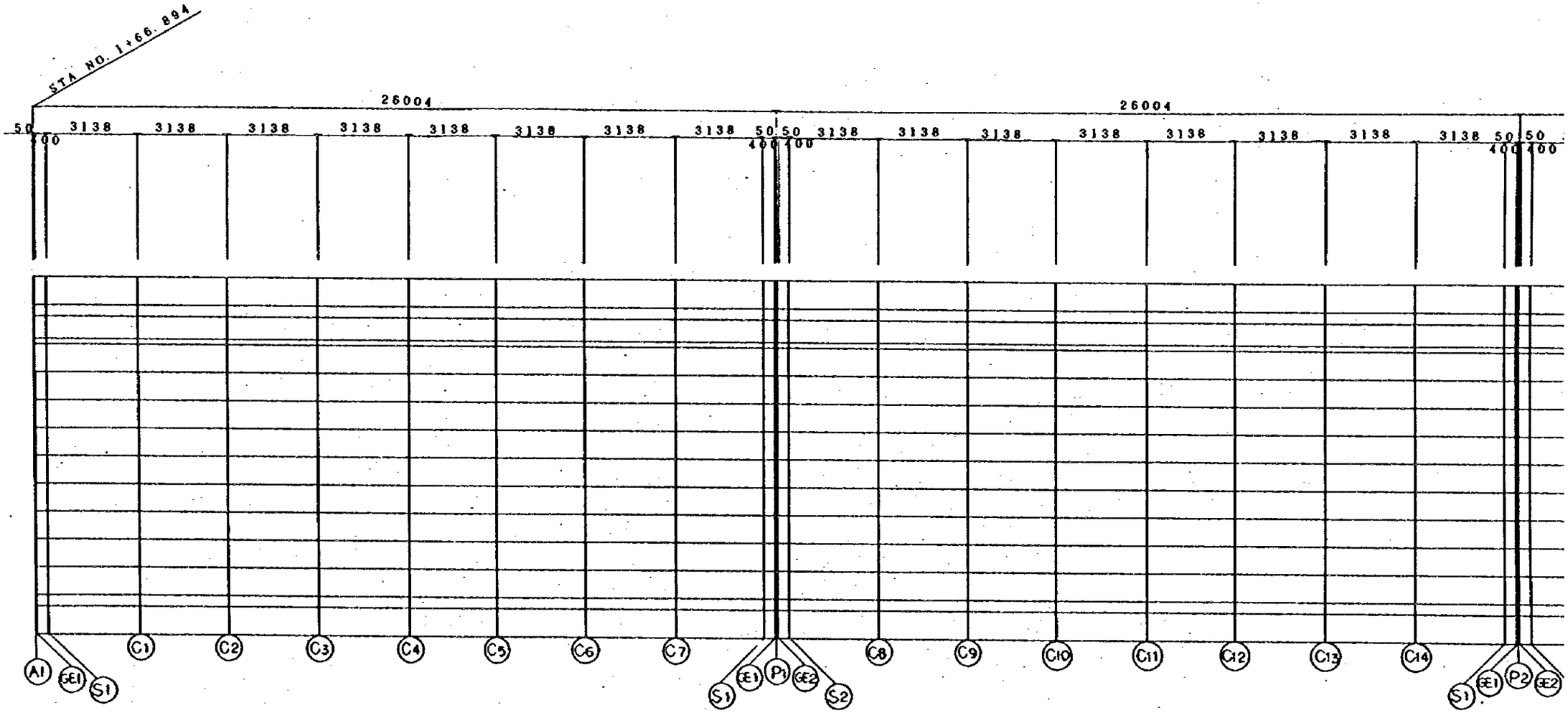
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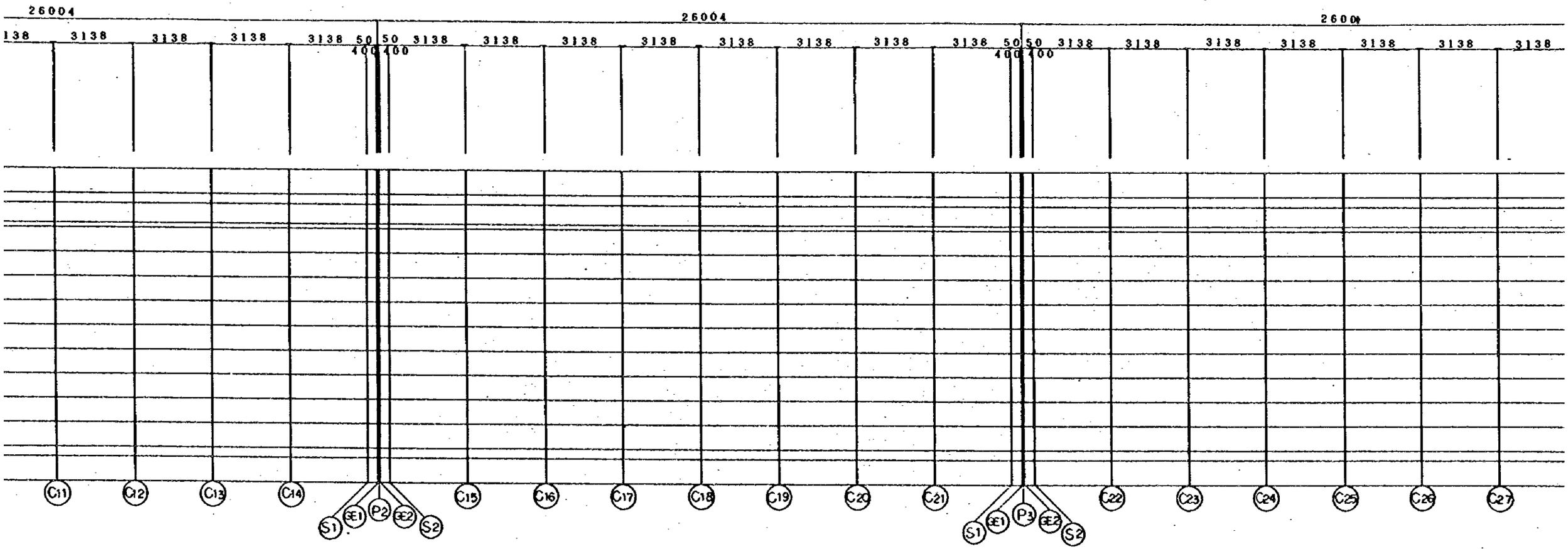
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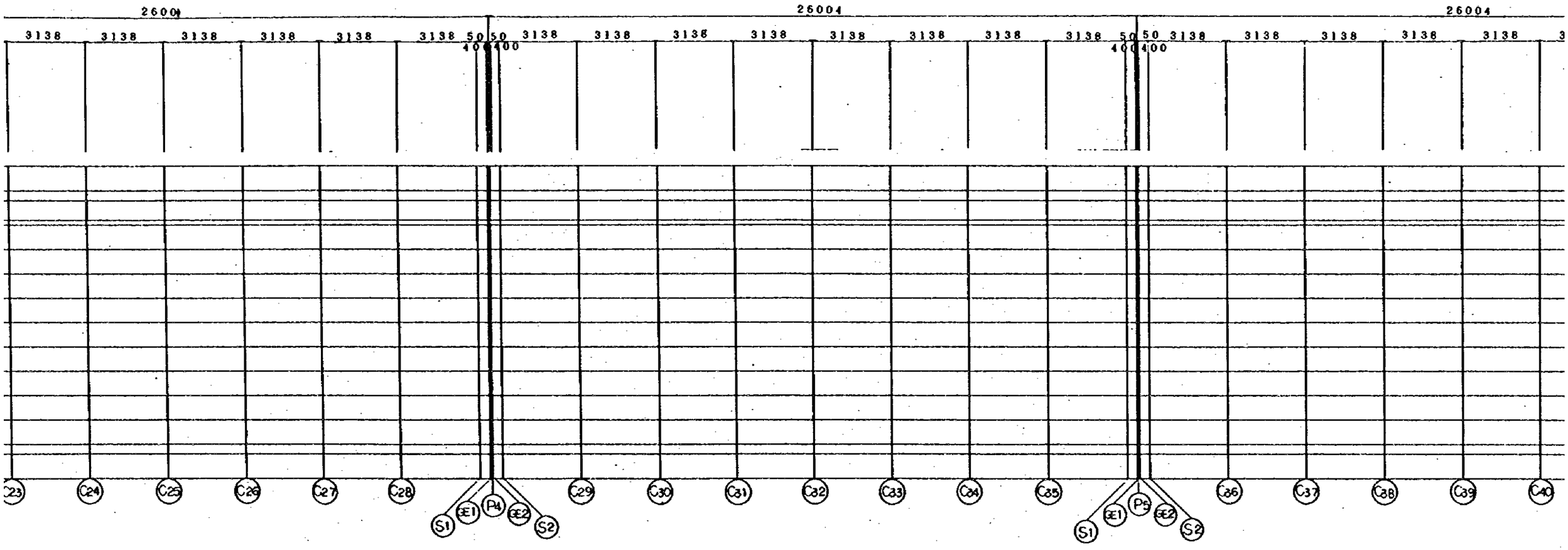
C27

R/A-3 BARKA

B-LINE



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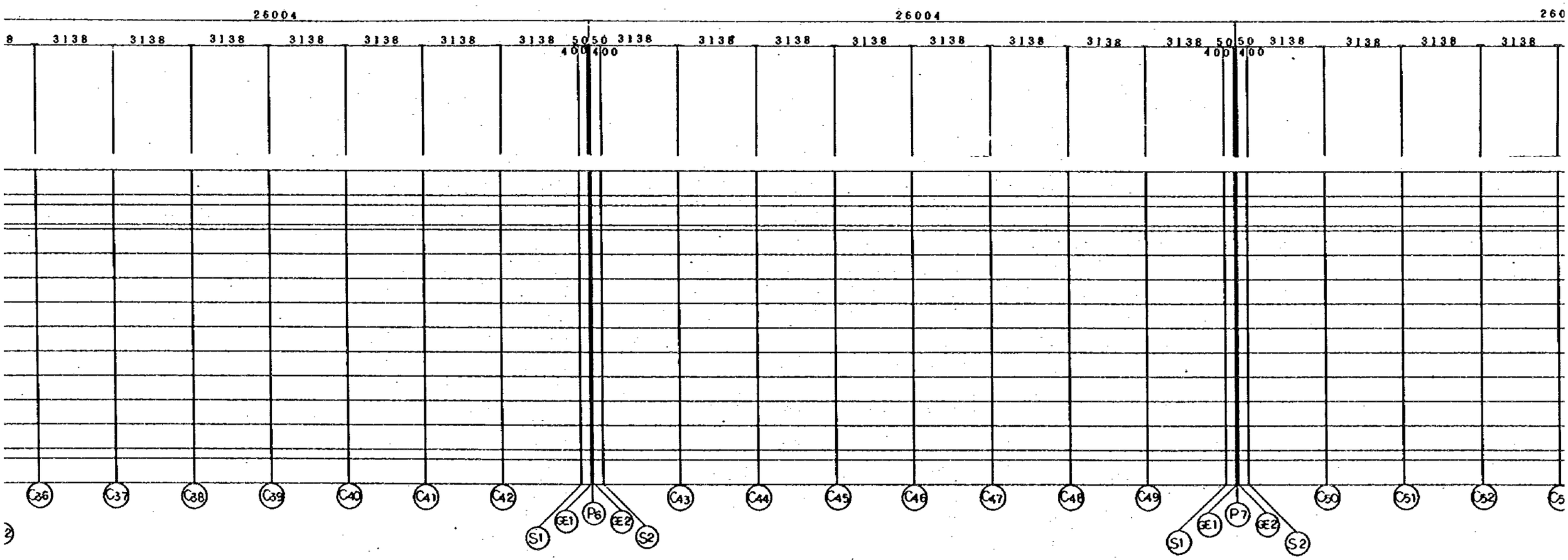
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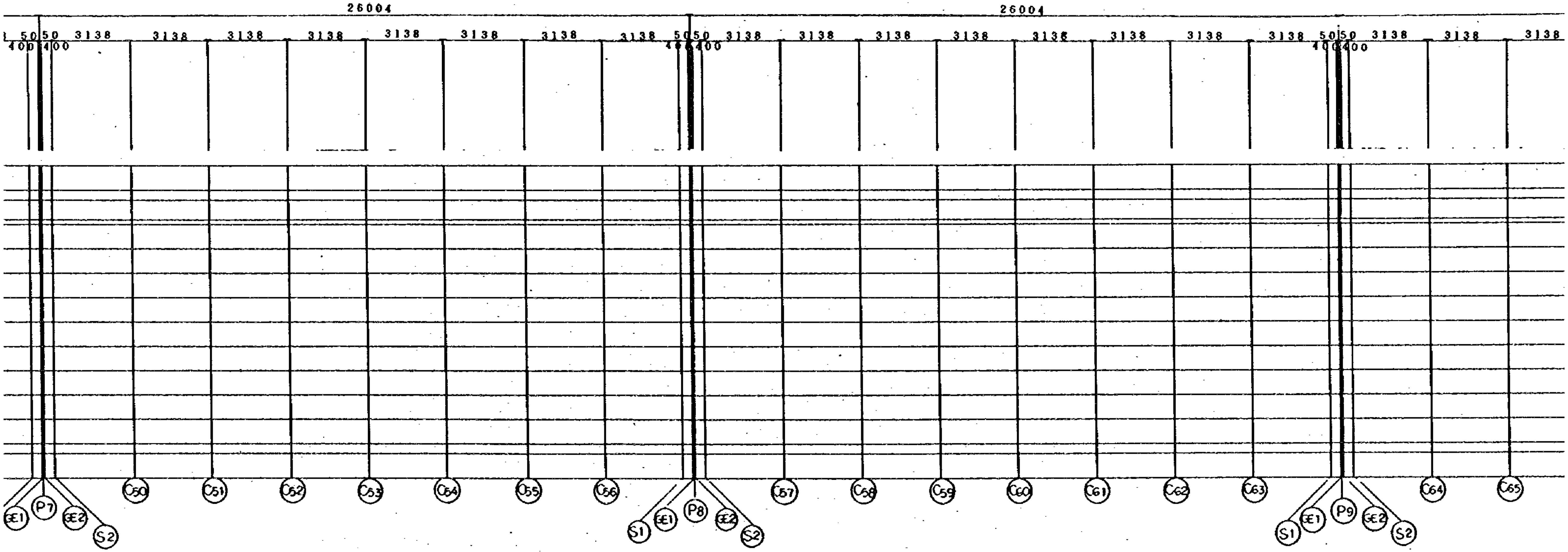
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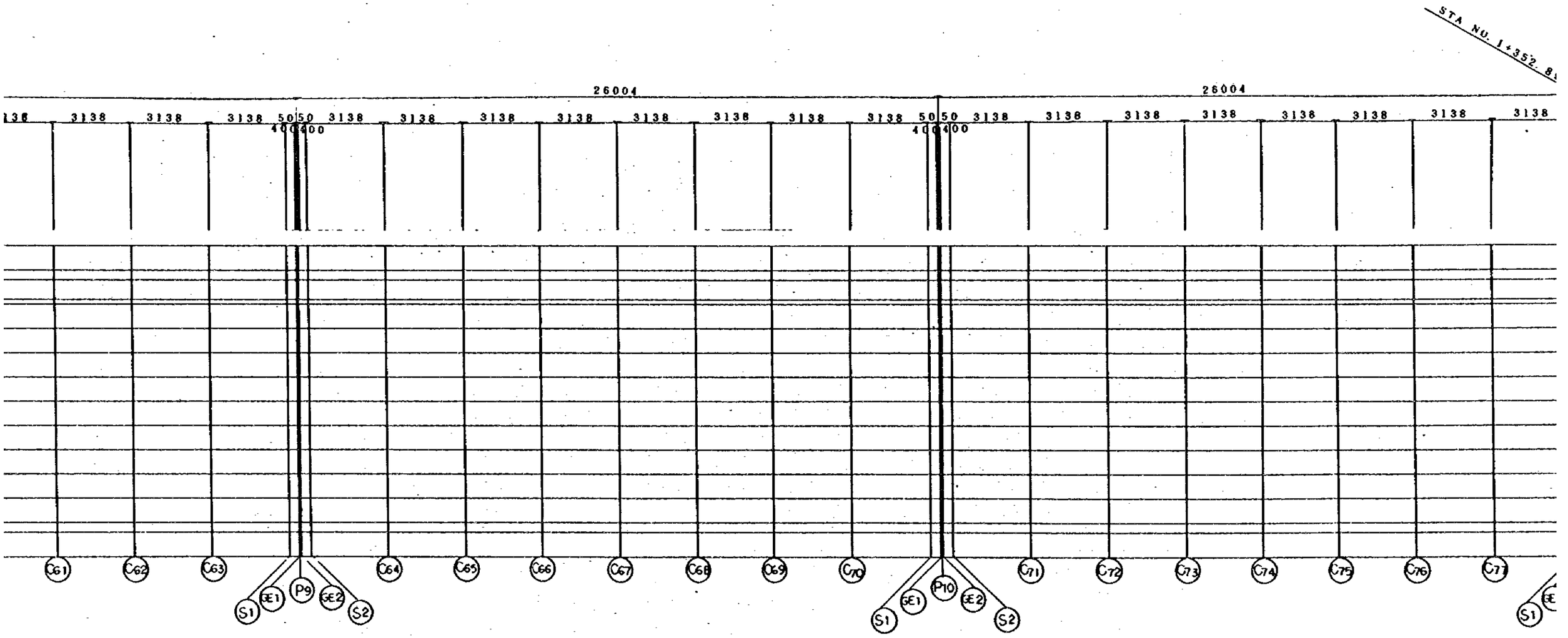
C50 C51 C52 C53 C54 C55 C56
S1 GE1 P8 GE2 S2
C57 C58 C59 C60 C61 C62 C63
S1 GE1 P9 GE2 S2
C64 C65



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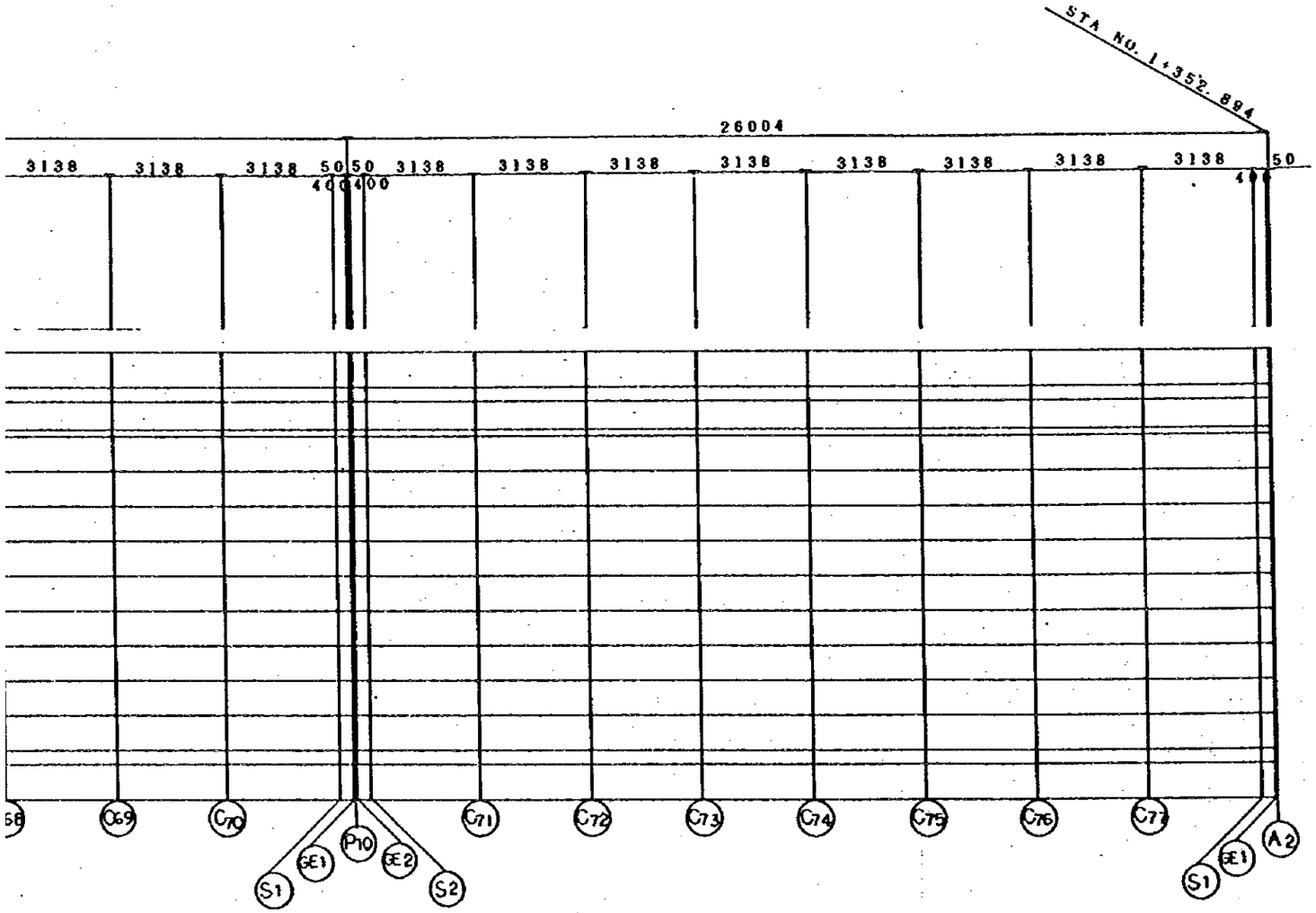

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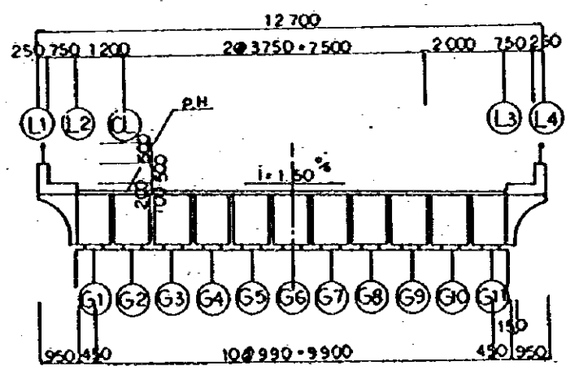


JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	CLIENT : MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS
	PROJECT: D/D ON ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY
JICA STUDY TEAM PACIFIC CONSULTANTS INTERNATIONAL FUKUYAMA CONSULTANTS INTERNATIONAL	TITLE FRAMING PLAN RA/03 AT B-LINE
	DATE / DWG NO. B-5

BARKA(B)

SECTION		A1	A1-GE1	A1-S1	C4	P1-S1	P1-GE1	P1	P1-GE2	P1-S2	C11
STATION		1 + 66.8940	1 + 66.9440	1 + 67.3440	1 + 79.8940	1 + 92.4440	1 + 92.8440	1 + 92.8940	1 + 92.9440	1 + 93.3440	1 + 105.8940
L1	X	0	0.05	0.45	13	25.55	25.95	26	26.05	26.45	39
	Y	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35
	Z	21.3796	21.3803	21.386	21.557	21.7123	21.717	21.7176	21.7181	21.7228	21.8612
L2	X	0	0.05	0.45	13	25.55	25.95	26	26.05	26.45	39
	Y	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35
	Z	21.4645	21.4653	21.471	21.642	21.7973	21.802	21.8025	21.8031	21.8078	21.9462
CL	X	0	0.05	0.45	13	25.55	25.95	26	26.05	26.45	39
	Y	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15
	Z	21.4465	21.4473	21.453	21.624	21.7793	21.784	21.7846	21.7851	21.7898	21.9282
G6(PIER CENTER)	X	0	0.05	0.45	13	25.55	25.95	26	26.05	26.45	39
	Y	0	0	0	0	0	0	0	0	0	0
	Z	21.3843	21.385	21.3907	21.5618	21.717	21.7217	21.7223	21.7229	21.7276	21.8659
L3	X	0	0.05	0.45	13	25.55	25.95	26	26.05	26.45	39
	Y	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35
	Z	21.3041	21.3048	21.3105	21.4815	21.6368	21.6415	21.6421	21.6426	21.6473	21.7857
L4	X	0	0.05	0.45	13	25.55	25.95	26	26.05	26.45	39
	Y	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35
	Z	21.189	21.1898	21.1955	21.3665	21.5218	21.5265	21.527	21.5276	21.5323	21.6707

NOTES:

	P1-GE1	P1	P1-GE2	P1-S2	C11	P2-S1	P2-GE1	P2	P2-GE2	P2-S2	C18	P3-S1	P3-GE1	P3	P3-GE2	P3-S2	C25	P4-S1	P4-GE1	P4
440	1 + 92.8440	1 + 92.8940	1 + 92.9440	1 + 93.3440	1 + 105.8940	1 + 118.4440	1 + 118.8440	1 + 118.8940	1 + 118.9440	1 + 119.3440	1 + 131.8940	1 + 144.4440	1 + 144.8440	1 + 144.8940	1 + 144.9440	1 + 145.3440	1 + 157.8940	1 + 170.4440	1 + 170.8440	1 + 170.
.55	25.95	26	26.05	26.45	39	51.55	51.95	52	52.05	52.45	65	77.55	77.95	78	78.05	78.45	91	103.55	103.95	
.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	
123	21.717	21.7176	21.7181	21.7228	21.8612	21.9838	21.9875	21.988	21.9884	21.992	22.0978	22.1878	22.1904	22.1908	22.1911	22.1937	22.2668	22.3242	22.3258	22.
.55	25.95	26	26.05	26.45	39	51.55	51.95	52	52.05	52.45	65	77.55	77.95	78	78.05	78.45	91	103.55	103.95	
.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	
973	21.802	21.8025	21.8031	21.8078	21.9462	22.0688	22.0725	22.0729	22.0734	22.077	22.1828	22.2728	22.2754	22.2757	22.2761	22.2787	22.3518	22.4092	22.4108	22.4
.55	25.95	26	26.05	26.45	39	51.55	51.95	52	52.05	52.45	65	77.55	77.95	78	78.05	78.45	91	103.55	103.95	
4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	
793	21.784	21.7846	21.7851	21.7898	21.9282	22.0508	22.0545	22.055	22.0554	22.059	22.1648	22.2548	22.2574	22.2577	22.2581	22.2607	22.3338	22.3912	22.3928	22.3
5.55	25.95	26	26.05	26.45	39	51.55	51.95	52	52.05	52.45	65	77.55	77.95	78	78.05	78.45	91	103.55	103.95	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
.717	21.7217	21.7223	21.7229	21.7276	21.8659	21.9886	21.9922	21.9927	21.9932	21.9968	22.1026	22.1926	22.1952	22.1955	22.1958	22.1984	22.2716	22.3289	22.3305	22.3
5.55	25.95	26	26.05	26.45	39	51.55	51.95	52	52.05	52.45	65	77.55	77.95	78	78.05	78.45	91	103.55	103.95	
-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5
6368	21.6415	21.6421	21.6426	21.6473	21.7857	21.9083	21.912	21.9125	21.9129	21.9165	22.0223	22.1123	22.1149	22.1153	22.1156	22.1182	22.1913	22.2487	22.2503	22.2
5.55	25.95	26	26.05	26.45	39	51.55	51.95	52	52.05	52.45	65	77.55	77.95	78	78.05	78.45	91	103.55	103.95	
-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6
5218	21.5265	21.527	21.5276	21.5323	21.6707	21.7933	21.797	21.7974	21.7979	21.8015	21.9073	21.9973	21.9999	22.0002	22.0006	22.0032	22.0763	22.1337	22.1353	22.1

FRAMING PLAN AT RA/03 BARKA (B-LINE)

:2	P3-S2	C25	P4-S1	P4-GE1	P4	P4-GE2	P4-S2	C32	P5-S1	P5-GE1	P5	P5-GE2	P5-S2	C39	P6-S1	P6-GE1	P6	P6-GE2	P6-S2	C46
9440	1 + 145.3440	1 + 157.8940	1 + 170.4440	1 + 170.8440	1 + 170.8940	1 + 170.9440	1 + 171.3440	1 + 183.8940	1 + 196.4440	1 + 196.8440	1 + 196.8940	1 + 196.9440	1 + 197.3440	1 + 209.8940	1 + 222.4440	1 + 222.8440	1 + 222.8940	1 + 222.9440	1 + 223.3440	1 + 235.
3.05	78.45	91	103.55	103.95	104	104.05	104.45	117	129.55	129.95	130	130.05	130.45	143	155.55	155.95	156	156.05	156.45	
6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	
911	22.1937	22.2668	22.3242	22.3258	22.326	22.3261	22.3277	22.3682	22.393	22.3935	22.3936	22.3936	22.3941	22.402	22.3941	22.3936	22.3935	22.3935	22.393	22.3
8.05	78.45	91	103.55	103.95	104	104.05	104.45	117	129.55	129.95	130	130.05	130.45	143	155.55	155.95	156	156.05	156.45	
5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	
761	22.2787	22.3518	22.4092	22.4108	22.4109	22.4111	22.4127	22.4532	22.478	22.4785	22.4785	22.4786	22.4791	22.487	22.4791	22.4786	22.4785	22.4785	22.478	22.4
8.05	78.45	91	103.55	103.95	104	104.05	104.45	117	129.55	129.95	130	130.05	130.45	143	155.55	155.95	156	156.05	156.45	
4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	
2581	22.2607	22.3338	22.3912	22.3928	22.3929	22.3931	22.3947	22.4352	22.46	22.4605	22.4605	22.4606	22.4611	22.469	22.4611	22.4606	22.4605	22.4605	22.46	22.4
8.05	78.45	91	103.55	103.95	104	104.05	104.45	117	129.55	129.95	130	130.05	130.45	143	155.55	155.95	156	156.05	156.45	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1958	22.1984	22.2716	22.3289	22.3305	22.3307	22.3309	22.3324	22.373	22.3977	22.3982	22.3983	22.3984	22.3989	22.4068	22.3989	22.3984	22.3983	22.3982	22.3977	22
8.05	78.45	91	103.55	103.95	104	104.05	104.45	117	129.55	129.95	130	130.05	130.45	143	155.55	155.95	156	156.05	156.45	
5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-
1156	22.1182	22.1913	22.2487	22.2503	22.2505	22.2506	22.2522	22.2927	22.3175	22.318	22.3181	22.3181	22.3186	22.3265	22.3186	22.3181	22.318	22.318	22.3175	22.
8.05	78.45	91	103.55	103.95	104	104.05	104.45	117	129.55	129.95	130	130.05	130.45	143	155.55	155.95	156	156.05	156.45	
6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-
0006	22.0032	22.0763	22.1337	22.1353	22.1354	22.1356	22.1372	22.1777	22.2025	22.203	22.203	22.2031	22.2036	22.2115	22.2036	22.2031	22.203	22.203	22.2025	22.

P6-S1	P6-GE1	P6	P6-GE2	P6-S2	C46	P7-S1	P7-GE1	P7	P7-GE2	P7-S2	C53	P8-S1	P8-GE1	P8	P8-GE2	P8-S2	C60	P9-S1	P9-GE1
1 + 222.4440	1 + 222.8440	1 + 222.8940	1 + 222.9440	1 + 223.3440	1 + 235.8940	1 + 248.4440	1 + 248.8440	1 + 248.8940	1 + 248.9440	1 + 249.3440	1 + 261.8940	1 + 274.4440	1 + 274.8440	1 + 274.8940	1 + 274.9440	1 + 275.3440	1 + 287.8940	1 + 300.4440	1 + 300.8440
155.55	155.95	156	156.05	156.45	169	181.55	181.95	182	182.05	182.45	195	207.55	207.95	208	208.05	208.45	221	233.55	233.95
6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35
22.3941	22.3936	22.3935	22.3935	22.393	22.3682	22.3277	22.3261	22.326	22.3258	22.3242	22.2668	22.1937	22.1911	22.1908	22.1904	22.1878	22.0978	21.992	21.9884
155.55	155.95	156	156.05	156.45	169	181.55	181.95	182	182.05	182.45	195	207.55	207.95	208	208.05	208.45	221	233.55	233.95
5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35
22.4791	22.4786	22.4785	22.4785	22.478	22.4532	22.4127	22.4111	22.4109	22.4108	22.4092	22.3518	22.2787	22.2761	22.2757	22.2754	22.2728	22.1828	22.077	22.0734
155.55	155.95	156	156.05	156.45	169	181.55	181.95	182	182.05	182.45	195	207.55	207.95	208	208.05	208.45	221	233.55	233.95
4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15
22.4611	22.4606	22.4605	22.4605	22.46	22.4352	22.3947	22.3931	22.393	22.3928	22.3912	22.3338	22.2607	22.2581	22.2577	22.2574	22.2548	22.1648	22.059	22.0554
155.55	155.95	156	156.05	156.45	169	181.55	181.95	182	182.05	182.45	195	207.55	207.95	208	208.05	208.45	221	233.55	233.95
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22.3989	22.3984	22.3983	22.3982	22.3977	22.373	22.3324	22.3309	22.3307	22.3305	22.3289	22.2716	22.1984	22.1958	22.1955	22.1952	22.1926	22.1026	21.9968	21.9932
155.55	155.95	156	156.05	156.45	169	181.55	181.95	182	182.05	182.45	195	207.55	207.95	208	208.05	208.45	221	233.55	233.95
-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35
22.3186	22.3181	22.318	22.318	22.3175	22.2927	22.2522	22.2506	22.2504	22.2503	22.2487	22.1913	22.1182	22.1156	22.1153	22.1149	22.1123	22.0223	21.9165	21.9129
155.55	155.95	156	156.05	156.45	169	181.55	181.95	182	182.05	182.45	195	207.55	207.95	208	208.05	208.45	221	233.55	233.95
-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35
22.2036	22.2031	22.203	22.203	22.2025	22.1777	22.1372	22.1356	22.1354	22.1353	22.1337	22.0763	22.0032	22.0006	22.0002	21.9999	21.9973	21.9073	21.8015	21.7979

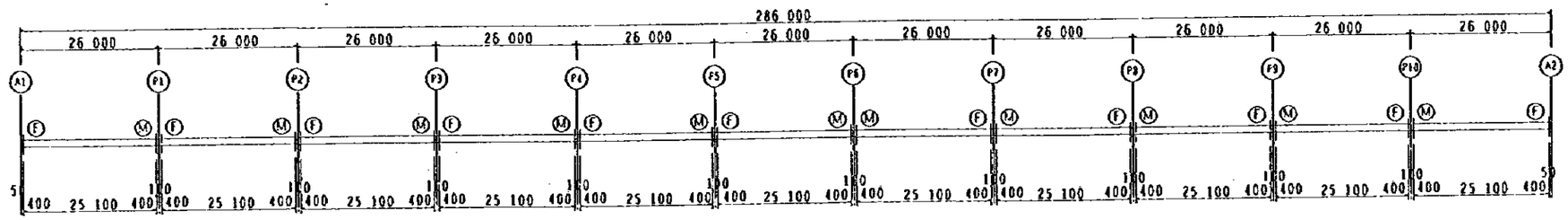
	P8-GE2	P8-S2	C60	P9-S1	P9-GE1	P9	P9-GE2	P9-S2	C67	P10-S1	P10-GE1	P10	P10-GE2	P10-S2	C74	A2-S1	A2-GE1	A2
.8940	1 + 274.9440	1 + 275.3440	1 + 287.8940	1 + 300.4440	1 + 300.8440	1 + 300.8940	1 + 300.9440	1 + 301.3440	1 + 313.8940	1 + 326.4440	1 + 326.8440	1 + 326.8940	1 + 326.9440	1 + 327.3440	1 + 339.8940	1 + 352.4440	1 + 352.8440	1 + 352.8940
208	208.05	208.45	221	233.55	233.95	234	234.05	234.45	247	259.55	259.95	260	260.05	260.45	273	285.55	285.95	286
6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35
1908	22.1904	22.1878	22.0978	21.992	21.9884	21.988	21.9875	21.9838	21.8612	21.7228	21.7181	21.7176	21.717	21.7123	21.557	21.386	21.3803	21.3796
208	208.05	208.45	221	233.55	233.95	234	234.05	234.45	247	259.55	259.95	260	260.05	260.45	273	285.55	285.95	286
5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35
2757	22.2754	22.2728	22.1828	22.077	22.0734	22.0729	22.0725	22.0688	21.9462	21.8078	21.8031	21.8025	21.802	21.7973	21.642	21.471	21.4653	21.4645
208	208.05	208.45	221	233.55	233.95	234	234.05	234.45	247	259.55	259.95	260	260.05	260.45	273	285.55	285.95	286
4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15
2577	22.2574	22.2548	22.1648	22.059	22.0554	22.0549	22.0545	22.0508	21.9282	21.7898	21.7851	21.7845	21.784	21.7793	21.624	21.453	21.4473	21.4466
208	208.05	208.45	221	233.55	233.95	234	234.05	234.45	247	259.55	259.95	260	260.05	260.45	273	285.55	285.95	286
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
.1955	22.1952	22.1926	22.1026	21.9968	21.9932	21.9927	21.9922	21.9886	21.866	21.7276	21.7229	21.7223	21.7217	21.717	21.5618	21.3907	21.385	21.3843
208	208.05	208.45	221	233.55	233.95	234	234.05	234.45	247	259.55	259.95	260	260.05	260.45	273	285.55	285.95	286
-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35
.1153	22.1149	22.1123	22.0223	21.9165	21.9129	21.9125	21.912	21.9083	21.7857	21.6473	21.6426	21.6421	21.6415	21.6368	21.4815	21.3105	21.3048	21.3041
208	208.05	208.45	221	233.55	233.95	234	234.05	234.45	247	259.55	259.95	260	260.05	260.45	273	285.55	285.95	286
-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35
.0002	21.9999	21.9973	21.9073	21.8015	21.7979	21.7974	21.797	21.7933	21.6707	21.5323	21.5276	21.527	21.5265	21.5218	21.3665	21.1955	21.1898	21.189

	JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	CLIENT :
		PROJECT:
	JICA STUDY TEAM PACIFIC CONSULTANTS INTERNATIONAL FUKUYAMA CONSULTANTS INTERNATIONAL	TITLE
		DATE

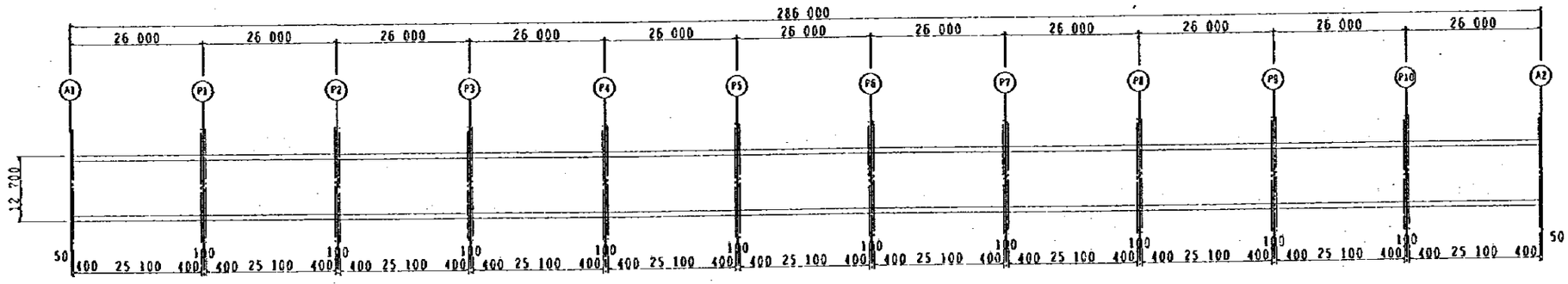
P9	P9-GE2	P9-S2	C67	P10-S1	P10-GE1	P10	P10-GE2	P10-S2	C74	A2-S1	A2-GE1	A2
00.8940	1 + 300.9440	1 + 301.3440	1 + 313.8940	1 + 326.4440	1 + 326.8440	1 + 326.8940	1 + 326.9440	1 + 327.3440	1 + 339.8940	1 + 352.4440	1 + 352.8440	1 + 352.8940
234	234.05	234.45	247	259.55	259.95	260	260.05	260.45	273	285.55	285.95	286
6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35
21.988	21.9875	21.9838	21.8612	21.7228	21.7181	21.7176	21.717	21.7123	21.557	21.386	21.3803	21.3796
234	234.05	234.45	247	259.55	259.95	260	260.05	260.45	273	285.55	285.95	286
5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35	5.35
22.0729	22.0725	22.0688	21.9462	21.8078	21.8031	21.8025	21.802	21.7973	21.642	21.471	21.4653	21.4645
234	234.05	234.45	247	259.55	259.95	260	260.05	260.45	273	285.55	285.95	286
4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15
22.0549	22.0545	22.0508	21.9282	21.7898	21.7851	21.7845	21.784	21.7793	21.624	21.453	21.4473	21.4466
234	234.05	234.45	247	259.55	259.95	260	260.05	260.45	273	285.55	285.95	286
0	0	0	0	0	0	0	0	0	0	0	0	0
21.9927	21.9922	21.9886	21.866	21.7276	21.7229	21.7223	21.7217	21.717	21.5618	21.3907	21.385	21.3843
234	234.05	234.45	247	259.55	259.95	260	260.05	260.45	273	285.55	285.95	286
-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35
21.9125	21.912	21.9083	21.7857	21.6473	21.6426	21.6421	21.6415	21.6368	21.4815	21.3105	21.3048	21.3041
234	234.05	234.45	247	259.55	259.95	260	260.05	260.45	273	285.55	285.95	286
-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35	-6.35
21.7974	21.797	21.7933	21.6707	21.5323	21.5276	21.527	21.5265	21.5218	21.3665	21.1955	21.1898	21.189

	JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	CLIENT : MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS
		PROJECT: D/D ON ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY
	JICA STUDY TEAM PACIFIC CONSULTANTS INTERNATIONAL FUKUYAMA CONSULTANTS INTERNATIONAL	TITLE CO-ORDINATE LIST RA/03 AT B-LINE
		DATE / DWGNO. B-6

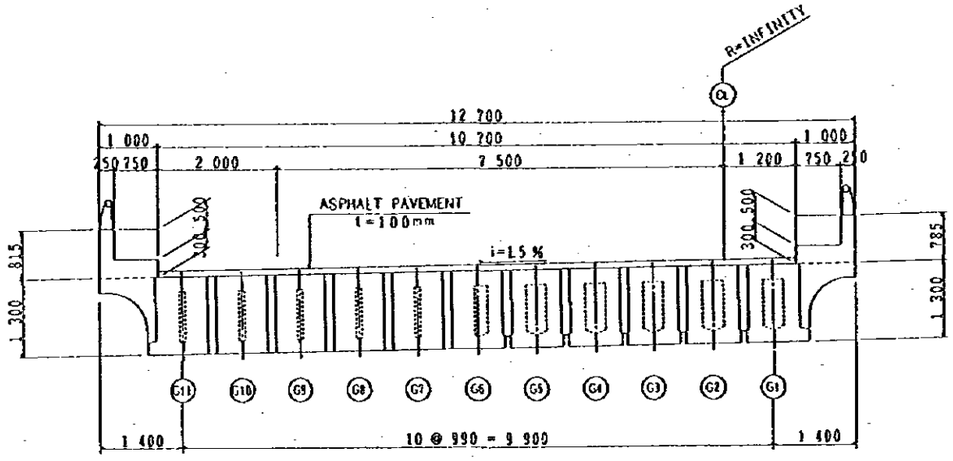
RA/3 BARKA



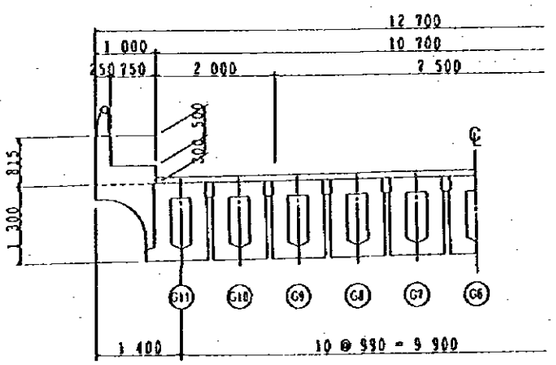
PROFILE OF BRIDGE s= 1/1000



PLAN s= 1/1000



GIRDER END MIDDLE SPAN



TYPICAL SEC.

	GIRDER LENGTH	SPAN LENGTH	REMARKS
A1 ~ P1 P10 ~ A2	25 902	25 102	INCLINED LENGTH
P1 ~ P2 P8 ~ P10	25 901	25 101	"
P2 ~ P8	25 900	25 100	"

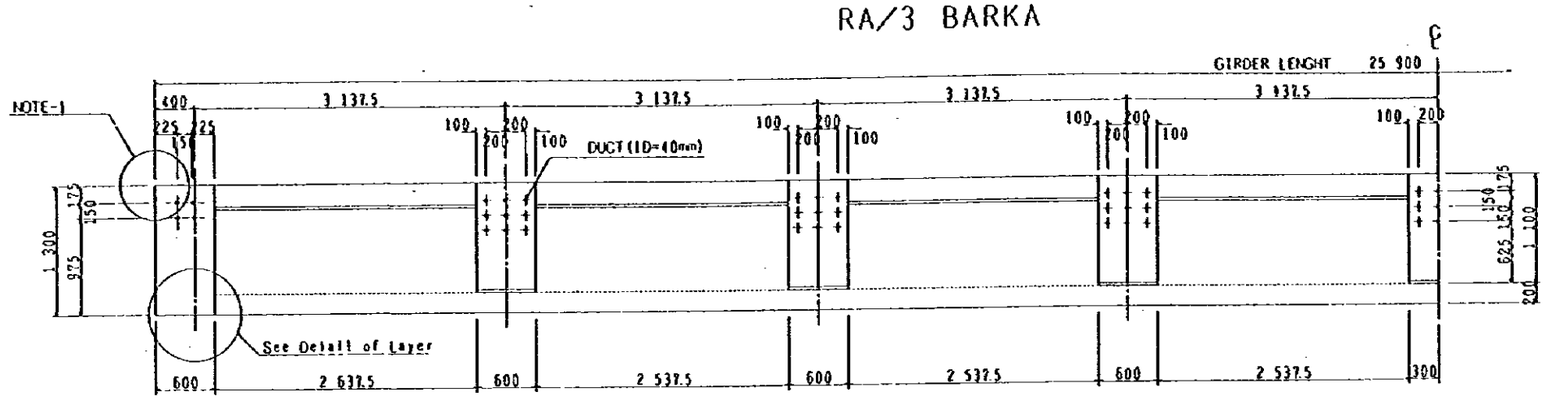
GIRDER LENGTH

SECTION s= 1/100

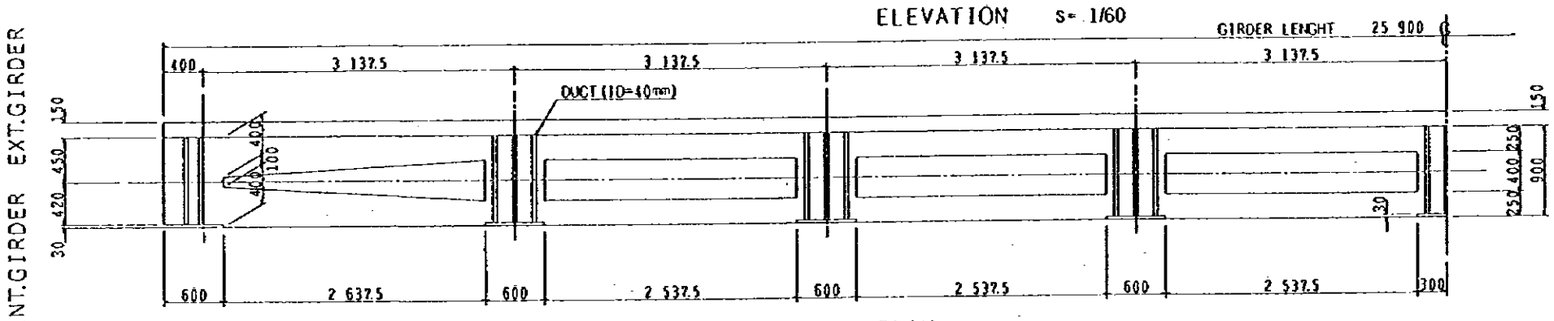
GENERAL VIEW OF BRIDGE AT A-LINE

NOTES:		JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) JICA STUDY TEAM PACIFIC CONSULTANTS INTERNATIONAL FUKUYAMA CONSULTANTS INTERNATIONAL	CLIENT: MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS PROJECT: D/D ON ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY TITLE: GENERAL VIEW OF BRIDGE AT A-LINE DATE: DWG NO. B-7

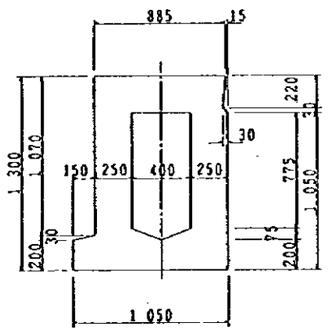
RA/3 BARKA

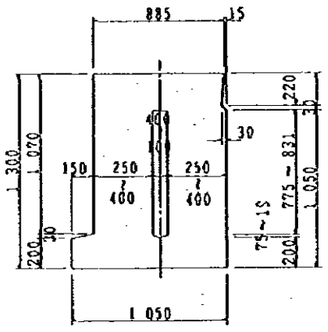


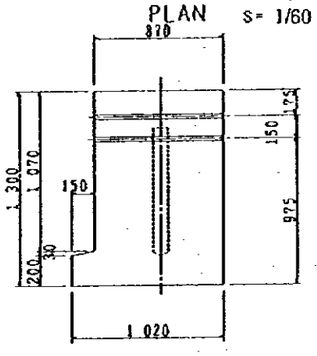
ELEVATION S= 1/60

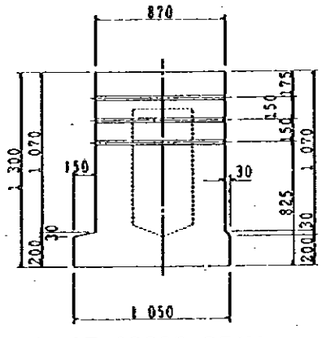


PLAN S= 1/60

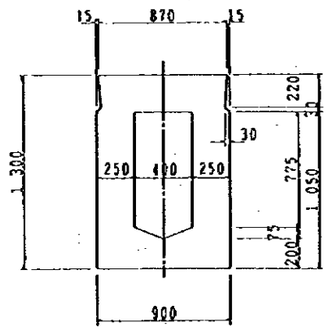


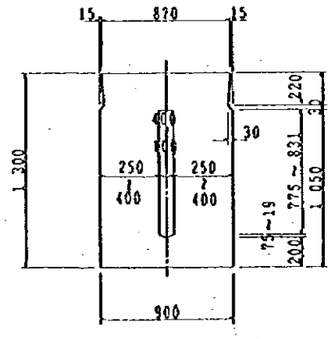


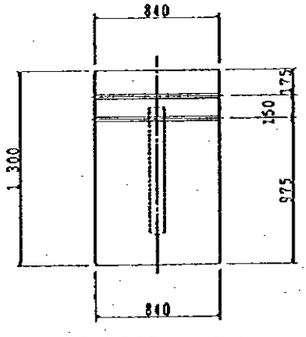


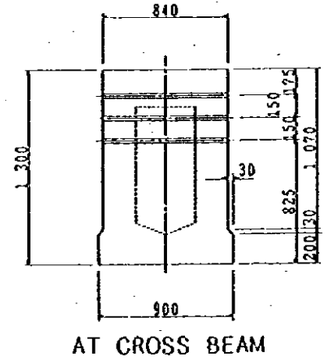


SECTION OF EXT.GIRDER 1/40

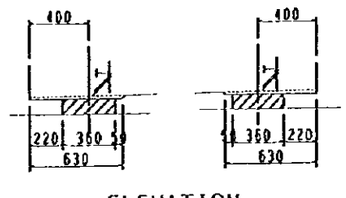


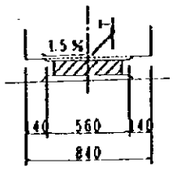






SECTION OF INT.GIRDER S= 1/40





DETAIL OF LAYER S= 1/40

		T	REMARKS
A1 ~ P1	FIX	16	
P10 ~ A2	MOV.	14	
P1 ~ P2	FIX	25	
P9 ~ P10	MOV.	15	
P2 ~ P3	FIX	24	
P8 ~ P9	MOV.	16	
P3 ~ P4	FIX	22	
P7 ~ P8	MOV.	18	
P4 ~ P5	FIX	21	
P6 ~ P7	MOV.	19	
P5 ~ P6	FIX	20	
	MOV.	20	

NOTE-1 :
CONSIDERING THE EFFECT LONGITUDINAL SLOPE (1%) TO END GIRDER BOTH ENDS SHOULD BE FIXED PALLAREL TO Y-AXIS

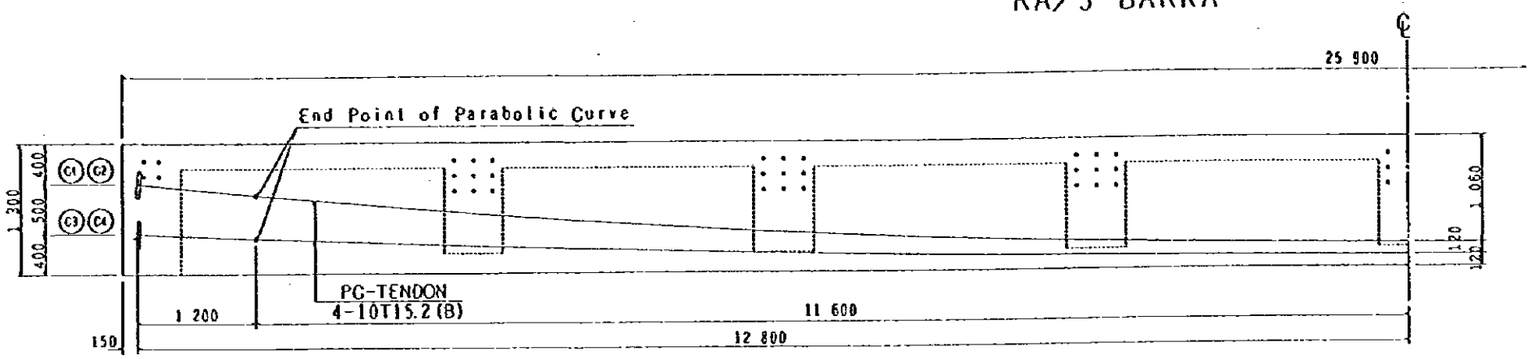
STRUCTURAL DITAIL OF MAIN GIRDER AT A-LINE

NOTES:

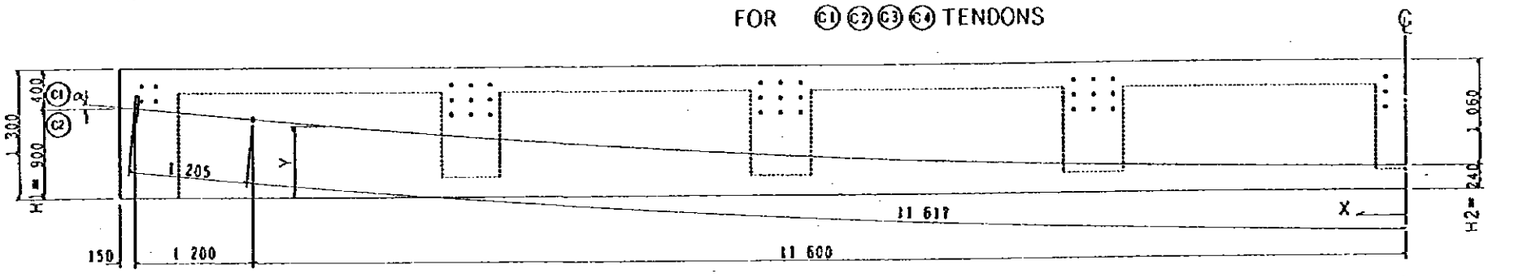
JAPAN INTERNATIONAL COOPERATION AGENCY
(JICA)
JICA STUDY TEAM
PACIFIC CONSULTANTS INTERNATIONAL
FUKUYAMA CONSULTANTS INTERNATIONAL

CLIENT: MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS
PROJECT: D/D ON ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY
TITLE STRUCTURAL DETAIL OF MAIN GIRDER AT A-LINE
DATE
DWG NO. B-8

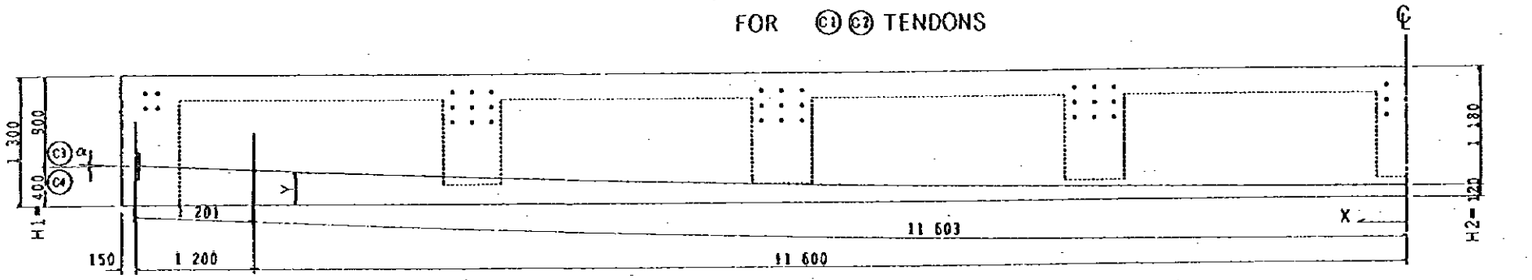
RA/3 BARKA



FOR ①②③④ TENDONS

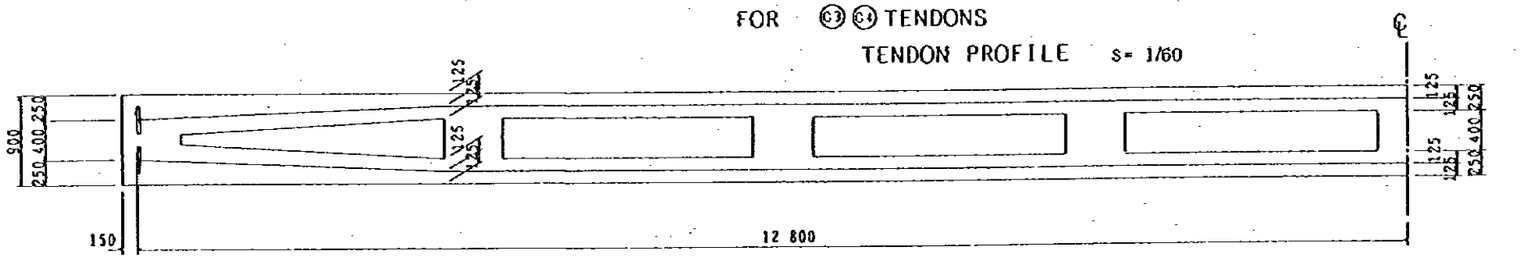


FOR ①② TENDONS

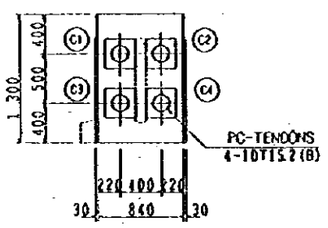


FOR ③④ TENDONS

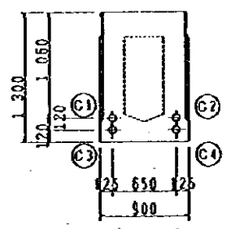
TENDON PROFILE s= 1/60



PLAN s= 1/60

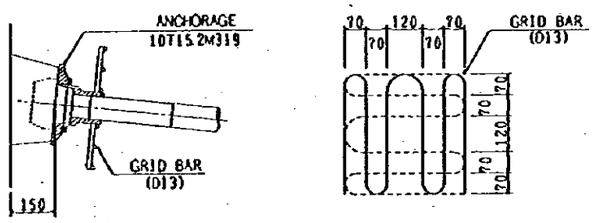


GIRDER END



MIDDLE SPAN

SECTION s= 1/60



DETAIL OF ANCHORAGE s= 1/20

	L1	L2	α deg	S1	S2	2×(S1+S2)	W / Cable	W (kg)
①②	12 800	11 600	5.4022	1 205	11 617	25 644	282.3	5646
③④	12 800	11 600	2.2918	1 201	11 603	25 608	281.9	5638
TOTAL								11284

USE GIRDER LENGTH=25.900m, EXTRA LENGTH FOR TENSIONING IS NOT INCLUDED

w=11.010kg/m/Cable (10T15.2B)

NOTE :

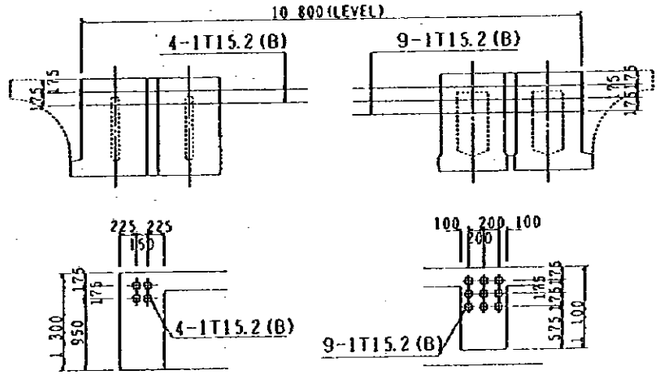
$Y=(H1-H2)/(L2\times(L2\times L1-L2))\times X^2+H2$

$\alpha=2\times(H1-H2)/(2\times L1-L2)$ rad.

$S1=1\ 200/\cos\alpha$

$S2=L2\times(1+8/3\times n^2-32/5\times n^4+128/7\times n^6-512/9\times n^8)$

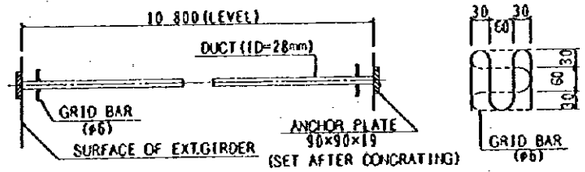
$n=(H1-H2-\tan\alpha\times 1\ 200)/(2\times L2)$



GIRDER END CROSS BEAM

LATERAL TENDON ARRANGEMENT s= 1/80

FOR CROSS BEAM

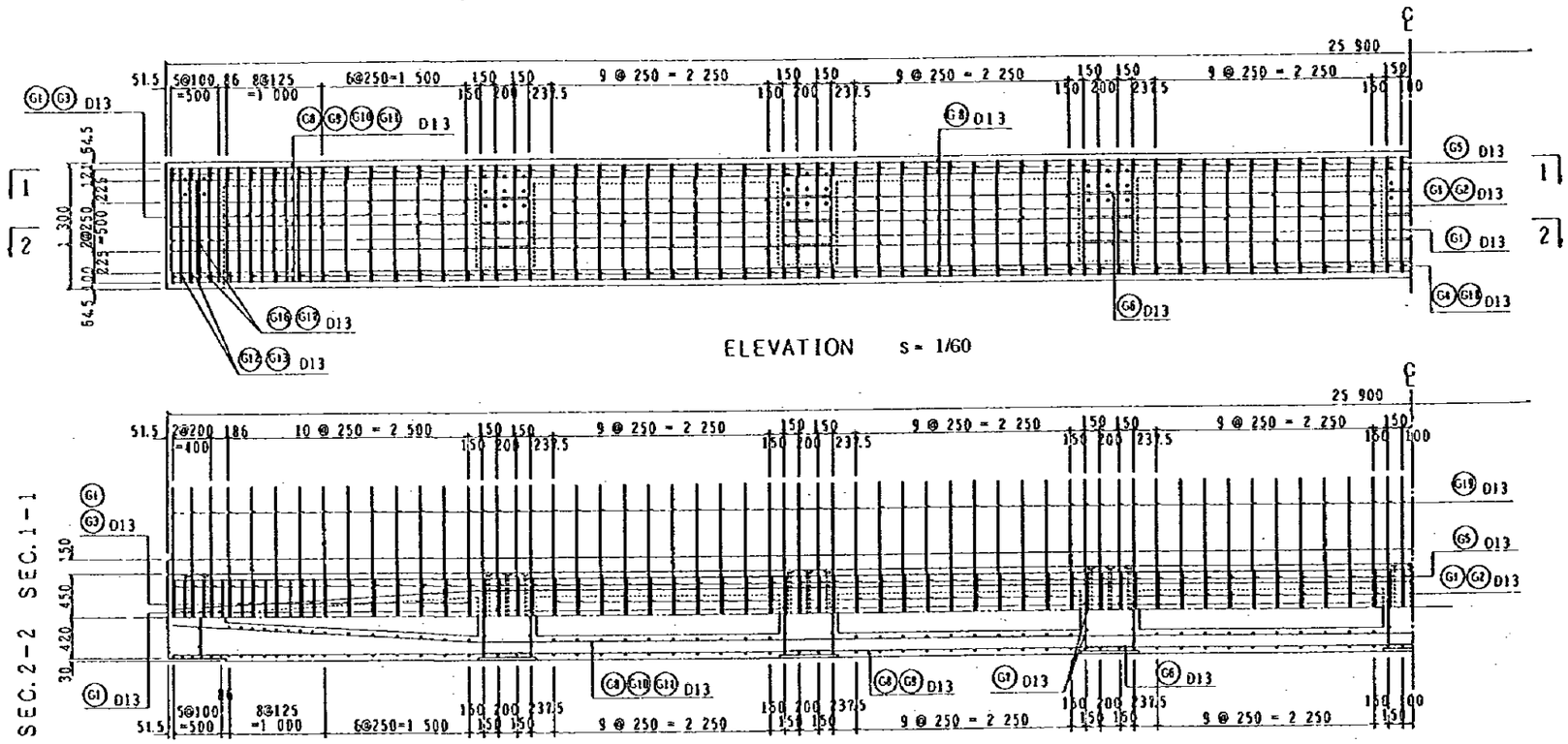


DETAIL OF ANCHORAGE s= 1/20/ 1/10

FOR MAIN GIRDER
DETAIL OF TENDONS AT A-LINE

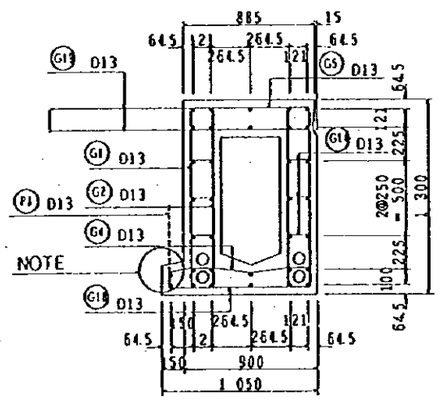
NOTES:	JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	CLIENT: MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS
		PROJECT: D/D ON ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY
	JICA STUDY TEAM PACIFIC CONSULTANTS INTERNATIONAL FUKUYAMA CONSULTANTS INTERNATIONAL	TITLE: DETAIL OF TENDONS AT A-LINE
		DATE / DWG NO. B-9

RA/3 BARKA

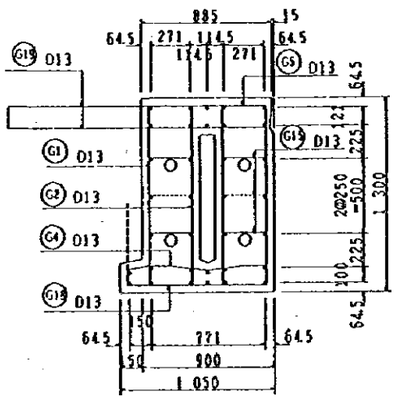


ELEVATION s= 1/60

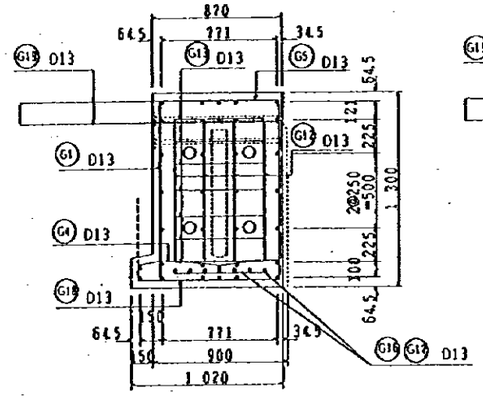
PLAN s= 1/60



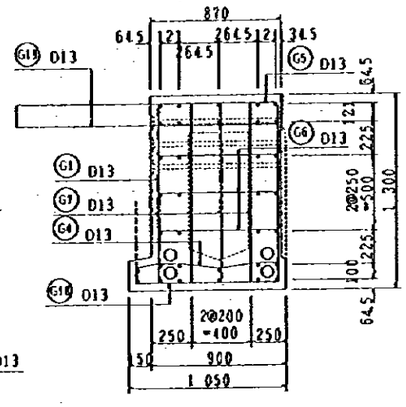
TYPICAL SECTION



AT WEB WIDENED



AT GIRDER END



AT CROSS BEAM

NOTE :

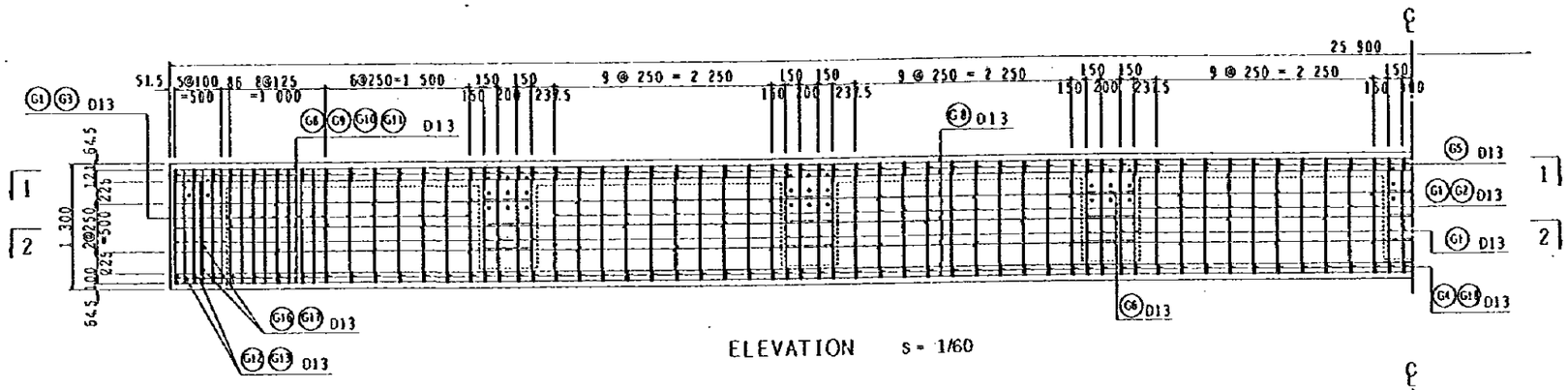
FOR ALTERNATIVE CONSTRUCTION JOINT, INSERT INSIDE THREADED JOINT TO HANDLE PLANTED VERTICAL BAR

SECTION s= 1/40

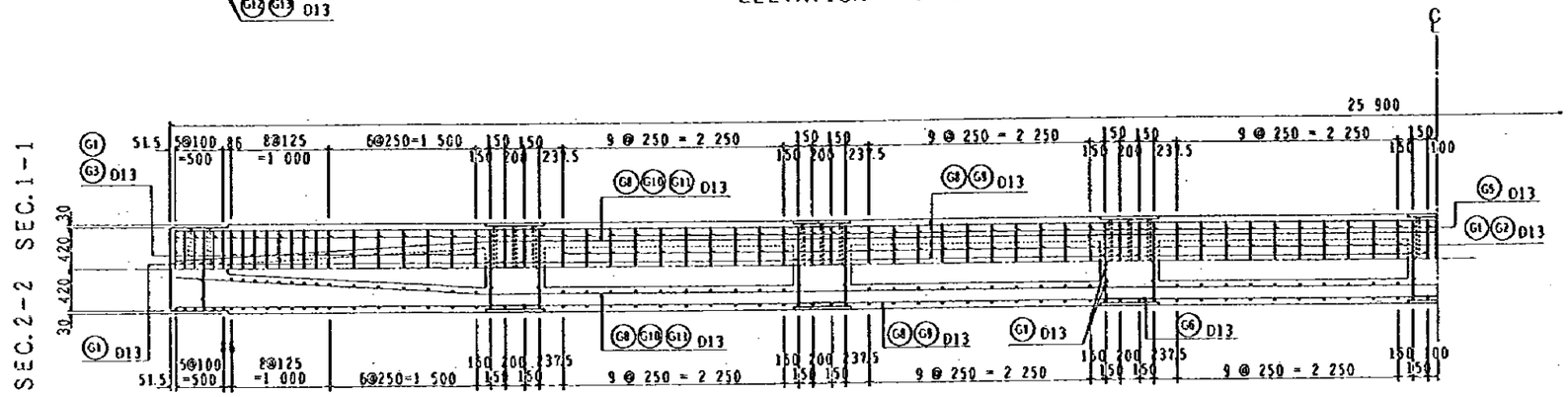
A-LINE RE-BAR ARRANGEMENT-1 (EXT.GIRDER)

NOTES:		JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	CLIENT : MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS
			PROJECT: D/D ON ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY
		JICA STUDY TEAM PACIFIC CONSULTANTS INTERNATIONAL FUKUYAMA CONSULTANTS INTERNATIONAL	TITLE RE-BAR ARRANGEMENT(1/2) AT A-LINE
			DATE DWGNO. B-10

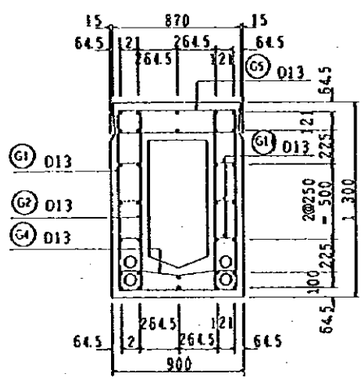
RA/3 BARKA



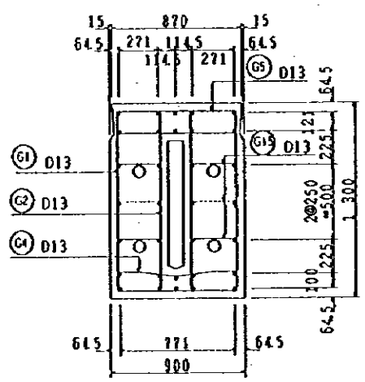
ELEVATION s = 1/60



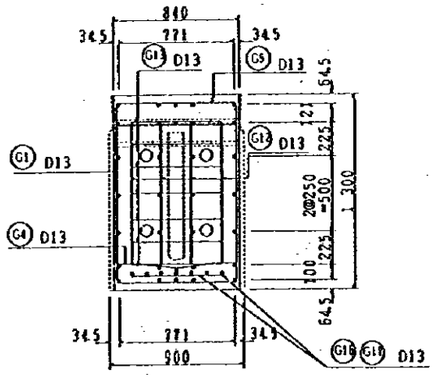
PLAN s = 1/60



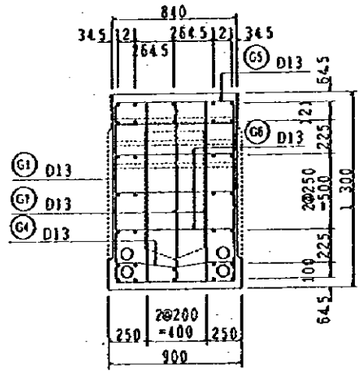
TYPICAL SECTION



AT WEB WIDENED



AT GIRDER END



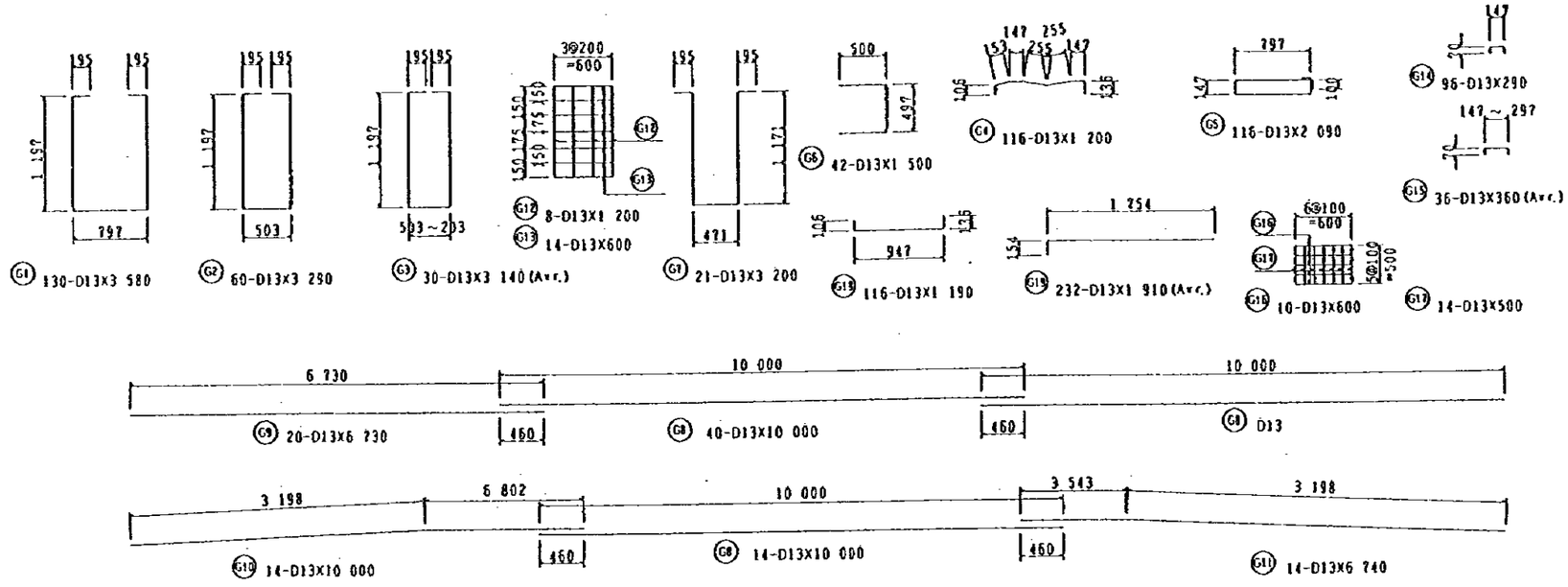
AT CROSS BEAM

SECTION s = 1/40

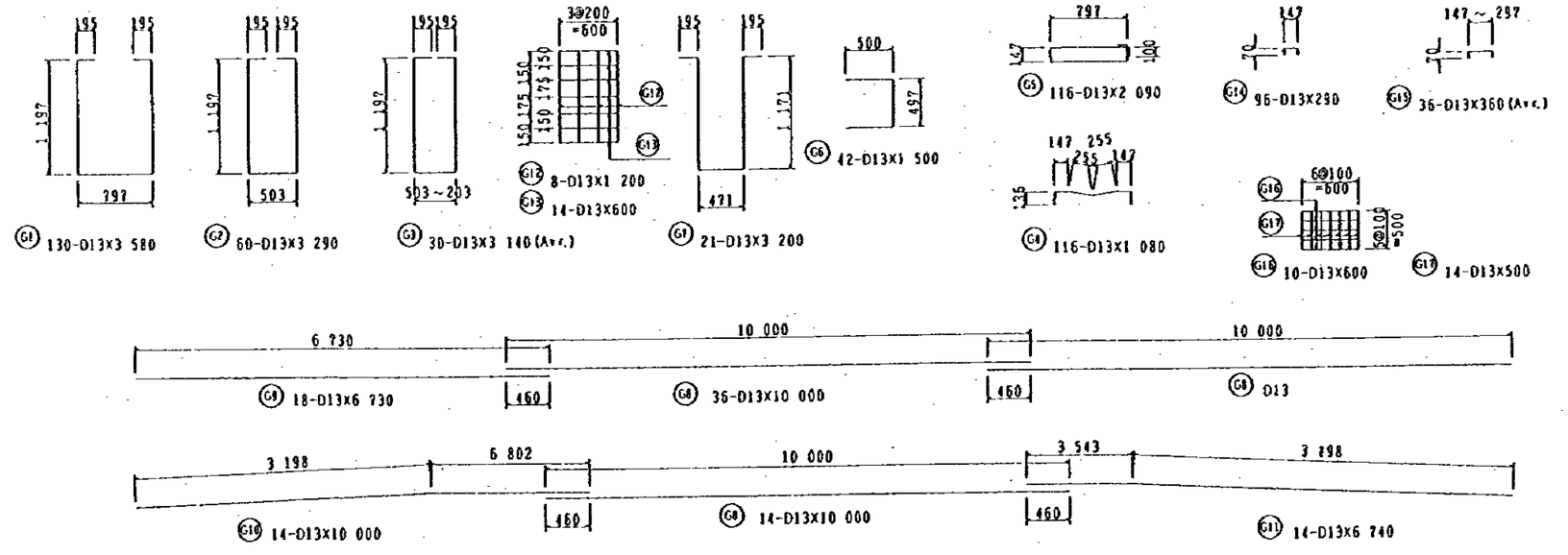
A-LINE RE-BAR ARRANGEMENT-2 (INT.GIRDER)

NOTES:		JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	CLIENT : MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS
			PROJECT: D/D ON ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY
		JICA STUDY TEAM PACIFIC CONSULTANTS INTERNATIONAL FUKUYAMA CONSULTANTS INTERNATIONAL	TITLE RE-BAR ARRANGEMENT(2/2) AT A-LINE
			DATE DWG NO. B-11

RA/3 BARKA



FOR EXT.GIRDER S= 1/60

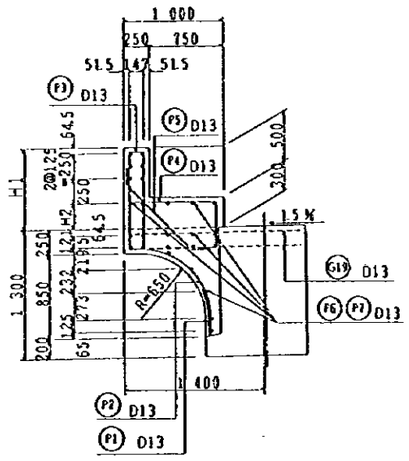


FOR INT.GIRDER S=. 1/60

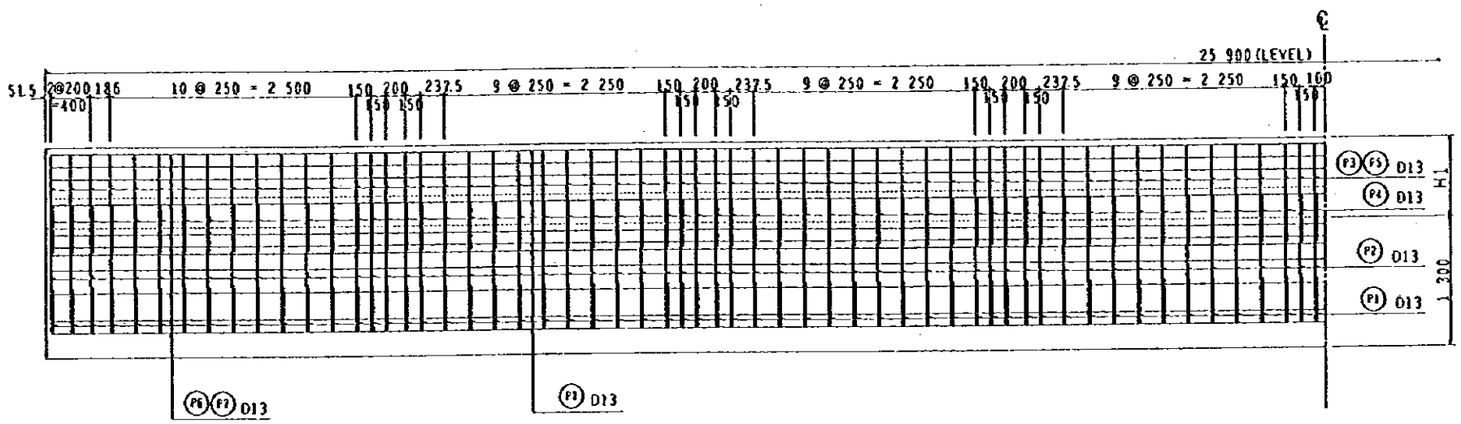
BAR SCHEDULE OF MAIN GIRDER AT A-LINE

NOTES:		JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) JICA STUDY TEAM PACIFIC CONSULTANTS INTERNATIONAL FUKUYAMA CONSULTANTS INTERNATIONAL	CLIENT: MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS PROJECT: D/D ON ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY TITLE: BAR SCHEDULE OF MAIN GIRDER AT A-LINE DATE: DWG NO. B-12

RA/3 BARKA

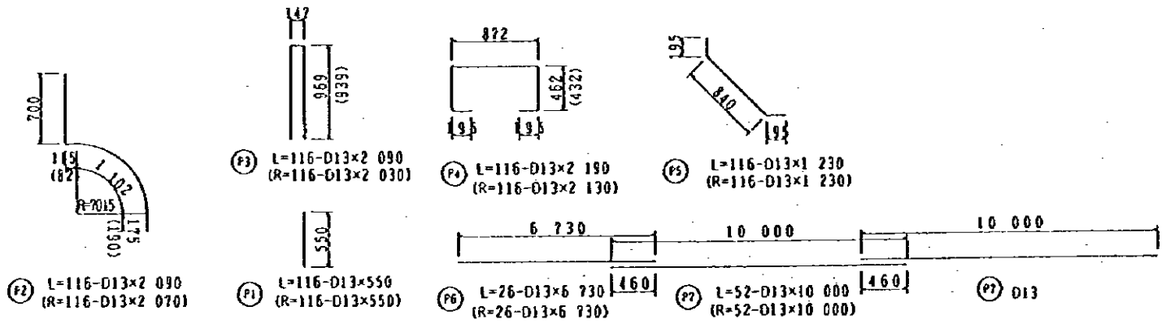


SECTION



ELEVATION

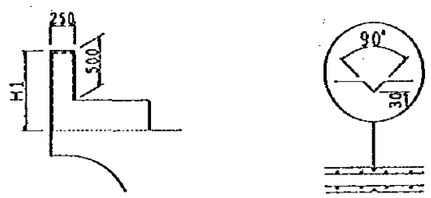
RE-BAR ARRANGEMENT S= 1/60



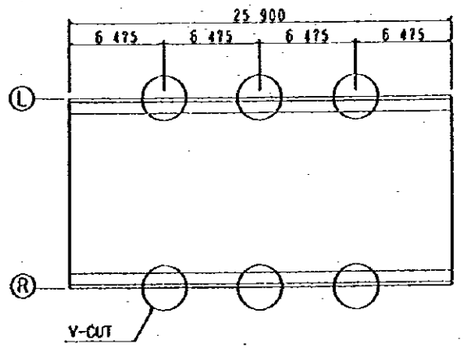
F2 L=116-D13×2 090 (R=116-D13×2 070)
F1 L=116-D13×550 (R=116-D13×550)
F3 L=116-D13×2 090 (R=116-D13×2 030)
P6 L=26-D13×6 730 (R=26-D13×6 730)
P4 L=116-D13×2 190 (R=116-D13×2 130)
P7 L=52-D13×10 000 (R=52-D13×10 000)
P5 L=116-D13×1 230 (R=116-D13×1 230)
P7 D13

BAR SCHEDULE

	H1	H2
Ⓛ	815	250.5
Ⓡ	785	220.5



DETAIL OF V-CUT



RAILING AND CANTILEVER SLAB AT A-LINE

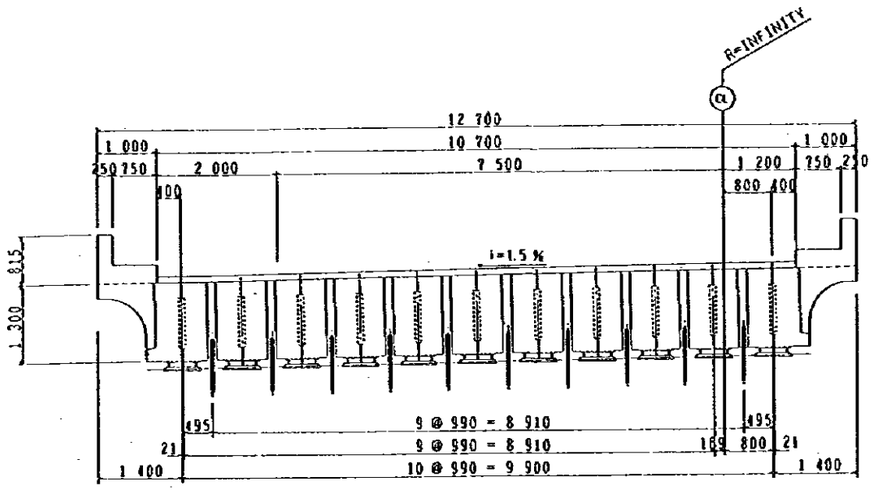
NOTES:

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

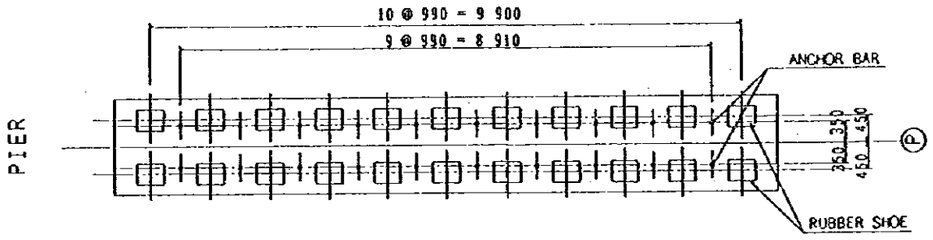
JICA STUDY TEAM
PACIFIC CONSULTANTS INTERNATIONAL
FUKUYAMA CONSULTANTS INTERNATIONAL

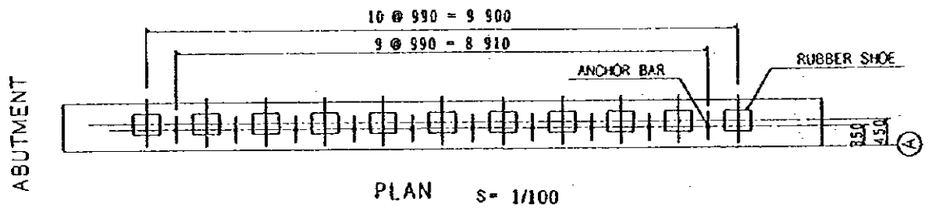
CLIENT: MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS
PROJECT: D/D ON ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY
TITLE: RAILING AND CANTILEVER SLAB AT A-LINE
DATE:
DWG NO. B-13

RA/3 BARKA



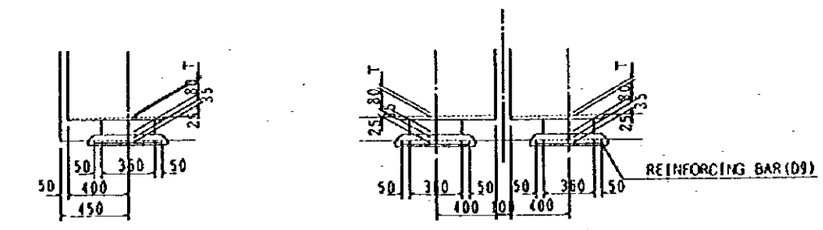
SECTION s= 1/100





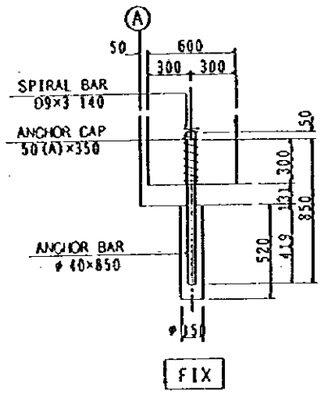
PLAN s= 1/100

DETAIL OF SHOE AND ANCHOR BAR

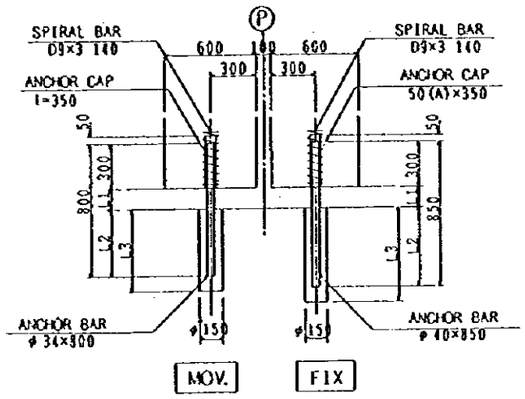


FOR ABUTMENT FOR PIER

DETAIL OF SHOE s= 1/40



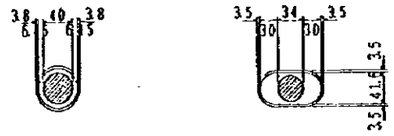
FOR ABUTMENT



FOR PIER

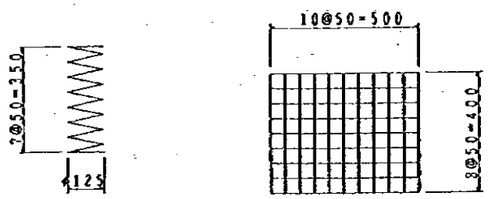
DETAIL OF ANCHOR BAR s= 1/40

		T	L1	L2	L3
A1 ~ P1	FIX	16	131	419	520
P10 ~ A2	MOV.	14	129	371	475
P1 ~ P2	FIX	25	140	410	520
P9 ~ P10	MOV.	15	130	370	475
P2 ~ P3	FIX	24	139	411	520
P8 ~ P9	MOV.	16	131	369	475
P3 ~ P4	FIX	22	137	413	520
P7 ~ P8	MOV.	18	133	367	475
P4 ~ P5	FIX	21	136	414	520
P6 ~ P7	MOV.	19	134	366	475
P5 ~ P6	FIX	20	135	415	520
	MOV.	20	135	365	475



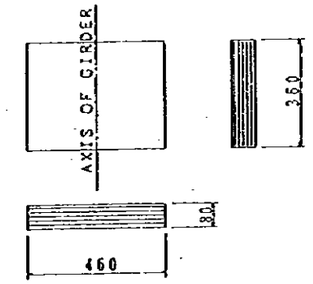
FOR FIX FOR MOV.

ANCHOR CAP s= 1/10

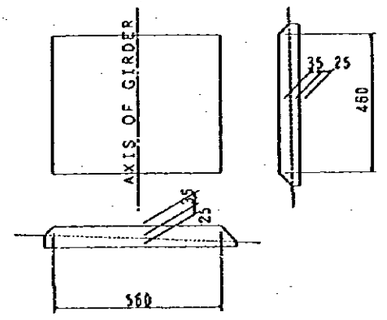


SPIRAL BAR(D9) REINFORCING BAR(D9)

s= 1/40 s= 1/40



SYNTHETIC RUBBER SHOE s= 1/20



SHOE BASE s= 1/20

(PER SPAN)

	DESCRIPTION	UNIT	QUANTITY	REMARKS
FIX	ANCHOR BAR (GALV.)	kg	83.9	w= 8.39 kg/pc.
	ANCHOR CAP (GALV.)	kg	18.6	w=1.86 kg/pc.
	FILLER	kg	5.9	w=0.588 kg/anc.
	SYNTHETIC RUBBER SHOE	Pcs	11	460×360×80
	REINFORCING BAR	kg	54.8	w=4.98 kg/Set
	SPIRAL BAR	kg	17.6	w=1.76 kg/pc.
	NON SHRINKAGE MORTAR	m^3	0.198	$0.018m^3$/Shoe
	"	m^3	0.080	$0.009m^3$/Hole (AVE.)
MOV.	ANCHOR BAR (GALV.)	kg	57.0	w=5.70 kg/pc.
	ANCHOR CAP (GALV.)	kg	23.7	w=2.37 kg/pc.
	FILLER	kg	14.5	w=1.45 kg/anc.
	SYNTHETIC RUBBER SHOE	Pcs	11	460×360×80
	REINFORCING BAR	kg	54.8	w=4.98kg/Set
	SPIRAL BAR	kg	17.6	w=1.76 kg/pc.
	NON SHRINKAGE MORTAR	m^3	0.198	$0.018m^3$/Shoe
	"	m^3	0.080	$0.008m^3$/Hole (AVE.)

MATERIAL LIST

DETAIL OF SHOE AND ANCHOR BAR AT A-LINE

NOTES:

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

JICA STUDY TEAM
PACIFIC CONSULTANTS INTERNATIONAL
FUKUYAMA CONSULTANTS INTERNATIONAL

CLIENT: MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS

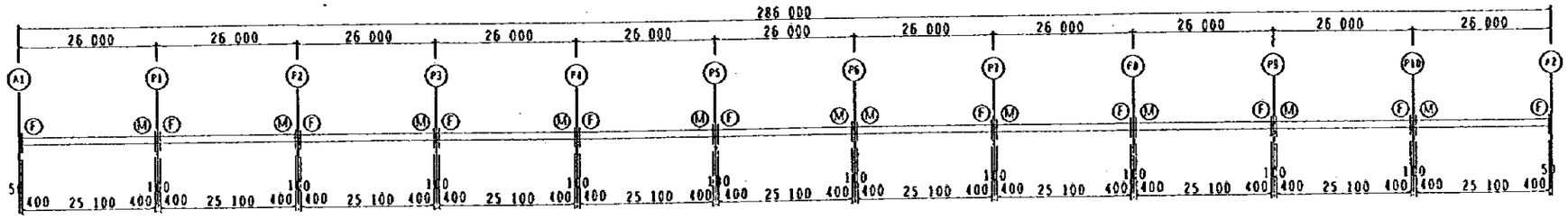
PROJECT: D/D ON ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY

TITLE DETAIL OF SHOE AND ANCHOR BAR AT A-LINE

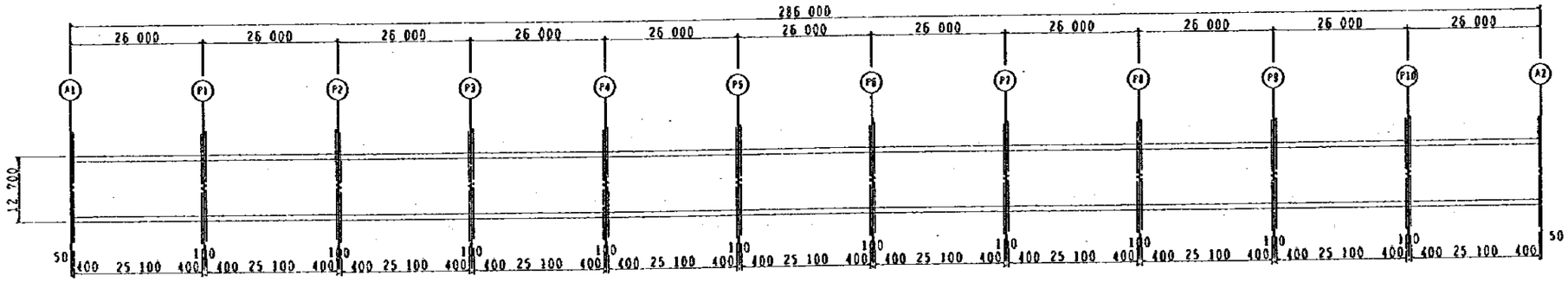
DATE

DWG NO. B-14

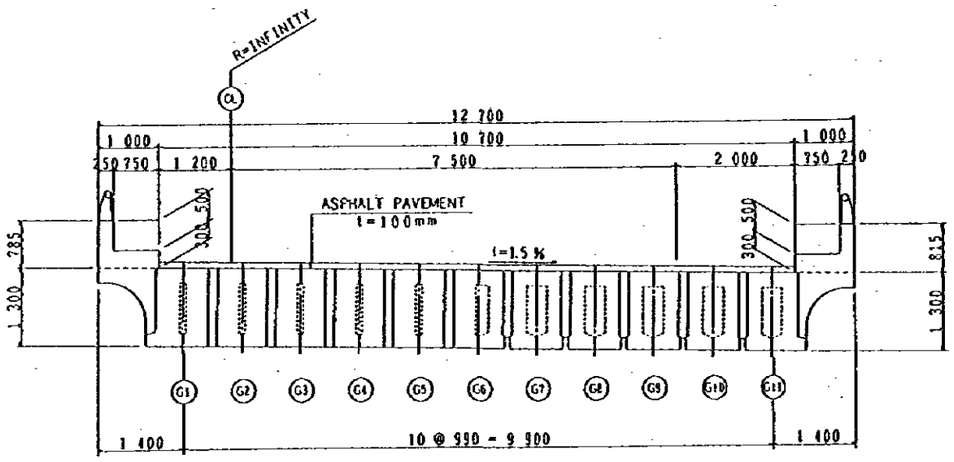
RA/3 BARKA



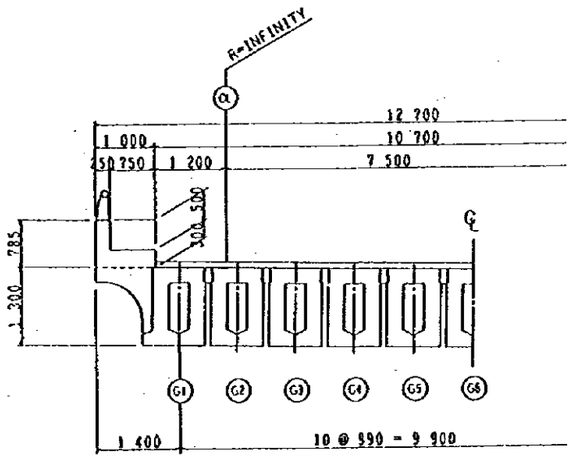
PROFILE OF BRIDGE s= 1/1000



PLAN s= 1/1000



GIRDER END MIDDLE SPAN



TYPICAL SEC.

SECTION s= 1/100

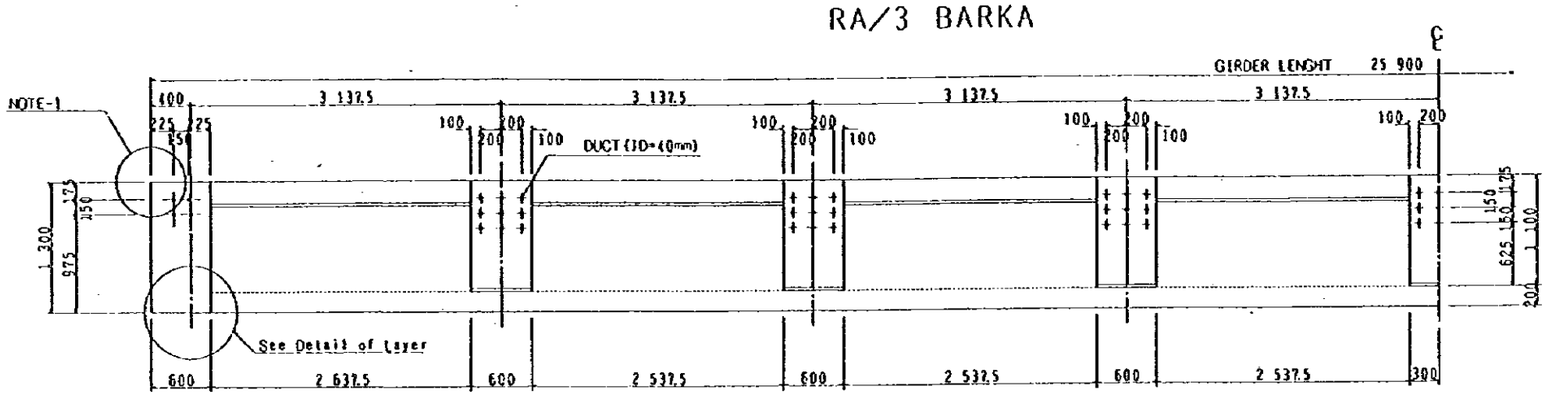
	GIRDER LENGTH	SPAN LENGTH	REMARKS
A1 ~ P1 P10 ~ A2	25 902	25 102	INCLINED LENGTH
P1 ~ P2 P8 ~ P10	25 901	25 101	"
P2 ~ P8	25 900	25 100	"

GIRDER LENGTH

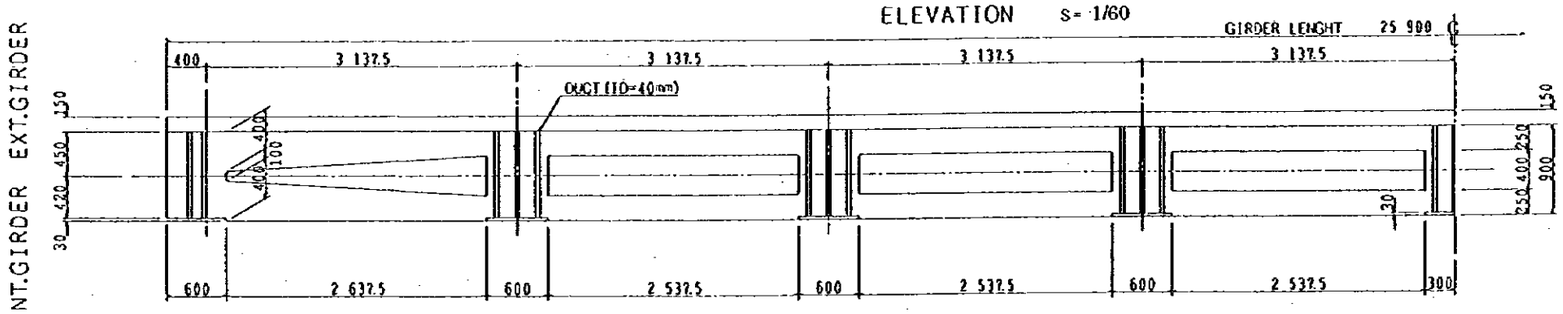
GENERAL VIEW OF BRIDGE AT B-LINE

NOTES:		JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) JICA STUDY TEAM PACIFIC CONSULTANTS INTERNATIONAL FUKUYAMA CONSULTANTS INTERNATIONAL	CLIENT: MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS PROJECT: D/D ON ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY TITLE: GENERAL VIEW OF BRIDGE AT B-LINE DATE: DWG NO. B-15

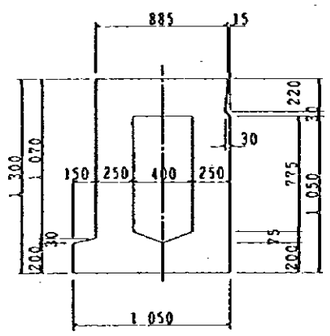
RA/3 BARKA

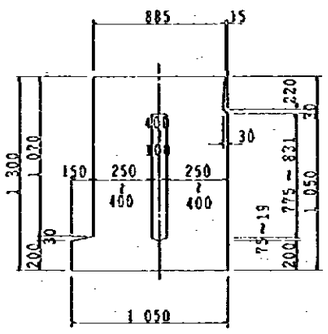


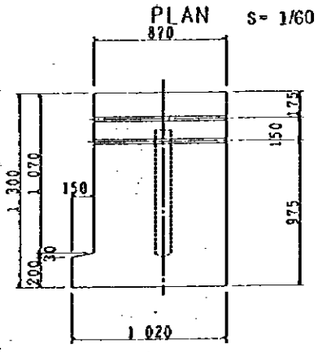
ELEVATION S= 1/60

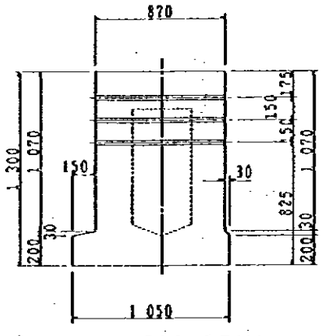


PLAN S= 1/60

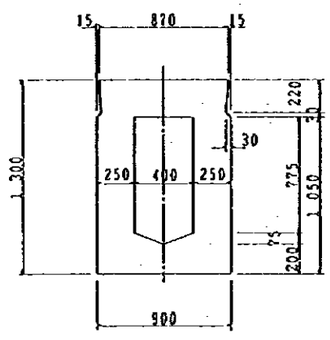


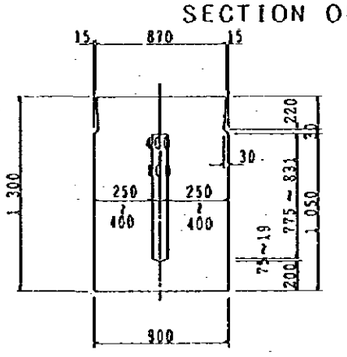


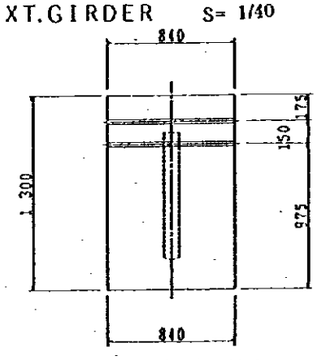


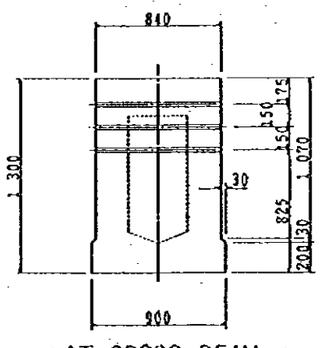


SECTION OF EXT.GIRDER S= 1/40



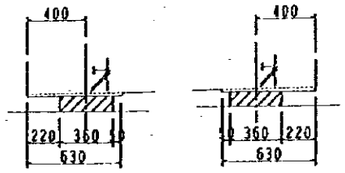


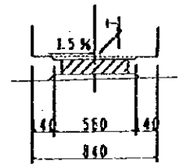




SECTION OF INT.GIRDER S= 1/40

NOTE-1 :
CONSIDERING THE EFFECT LONGITUDINAL SLOPE (i%) TO END GIRDER BOTH ENDS SHOULD BE FIXED PALLAREL TO Y-AXIS





DETAIL OF LAYER S= 1/40

		T	REMARKS
A1 ~ P1	FIX	16	
P10 ~ A2	MOV.	14	
P1 ~ P2	FIX	25	
P3 ~ P10	MOV.	15	
P2 ~ P3	FIX	24	
P8 ~ P9	MOV.	16	
P3 ~ P4	FIX	22	
P7 ~ P8	MOV.	18	
P4 ~ P5	FIX	21	
P6 ~ P7	MOV.	19	
P5 ~ P6	FIX	20	
	MOV.	20	

STRUCTURAL DETAIL OF MAIN GIRDER AT B-LINE

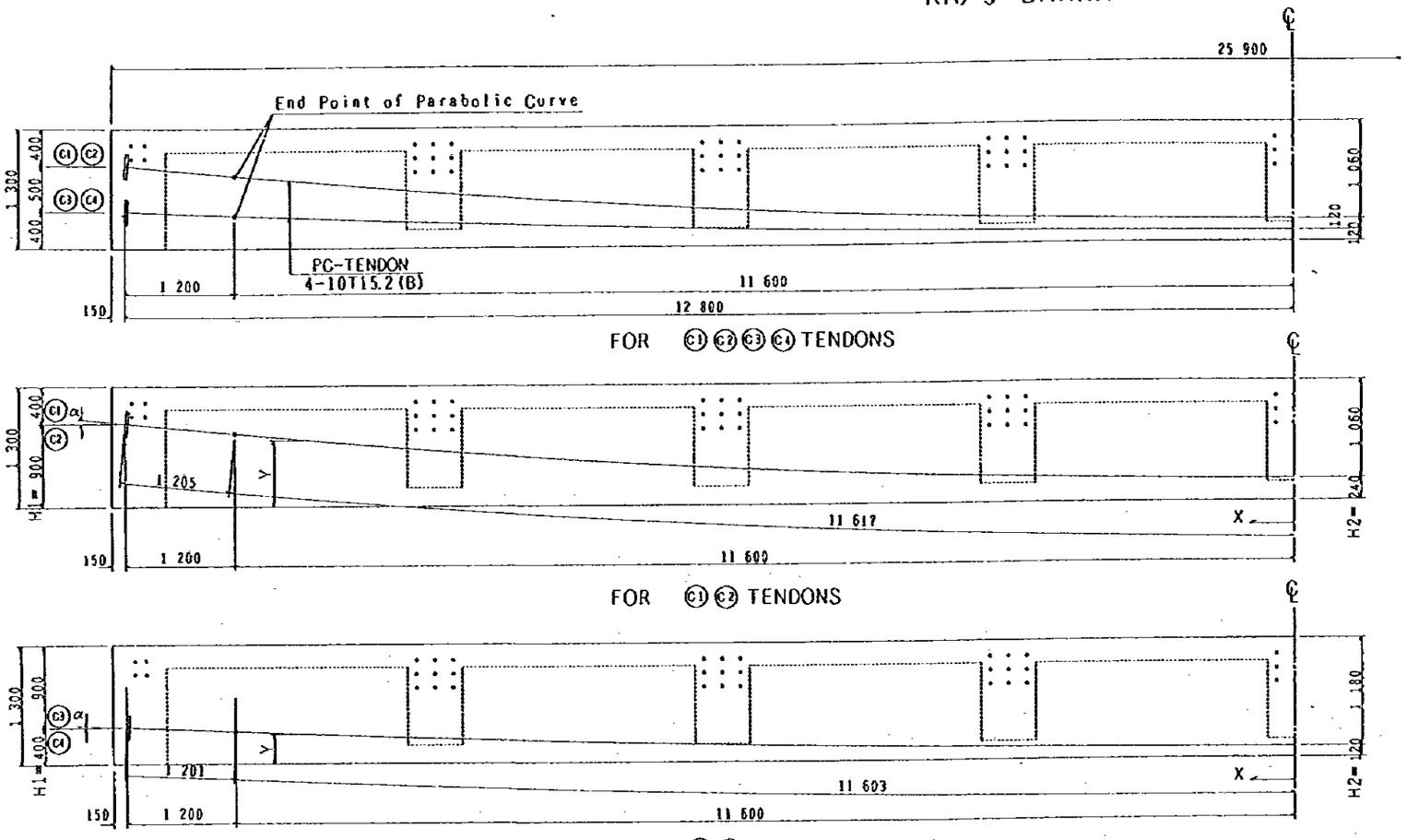
NOTES:

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

JICA STUDY TEAM
PACIFIC CONSULTANTS INTERNATIONAL
FUKUYAMA CONSULTANTS INTERNATIONAL

CLIENT : MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS
PROJECT: D/D ON ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY
TITLE STRUCTURAL DETAIL OF MAIN GIRDER AT B-LINE
DATE
DWGNO. B-16

RA/3 BARKA



	L1	L2	α deg	S1	S2	2×(S1+S2)	W / Cable	W (kg)
ⓒ1 ⓒ2	12 800	11 600	5.4022	1 205	11 617	25 644	282.3	564.6
ⓒ3 ⓒ4	12 800	11 600	2.2918	1 201	11 603	25 608	281.9	563.8
TOTAL								1 128.4

USE GIRDER LENGTH=25.900m, EXTRA LENGTH FOR TENSIONING IS NOT INCLUDED

w=11.010kg/m/Cable (10T15.2B)

NOTE :

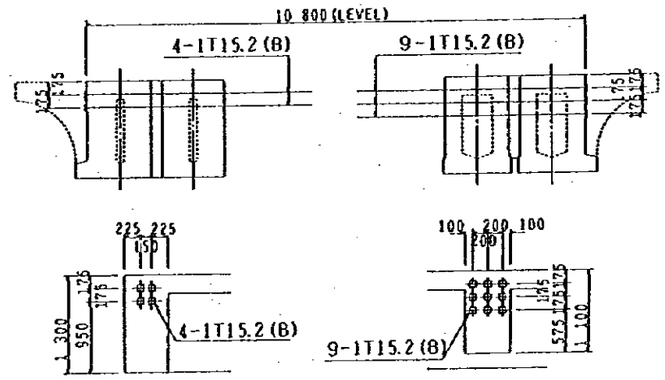
$Y=(H1-H2)/(L2\times(L2\times L1-L2))\times X^2+H2$

$\alpha=2\times(H1-H2)/(2\times L1-L2)$ rad.

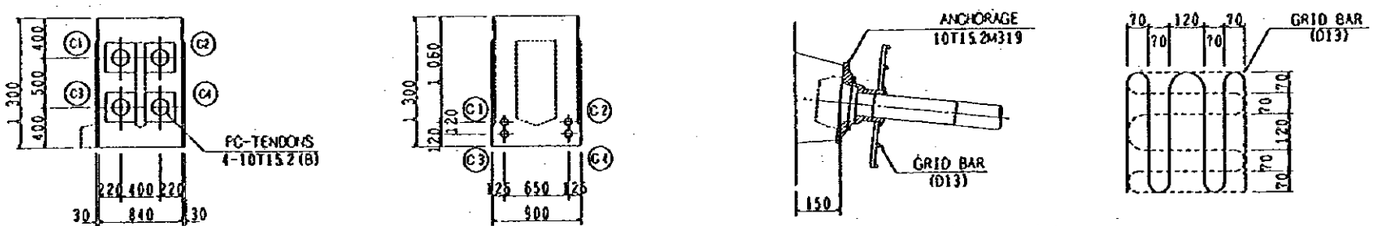
$S1=1\ 200/\cos\alpha$

$S2=L2\times(1+8/3\times n^2-32/5\times n^4+128/7\times n^6-512/9\times n^8)$

$n=(H1-H2-\tan\alpha\times 1\ 200)/(2\times L2)$



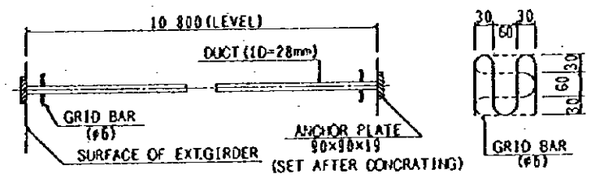
LATERAL TENDON ARRANGEMENT S=1/80



FOR MAIN GIRDER

DETAIL OF TENDONS AT B-LINE

FOR CROSS BEAM



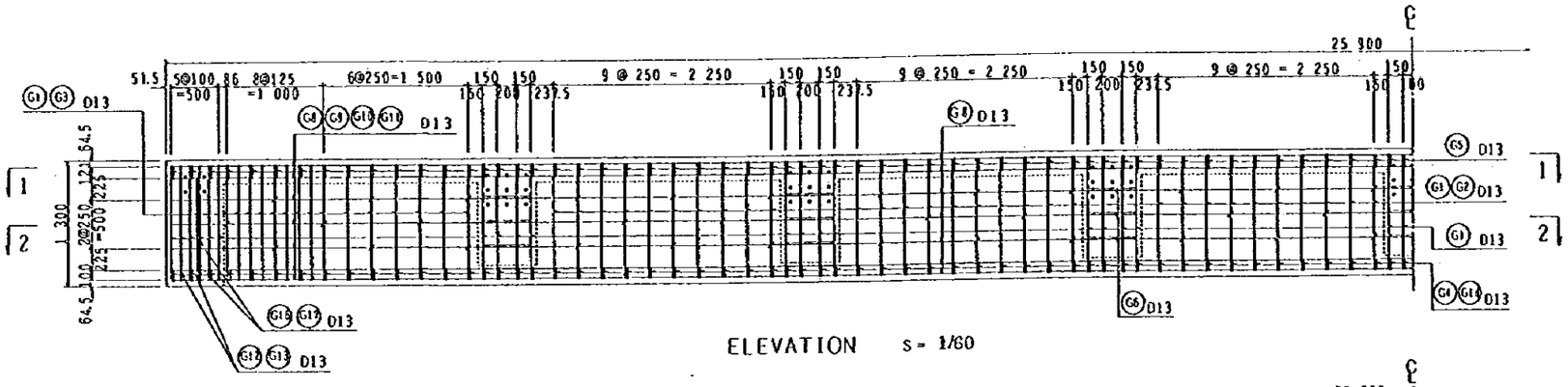
DETAIL OF ANCHORAGE S=1/20, 1/10

NOTES:

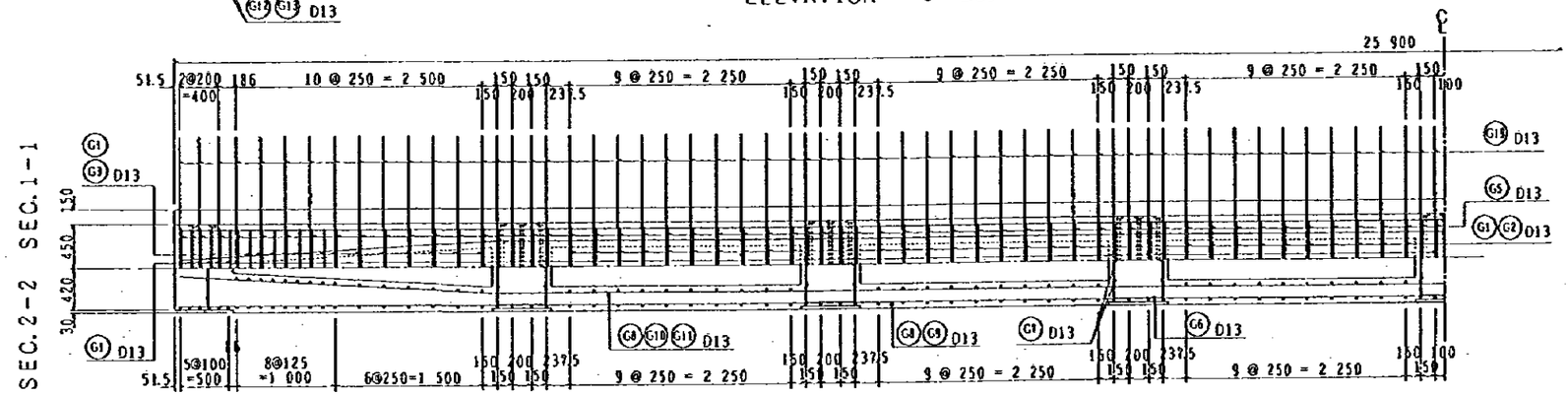
JAPAN INTERNATIONAL COOPERATION AGENCY
(JICA)
JICA STUDY TEAM
PACIFIC CONSULTANTS INTERNATIONAL
FUKUYAMA CONSULTANTS INTERNATIONAL

CLIENT: MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS
PROJECT: D/D ON ROAD DEVELOPMENT PROJECT ON BATINAN HIGHWAY
TITLE: DETAIL OF TENDONS AT B-LINE
DATE
DWGNO. B-17

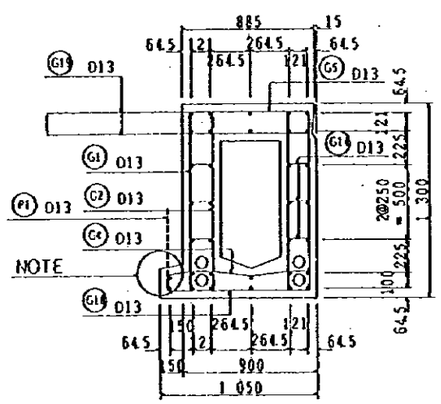
RA/3 BARKA



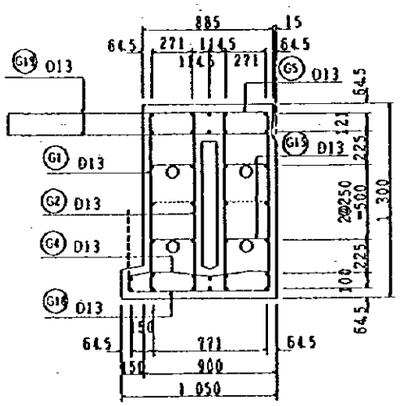
ELEVATION s= 1/60



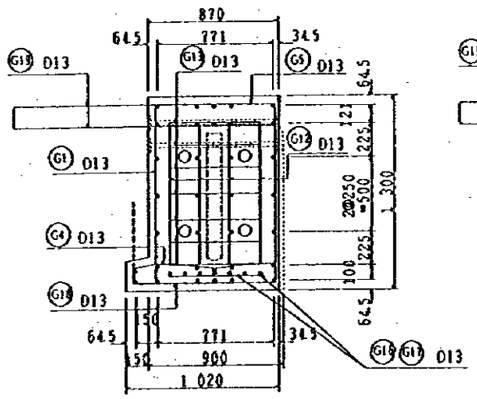
PLAN s= 1/60



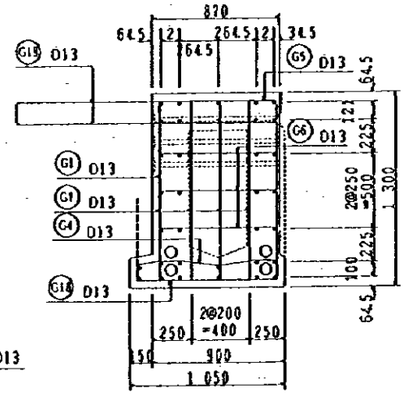
TYPICAL SECTION



AT WEB WIDENED



AT GIRDER END



AT CROSS BEAM

NOTE :

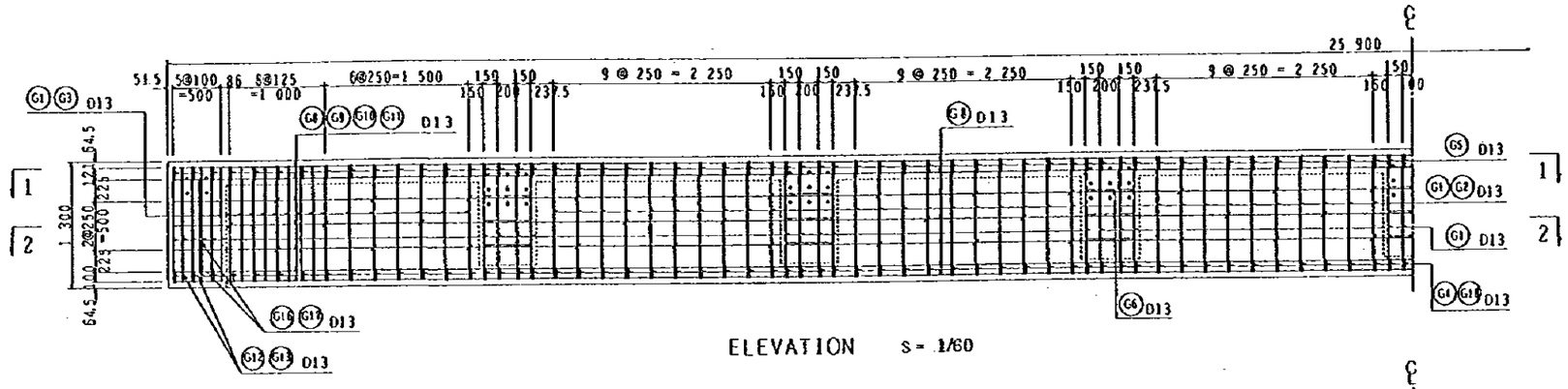
FOR ALTERNATIVE CONSTRUCTION JOINT, INSERT INSIDE THREADED JOINT TO HANDLE PLANTED VERTICAL BAR

SECTION s= 1/40

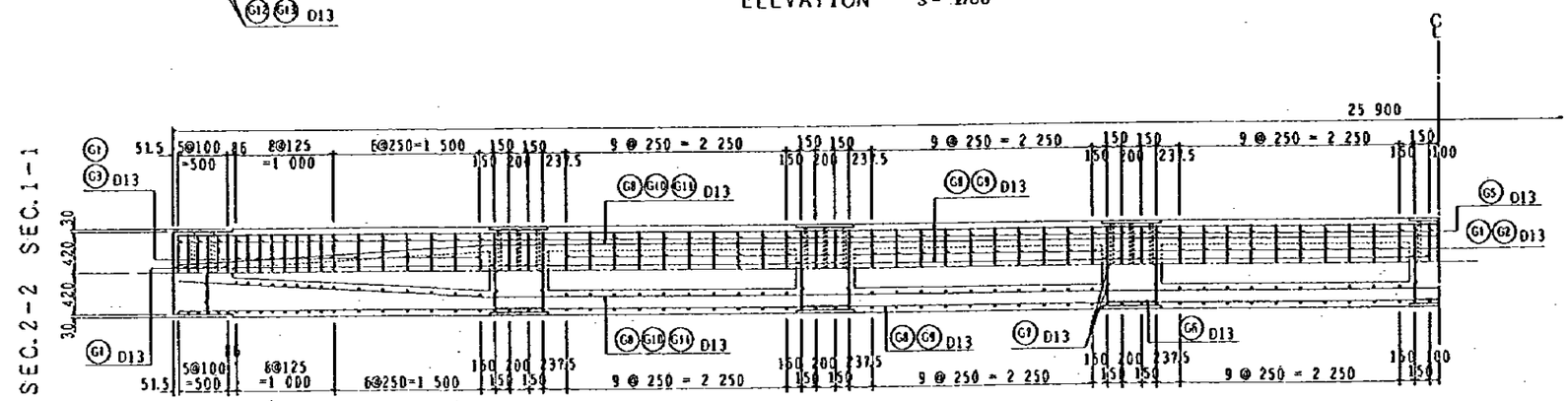
B-LINE RE-BAR ARRANGEMENT-1 (EXT.GIRDER)

NOTES:		JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) JICA STUDY TEAM PACIFIC CONSULTANTS INTERNATIONAL FUKUYAMA CONSULTANTS INTERNATIONAL	CLIENT : MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS PROJECT: D/D ON ROAD DEVELOPMENT PROJECT ON BATANAH HIGHWAY TITLE – RE-BAR ARRANGEMENT(1/2) AT B-LINE DATE DWGNO. B-18

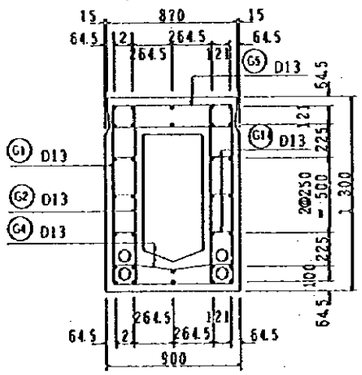
RA/3 BARKA



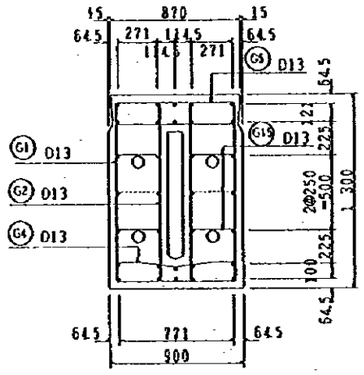
ELEVATION s= 1/60



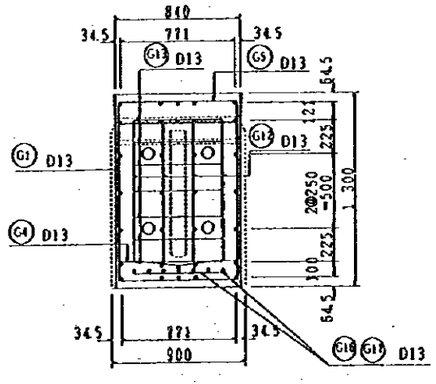
PLAN s= 1/60



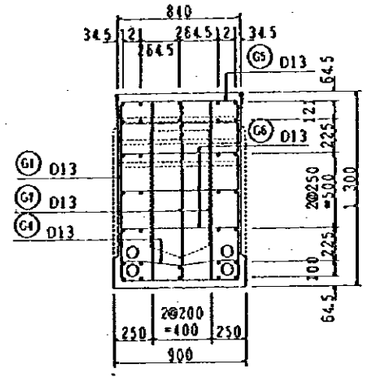
TYPICAL SECTION



AT WEB WIDENED



AT GIRDER END



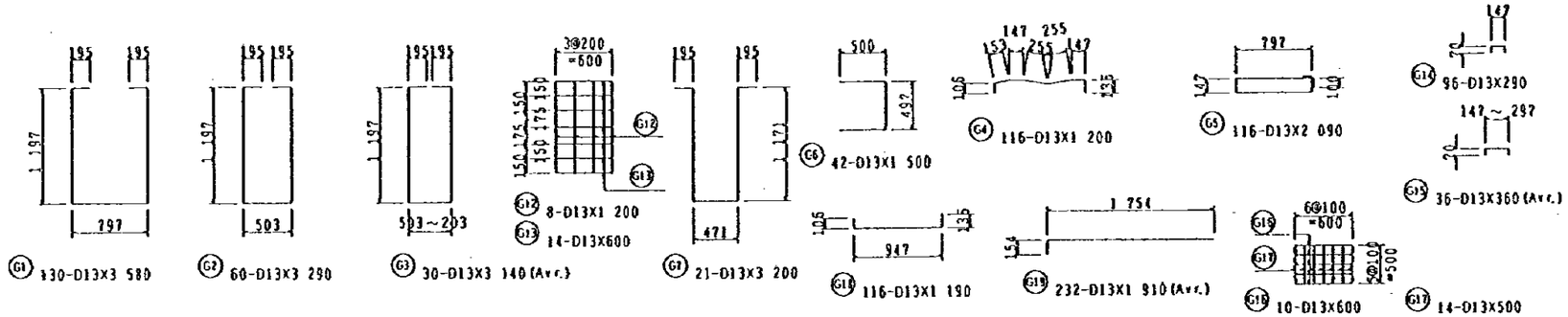
AT CROSS BEAM

SECTION s= 1/40

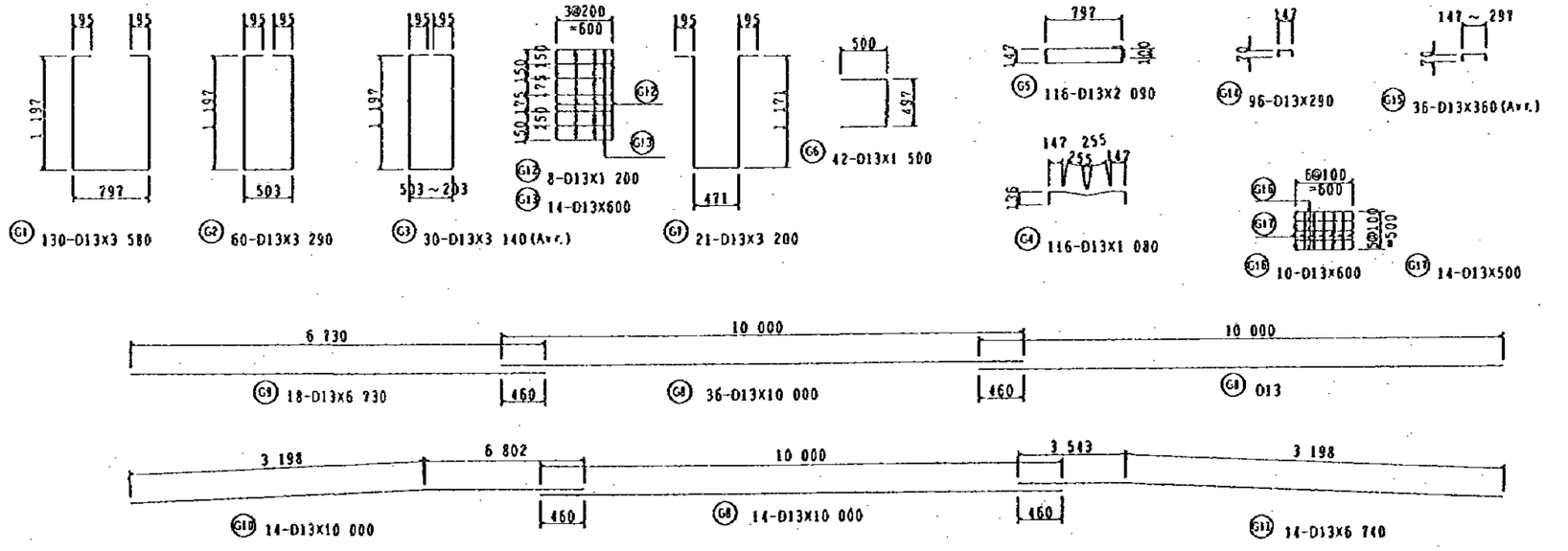
B-LINE RE-BAR ARRANGEMENT-2 (INT.GIRDER)

NOTES:		JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	CLIENT: MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS
		JICA STUDY TEAM PACIFIC CONSULTANTS INTERNATIONAL FUKUYAMA CONSULTANTS INTERNATIONAL	PROJECT: D/D ON ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY
			TITLE: RE-BAR ARRANGEMENT(2/2) AT B-LINE
			DATE / DWGNO. B-19

RA/3 BARKA



FOR EXT.GIRDER S= 1/60

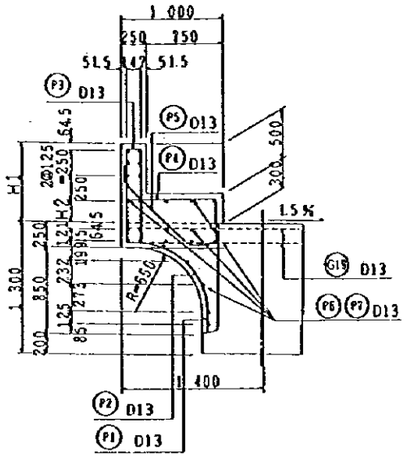


FOR INT.GIRDER S= 1/60

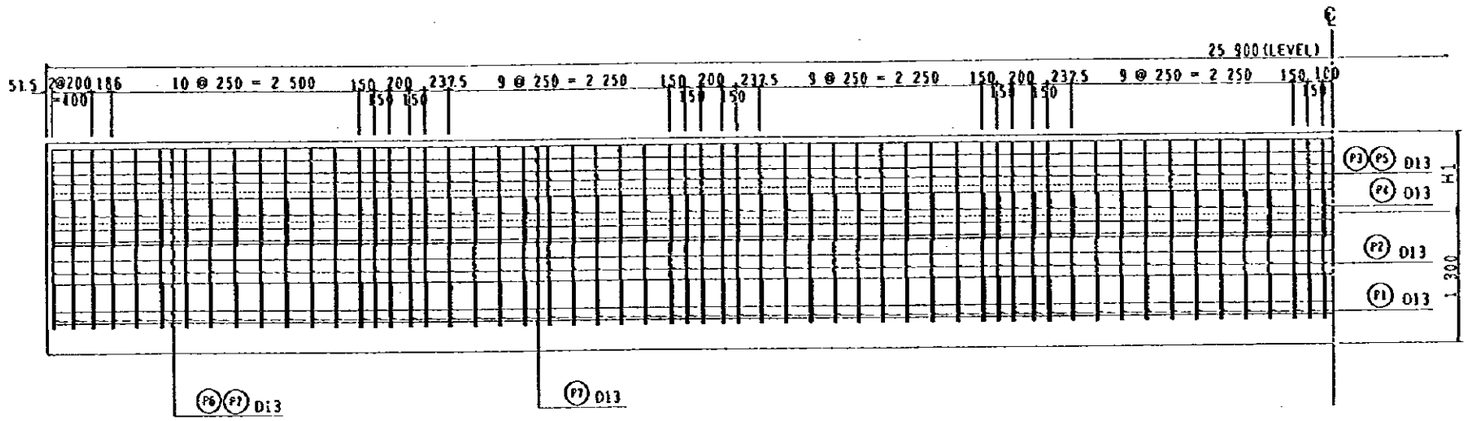
BAR SCHEDULE OF MAIN GIRDER AT B-LINE

NOTES:		JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	CLIENT: MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS
			PROJECT: D/D ON ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY
		JICA STUDY TEAM PACIFIC CONSULTANTS INTERNATIONAL FUKUYAMA CONSULTANTS INTERNATIONAL	TITLE: BAR SCHEDULE OF MAIN GIRDER AT B-LINE
			DATE: DWG NO. B-20

RA/3 BARKA



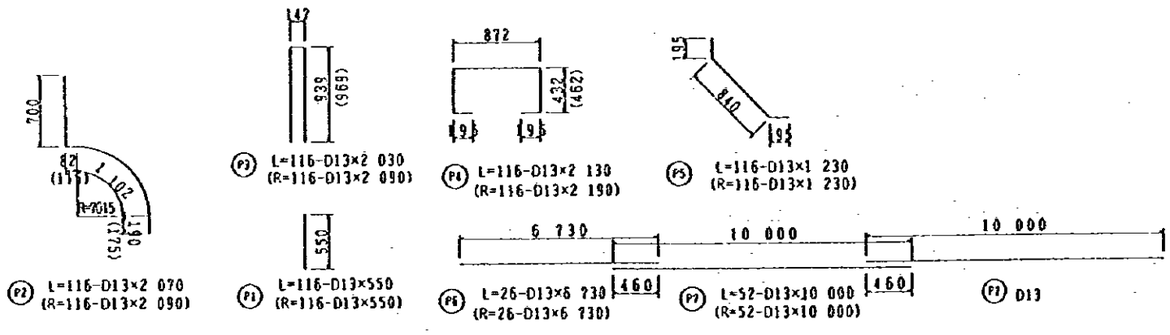
SECTION



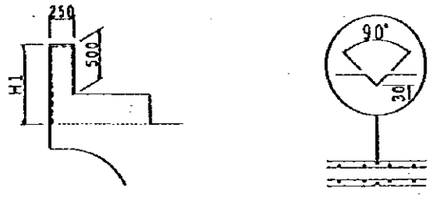
ELEVATION

RE-BAR ARRANGEMENT S= 1/60

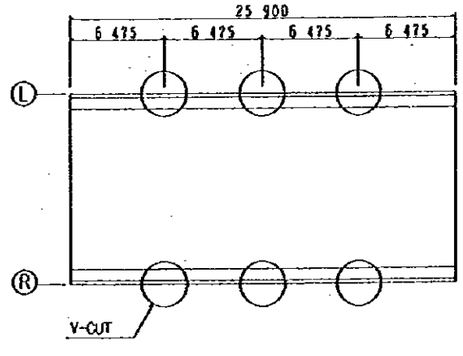
	H1	H2
Ⓛ	785	220.5
Ⓡ	815	250.5



BAR SCHEDULE



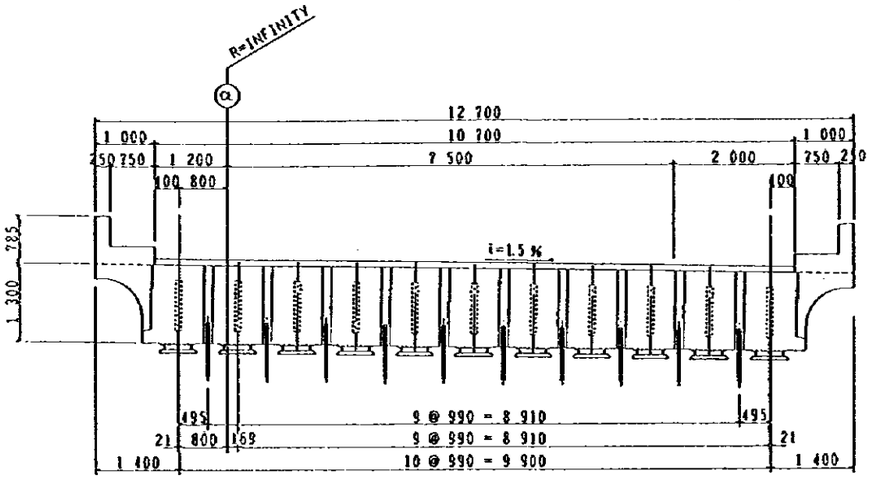
DETAIL OF V-CUT



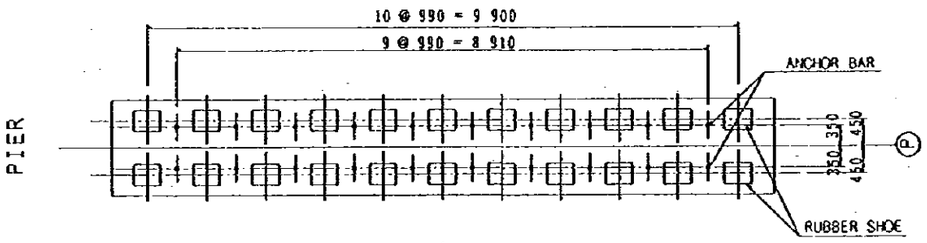
RAILING AND CANTILEVER SLAB AT B-LINE

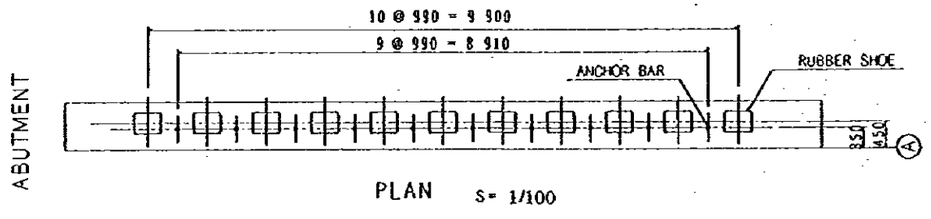
NOTES:		JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) JICA STUDY TEAM PACIFIC CONSULTANTS INTERNATIONAL FUKUYAMA CONSULTANTS INTERNATIONAL	CLIENT: MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS PROJECT: D/D ON ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY TITLE: RAILING AND CANTILEVER SLAB AT B-LINE DATE: DWGNO. B-21

RA/3 BARKA



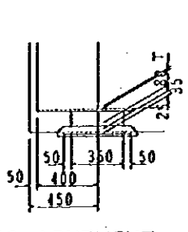
SECTION s= 1/100



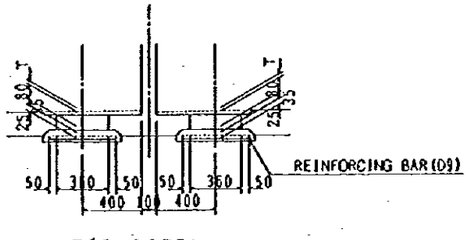


PLAN s= 1/100

DETAIL OF SHOE AND ANCHOR BAR

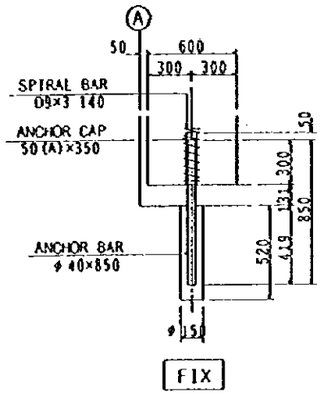


FOR ABUTMENT

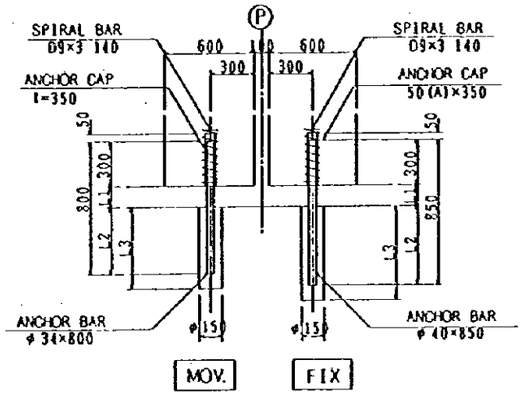


FOR PIER

DETAIL OF SHOE s= 1/40



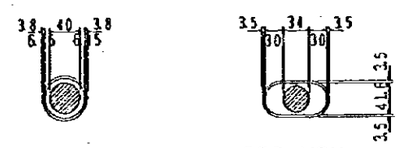
FOR ABUTMENT



FOR PIER

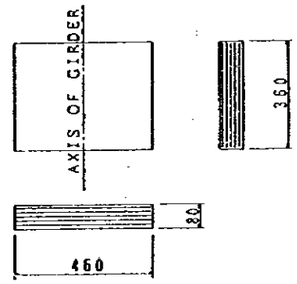
DETAIL OF ANCHOR BAR s= 1/40

		T	L1	L2	L3
A1 ~ P1	FIX	16	131	419	520
A1 ~ A2	MOV.	14	129	371	475
P1 ~ P2	FIX	25	140	410	520
P9 ~ P10	MOV.	15	130	370	475
P2 ~ P3	FIX	24	139	411	520
P8 ~ P9	MOV.	16	131	369	475
P3 ~ P4	FIX	22	137	413	520
P7 ~ P8	MOV.	18	133	367	475
P4 ~ P5	FIX	21	136	414	520
P6 ~ P7	MOV.	19	134	366	475
P5 ~ P6	FIX	20	135	415	520
	MOV.	20	135	365	475

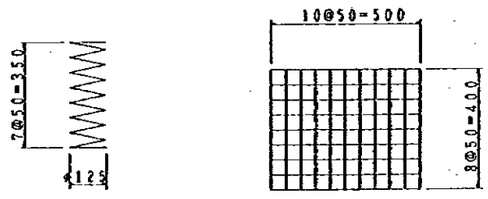


FOR FIX FOR MOV.

ANCHOR CAP s= 1/10

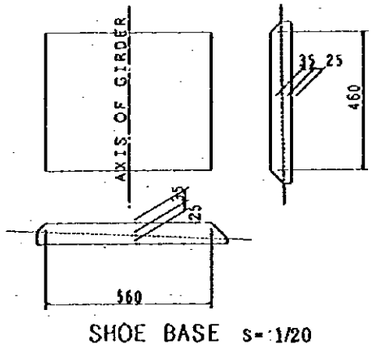


SYNTHETIC RUBBER SHOE s= 1/20



SPIRAL BAR(D9) s= 1/40

REINFORCING BAR(D9) s= 1/40



SHOE BASE s= 1/20

(PER SPAN)

	DESCRIPTION	UNIT	QUANTITY	REMARKS
FIX	ANCHOR BAR (GALV.)	kg	83.9	w= 8.39 kg/pc.
	ANCHOR CAP (GALV.)	kg	18.6	w=1.86 kg/pc.
	FILLER	kg	5.9	w=0.588 kg/anc.
	SYNTHETIC RUBBER SHOE	Pcs	11	460×360×80
	REINFORCING BAR	kg	54.8	w=4.98 kg/Set
	SPIRAL BAR	kg	17.6	w=1.76 kg/pc.
	NON SHRINKAGE MORTAR	m^3	0.198	0.018m^3/Shoe
	"	m^3	0.090	0.009m^3/Hole (AVE.)
MOV.	ANCHOR BAR (GALV.)	kg	57.0	w=5.70 kg/pc.
	ANCHOR CAP (GALV.)	kg	23.7	w=2.37 kg/pc.
	FILLER	kg	14.5	w=1.45 kg/anc.
	SYNTHETIC RUBBER SHOE	Pcs	11	460×360×80
	REINFORCING BAR	kg	54.8	w=4.98kg/Set
	SPIRAL BAR	kg	17.6	w=1.76 kg/pc.
	NON SHRINKAGE MORTAR	m^3	0.198	0.018m^3/Shoe
	"	m^3	0.080	0.008m^3/Hole (AVE.

MATERIAL LIST

DETAIL OF SHOE AND ANCHOR BAR AT B-LINE

NOTES:

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

JICA STUDY TEAM
PACIFIC CONSULTANTS INTERNATIONAL
FUKUYAMA CONSULTANTS INTERNATIONAL

CLIENT: MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS

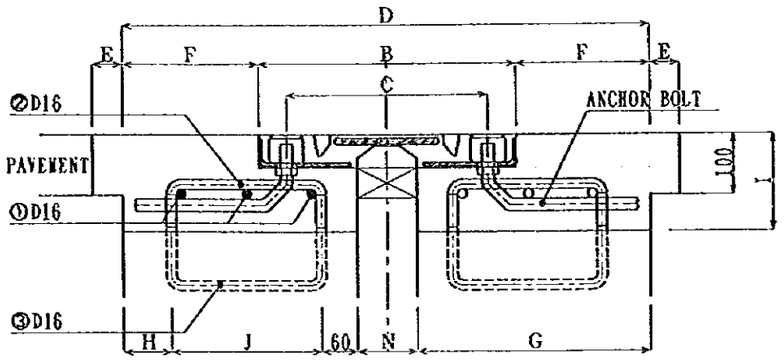
PROJECT: D/D ON ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY

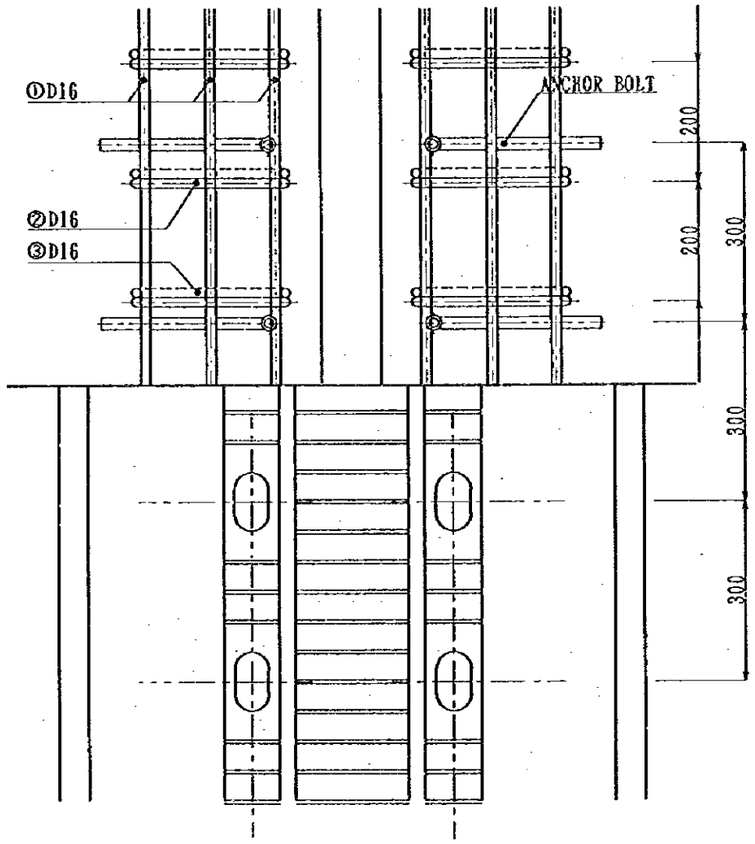
TITLE: DETAIL OF SHOE AND ANCHOR BAR AT B-LINE

DATE

DWG NO. B-22

B A R K A





MEASURE DATA

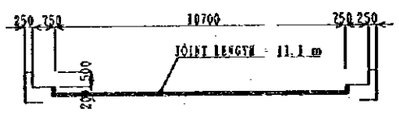
	A	B	C	D	E	F	G	H	I	J	STANDARD SPACE BETWEEN SLABS N	TRAVEL
PIER	54	433	340	879	50	223	390	80	160	250	100	80
ABUT	40	303	235	709	50	203	330	70	150	200	50	50

MATERIAL LIST (PER 10 m)

MATERIAL	CLASSIFICATION	UNIT	PIER	ABUT
TRANSFLEX JOINT	INCLUDING ANCHORBOLT	m	10.0	10.0
SEALANT	FOR JOINT SEALS	kg	22.5	16.0
	FOR PLUG HOLE	kg	8.5	4.0
REINFORCING BAR	①D16	kg	93.60	93.60
	②D16	kg	60.84	53.04
RECESS CONCRETE	HIGH-EARLY STRENGTH CONCRETE	m³	1.143	0.964
COLORING AGENT OF THE FACE	3 kg/m²	kg	16.0	15.0
POLYURETHANE FORM		m	10.0	10.0
TRANSIENT FILLING MATERIAL	SAND	m³	0.66	0.53
	ASPHALT CONCRETE	m³	0.73	0.60

QUANTITY LIST

	PIER	ABUTMENT
AL KHABURAHN	20	4
TOTAL LENGTH	222.0	44.4



JOINT LENGTH PER 1 PLACE

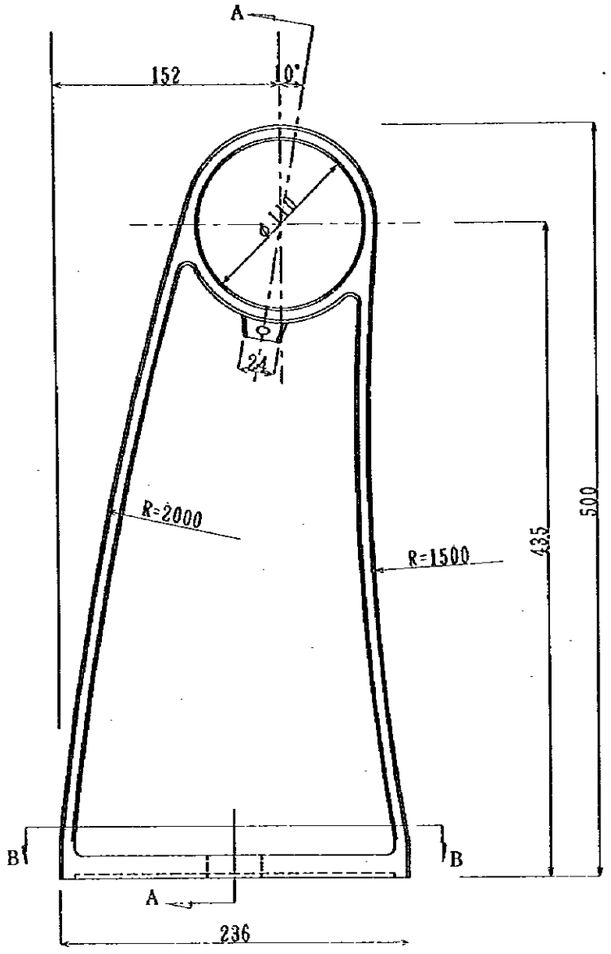
TRANSFLEX JOINT S= 1/10

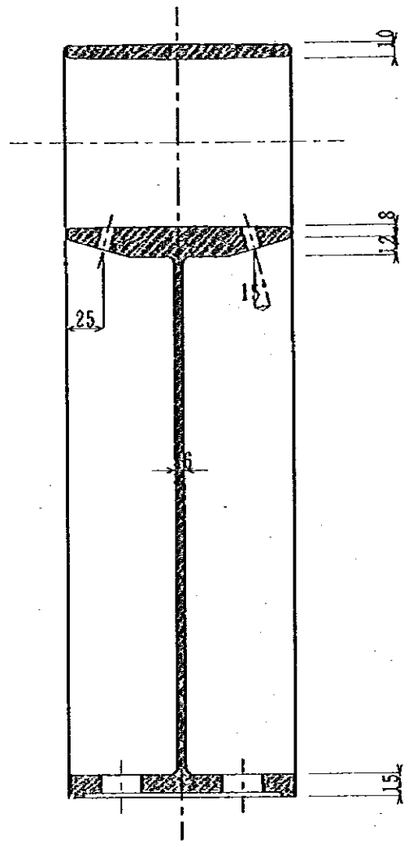
NOTES:

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	CLIENT: MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS
JICA STUDY TEAM PACIFIC CONSULTANTS INTERNATIONAL FUKUYAMA CONSULTANTS INTERNATIONAL	PROJECT: D/D ON ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY
	TITLE: EXPANSION JOINT
	DATE: — DWGNO. B-23

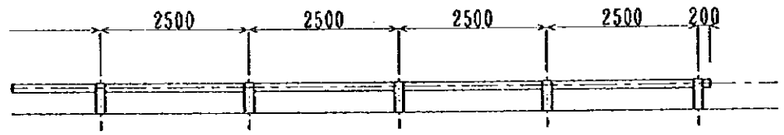
43

B A R K A

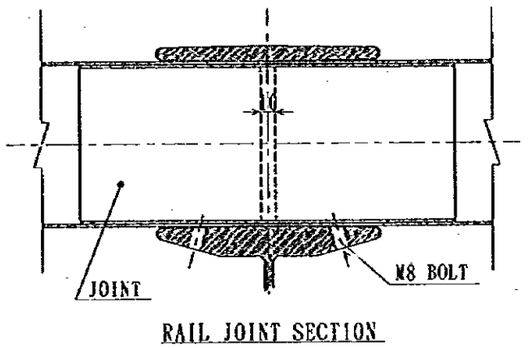




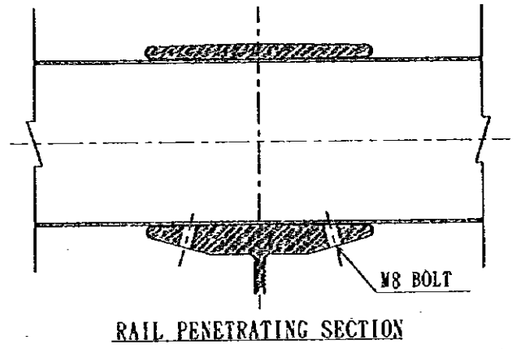
A-A SECTION



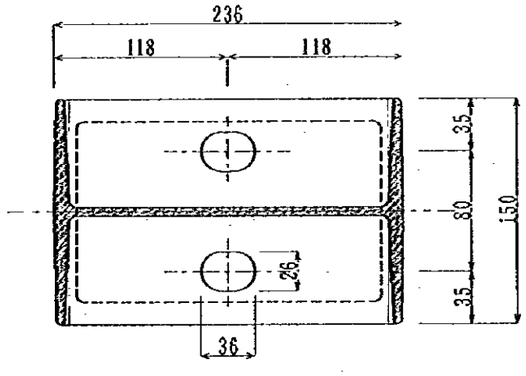
POST ARRANGEMENT



RAIL JOINT SECTION

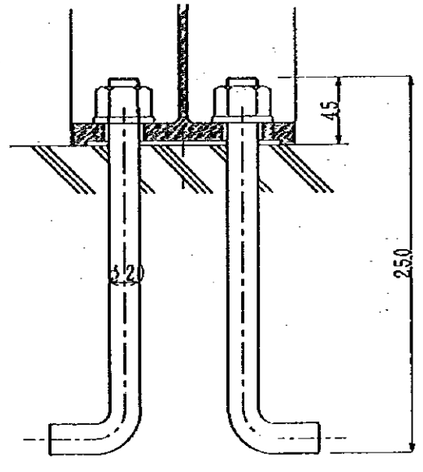


RAIL PENETRATING SECTION

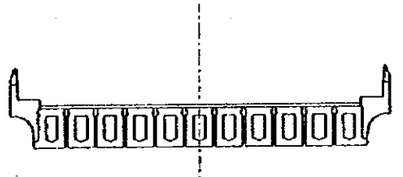


B-B SECTION

POST SCALE



ANCHOR BOLT



HANDRAIL LOCATION

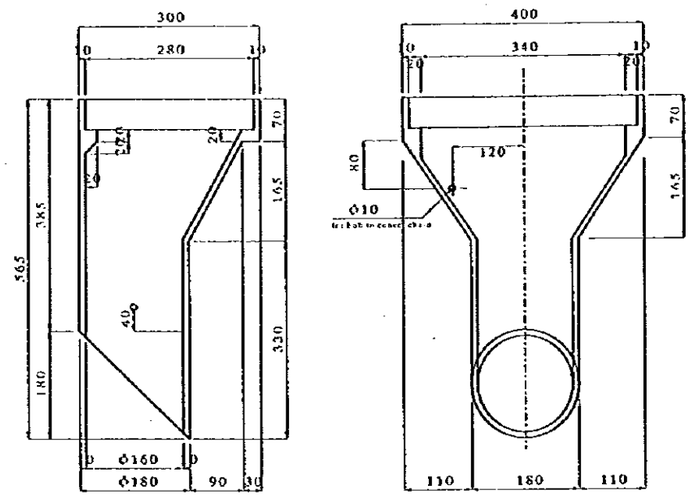
H A N D R A I L S=1:4

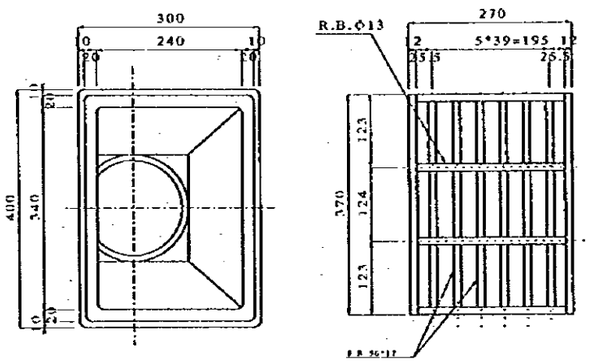
ALMINIUM PRODUCTS

NOTES:		JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	CLIENT : MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS
			PROJECT: D/D ON ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY
		JICA STUDY TEAM PACIFIC CONSULTANTS INTERNATIONAL FUKUYAMA CONSULTANTS INTERNATIONAL	TITLE HANDRAIL
			DATE -- DWGNO. B-24

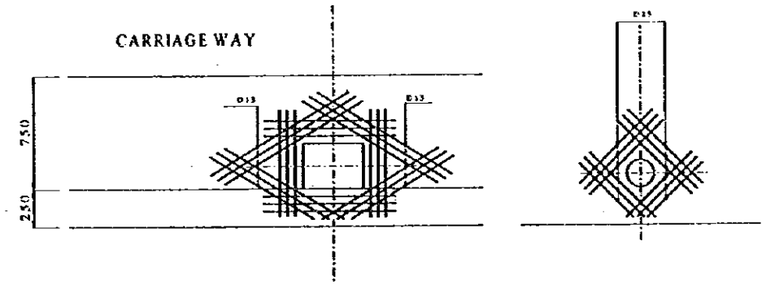
BRIDGE DRAINAGE DETAILS
(BARKA FLYOVER)

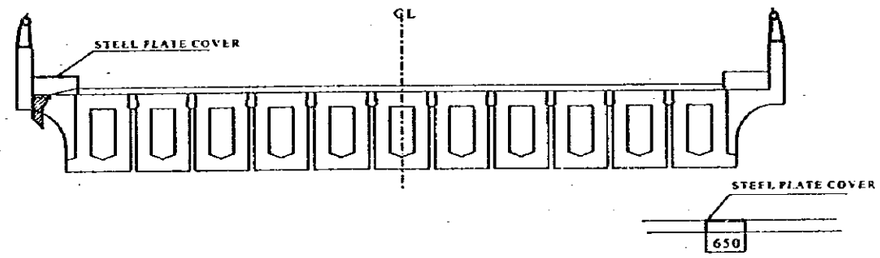
CATCH BASIN (S=1:5)





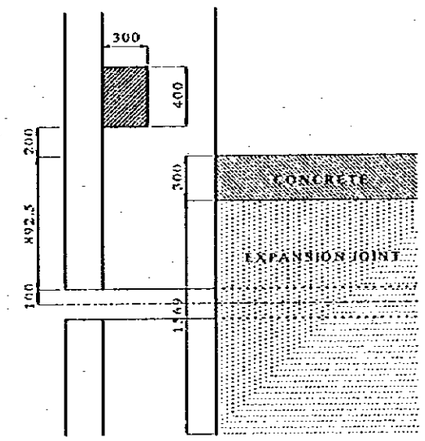
REINFORCING (S=1:20)



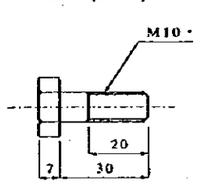


CROSS SECTIONAL LOCATION

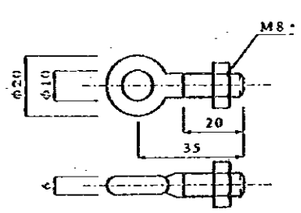
INSTALLING LOCATION DETAIL



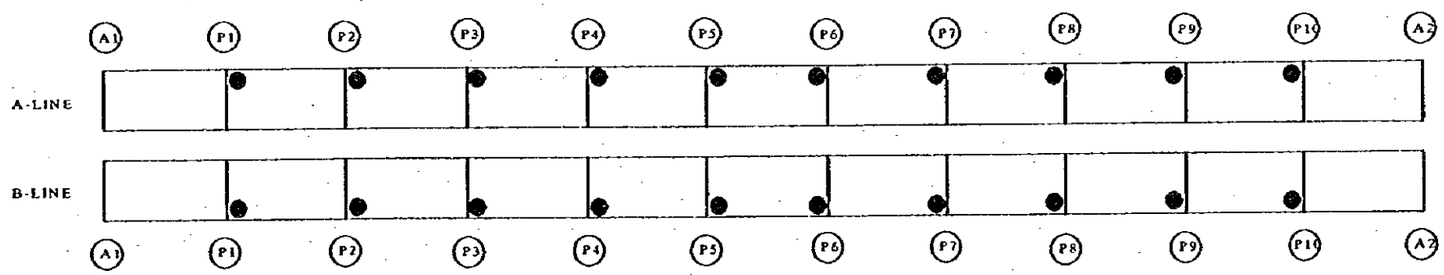
BISS (S=1:1)



BOLT TO CONNECT CHAIN (S=1:1)



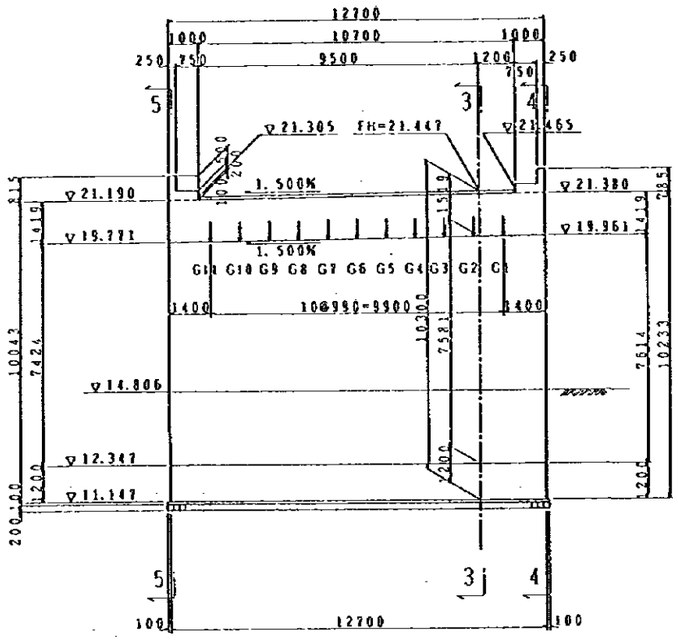
INATALLING LOCATIONS



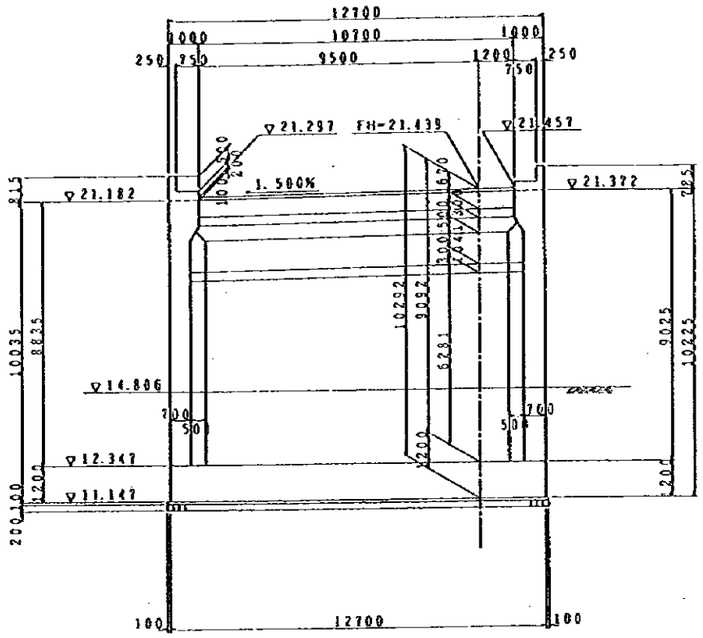
NOTES:

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	CLIENT: MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS
JICA STUDY TEAM PACIFIC CONSULTANTS INTERNATIONAL FUKUYAMA CONSULTANTS INTERNATIONAL	PROJECT: D/D ON ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY
	TITLE: BRIDGE DRAINEGE DETAILS (BARKA)
	DATE: -- / DWG. NO. 8-25

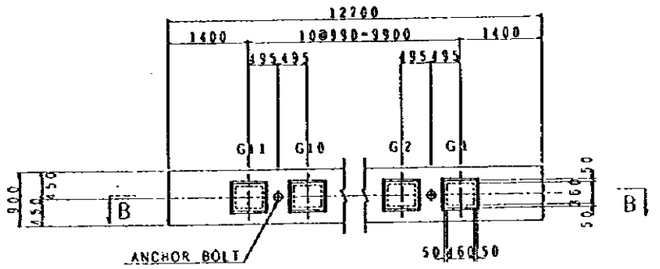
RA/3 BARKA



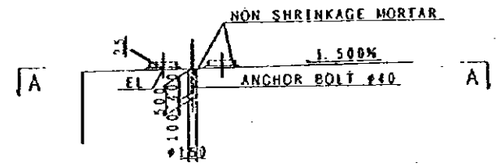
SECTION 1-1 S= 1/200



SECTION 2-2 S= 1/200

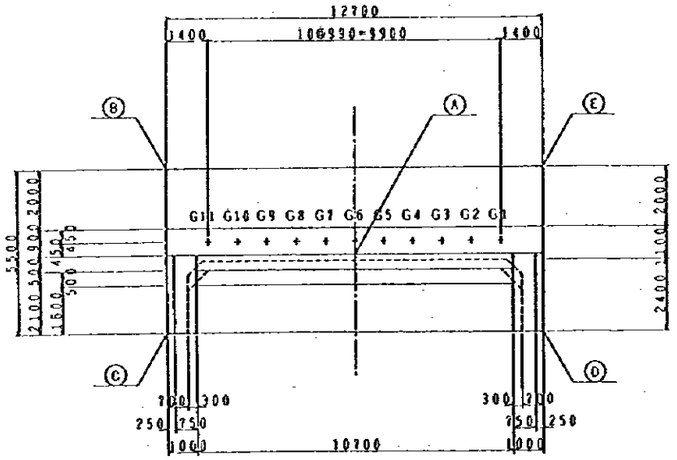


SECTION A-A S= 1/100

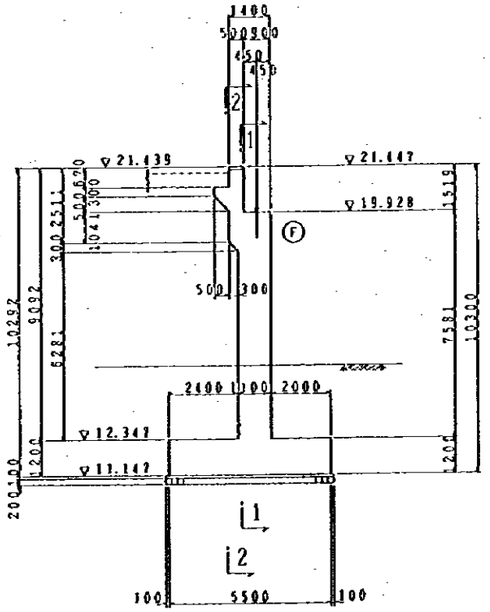


SECTION B-B S= 1/100

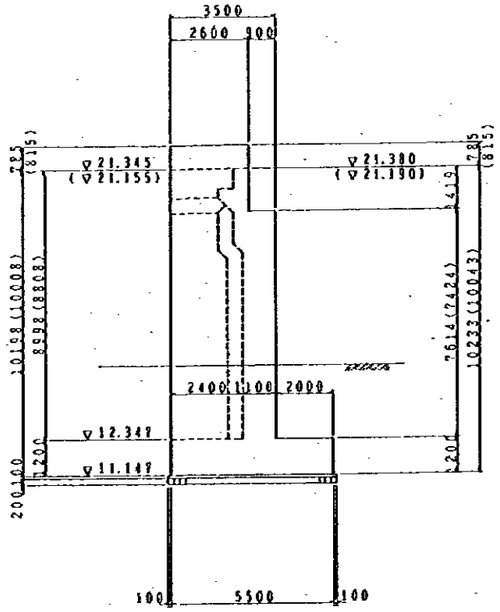
DETAIL OF SHOE BED



P L A N S= 1/200



SECTION 3-3 S= 1/200



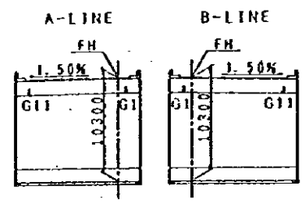
SECTION 4-4 (5-5) S= 1/200.

SHOE ELEVATION(EL) TABLE

	G1	G11
A-LINE	19.940	19.792
B-LINE	19.940	19.792

CO-ORDINATES LIST

		A-LINE	B-LINE
A	X	17764.6830	17684.4555
	Y	9977.4582	3573.0766
B	X	17718.3128	17690.6854
	Y	9981.6295	9977.9119
C	X	17731.4814	17691.2180
	Y	9976.2865	9971.8289
D	X	17699.6216	17678.7883
	Y	9973.6405	9969.2229
E	X	17627.8830	17677.6597
	Y	9979.0235	9974.6059



KEY PLAN

STRUCTURAL DETAIL OF A1 ABUTMENT AT A・B-LINE

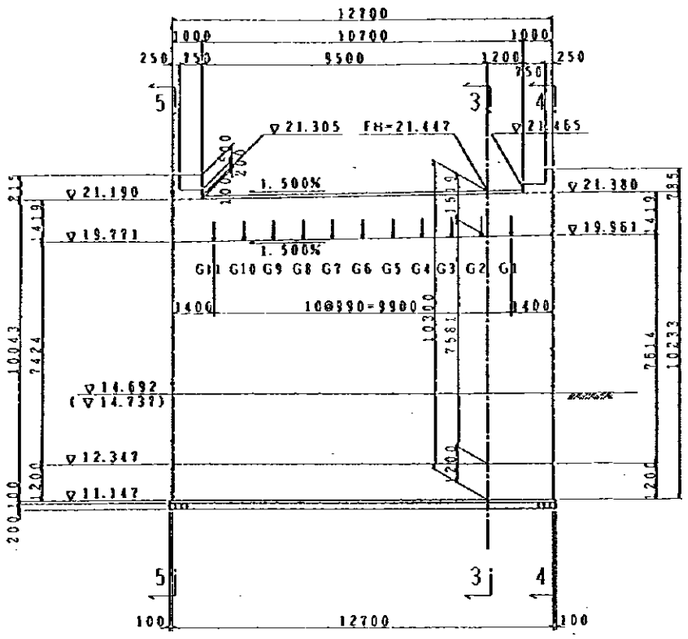
NOTES:

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

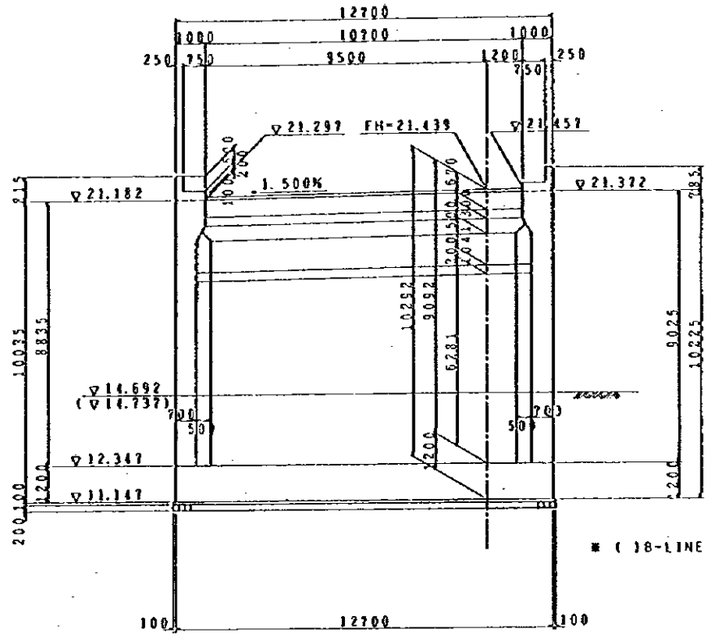
JICA STUDY TEAM
PACIFIC CONSULTANTS INTERNATIONAL
FUKUYAMA CONSULTANTS INTERNATIONAL

CLIENT: MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS
PROJECT: D/D ON ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY
TITLE STRUCTURAL DETAIL OF A1 ABUTMENT AT A,B-LINE
DATE
DWG NO. B-26

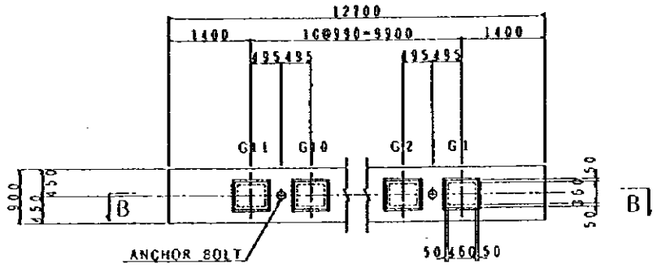
RA/3 BARKA



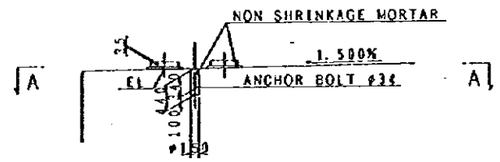
SECTION 1-1 S= 1/200



SECTION 2-2 S= 1/200



SECTION A-A S= 1/100



SECTION B-B S= 1/100

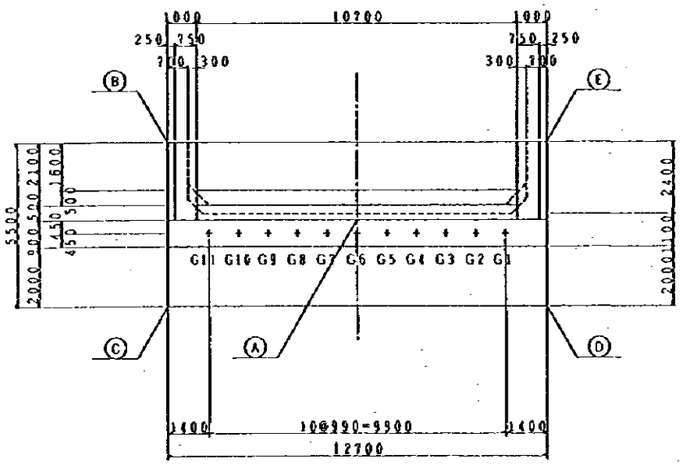
DETAIL OF SHOE BED

SHOE ELEVATION(EL) TABLE

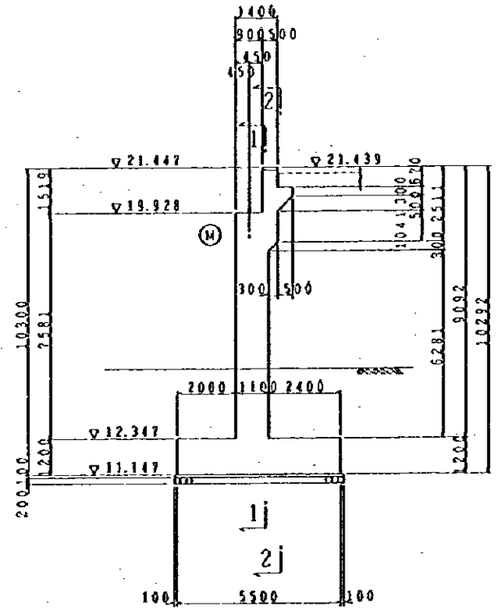
	G1	G11
A-LINE	19.940	19.792
B-LINE	19.940	19.792

CO-ORDINATES LIST

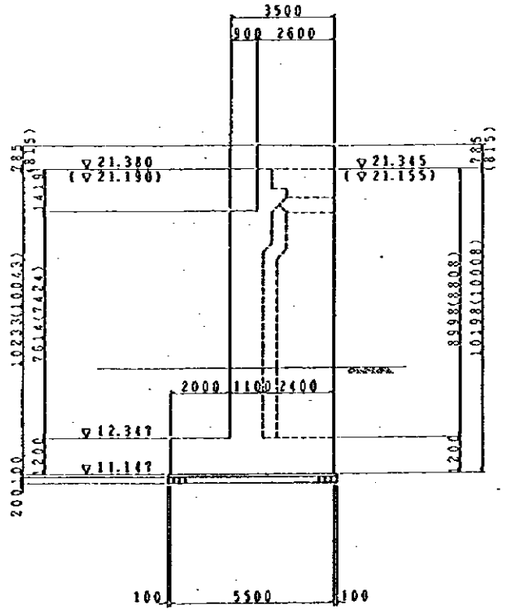
		A-LINE	B-LINE
A	X	17616.0665	17625.7892
	Y	10259.4025	10252.9347
B	X	17651.6879	17603.4645
	Y	10281.2500	10256.8324
C	X	17652.8165	17632.5931
	Y	10255.8670	10251.4494
D	X	17643.3387	17626.1833
	Y	10259.2610	10245.8434
E	X	17638.2581	17619.0347
	Y	10258.6440	10254.2264



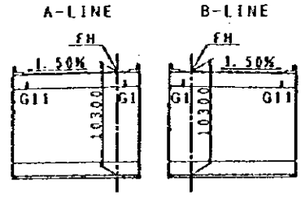
P L A N S= 1/200



SECTION 3-3 S= 1/200



SECTION 4-4 (5-5) S= 1/200



KEY PLAN

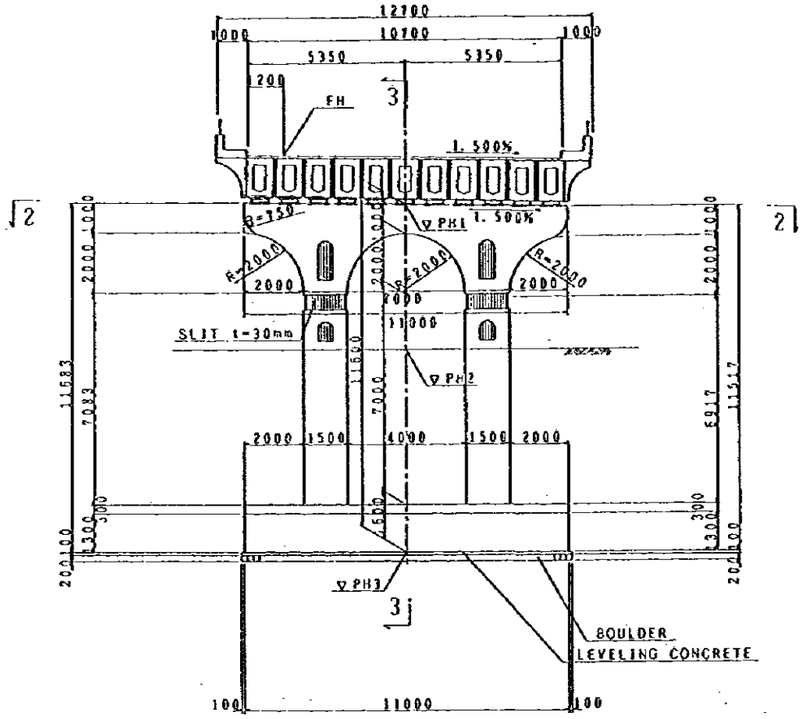
STRUCTURAL DETAIL OF A2 ABUTMENT AT A・B-LINE

NOTES:

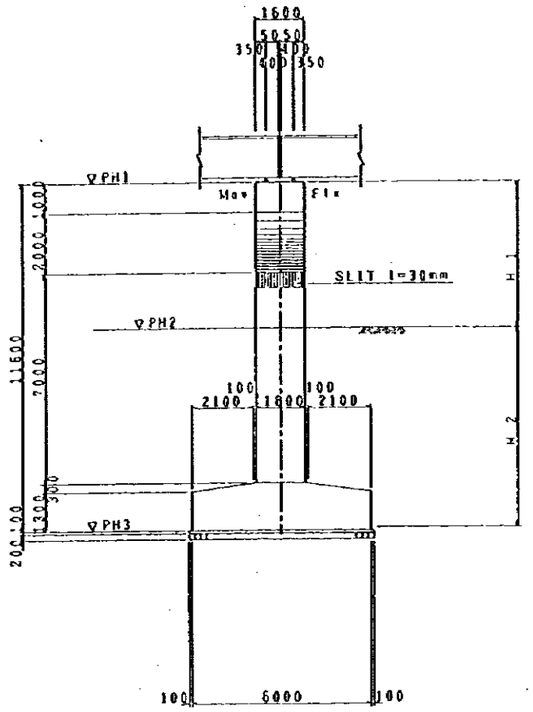
JAPAN INTERNATIONAL COOPERATION AGENCY
(JICA)
JICA STUDY TEAM
PACIFIC CONSULTANTS INTERNATIONAL
FUKUYAMA CONSULTANTS INTERNATIONAL

CLIENT: MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS
PROJECT: D/D ON ROAD DEVELOPMENT PROJECT ON BATANES HIGHWAY
TITLE: STRUCTURAL DETAIL OF A2 ABUTMENT AT A,B-LINE
DATE:
DWG NO. B-27

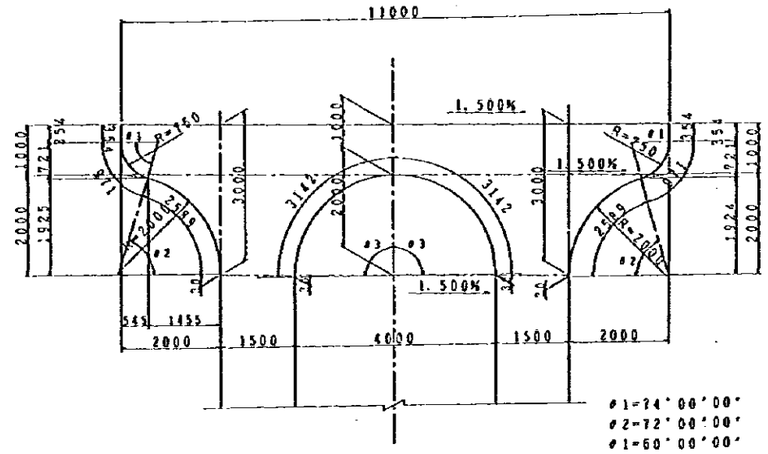
RA/3 BARKA



SECTION 1-1 S= 1/200



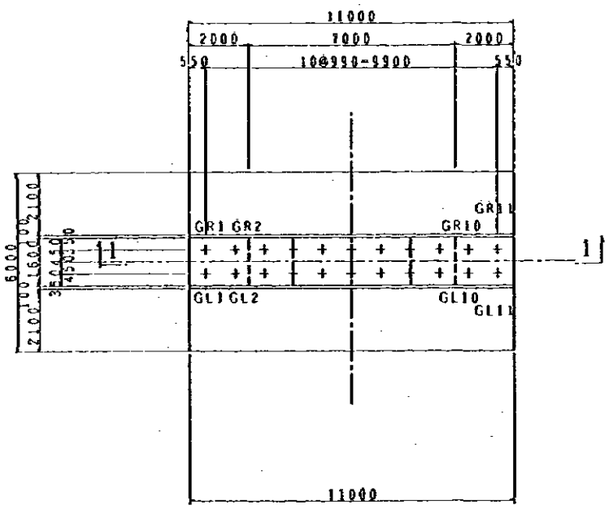
SECTION 3-3 S= 1/200



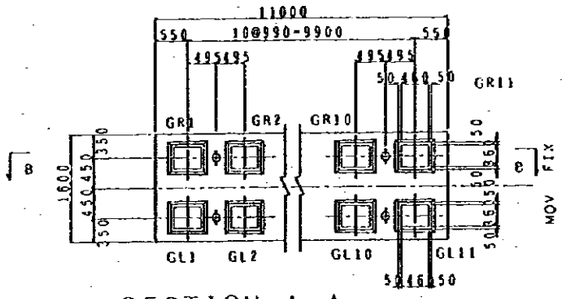
BEAM DETAL S=1/120

DEMENSION TABLE

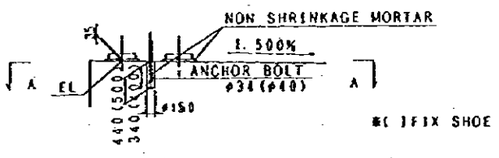
		PH1	PH2	PH3	H1	H2
A-LINE	P4	20.796	15.100	9.196	5.696	5.904
	P5	20.863	15.900	9.263	4.963	6.637
	P6	20.863	15.890	9.263	4.973	6.627
	P7	20.796	15.100	9.196	5.696	5.904
B-LINE	P4	20.796	15.100	9.196	5.696	5.904
	P5	20.863	15.900	9.263	4.963	6.637
	P6	20.863	15.950	9.263	4.913	6.687
	P7	20.796	15.100	9.196	5.696	5.904



SECTION 2-2 S= 1/200



SECTION A-A S= 1/100

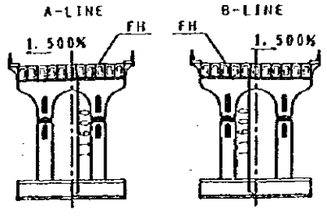


SECTION B-B S= 1/100

DETAIL OF SHOE BED

SHOE ELEVATION(EL) TABLE

	G1L(G1R)	G1L(G11R)
P4	20.870	20.722
P5	20.937	20.789
P6	20.937	20.789
P7	20.870	20.722



KEY PLAN

STRUCTURAL DETAIL OF TWO-COLUMN PIER FOR P4~P7 AT A·B-LINE (1/2)

NOTES:

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

JICA STUDY TEAM
PACIFIC CONSULTANTS INTERNATIONAL
FUKUYAMA CONSULTANTS INTERNATIONAL

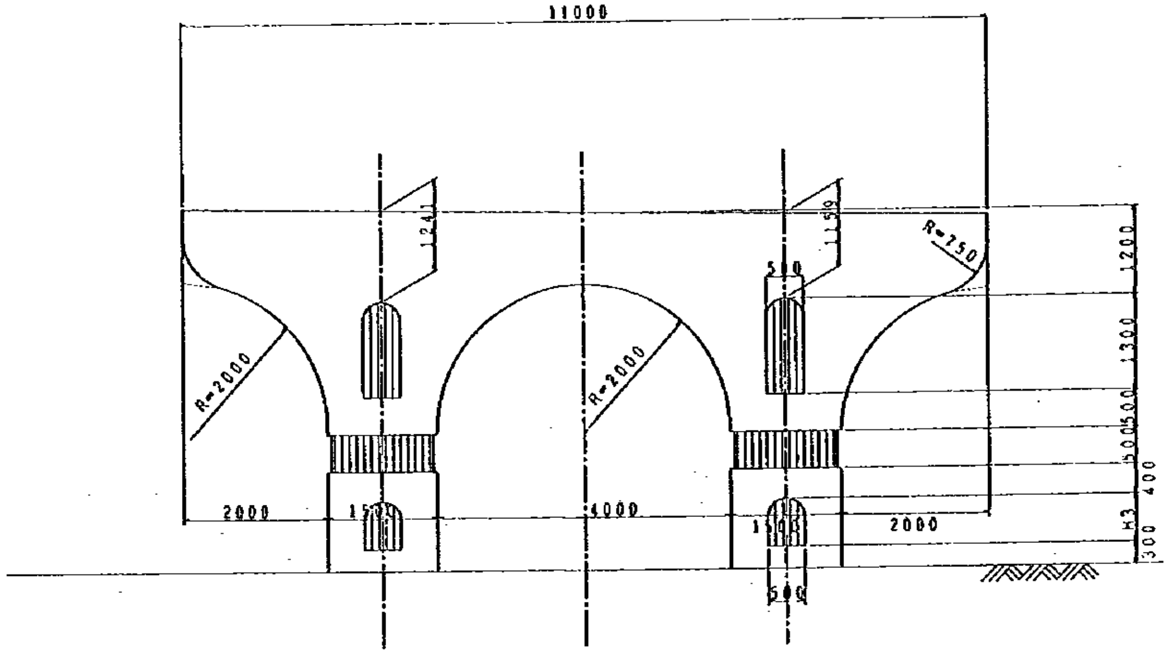
CLIENT: MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS

PROJECT: D/D ON ROAD DEVELOPMENT PROJECT ON BATINAN HIGHWAY

TITLE STRUCTURAL DETAIL OF TWO-COLUMN PIER(P4~P7) AT A,B-LINE (1/2)

DATE DWGNO. B-28

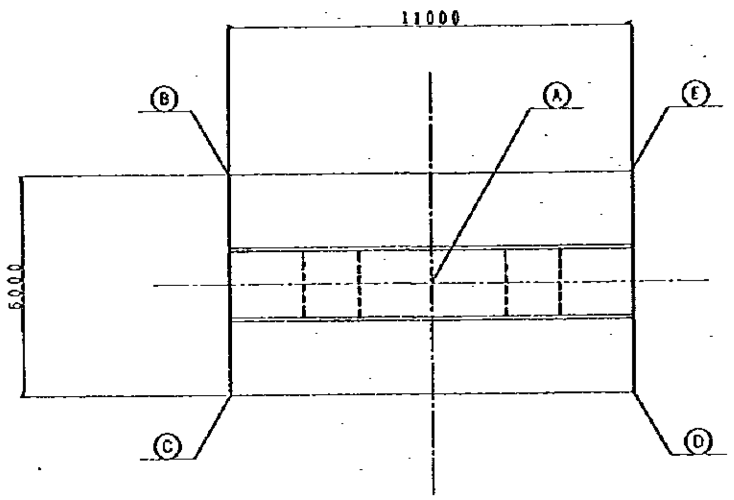
RA/3 BARKA



SLIT OF PLAN S= 1/100

DEMENSION (H₃) TABLE

	A-LINE	B-LINE
P 4	1496	1496
P 5	763	763
P 6	773	713
P 7	1496	1496



FRAMING PLAN S= 1/200

CO-ORDINATES LIST

			A	B	C	D	E
A-LINE	P4	X	17663.3525	17638.1169	17659.3516	17678.5851	17577.3533
		Y	10079.2752	10083.3593	10077.4575	10075.2104	10051.6827
	P5	X	17672.0173	17582.7847	17664.0159	17675.2499	17675.6187
		Y	10104.7219	10108.7867	10102.9143	10100.6572	10106.5295
	P6	X	17672.6922	17577.4495	17678.6807	17667.9143	17666.6335
		Y	10135.1687	10134.2334	10128.3611	10126.1039	10131.9752
	P7	X	17667.5471	17672.1144	17673.3456	17662.5797	17661.3485
		Y	10155.6154	10159.6851	10153.8378	10151.5566	10157.4230
B-LINE	P4	X	17663.1291	17667.8365	17668.1276	17658.3617	17657.3305
		Y	10074.2576	10078.9223	10073.0560	10070.7928	10076.6651
	P5	X	17657.9840	17662.5819	17663.7925	17653.0266	17651.7954
		Y	10103.3053	10104.3690	10098.4967	10096.2395	10102.1119
	P6	X	17652.4588	17657.2262	17658.4574	17647.6914	17646.4603
		Y	10125.7519	10129.8156	10123.9435	10121.6863	10127.5586
	P7	X	17647.1937	17651.8910	17653.1222	17642.3563	17641.1251
		Y	10151.1578	10155.2625	10149.3902	10147.1330	10153.0053

STRUCTURAL DETAIL OF TWO-COLUMN PIER FOR P4~P7 AT A·B-LINE (2/2)

NOTES:

JAPAN INTERNATIONAL COOPERATION AGENCY
(JICA)

JICA STUDY TEAM
PACIFIC CONSULTANTS INTERNATIONAL
FUKUYAMA CONSULTANTS INTERNATIONAL

CLIENT; MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS

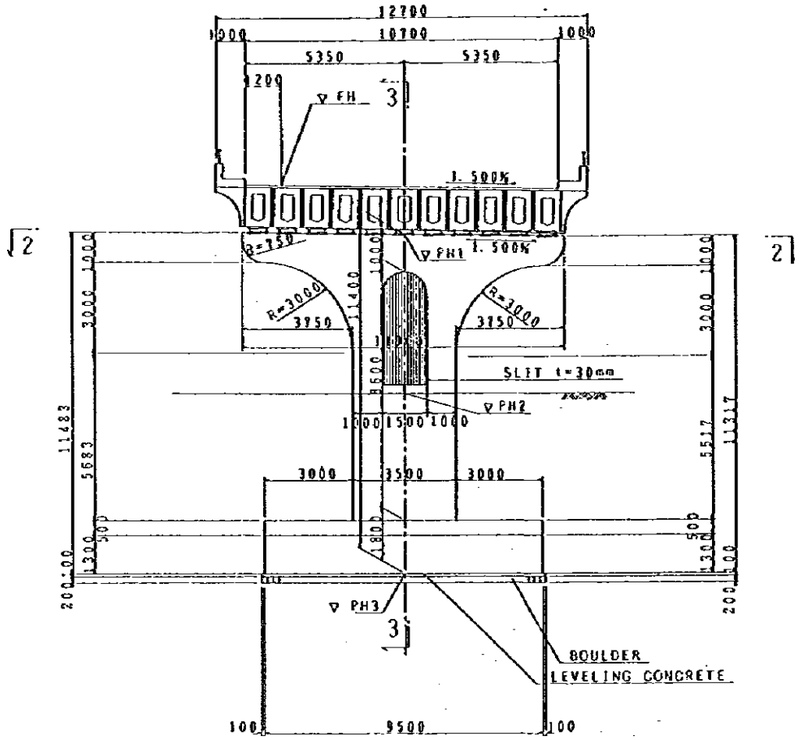
PROJECT: D/D ON ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY

TITLE STRUCTURAL DETAIL OF TWO-COLUMN PIER(P4~P7) AT A,B-LINE (2/2)

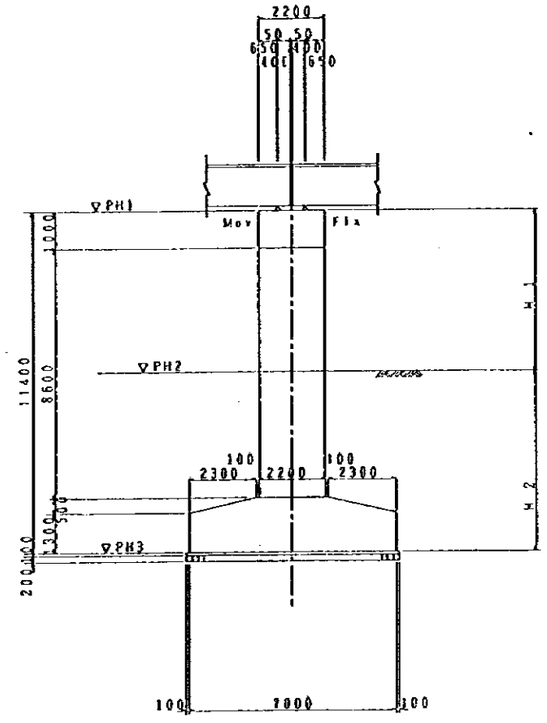
DATE

DWGNO. B-29

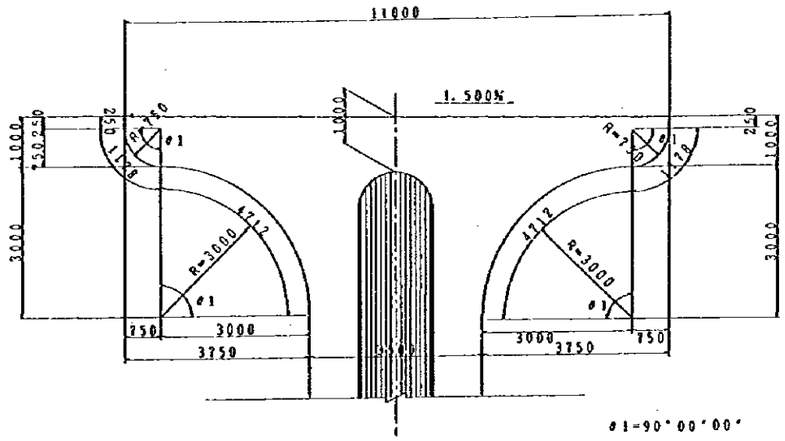
RA/3 BARKA



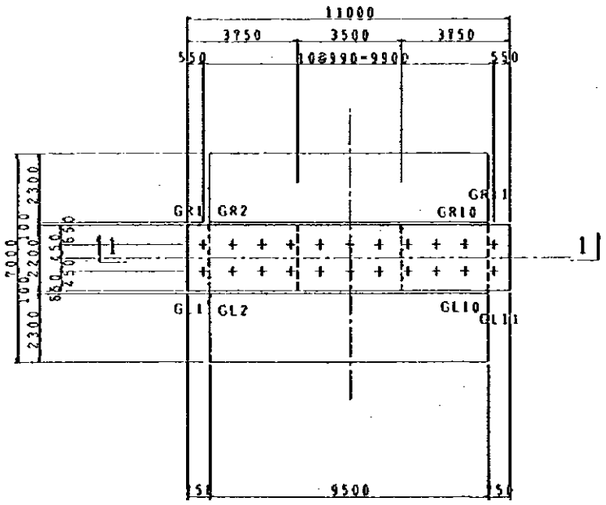
SECTION 1-1 S= 1/200



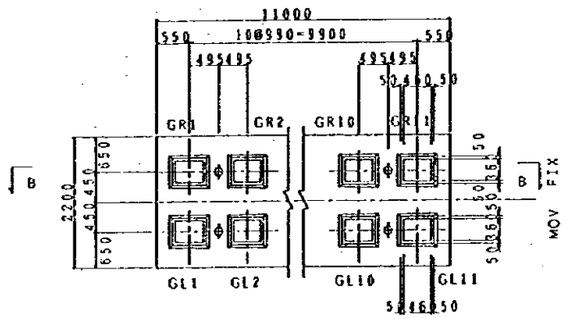
SECTION 3-3 S= 1/200



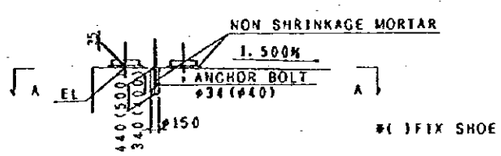
BEAM DETAL S= 1/120



SECTION 2-2 S= 1/200



SECTION A-A S= 1/100



SECTION B-B S= 1/100

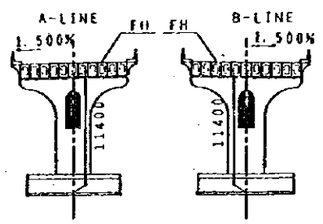
DETAIL OF SHOE BED

DIMENSION TABLE

		PH1	PH2	PH3	H 1	H 2
A-LINE	P 1	20.187	14.804	8.787	5.383	6.017
	P 2	20.458	14.803	9.058	5.655	5.746
	P 3	20.661	14.802	9.261	5.859	5.541
	P 8	20.661	14.782	9.261	5.879	5.521
	P 9	20.458	14.752	9.058	5.706	5.694
	P 10	20.187	14.722	8.787	5.465	5.935
B-LINE	P 1	20.187	14.804	8.787	5.383	6.017
	P 2	20.458	14.803	9.058	5.655	5.745
	P 3	20.661	14.802	9.261	5.859	5.541
	P 8	20.661	14.780	9.261	5.881	5.519
	P 9	20.458	14.765	9.058	5.693	5.707
	P 10	20.187	14.751	8.787	5.436	5.964

SHOE ELEVATION(EL) TABLE

	G1L(G1R)	G11L(G11R)
P 1	20.261	20.113
P 2	20.532	20.384
P 3	20.735	20.587
P 8	20.735	20.587
P 9	20.532	20.384
P 10	20.261	20.113



KEY PLAN

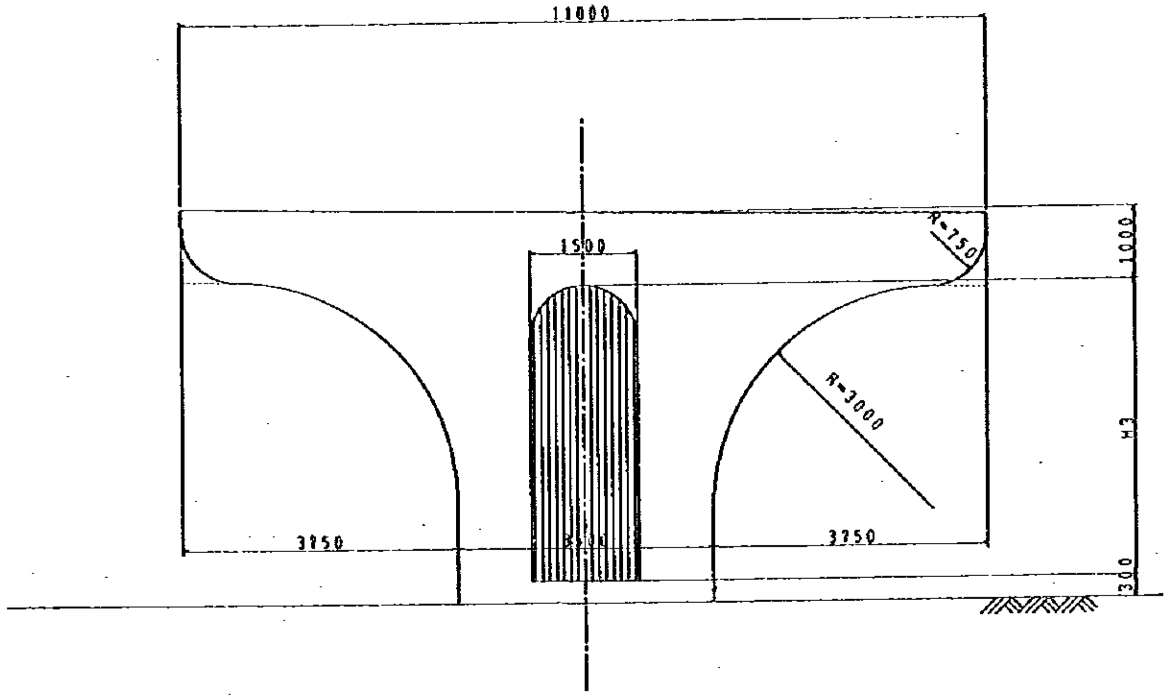
STRUCTURAL DETAIL OF T-WALL PIER FOR P1~P3,P8~P10 AT A·B-LINE (1/2)

NOTES:

JAPAN INTERNATIONAL COOPERATION AGENCY
(JICA)
JICA STUDY TEAM
PACIFIC CONSULTANTS INTERNATIONAL
FUKUYAMA CONSULTANTS INTERNATIONAL

CLIENT: MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS
PROJECT: D/D ON ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY
TITLE STRUCTURAL DETAIL OF T-WALL PIER(P1,P2,P3,P8,P9,P10) AT A,B-LINE (1/2)
DATE
DWGNO. B-30

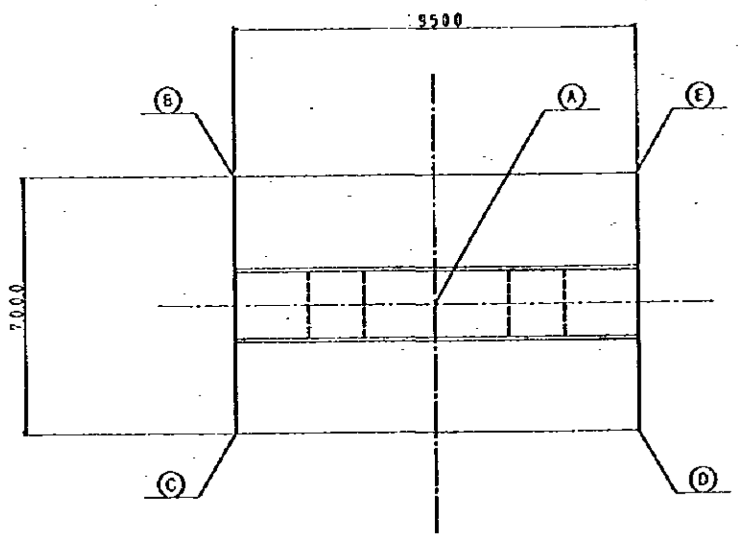
RA/3 BARKA



SLIT OF PLAN S= 1/100

DIMENSION (H_3) TABLE

	A-LINE	B-LINE
P 1	4083	4083
P 2	4355	4355
P 3	4559	4559
P 8	4579	4581
P 9	4406	4393
P10	4165	4136



FRAMING PLAN S= 1/200

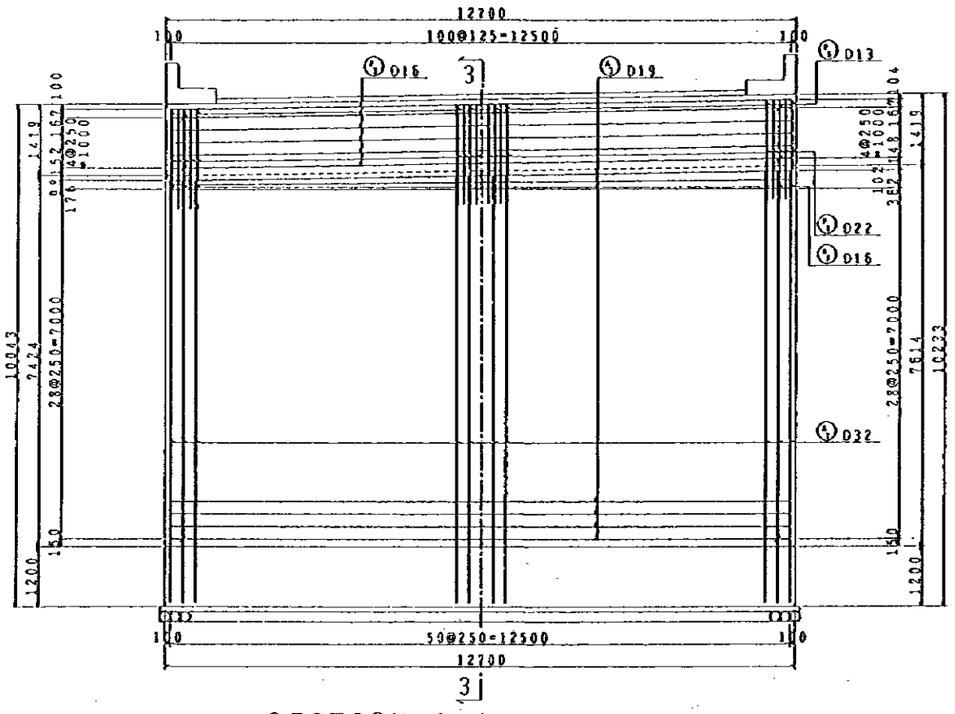
CO-ORDINATES LIST

			A	B	C	D	E
A-LINE	P1	X	17690.3575	17703.2686	17704.7249	17695.4271	17693.9307
		Y	10062.9359	10007.3352	10000.4843	9999.5547	10005.3659
	P2	X	17694.0227	17687.3531	17699.3495	17693.0020	17688.6556
		Y	10022.3217	10032.7519	10025.9309	10023.3615	10030.5325
	P3	X	17629.6875	17682.6183	17691.0547	17684.7568	17683.5205
		Y	10053.6284	10058.2288	10051.9776	10049.4282	10056.2793
	P8	X	17652.0139	17665.5426	17667.3795	17658.0612	17655.6419
		Y	10181.0621	10135.4623	10178.6113	10178.6619	10183.5129
	P9	X	17655.6768	17660.6075	17662.6439	17552.7460	17651.3797
		Y	10206.5383	10210.3091	10204.6560	10202.1085	10205.9597
	P10	X	17651.9437	17655.2724	17556.7038	17647.4109	17545.9745
		Y	10231.9556	10236.3558	10229.5047	10227.5554	10234.4064
B-LINE	P1	X	17679.1345	17633.0652	17684.5016	17675.2038	17673.7674
		Y	9590.5174	10002.9176	9995.0665	9994.1171	10000.9662
	P2	X	17673.7594	17677.7301	17679.1665	17669.8696	17668.4322
		Y	10023.9641	10028.3643	10021.5153	10019.5639	10026.4149
	P3	X	17668.4642	17672.3949	17673.8313	17664.5535	17663.0971
		Y	10049.4108	10053.8110	10046.9600	10045.0106	10051.8617
	P8	X	17641.7626	17645.7193	17647.1557	17637.8578	17636.4214
		Y	10176.6445	10181.0447	10174.1937	10172.2443	10179.0953
	P9	X	17636.4534	17540.3841	17641.8205	17632.5227	17631.0863
		Y	10232.0412	10206.4914	10159.6404	10197.6919	10204.5421
	P10	X	17651.1183	17635.0490	17636.4854	17627.1875	17625.7512
		Y	10227.5386	10231.9382	10225.0871	10223.1376	10229.9989

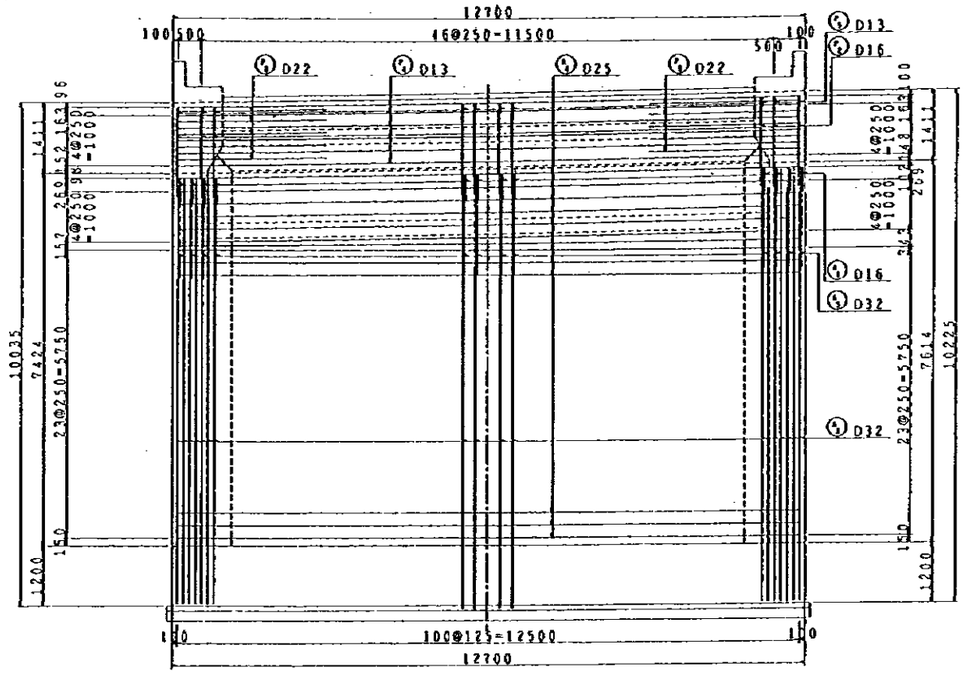
STRUCTURAL DETAIL OF T-WALL PIER FOR P1~P3,P8~P10 AT A·B-LINE (2/2)

NOTES:		JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	CLIENT: MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS
			PROJECT: D/D ON ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY
		JICA STUDY TEAM PACIFIC CONSULTANTS INTERNATIONAL FUKUYAMA CONSULTANTS INTERNATIONAL	TITLE STRUCTURAL DETAIL OF T-WALL PIER(P1,P2,P3,P8,P9,P10) AT A,B-LINE (2/2)
			DATE — DWGNO. B-31

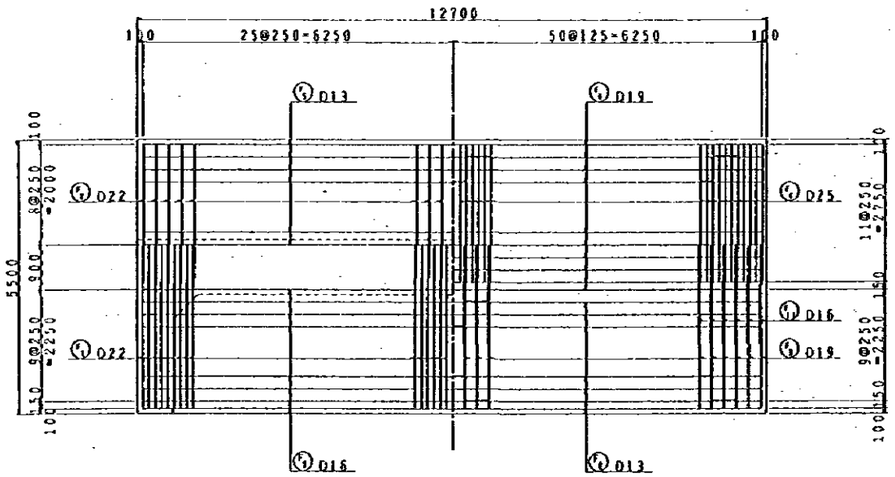
RA/3 BARKA



SECTION 1-1 S= 1/120

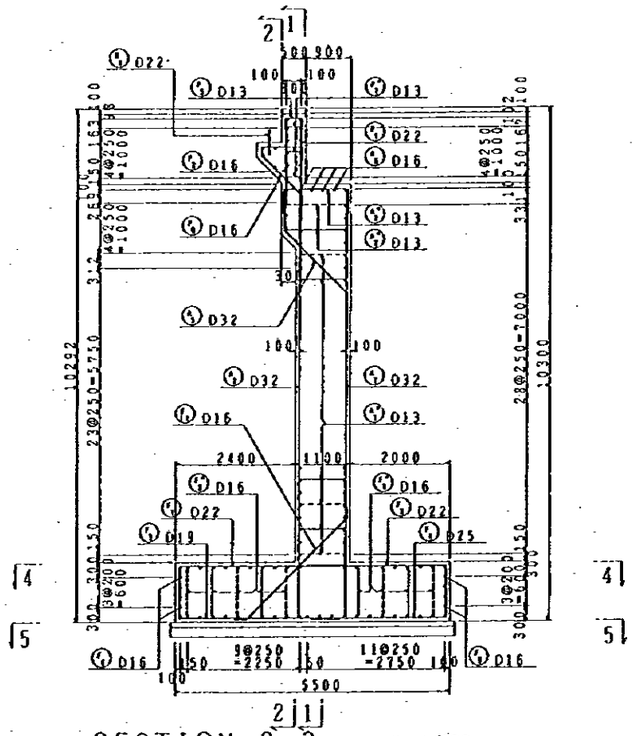


SECTION 2-2 S= 1/120



SECTION 4-4 S= 1/120

SECTION 5-5 S= 1/120

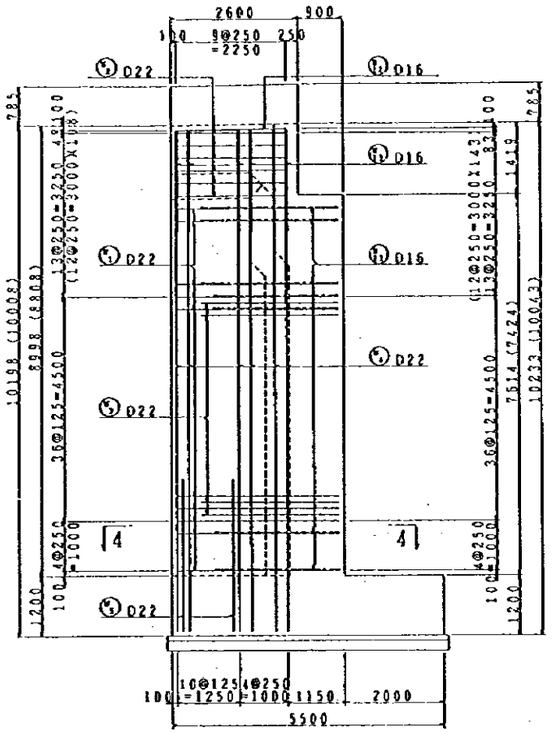


SECTION 3-3 S= 1/120

RE-BAR ARRANGEMENT OF A1 ABUTMENT AT A,B-LINE (1/3)

NOTES:		JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	CLIENT: MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS
			PROJECT: D/D ON ROAD DEVELOPMENT PROJECT ON BATANAH HIGHWAY
		JICA STUDY TEAM PACIFIC CONSULTANTS INTERNATIONAL FUKUYAMA CONSULTANTS INTERNATIONAL	TITLE: RE-BAR ARRANGEMENT OF A1 ABUTMENT AT A,B-LINE (1/3)
			DATE / DWG NO. B-32

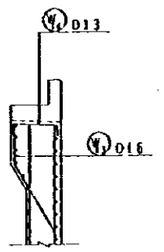
RA/3 BARKA



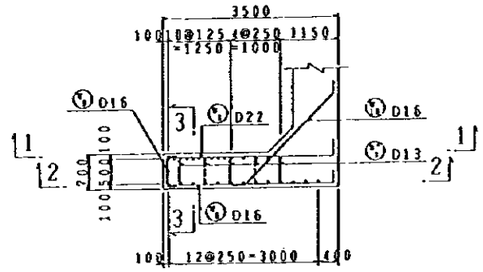
SECTION 1-1 S= 1/120

SECTION 2-2 S= 1/120

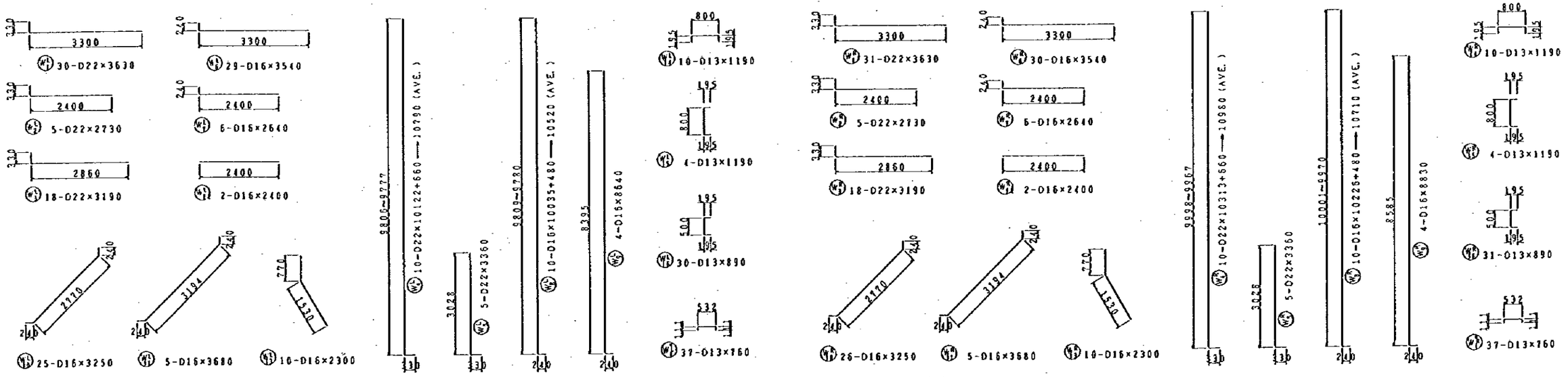
NOTE: ( ) LEFT WING



SECTION 3-3 S= 1/120



SECTION 4-4 S= 1/120

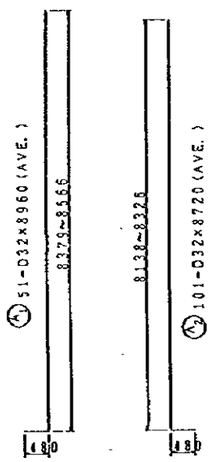


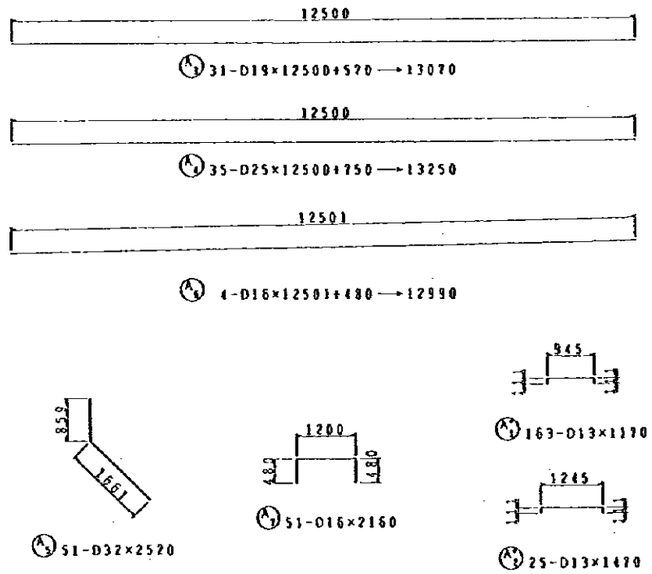
RE-BAR ARRANGEMENT OF A1 ABUTMENT AT A.B-LINE (2/3)

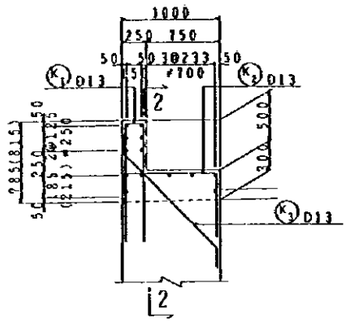
NOTES:

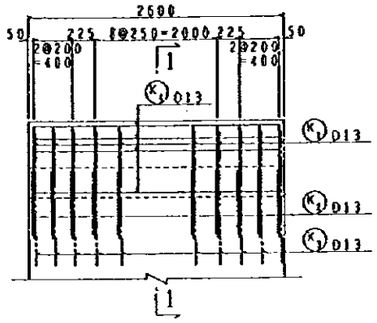
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	CLIENT: MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS
JICA STUDY TEAM PACIFIC CONSULTANTS INTERNATIONAL FUKUYAMA CONSULTANTS INTERNATIONAL	PROJECT: D/D ON ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY
	TITLE: RE-BAR ARRANGEMENT OF A1 ABUTMENT AT A,B-LINE (2/3)
	DATE: DWGNO. B-33

RA/3 BARKA

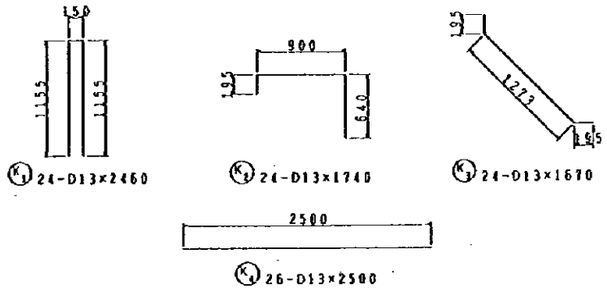




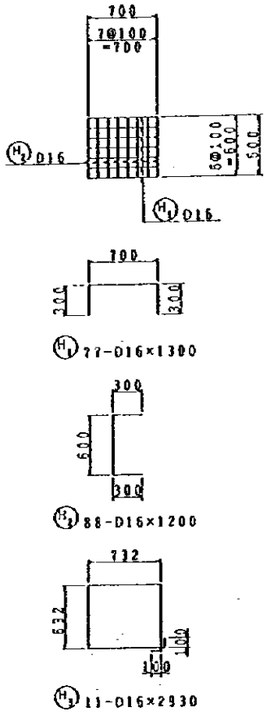




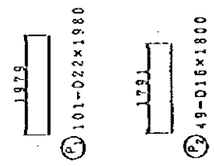
NOTE; ( )RIGHT RAILING

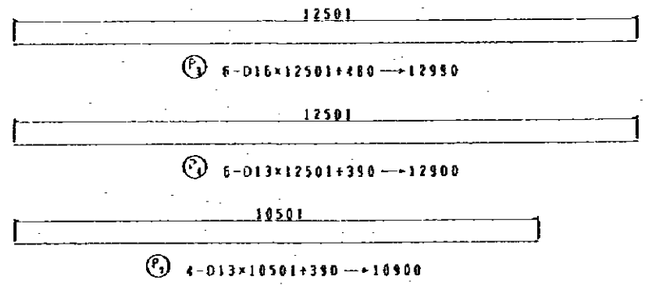


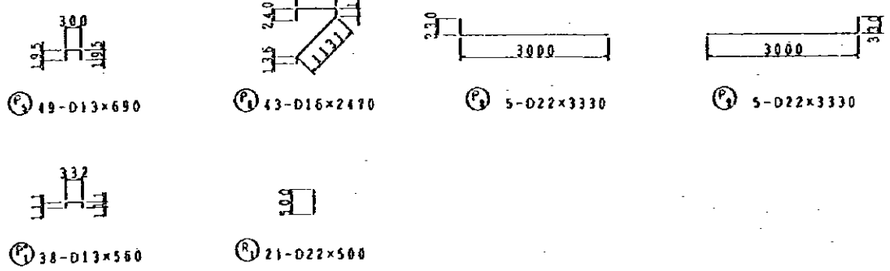
DETAIL OF RAILING S= 1/60

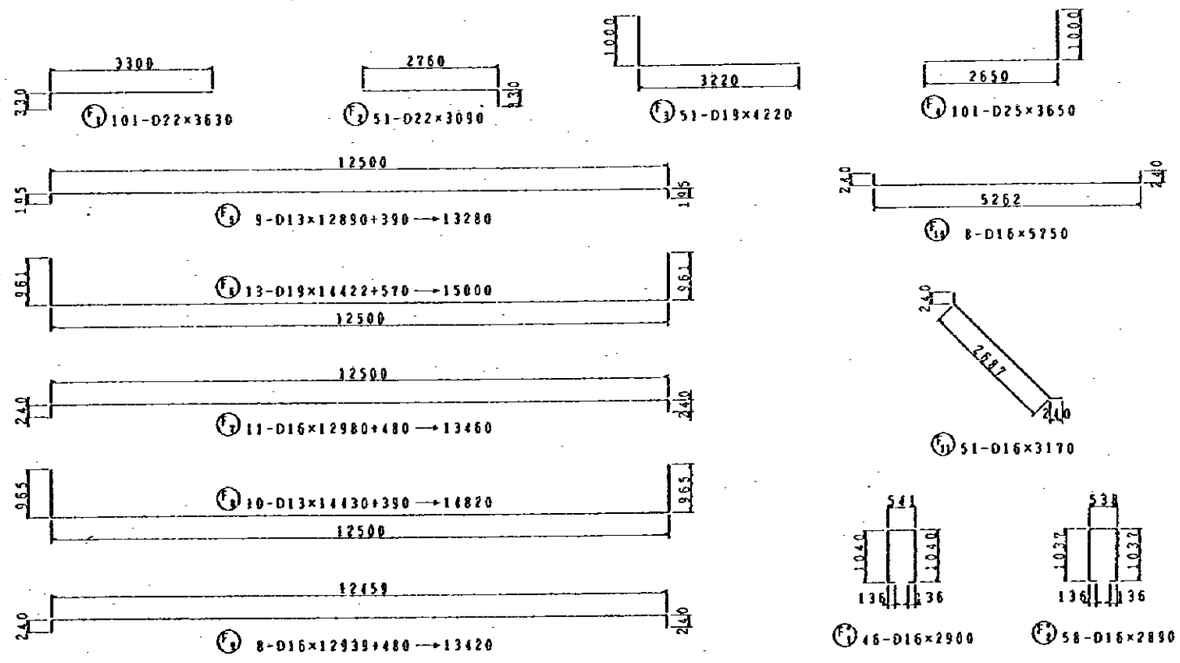


DETAIL OF SHOE BED S= 1/60





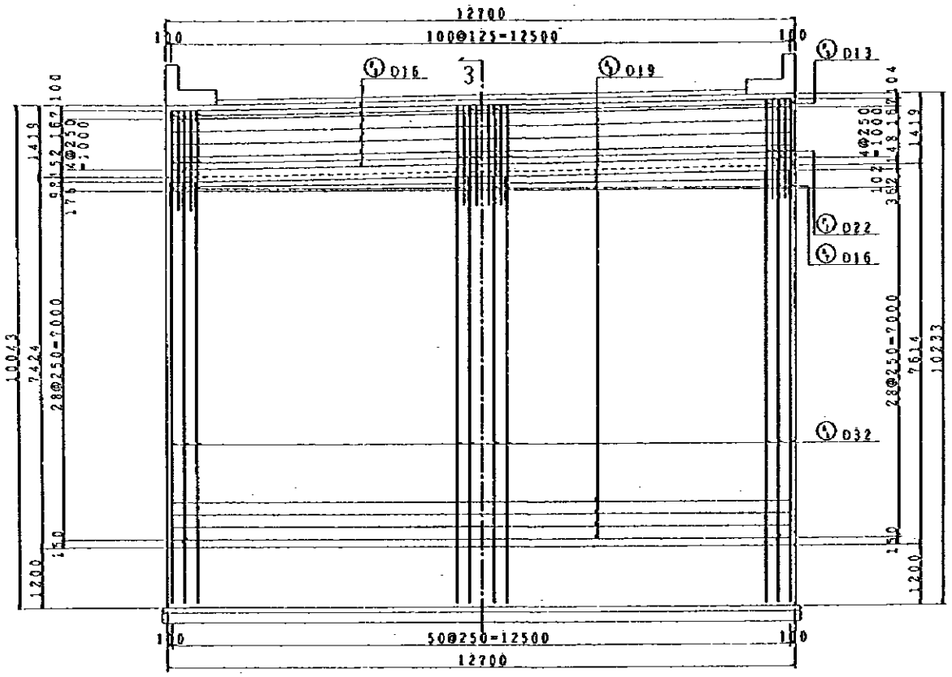




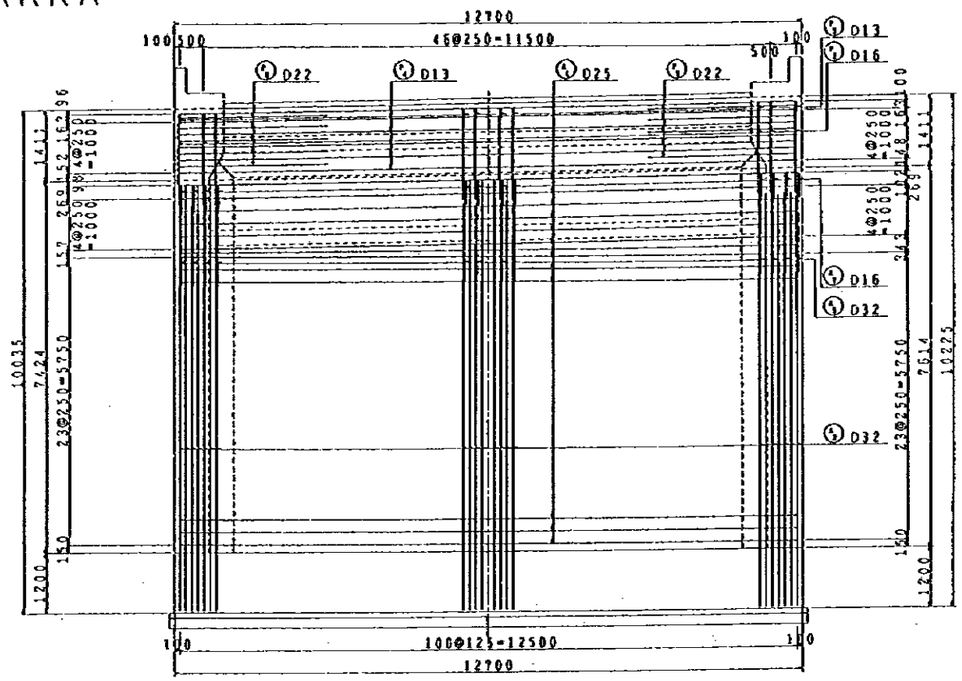
RE-BAR ARRANGEMENT OF A1 ABUTMENT AT A.B-LINE (3/3)

NOTES:	JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) JICA STUDY TEAM PACIFIC CONSULTANTS INTERNATIONAL FUKUYAMA CONSULTANTS INTERNATIONAL	CLIENT: MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS PROJECT: D/D ON ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY TITLE: RE-BAR ARRANGEMENT OF A1 ABUTMENT AT A,B-LINE (3/3) DATE: DWGNO. B-34

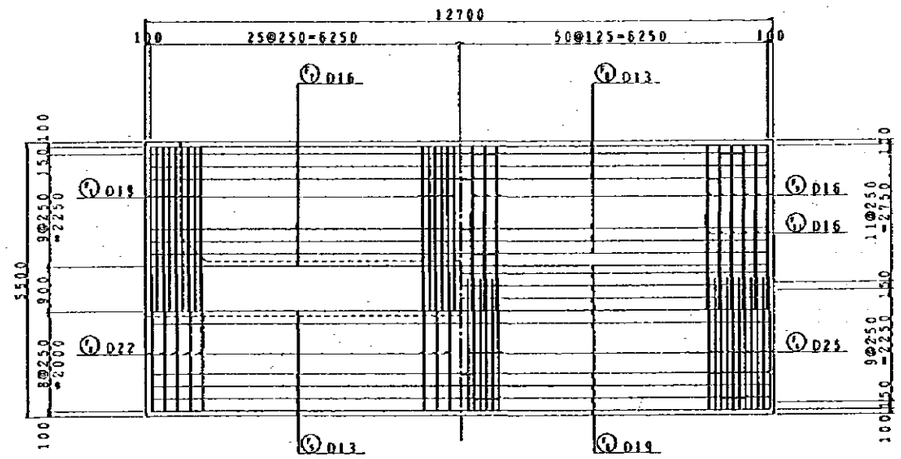
RA/3 BARKA



SECTION 1-1 S= 1/120

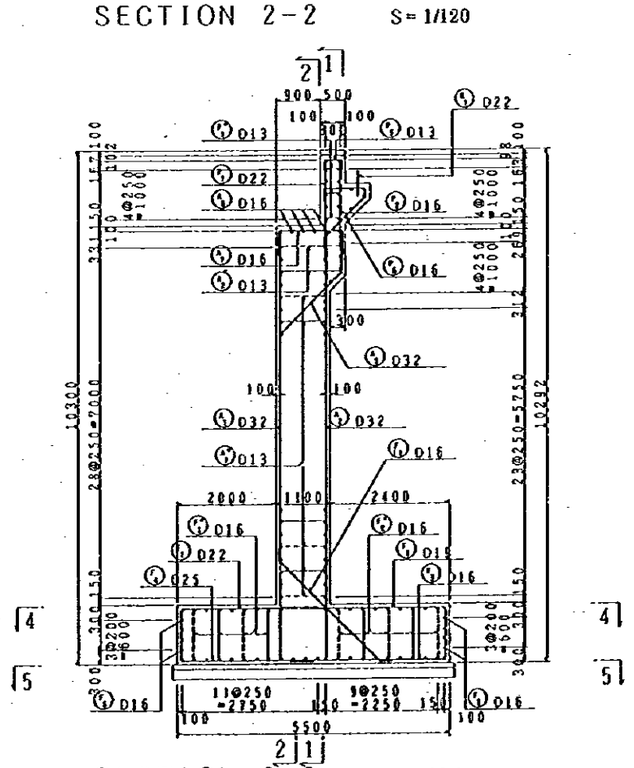


SECTION 2-2 S= 1/120



SECTION 4-4 S= 1/120

SECTION 5-5 S= 1/120

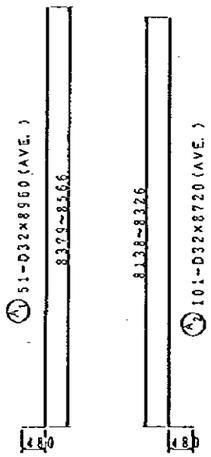


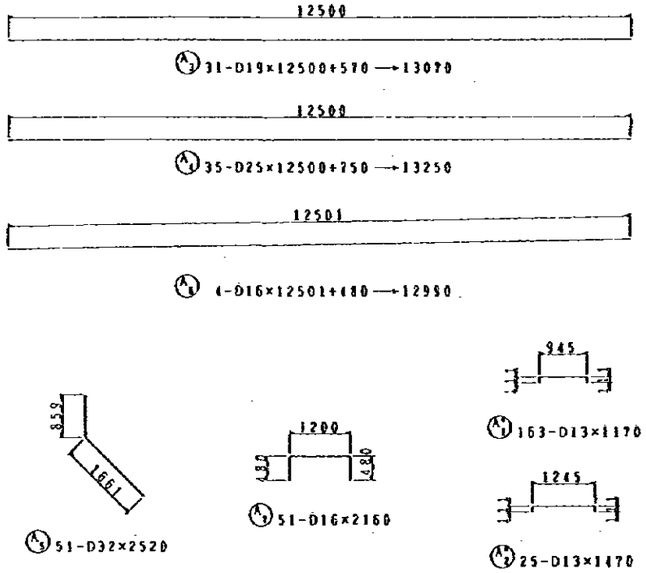
SECTION 3-3 S= 1/120

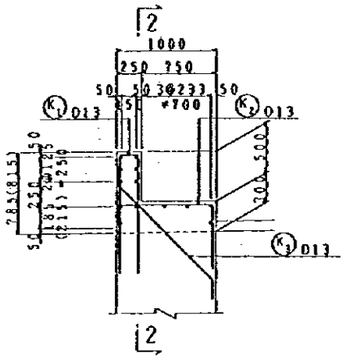
RE-BAR ARRANGEMENT OF A2 ABUTMENT AT A,B-LINE (1/2)

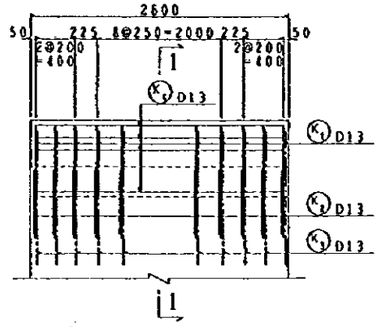
NOTES:	JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) JICA STUDY TEAM PACIFIC CONSULTANTS INTERNATIONAL FUKUYAMA CONSULTANTS INTERNATIONAL	CLIENT: MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS PROJECT: D/D ON ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY TITLE: RE-BAR ARRANGEMENT OF A2 ABUTMENT AT A,B-LINE (1/2) DATE: DWG NO. B-35

RA/3 BARKA

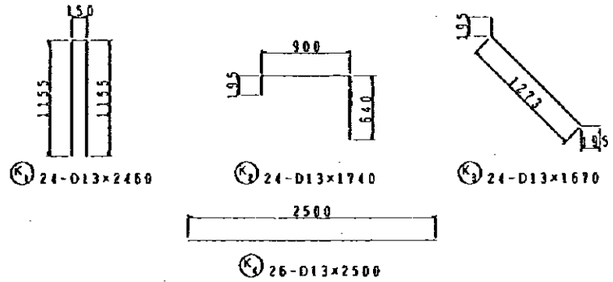




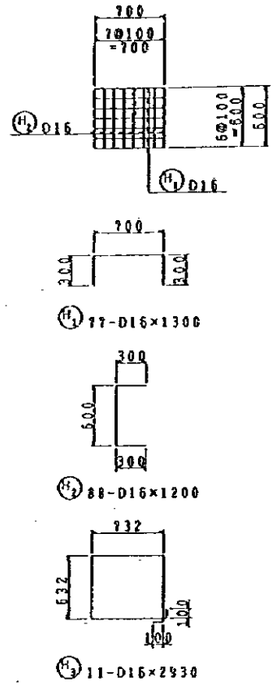




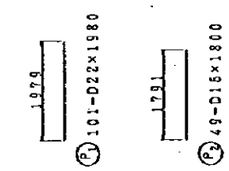
NOTE: ( ) RIGHT RAILING

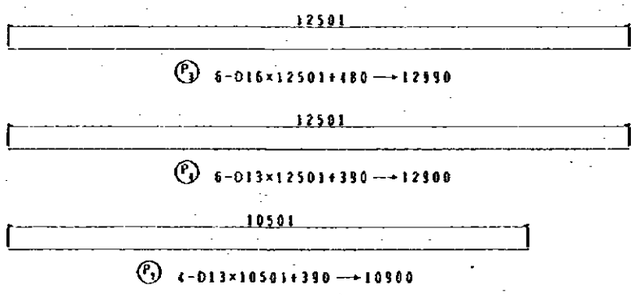


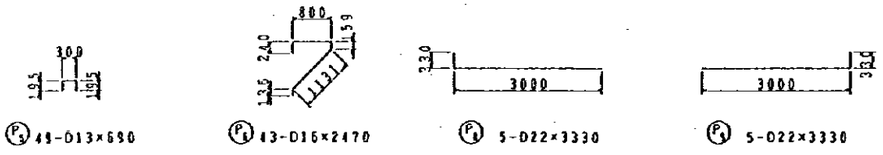
DETAIL OF RAILING S= 1/60

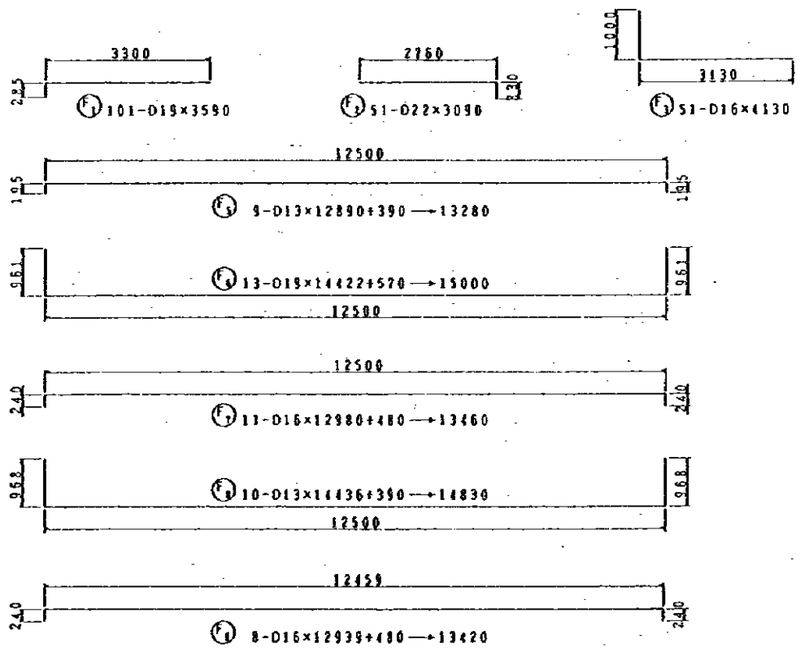


DETAIL OF SHOE BED S= 1/60







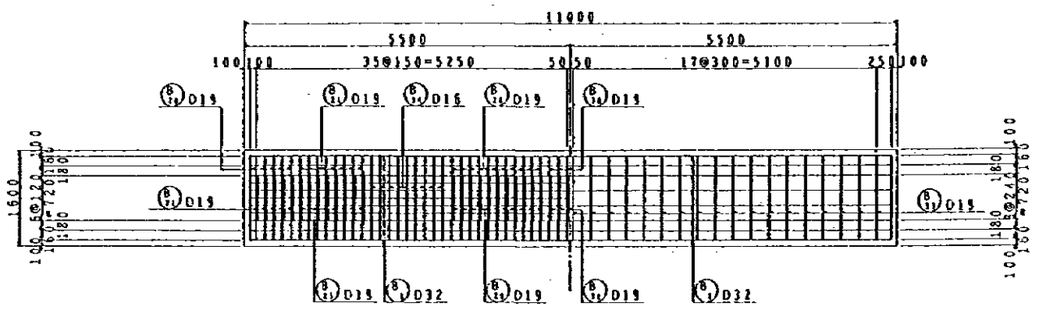


NOTE: RE-BAR ARRANGEMENT OF WING IS AS SAME AS IN A1 ABUTMENT

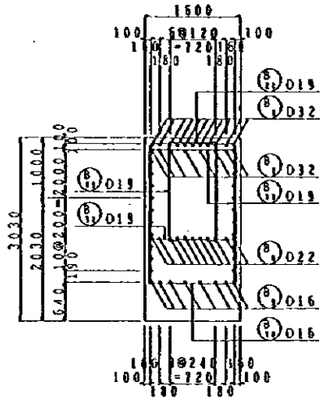
RE-BAR ARRANGEMENT OF A2 ABUTMENT AT A.B-LINE (2/2)

NOTES:	JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	CLIENT: MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS
	JICA STUDY TEAM PACIFIC CONSULTANTS INTERNATIONAL FUKUYAMA CONSULTANTS INTERNATIONAL	PROJECT: D/D ON ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY
		TITLE: RE-BAR ARRANGEMENT OF A2 ABUTMENT AT A,B-LINE (2/2)
		DATE: DWG NO. B-36

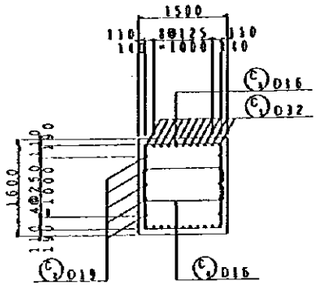
RA/3 BARKA



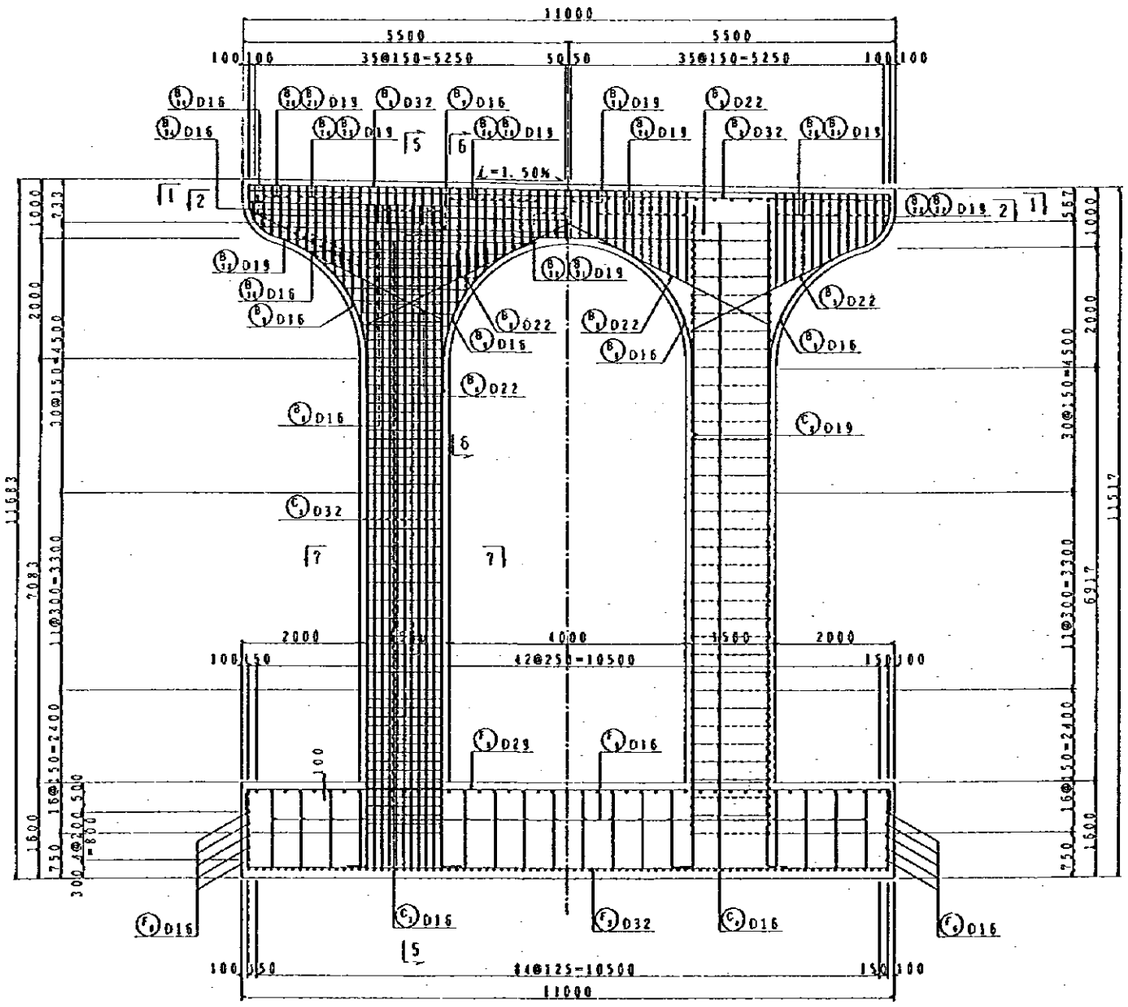
SECTION 1 - 1 S= 1/100



SECTION 2 - 2 S= 1/100

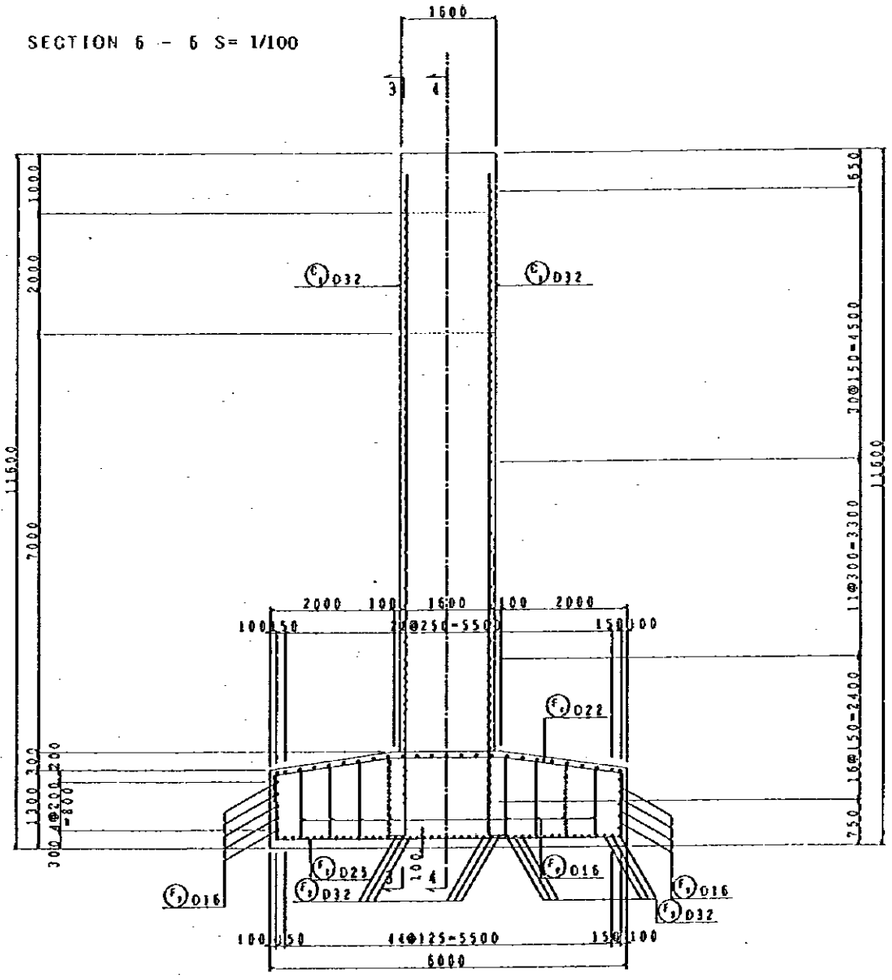


SECTION 7 - 7 S= 1/100



SECTION 3 - 3 S= 1/100

SECTION 4 - 4 S= 1/100



SECTION 6 - 6 S= 1/100

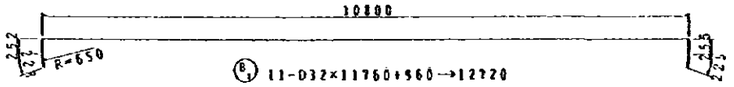
SECTION 5 - 5 S= 1/100

RE-BARARRANGEMENT OF TWO-COLUMN PIER FOR P4~P7 AT A,B-LINE (1/2)

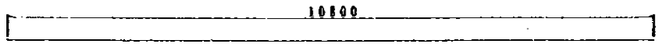
NOTES:

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	CLIENT: MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS
	PROJECT: D/D ON ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY
JICA STUDY TEAM PACIFIC CONSULTANTS INTERNATIONAL FUKUYAMA CONSULTANTS INTERNATIONAL	TITLE RE-BAR ARRANGEMENT OF TWO-COLUMN PIER(P4~P7) AT A,B-LINE (1/2)
	DATE / DWG NO. B-37

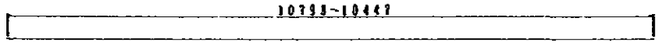
RA/3 BARKA



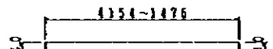
B1 11-D32×11760+560→12320



B2 8-D32×10800+960→11760

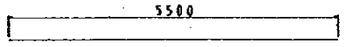


B3 6-D16×10623+480→11110 (AVE.)

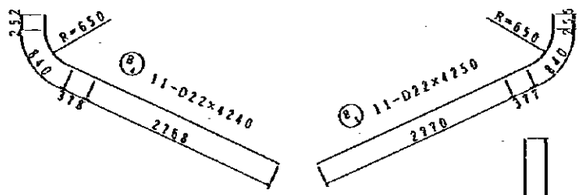


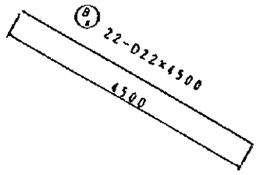
B4 32-D16×3300 (AVE.)

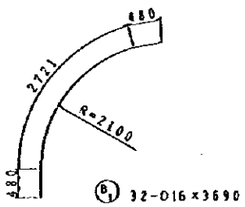
B5 20-D16×3200 (AVE.)

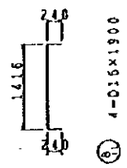


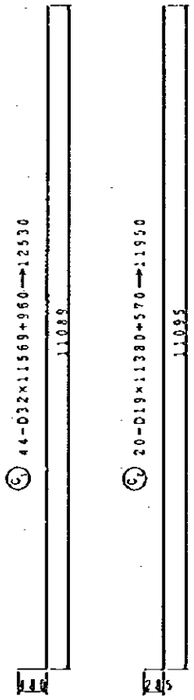
B6 11-D22×5500

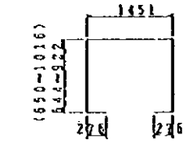




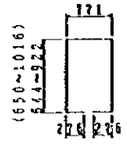




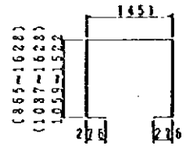




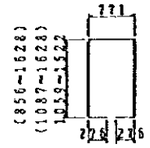
B11 5-D19×3640 (AVE.)
B12 5-D19×3670 (AVE.)



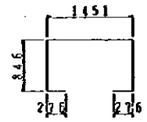
B13 5-D19×2560 (AVE.)
B14 5-D19×2590 (AVE.)



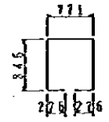
B15 8-D19×4590 (AVE.)
(B16 6-D19×4720 (AVE.))
(B17 22-D19×4490 (AVE.))



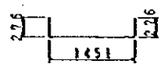
B18 8-D19×3910 (AVE.)
(B19 8-D19×4040 (AVE.))
(B20 22-D19×3810 (AVE.))



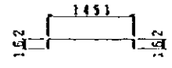
B21 6-D19×3700 (AVE.)



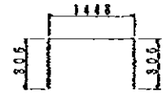
B22 6-D19×3020 (AVE.)



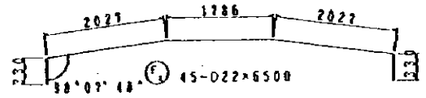
B23 54-D19-2010



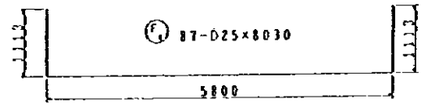
B24 36-D19×1780



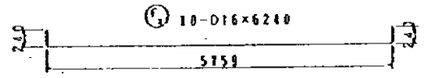
B25 18-D16×3860



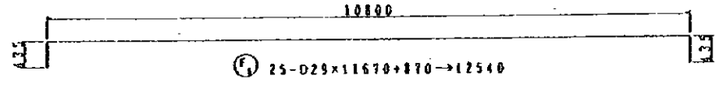
F1 45-D22×6500



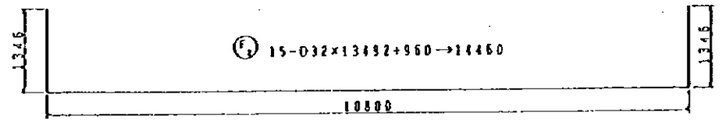
F2 87-D25×8030



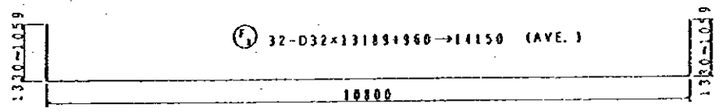
F3 10-D16×6240



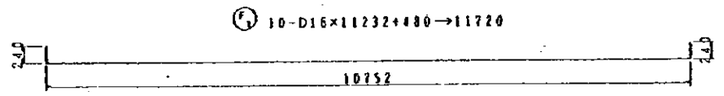
F4 25-D29×11670+870→12540



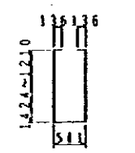
F5 15-D32×13892+960→14460



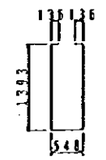
F6 32-D32×13189+960→14150 (AVE.)



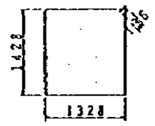
F7 10-D16×11232+480→11720



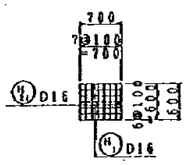
F8 84-D16×3450 (AVE.)



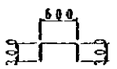
F9 24-D16×3610

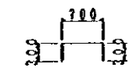


C3 116-D16×5290

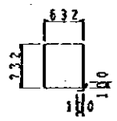


H1 176-D16×1200

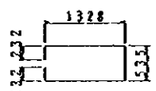




H2 154-D16×1300



H3 22-D16×2930



C4 70-D16×3660

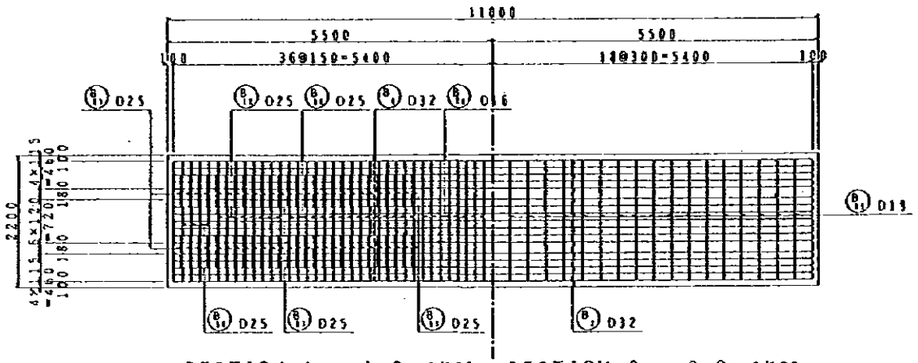
DETAIL OF SHOEBED S= 1/100

RE-BARARRANGEMENT OF TWO-COLUMN PIER FOR P4~P7 AT A,B-LINE (2/2)

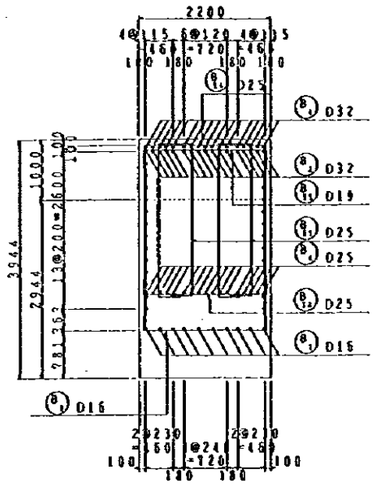
NOTES:

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	CLIENT: MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS
JICA STUDY TEAM PACIFIC CONSULTANTS INTERNATIONAL FUKUYAMA CONSULTANTS INTERNATIONAL	PROJECT: D/D ON ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY
	TITLE STRUCTURAL DETAIL OF TWO-COLUMN PIER(P4~P7) AT A,B-LINE (2/2)
	DATE / DWG NO. B-38

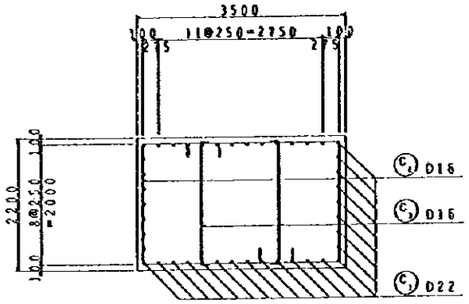
RA/3 BARKA



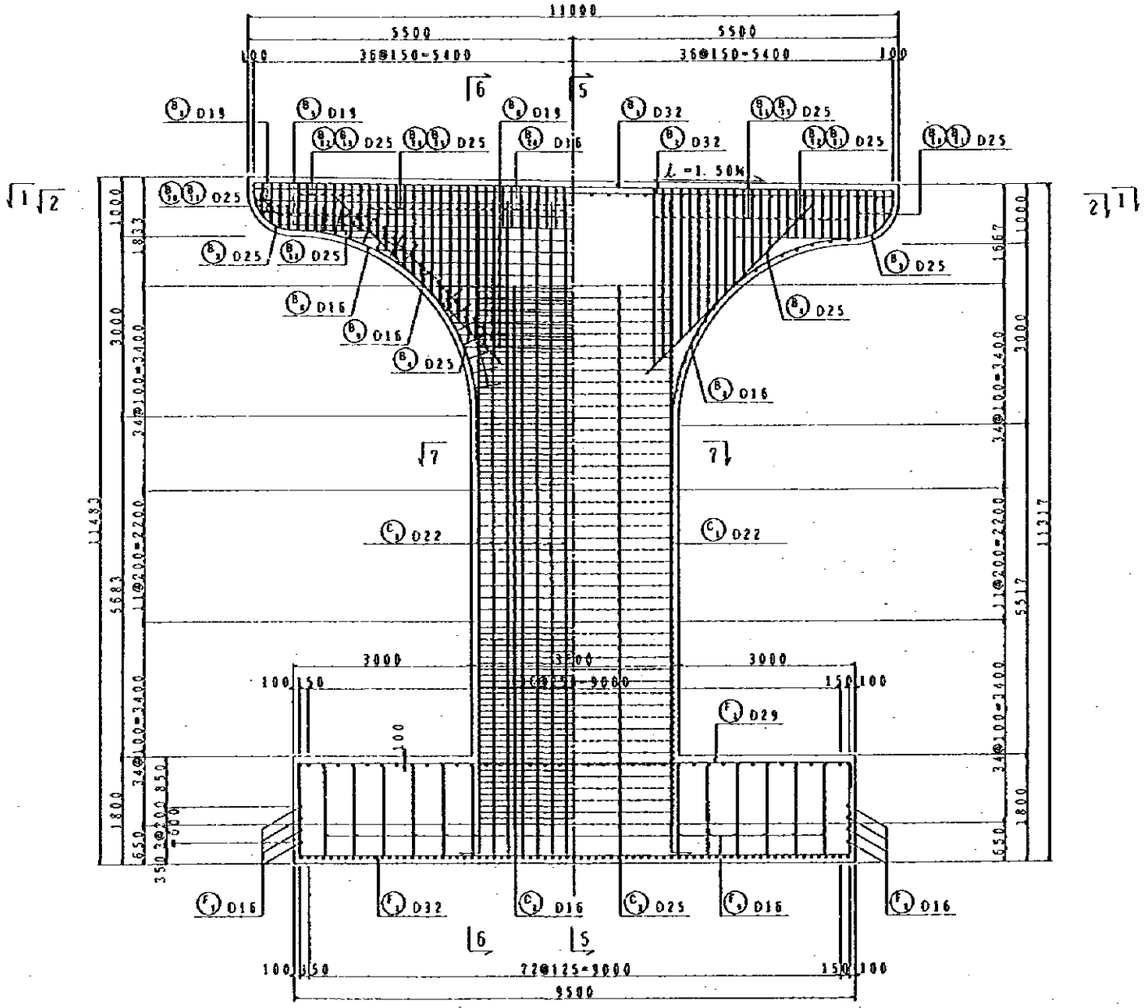
SECTION 1 - 1 S= 1/100 SECTION 2 - 2 S= 1/100



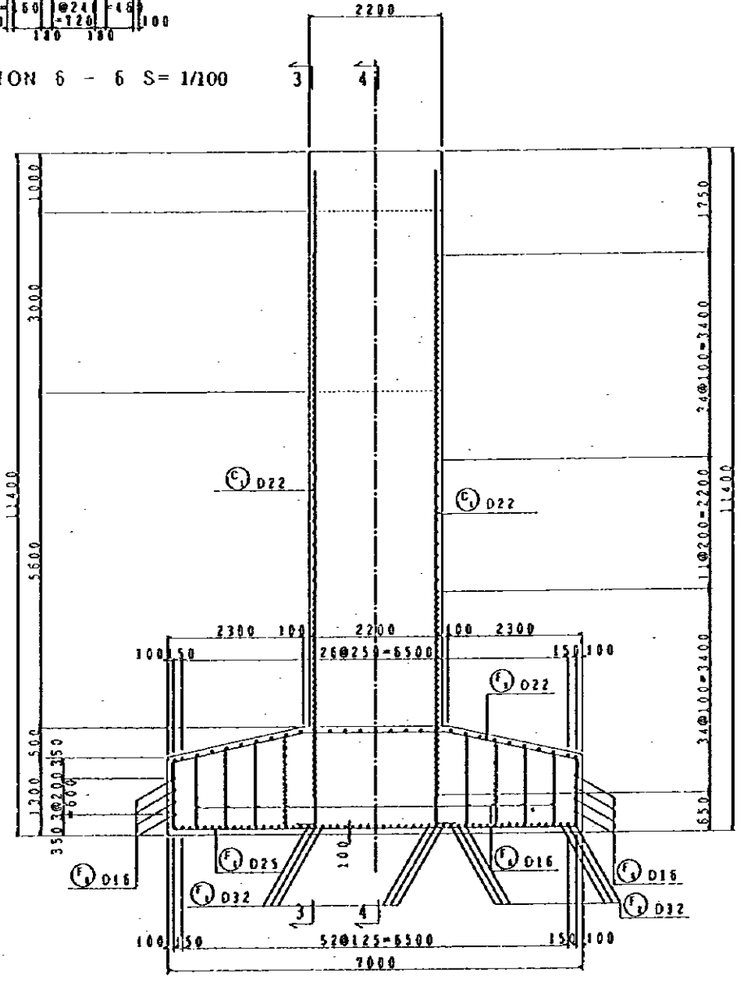
SECTION 6 - 6 S= 1/100



SECTION 7 - 7 S= 1/100



SECTION 3 - 3 S= 1/100 SECTION 4 - 4 S= 1/100



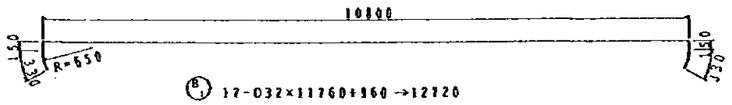
SECTION 5 - 5 S= 1/100

RE-BAR ARRANGEMENT OF T-WALL PIER FOR P1, P2, P3, P8, P9, P10 AT A, B-LINE (1/2)

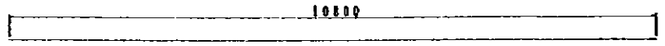
NOTES:

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	CLIENT: MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS
JICA STUDY TEAM PACIFIC CONSULTANTS INTERNATIONAL FUKUYAMA CONSULTANTS INTERNATIONAL	PROJECT: D/D ON ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY
	TITLE: RE-BAR ARRANGEMENT OF T-WALL PIER(P1,P2,P3,P8,P9,P10) AT A,B-LINE (1/2)
	DATE / DWGNO. B-39

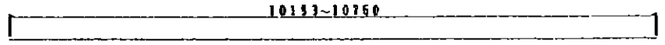
RA/3 BARKA



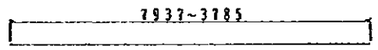
(B1) 17-D32×11760+960→12720



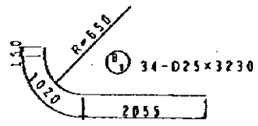
(B2) 17-D32×10800+960→11760



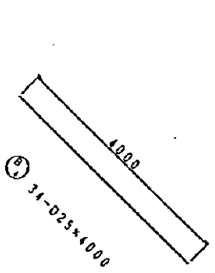
(B3) 6-D19×10477+570→11050 (AVE.)



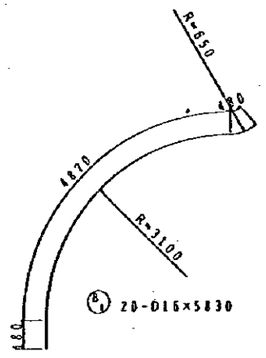
(B4) 20-D19×5810 (AVE.)



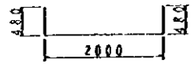
(B5) 34-D25×3230



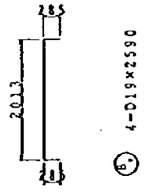
(B6) 34-D25×4000



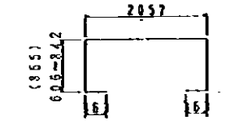
(B7) 20-D16×5830



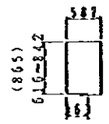
(B8) 28-D16×2960



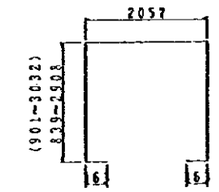
(B9) 4-D19×2590



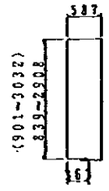
(B10) 8-D25×4250 (AVE.)
(B11) 16-D25×4520



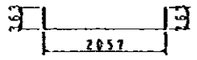
(B12) 16-D25×2790 (AVE.)
(B13) 32-D25×3050



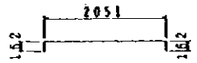
(B14) 15-D25×6530 (AVE.)
(B15) 15-D25×6720 (AVE.)



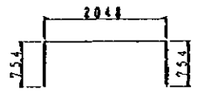
(B16) 30-D25×5060 (AVE.)
(B17) 30-D25×5250 (AVE.)



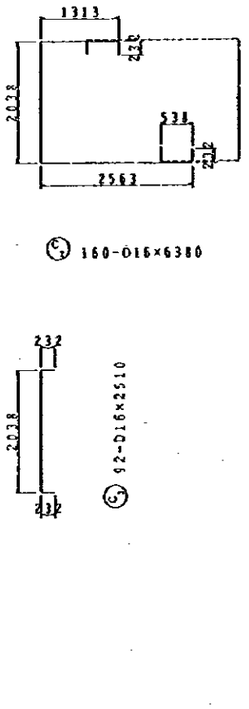
(B18) 54-D25×2790



(B19) 35-D19×2380



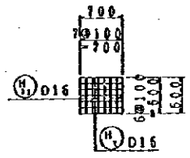
(B20) 11-D16×3560



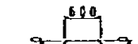
(C1) 42-D22×11206+570→11780

(C2) 160-D16×6380

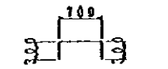
(C3) 92-D16×2510



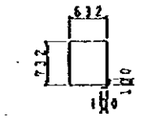
(H1) 176-D16×1200

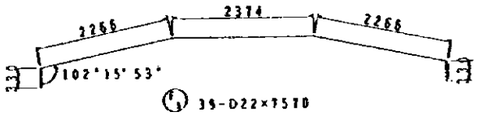


(H2) 154-D16×1300

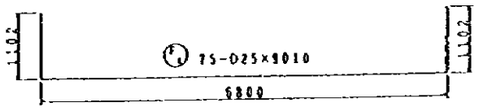


(H3) 22-D16×2530

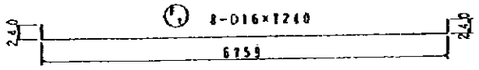




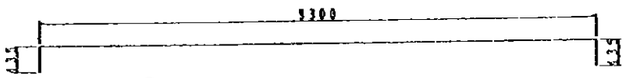
(F1) 39-D22×7570



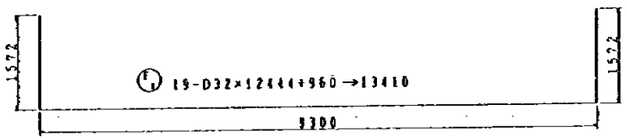
(F2) 75-D25×9010



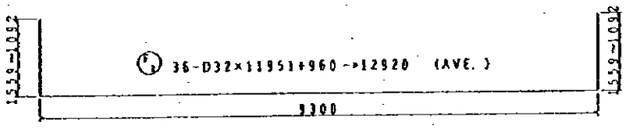
(F3) 8-D16×7240



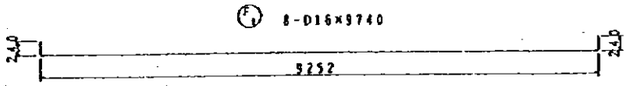
(F4) 28-D29×10120+870→11040



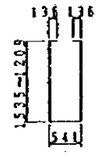
(F5) 19-D32×12444+960→13410



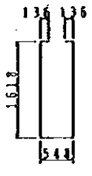
(F6) 36-D32×11951+960→12920 (AVE.)



(F7) 8-D16×9740



(F8) 68-D16×3560 (AVE.)



(F9) 16-D16×4060

DETAIL OF SHOEBED S= 1/100

RE-BAR ARRANGEMENT OF T-WALL PIER FOR P1, P2, P3, P8, P9, P10 AT A, B-LINE (2/2)

NOTES:

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

JICA STUDY TEAM
PACIFIC CONSULTANTS INTERNATIONAL
FUKUYAMA CONSULTANTS INTERNATIONAL

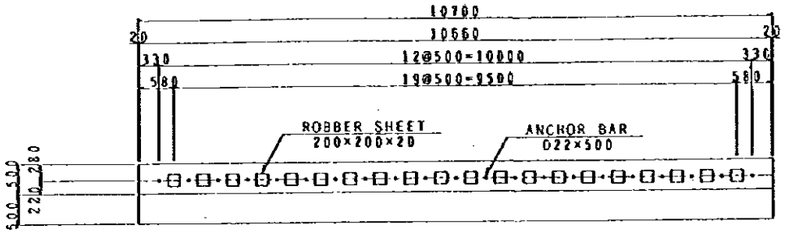
CLIENT: MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS

PROJECT: D/D ON ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY

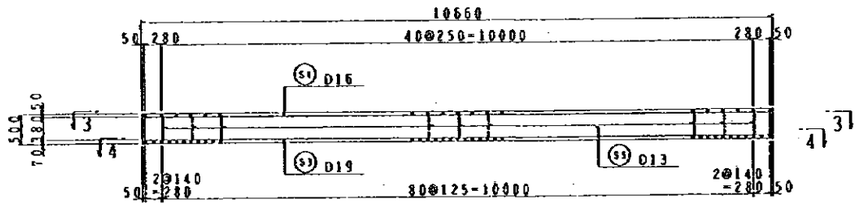
TITLE RE-BAR ARRANGEMENT OF T-WALL PIER(P1,P2,P3,P8,P9,P10) AT A,B-LINE (2/2)

DATE

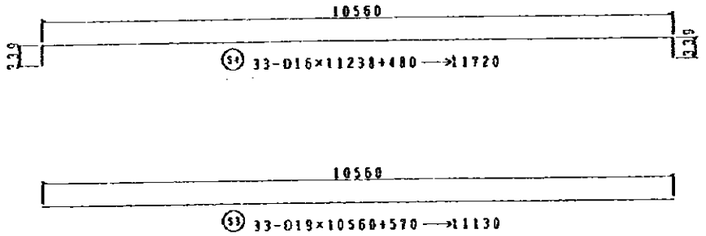
DWGNO. B-40

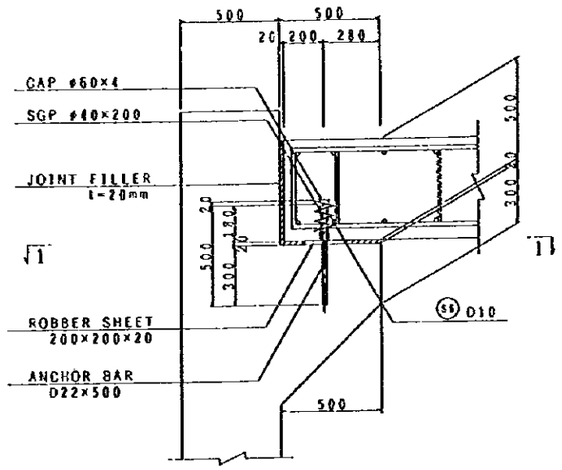


SECTION 1-1 S= 1/100

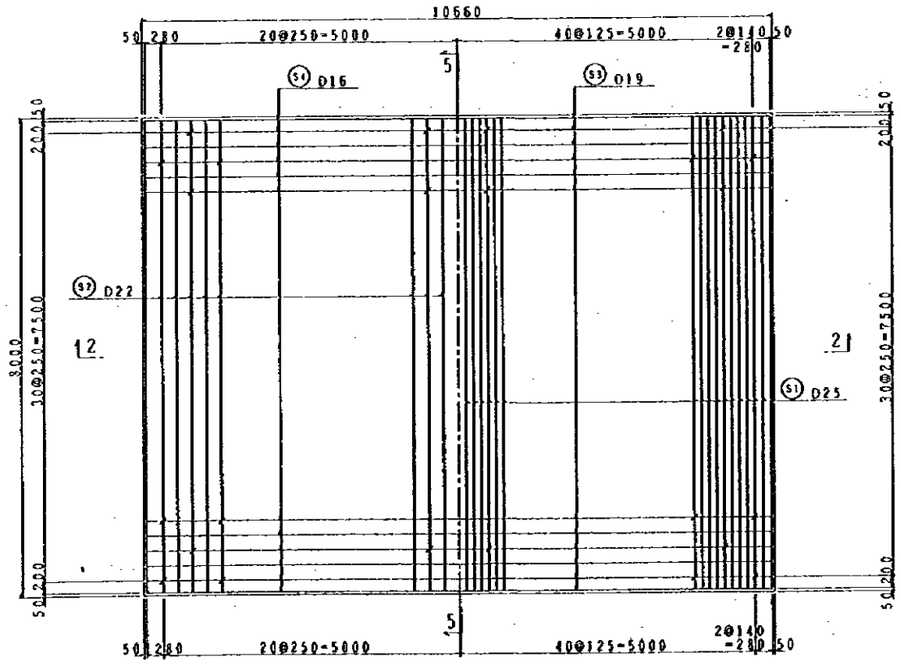


SECTION 2-2 S= 1/100

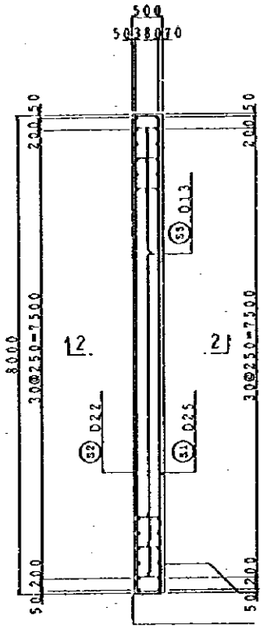




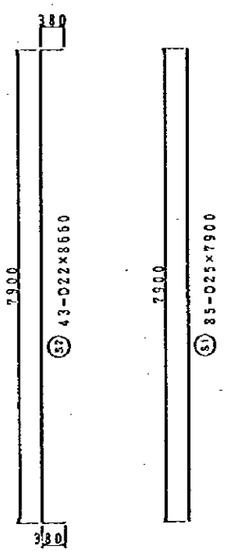
P L A N S= 1/30



SECTION 3-3 S= 1/100



SECTION 4-4 S= 1/100



SECTION 5-5 S= 1/100

RE-BAR ARRANGEMENT OF APPROACH SLAB

NOTES:

This drawing shows one approach slab. This is applied for all 4 abutments. So the total number of approach slabs are 4.

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	CLIENT: MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS
	PROJECT: D/D ON ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY
JICA STUDY TEAM PACIFIC CONSULTANTS INTERNATIONAL FUKUYAMA CONSULTANTS INTERNATIONAL	TITLE: RE-BAR ARRANGEMENT OF APPROACH SLAB
	DATE / DWGNO. B-41

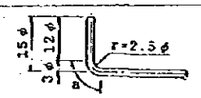
BAR BENDING DIAGRAM

LAP JOINT LENGTH

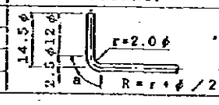
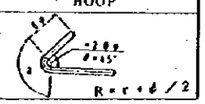
ϕ	a	LAP JOINT LENGTH
D13	390	
D16	480	
D19	570	
D22	660	
D25	750	
D29	870	
D32	960	

	JAPAN		OTAN	
	CROSS-SECTIONAL AREA (cm²)	NOMINAL WEIGHT (kg/m)	CROSS-SECTIONAL AREA (cm²)	NOMINAL WEIGHT (kg/m)
D13	1.267	0.995	1.290	0.994
D16	1.986	1.56	2.000	1.552
D19	2.865	2.25	2.839	2.235
D22	3.871	3.04	3.871	3.042
D25	5.067	3.98	5.067	3.973
D29	6.424	5.04	6.452	5.059
D32	7.942	6.23	8.194	6.403

BENDING DIMENSION (MAIN REINFORCEMENT)

ϕ	θ ≦ 90° R = 3ϕ	θ > 90° R = 3.5ϕ	HOOK LENGTH
D13	39	71.5	
D16	48	88	
D19	57	104.5	
D22	66	121	
D25	75	137.5	
D29	87	159.5	
D32	96	176	R = r + ϕ / 2

BENDING DIMENSION (STIRRUP, ERECTION BAR)

ϕ	R = 2.5ϕ	θ = 90 a	θ = 45 a	HOOK LENGTH STIRRUP	ERECTION BAR	HOOP
D13	32.5	51	77			
D16	40	63	94			
D19	47.5	75	112			
D22	55	86	130	R = r + ϕ / 2	R = r + ϕ / 2	R = r + ϕ / 2

NOTES:

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TITLE BAR BENDING DIAGRAM

DATE

DWG NO. B-42