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JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

MINISTRY OF PUBLIC WORKS
THE REPUBLIC OF CHILE

THE REHABILITATION AND CONSERVATION PROGRAM ON THE BRIDGES IN THE REPUBLIC OF CHILE (PHASE 2)

FINAL REPORT

STANDARD BRIDGE DESIGN DRAWINGS

(VOLUME 8/8)

JULY 1998

PACIFIC CONSULTANTS INTERNATIONAL

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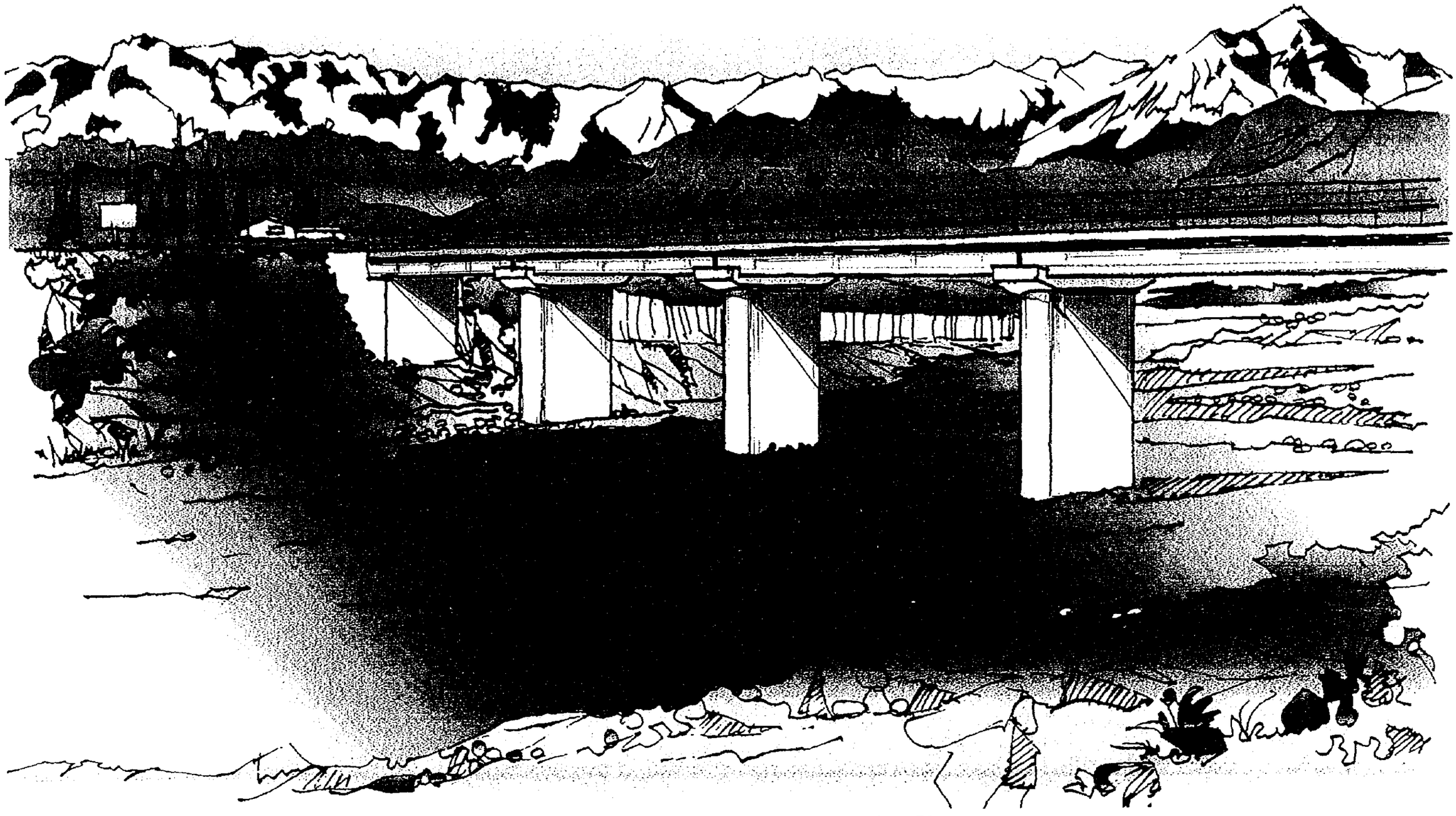


David Garcia Bridge in Region V

CONTENTS

STEEL SUPERSTRUCTURE

PRE-STRESSEDE CONCRETE SUPERSTRUCTURE

SUBSTRUCTURE

DETAIL

STEEL SUPERSTRUCTURE

Ⅰ. General

1. Outline

The "Drawings " may be used in the case that the budgeting for an implementation plan be required by the Ministry of Public Works in Chile, or as a kind of the data in preliminary design for engineers. So it must be recognized that they are not considered as a detailed design.

2. Specifications

The design is based on the following specifications.

1) "Standard Specifications for Highway Bridges" adopted 1992 and published by the American Association of State Highway and Transportation Officials 444 North Capitol Street, N. W. ,Suite 249 Washington, D.C. 20001.

2) " Specifications for Highway Bridges " adopted 1994 and published by Japan Road Association.

3. Contents

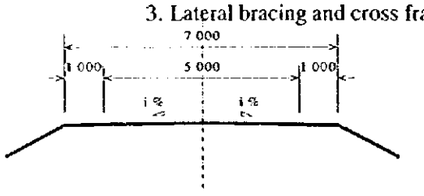
This set of the part for the steel superstructure constitutes of the following chapters.

Ⅰ. General
Ⅱ. Design Conditions
Ⅲ. Table of Design Variables
Ⅳ. Drawings
Ⅴ. Calculation report (Input and Generalization table)
Ⅵ. Material List
Ⅶ. Span-steel weight Diagram

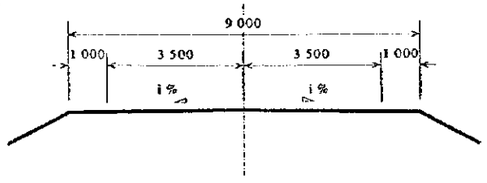
4. Composition of the Drawings

Each set of drawings for a steel superstructure consists of ;

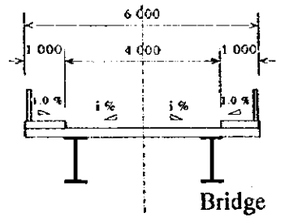
1. Concrete deck slab and general cross-section
2. Main girder
3. Lateral bracing and cross frames



Embankment

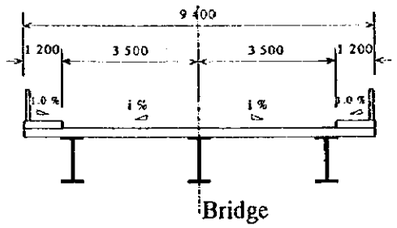


Embankment



Bridge

For 1 Lane



Bridge

For 2 Lanes

5. Instruction

1) The standard bridges dealt here are straight and right-angled only, hence some modifications and consideration should be added to the standard design, when applied to skewed or curved bridges.
2) All dimensions on the drawings are in "mm" unless otherwise stated.
3) The standard bridges are intended to be used for rural bridges.
4) The number of lanes are available for one or two, and the width for these lane numbers are shown at below-left.
5) Cross-fall on the road-way is 1.5 % and on the side-walk is 1.0 %.
6) Curb height and width are 250 mm and 200 mm respectively.
7) Railings are 1100 mm high.
8) The minimum thickness of pavement is 50 mm at both sides of the road-way, and it is thickest at the center according to the cross-fall.
9) All the drawings of the standard bridges are made by use of CADD System program separately worked out for the project.
10) Combinations of span lengths and number of lanes are shown below.

Span Length (m)	Steel			
	1 Lane		2 Lane	
	Roll-H	Built-I	Roll-H	Built-I
14	●	—	●	—
16	●	—	●	—
18	●	—	●	—
20	●	—	●	—
22	●	—	●	—
24	●	—	●	—
26	—	●		●
28	—	●		●
30	—	●		●
32	—	●		●
34	—	●		●
36	—	●		●

11) Structures of which applicable span length are not in the drawings can be designed using the CADD system program.

Ⅱ. Design Condition

1. Design Method : Allowable Stress
2. Loading
   1) Dead Loads

Plane Concrete	: $W_c = 2.30\ t/m^3$
Reinforced Concrete	: $\gamma_C = 2.50\ t/m^3$
Steel	: $\gamma = 7.85\ t/m^3$
Pavement	: $\gamma = 2.30\ t/m^3$
Soil	: $\gamma_S = 1.80\ t/m^3$

   2) Horizontal Force of Railing : $W_B = 0.050$ t/m, $W_L = 0.020$ t/m, h = 1.100 m

   3) Sidewalk Live Load

   Lc ≤ 7.6 m → $W_P = 0.415\ t/m^2$ Lc ; Span Length

   7.6 m < Lc ≤ 30.5m → $W_P = 0.293\ t/m^2$

   30.5 m < Lc

$$Wp = \left(147 + \frac{4464}{Lc}\right) \times \left(\frac{16.76 - (Sw - 0.25)}{15.24}\right) \times \frac{1}{1000}$$

   ※ In case of $W_p > 0.293 \rightarrow W_P = 0.293\ t/m^2$ Sw ; Sidewalk width

   4) Live Load : HS20-44(100%)

   5) Wind : $W_V = 0.244\ t/m^2$

   6) Earthquake : A = 0.15 , Category B

3. Materials

Slab Concrete	: H-30, $f_c' = 250\ kg/cm^2$, $E_c = 2.50\times10^5\ kg/cm^2$
Reinforcing Bar	: A63-42H, $f_y = 4200\ kg/cm^2$, $f_{sa} = 1690\ kg/cm^2$, $E_s = 2.10\times10^6\ kg/cm^2$
Concrete Cover	: 3.0 cm (Lateral Beam 2.5cm)
Anchor Bar	: A44-28H , $f_y = 2800\ kg/cm^2$, $f_s = 1400\ kg/cm^2$
Steel	: A52-34ES, $f_y = 3400\ kg/cm^2$, $f_s = 1870\ kg/cm^2$
Bolt	: ASTM A490, $f_{sa} = 1400\ kg/cm^2$, ϕ=22mm

4. Design Concept

   1) Beam Type

   Two types of steel beams are employed, rolled H and built-up plate girder. Rolled H beam is used for shorter span, which is of a simple structure and easily constructed. Built-up plate girder is for rather longer than the other. Both types of beams are used as steel girders for composite girders with concrete slab.

   2) Edge distances from end of beam to center of bearing(ED) vary according to the span length as follows.

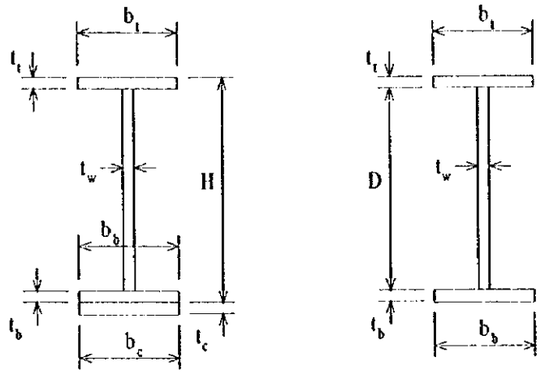
Span :Lc(m)	Lc<20	20<Lc<30	30≦Lc
ED (mm)	250	300	350

   3) Distance from center to center of beams is limited to less than 3m, considering the girder deflection by the live and impact load not to be excessive, and then selected appropriate girder depth in order to maintain an economic design.

   4) End cross frame is designed by reinforced concrete according to conventional Chilean designing method, and through the structure anti-seismic bars are connected with sub-structure.

   5) Steel elements are connected at site by use of high strength friction grip bolts, notwithstanding the fact that welding has been used for a long time in Chile for site connection, because if this technique is properly performed, the it is easier but firmer.

Ⅲ. Table of Design Variables



1. Lv ; Girder Length (m)
2. Lc ; Span Length (m)
3. H/D ; Girder Height (m), Girder Depth (m)
4. t_w ; Web Thickness (mm)
5. Ls ; Length of Section (m)
6. b_t ; Width of Top Flange (mm)
7. t_t ; Thickness of Top Flange (mm)
8. b_b ; Width of Bottom Flange (mm)
9. t_b ; Thickness of Bottom Flange (mm)
10. b_c ; Width of Cover Plate for Bottom Flange (mm)
11. t_c ; Thickness of Cover Plate for Bottom Flange (mm)
12. R.Bar ; Diameter and Pitch of Main Reinforcement Bar for Concrete Deck Slab (mm) [Upper row]
    Diameter and Pitch of Distribution Reinforcement Bar for Deck Slab (mm) [Lower row]
13. Main Gird. ; Number of Main Girders
14. Main Gird. ; Spacing of Main Girders (m)
15. H. Stiff. ; Location of Horizontal Stiffeners from Top Flange (mm)
    Section for Horizontal Stiffener , With × Thickness (mm)
16. Splice ; Location of Field Splice from Bearing (m)
    $n_W \times m_W$; Number of Rows of Bolts for Web Plate (Longitudinal × Transverse)
17. $n_U \times m_U$; Number of Rows of Bolts (Longitudinal × Transverse) for Top Flange [Upper row]
    $n_L \times m_L$; Number of Rows of Bolts (Longitudinal × Transverse) for Top Flange [Lower row]
18. x(stud) ; Range of Stud Densely Attached (mm)
19. Pe ; Pitch of Stud Densely Attached (mm)
20. Pc ; Pitch of Stud Coarsely Attached (mm)
21. S. Bracing ; Steel Shape Depth × Width × Thickness (mm)
    (Channel is used for rolled H, angle for plate girder)
22. A.S.B. ; Diameter and Number of Anti-seismic Bars (mm)
23. Area ; Deck Surface Area of Bridge (m^2)
24. Vc ; Concrete Volume (m^3)
25. S. Weight ; Steel Weight Employed for Steel Superstructure (kg)
26. W_R ; Weight of Reinforcement Bar (kg)
27. W/A ; Unit Weight of Steel used for Steel Structure (kg/m^2) [Upper row]
    W_R/Vc ; Weight of Reinforcement Bar for Unit concrete volume (kg/m^3) [Lower row]
28. Rd(t) ; Dead Load Reaction Force per Each Girder at One Bearing, (ton) [Upper row]
    RL(t) ; Live Load Reaction Force per Each Girder at One Bearing, (ton) [Lower row]

(1-Lane)

INDEX	L_V(m)	L_C(m)	H / D	t_w	Ls	b_t	t_t	b_b	t_b	b_c	t_c	R. Bar	Main Gird.		H. Stiff.	Splice $n_W \times m_W$	$n_U \times m_U$ $n_L \times m_L$	x(stud)	Pc	Pc	S. Bracing	A.S.B.	Area	Vc	S. Weight	W_R	W/A W_R/Vc	Rd(t) RL(t)
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1-SRH-L14_n3	14.500	14.000	0.800	14	14.800	300	16	300	16			ϕ16@150	3	2.400				4.000	150	300	C300×100×10	ϕ22n2	87.00		7904.71		90.86	13.521
												ϕ12@125												30.91		6181.61	199.99	18.956
1-SRH-L16_n3	16.500	16.000	0.800	14	10.600	300	16	300	16	250	10	ϕ16@150	3	2.400				4.700	150	300	C300×100×10	ϕ22n2	99.00		9487.37		95.83	15.421
					3.100	300	16	300	16			ϕ12@125												34.72		6938.31	199.84	19.396
1-SRH-L18_n3	18.500	18.000	0.800	14	12.000	300	16	300	16	250	13	ϕ16@150	3	2.400				5.100	150	300	C300×100×10	ϕ22n2	111.00		10740.35		96.76	17.233
					3.400	300	16	300	16			ϕ12@125												38.58		7695.02	199.46	19.707
1-SRH-L20_n3	20.600	20.000	0.900	16	13.200	350	18	350	18	300	10	ϕ16@150	3	2.400				7.800	200	400	C300×100×10	ϕ22n2	123.60		15116.53		122.30	19.670
					3.800	350	18	350	18			ϕ12@125												42.94		8524.36	198.52	19.929
1-SRH-L22_n3	22.600	22.000	0.900	16	14.600	350	18	350	18	300	14	ϕ16@150	3	2.400				8.600	200	400	C300×100×10	ϕ22n2	135.60		16872.61		124.43	21.585
					4.100	350	18	350	18			ϕ12@125												46.81		9324.24	199.19	20.089
1-SRH-L24_n3	24.600	24.000	1.000	18	15.800	350	20	350	20	300	12	ϕ16@150	3	2.400				8.600	200	400	C300×100×10	ϕ22n2	147.60		20862.36		141.34	23.930
					4.500	350	20	350	20			ϕ12@125												50.89		10094.09	198.35	20.206
1-SBI-L26_n2	26.600	26.000		10	17.200	360	12	440	36			ϕ16@125	2	3.000		5.850	2×2	8.000	200	400	L-80×80×8	ϕ25n4	159.60		14865.92		93.14	37.404
			1.300		4.800	360	10	360	16			ϕ16@175					6×2							55.87		12841.33	229.84	23.715
1-SBI-L28_n2	28.600	28.000		10	18.400	360	14	460	30			ϕ16@125	2	3.000		6.300	2×2	5.800	200	400	L-80×80×8	ϕ25n4	171.60		15955.00		92.98	40.183
			1.400		5.200	360	10	360	18			ϕ16@175				2×14	6×2							59.98		13772.99	229.63	23.784
1-SBI-L30_n2	30.700	30.000		10	19.800	360	15	500	29			ϕ16@125	2	3.000	300	6.750	3×2	6.400	200	400	L-80×80×8	ϕ25n4	184.20		18799.32		102.06	43.379
			1.500		5.500	360	10	360	19			ϕ16@175			120×16	2×15	7×2							64.31		14751.41	229.38	23.831
1-SBI-L32_n2	32.700	32.000		10	17.400	360	17	520	30			ϕ16@125	2	3.000	320	8.575	3×2	7.000	200	400	L-80×80×8	ϕ25n4	196.20		20816.80		106.10	46.570
			1.600		3.800	360	10	440	23						120×16	2×17												
					3.900	360	10	360	10			ϕ16@175					7×2							68.45		15676.01	229.01	23.862
1-SBI-L34_n2	34.700	34.000		10	18.400	360	19	560	29			ϕ16@125	2	3.000	340	9.163	3×2	7.000	200	400	L-80×80×8	ϕ28n4	208.20		23203.12		111.45	49.742
			1.700		4.100	360	10	460	23						120×16	2×18												
					4.100	360	10	360	10			ϕ16@175					7×2							72.56		16633.84	229.24	23.880
1-SBI-L36_n2	36.700	36.000		10	19.400	380	20	580	29			ϕ16@125	2	3.000	360	9.750	4×2	4.200	200	400	L-80×80×8	ϕ28n4	220.20		25507.09		115.84	52.948
			1.800		4.300	360	10	480	24						120×16	2×18												
					4.400	360	10	360	11			ϕ16@175					9×2							76.71		17559.16	228.90	23.888

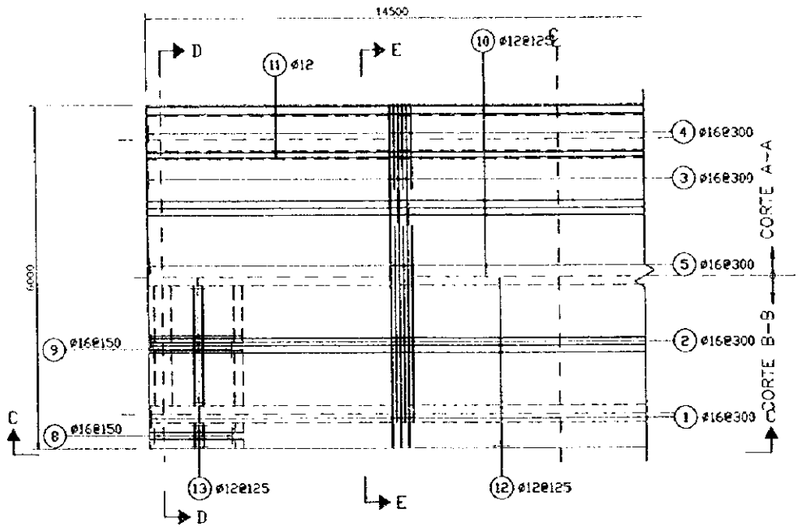
(2-Lane)

INDEX	L_V(m)	L_C(m)	H / D	t_w	Ls	b_t	t_t	b_b	t_b	b_c	t_c	R. Bar	Main Gird.		H. Stiff.	Splice $n_W \times m_W$	$n_U \times m_U$ $n_L \times m_L$	x(stud)	Pe	Pc	S. Bracing	A.S.B.	Area	Vc	S. Weight	W_R	W/A W_R/Vc	Rd(t) RL(t)
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
2-SRH-L14-n4	14.500	14.000	0.800	14	14.800	300	16	300	16			ϕ16@150	4	2.400				5.500	140	300	C300×100×10	ϕ22n2	131.60		10664.04		81.03	15.243
												ϕ12@125												47.36		9001.63	190.07	24.033
2-SRH-L16-n4	16.500	16.000	0.800	14	10.600	300	16	300	16	250	10	ϕ16@150	4	2.400				6.500	140	300	C300×100×10	ϕ22n2	150.40		12774.26		84.94	17.364
					3.100	300	16	300	16			ϕ12@125												53.21		10098.13	189.78	24.592
2-SRH-L18-n4	18.500	18.000	0.800	14	12.000	300	16	300	16	250	18	ϕ16@150	4	2.400				7.350	130	300	C300×100×10	ϕ22n2	169.20		14915.87		88.16	19.489
					3.400	300	16	300	16			ϕ12@125												59.12		11194.62	189.35	24.985
2-SRH-L20-n4	20.600	20.000	0.900	16	13.200	350	18	350	18	300	10	ϕ16@150	4	2.400				7.450	150	300	C300×100×10	ϕ22n2	188.00		20343.79		108.21	22.082
					3.800	350	18	350	18			ϕ12@125												65.78		12398.03	188.48	25.267
2-SRH-L22-n4	22.600	22.000	0.900	16	14.600	350	18	350	18	300	19	ϕ16@150	4	2.400				8.450	150	300	C300×100×10	ϕ22n2	206.80		23372.89		113.02	24.353
					4.100	350	18	350	18			ϕ12@125												71.70		13556.74	189.08	25.471
2-SRH-L24-n4	24.600	24.000	1.000	18	15.800	350	20	350	20	300	17	ϕ16@150	4	2.400				8.250	150	300	C300×100×10	ϕ22n2	225.60		28750.83		127.44	26.945
					4.500	350	20	350	20			ϕ12@125												77.95		14672.94	188.24	25.618
2-SBI-L26-n3	26.600	26.000		10	17.200	400	20	440	36			ϕ16@125	3	3.200		5.850	3×2	8.500	160	300	L-80×80×8	ϕ25n4	244.40		25109.78		102.74	38.883
			1.300		4.800	360	10	380	20			ϕ16@175				2×12	7×2							87.10		19245.02	220.95	34.298
2-SBI-L28-n3	28.600	28.000		10	18.400	400	20	460	36			ϕ16@125	3	3.200		6.300	4×2	8.000	170	300	L-80×80×8	ϕ25n4	263.20		27884.87		105.95	42.003
			1.400		5.200	360	10	400	20			ϕ16@175				2×13	7×2							93.55		20639.53	220.63	34.398
2-SBI-L30-n3	30.700	30.000		10	19.800	400	20	500	35			ϕ16@125	3	3.200		6.750	4×2	7.650	180	300	L-80×80×8	ϕ25n4	282.00		31044.12		110.09	45.316
			1.500		5.500	360	10	400	21			ϕ16@175				2×13	7×2							100.32		22098.84	220.28	34.467
2-SBI-L32-n3	32.700	32.000		10	17.400	400	20	520	35			ϕ16@125	3	3.200	320	8.575	4×2	7.450	180	300	L-80×80×8	ϕ25n4	300.80		34936.01		116.14	48.490
			1.600		3.800	360	10	480	25						120×16	2×17												
					3.900	360	10	360	13			ϕ16@175					8×2							106.81		23478.19	219.81	34.511
2-SBI-L34-n3	34.700	34.000		10	18.400	400	20	560	34			ϕ16@125	3	3.200	340	9.163	4×2	7.250	190	300	L-80×80×8	ϕ25n4	319.60		38272.60		119.75	51.710
			1.700		4.100	360	10	500	26						120×16	2×17												
					4.100	360	10	360	13			ϕ16@175					8×2							113.27		24872.60	219.59	34.538
2-SBI-L36-n3	36.700	36.000		10	19.400	400	21	600	33			ϕ16@125	3	3.200	360	9.750	4×2	6.000	200	300	L-80×80×8	ϕ25n4	338.40		41836.87		123.63	55.005
			1.800		4.300	360	11	520	26						120×16	2×18												
					4.400	360	10	360	14			ϕ16@175					6×3							119.70		26251.84	219.31	34.549

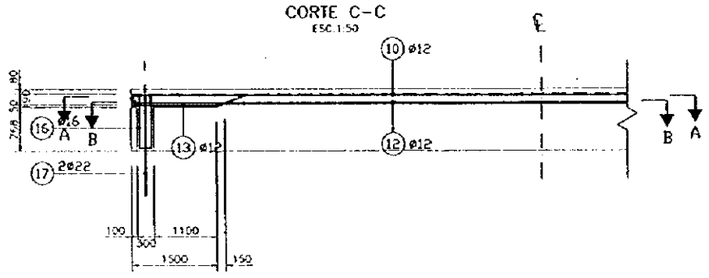
Ⅳ. Drawings

1. 1-SRH-L14-n3_1 (slab and cross-section)
2. 1-SRH-L14-n3_2 (Main girder)
3. 1-SRH-L14-n3_3 (Lateral bracing and cross frames)
4. 1-SRH-L16-n3_1 (slab and cross-section)
5. 1-SRH-L16-n3_2 (Main girder)
6. 1-SRH-L16-n3_3 (Lateral bracing and cross frames)
7. 1-SRH-L18-n3_1 (slab and cross-section)
8. 1-SRH-L18-n3_2 (Main girder)
9. 1-SRH-L18-n3_3 (Lateral bracing and cross frames)
10. 1-SRH-L20-n3_1 (slab and cross-section)
11. 1-SRH-L20-n3_2 (Main girder)
12. 1-SRH-L20-n3_3 (Lateral bracing and cross frames)
13. 1-SRH-L22-n3_1 (slab and cross-section)
14. 1-SRH-L22-n3_2 (Main girder)
15. 1-SRH-L22-n3_3 (Lateral bracing and cross frames)
16. 1-SRH-L24-n3_1 (slab and cross-section)
17. 1-SRH-L24-n3_2 (Main girder)
18. 1-SRH-L24-n3_3 (Lateral bracing and cross frames)
19. 1-SBI-L26-n2_1 (slab and cross-section)
20. 1-SBI-L26-n2_2 (Main girder)
21. 1-SBI-L26-n2_3 (Lateral bracing and cross frames)
22. 1-SBI-L28-n2_1 (slab and cross-section)
23. 1-SBI-L28-n2_2 (Main girder)
24. 1-SBI-L28-n2_3 (Lateral bracing and cross frames)
25. 1-SBI-L30-n2_1 (slab and cross-section)
26. 1-SBI-L30-n2_2 (Main girder)
27. 1-SBI-L30-n2_3 (Lateral bracing and cross frames)
28. 1-SBI-L32-n2_1 (slab and cross-section)
29. 1-SBI-L32-n2_2 (Main girder)
30. 1-SBI-L32-n2_3 (Lateral bracing and cross frames)
31. 1-SBI-L34-n2_1 (slab and cross-section)
32. 1-SBI-L34-n2_2 (Main girder)
33. 1-SBI-L34-n2_3 (Lateral bracing and cross frames)
34. 1-SBI-L36-n2_1 (slab and cross-section)
35. 1-SBI-L36-n2_2 (Main girder)
36. 1-SBI-L36-n2_3 (Lateral bracing and cross frames)
37. 2-SRH-L14-n4_1 (slab and cross-section)
38. 2-SRH-L14-n4_2 (Main girder)
39. 2-SRH-L14-n4_3 (Lateral bracing and cross frames)
40. 2-SRH-L16-n4_1 (slab and cross-section)
41. 2-SRH-L16-n4_2 (Main girder)
42. 2-SRH-L16-n4_3 (Lateral bracing and cross frames)
43. 2-SRH-L18-n4_1 (slab and cross-section)
44. 2-SRH-L18-n4_2 (Main girder)
45. 2-SRH-L18-n4_3 (Lateral bracing and cross frames)
46. 2-SRH-L20-n4_1 (slab and cross-section)
47. 2-SRH-L20-n4_2 (Main girder)
48. 2-SRH-L20-n4_3 (Lateral bracing and cross frames)
49. 2-SRH-L22-n4_1 (slab and cross-section)
50. 2-SRH-L22-n4_2 (Main girder)
51. 2-SRH-L22-n4_3 (Lateral bracing and cross frames)
52. 2-SRH-L24-n4_1 (slab and cross-section)
53. 2-SRH-L24-n4_2 (Main girder)
54. 2-SRH-L24-n4_3 (Lateral bracing and cross frames)
55. 2-SBI-L26-n3_1 (slab and cross-section)
56. 2-SBI-L26-n3_2 (Main girder)
57. 2-SBI-L26-n3_3 (Lateral bracing and cross frames)
58. 2-SBI-L28-n3_1 (slab and cross-section)
59. 2-SBI-L28-n3_2 (Main girder)
60. 2-SBI-L28-n3_3 (Lateral bracing and cross frames)
61. 2-SBI-L30-n3_1 (slab and cross-section)
62. 2-SBI-L30-n3_2 (Main girder)
63. 2-SBI-L30-n3_3 (Lateral bracing and cross frames)
64. 2-SBI-L32-n3_1 (slab and cross-section)
65. 2-SBI-L32-n3_2 (Main girder)
66. 2-SBI-L32-n3_3 (Lateral bracing and cross frames)
67. 2-SBI-L34-n3_1 (slab and cross-section)
68. 2-SBI-L34-n3_2 (Main girder)
69. 2-SBI-L34-n3_3 (Lateral bracing and cross frames)
70. 2-SBI-L36-n3_1 (slab and cross-section)
71. 2-SBI-L36-n3_2 (Main girder)
72. 2-SBI-L36-n3_3 (Lateral bracing and cross frames)

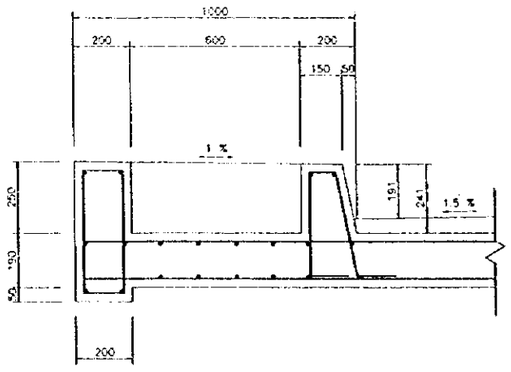
PLANTA DE LOSA
ESC 1:50



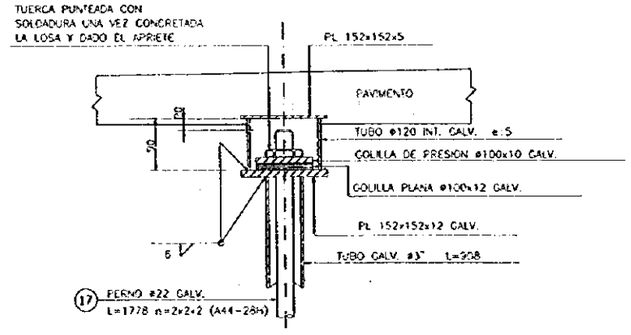
CORTE C-C
ESC 1:50



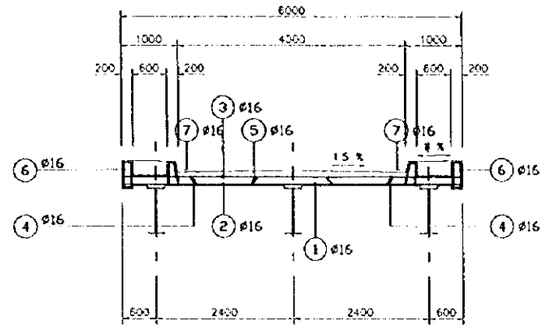
DETALLE DE PASILLO
ESC 1:10



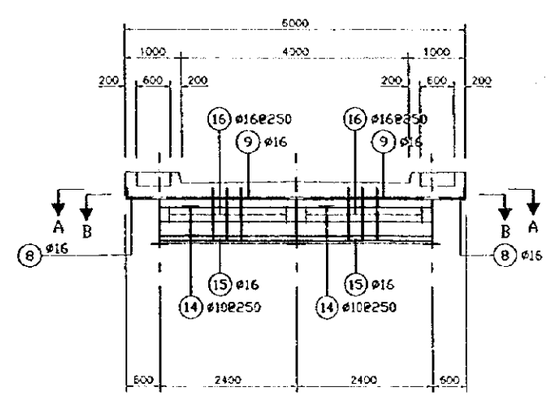
DETALLE BARRAS ANTISISMICAS
ESC 1:5



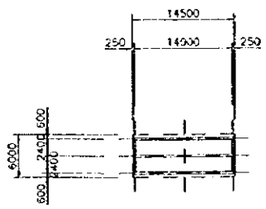
CORTE TRAVERSAL
CORTE E-E
ESC 1:50



TRAVESAÑOS EXTREMOS
CORTE D-D
ESC 1:50



PLANTA DE DISPOSICION



DIRECCION DE VIALIDAD
DEPARTAMENTO DE PUENTES

Puente:	1-SRH-L14_n3
Camino:	
Provincia:	Region:

Proyecto — Revisó

Vo Bo Ing. Jefe Depto. Puentes — Director de Vialidad

Dibujo:
Fecha: November 1997

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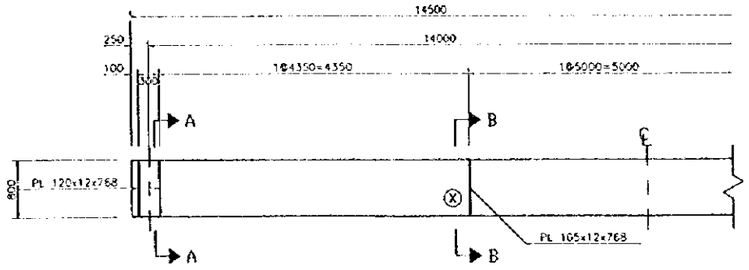
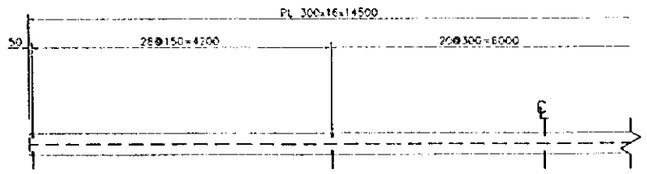
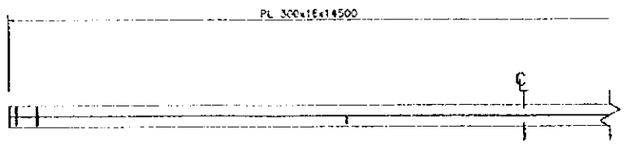
ELEVACION VIGA ACERO
ESC 1:40



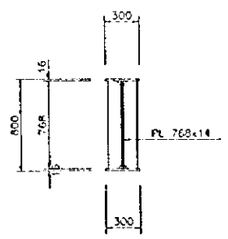
BRIDA SUPERIOR
ESC 1:40



BRIDA INFERIOR
ESC 1:40



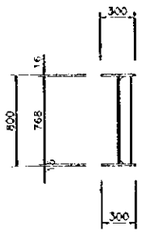
CORTE A--A
ESC 1:25



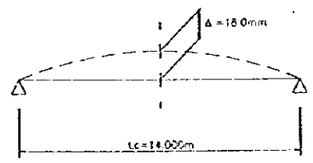
CONECTOR
ESC 1:25

STUD
Diametro 22 mm
Altura 150 mm

CORTE B-B
EN PUNTOS X
ESC 1:25



COMBADURA



DIRECCION DE VIALIDAD
DEPARTAMENTO DE PUENTES

Puente: 1-SRH-L14_n3
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Director de Vialidad

Dibujo
Fecha: November 1997

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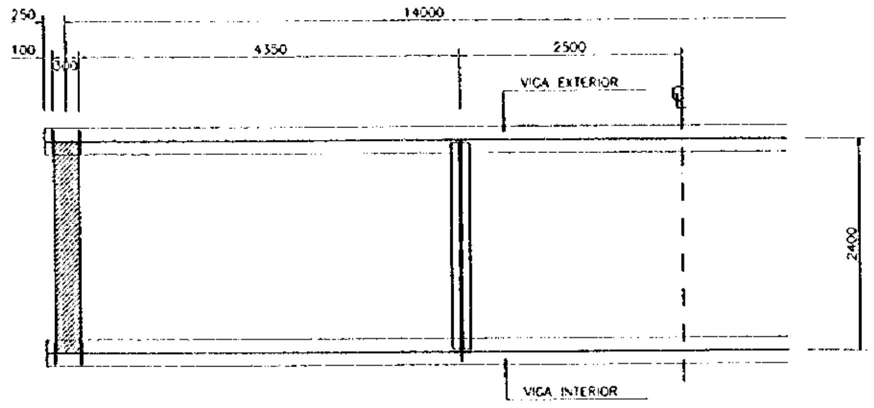
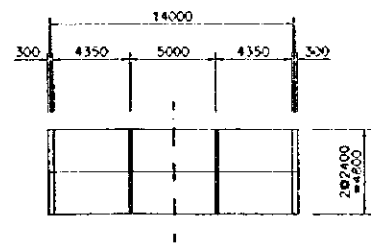
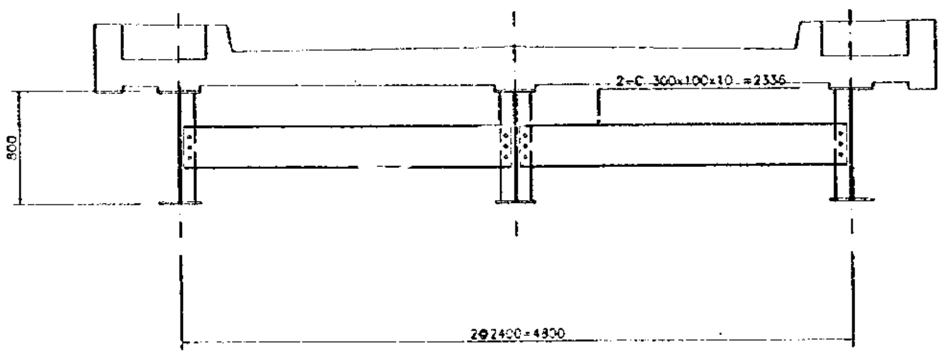
ARRIOSTRAMIENTO HORIZONTAL
ESC 1:40



PLANTA DE DISPOSICION



ARRIOSTRAMIENTO VERTICAL
EN PUNTOS X
ESC 1:25



DIRECCION DE VIALIDAD
DEPARTAMENTO DE PUENTES

Puente: 1-SRH-L14_n3	
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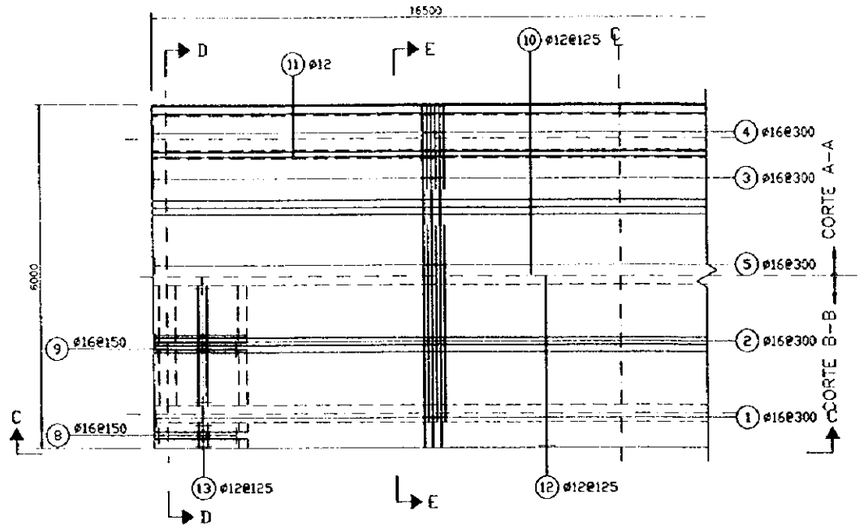
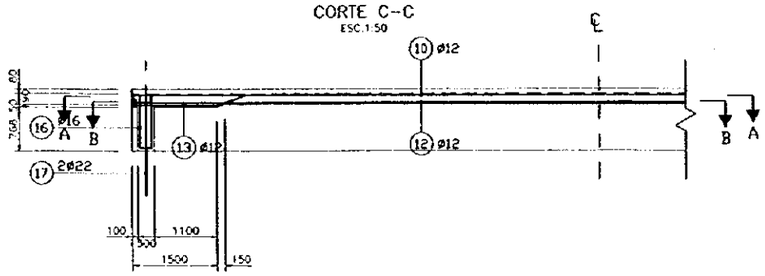
Proyecto	Reviso
Vo Bo Ing. Jefe Depto. Puentes	Director de Vialidad
Dibujo: Fecha: November 1997	

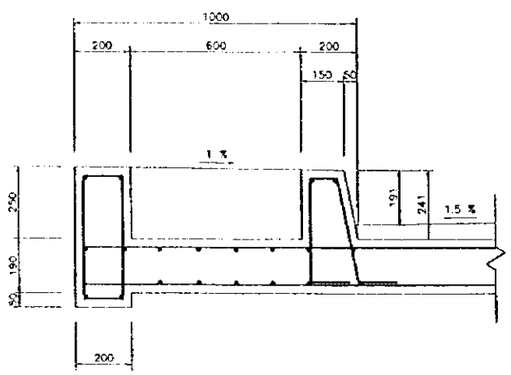
PLANTA DE LOSA
ESC. 1:50



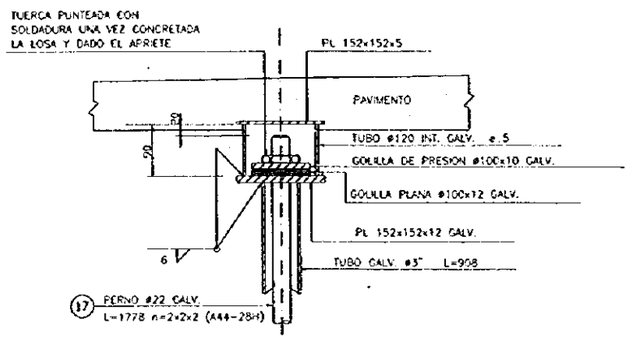
CORTE C-C
ESC. 1:50



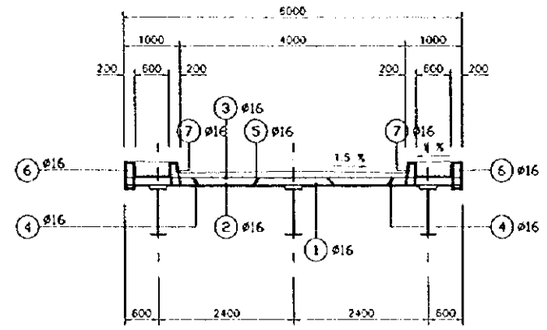
DETALLE DE PASILLO
ESC. 1:10



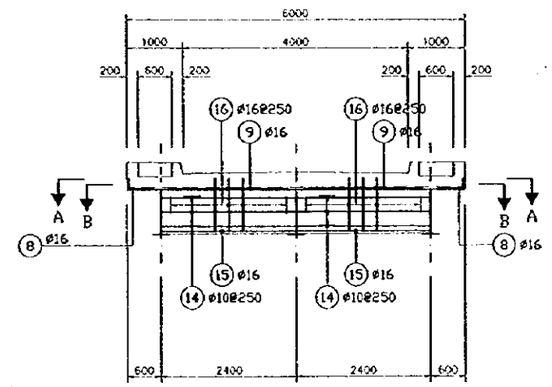
DETALLE BARRAS ANTISISMICAS
ESC 1:5



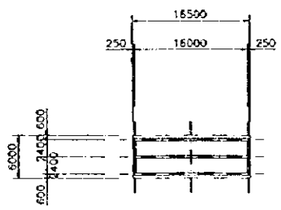
CORTE TRAVERSAL
CORTE E-E
ESC. 1:50



TRAVESAÑOS EXTREMOS
CORTE D-D
ESC. 1:50



PLANTA DE DISPOSICION



DIRECCION DE VIALIDAD
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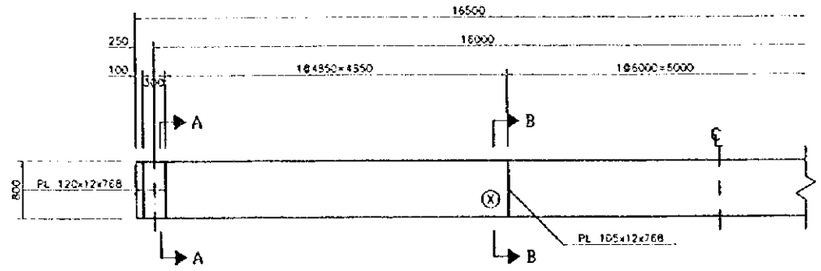
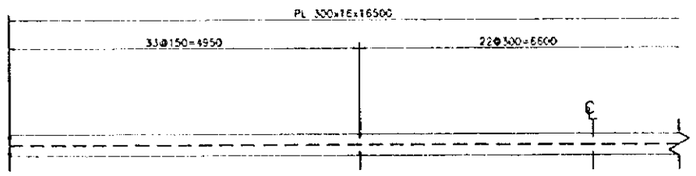
Dibujo
Fecha: November 1997

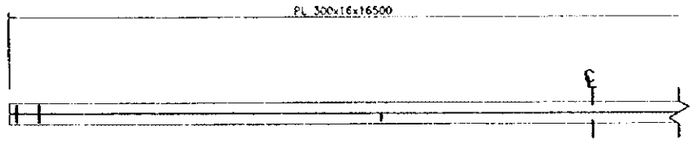
ELEVACION VIGA ACERO
ESC 1:40



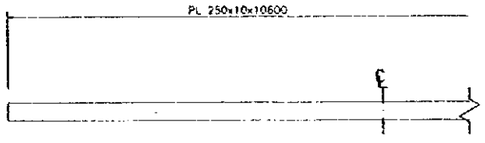
BRIDA SUPERIOR
ESC 1:40



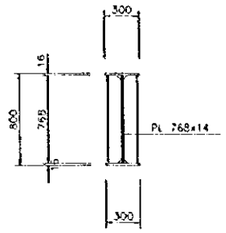
BRIDA INFERIOR
ESC 1:40



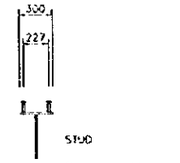
REFURZO BRIDA INTERIOR
ESC 1:40



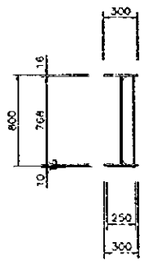
CORTE A-A
ESC 1:25



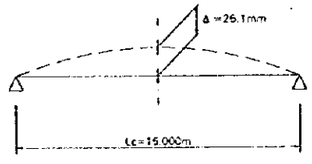
CONECTOR
ESC 1:25



CORTE B-B
EN PUNTOS X
ESC 1:25



COMBADURA



DIRECCION DE VIALIDAD
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Fecha: November 1997

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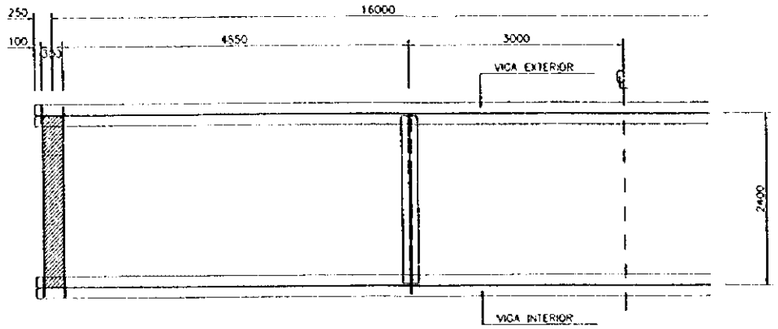
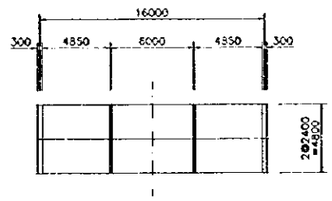
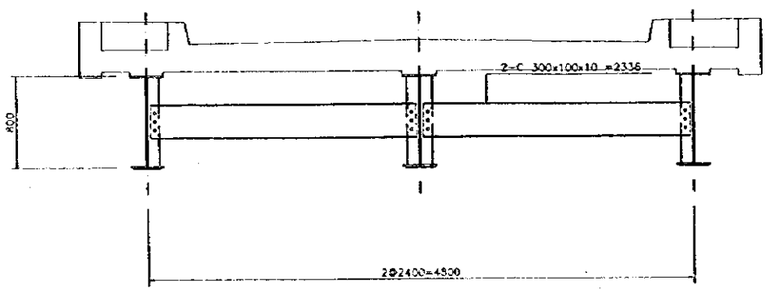
ARRIOSTRAMIENTO HORIZONTAL
ESC 1:40



PLANTA DE DISPOSICION



ARRIOSTRAMIENTO VERTICAL
EN PUNTOS X
ESC 1:25



DIRECCION DE VIALIDAD
DEPARTAMENTO DE PUENTES

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Fecha: November 1997

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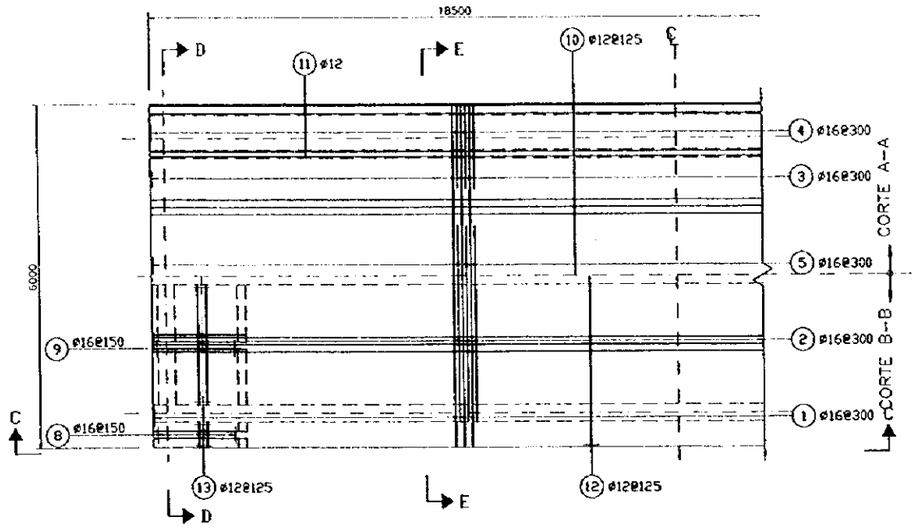
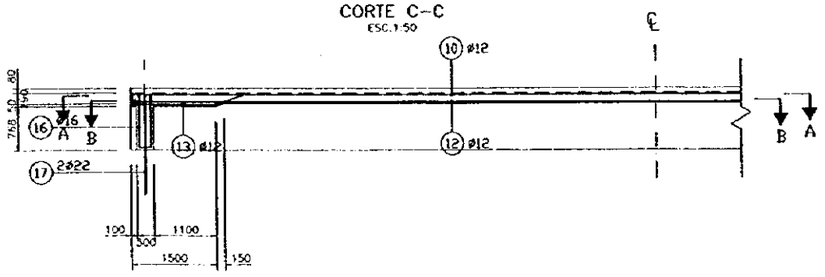
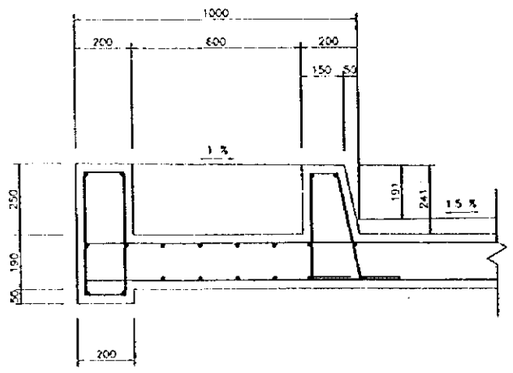
PLANTA DE LOSA
ESC.1:50



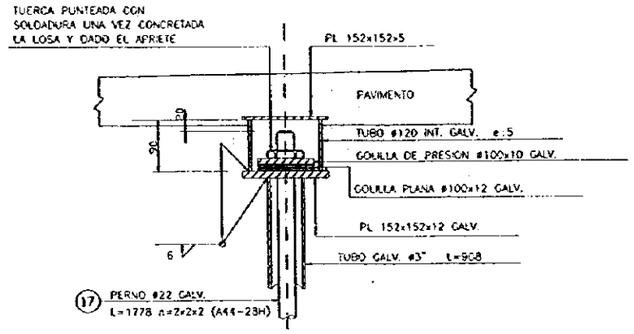
CORTE C-C
ESC.1:50



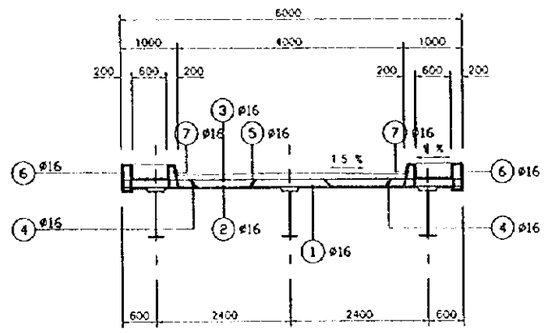
DETALLE DE PASILLO
ESC.1:10



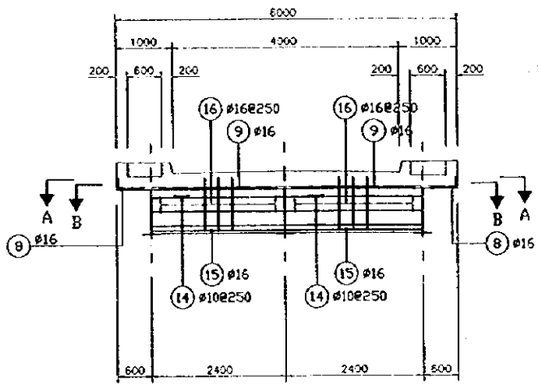
DETALLE BARRAS ANTISISMICAS
ESC.1:5



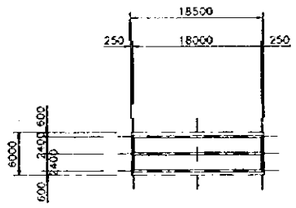
CORTE TRAVERSAL
CORTE E-E
ESC.1:50



TRAVESAÑOS EXTREMOS
CORTE D-D
ESC.1:50



PLANTA DE DISPOSICION



DIRECCION DE VIALIDAD
DEPARTAMENTO DE PUENTES

Puente: 1-SRH-L18_n3	
Camino:	
Provincia:	Region:

Proyecto

Revisó

Vo Bo Ing. Jefe Depto. Puentes

Director de Vialidad

Dibujo
Fecha: November 1997

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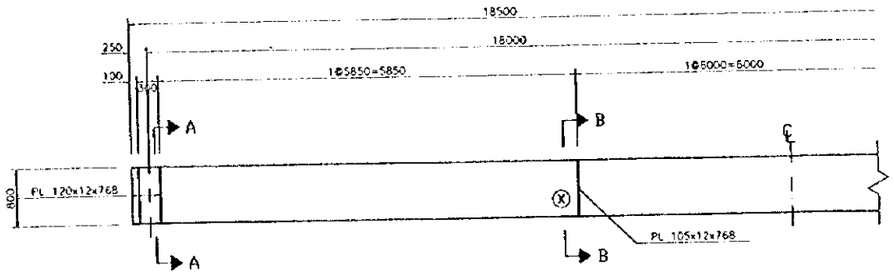
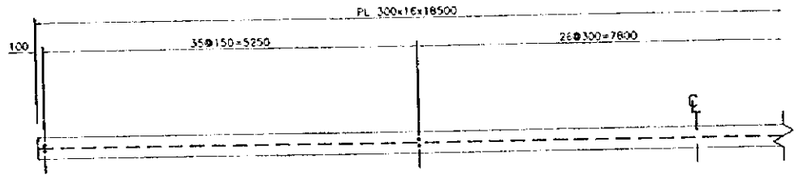
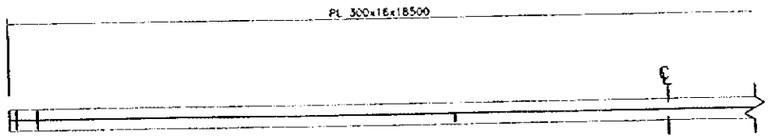
ELEVACION VIGA ACERO
ESC 1:40



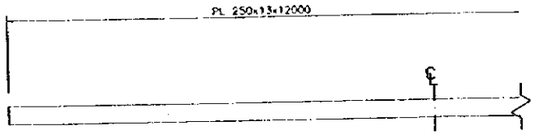
BRIDA SUPERIOR
ESC 1:40



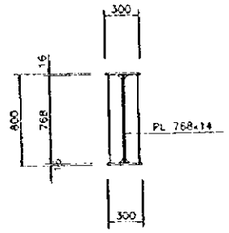
BRIDA INFERIOR
ESC 1:40



REFURZO BRIDA INTERIOR
ESC 1:40



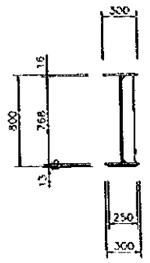
CORTE A-A
ESC 1:25



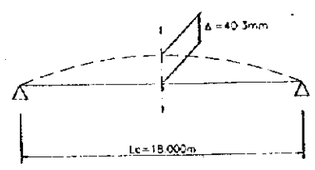
CONECTOR
ESC 1:25

STUD
Diametro 22 mm
Altura 100 mm

CORTE B-B
EN PUNTOS X
ESC 1:25



COMBADURA



DIRECCION DE VIALIDAD
DEPARTAMENTO DE PUENTES

Puente: 1-SRH-L18_n3

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Dibujó
Fecha: November 1997

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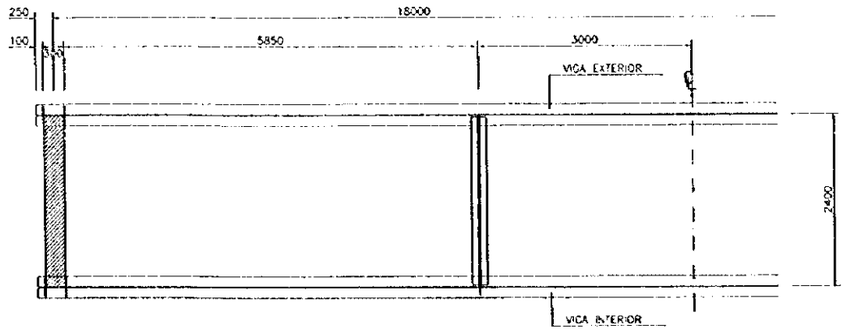
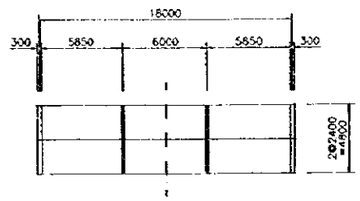
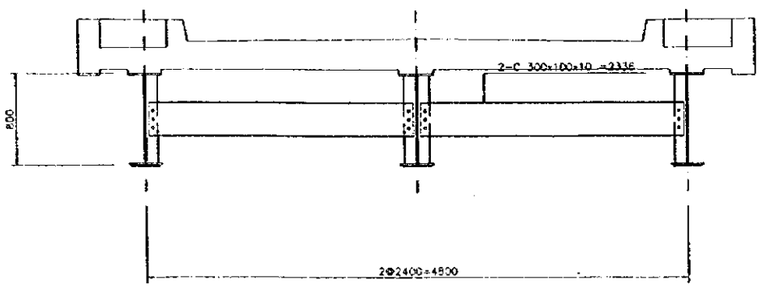
ARRIOSTRAMIENTO HORIZONTAL
ESC.1:50



PLANTA DE DISPOSICION



ARRIOSTRAMIENTO VERTICAL
EN PUNTOS X
ESC.1:25



DIRECCION DE VIALIDAD
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Puente: 1-SRH-L18_n3

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Fecha Noviembre 1997

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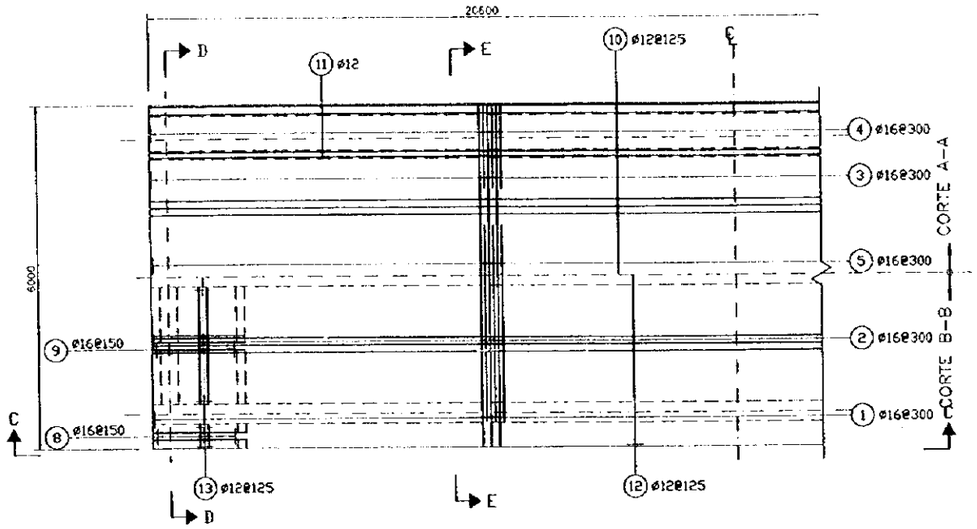
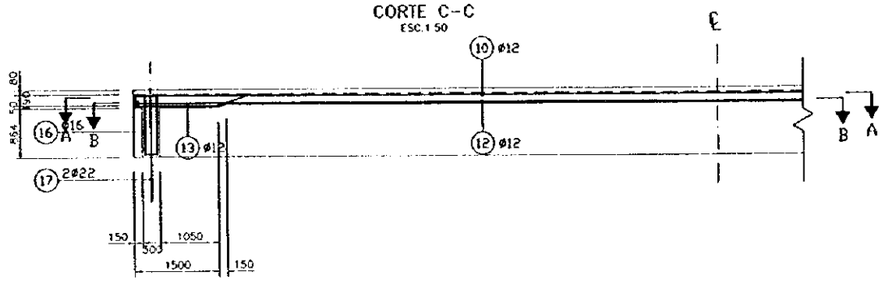
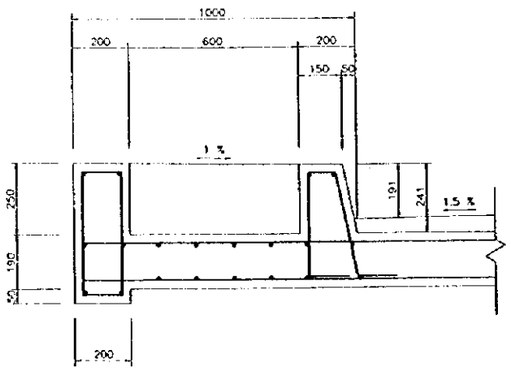
PLANTA DE LOSA
ESC 1:50



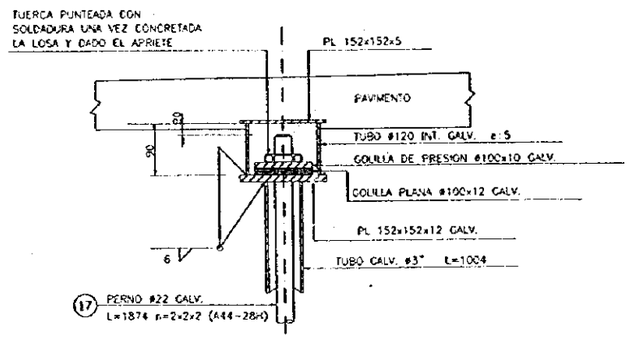
CORTE C-C
ESC.1:50



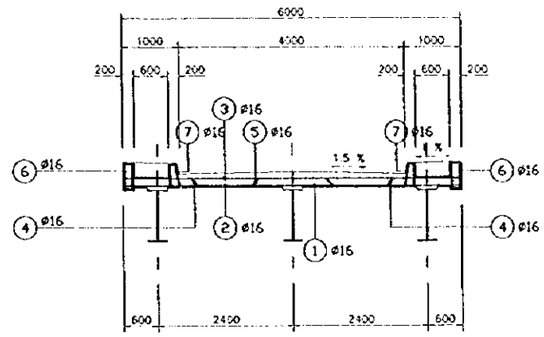
DETALLE DE PASILLO
ESC.1:10



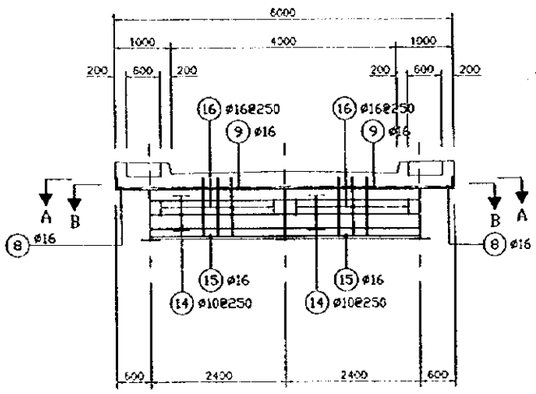
DETALLE BARRAS ANTISISMICAS
ESC.1:5



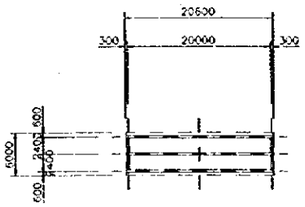
CORTE TRAVERSAL
CORTE E--E
ESC 1:50



TRAVESAÑOS EXTREMOS
CORTE D-D
ESC 1:50



PLANTA DE DISPOSICION



DIRECCION DE VIALIDAD
DEPARTAMENTO DE PUENTES

Puente: 1-SRH-L20_n3
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Director de Vialidad
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Fecha: Noviembre 1997

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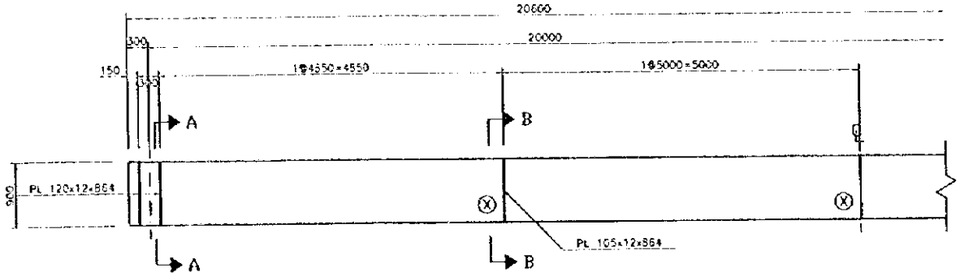
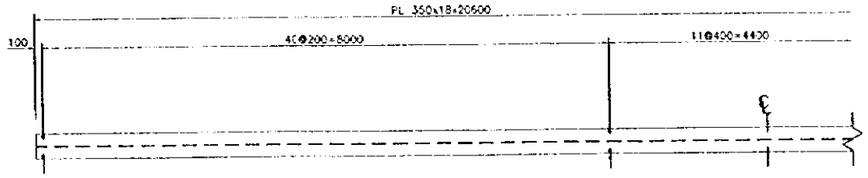
ELEVACION VIGA ACERO
ESC 1:40

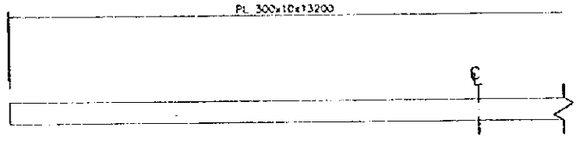


BRIDA SUPERIOR
ESC 1:40

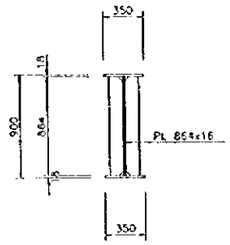


BRIDA INFERIOR
ESC 1:40

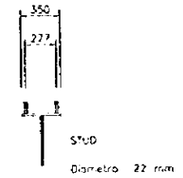
REFURZO BRIDA INTERIOR
ESC 1:40



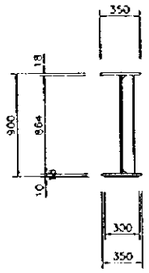
CORTE A–A
ESC 1:25



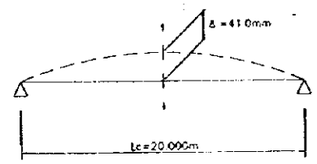
CONECTOR
ESC 1:25



CORTE B–B
EN PUNTOS X
ESC 1:25



COMBADURA



DIRECCION DE VIALIDAD
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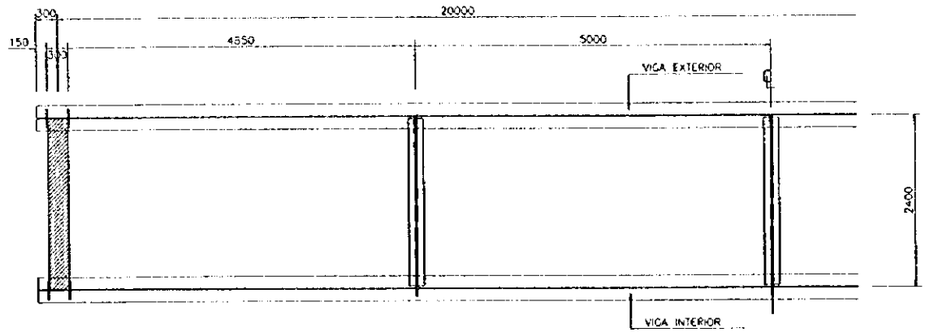
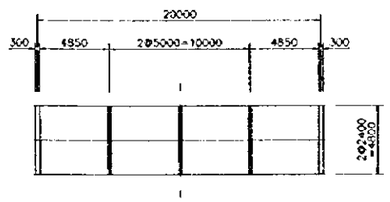
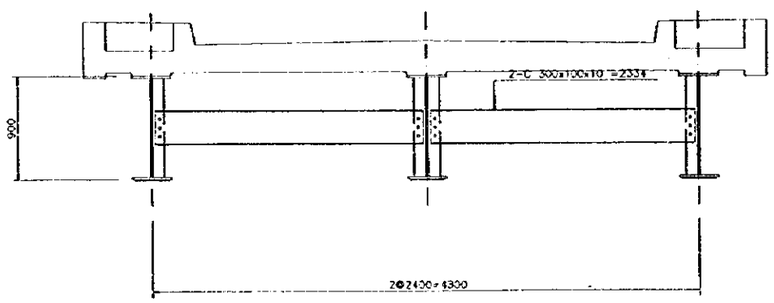
ARRIOSTRAMIENTO HORIZONTAL
ESC.1:40



PLANTA DE DISPOSICION



ARRIOSTRAMIENTO VERTICAL
EN PUNTOS X
ESC.1:25



DIRECCION DE VIALIDAD
DEPARTAMENTO DE PUENTES

Puente: 1-SRH-L20_n3

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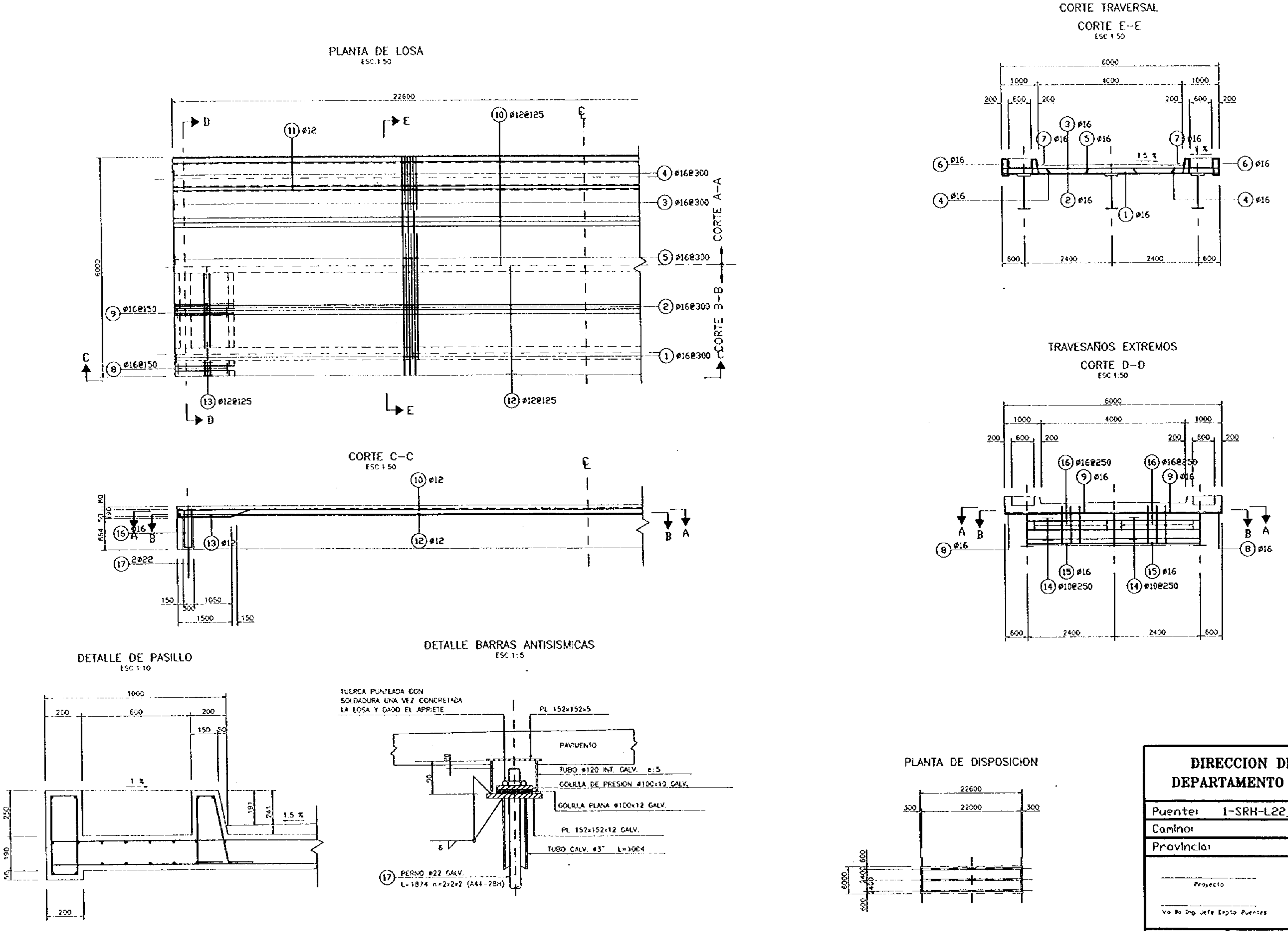

DIRECCION DE VIALIDAD
DEPARTAMENTO DE PUENTES

Puente: 1-SRH-L22_n3

Camino:

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Proyecto | Reviso

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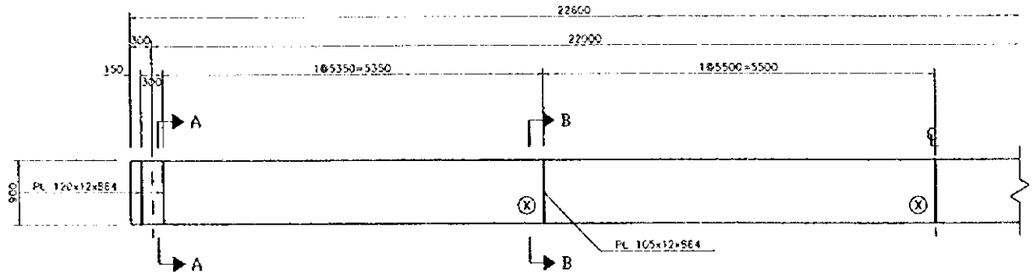
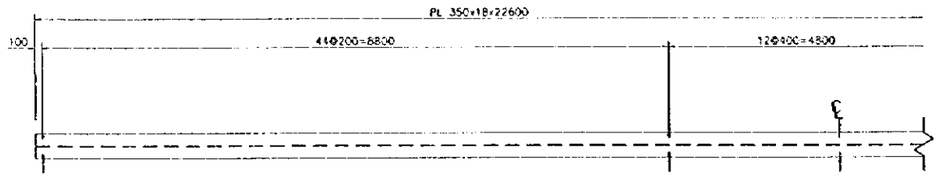
Dibujo:
Fecha: November 1997

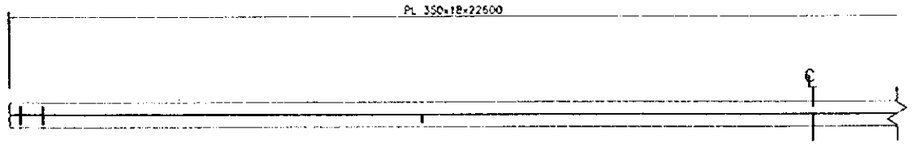
ELEVACION VIGA ACERO
ESC 1:40



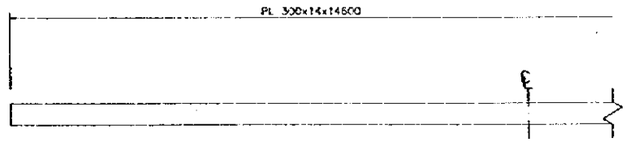
BRIDA SUPERIOR
ESC 1:40



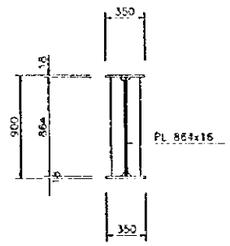
BRIDA INFERIOR
ESC 1:40



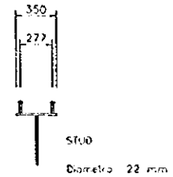
REFUERZO BRIDA INTERIOR
ESC 1:40



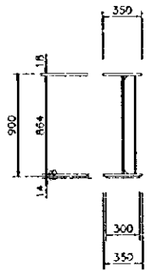
CORTE A-A
ESC 1:25



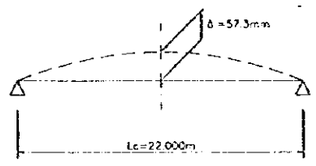
CONECTOR
ESC 1:25



CORTE B-B
EN PUNTOS X
ESC 1:25



COMBADURA



DIRECCION DE VIALIDAD
DEPARTAMENTO DE PUENTES

Puente:	I-SRH-L22_n3
Camino:	
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Dibujo
Fecha: November 1997

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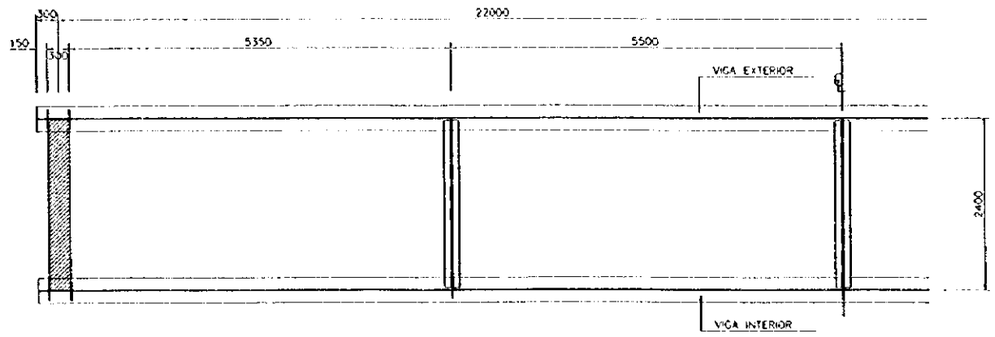
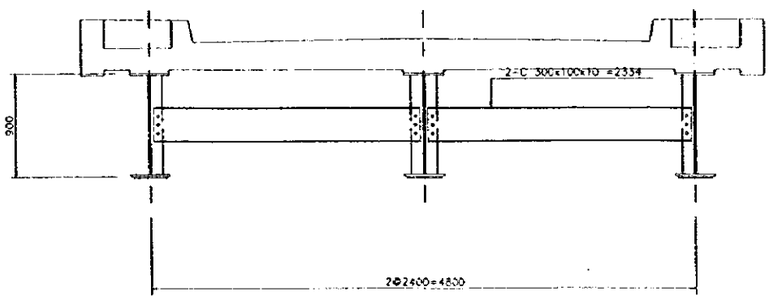
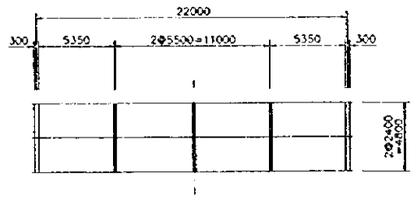
ARRIOSTRAMIENTO HORIZONTAL
ESC.1:40



ARRIOSTRAMIENTO VERTICAL
EN PUNTOS X
ESC 1:25



PLANTA DE DISPOSICION



DIRECCION DE VIALIDAD
DEPARTAMENTO DE PUENTES

Puente: 1-SRH-L22_n3

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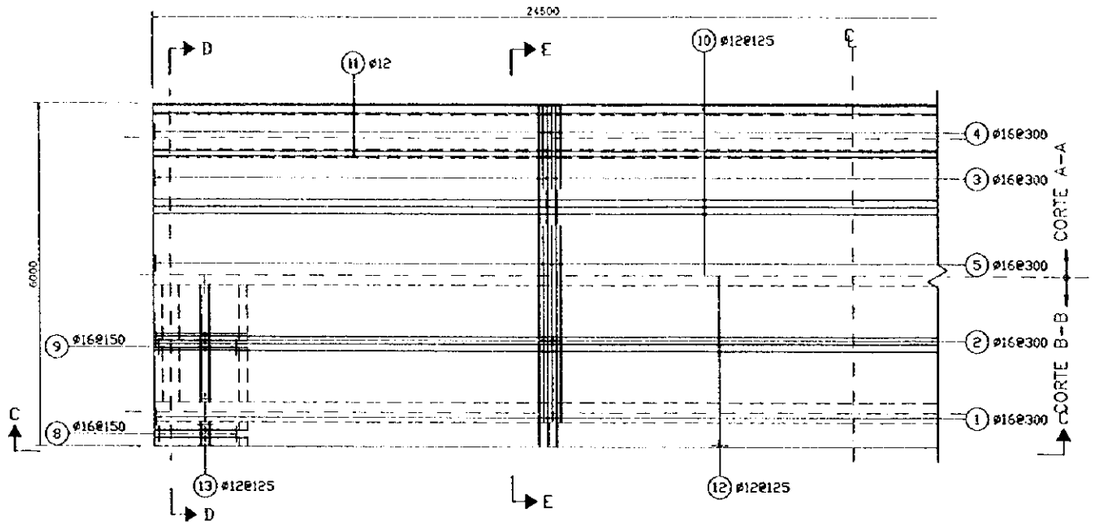
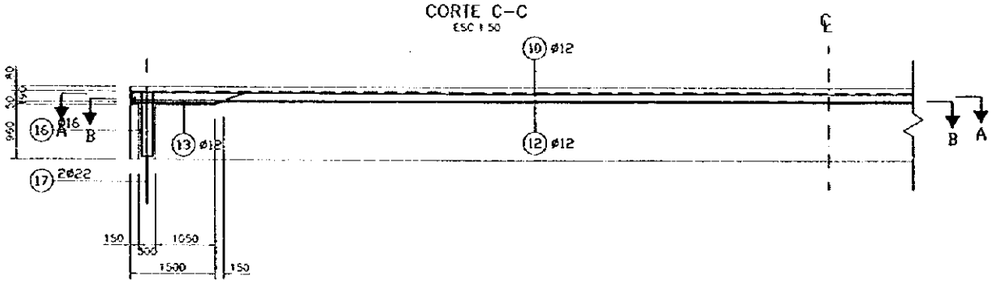
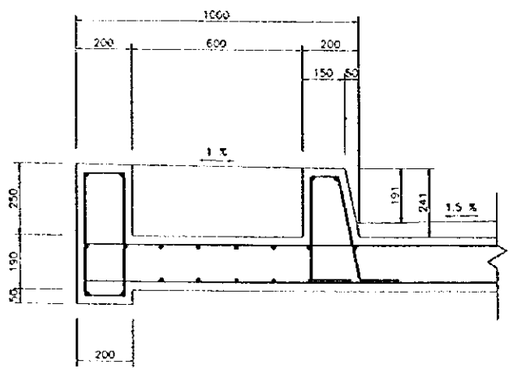
PLANTA DE LOSA
ESC 1:50



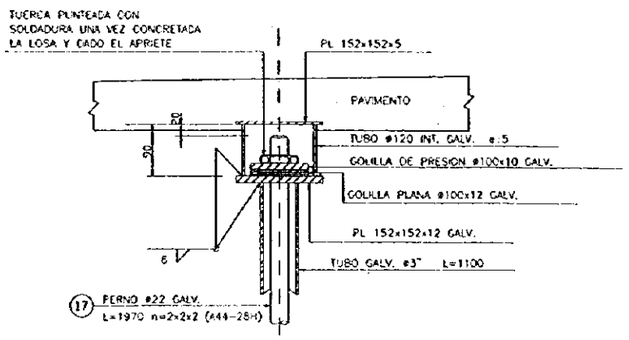
CORTE C-C
ESC 1:50



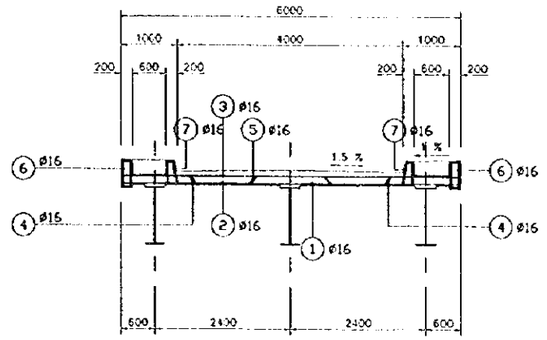
DETALLE DE PASILLO
ESC 1:10



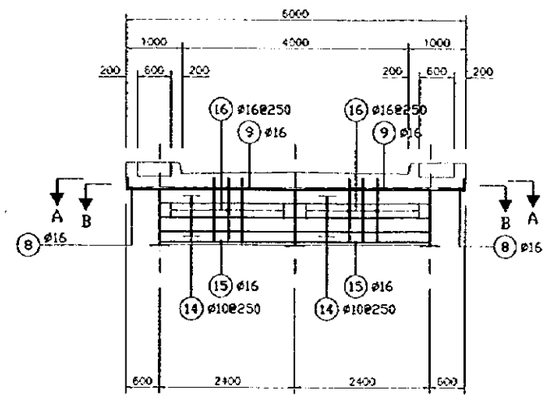
DETALLE BARRAS ANTISISMICAS
ESC.1:5



CORTE TRAVERSAL
CORTE E-E
ESC 1:50



TRAVESAÑOS EXTREMOS
CORTE D-D
ESC 1:50



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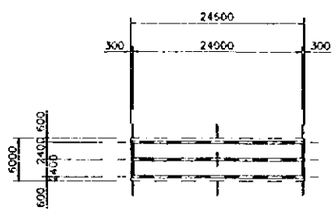

DIRECCION DE VIALIDAD
DEPARTAMENTO DE PUENTES

Puente: 1-SRH-L24_n3	
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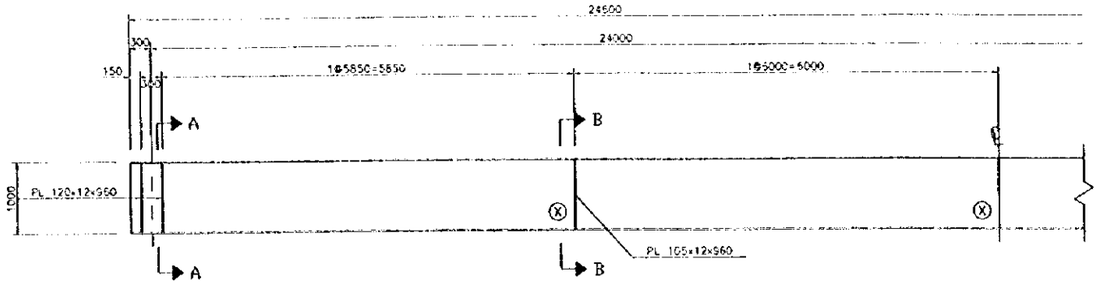
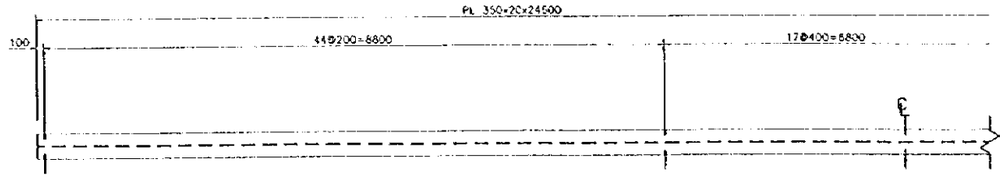
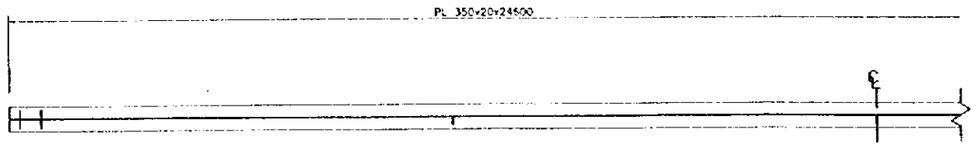
ELEVACION VIGA ACERO
ESC 1:40



BRIDA SUPERIOR
ESC 1:40



BRIDA INFERIOR
ESC 1:40



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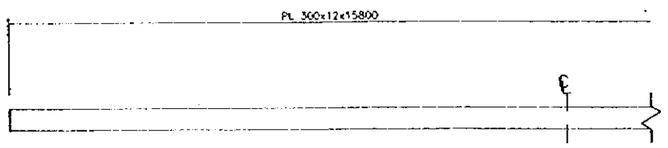
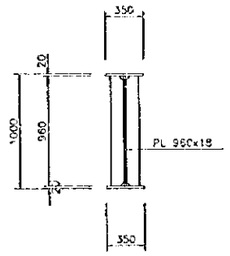
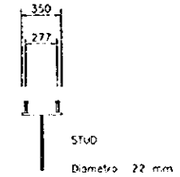


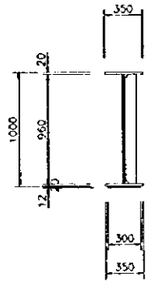
CORTE A-A
ESC 1:25



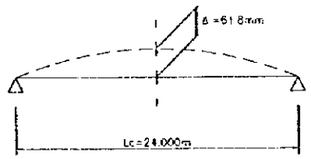
CONECTOR
ESC 1:25



CORTE B-B
EN PUNTOS X
ESC 1:25



COMBADURA



DIRECCION DE VIALIDAD
DEPARTAMENTO DE PUENTES

Puente: 1-SRH-L24_n3

Camino:

Provincia: | Region:

Proyecto | Revisó

Vo Bo Ing Jefe Depto Puentes | Director de Vialidad

Dibujo:
Fecha: Noviembre 1997

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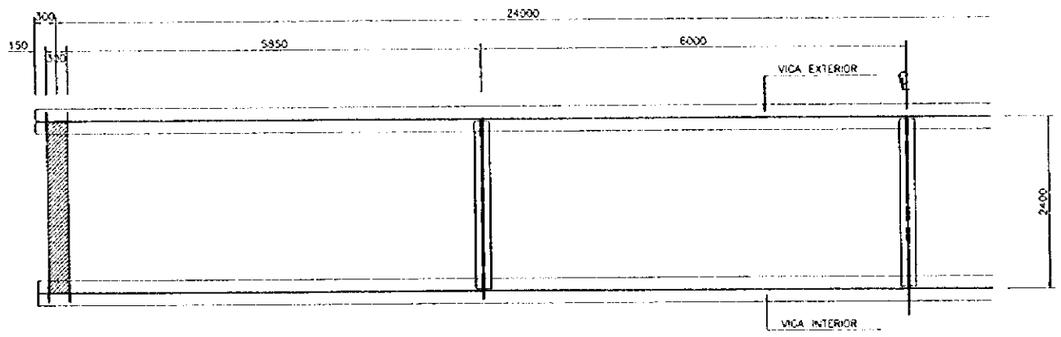
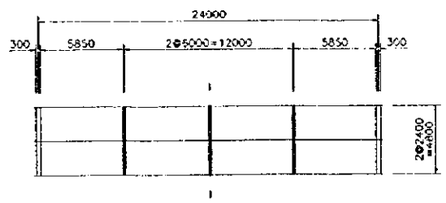
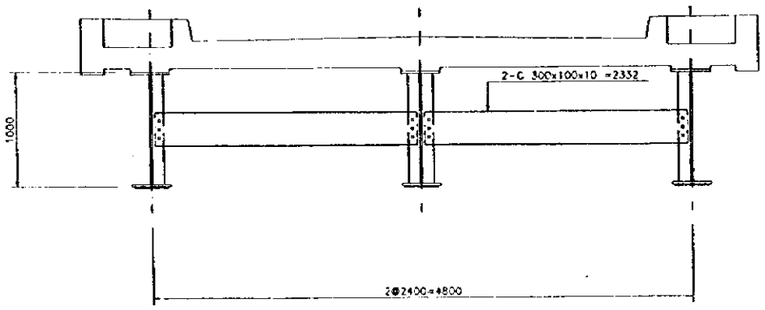
ARRIOSTRAMIENTO HORIZONTAL
ESC 1:40



PLANTA DE DISPOSICION



ARRIOSTRAMIENTO VERTICAL
EN PUNTOS X
ESC 1:25



DIRECCION DE VIALIDAD
DEPARTAMENTO DE PUENTES

Puente: 1-SRH-L24_n3

Camino:

Provincia: | Region:

Proyecto | Revisó

V° B° Ing. Jefe Depto. Puentes | Director de Vialidad

Dibujo
Fecha November 1997

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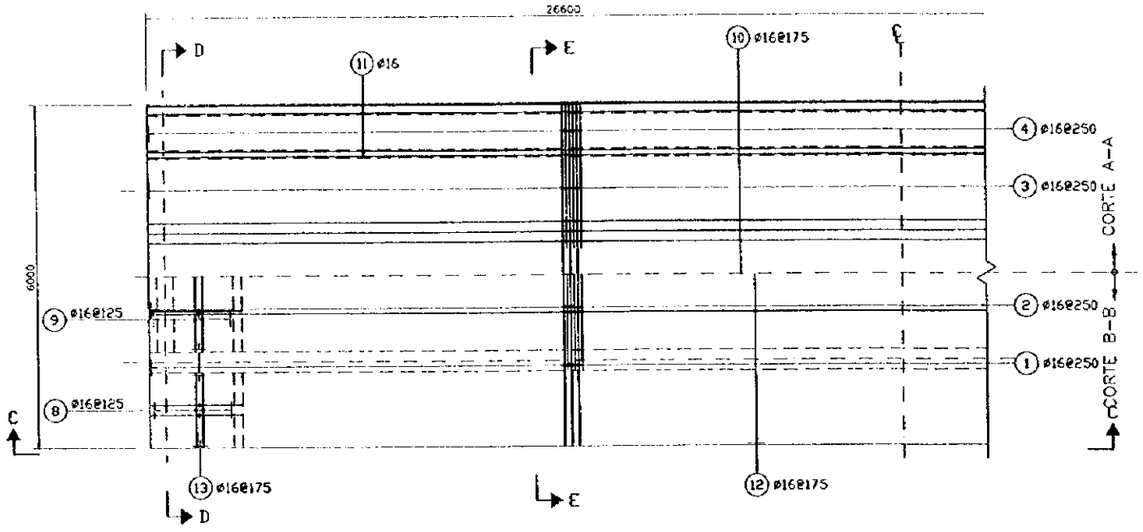
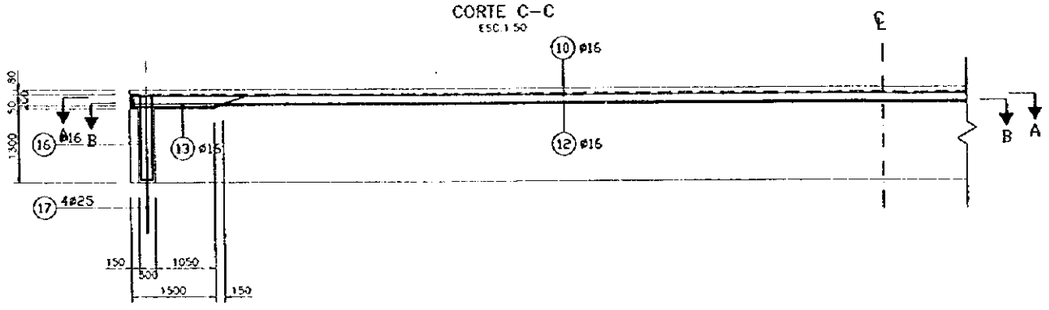
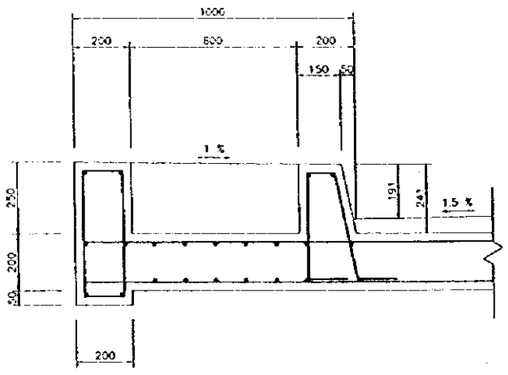
PLANTA DE LOSA
ESC.1:50



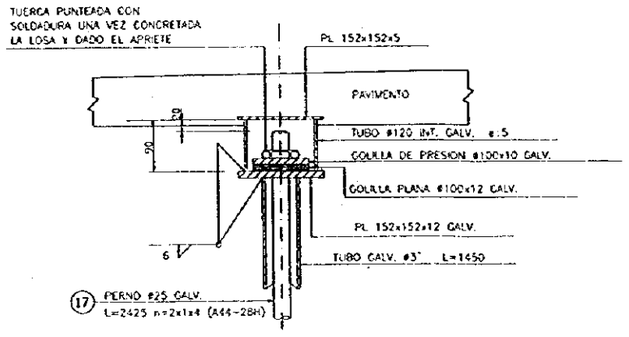
CORTE C-C
ESC.1:50



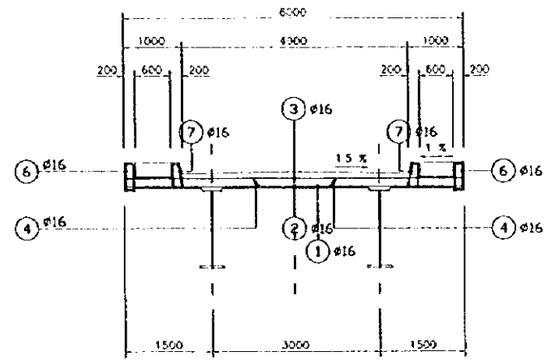
DETALLE DE PASILLO
ESC.1:10



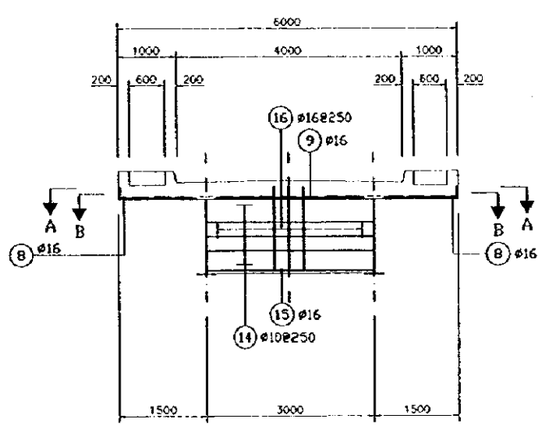
DETALLE BARRAS ANTISISMICAS
ESC.1:5



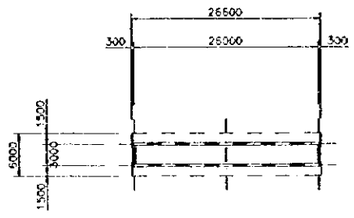
CORTE TRAVERSAL
CORTE E-E
ESC.1:50



TRAVESAÑOS EXTREMOS
CORTE D-D
ESC.1:50



PLANTA DE DISPOSICION



DIRECCION DE VIALIDAD
DEPARTAMENTO DE PUENTES

Puente: 1-SBI-L26_n2	
Camino:	
Provincia:	Region:
Proyecto	Revisó
Vo Bo Ing Jefe Depto Puentes	Director de Vialidad
Dibujo Fecha: Noviembre 1997	

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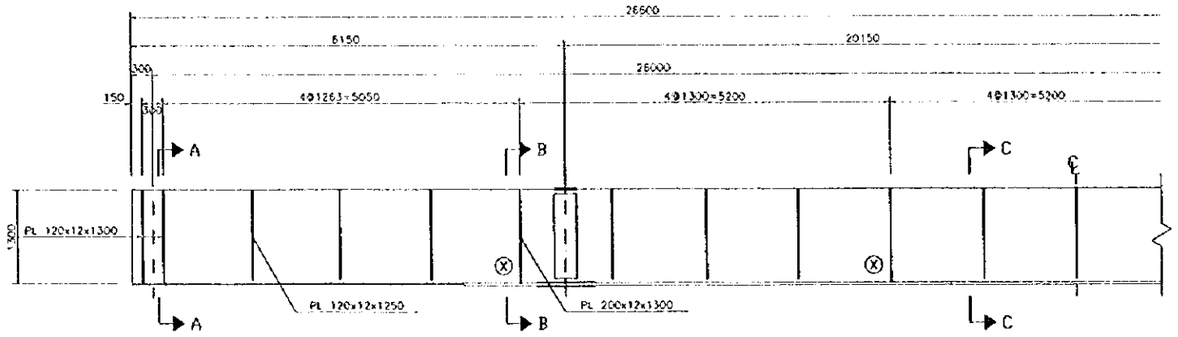
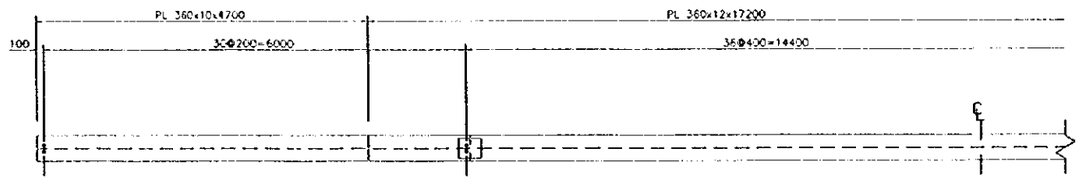
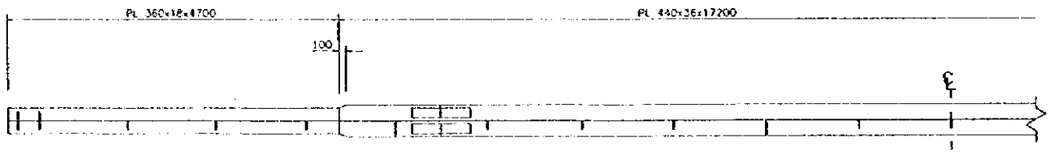
ELEVACION VIGA ACERO
ESC.1:40



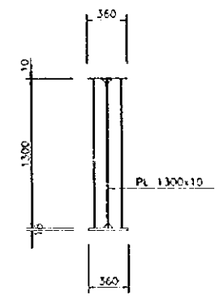
BRIDA SUPERIOR
ESC.1:40



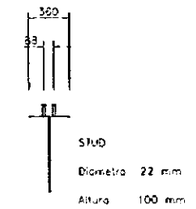
BRIDA INFERIOR
ESC.1:40



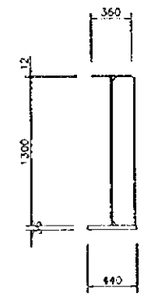
CORTE A-A
ESC.1:25



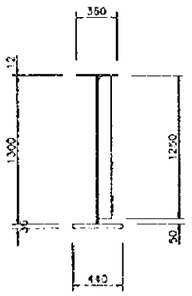
CONECTOR
ESC.1:25

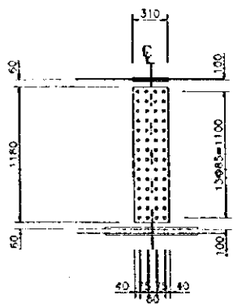


CORTE B-B
EN PUNTOS X
ESC.1:25



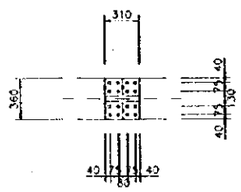
CORTE C-C
ESC.1:25





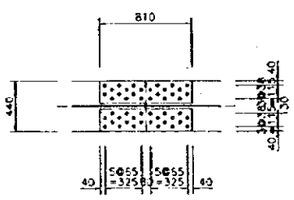
2-Spl PL 310x9x1180 (A52-34ES)
56-PERNO M22x30 (ASTM A490)

BRIDA SUPERIOR



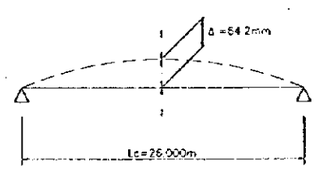
1-Spl PL 360x12x310 (A52-34ES)
2-Spl PL 155x12x310 (A52-34ES)
16-PERNO M22x40 (ASTM A490)

BRIDA INFERIOR



2-Spl PL 195x16x810 (A52-34ES)
1-Spl PL 440x18x810 (A52-34ES)
96-PERNO M22x70 (ASTM A490)

COMBADURA



DIRECCION DE VIALIDAD
DEPARTAMENTO DE PUENTES

Puente: 1-SBI-L26_n2
Camino:
Provincia: Region:

Proyecto
Revisó
Vo Bo Ing. Jefe Depto. Puentes
Director de Vialidad

Dibujo
Fecha: November 1997

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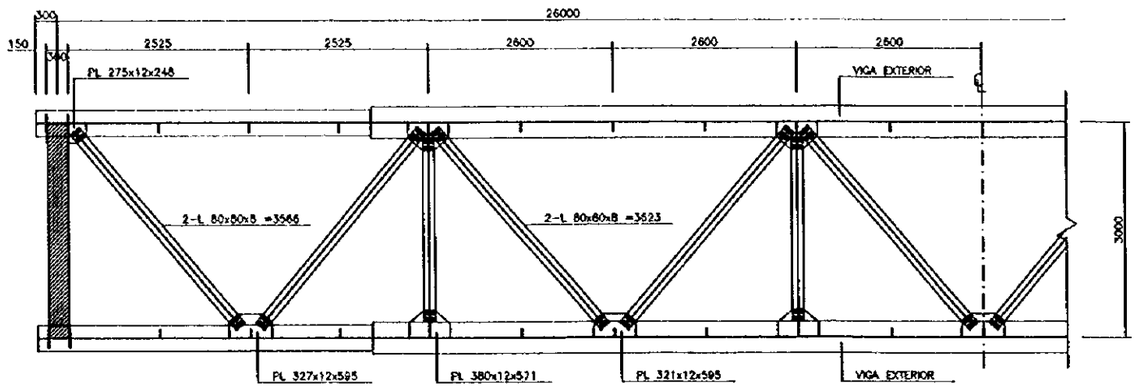
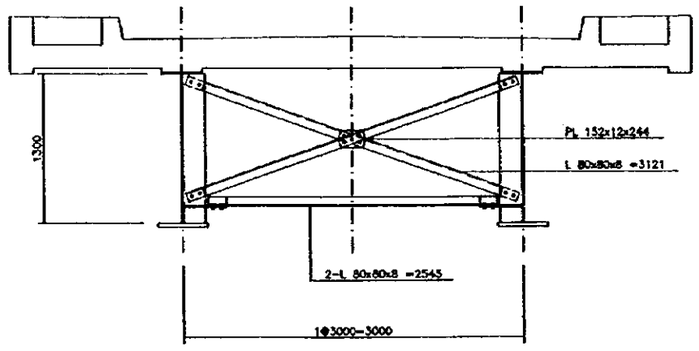
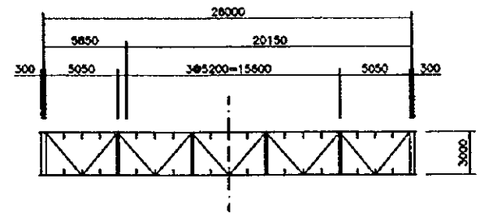
ARRIOSTRAMIENTO HORIZONTAL
ESC.1:40



ARRIOSTRAMIENTO VERTICAL
EN PUNTOS X
ESC.1:25



PLANTA DE DISPOSICION



DIRECCION DE VIALIDAD
DEPARTAMENTO DE PUENTES

Puente: 1-SBI-L26_n2
Camino:
Provincia: Region:

Proyecto | Revisó
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Dibujo
Fecha: November 1997

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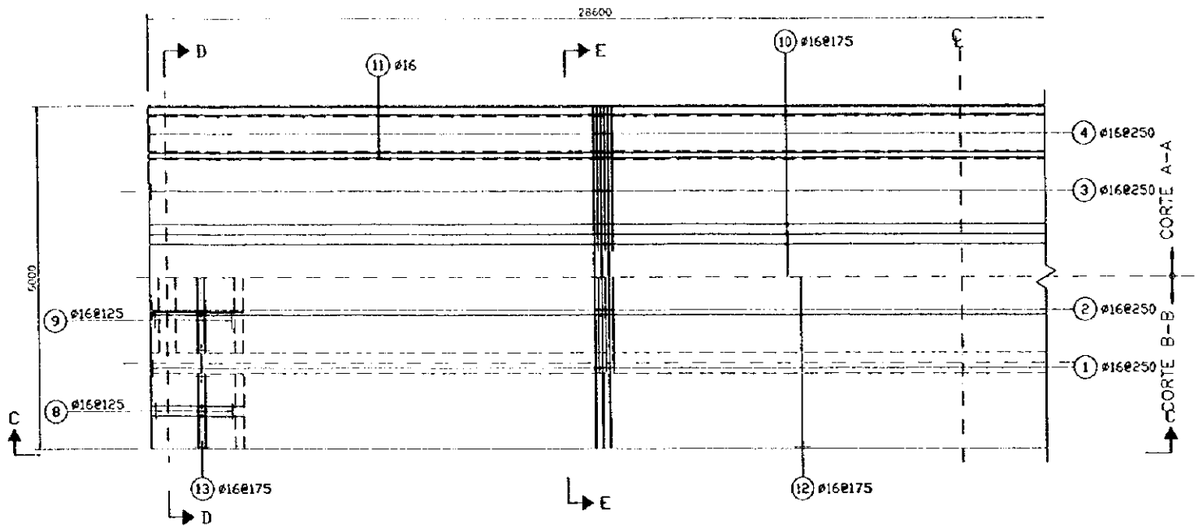
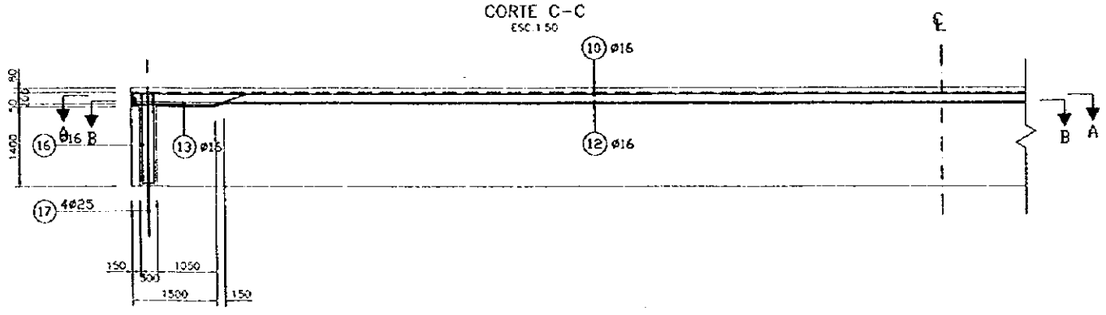
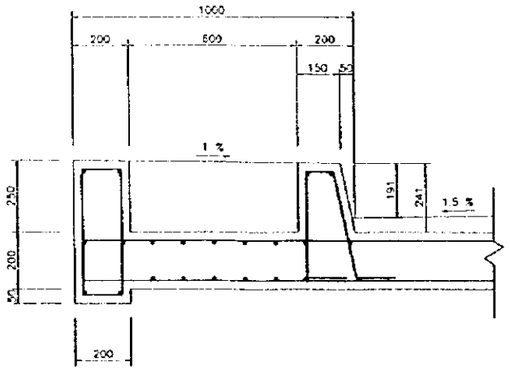
PLANTA DE LOSA
ESC 1:50



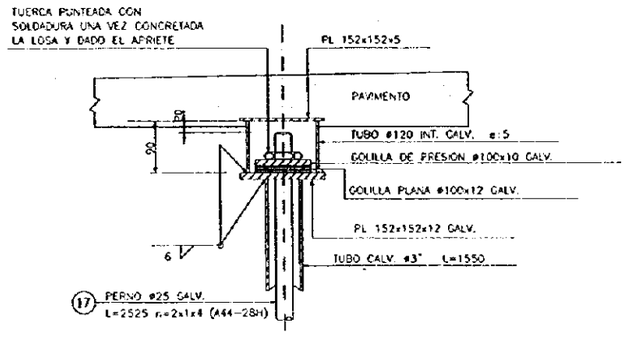
CORTE C-C
ESC 1:50



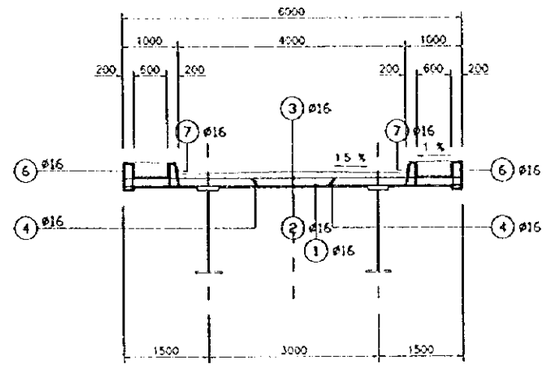
DETALLE DE PASILLO
ESC 1:10



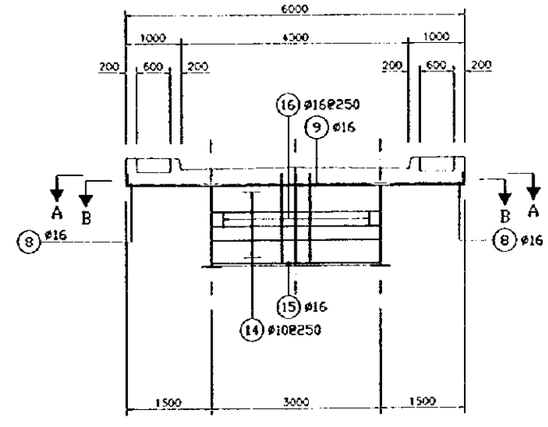
DETALLE BARRAS ANTISISMICAS
ESC 1:5



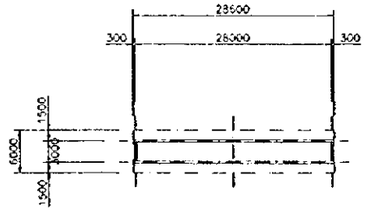
CORTE TRAVERSAL
CORTE E-E
ESC 1:50



TRAVESAÑOS EXTREMOS
CORTE D-D
ESC 1:50



PLANTA DE DISPOSICION



DIRECCION DE VIALIDAD
DEPARTAMENTO DE PUENTES

Puente: 1-SBI-L28_n2	
Camino:	
Provincia:	Region:
Proyecto	Revisó
Vo Bo Ing. Jefe Depto Puentes	Director de Vialidad
Dibujo	
Fecha November 1997	

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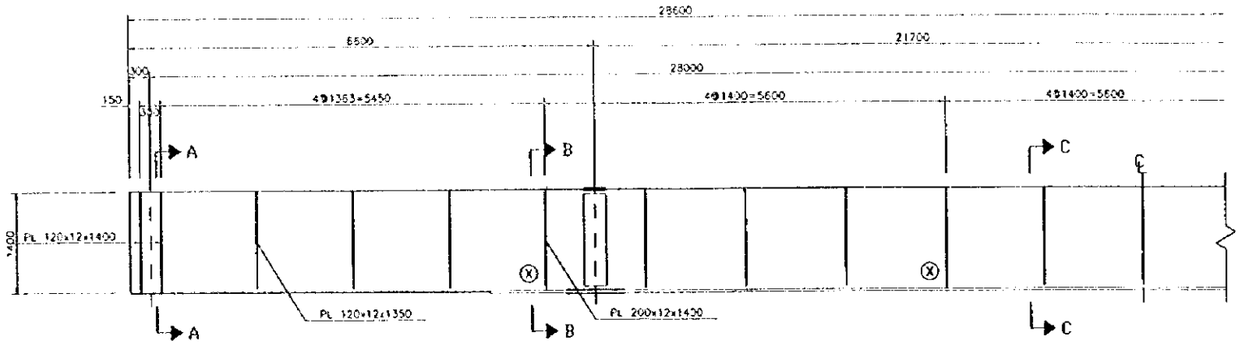
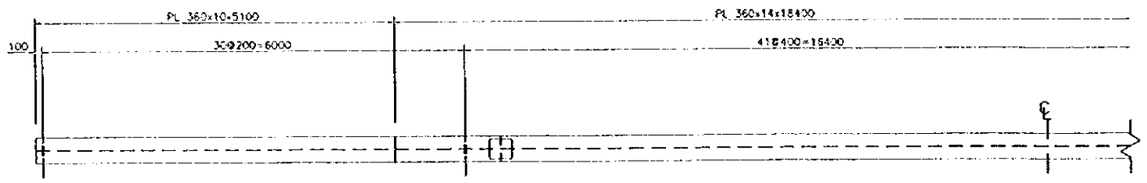
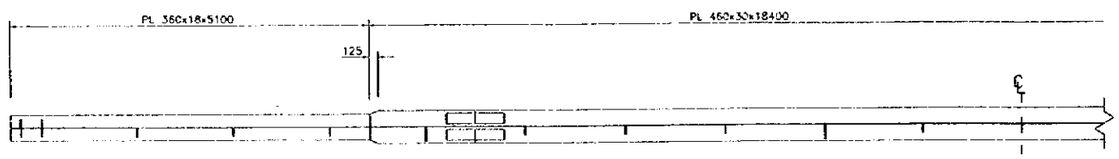
ELEVACION VIGA ACERO
ESC 1:40



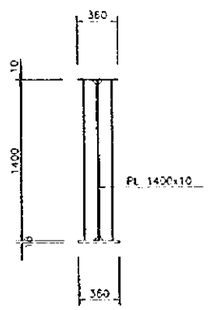
BRIDA SUPERIOR
ESC 1:40



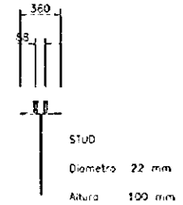
BRIDA INFERIOR
ESC 1:40



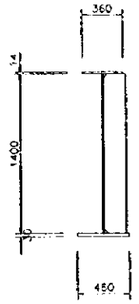
CORTE A–A
ESC 1:25



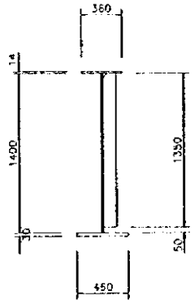
CONECTOR
ESC 1:25

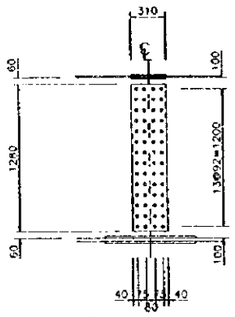


CORTE B–B
EN PUNTOS X
ESC 1:25



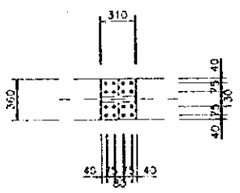
CORTE C–C
ESC 1:25





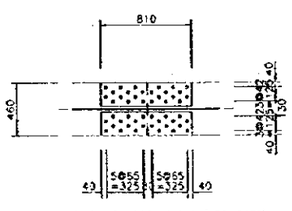
2-Spl PL 310x9x1280 (A52-34ES)
56-PERNO M22x30 (ASTM A490)

BRIDA SUPERIOR



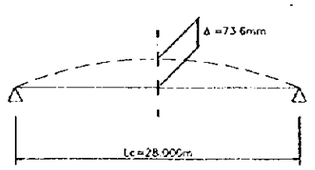
1-Spl PL 360x12x310 (A52-34ES)
2-Spl PL 155x12x310 (A52-34ES)
16-PERNO M22x40 (ASTM A490)

BRIDA INFERIOR



2-Spl PL 205x16x810 (A52-34ES)
1-Spl PL 460x16x810 (A52-34ES)
95-PERNO M22x55 (ASTM A490)

COMBADURA



DIRECCION DE VIALIDAD
DEPARTAMENTO DE PUENTES

Puente: 1-SBI-L28_n2
Camino:
Provincia: Region:

Proyecto
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Vo Bo Ing. Jefe Depto. Puentes
Director de Vialidad

Dibujo
Fecha: November 1997

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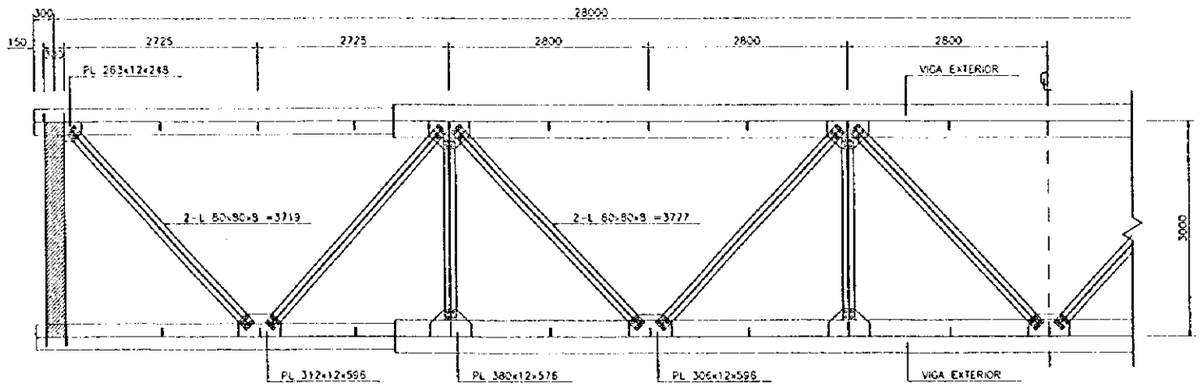
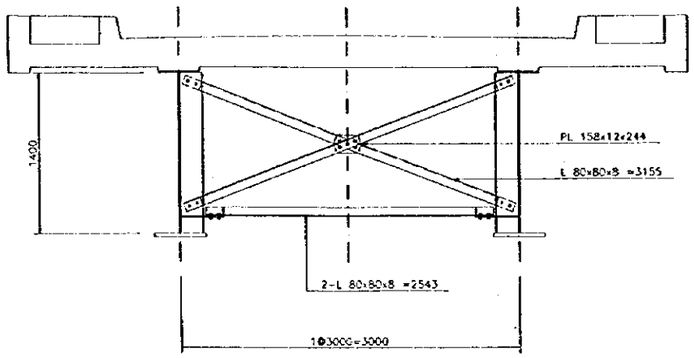
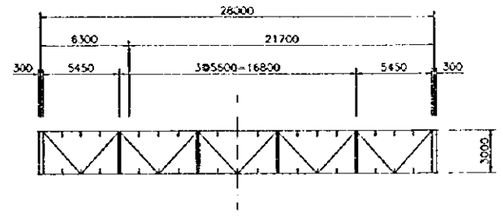
ARRIOSTRAMIENTO HORIZONTAL
ESC.1:40



ARRIOSTRAMIENTO VERTICAL
EN PUNTOS X
ESC.1:25



PLANTA DE DISPOSICION



DIRECCION DE VIALIDAD
DEPARTAMENTO DE PUENTES

Puente: 1-SBI-L28_n2	
Camino:	
Provincia:	Region:
Proyecto	Revisó
Vo.Bo. Ing. Jefe Depto. Puentes	Director de Vialidad
Dibujo Fecha: November 1997	

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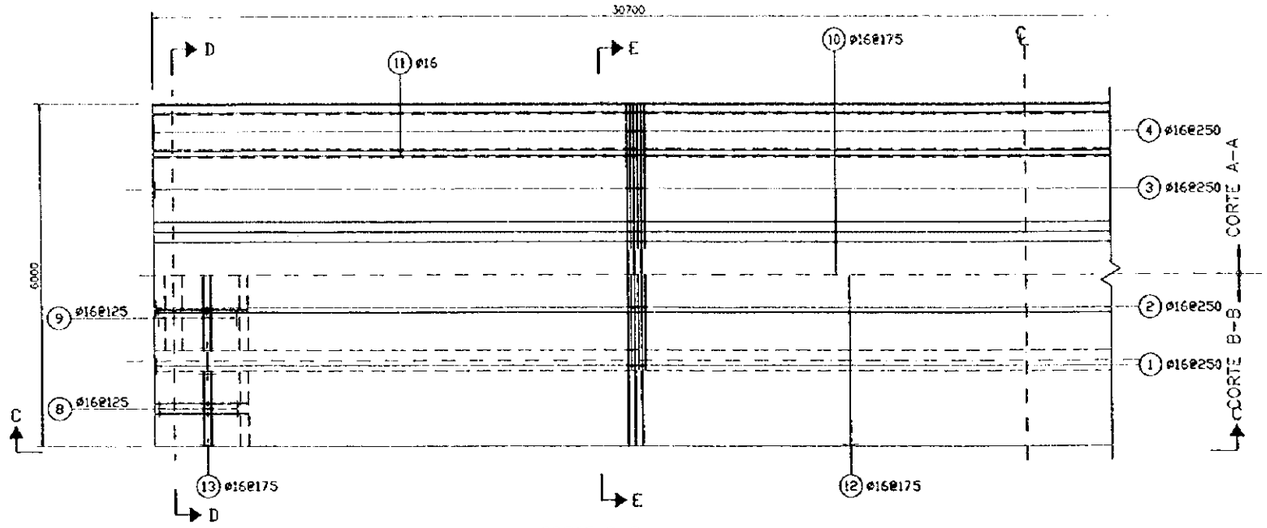
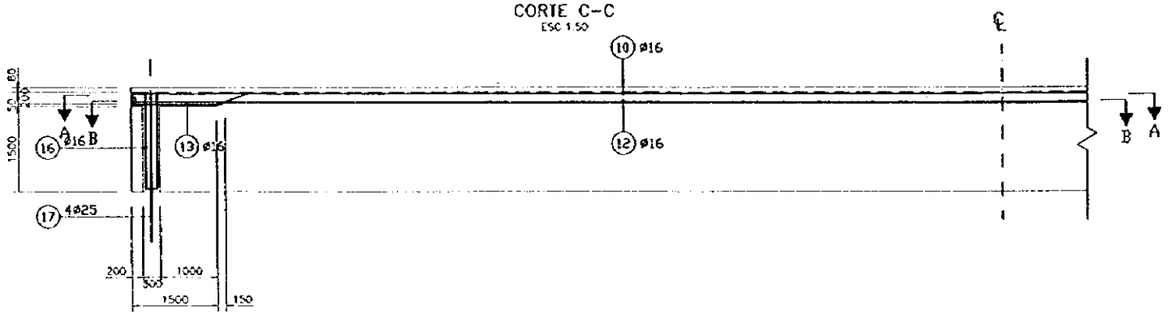
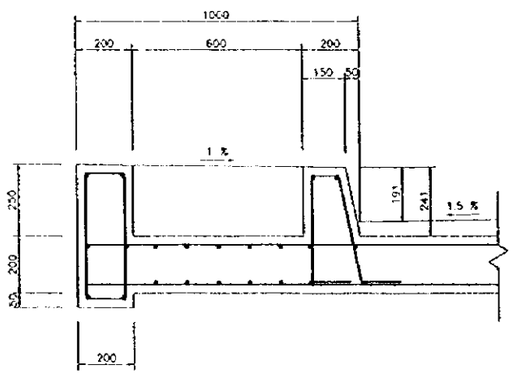
PLANTA DE LOSA
ESC 1:50



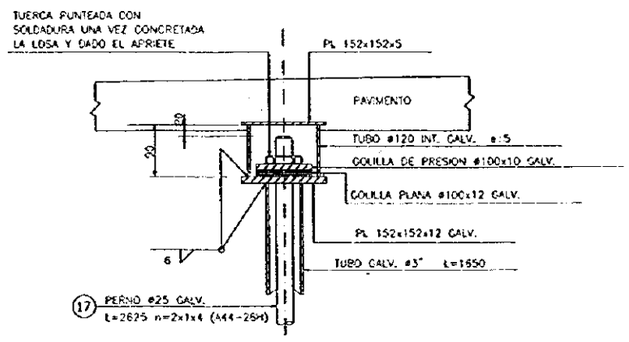
CORTE C-C
ESC 1:50



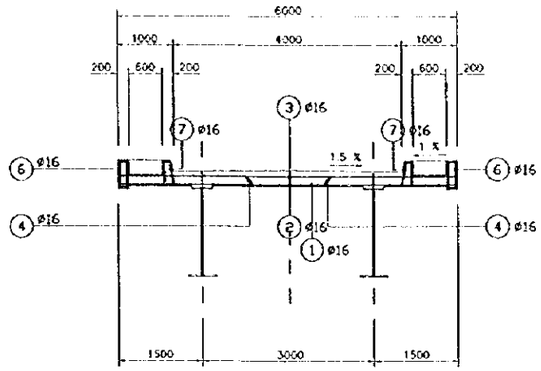
DETALLE DE PASILLO
ESC 1:10



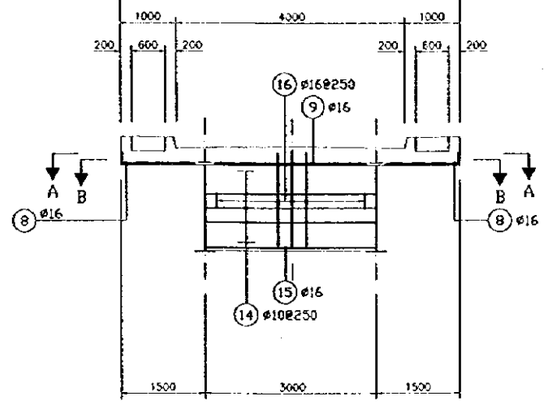
DETALLE BARRAS ANTISISMICAS
ESC 1:5



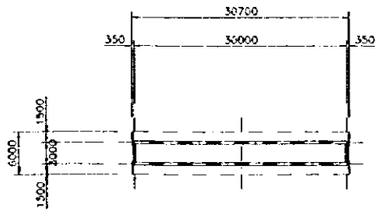
CORTE TRAVERSAL
CORTE E-E
ESC 1:50



TRAVESAÑOS EXTREMOS
CORTE D-D
ESC 1:50



PLANTA DE DISPOSICION



DIRECCION DE VIALIDAD
DEPARTAMENTO DE PUENTES

Puente:	1-SBI-L30_n2
Camino:	
Provincia:	Region:

Proyecto — Revisó

Vo Bo Ing. Jefe Depto. Puentes — Director de Vialidad

Dibujo
Fecha: November 1997

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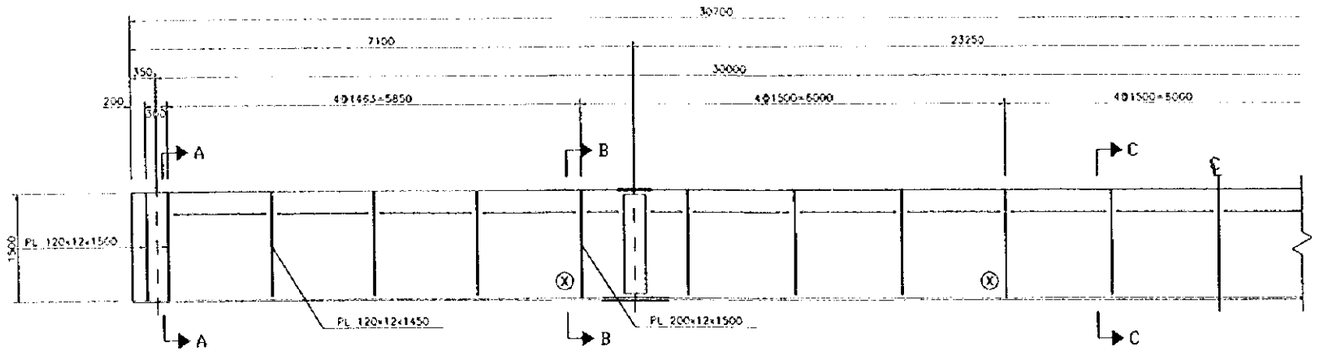
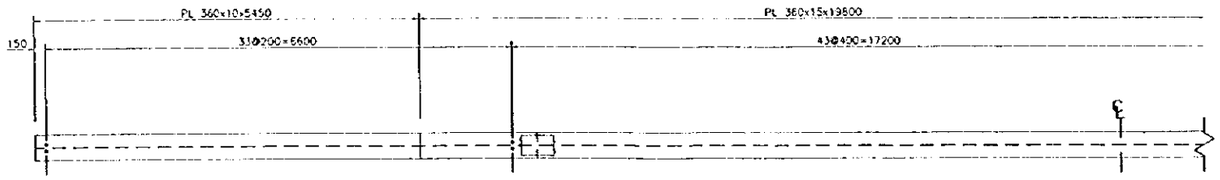
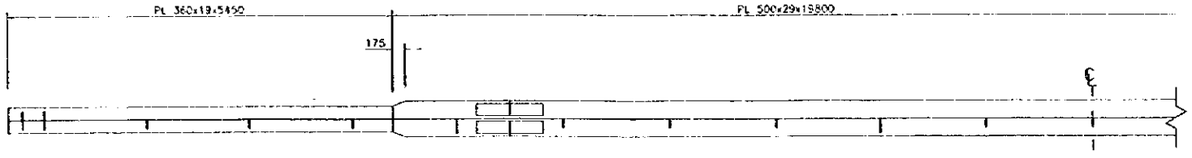
ELEVACION VIGA ACERO
ESC 1:40



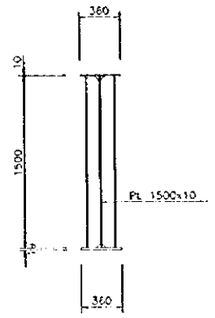
BRIDA SUPERIOR
ESC 1:40



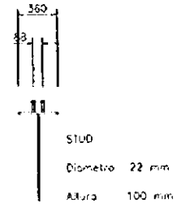
BRIDA INFERIOR
ESC.1:40



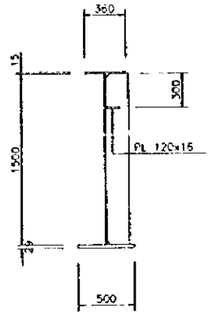
CORTE A-A
ESC 1:25



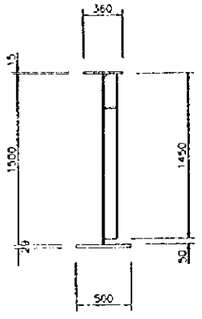
CONECTOR
ESC.1:25

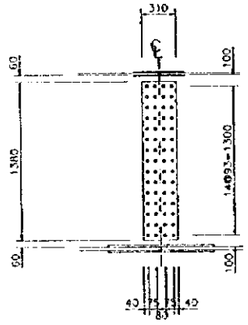


CORTE B-B
EN PUNTOS X
ESC.1:25



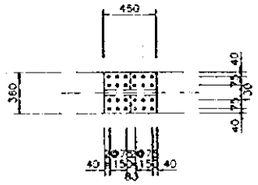
CORTE C-C
ESC.1:25





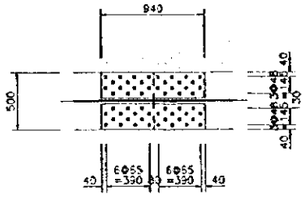
2-Spl PL 310x9x1380 (A52-34ES)
60-PERNO M22x30 (ASTM A490)

BRIDA SUPERIOR



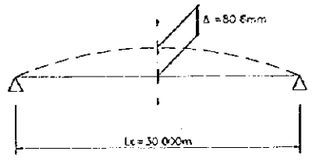
1-Spl PL 360x12x450 (A52-34ES)
2-Spl PL 155x12x450 (A52-34ES)
24-PERNO M22x40 (ASTM A490)

BRIDA INFERIOR



2-Spl PL 225x16x940 (A52-34ES)
1-Spl PL 500x16x940 (A52-34ES)
112-PERNO M22x65 (ASTM A490)

COMBADURA



DIRECCION DE VIALIDAD
DEPARTAMENTO DE PUENTES

Puente: 1-SBI-L30_n2

Camino:

Provincia: | Region:

Proyecto | Revisó

Vo Bo Sup. Jefe Depto. Puentes | Director de Vialidad

Dibujo
Fecha: November 1997

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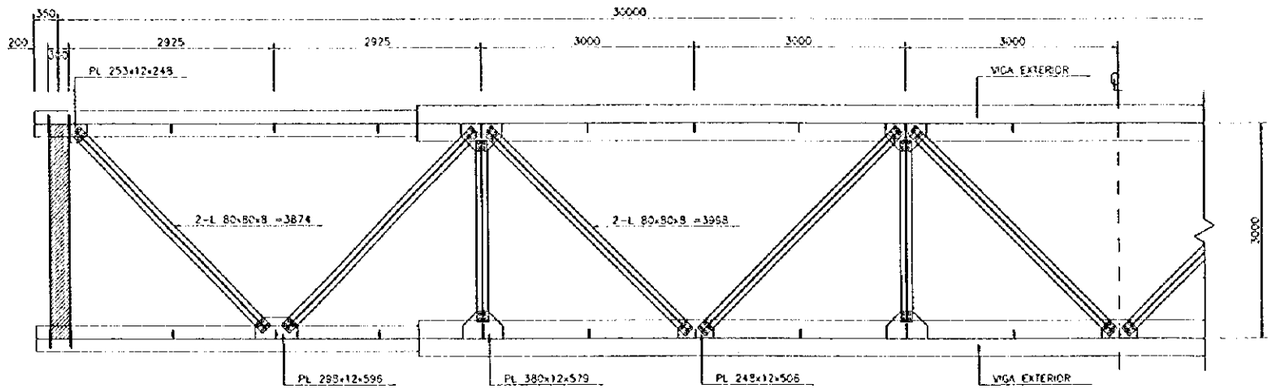
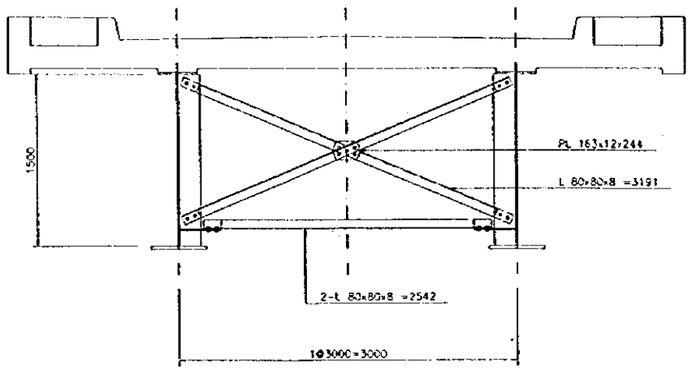
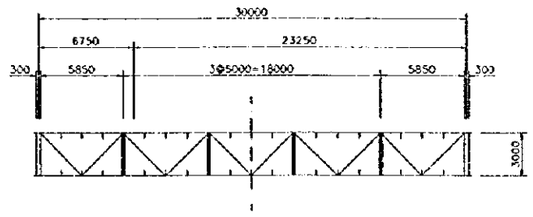
ARRIOSTRAMIENTO HORIZONTAL
ESC 1:40



ARRIOSTRAMIENTO VERTICAL
EN PUNTOS X
ESC 1:25



PLANTA DE DISPOSICION



DIRECCION DE VIALIDAD
DEPARTAMENTO DE PUENTES

Puente: 1-SBI-L30_n2

Camino:

Provincia: | Region:

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Vo Bo Ing. Jefe Depto. Puentes | Director de Vialidad

Dibujo:
Fecha: November 1997

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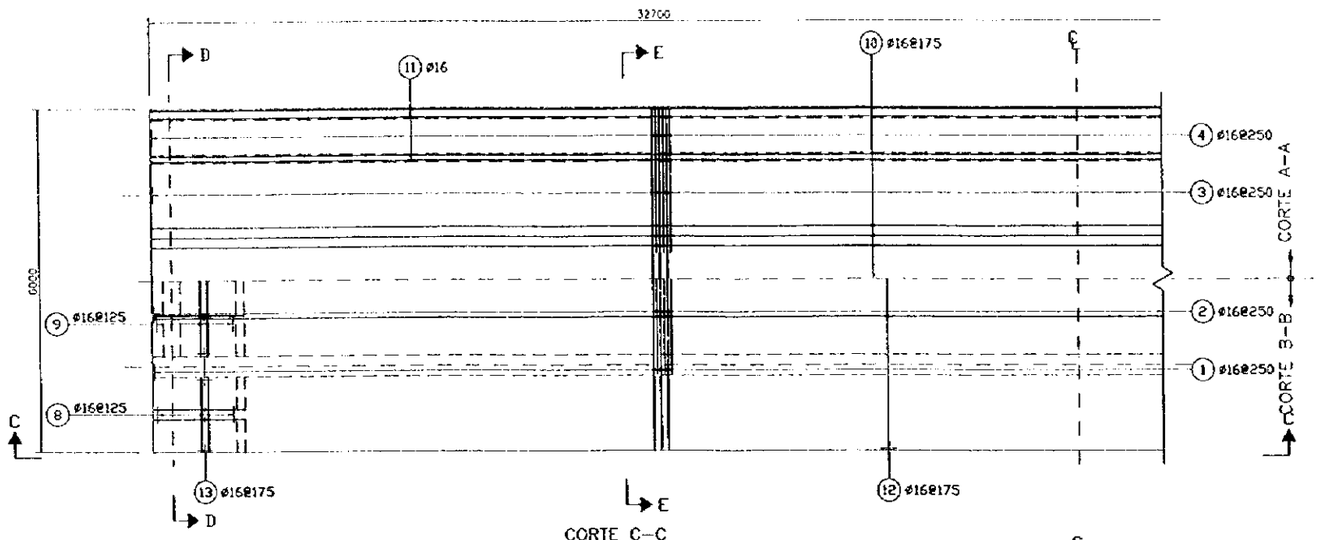
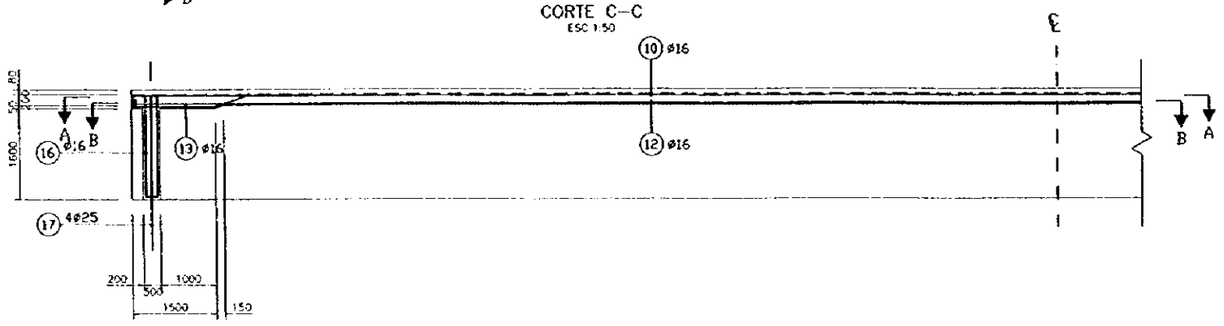
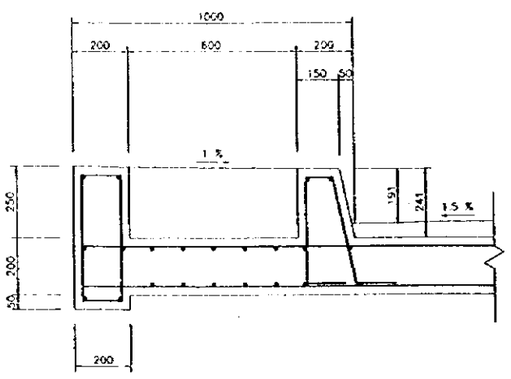
PLANTA DE LOSA
ESC 1:50



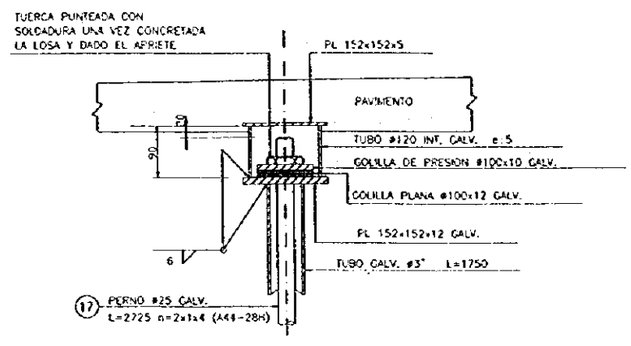
CORTE C–C
ESC 1:50



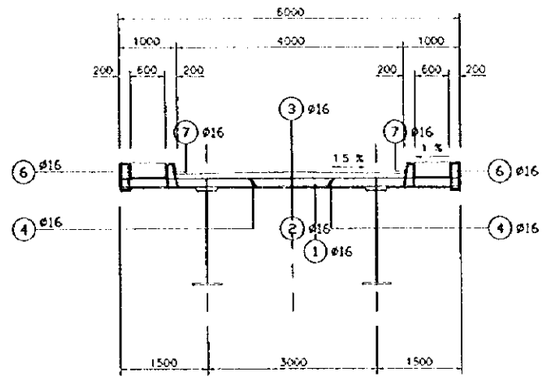
DETALLE DE PASILLO
ESC 1:10



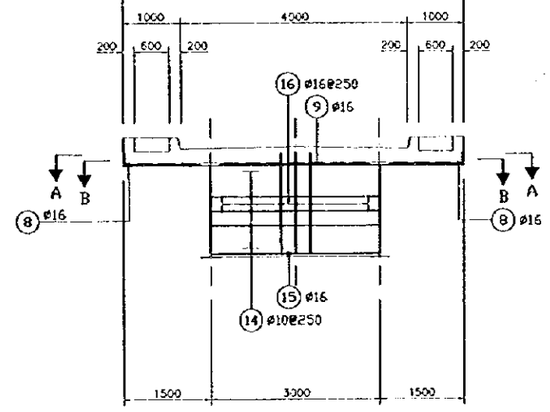
DETALLE BARRAS ANTISISMICAS
ESC 1:5



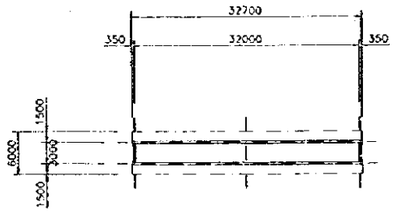
CORTE TRAVERSAL
CORTE E–E
ESC 1:50



TRAVESAÑOS EXTREMOS
CORTE D–D
ESC 1:50



PLANTA DE DISPOSICION



DIRECCION DE VIALIDAD
DEPARTAMENTO DE PUENTES

Puente: 1-SBI-L32_n2	
Camino:	
Provincia:	Region:
Proyecto	Revisó
Vo Bo Ing. Jefe Depto. Puentes	Director de Vialidad
Dibujo	
Fecha: November 1997	

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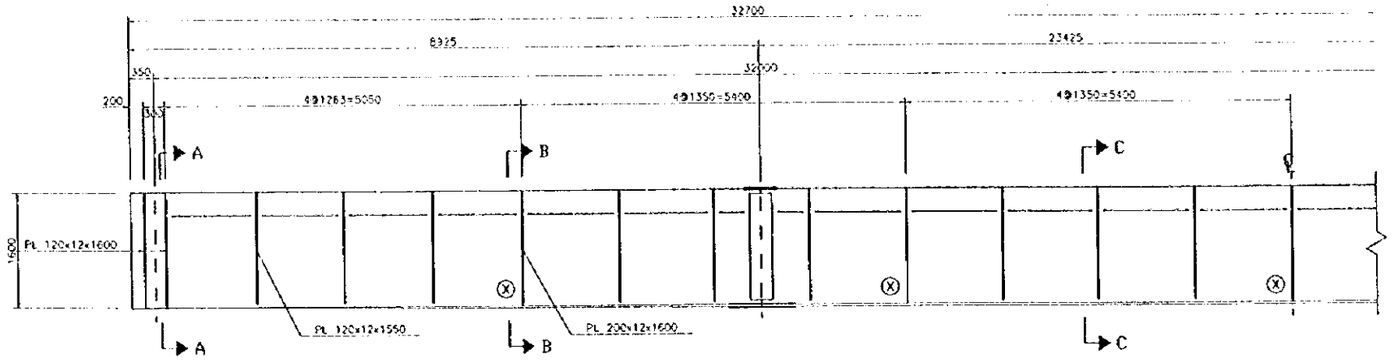
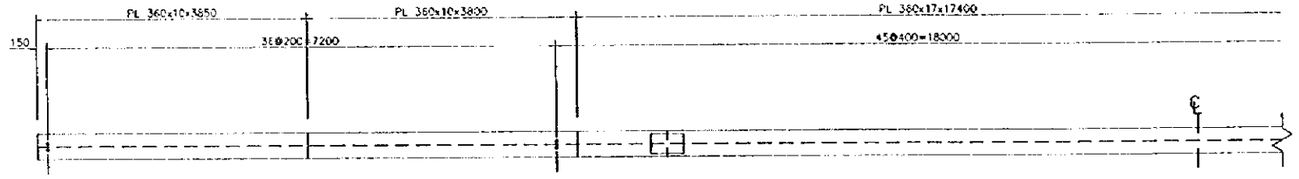
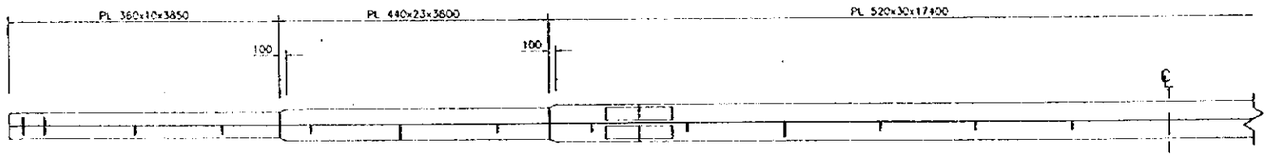
ELEVACION VIGA ACERO
ESC 1:40



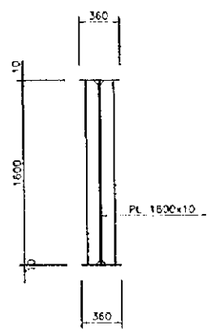
BRIDA SUPERIOR
ESC 1:40



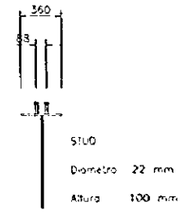
BRIDA INFERIOR
ESC 1:40



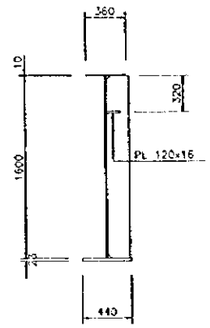
CORTE A-A
ESC 1:25



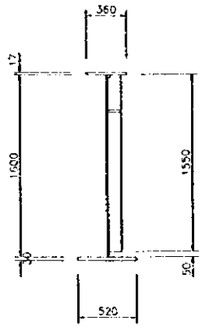
CONECTOR
ESC 1:25

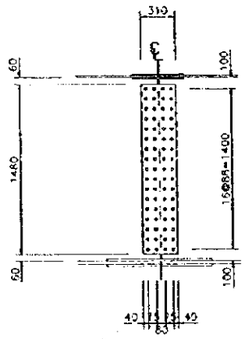


CORTE B-B
EN PUNTOS X
ESC 1:25



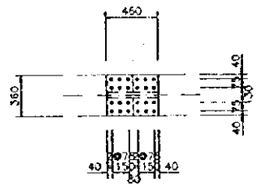
CORTE C-C
ESC 1:25





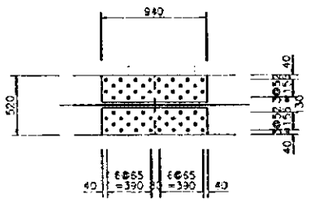
2-Spl PL 310x9x1480 (A52-34ES)
68-PERNO M22x30 (ASTM A490)

BRIDA SUPERIOR



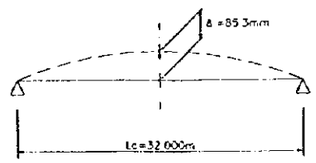
1-Spl PL 360x12x460 (A52-34ES)
2-Spl PL 155x12x460 (A52-34ES)
24-PERNO M22x45 (ASTM A490)

BRIDA INFERIOR



2-Spl PL 235x16x940 (A52-34ES)
1-Spl PL 520x16x940 (A52-34ES)
112-PERNO M22x65 (ASTM A490)

COMBADURA



DIRECCION DE VIALIDAD
DEPARTAMENTO DE PUENTES

Puente: 1-SBI-L32_n2

Camino:

Provincia: | Region:

Proyecto | Revisa

Vo Bo Ing. Jefe Depto. Puentes | Director de Vialidad

Dibujo
Fecha Noviembre 1992

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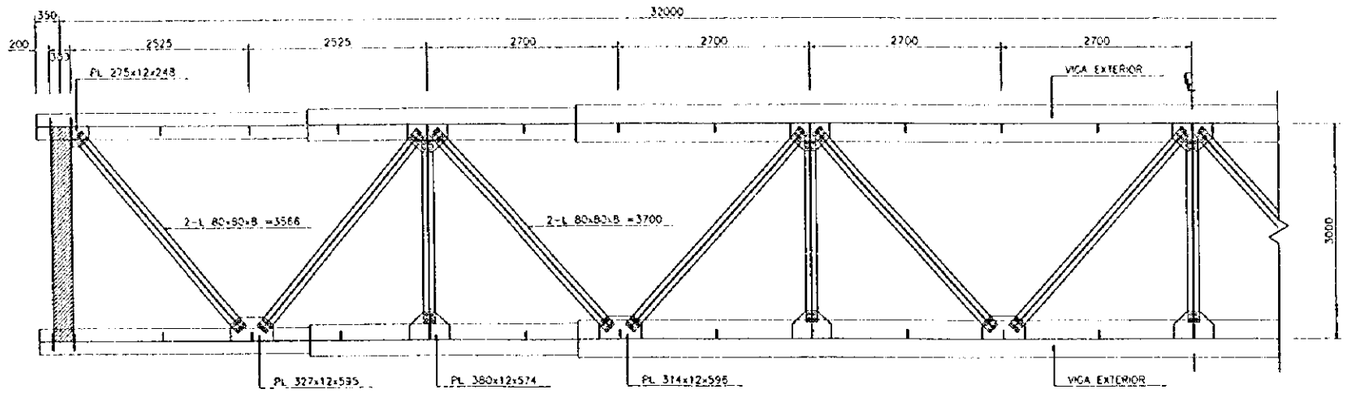
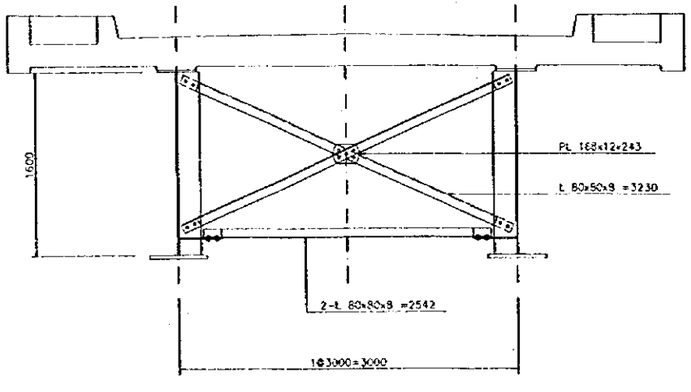
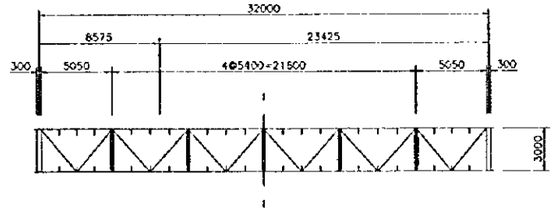
ARRIOSTRAMIENTO HORIZONTAL
ESC.1:40



ARRIOSTRAMIENTO VERTICAL
EN PUNTOS X
ESC.1:25



PLANTA DE DISPOSICION



DIRECCION DE VIALIDAD
DEPARTAMENTO DE PUENTES

Puente: 1-SBI-L32_n2

Camino:

Provincia: Region:

Proyecto

Revisó

Vo Bo Ing. Jefe Depto. Puentes

Director de Vialidad

Dibujo
Fecha: Noviembre 1997

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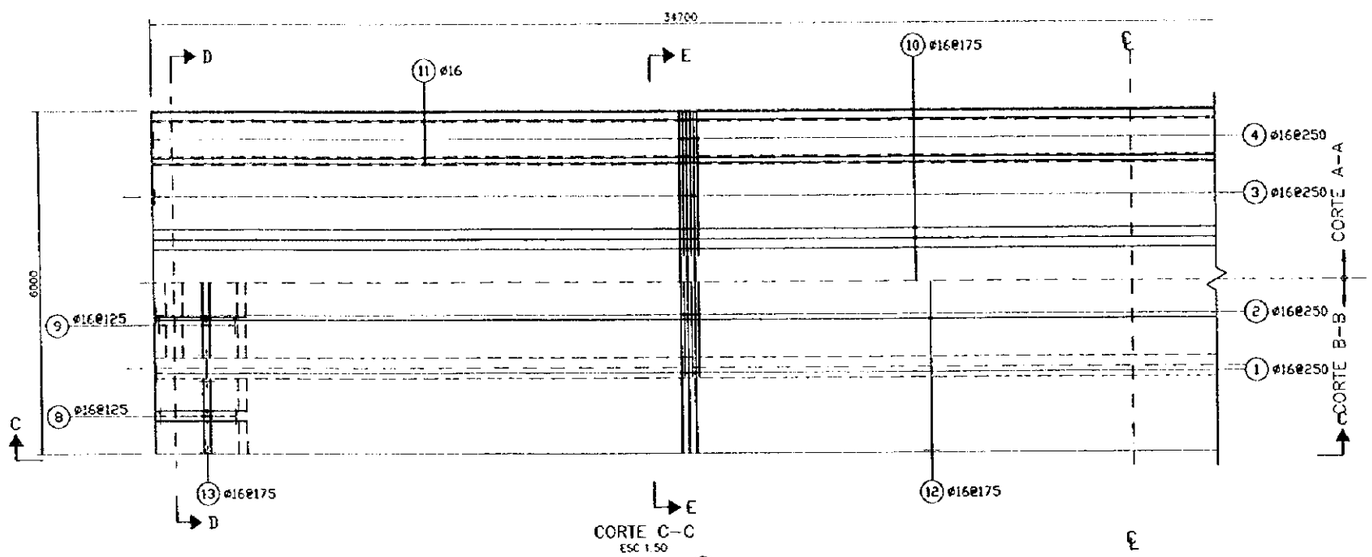
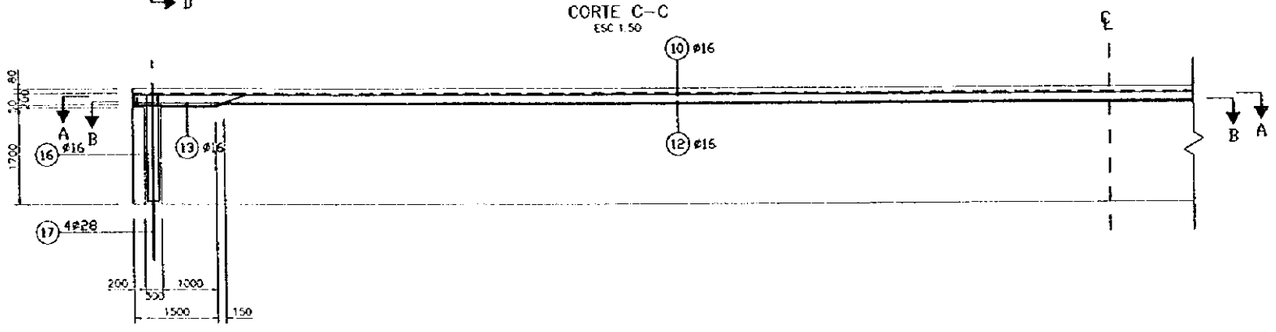
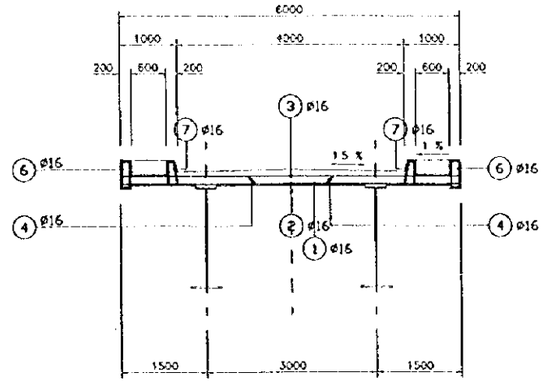
PLANTA DE LOSA
ESC 1:50



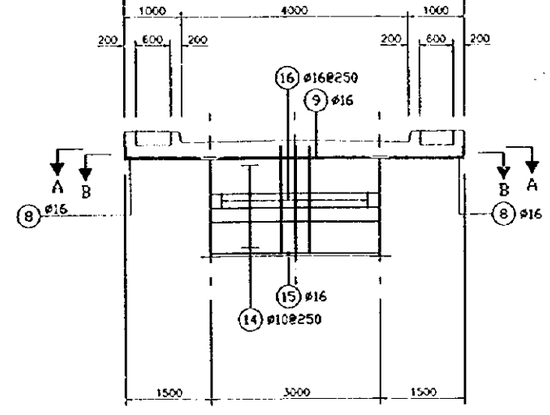
CORTE C–C
ESC 1:50



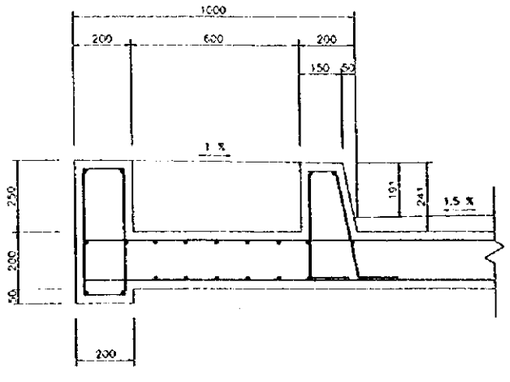
CORTE TRAVERSAL
CORTE E–E
ESC 1:50



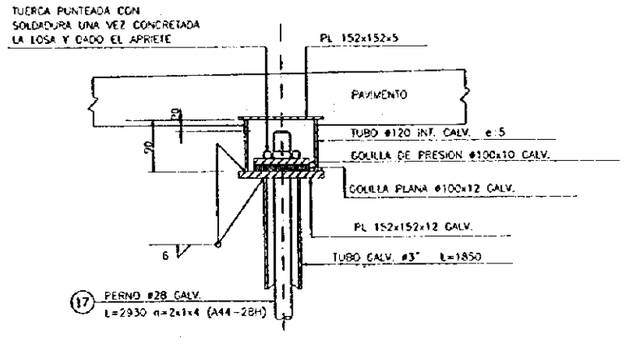
TRAVESAÑOS EXTREMOS
CORTE D–D
ESC 1:50



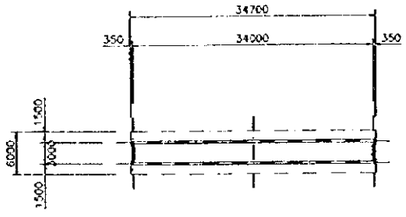
DETALLE DE PASILLO
ESC 1:10



DETALLE BARRAS ANTISISMICAS
ESC 1:5



PLANTA DE DISPOSICION



DIRECCION DE VIALIDAD
DEPARTAMENTO DE PUENTES

Puente: 1-SBI-L34_n2

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Dibujo
Fecha: November 1997

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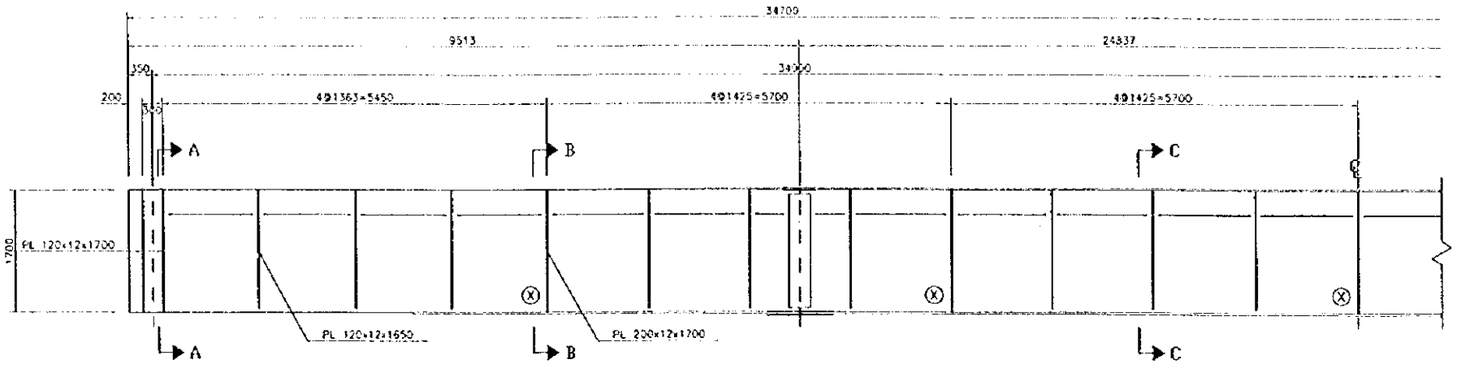
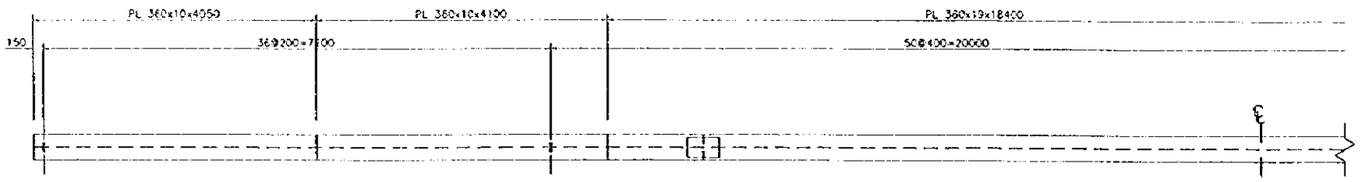
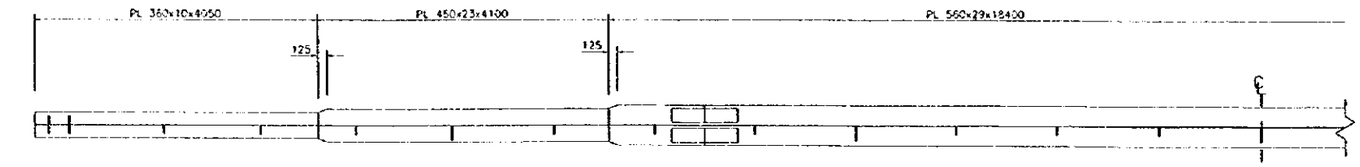
ELEVACION VIGA ACERO
ESC 1:40



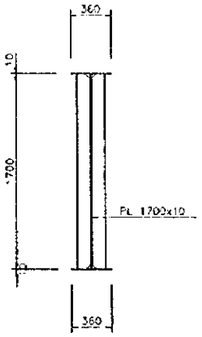
BRIDA SUPERIOR
ESC 1:40



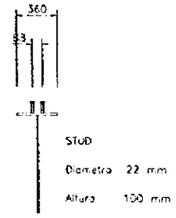
BRIDA INFERIOR
ESC 1:40



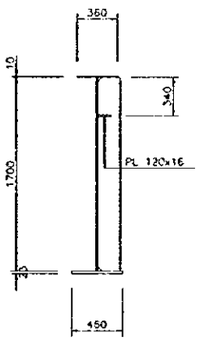
CORTE A–A
ESC 1:25



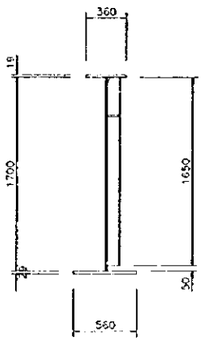
CONECTOR
ESC 1:25

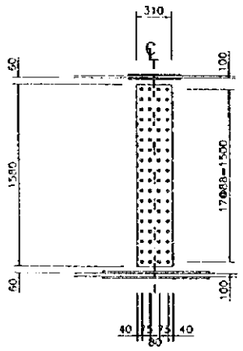


CORTE B–B EN PUNTOS X
ESC.1:25



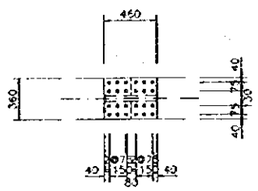
CORTE C–C
ESC.1:25





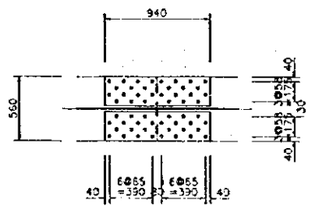
2-Spl PL 310x9x1580 (A52-34ES)
72-PERNO M22x30 (ASTM A490)

BRIDA SUPERIOR



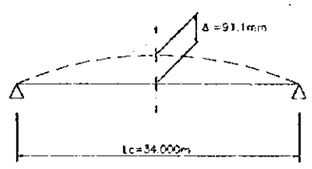
1-Spl PL 360x12x460 (A52-34ES)
2-Spl PL 155x12x460 (A52-34ES)
24-PERNO M22x45 (ASTM A490)

BRIDA INFERIOR



2-Spl PL 255x16x940 (A52-34ES)
1-Spl PL 560x16x940 (A52-34ES)
112-PERNO M22x65 (ASTM A490)

COMBADURA



DIRECCION DE VIALIDAD
DEPARTAMENTO DE PUENTES

Puente: 1-SBI-L34_n2	
Camino:	
Provincia:	Region:

Proyecto — Revisó

Vo Bo Ing. Jefe Depto. Puentes — Director de Vialidad

Dibujo
Fecha Noviembre 1997

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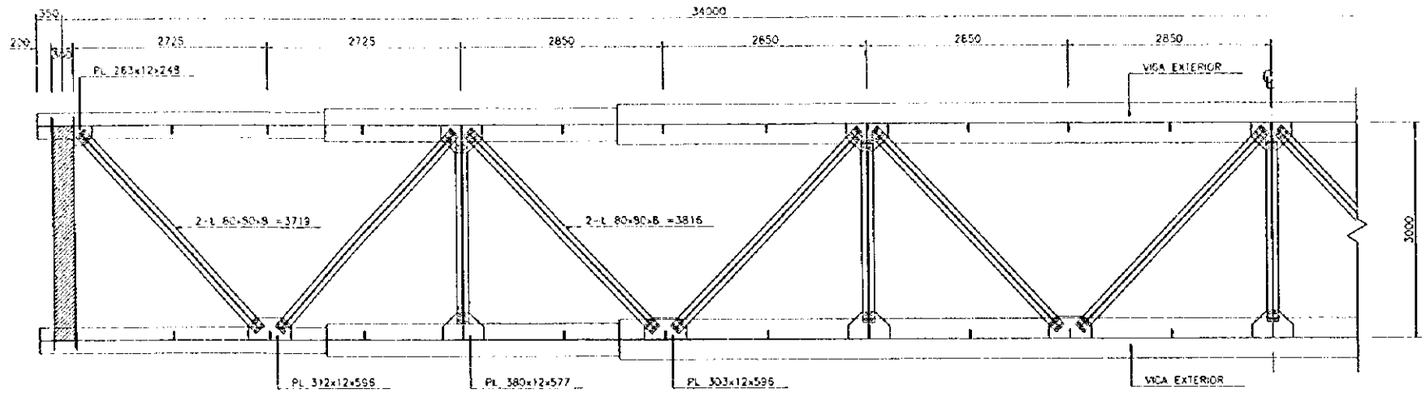
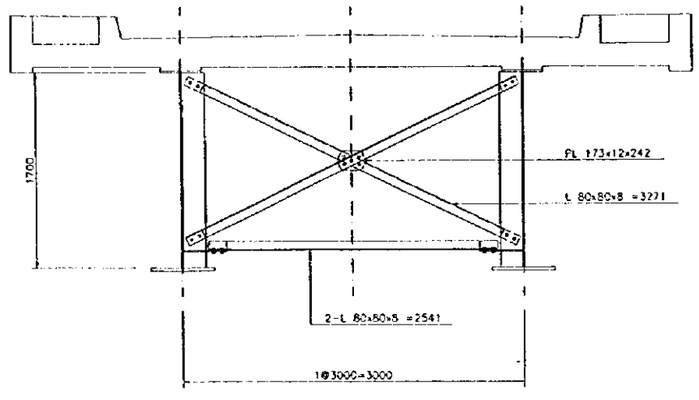
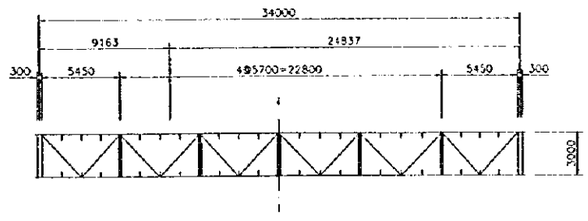
ARRIOSTRAMIENTO HORIZONTAL
ESC.1:40



ARRIOSTRAMIENTO VERTICAL
EN PUNTOS X
ESC.1:25



PLANTA DE DISPOSICION



DIRECCION DE VIALIDAD
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Puente: I-SBI-L34_n2

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Fecha Noviembre 1997

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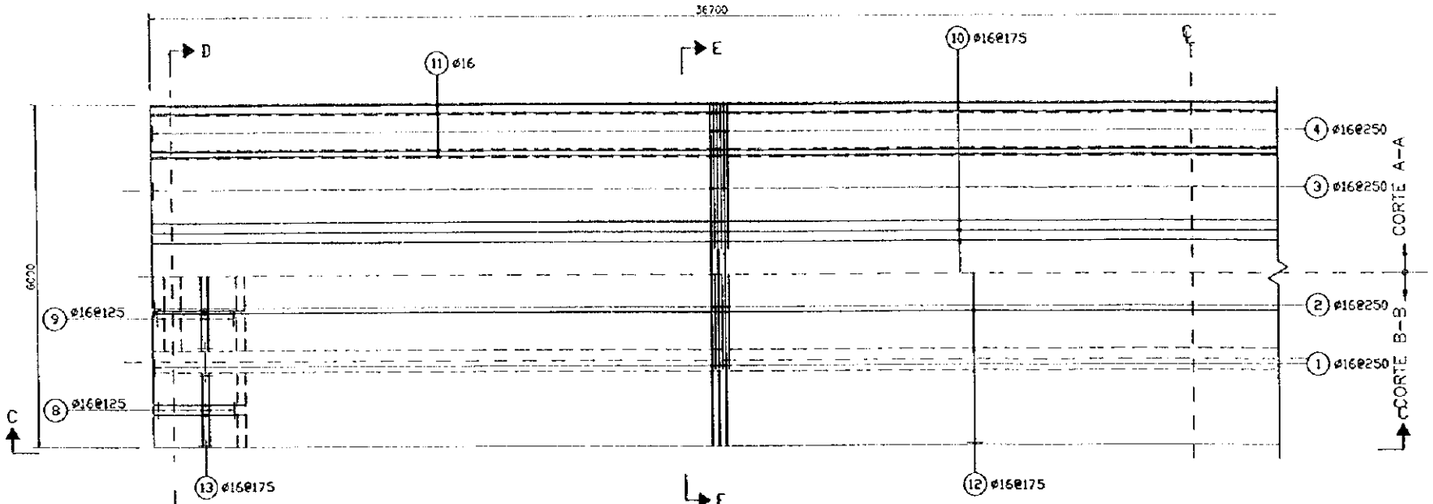
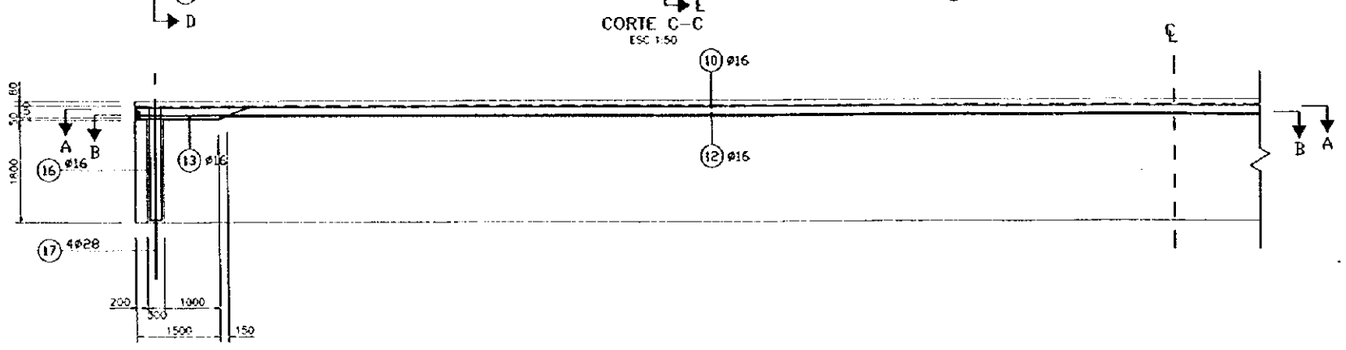
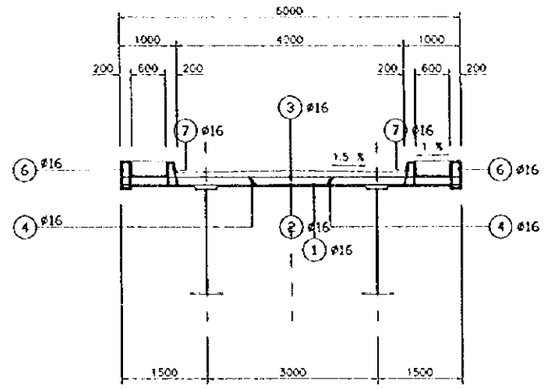
PLANTA DE LOSA
ESC 1:50



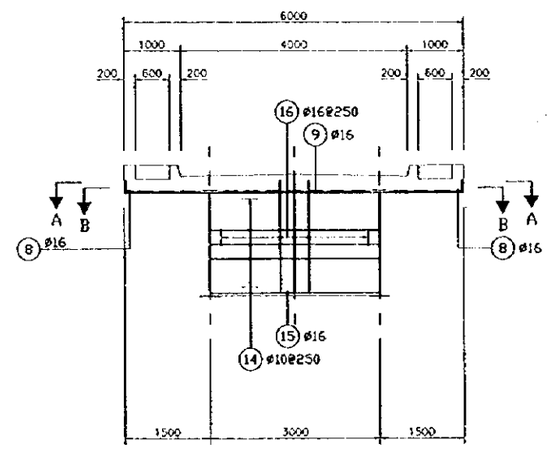
CORTE C–C
ESC 1:50



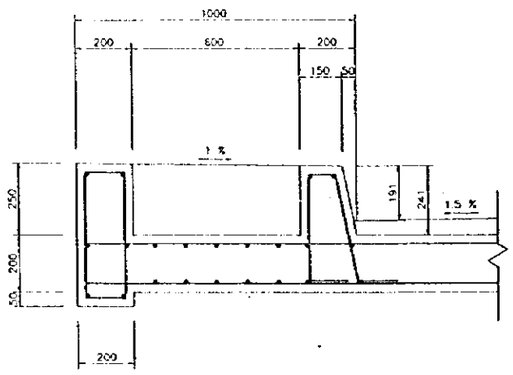
CORTE TRAVERSAL
CORTE E–E
ESC 1:50



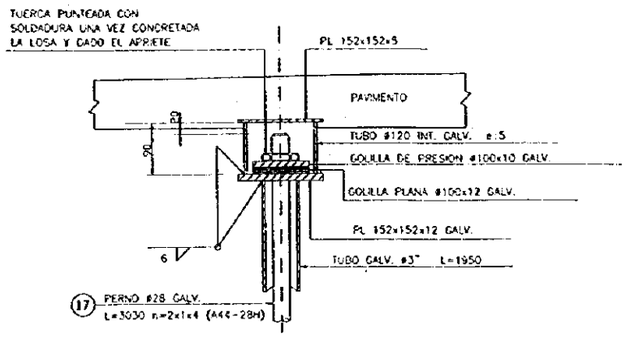
TRAVESAÑOS EXTREMOS
CORTE D–D
ESC 1:50



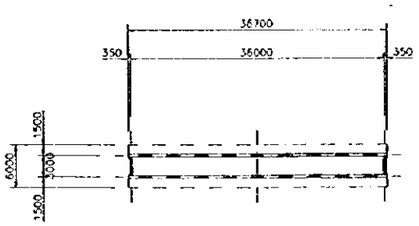
DETALLE DE PASILLO
ESC 1:10



DETALLE BARRAS ANTISISMICAS
ESC.1:5



PLANTA DE DISPOSICION



DIRECCION DE VIALIDAD
DEPARTAMENTO DE PUENTES

Puente:	I-SBI-L36_n2
Camino:	
Provincia:	Region:

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Vo Bo Ing. Jefe Depto Puentes — Director de Vialidad

Dibujo
Fecha: November 1997

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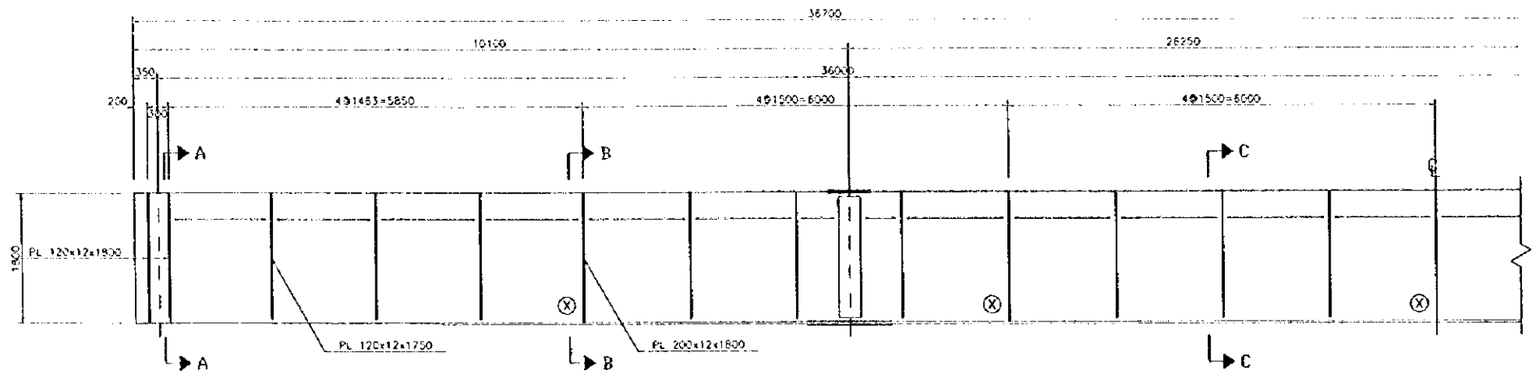
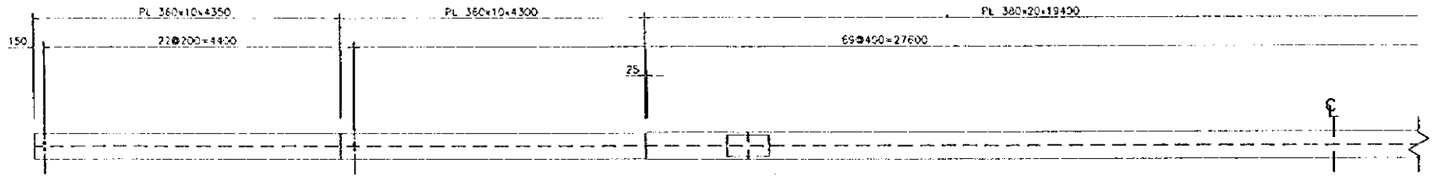
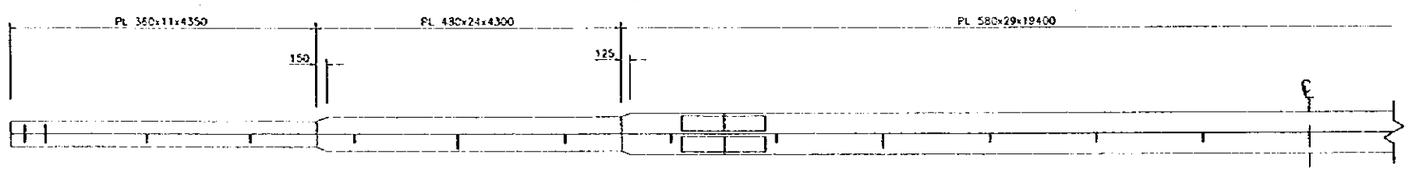
ELEVACION VIGA ACERO
ESC 1:40



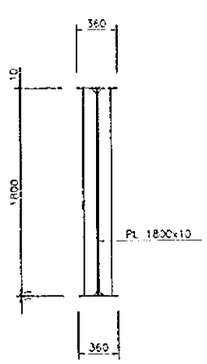
BRIDA SUPERIOR
ESC 1:40



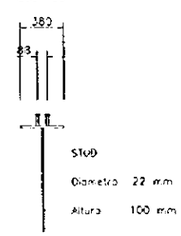
BRIDA INFERIOR
ESC 1:40



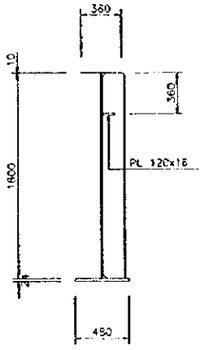
CORTE A-A
ESC 1:25



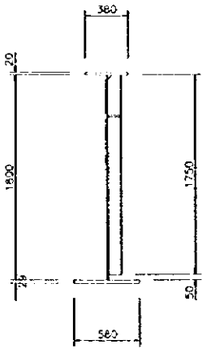
CONECTOR
ESC 1:25

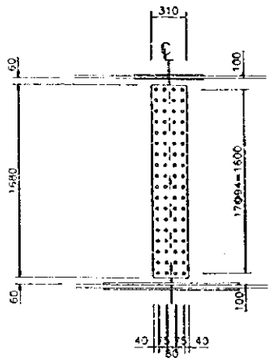


CORTE B-B
EN PUNTOS X
ESC 1:25



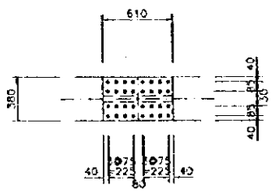
CORTE C-C
ESC 1:25





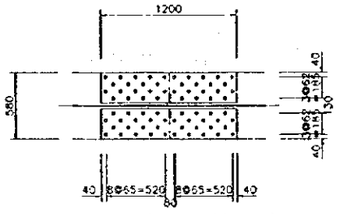
2-Spl PL 310x9x1680 (A52-34ES)
72-PERNO M22x30 (ASTM A490)

BRIDA SUPERIOR



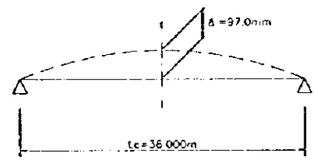
1-Spl PL 380x12x610 (A52-34ES)
2-Spl PL 165x12x610 (A52-34ES)
32-PERNO M22x45 (ASTM A490)

BRIDA INFERIOR



2-Spl PL 265x16x1200 (A52-34ES)
1-Spl PL 580x18x1200 (A52-34ES)
144-PERNO M22x65 (ASTM A490)

COMBADURA



DIRECCION DE VIALIDAD
DEPARTAMENTO DE PUENTES

Puente: I-SBI-L36_n2
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Proyecto
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Director de Vialidad

Dibujo
Fecha: November 1997

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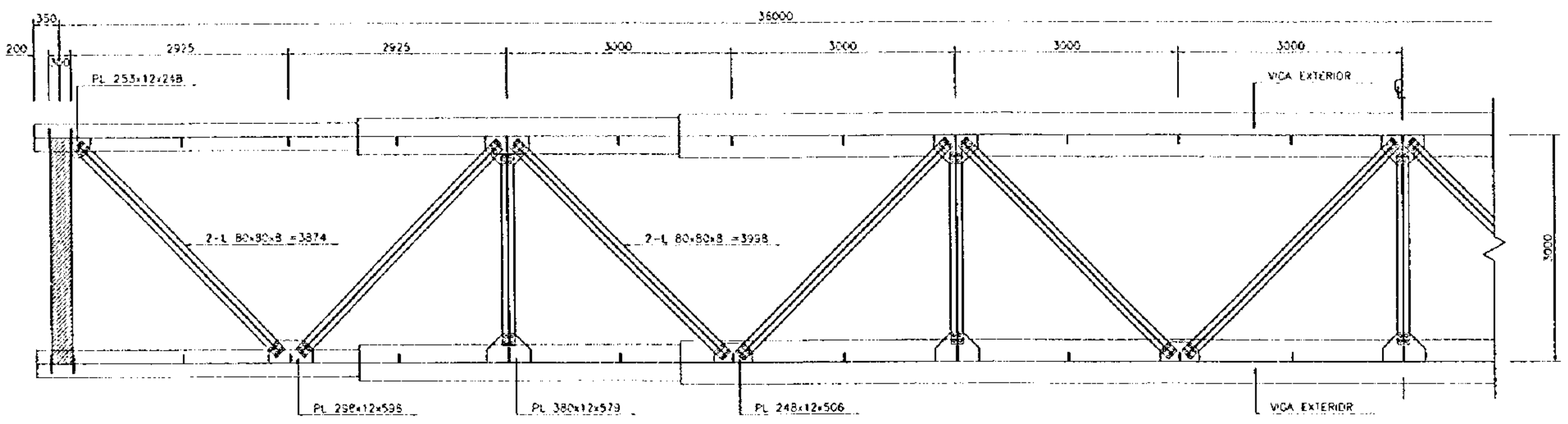
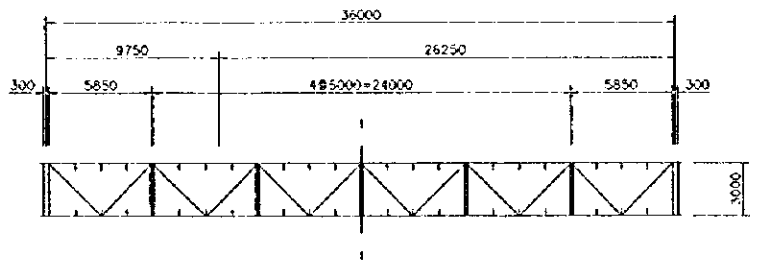
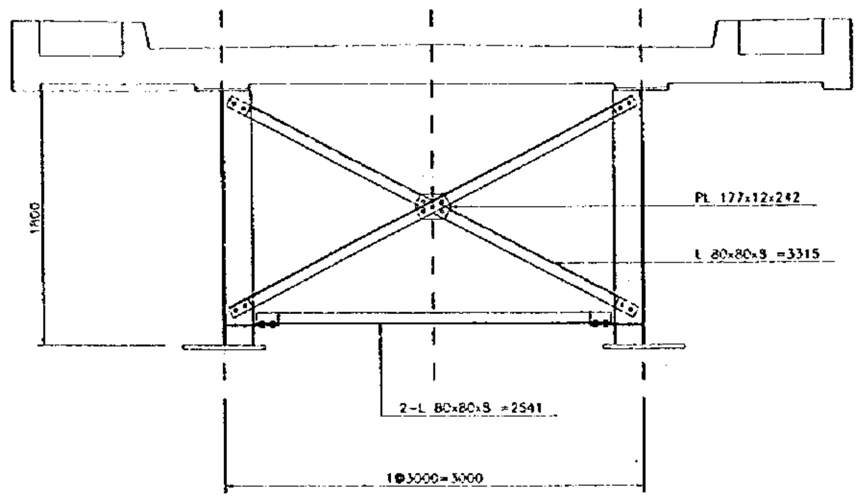
ARRIOSTRAMIENTO HORIZONTAL
ESC 1:40



PLANTA DE DISPOSICION



ARRIOSTRAMIENTO VERTICAL EN PUNTOS X
ESC 1:25



DIRECCION DE VIALIDAD
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Puente: 1-SBI-L36_n2
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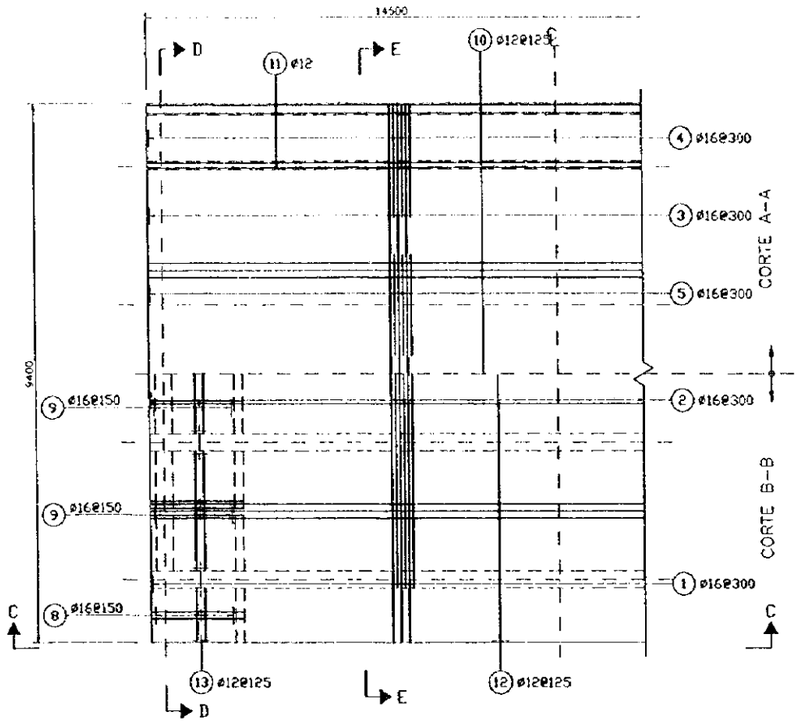
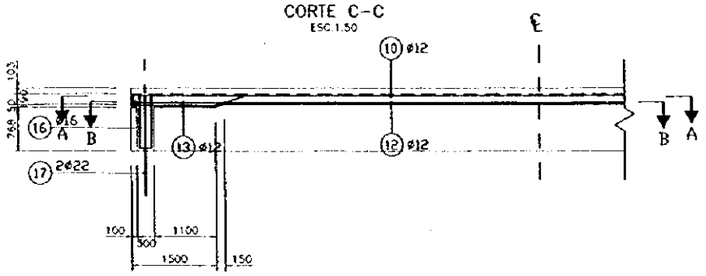
Director de Vialidad

Dibujo
Fecha November 1997

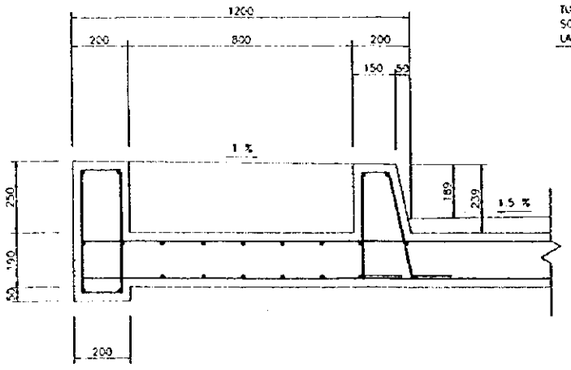
PLANTA DE LOSA
ESC 1:50



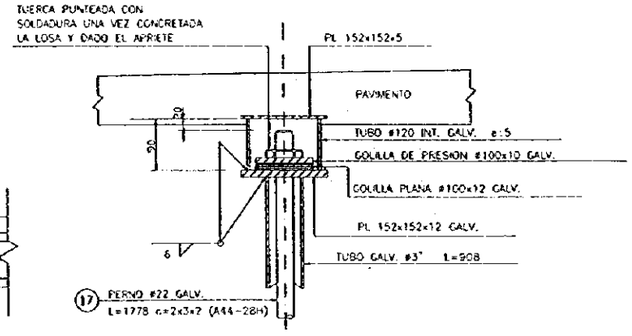
CORTE C-C
ESC.1:50



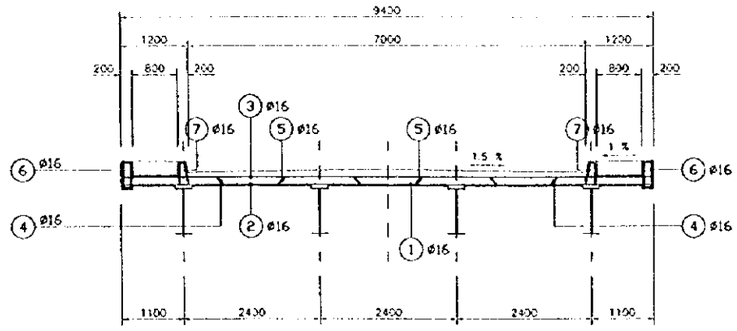
DETALLE DE PASILLO
ESC 1:10



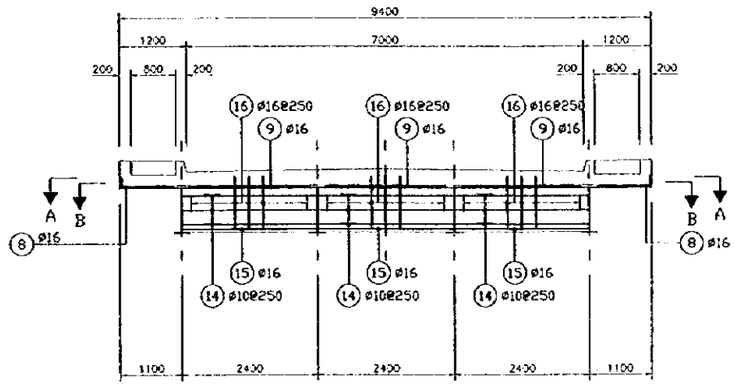
DETALLE BARRAS ANTISISMICAS
ESC.1:5



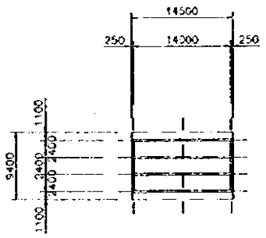
CORTE TRAVERSAL
CORTE E-E
ESC 1:50



TRAVESAÑOS EXTREMOS
CORTE D-D
ESC 1:50



PLANTA DE DISPOSICION



DIRECCION DE VIALIDAD
DEPARTAMENTO DE PUENTES

Puente: 2-SRH-L14_n4
Camino:
Provincia: Region:

Proyecto
Revisó
Vo Bo Ing. Jefe Depto Puentes
Director de Vialidad

Dibujo:
Fecha: Noviembre 1997

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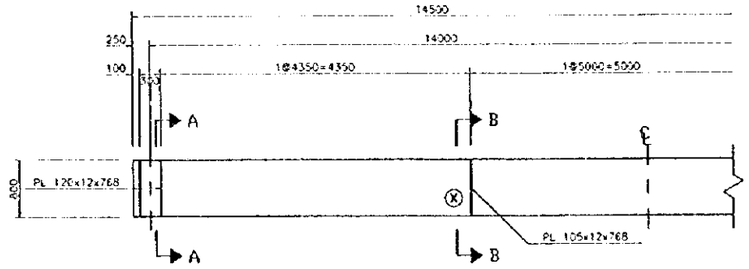
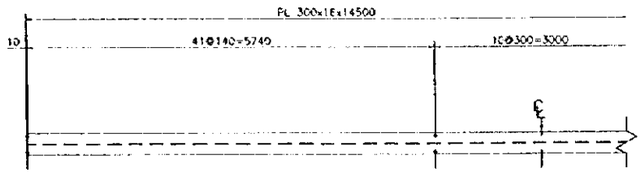
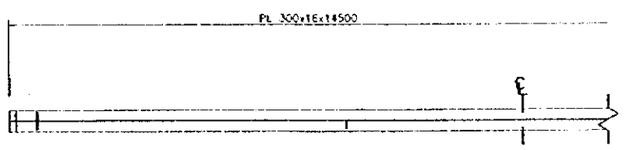
ELEVACION VIGA ACERO
ESC 1:40



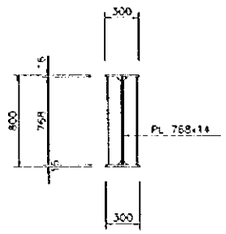
BRIDA SUPERIOR
ESC 1:40



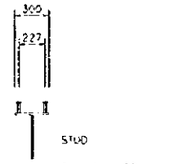
BRIDA INFERIOR
ESC 1:40



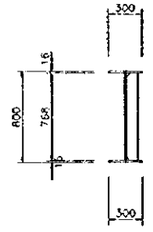
CORTE A–A
ESC 1:25



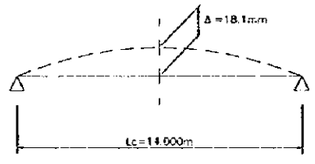
CONECTOR
ESC 1:25



CORTE B–B
EN PUNTOS X
ESC 1:25



COMBADURA



DIRECCION DE VIALIDAD
DEPARTAMENTO DE PUENTES

Puente: 2-SRH-L14_n4
Camino:
Provincia: Region:

Proyecto
Revisa
Vo Bo Ing. Jefe Depto. Puentes
Director de Vialidad

Dibujo
Fecha: November 1997

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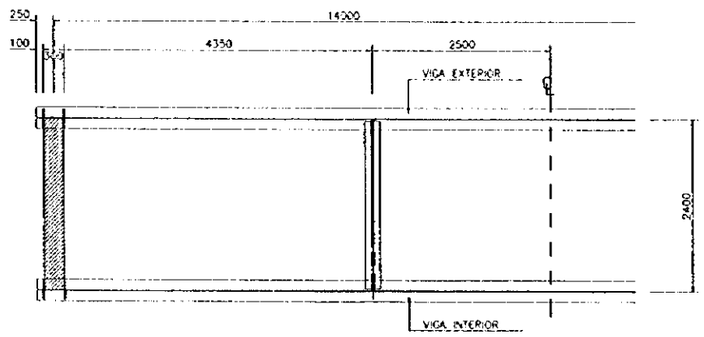
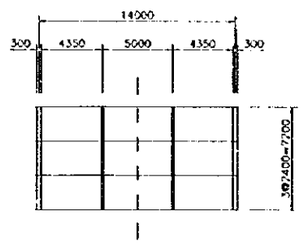
ARRIOSTRAMIENTO HORIZONTAL

ESC.1:40



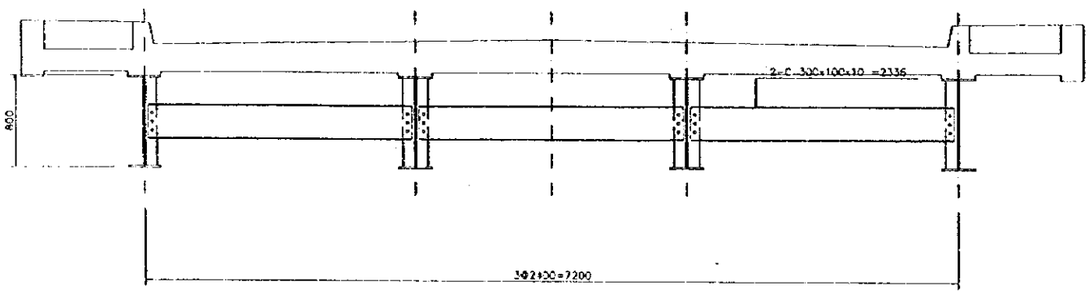
PLANTA DE DISPOSICION



ARRIOSTRAMIENTO VERTICAL

EN PUNTOS X

ESC.1:25



DIRECCION DE VIALIDAD
DEPARTAMENTO DE PUENTES

Puente: 2-SRH-L14_n4

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Dwgs
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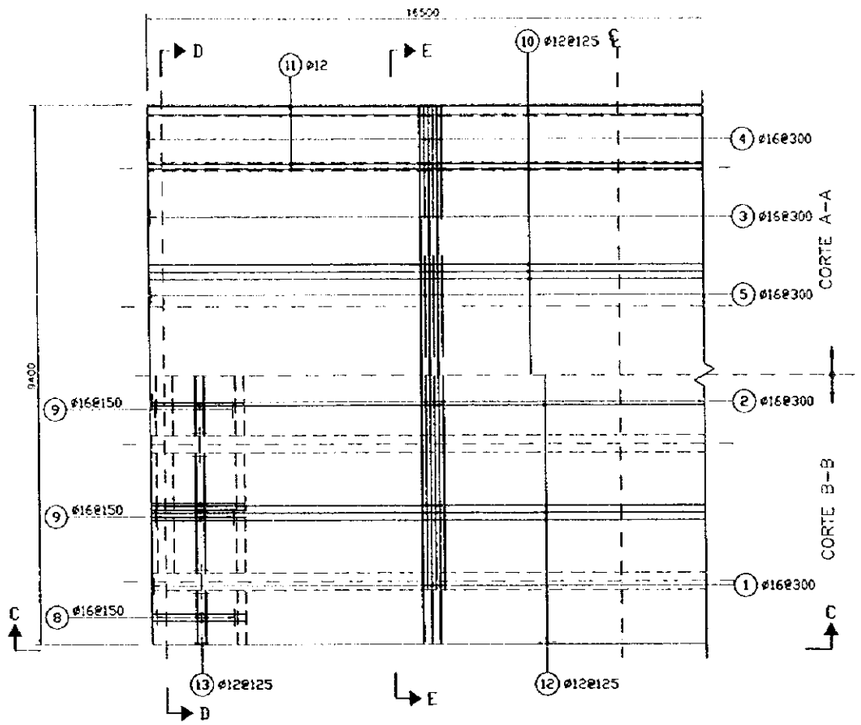
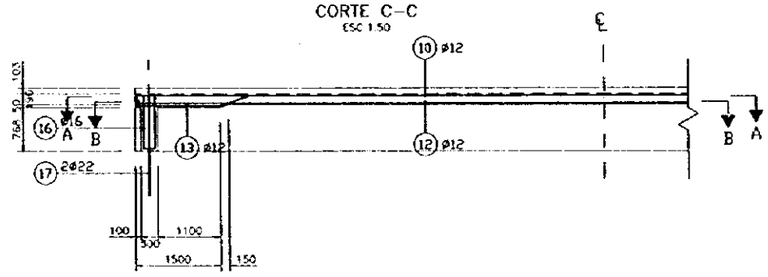
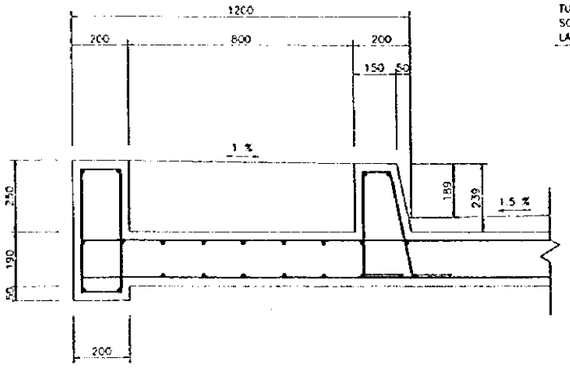
PLANTA DE LOSA
ESC 1:50



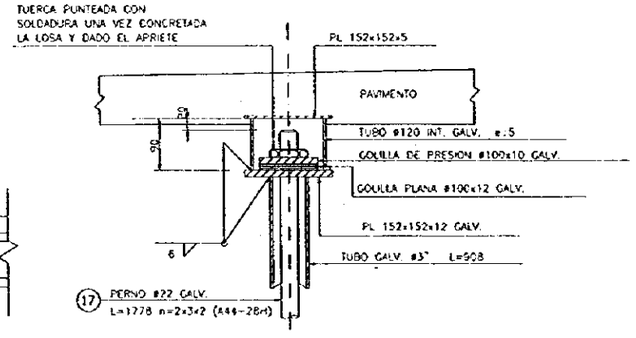
CORTE C-C
ESC 1:50



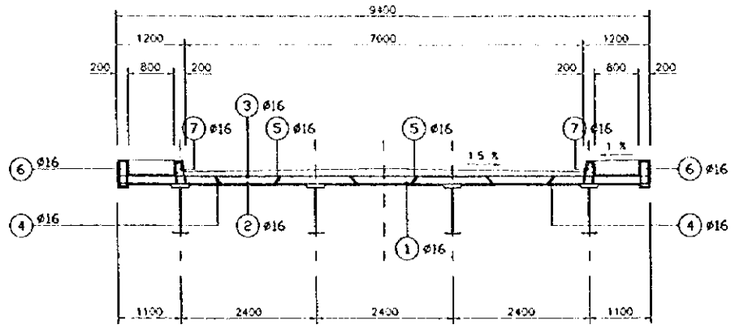
DETALLE DE PASILLO
ESC 1:10



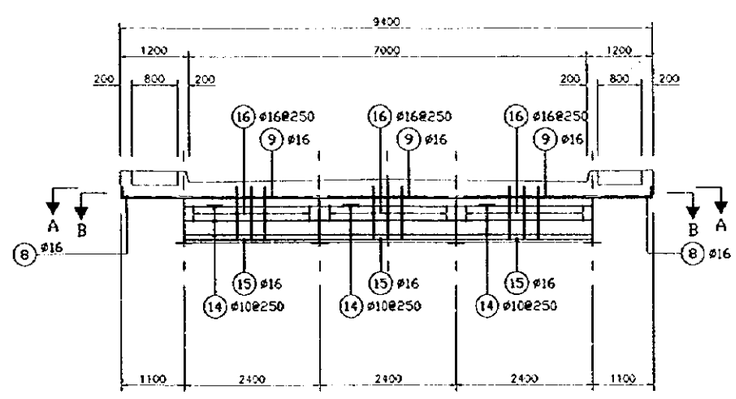
DETALLE BARRAS ANTISISMICAS
ESC.1:5



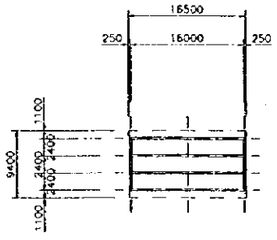
CORTE TRAVERSAL
CORTE E-E
ESC 1:50



TRAVESAÑOS EXTREMOS
CORTE D-D
ESC 1:50



PLANTA DE DISPOSICION



DIRECCION DE VIALIDAD
DEPARTAMENTO DE PUENTES

Puente: 2-SRH-L16_n4	
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Dibujo Fecha: Noviembre 1997	

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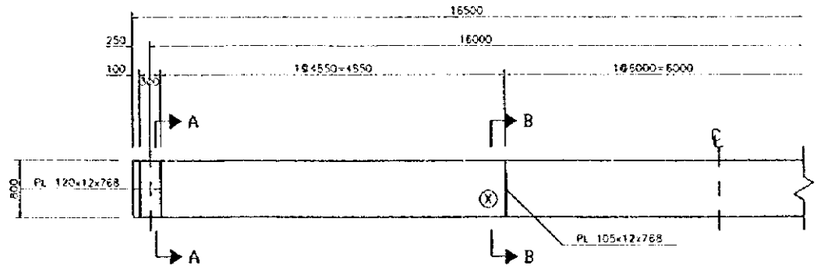
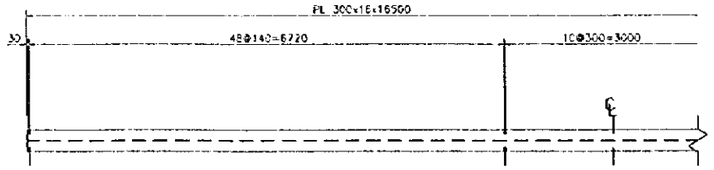
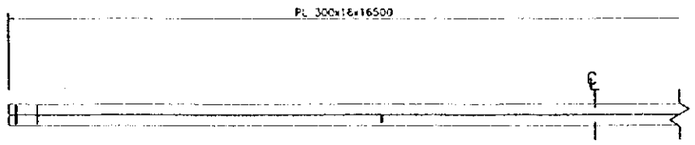
ELEVACION VIGA ACERO
ESC 1:40



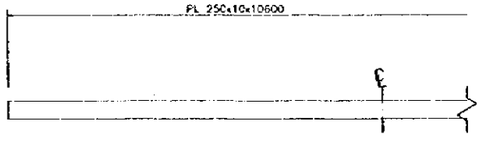
BRIDA SUPERIOR
ESC 1:40



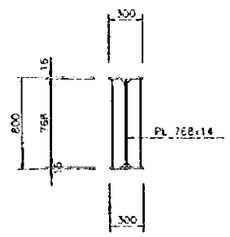
BRIDA INFERIOR
ESC 1:40



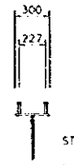
REFURZO BRIDA INTERIOR
ESC 1:40



CORTE A-A
ESC 1:25

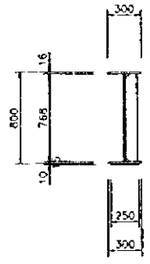


CONECTOR
ESC 1:25

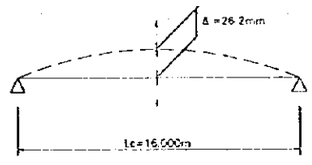


STUD
Diametro 22 mm
Altura 100 mm

CORTE B-B
EN PUNTOS X
ESC 1:25



COMBADURA



DIRECCION DE VIALIDAD
DEPARTAMENTO DE PUENTES

Puente: 2-SRH-L16_n4

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Director de Vialidad

Dibujo
Fecha: Noviembre 1997

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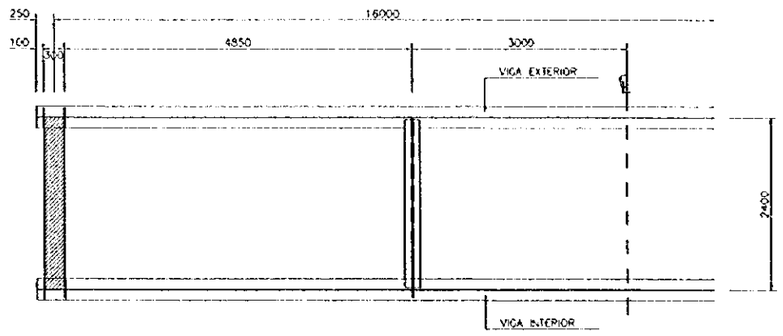
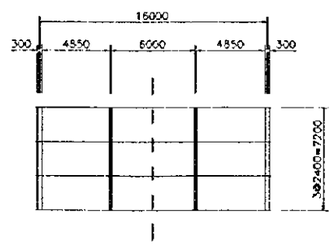
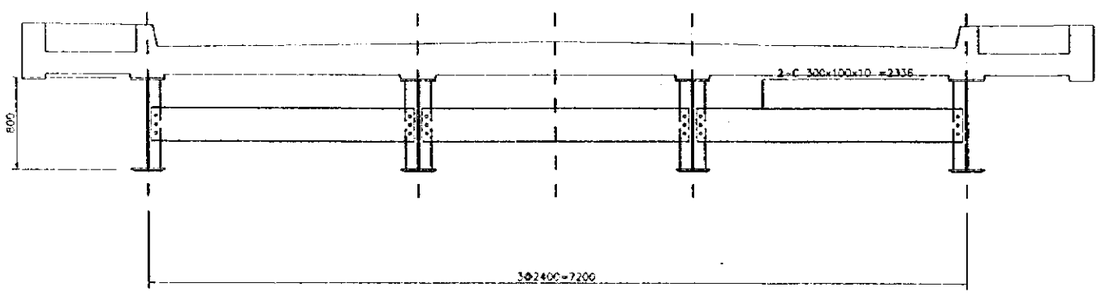
ARRIOSTRAMIENTO HORIZONTAL
ESC 1:40



PLANTA DE DISPOSICION



ARRIOSTRAMIENTO VERTICAL
EN PUNTOS X
ESC 1:25



DIRECCION DE VIALIDAD
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Fecha: November 1997

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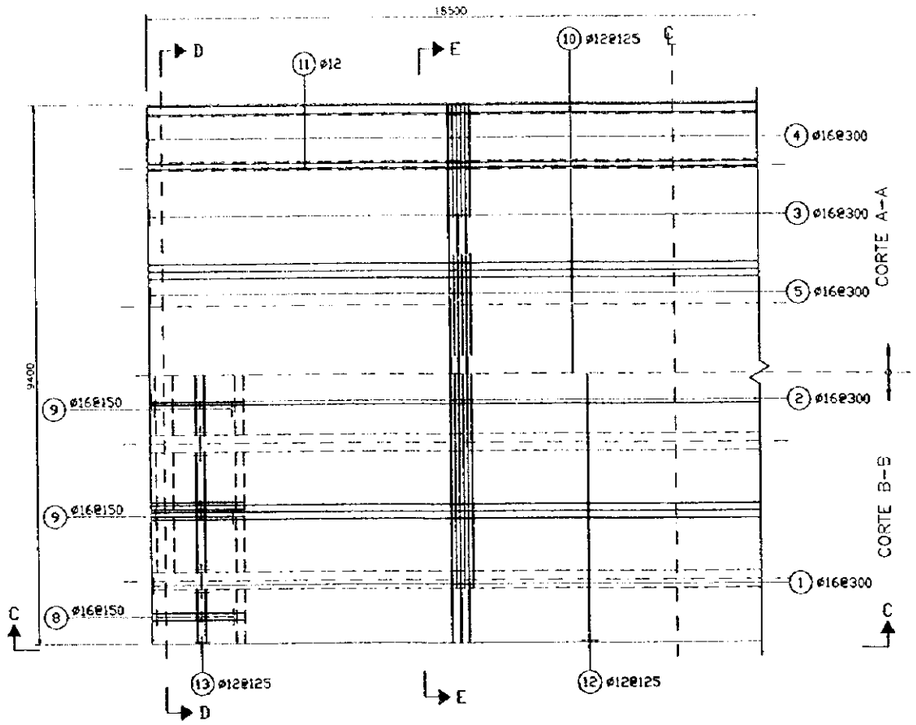
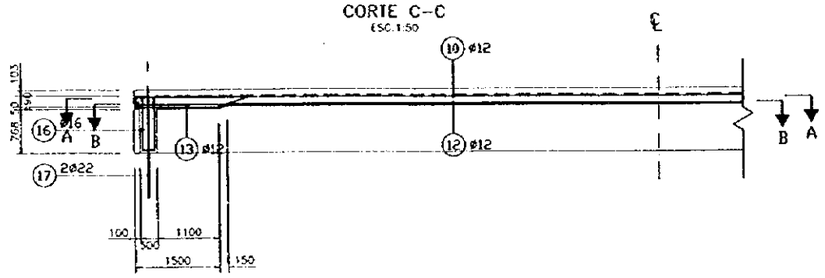
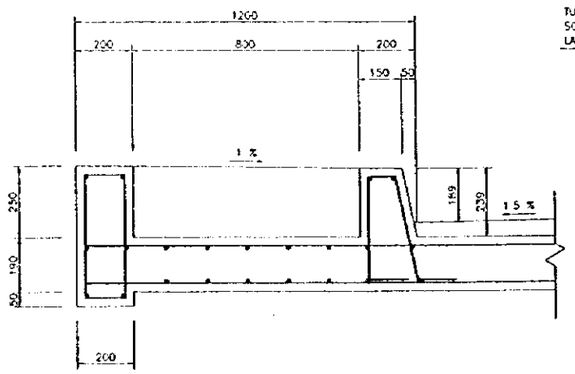
PLANTA DE LOSA
ESC. 1:50



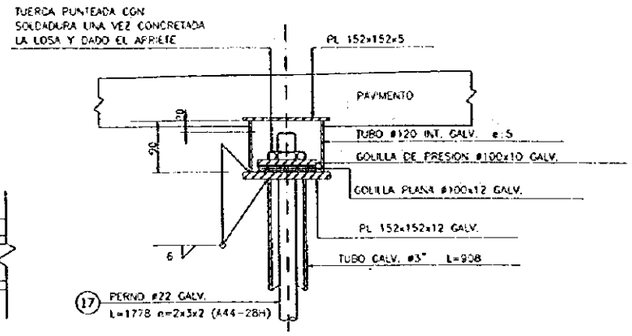
CORTE C-C
ESC. 1:50



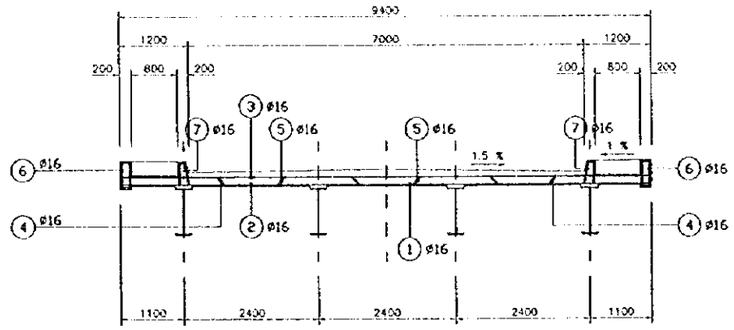
DETALLE DE PASILLO
ESC. 1:10



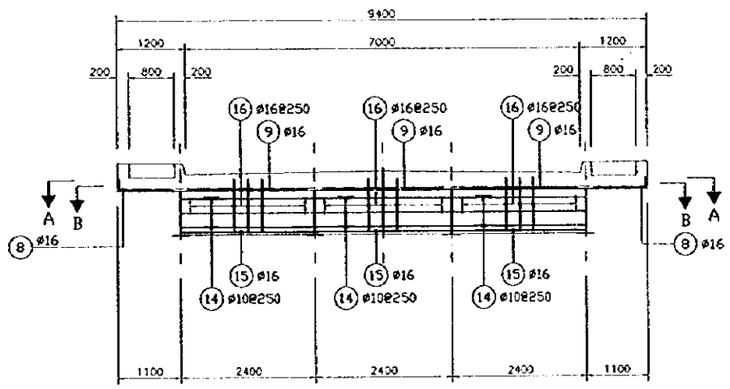
DETALLE BARRAS ANTISISMICAS
ESC. 1:5



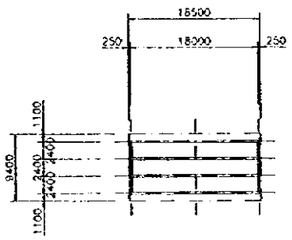
CORTE TRAVERSAL
CORTE E-E
ESC. 1:50



TRAVESAÑOS EXTREMOS
CORTE D-D
ESC. 1:50



PLANTA DE DISPOSICION



DIRECCION DE VIALIDAD
DEPARTAMENTO DE PUENTES

Puente: 2-SRH-L18_n4

Camino:

Provincia: | Region:

Proyecto | Revisó

Vo Bo Ing. Jefe Depto Puentes | Director de Vialidad

Dibujo
Fecha Noviembre 1997

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