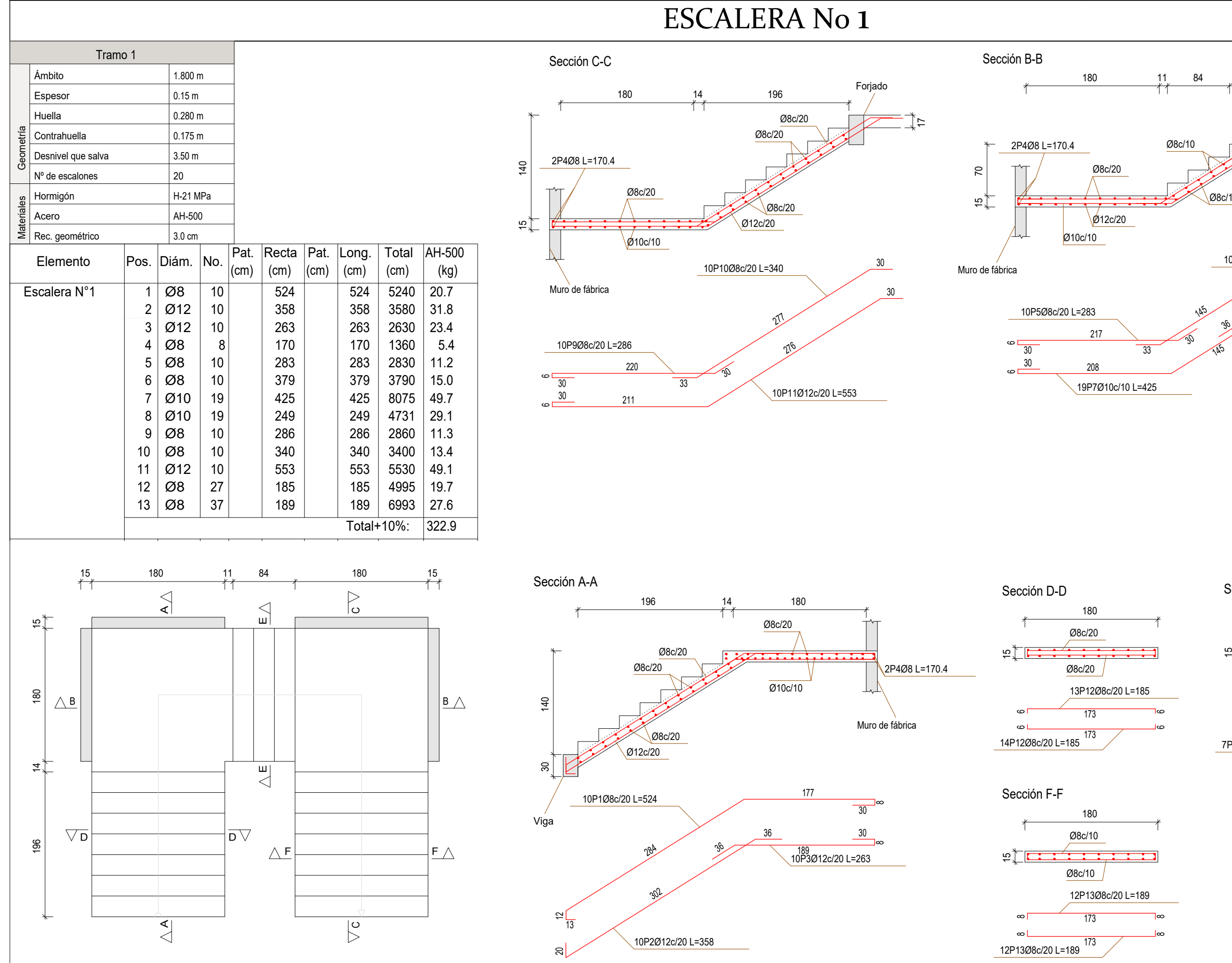
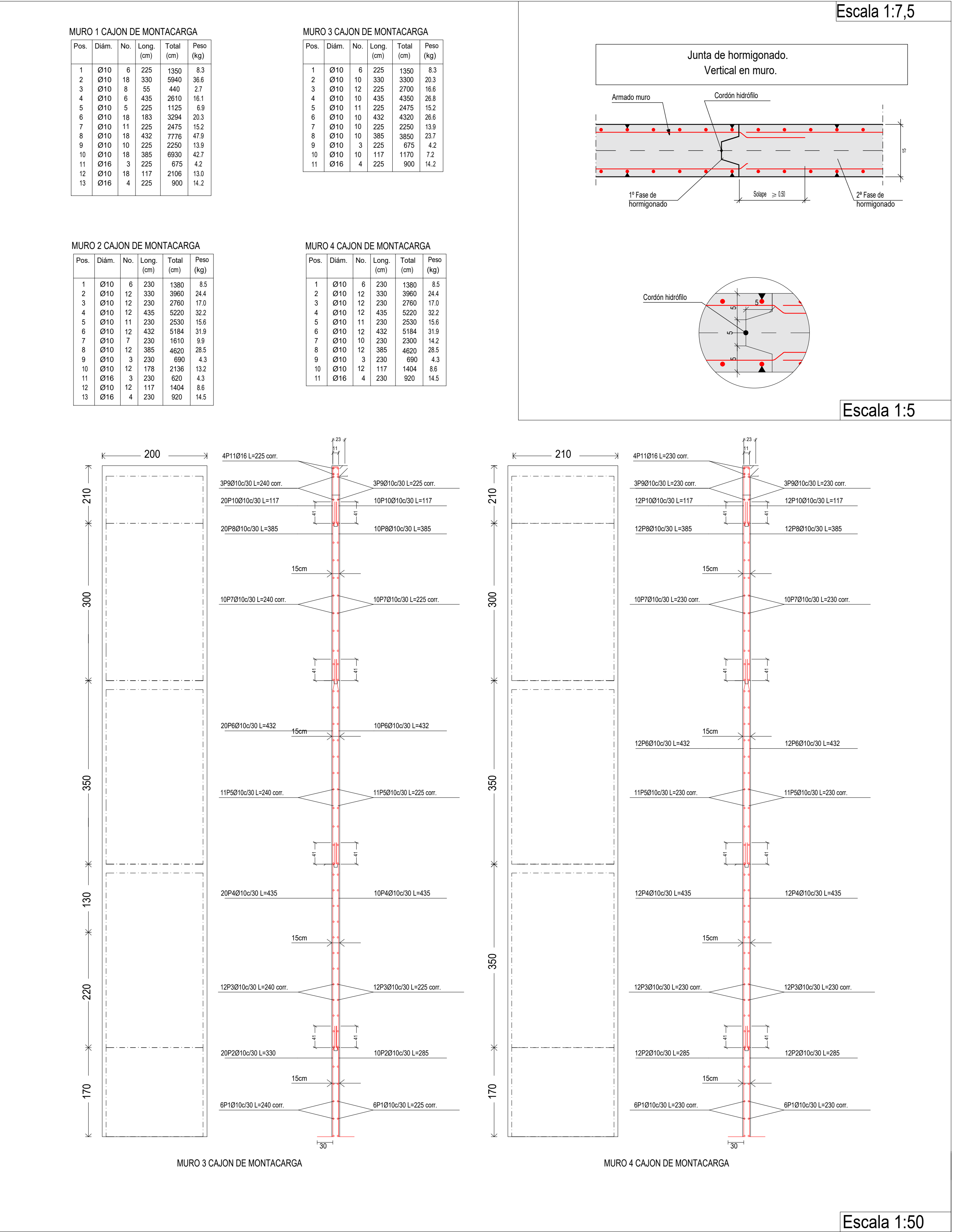
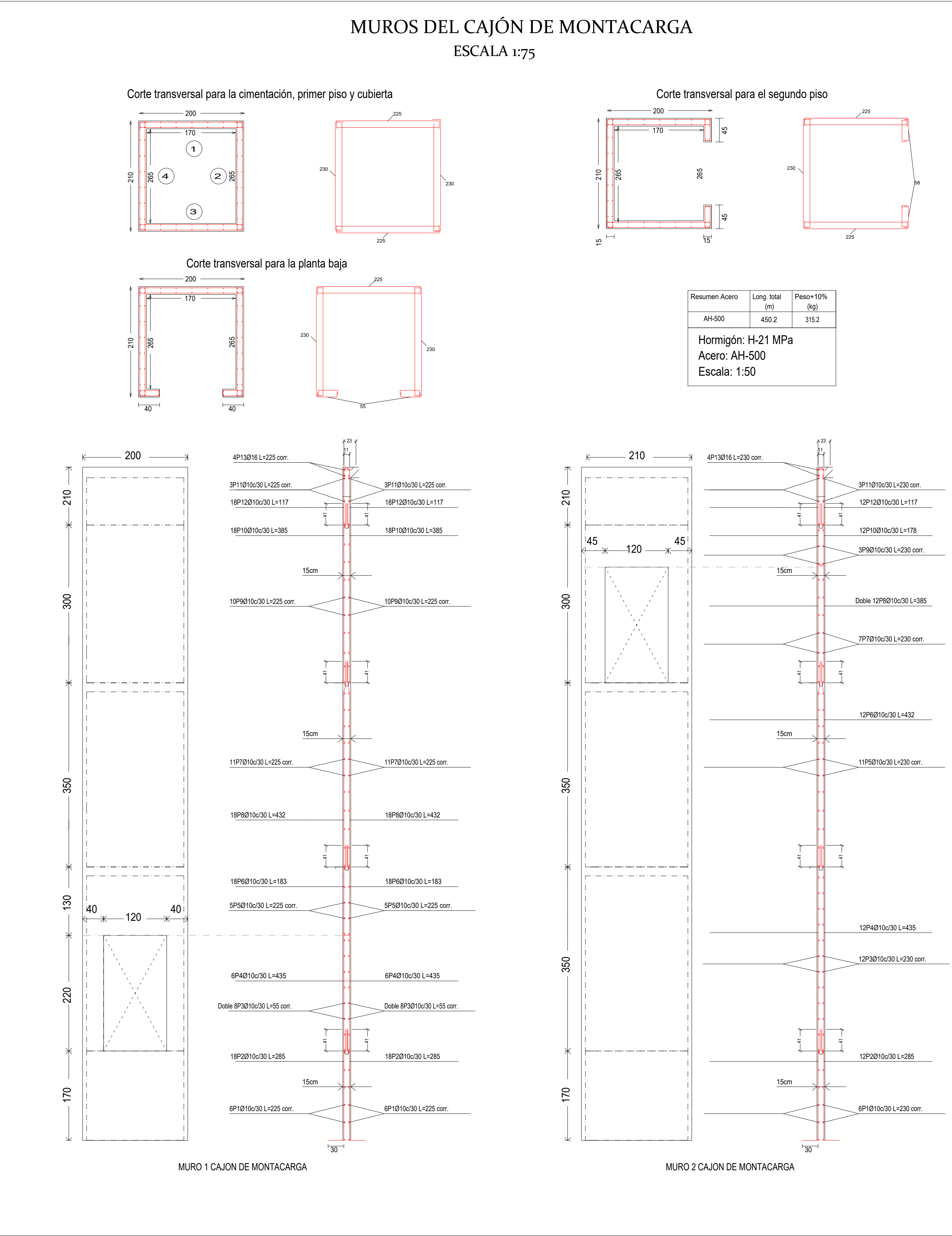
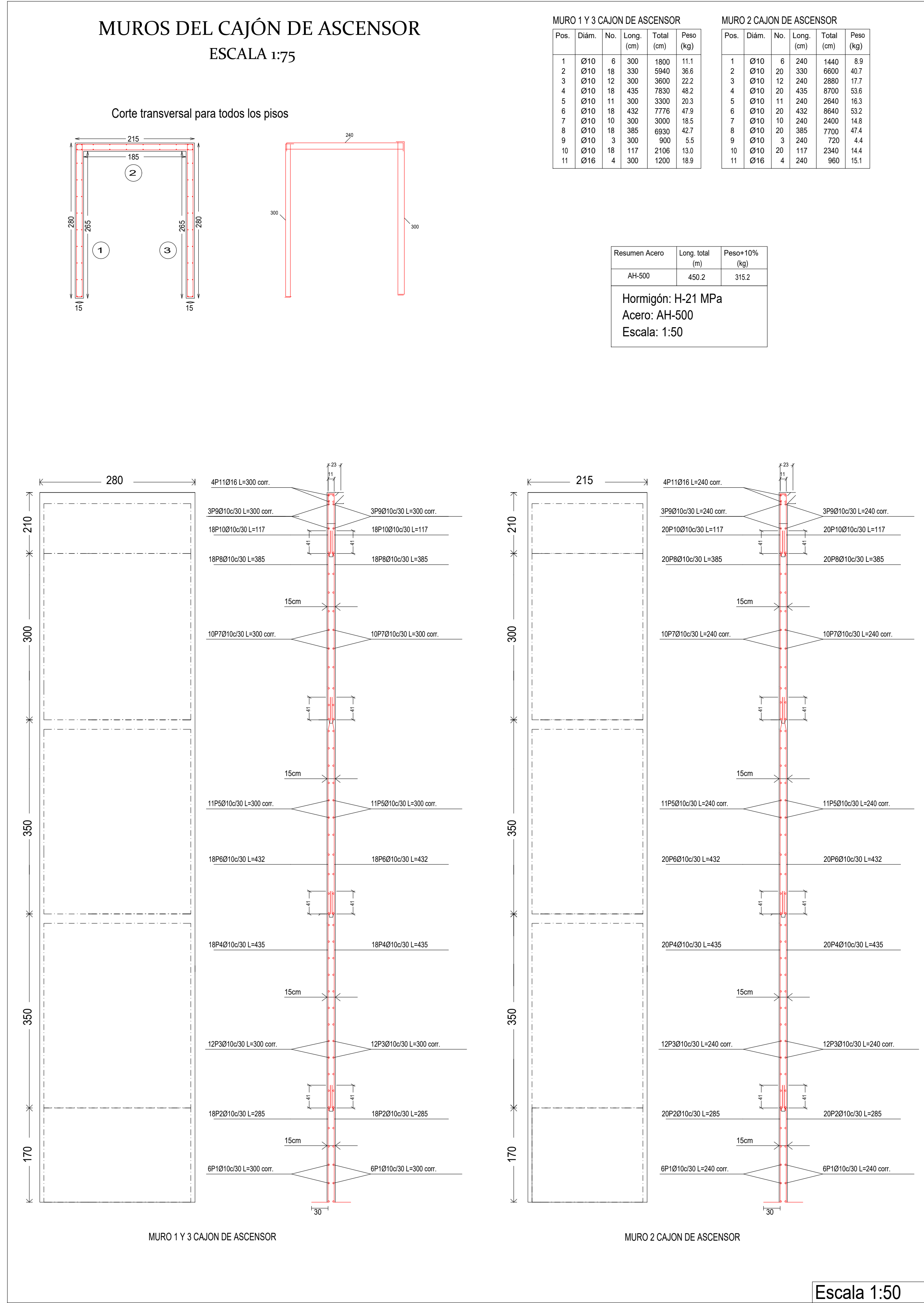


Elemento	Pos.	Diám.	No.	Esquema (cm)	Long. (cm)	Total (cm)	AH-500 (kg)
Pórtico 23	1	Ø8	2		800	815	1630 6.4
	2	Ø8	2		600	630	1260 5.0
	3	Ø8	2		700	780	1560 6.2
	4	Ø12	2		300	320	640 5.7
	5	Ø16	2		310	310	620 9.8
	6	Ø8	2		600	300	600 2.4
	7	Ø10	1		200	200	200 1.2
	8	Ø12	2		750	1500	1530 13.3
	9	Ø12	2		586	1172	10.4
	10	Ø10	2		745	1530	9.4
	11	Ø12	1		410	410	410 3.6
	12	Ø10	1		340	340	200 2.1
	13	Ø8	1		400	400	400 1.6
	14	Ø8	4		456	1824	7.2
	15	Ø6	58		134	7772	17.2
	16	Ø6	53		94	4982	11.1
Total+10%:					123.9		
Pórtico 24	1	Ø8	2		975	990	1980 7.8
	2	Ø8	2		640	1280	5.1
	3	Ø8	2		790	1580	6.2
	4	Ø12	2		320	640	5.7
	5	Ø16	2		340	680	10.7
	6	Ø8	2		300	600	2.4
	7	Ø8	1		150	150	0.6
	8	Ø12	2		980	1960	17.4
	9	Ø10	2		590	1180	7.3
	10	Ø10	2		745	1530	9.4
	11	Ø10	3		400	1200	7.4
	12	Ø8	4		456	1824	7.2
	13	Ø6	74		134	9916	22.0
	14	Ø6	53		94	4982	11.1
Total+10%:					132.3		
Pórtico 25	1	Ø8	2		855	1710	6.7
	2	Ø8	2		865	1730	6.8
	3	Ø6	56		94	5264	11.7
Total+10%:					27.7		
Pórtico 26	1	Ø8	2		300	600	2.4
	2	Ø8	2		310	620	2.4
	3	Ø6	16		94	1504	3.3
Total+10%:					8.9		
Pórtico 27	1	Ø10	2		793	1586	9.8
	2	Ø12	1		180	360	1.6
	3	Ø10	2		760	1520	9.4
	4	Ø6	64		94	6016	13.4
Total+10%:					37.6		
Pórtico 28	1	Ø8	2		232	464	1.8
	2	Ø10	2		238	476	2.9
	3	Ø6	8		104	832	1.8
Total+10%:					7.2		
Pórtico 21	1	Ø12	4		731	2924	26.0
	2	Ø8	2		230	460	1.8
	3	Ø10	2		390	780	4.8
	4	Ø6	31		134	4154	9.2
Total+10%:					46.0		
Pórtico 19	1	Ø8	2		860	1720	6.8
	2	Ø8	2		560	1120	4.4
	3	Ø10	1		120	120	0.7
	4	Ø8	1		200	200	0.8
	5	Ø8	2		850	1700	6.7
	6	Ø10	2		555	1110	6.8
	7	Ø6	93		94	8742	19.4
Total+10%:					60.2		
Pórtico 18	1	Ø8	2		620	1240	4.9
	2	Ø8	2		625	1250	4.9
	3	Ø6	40		94	3760	8.3
Total+10%:					19.9		
Pórtico 17	1	Ø8	2		850	1700	6.7
	2	Ø8	2		560	1120	4.4
	3	Ø8	1		200	200	0.8
	4	Ø8	1		150	150	0.6
	5	Ø10	1		200	200	1.2
	6	Ø10	2		850	1700	10.5
	7	Ø10	2		550	1100	6.8
	8	Ø6	103		94	9682	21.5
Total+10%:					57.8		
Pórtico 22	1	Ø8	2		855	1710	6.7
	2	Ø8	1		100	100	0.4
	3	Ø8	2		865	1730	6.8
	4	Ø6	56		94	5264	11.7
Total+10%:					28.2		
Pórtico 29	1	Ø8	2		850	1700	6.7
	2	Ø8	2		970	1940	7.7
	3	Ø8	2		630	1260	5.0
	4	Ø8	4		750	3060	12.1
	5	Ø8	1		230	230	0.9
	6	Ø8	2		845	1690	6.7
	7	Ø10	2		600	1200	7.4
	8	Ø10	2		600	1200	7.4
	9	Ø6	108		94	10152	22.5
	10	Ø6	63		134	8442	18.7
Total+10%:					109.6		
Pórtico 34	1	Ø8	4		555	2220	8.8
	2	Ø6	37		94	3478	7.7
Total+10%:					18.2		
Pórtico 30	1	Ø8	2		860	1720	6.8
	2	Ø10	4		560	2240	13.8
	3	Ø10	1		200	200	1.2
	4	Ø8	2		850	1700	6.7
	5	Ø6	103		94	9682	21.5
Total+10%:					55.0		
Pórtico 35	1	Ø8	2		625	1250	4.9
	2	Ø8	2		635	1270	5.0
Pórtico 36	3	Ø6	42		94	3948	8.8
	Total+10%:					20.6 (x2): 41.2	
Pórtico 37	1	Ø8	2		565	1130	4.5
	2	Ø8	2		575	1150	4.5
	3	Ø6	37		94	3478	7.7
Total+10%:					18.4		
Pórtico 31	1	Ø10	2		645	1290	8.0
	2	Ø10	2		775	1550	9.6
	3	Ø10	2		300	600	3.7
	4	Ø10	2		620	1240	7.6
	5	Ø10	2		740	1480	9.4
	6	Ø8	2		400	800	3.2
Pórtico 38	7	Ø6	106		94	9964	22.1
	Total+10%:					70.0	

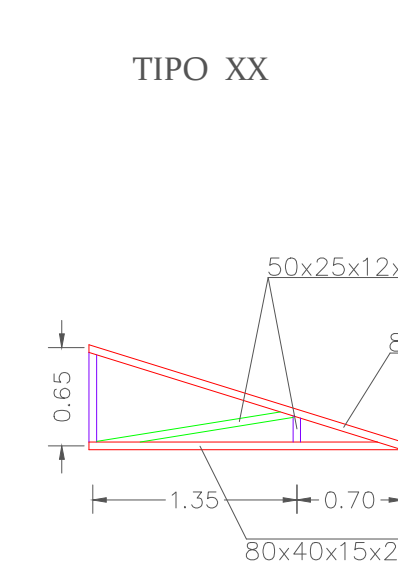
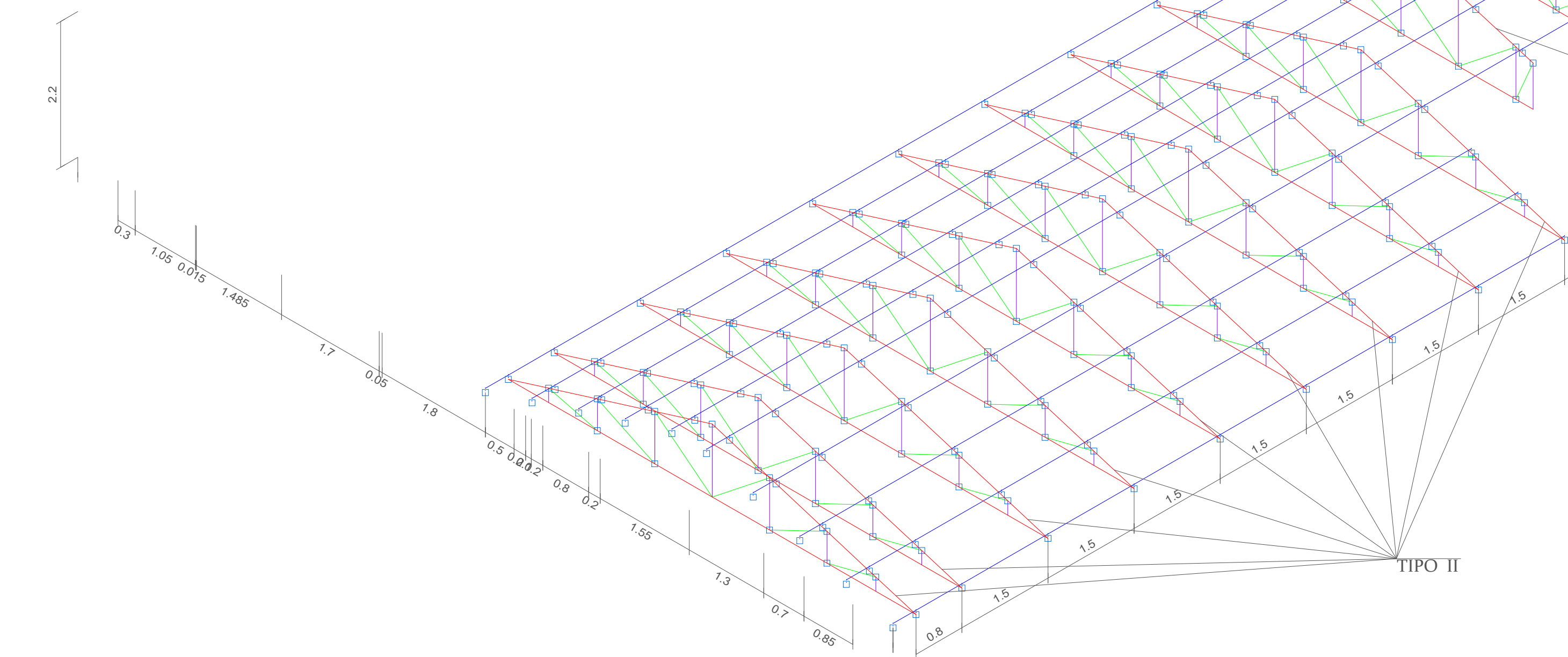
PLANO DE VIGAS CUBIERTA

ESCALA 1:70

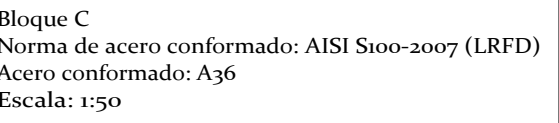
Elemento	Pos.	Diám.	No.	Esquema (cm)	Long (cm)	Total (cm)	AH-500 (kg)
Pórtico 32	1	Ø8	2		850	1700	6.7
	2	Ø8	2		545	1090	4.3
	3	Ø8	2		200	400	1.6
	4	Ø10	2		850	1700	10.5
	5	Ø8	2		550	1100	4.3
	6	Ø6	93		94	8742	19.4
Total+10%					94	51.5	51.5
Pórtico 33	1	Ø8	2		630	1260	5.0
	2	Ø8	2		770	1540	6.1
	3	Ø10	1		230	230	0.8
	4	Ø8	1		200	200	0.4
	5	Ø10	2		630	1260	5.0
	6	Ø10	2		760	1520	9.4
	7	Ø8	1		380	380	1.5
	8	Ø6	94		94	8836	19.6
Total+10%					94	56.8	56.8
Pórtico 38	1	Ø8	2		740	1480	5.8
	2	Ø8	2		200	400	1.6
	3	Ø10	2		765	1530	9.4
	4	Ø6	55		94	5170	11.5
Total+10%					94	30.3	30.3



ESCALA 1:50



ESCALA 1:50



CUBIERTA BLOQUE (C)
(AUDITORIO)