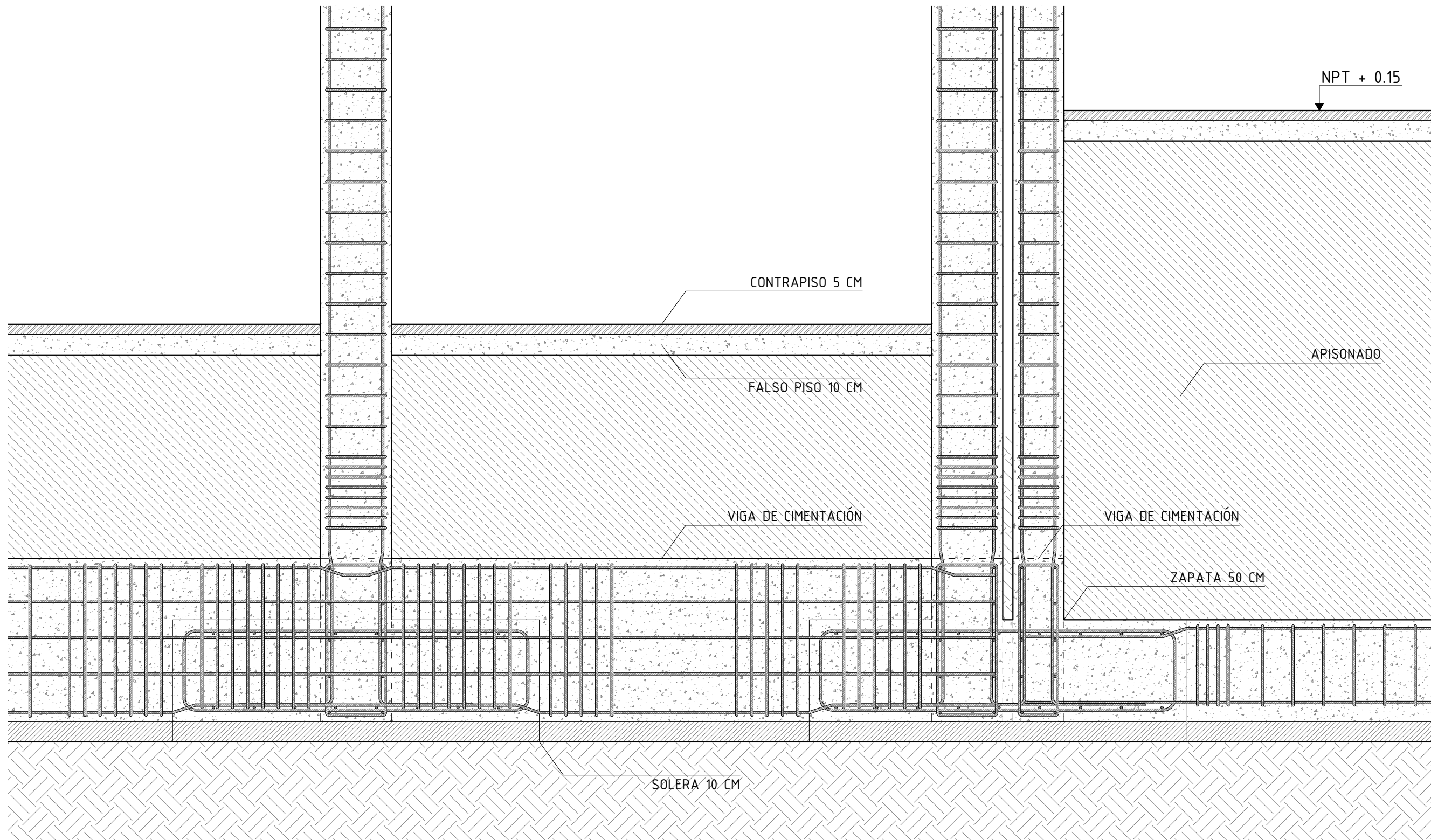
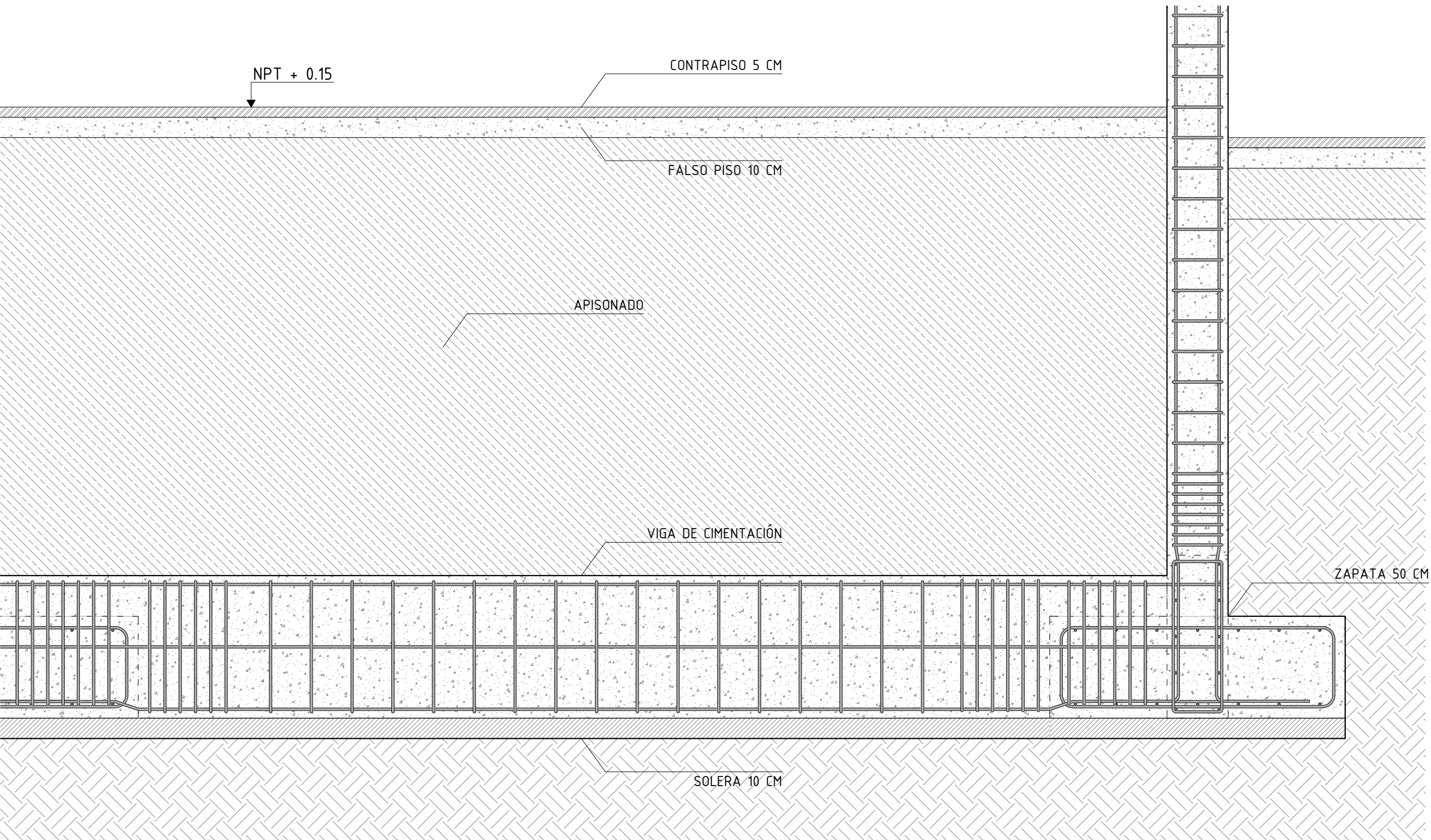


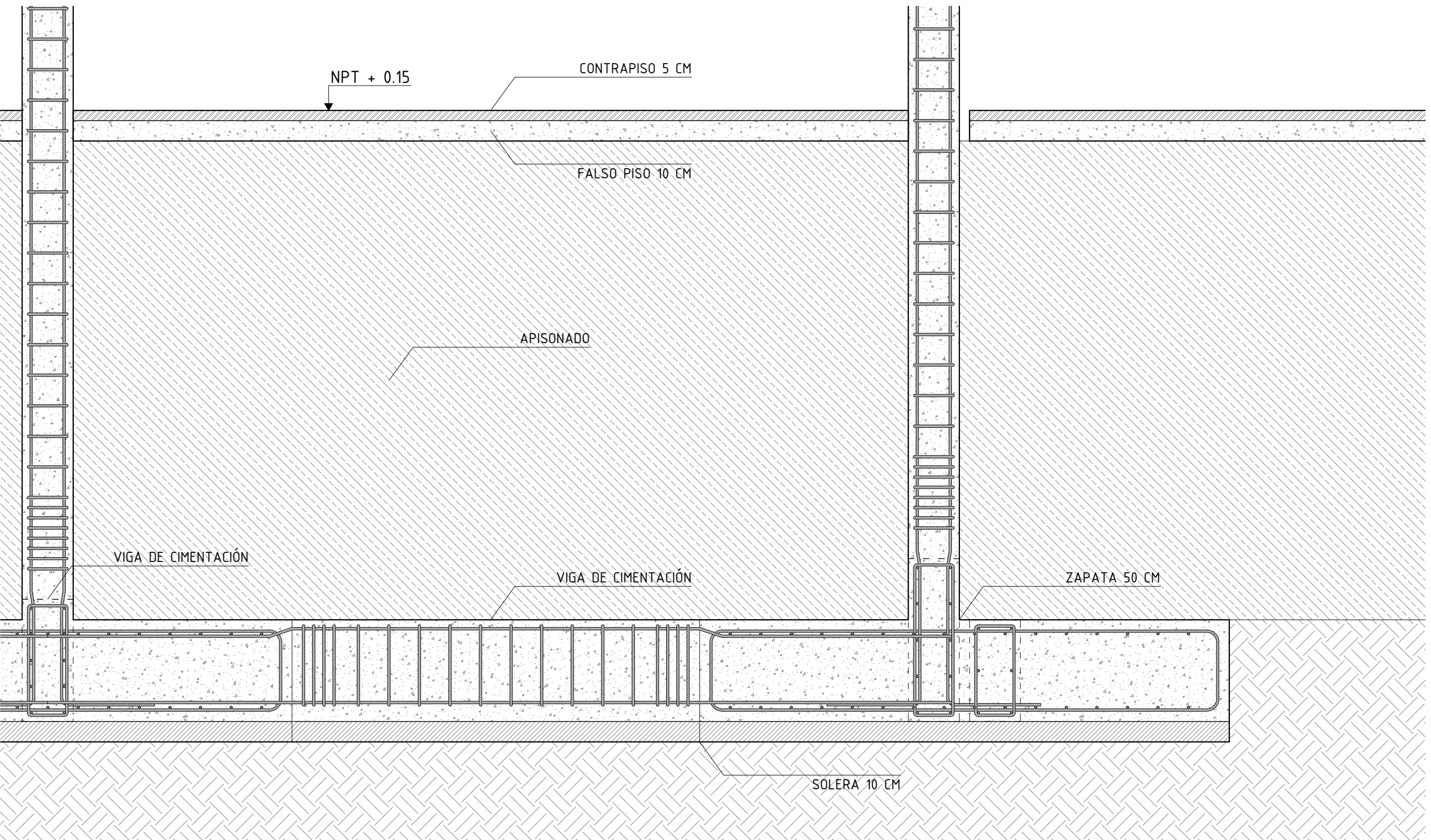
DETALLE 1
ESC:1/20



DETALLE 3
ESC:1/20



DETALLE 2
ESC:1/20



DETALLE 4
ESC:1/20

BLOQUE A-03

Predimensionamiento de Zapatas		Ln/9 = Peralte	
f'c=	280.00 Kg/cm2	Eje Principal =	7 m
f'y=	4200 Kg/cm2	Eje Sec =	4.35 m
Ø mayor de As= Varilla Ø	1/2 "	b Viga = b Colun	0.25 m
db=	1.27 cm	h Viga P =	0.78
1ª condición	≥ 20 cm	b Viga P =	0.25
d zapata = h	0.08*db*f'y/√f'c	h Vigas S =	0.48
Ld =	25.5 cm	b Viga S =	0.25
Ld Asumido =	30 cm	Vigas de conexión = Vigas Principales y Secundarias	
Ld =	40 cm		
h =	50 cm		
Área Tributaria		Área Zapata P/(σ-(γ*h))	
P(servicio) =	16.03 m2	Área Zapata =	3.25 m2
C.Muerta =	1000.00 kg/m2	Lado Zapata =	1.80 m
C.Viva =	750 kg/m2	Asumir Zapata =	1.85 m
Niveles =	250 kg/m2	Área Zapata =	3.42 m2
P(servicio) =	2		
P(servicio) =	32 060.00 Kg		
P(servicio) =	32.06 Tn		
σ =	1.5 Kg/cm2	Siendo	Pt= CM + 50% CV
σ =	15.00 Tn/m2	Pt =	875 kg/m2
γ =	1800.00 Kg/m3	Pu =	(1.4 Pt + 1.7 CV)*AT*N°
γ =	1.80 Tn/m3	Pu =	52 899.00 kg/m2
h =	2.85 m	Pu =	52.90 Tn/m2
		Wu =	Pu / Área de Zapata
		Wu = σu =	15.46 Tn/m2
Condición de diseño por punzonamiento			
h Zapata =	0.5 m	0.3 - 0.7	
Recubrimiento=	0.075 m	Columna	cm
d =	0.425 m	a =	0.25
f'c=	280	b =	0.5
bo = 2 (a + d)* 2 (b + d)		Vc =	1.06 √f'c * bo * d
bo =	3.2 m2	Vc =	241 225.82 Kg
Ao = (a+d)*(b+d)		Vc =	241.23 Tn
Ao =	0.62 m2		
Resistencia del Concreto Ø Vc =		0.85 x Vc =	205.04 Tn
Vu =	σu (A zap - Ao)	Vu < 0.85*Vc	OK CUMPLE
Vu =	43.25 Tn	43.25	< 205.04

Z-1	1.47	2.68	1.60	1.75	2.80	50	✓			
Z-2	1.98	3.35	1.80	1.95	3.51	50	✓			
Z-3	2.36	4.33	1.85	2.35	4.35	50	✓			
Z-4	2.72	4.97	2.25	2.25	5.06	50	✓			
Z-5	3.22	5.63	2.35	2.40	5.64	50	✓			
Z-6	2.36	2.29	1.85	2.35	4.35	50	✓			
Z-7	1.25	2.29	1.65	1.45	2.39	50	✓			
Z-8	3.25	4.72	2.05	2.30	4.72	50	✓			
Z-9	3.25	4.72	2.05	2.30	4.72	50	✓			
Z-10	4.26	6.98	1.95	3.60	7.02	50	✓	✓		
Z-11	2.30	2.84	1.80	2.05	3.69	50	✓	✓		
Z-12	5.50	8.62	2.40	3.60	8.64	50	✓	✓		
Z-13	5.07	6.98	2.60	3.50	9.10	50	✓	✓	✓	
Z-14	2.66	4.01	1.90	2.15	4.09	50	✓			
Z-15	2.87	4.26	1.80	2.05	3.69	50	✓			
Z-16	4.69	7.75	2.20	3.95	8.69	50	✓		✓	

