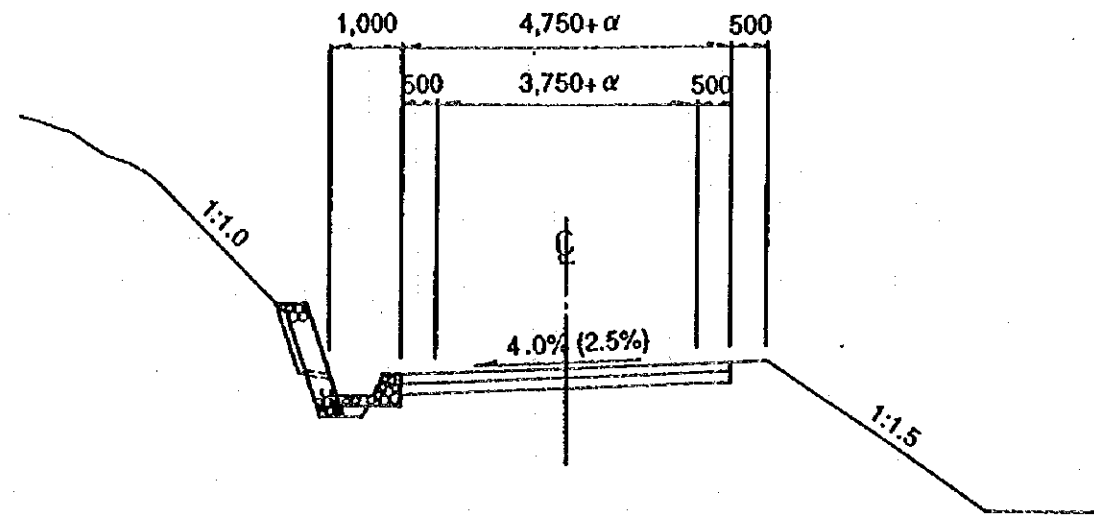




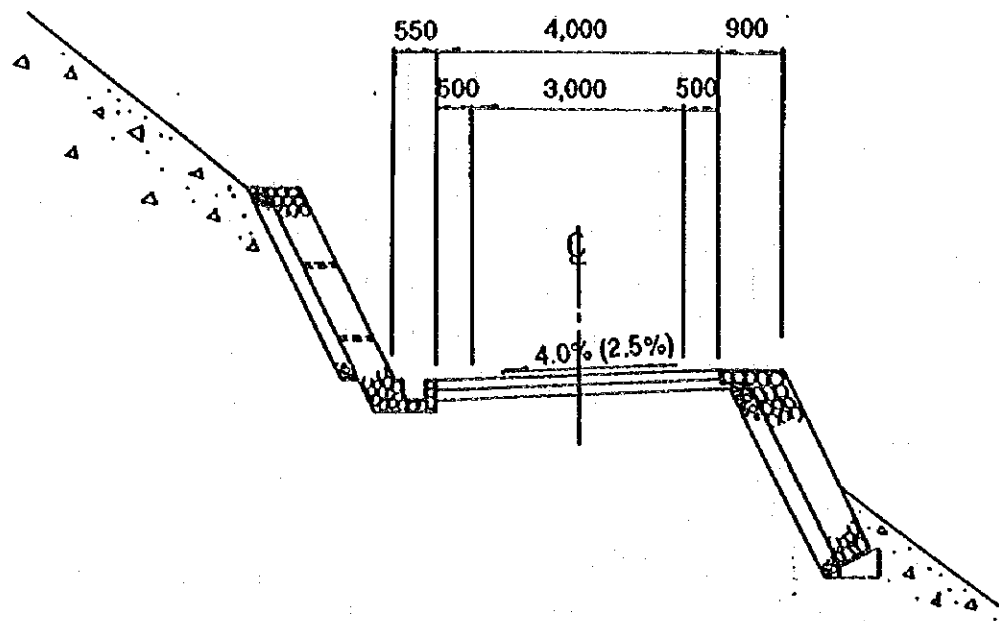




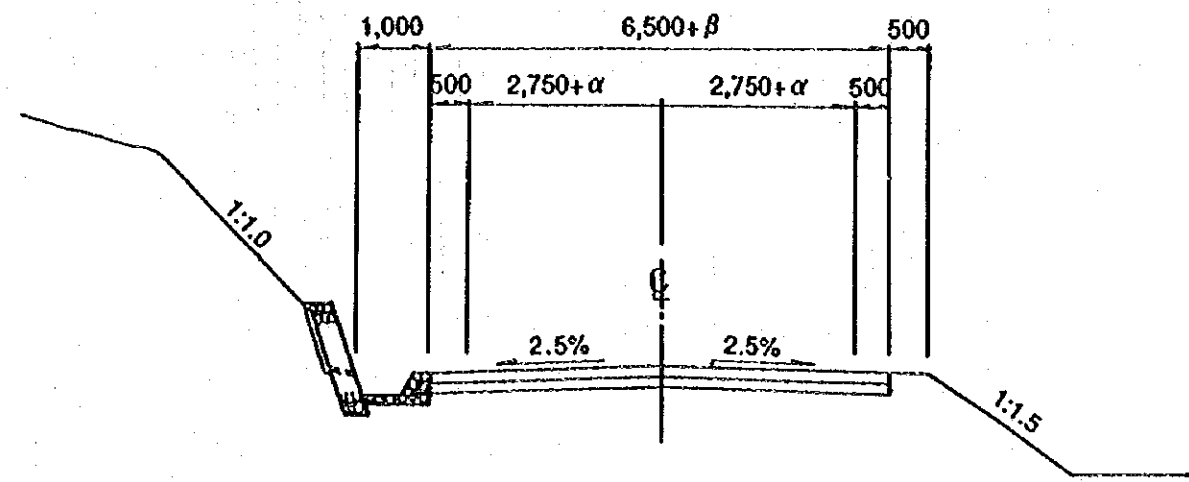
1車線道路区間



急峻地形劣悪な地質の間を通過する際に採用する特例的な横断構成

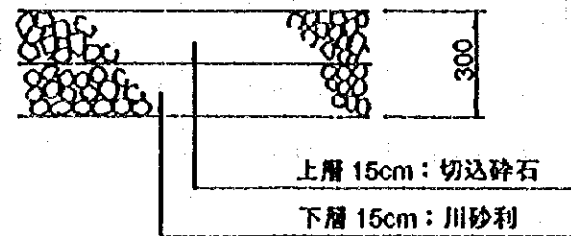


2車線道路区間

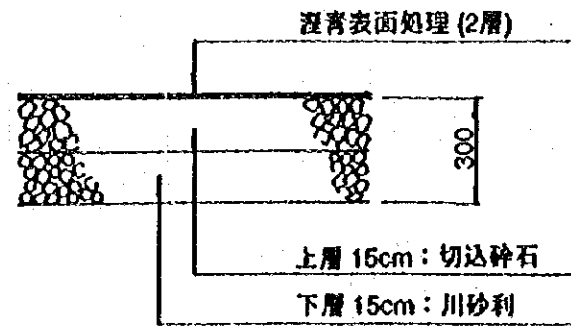


ドリケル市付近 700m 及びバスストップ (30m 箇所) に採用する。

標準舗装構成



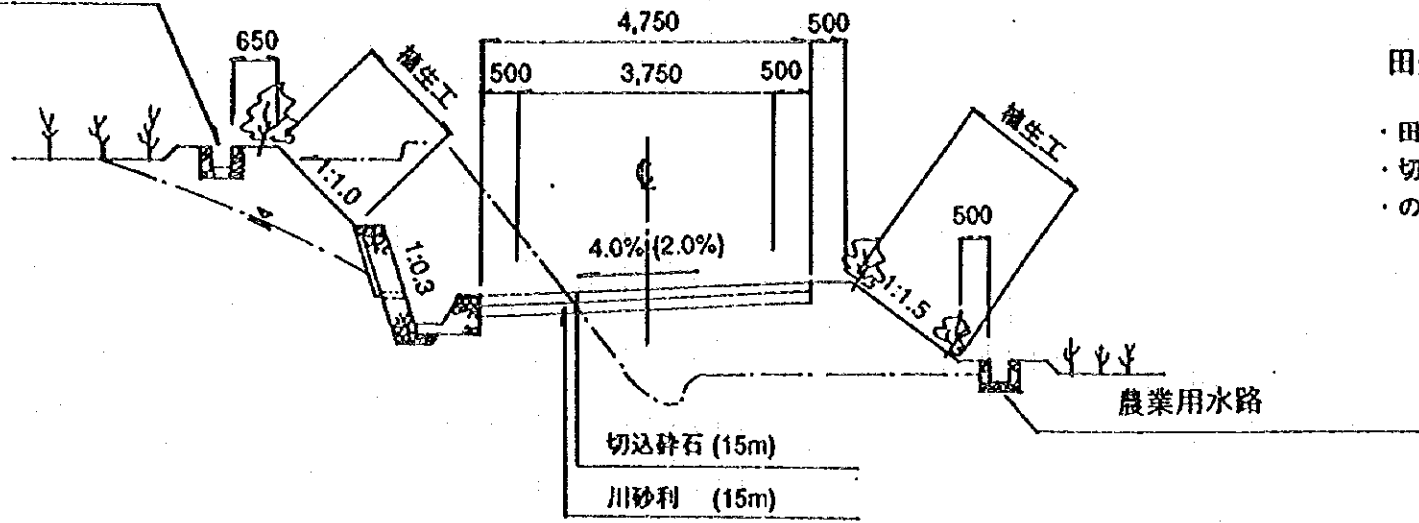
(砂利舗装)  
 ・一般区間に採用する。  
 ・路床を砂利で施工させる区間では削除する。



(瀝青表面処理)  
 ・STA.280～終点までの間に採用する。  
 ・縦断勾配>5%の区間に採用する。

標準横断図 (2/3) Scale: 1/100

農業用水路

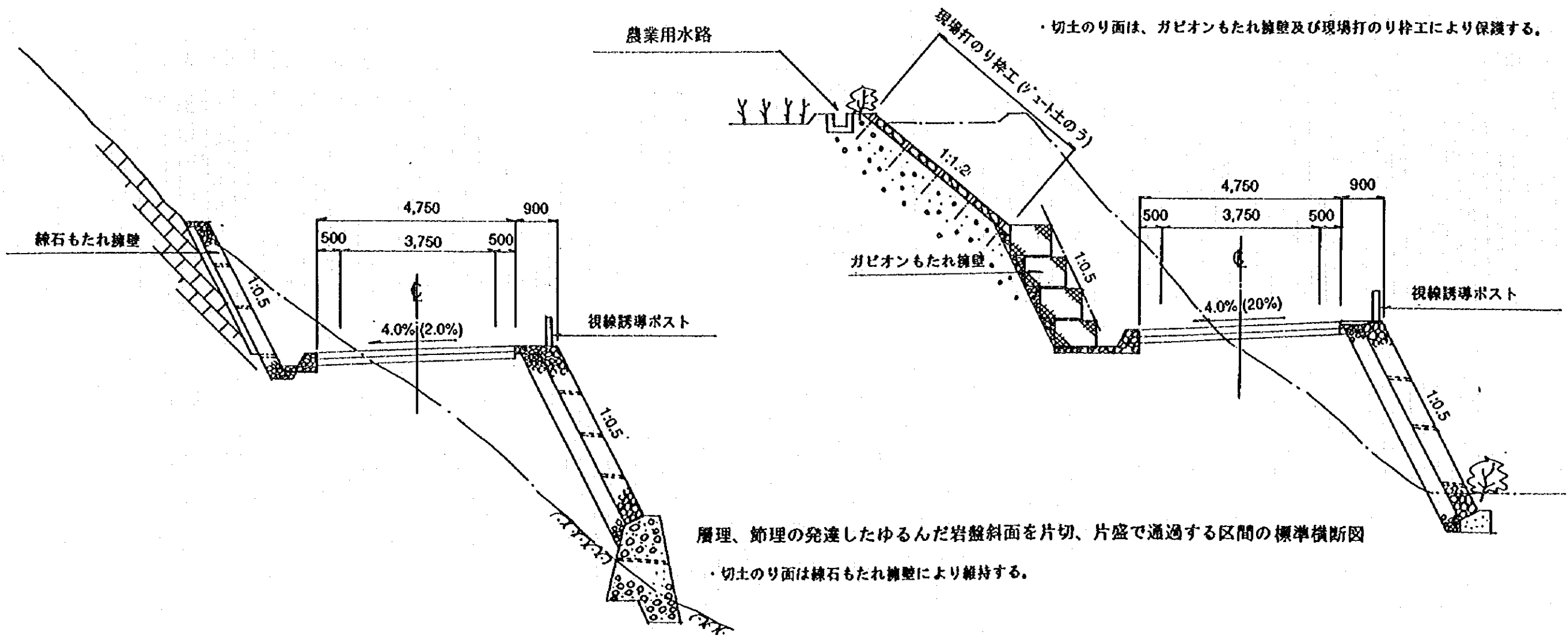


田畑の中を通過する区間の標準横断図

- ・田畑との境界には農業用水路を設ける。
- ・切土側のり面には湧水点からのり面浸食を防止する為に腰石積を設ける。
- ・のり面には、芝工、さし木、種敷布等による植生を行う。

段丘レキ層、崩積土層を片切、片盛で通過する区間の標準横断図

- ・切土のり面は、ガビオンもたれ擁壁及び現場打のり枠工(シート土のう)により保護する。

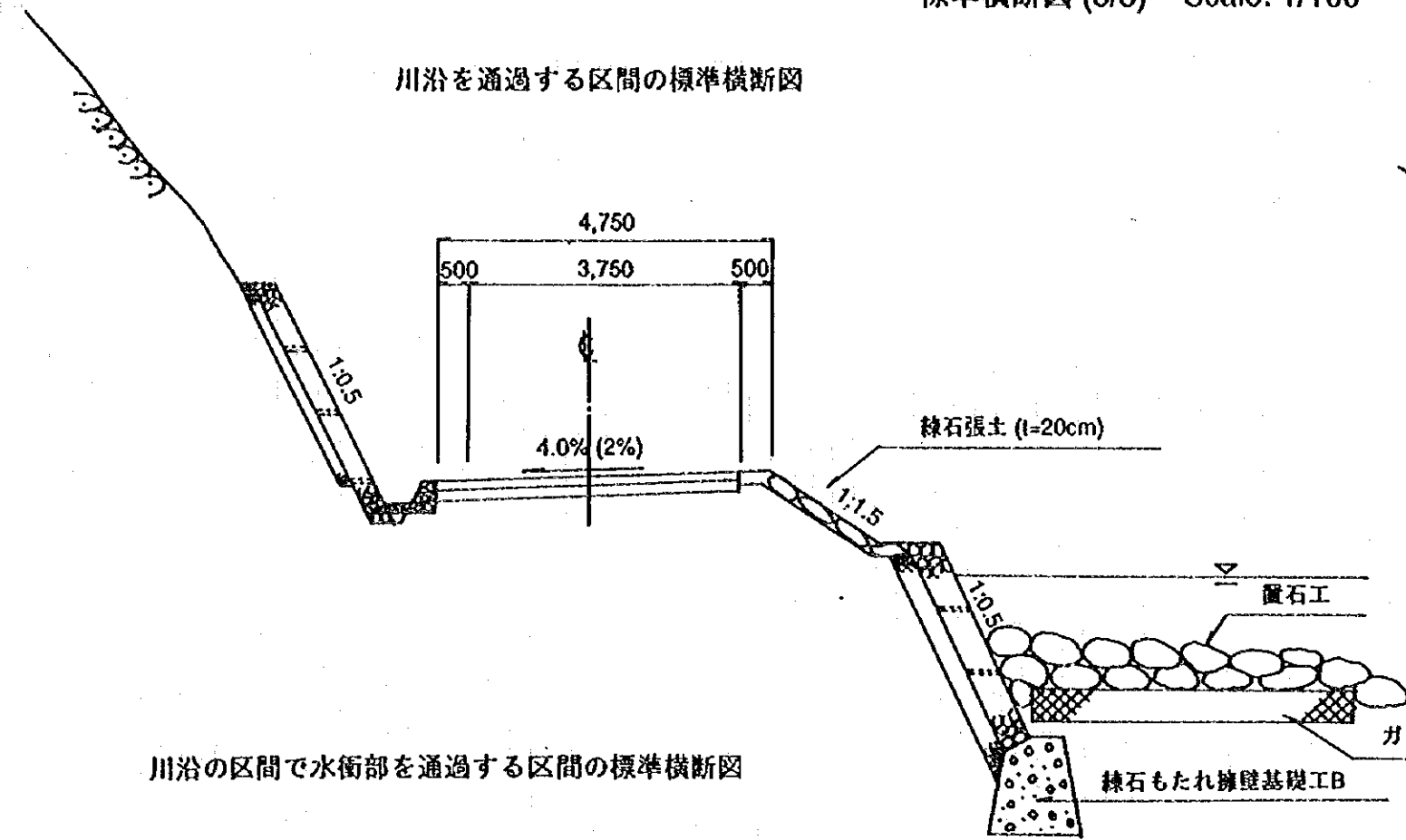


層理、節理の発達したゆるんだ岩盤斜面を片切、片盛で通過する区間の標準横断図

- ・切土のり面は練石もたれ擁壁により維持する。

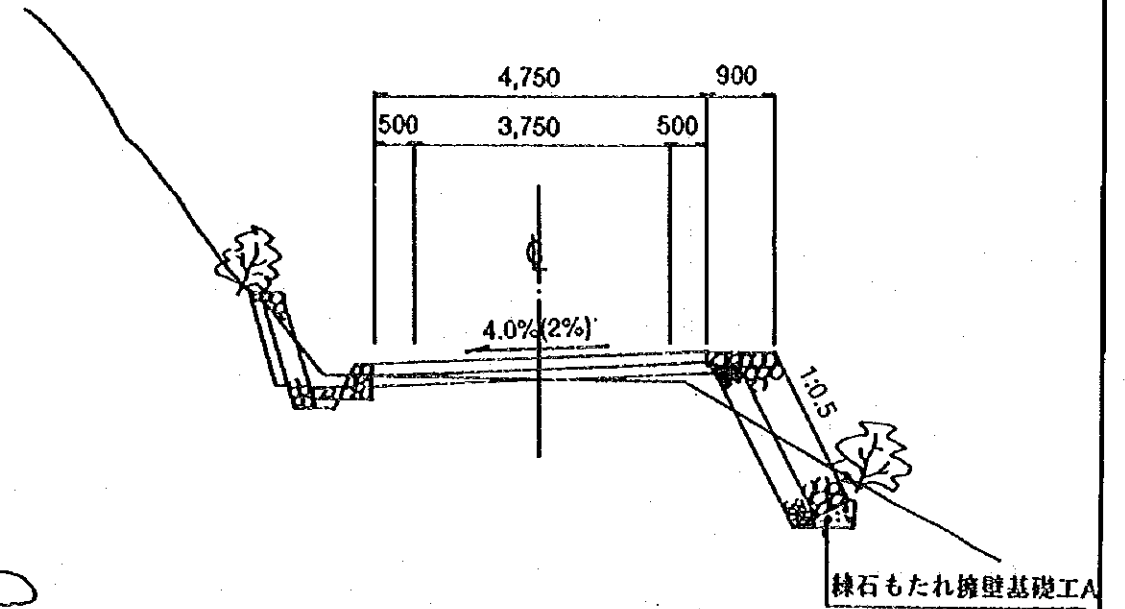
標準横断図 (3/3) Scale: 1/100

川沿を通過する区間の標準横断図

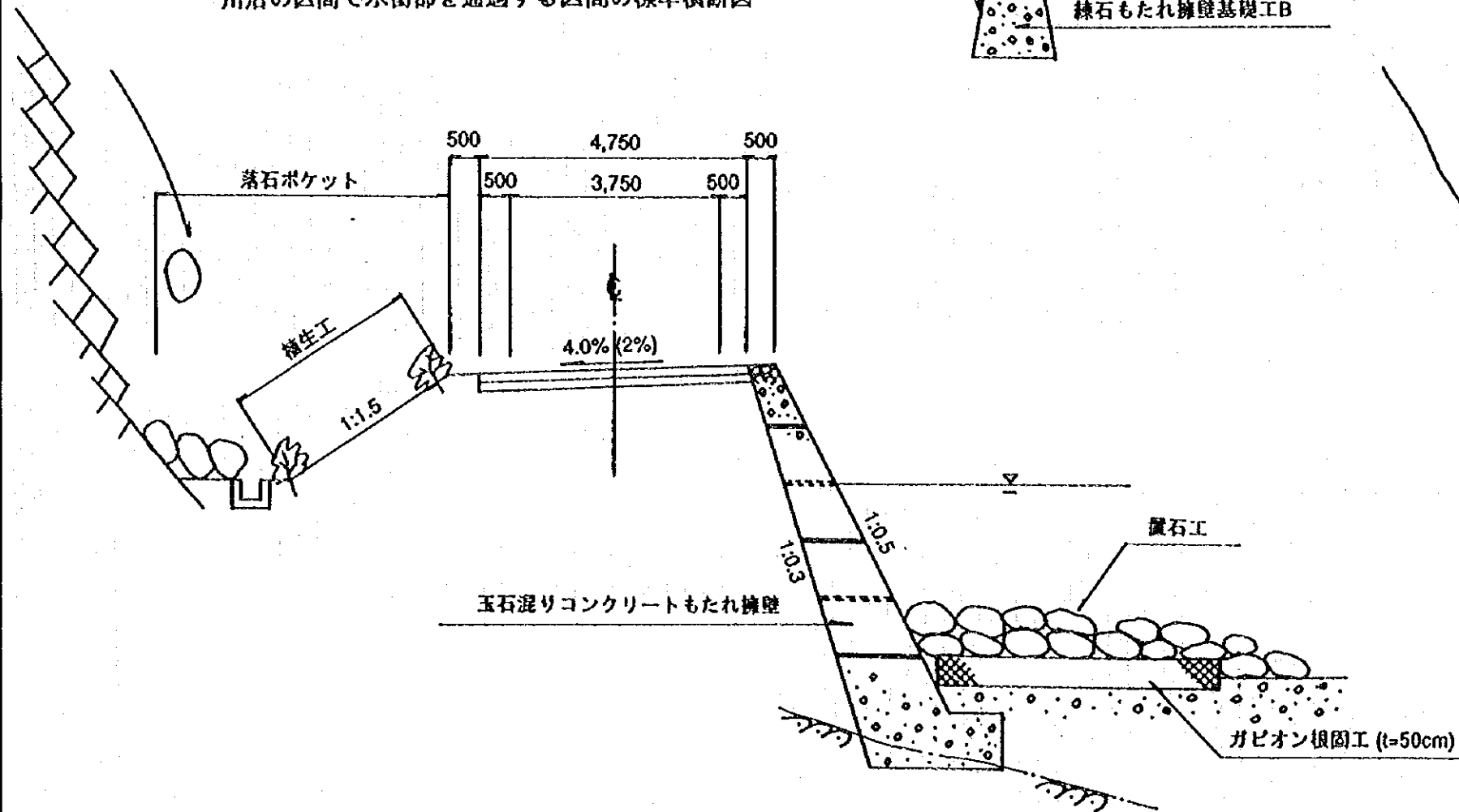


現道区間の標準横断図

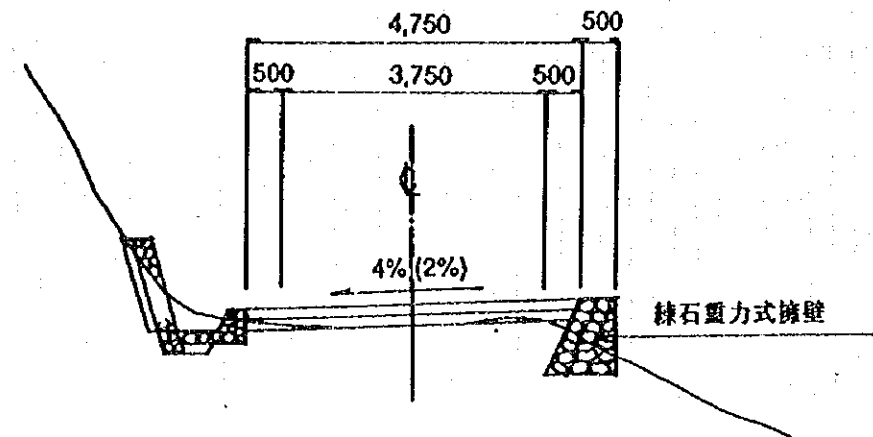
山側の切土を避けて、谷側へ擁壁による拡巾する。



川沿の区間で水衝部を通過する区間の標準横断図

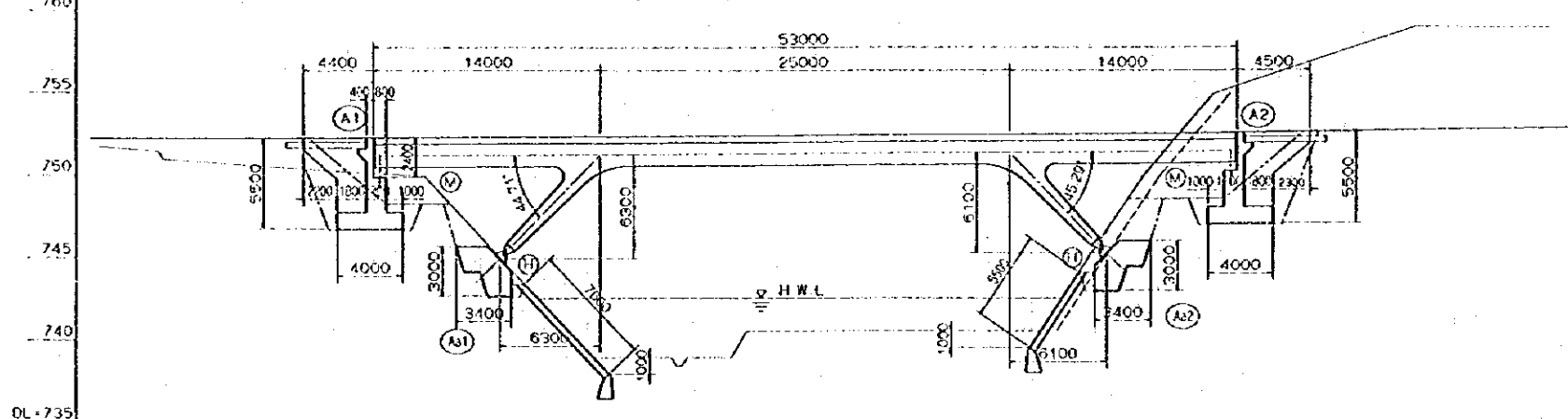


現道巾員の広い場合には、簡易な練石重力式擁壁により谷側路肩を保護する。

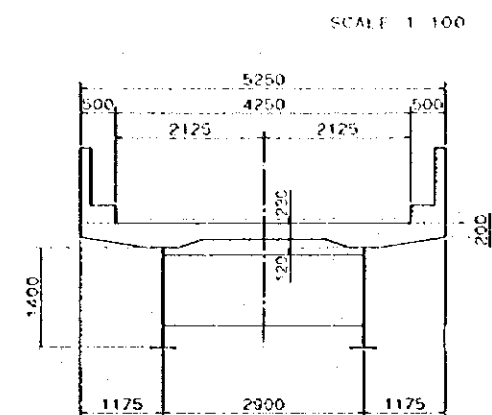


ダウネ橋 全体一般図

SIDE ELEVATION SCALE 1:400

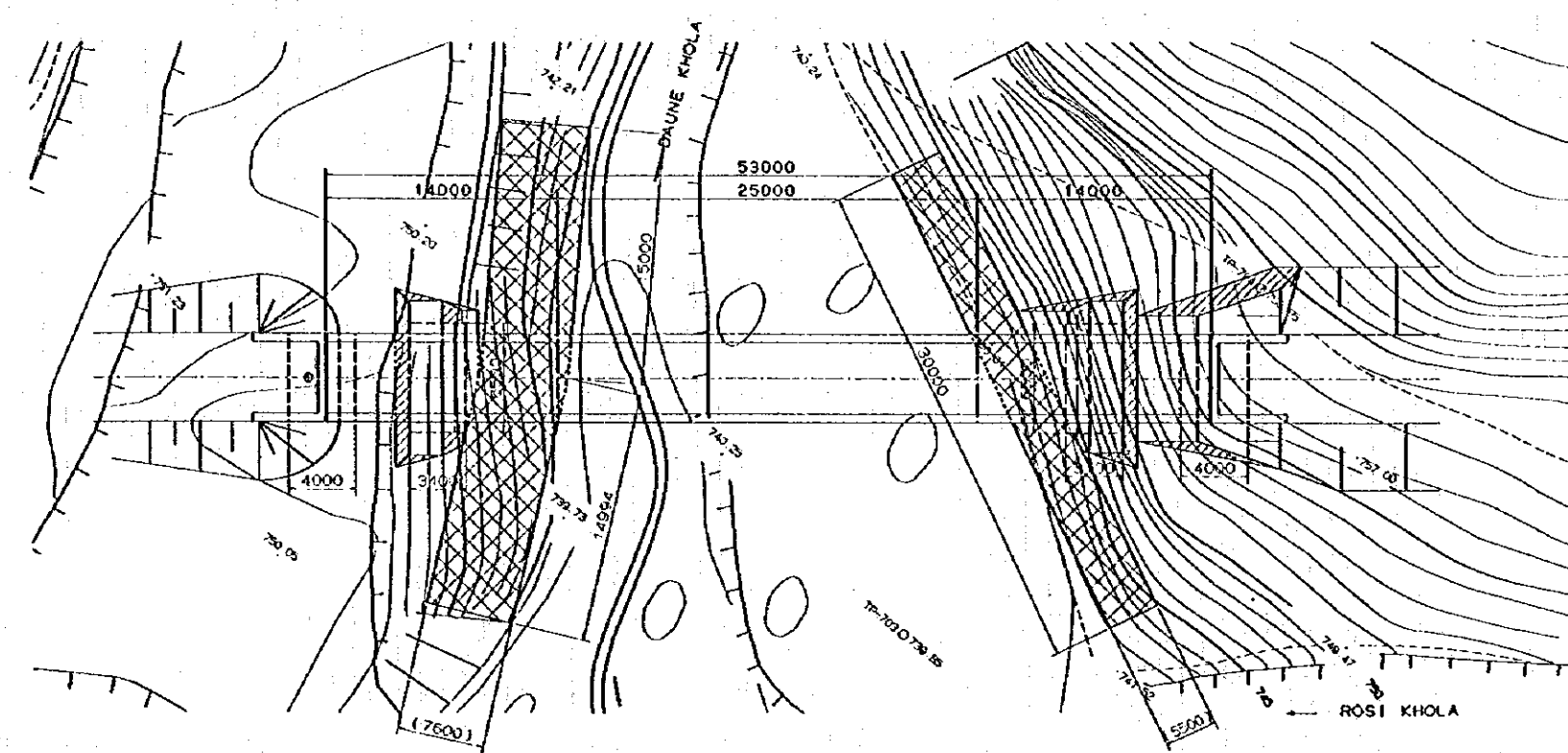


CROSS SECTION SCALE 1:100



GRADE	1+0.33% L=150m		752.50	1+1.60% L=125m	
PROPOSED HEIGHT	752.93	752.42	752.95	751.99	752.54
GROUND HEIGHT	750.25	740.60	751.99	751.99	751.99
DISTANCE	25 000	25 000	25 000	25 000	25 000
STATION	133+00 133+11	133+25	133+46	133+50	133+54
CURVE ELEMENT	R=∞				

PLAN SCALE 1:400



SUPERSTRUCTURE

ITEM	CLASS	UNIT	QUANTITY	REMARKS
STEEL		LF	59.872	
PAINTING		m <sup>2</sup>	1.064.8	
CONCRETE	ock-240#/100	m <sup>3</sup>	104.7	
FORM		m <sup>2</sup>	521.7	
REINFORCEMENT BAR		LF	23.417	
ASPHALT PAVEMENT		m <sup>2</sup>	225.3	
BEARING		PLACE	8	
EXPANSION JOINT		PLACE	2	
DRAIN		PLACE	10	

SUBSTRUCTURE

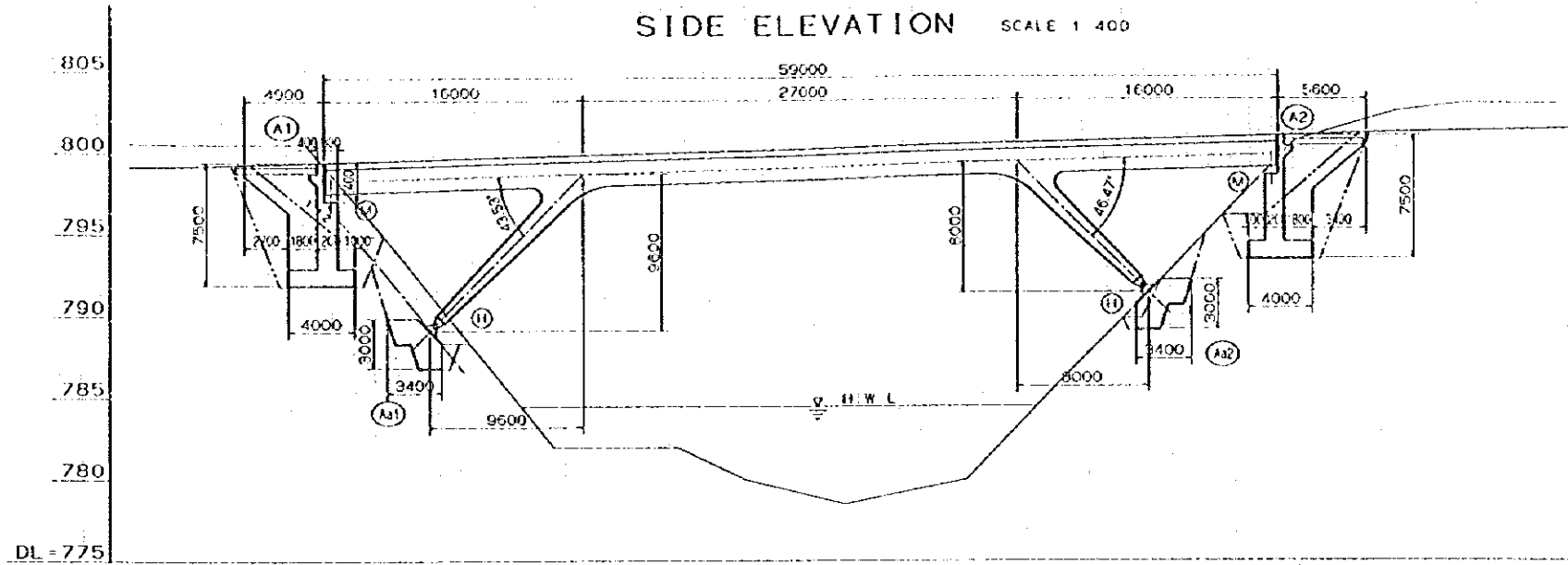
ITEM	CLASS	UNIT	QUANTITY	REMARKS
EXCAVATION		m <sup>3</sup>	808	
BACKFILLING		m <sup>3</sup>	165	
CONCRETE	ock-240#/100	m <sup>3</sup>	189.1	
FORM		m <sup>2</sup>	354.0	
REINFORCEMENT BAR		LF	12.229	
APPROACH CUSHION	L=5m	PLACE	2	

ACCESSORY WORK

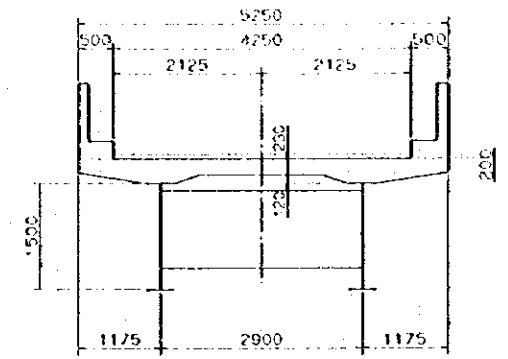
ITEM	CLASS	UNIT	QUANTITY	REMARKS
REPAIR WORKS		m <sup>2</sup>	393.0	
RIVER BED PROTECTION WORKS		m <sup>2</sup>	---	
RETAINING WALL OF CONCRETE BLOCK		m <sup>2</sup>	119.3	

ナラケ橋 全体一般図

SIDE ELEVATION SCALE 1/400

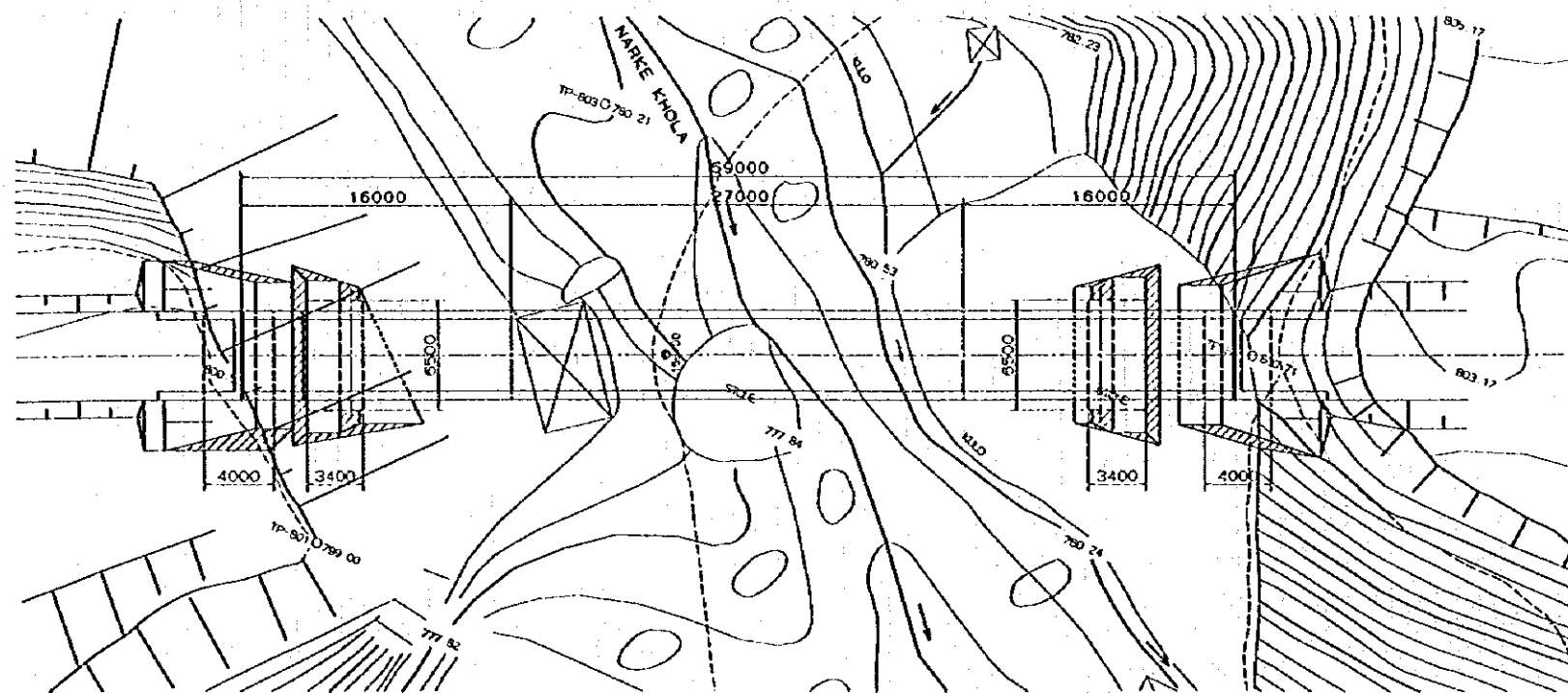


CROSS SECTION SCALE 1/100



GRADE	1:2.57% L=350m				
PROPOSED HEIGHT	799.50	800.14	800.79	801.43	
GROUND HEIGHT	799.25	790.42	790.41	803.00	803.43
DISTANCE	25 000	25 000	25 000	25 000	25 000
STATION	(A) 157+75 (A1) 157+81.4	(B) 158+00 (B1) 158+25 (B2) 158+28	(C) 158+34 (C1) 158+34	(D) 158+50	
CURVE ELEMENT	R=∞				

PLAN SCALE 1/400



SUPERSTRUCTURE

ITEM	CLASS	UNIT	QUANTITY	REMARKS
STEEL		LF	77 996	
PAINTING		m <sup>2</sup>	1 400.9	
CONCRETE	ack-240#/C40	m <sup>3</sup>	116.5	
FORM		m <sup>2</sup>	580.3	
REINFORCEMENT BAR		LF	26 068	
ASPHALT PAVEMENT		m <sup>2</sup>	250.8	
BEARING		PLACE	8	
EXPANSION JOINT		PLACE	2	
DRAIN		PLACE	12	

SUBSTRUCTURE

ITEM	CLASS	UNIT	QUANTITY	REMARKS
EXCAVATION		m <sup>3</sup>	1 194	
BACKFILLING		m <sup>3</sup>	250	
CONCRETE	ack-240#/C40	m <sup>3</sup>	232.4	
FORM		m <sup>2</sup>	465.0	
REINFORCEMENT BAR		LF	15 781	
APPROACH CUSHION	L=5m	PLACE	2	

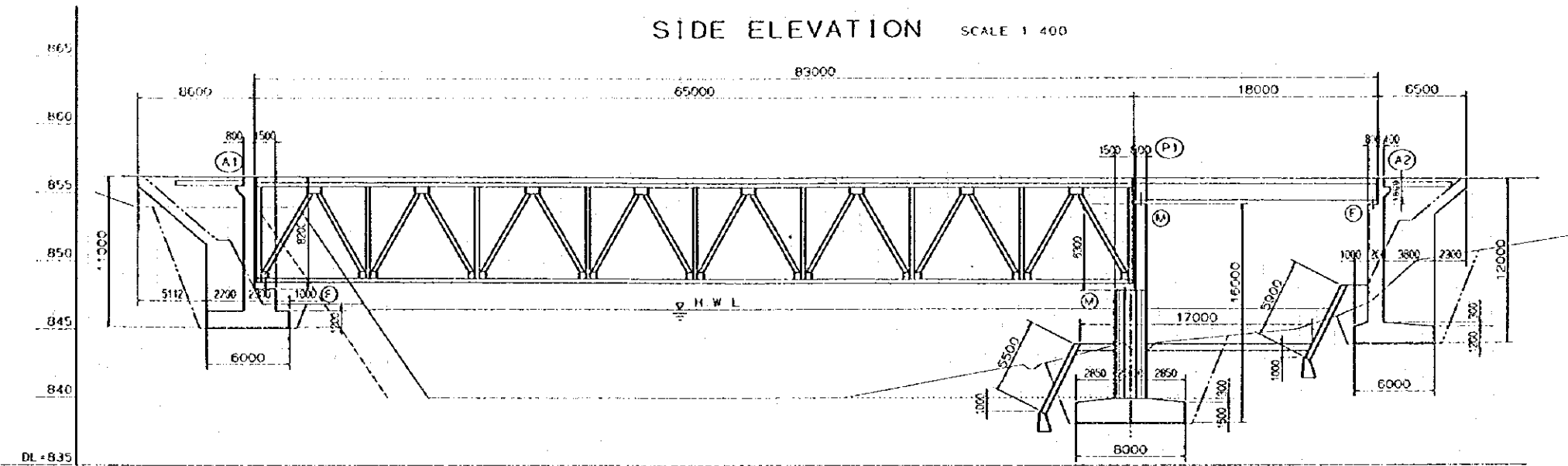
ACCESSORY WORK

ITEM	CLASS	UNIT	QUANTITY	REMARKS
REPAIR WORKS		m <sup>2</sup>	---	
RIVER BED PROTECTION WORKS		m <sup>2</sup>	---	
RETAINING WALL OF CONCRETE BLOCK		m <sup>2</sup>	131.3	



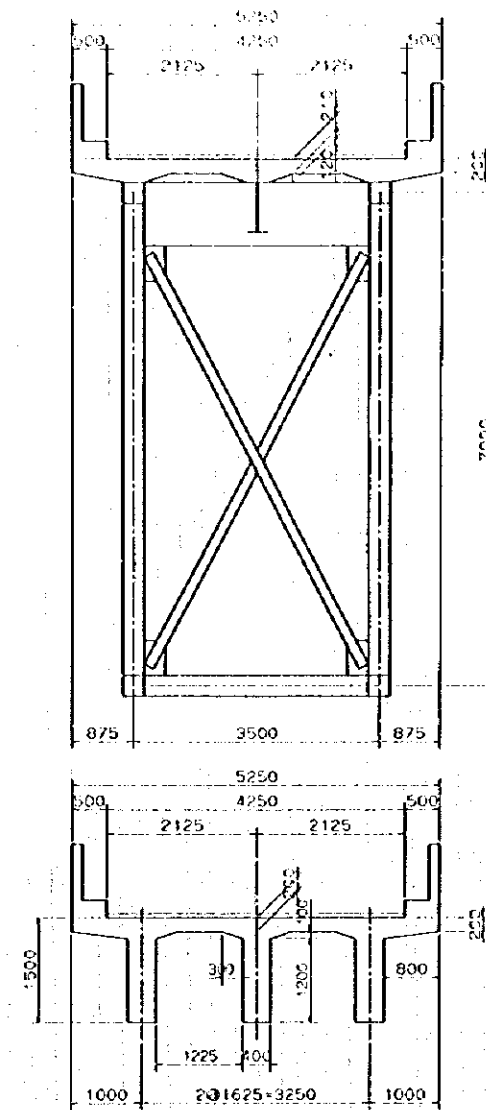
ロシ橋 全体一般図

SIDE ELEVATION SCALE 1/400



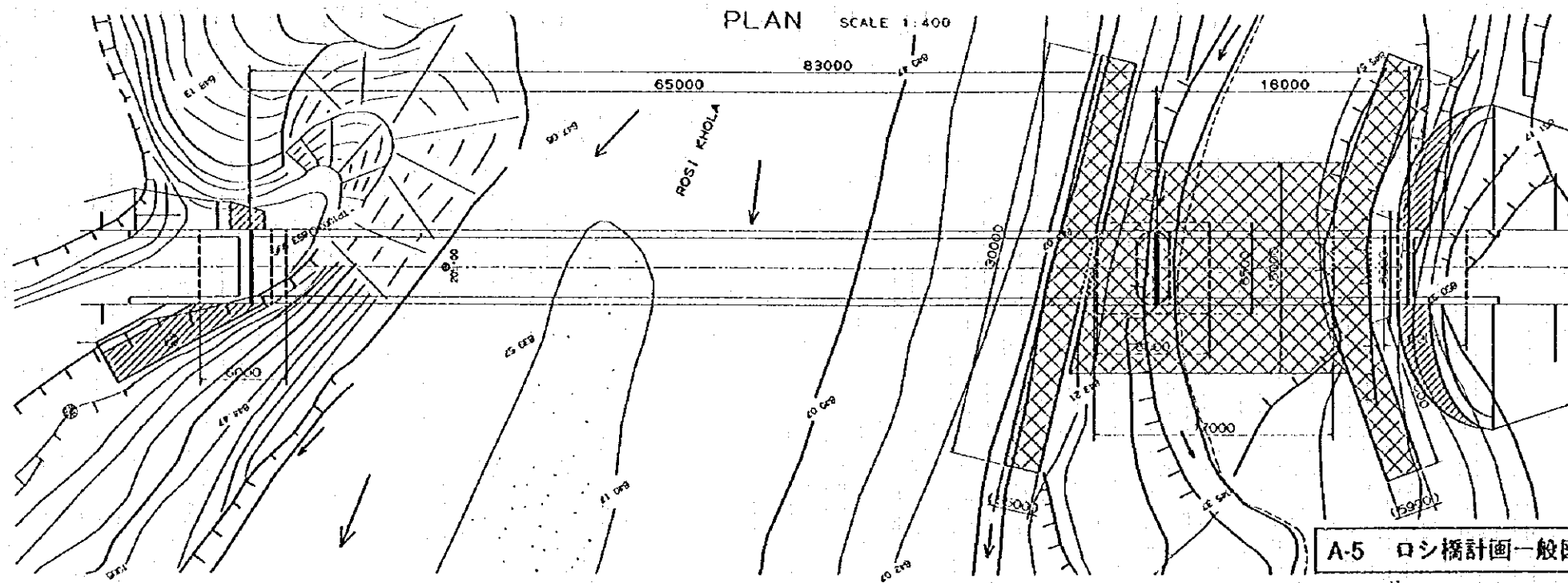
CROSS SECTION

SCALE 1/100



GRADE	1+0.27% L=375m				
PROPOSED HEIGHT		856.17	856.17	856.03	855.97
GROUND HEIGHT		840.00	840.00	843.89	850.49
DISTANCE		25.000	25.000	25.000	25.000
STATION	204+85	205+00	205+25	205+50	205+75
CURVE ELEMENT			R=∞		

PLAN SCALE 1/400



SUPERSTRUCTURE

ITEM	CLASS	UNIT	QUANTITY	REMARKS
STEEL		tf	106.473	
PAINTING		m <sup>2</sup>	1.858.2	
CONCRETE	ock+24cm <sup>3</sup> /cm <sup>3</sup>	m <sup>3</sup>	185.0	
FORM		m <sup>2</sup>	961.2	
REINFORCEMENT BAR		tf	41.744	
ASPHALT PAVEMENT		m <sup>2</sup>	352.8	
BEARING		PLACE	10	
EXPANSION JOINT		PLACE	3	
DRAIN		PLACE	16	

SUBSTRUCTURE

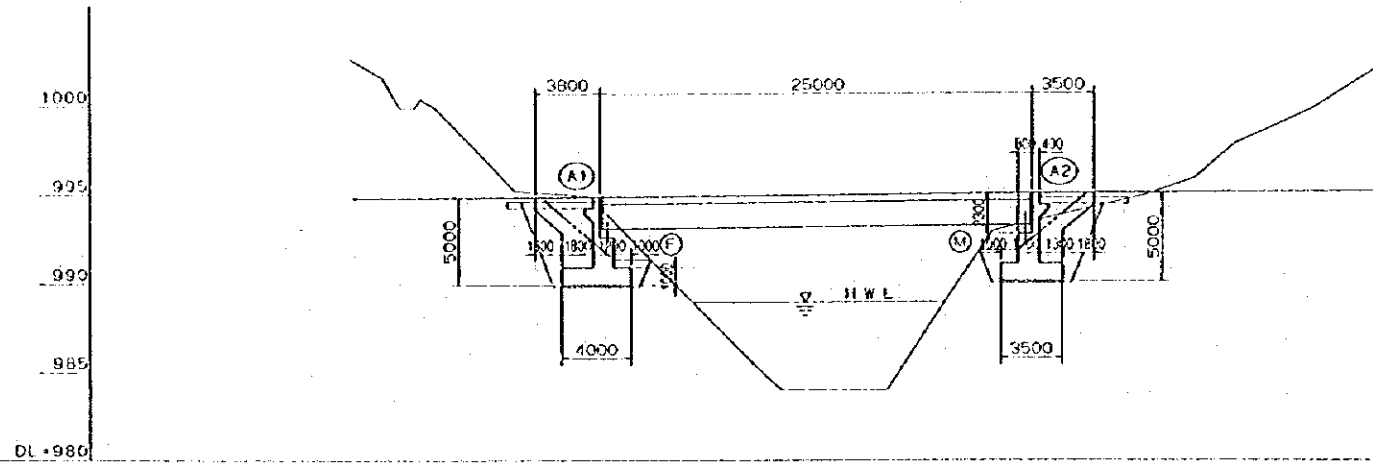
ITEM	CLASS	UNIT	QUANTITY	REMARKS
EXCAVATION		m <sup>3</sup>	1.900	
BACKFILLING		m <sup>3</sup>	679	
CONCRETE	ock+24cm <sup>3</sup> /cm <sup>3</sup>	m <sup>3</sup>	523.7	
FORM		m <sup>2</sup>	978.5	
REINFORCEMENT BAR		tf	42.193	
APPROACH CUSHION	L=5m	PLACE	2	

ACCESSORY WORK

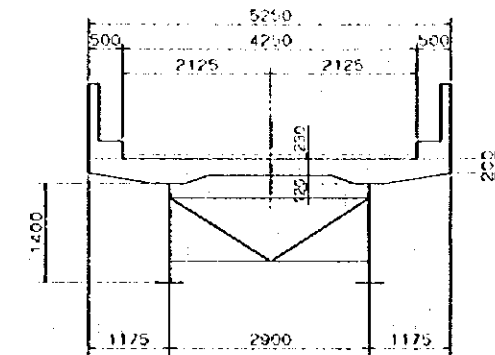
ITEM	CLASS	UNIT	QUANTITY	REMARKS
REPARATION WORKS		m <sup>2</sup>	177.0	
RIVER BED PROTECTION WORKS		m <sup>2</sup>	243.9	
RETAINING WALL OF CONCRETE BLOCK		m <sup>2</sup>	122.1	

第一ダブチャ橋 全体一般図

SIDE ELEVATION SCALE 1:400

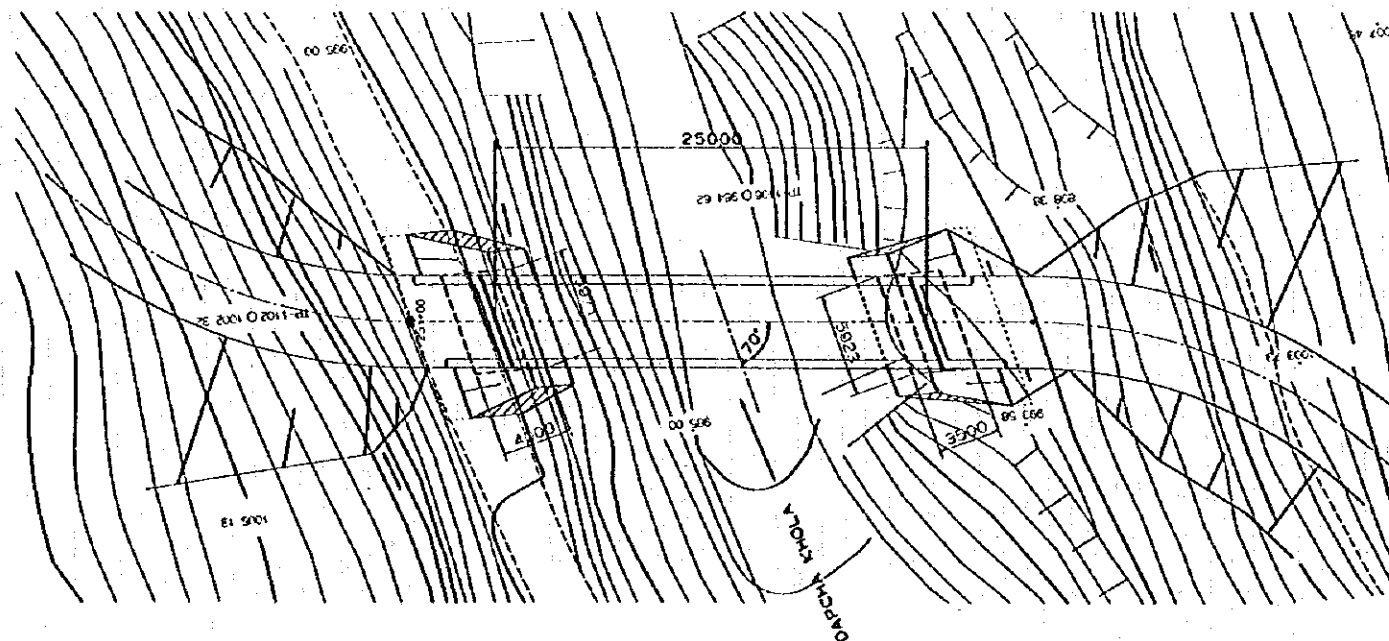


CROSS SECTION SCALE 1:100



GRADE				
PROPOSED HEIGHT		994.93	995.14	995.36
GROUND HEIGHT		995.30	989.02	1002.45
DISTANCE		25.000	25.000	25.000
STATION		251+00 (A1)	251+25 (A2)	251+50
CURVE ELEMENT	R=30	R=∞	R=30	

PLAN SCALE 1:400



SUPERSTRUCTURE

ITEM	CLASS	UNIT	QUANTITY	REMARKS
STEEL		tf	19 895	
PAINTING		m <sup>2</sup>	357 3	
CONCRETE	ack-240 tf/cu	m <sup>3</sup>	49 4	
FORM		m <sup>2</sup>	248 2	
REINFORCEMENT BAR		tf	11 046	
ASPHALT PAVEMENT		m <sup>2</sup>	106 3	
BEARING		PLACE	4	
EXPANSION JOINT		PLACE	2	
DRAIN		PLACE	6	

SUBSTRUCTURE

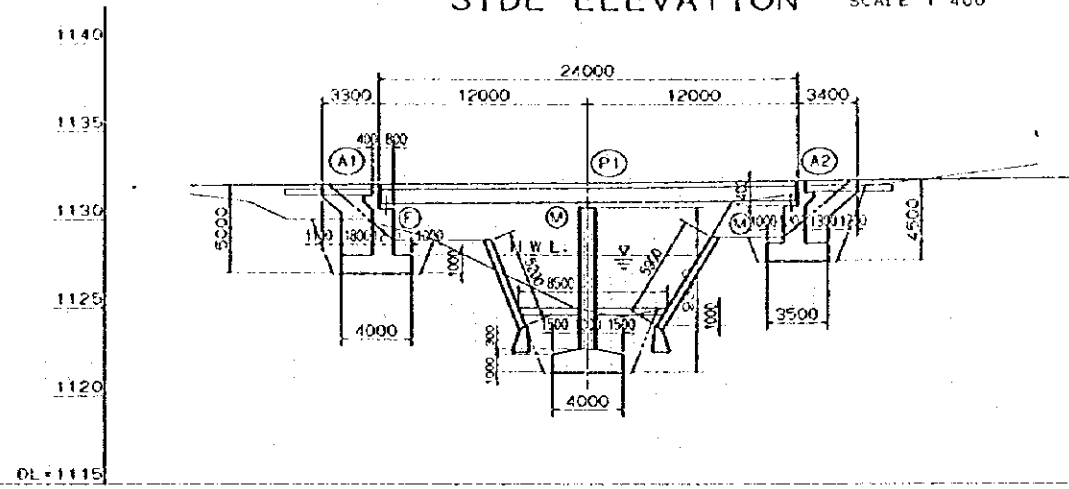
ITEM	CLASS	UNIT	QUANTITY	REMARKS
EXCAVATION		m <sup>3</sup>	376	
BACKFILLING		m <sup>3</sup>	129	
CONCRETE	ack-240 tf/cu	m <sup>3</sup>	108 3	
FORM		m <sup>2</sup>	245 3	
REINFORCEMENT BAR		tf	7 722	
APPROACH CUSHION	L=5m	PLACE	2	

ACCESSORY WORK

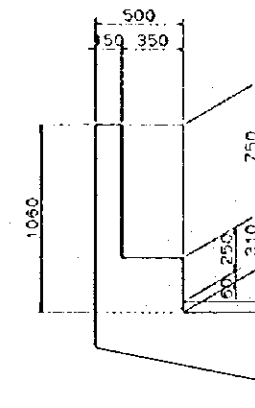
ITEM	CLASS	UNIT	QUANTITY	REMARKS
RETARIAN WORKS		m <sup>2</sup>	---	
RIVER BED PROTECTION WORKS		m <sup>2</sup>	---	
RETAINING WALL OF CONCRETE BLOCK		m <sup>2</sup>	25 6	

第二ダブチャ橋 全体一般図

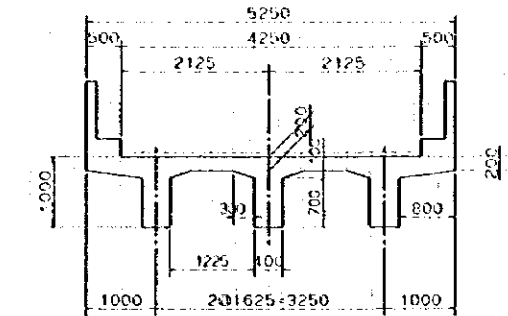
SIDE ELEVATION SCALE 1/400



DETAIL SCALE 1/10

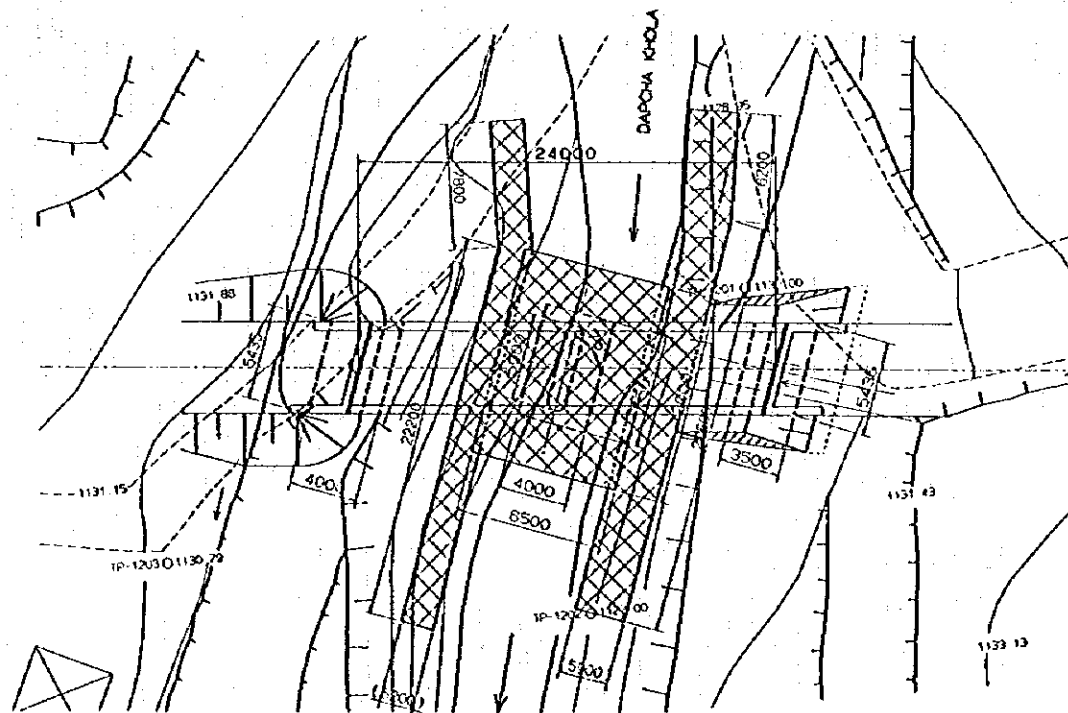


CROSS SECTION SCALE 1/100



GRADE	1:0.75% L=200m	
PROPOSED HEIGHT	1131.94	1132.13
GROUND HEIGHT	1130.81	1127.39
DISTANCE	25.000	25.000
STATION	287+25	287+50
CURVE ELEMENT	R=∞	

PLAN SCALE 1/400



SUPERSTRUCTURE

ITEM	CLASS	UNIT	QUANTITY	REMARKS
CONCRETE	oct-240x81/cr2	m <sup>3</sup>	645	
FORM		m <sup>2</sup>	360.2	
REINFORCEMENT BAR		LF	14,700	
ASPHALT PAVEMENT		m <sup>2</sup>	102.0	
BEARING		PLACE	9	
EXPANSION JOINT		PLACE	2	
DEAIN		PLACE	4	

SUBSTRUCTURE

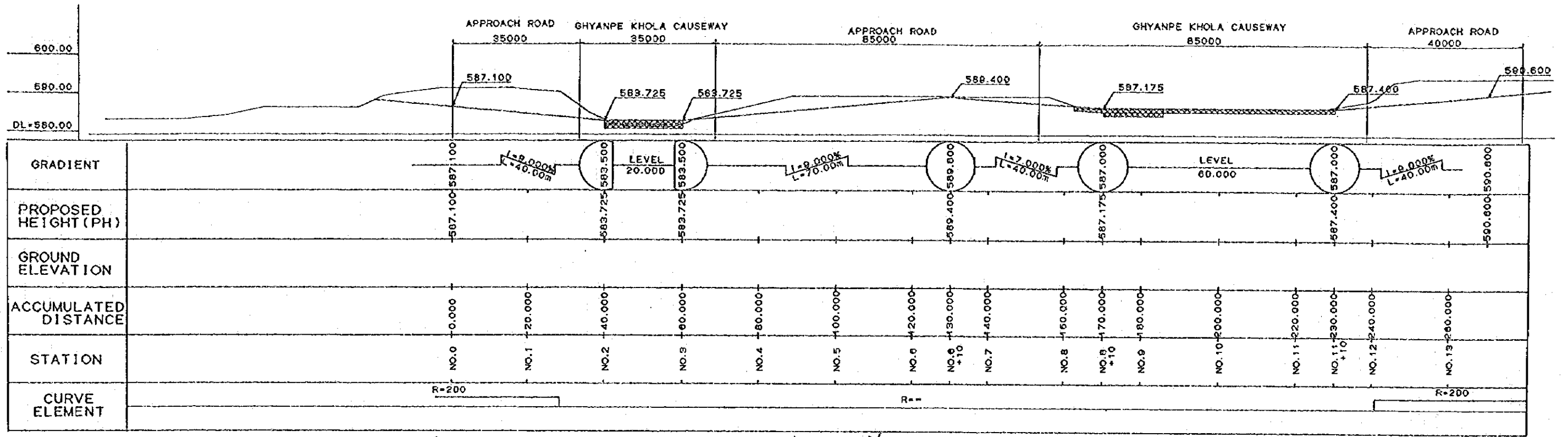
ITEM	CLASS	UNIT	QUANTITY	REMARKS
EXCAVATION		m <sup>3</sup>	556	
BACKFILLING		m <sup>3</sup>	128	
CONCRETE	oct-240x81/cr2	m <sup>3</sup>	173.9	
FORM		m <sup>2</sup>	339.4	
REINFORCEMENT BAR		LF	13,660	
APPROACH CUSHION	L=5m	PLACE	2	

ACCESSORY WORK

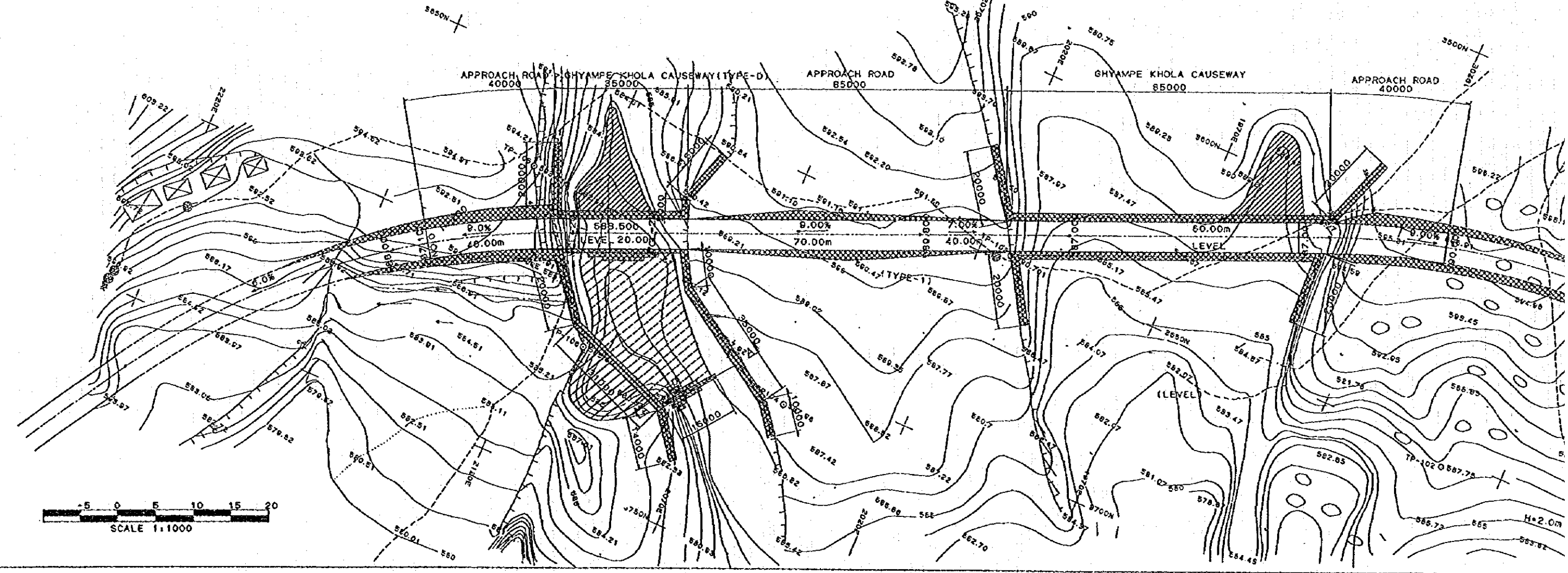
ITEM	CLASS	UNIT	QUANTITY	REMARKS
REPAIR WORKS		m <sup>2</sup>	333.0	
RIVER BED PROTECTION WORKS		m <sup>2</sup>	97.2	
RETAINING WALL OF CONCRETE BLOCK		m <sup>2</sup>	14.8	

PROFILE SCALE 1:1000

(NO.1)  
GHYAMPE KHOLA コースウェイ一般図

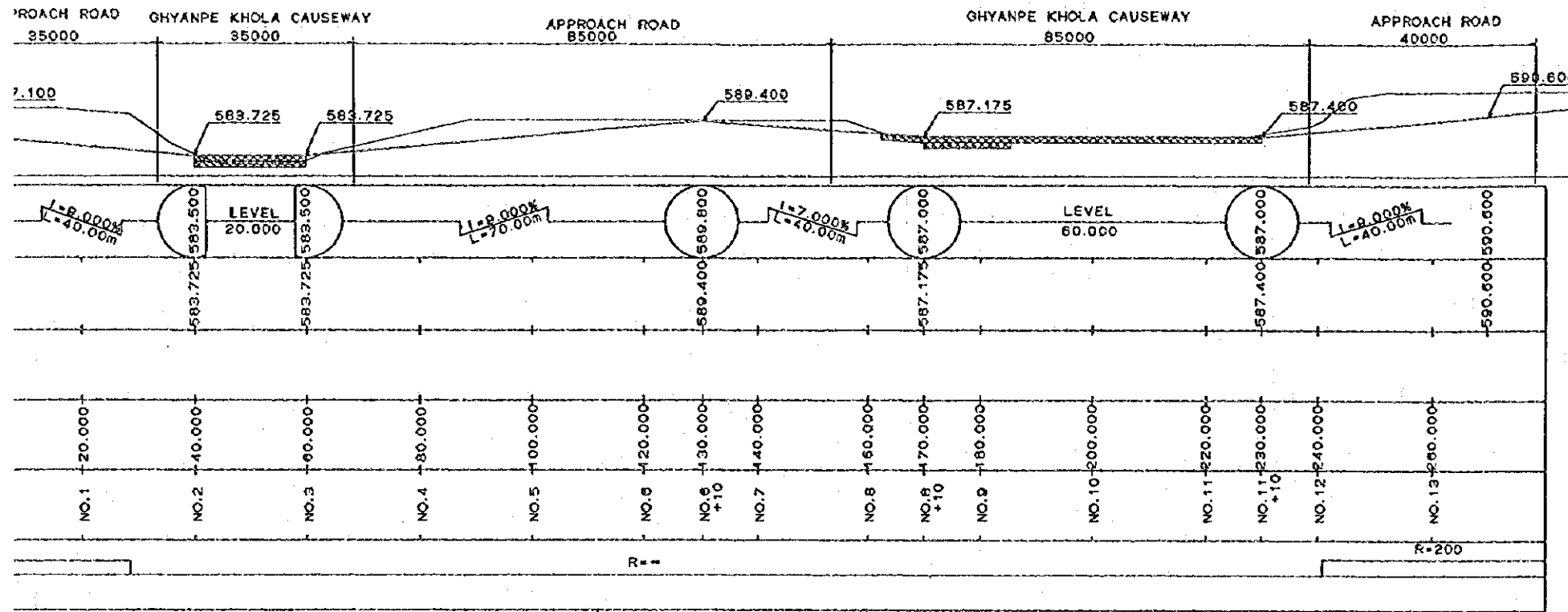


PLAN SCALE 1:1000



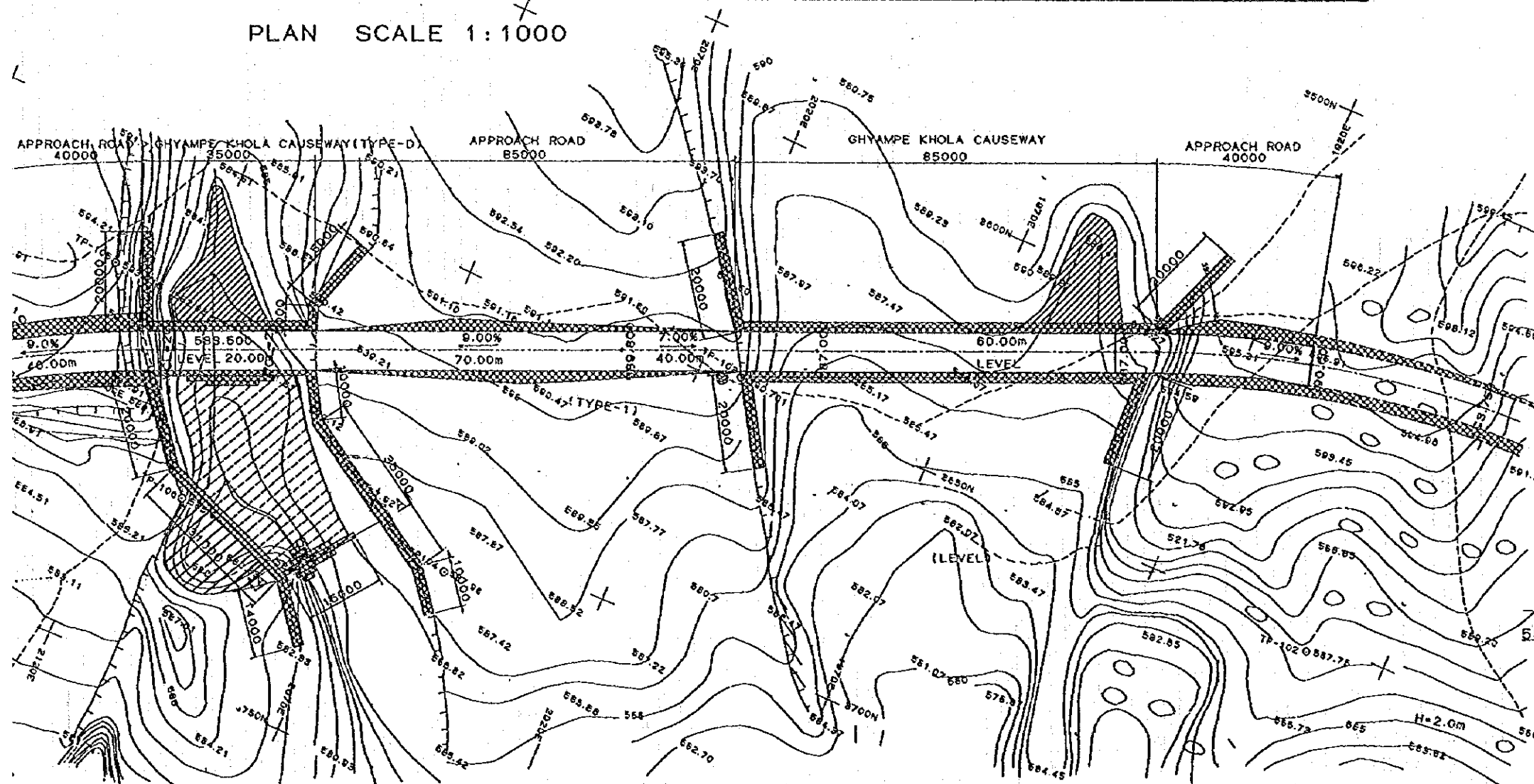
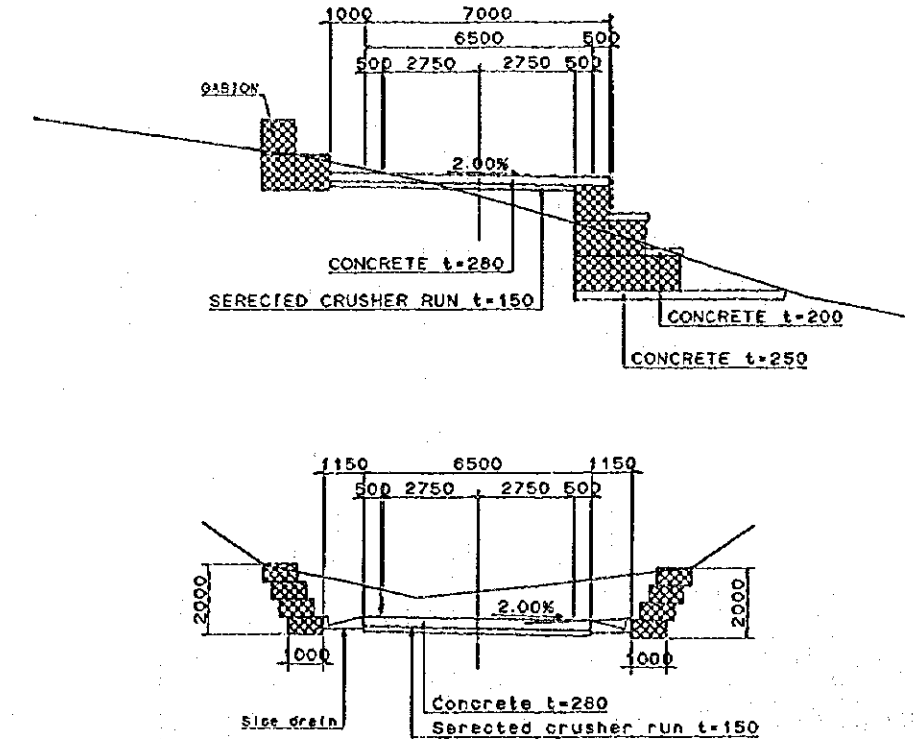
(NO.1)  
GHYAMPE KHOLA コースウェイ一般図

SCALE 1:1000



PLAN SCALE 1:1000

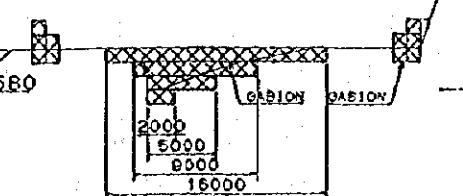
CROSS SECTION SCALE 1:200



MATERIALS

ITEM	CLASS	UNIT	QUANTITY	REMARKS
EXCAVATION		m <sup>3</sup>	4968.0	
BACKFILL		m <sup>3</sup>	696.0	
CONCRETE		m <sup>3</sup>		
CONCRETE WITH COBSLE		m <sup>3</sup>	232.8	
GABION	CAUSEWAY	m <sup>3</sup>	1740.0	
PAVEMENT	t=28	m <sup>3</sup>	568.1	
BASE	CRUSHERRUN	m <sup>2</sup>	1312.5	
SIDE DITCH		m	330.0	
GABION WALL	RIVER PROTECT	m <sup>3</sup>	1080.0	
REINFOR CEMENTO	BAR	t	4.0	

SECTION A-A  
SCALE 1:500

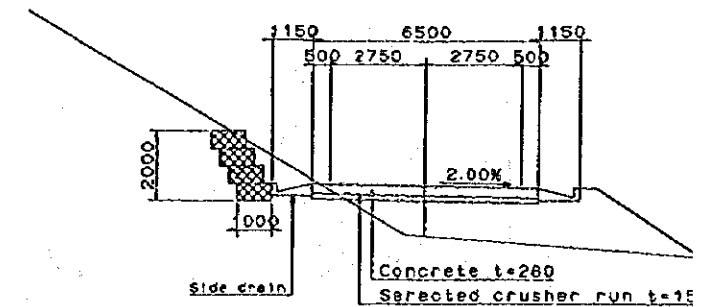
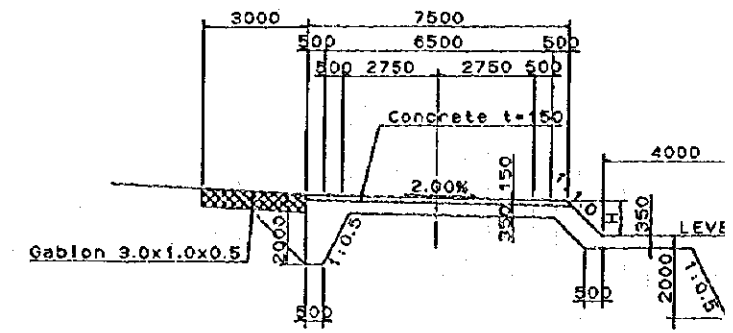
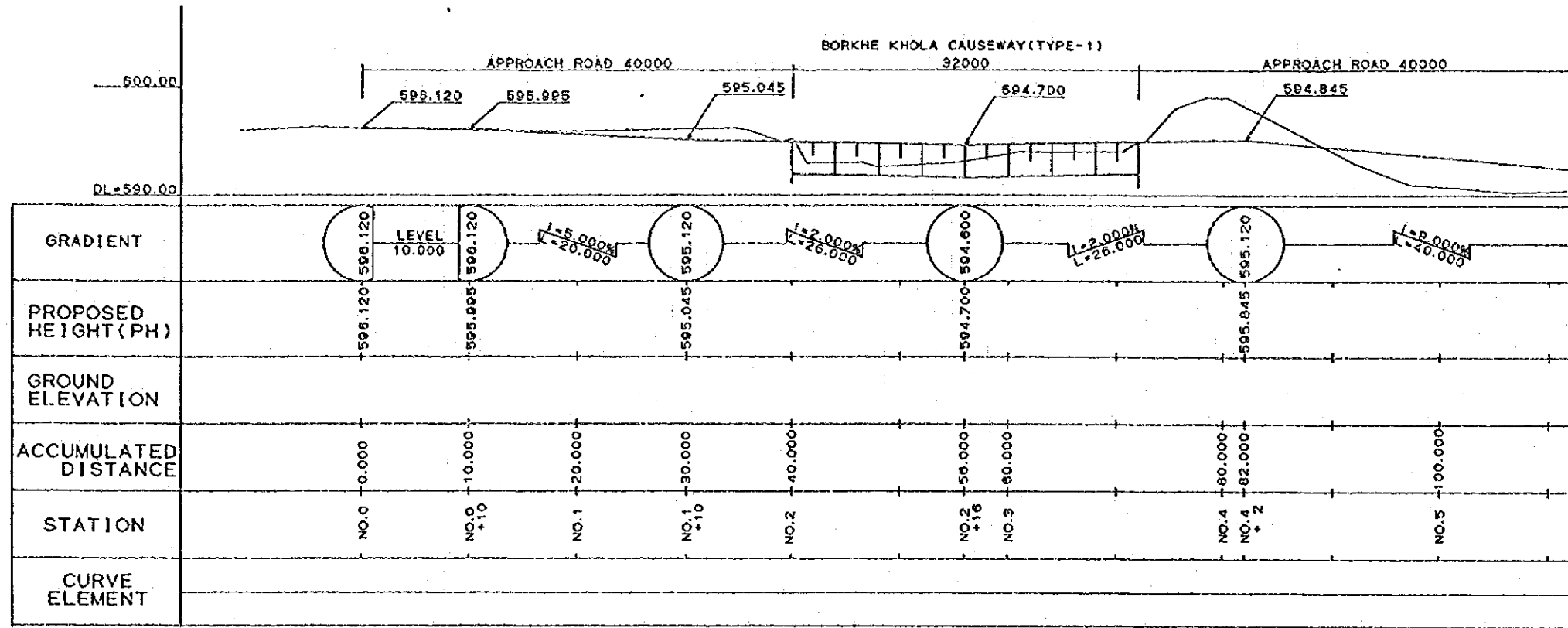


A-8 ガンペ川コースウェイ

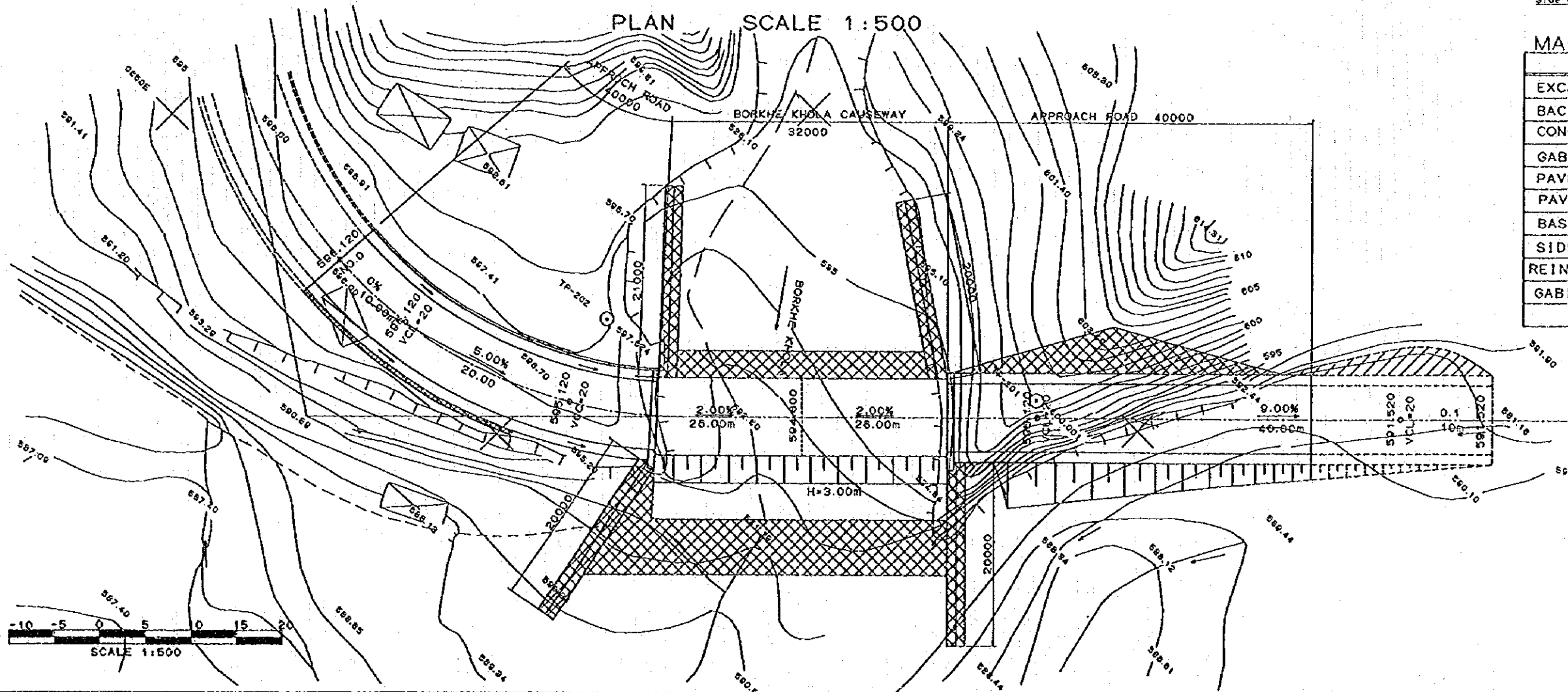
(NO.2) BORKHE KHOLA コースウェイ一般図

PROFILE SCALE 1:500

CROSS SECTION SCALE 1:200



PLAN SCALE 1:500

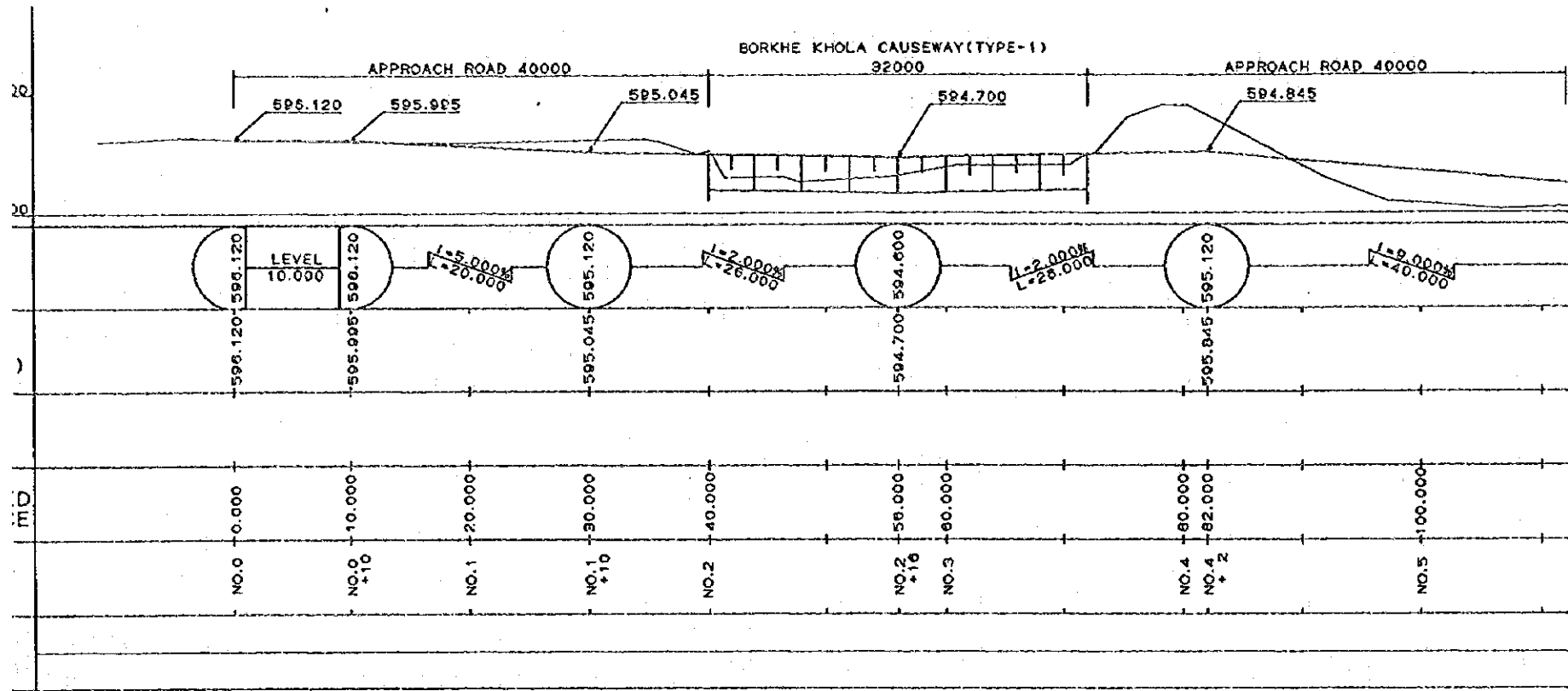


MATERIALS

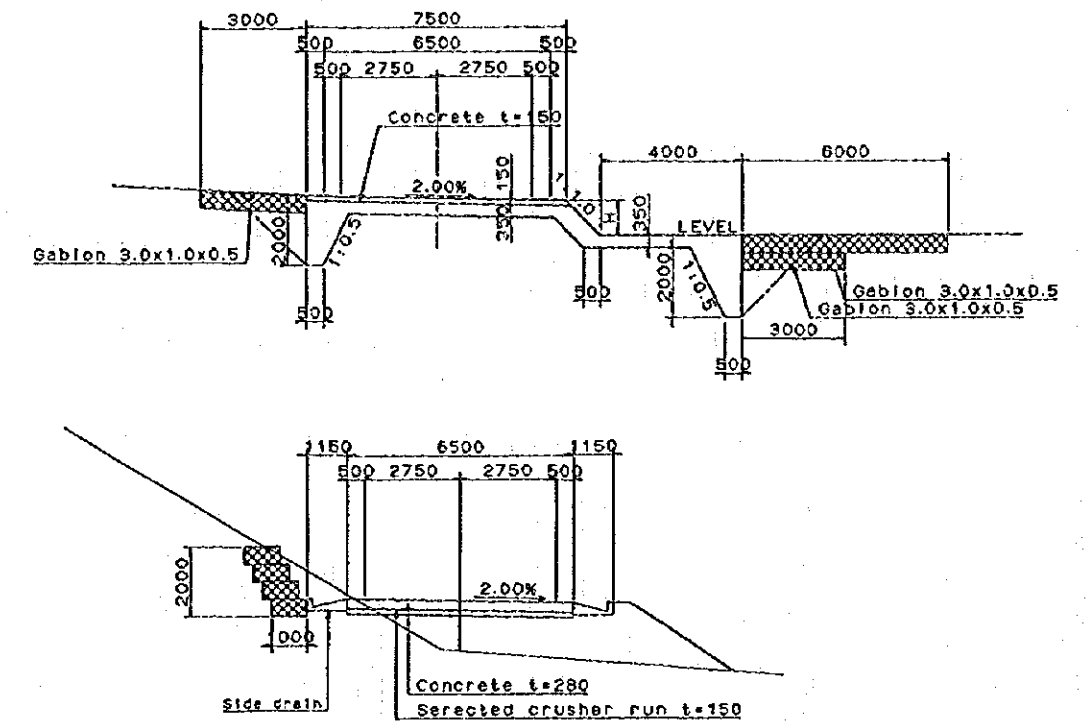
ITEM	CLASS	UNIT	Q
EXCAVATION		m <sup>3</sup>	
BACKFILL		m <sup>3</sup>	
CONCRETE WITH COBBLE		m <sup>3</sup>	
GABION	CAUSEWAY	m <sup>3</sup>	
PAVEMENT	t=15	m <sup>3</sup>	
PAVEMENT	t=28	m <sup>3</sup>	
BASE	CRUSHERRUN	m <sup>2</sup>	
SIDE DITCH		m	
REINFORCEMENT BAR		t	
GABION WALL	RIVER PROTECT	m <sup>3</sup>	

(NO.2) BORKHE KHOLA コースウェイ一般図

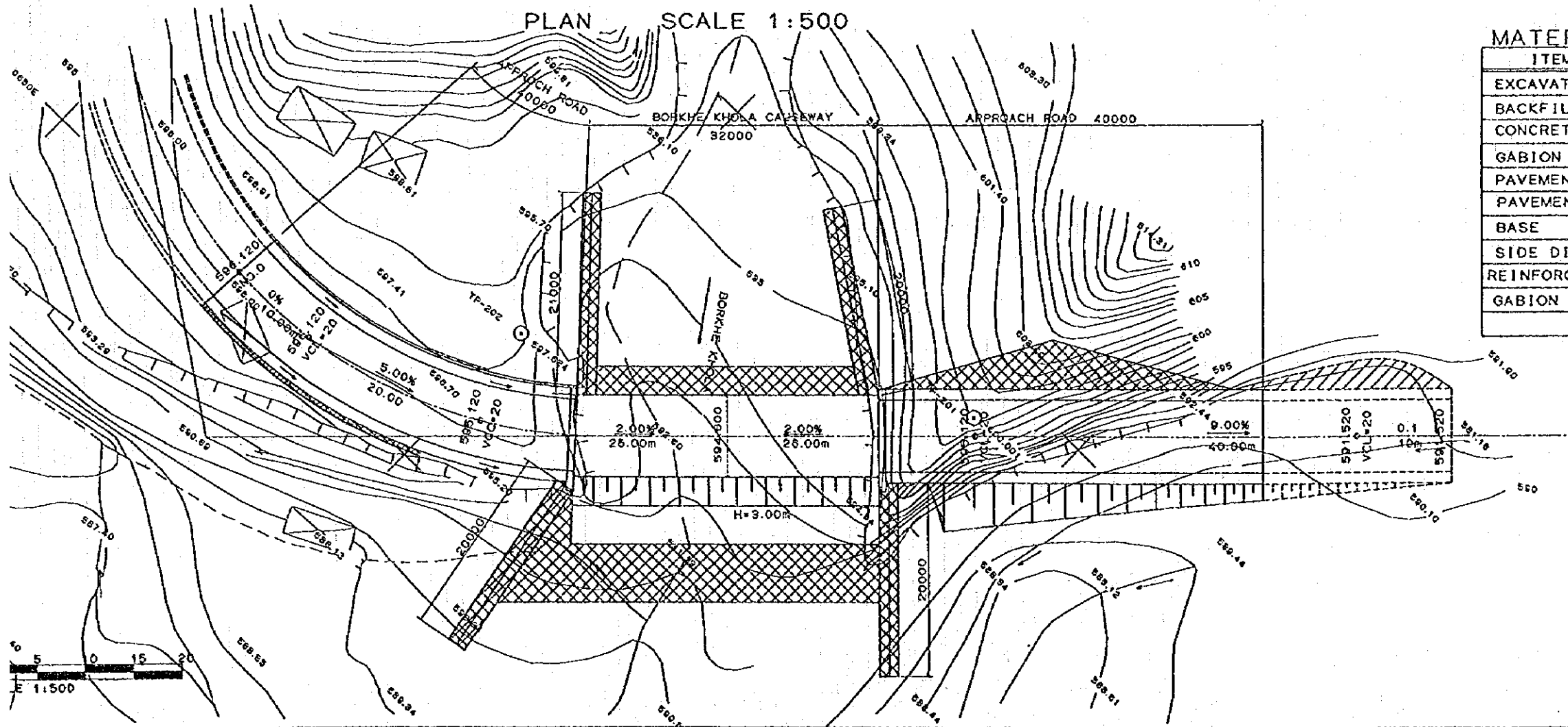
PROFILE SCALE 1:500



CROSS SECTION SCALE 1:200



PLAN SCALE 1:500

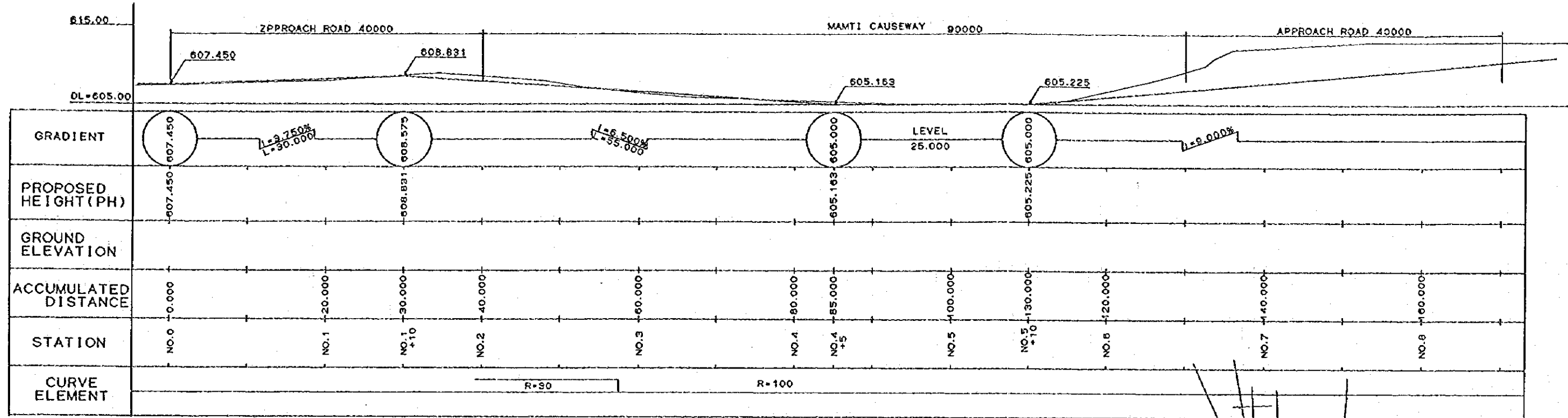


MATERIALS

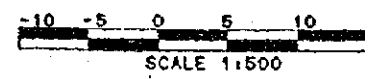
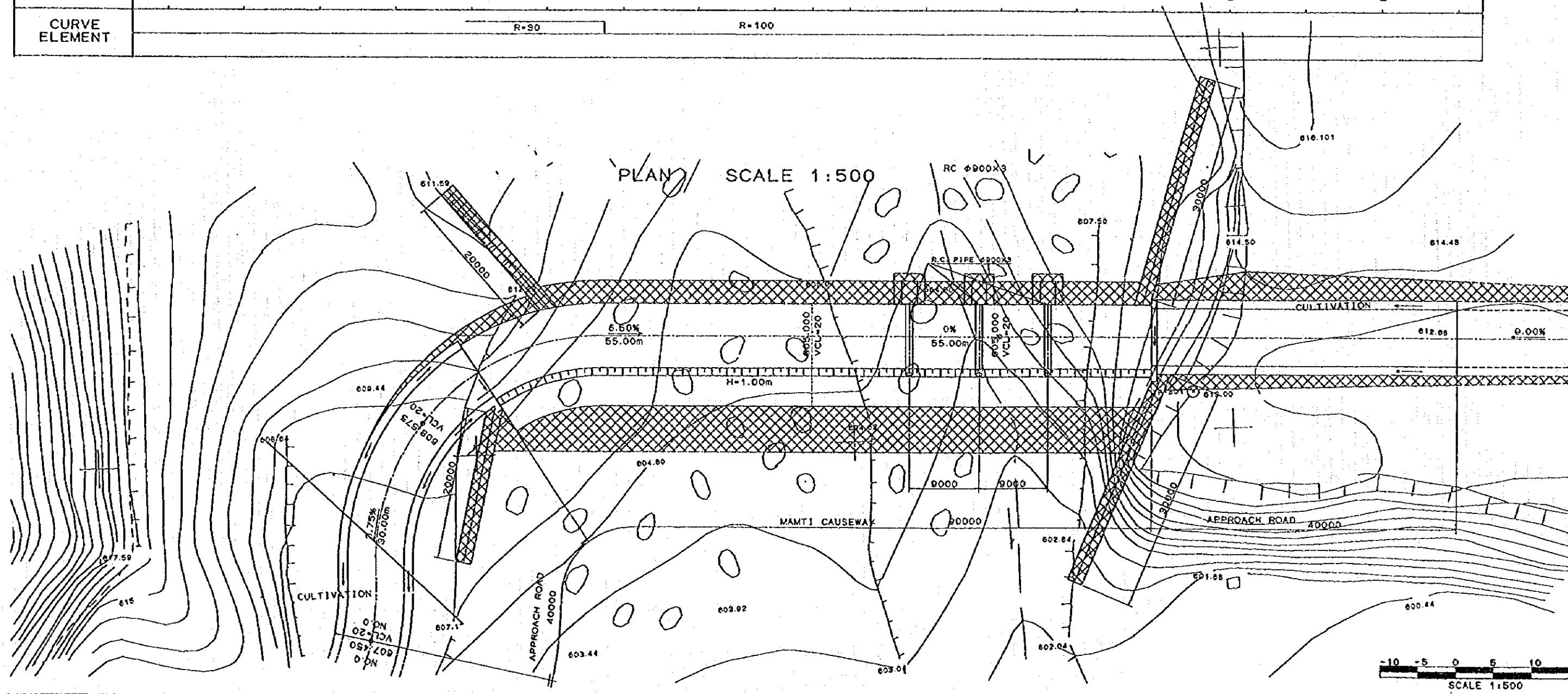
ITEM	CLASS	UNIT	QUANTITY
EXCAVATION		m3	884.0
BACKFILL		m3	120.0
CONCRETE WITH COBBLE		m3	246.4
GABION	CAUSEWAY	m3	272.0
PAVEMENT	t=15	m3	36.0
PAVEMENT	t=28	m3	72.8
BASE	CRUSHERRUN	m2	520.0
SIDE DITCH		m	160.0
REINFORCEMENT BAR		t	3.7
GABION WALL	RIVER PROTECT	m3	84.5

PROFILE SCALE 1:500

(NO.3) MAMTI コースウェイ一般図



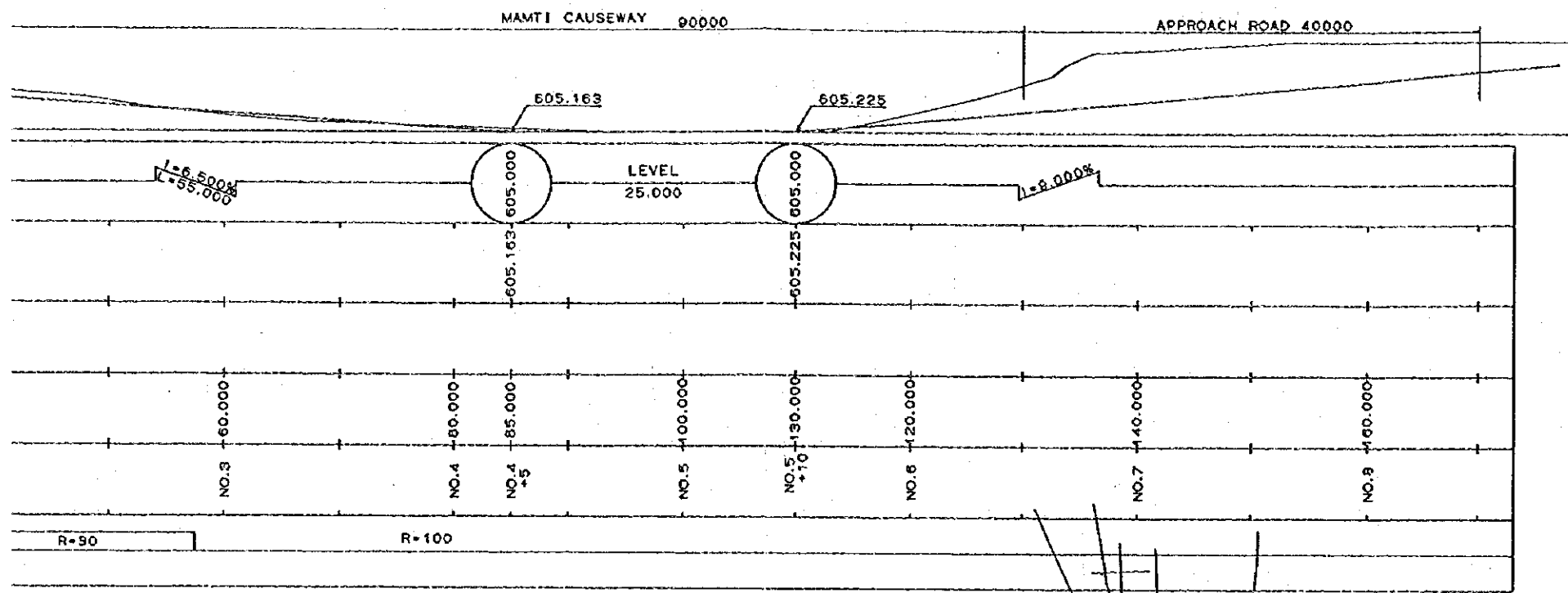
PLAN SCALE 1:500



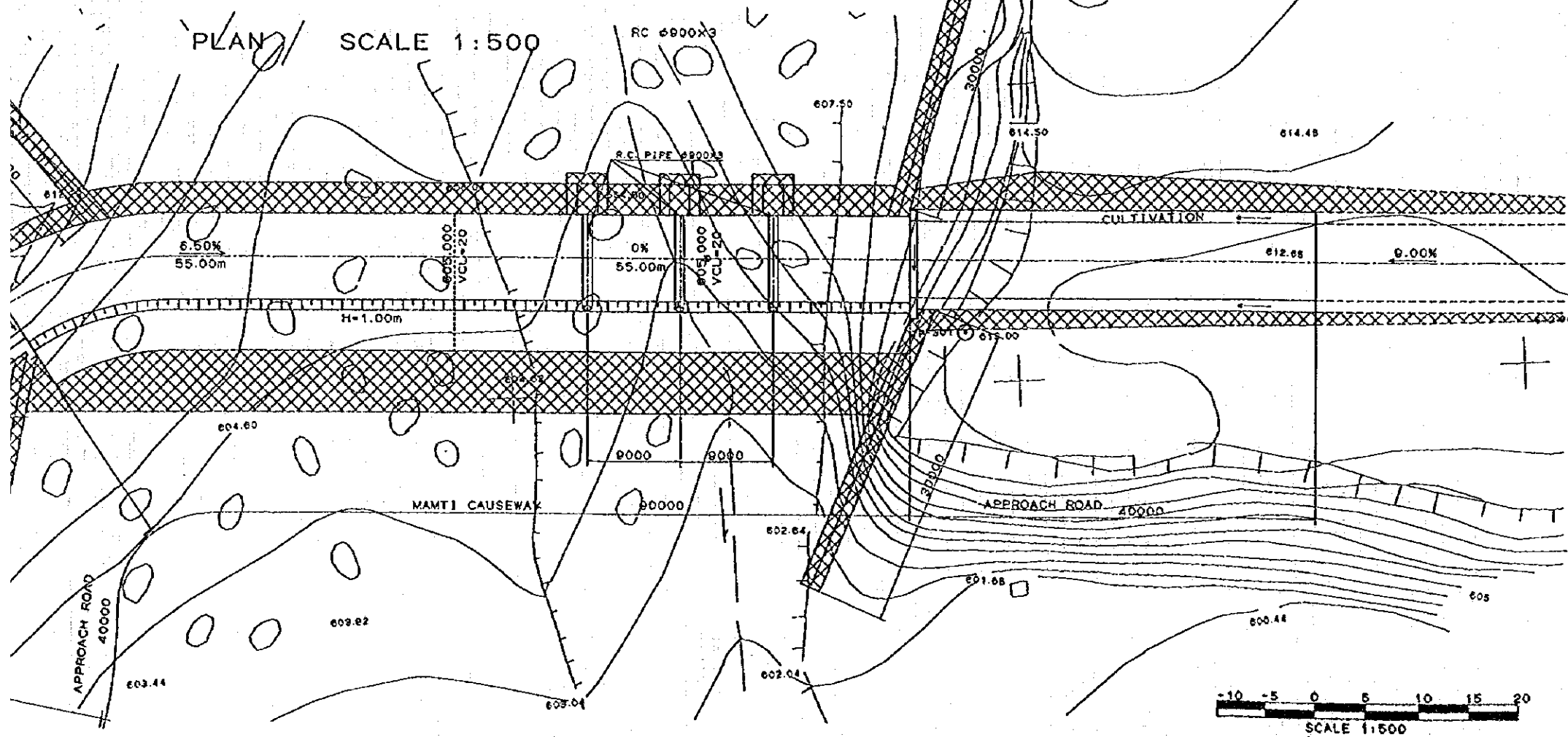
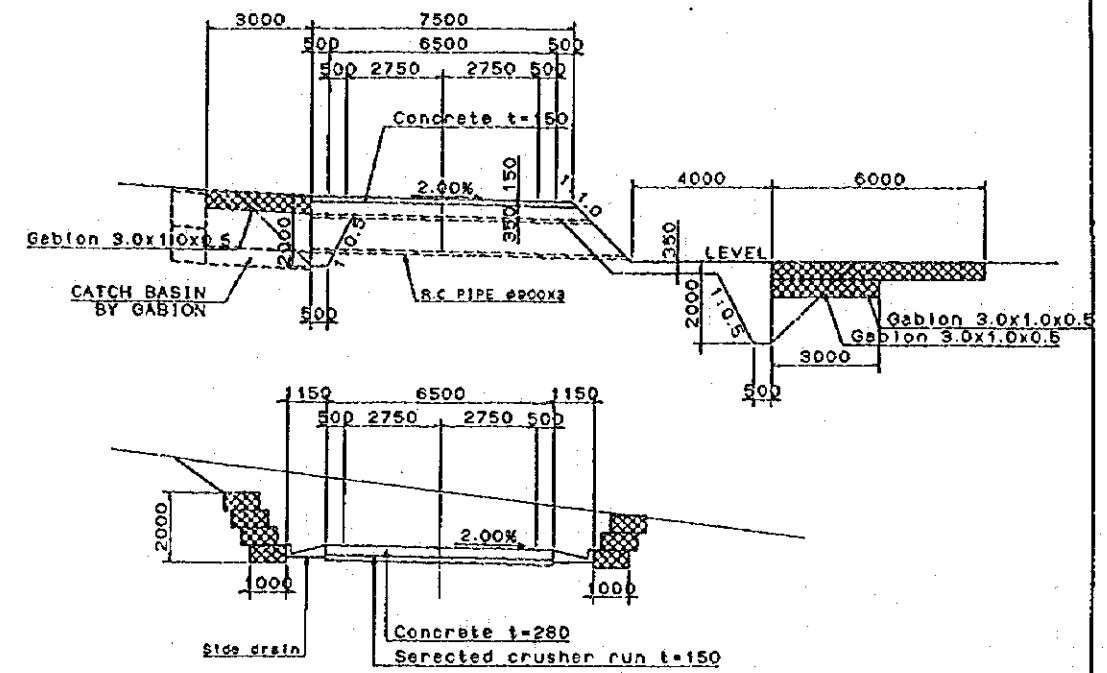


OFFICE SCALE 1:500

(NO.3) MAMTI コースウェイ一般図

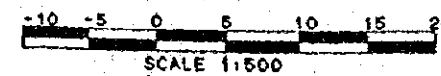


CROSS SECTION SCALE 1:200



MATERIALS

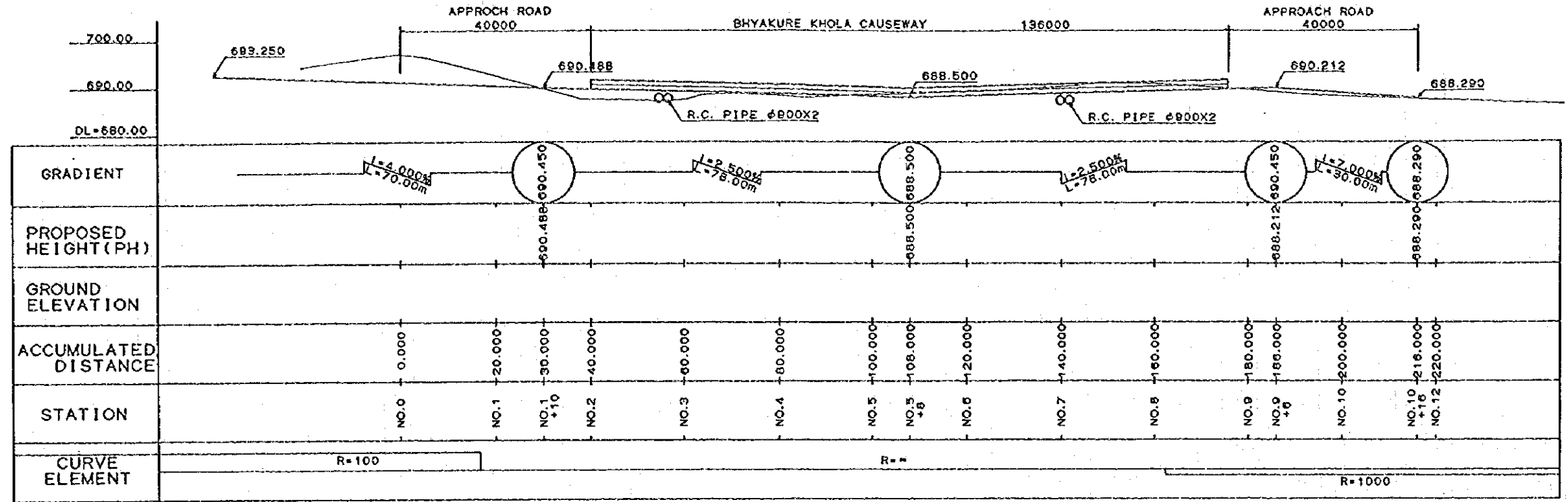
ITEM	CLASS	UNIT	QUANTITY
EXCAVATION		m <sup>3</sup>	2206.0
BACKFILL		m <sup>3</sup>	249.0
CONCRETE WITH COBBLE		m <sup>3</sup>	693.0
GABION	CAUSEWAY	m <sup>3</sup>	1040.0
PAVEMENT	t=15	m <sup>3</sup>	101.3
PAVEMENT	t=28	m <sup>3</sup>	72.8
BASE	CRUSHERRUN	m <sup>2</sup>	520.0
SIDE DITCH		m	160.0
REINFORCEMENT BAR		t	10.4
GABION WALL	RIVER PROTECT	m <sup>3</sup>	450.0
RC PIPE	ø900	m	24.0



A-10 マムテム川コースウェイ一般図

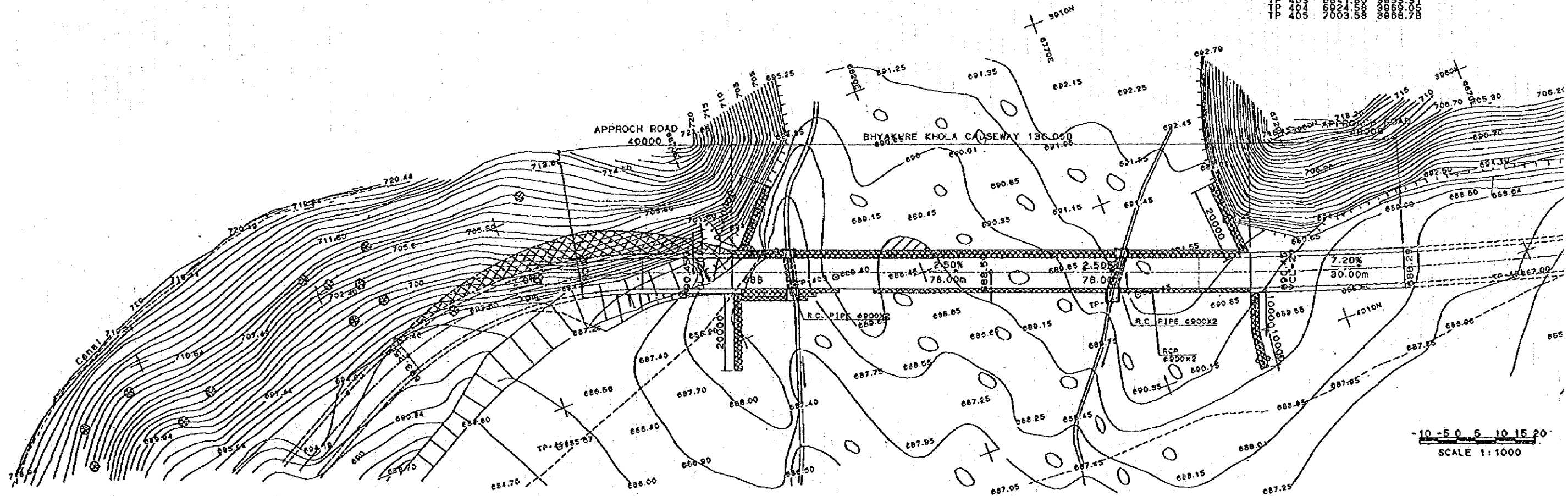
(NO.4)  
BHYAKURE KHOLA コースウェイ一般図

PROFILE SCALE 1:1000



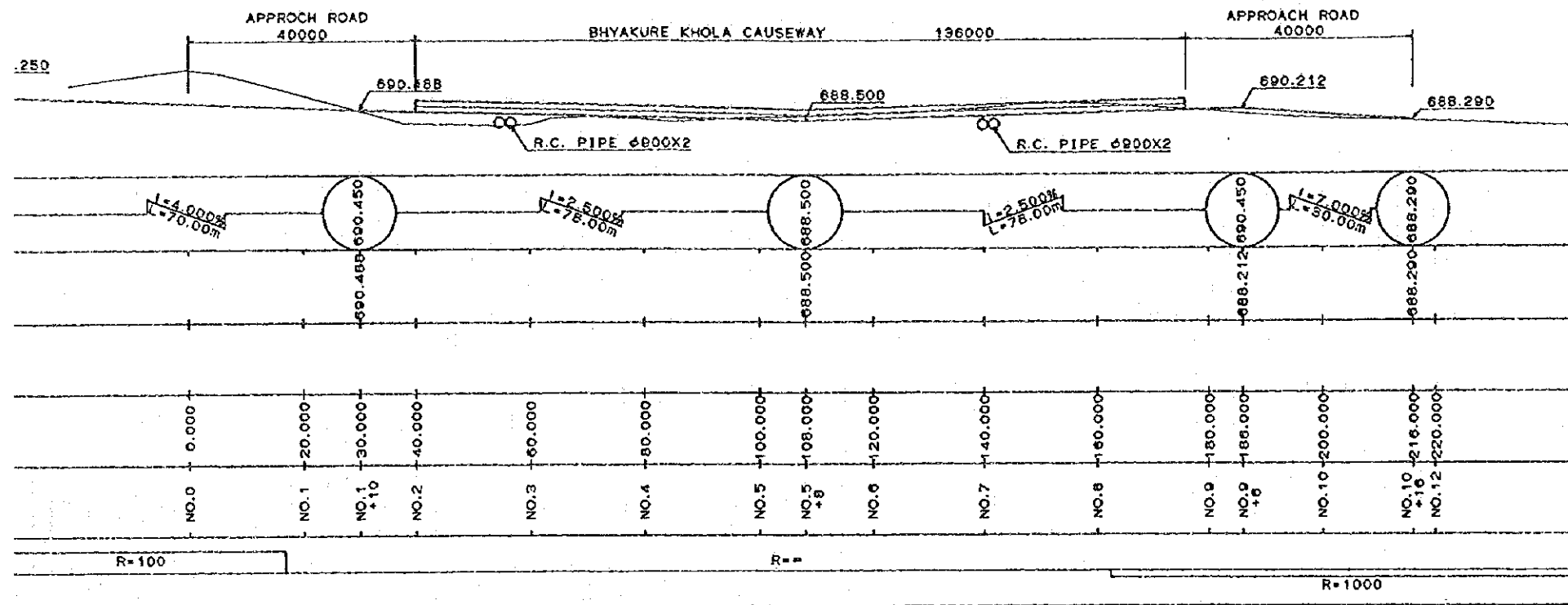
PLAN SCALE 1:1000

STATION	NO.	EASTING	NORTHING
TP	401	6675.00	4015.00
TP	402	6676.30	4015.00
TP	403	6674.80	4015.00
TP	404	6674.80	4015.00
TP	405	6673.58	4015.78

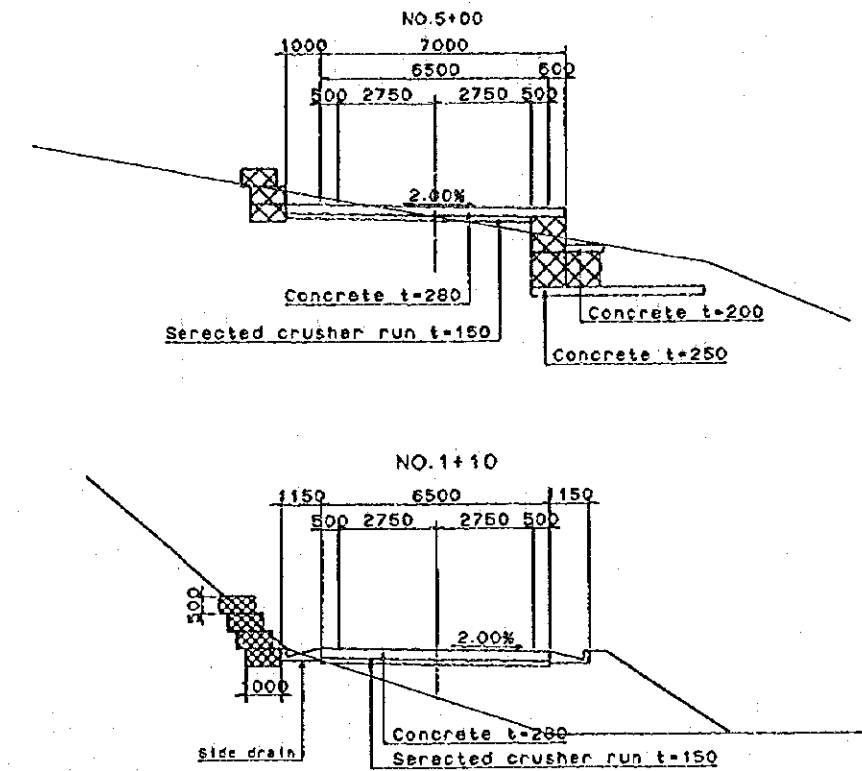


(NO.4)  
BHYAKURE KHOLA コースウェイ一般図

FILE SCALE 1:1000

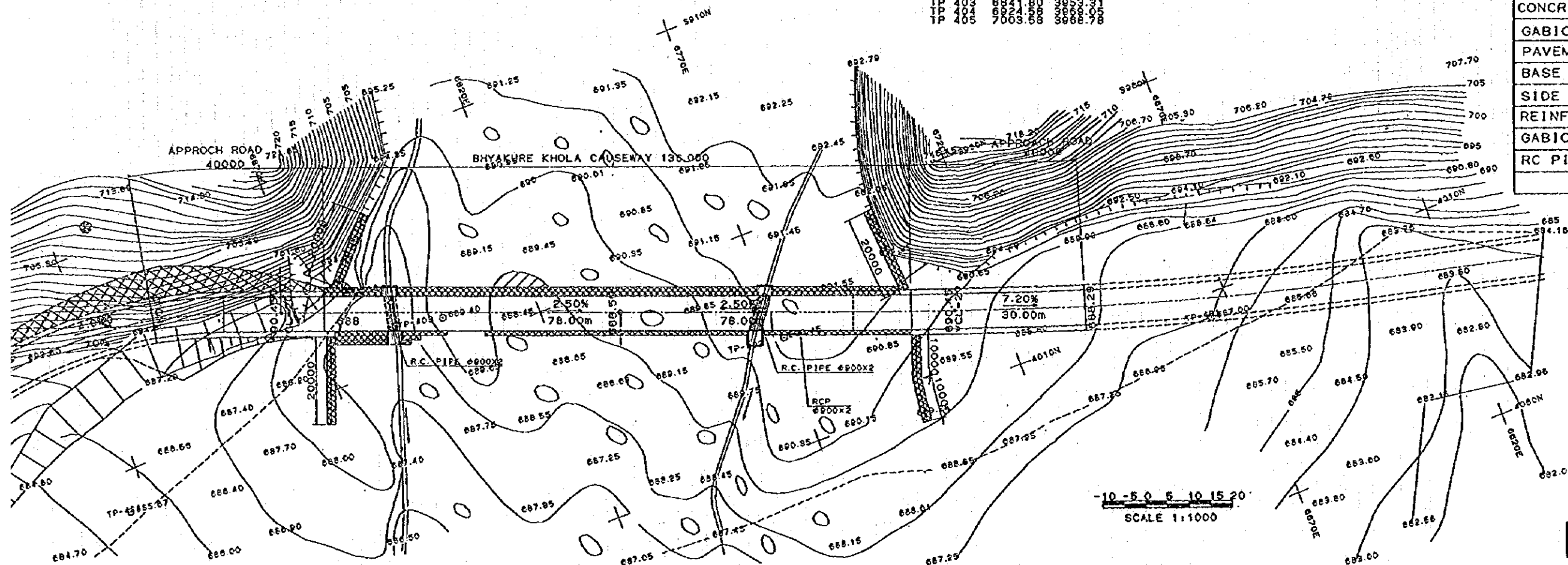


CROSS SECTION SCALE 1:200



PLAN SCALE 1:1000

STATION NO.	EASTING	NORTHING
TP 401	6675.00	6904.00
TP 402	6676.90	6904.00
TP 403	6678.80	6904.00
TP 404	6680.70	6904.00
TP 405	6682.60	6904.00

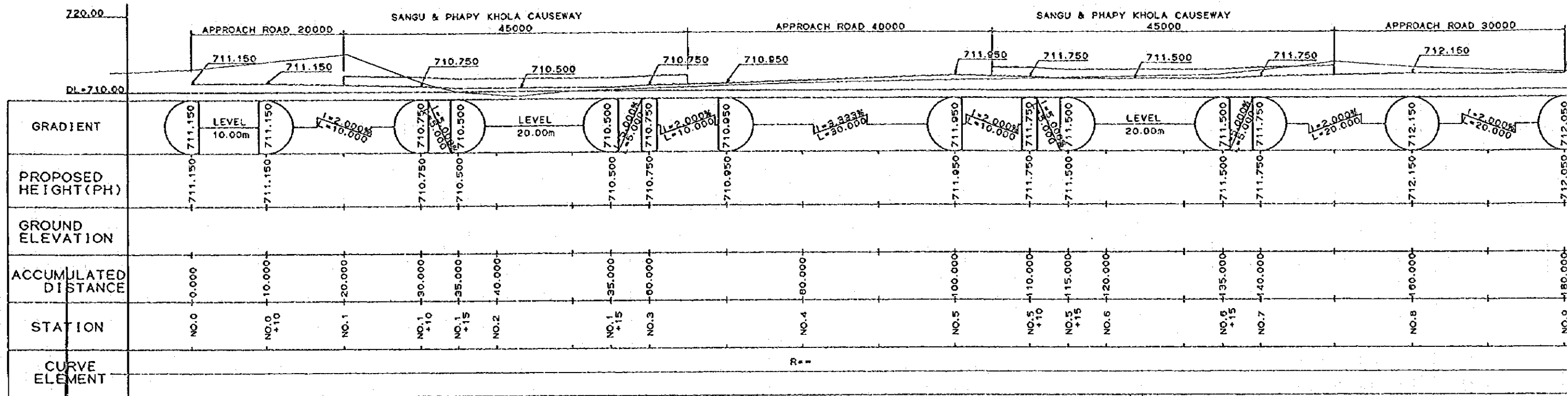


MATERIALS

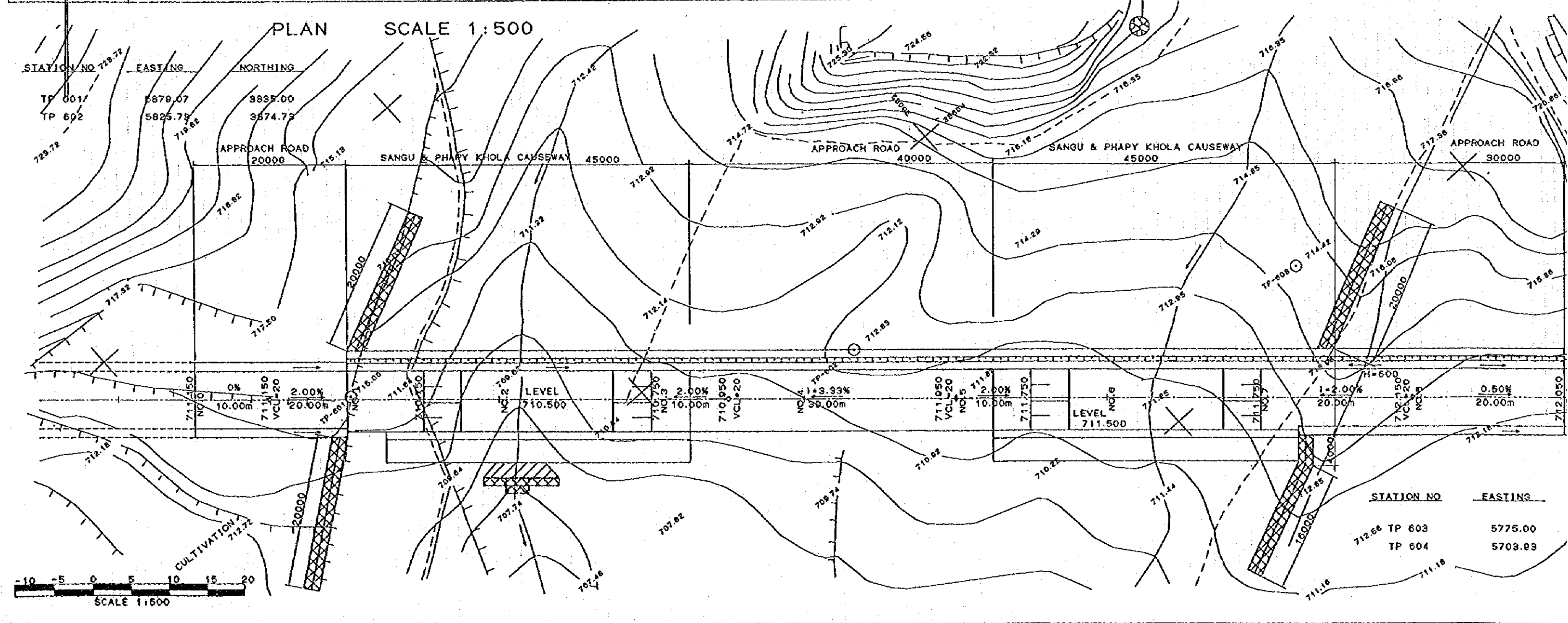
ITEM	CLASS	UNIT	QUANTITY
EXCAVATION		m <sup>3</sup>	2232.0
BACKFILL		m <sup>3</sup>	357.6
CONCRETE WITH COBBLE		m <sup>3</sup>	282.0
GABION	CAUSEWAY	m <sup>3</sup>	864.8
PAVEMENT	t=28	m <sup>2</sup>	377.4
BASE	CRUSHERRUN	m <sup>2</sup>	673.0
SIDE DITCH		m	160.0
REINFORCEMENT BAR		t	4.0
GABION WALL		m <sup>3</sup>	360.0
RC PIPE	$\phi 900$	m	32.0

(NO.5) SANGU&PHAPY KHOLA コーズウェイ一般図

PROFILE SCALE 1:500

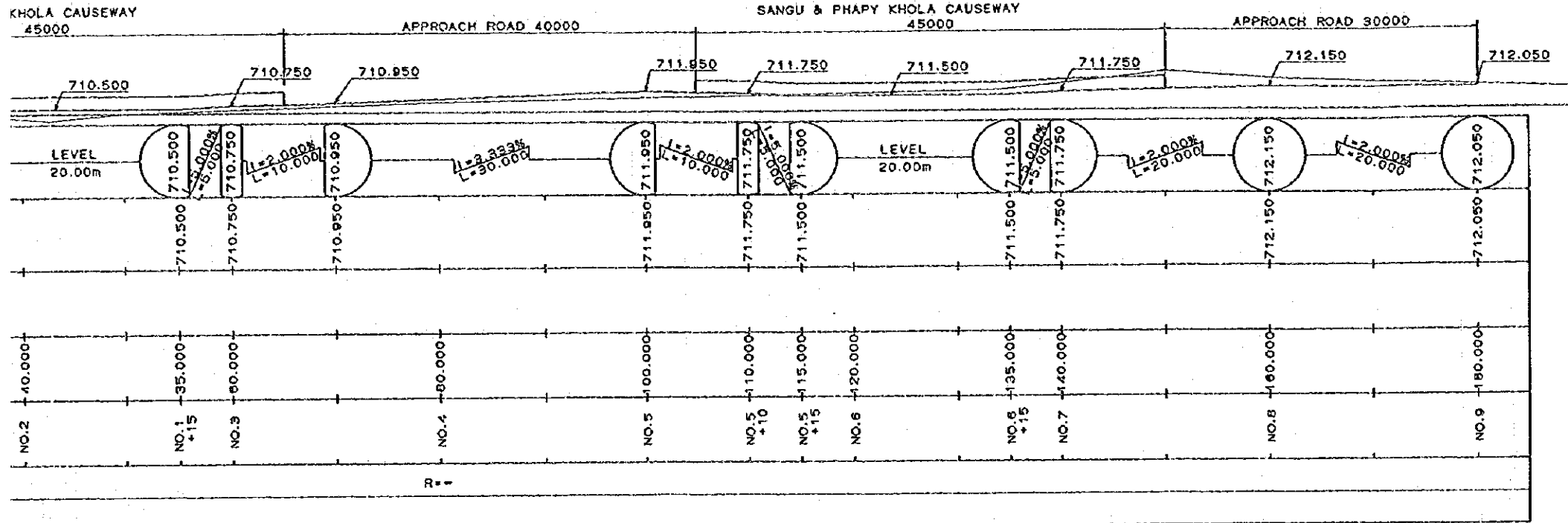


PLAN SCALE 1:500

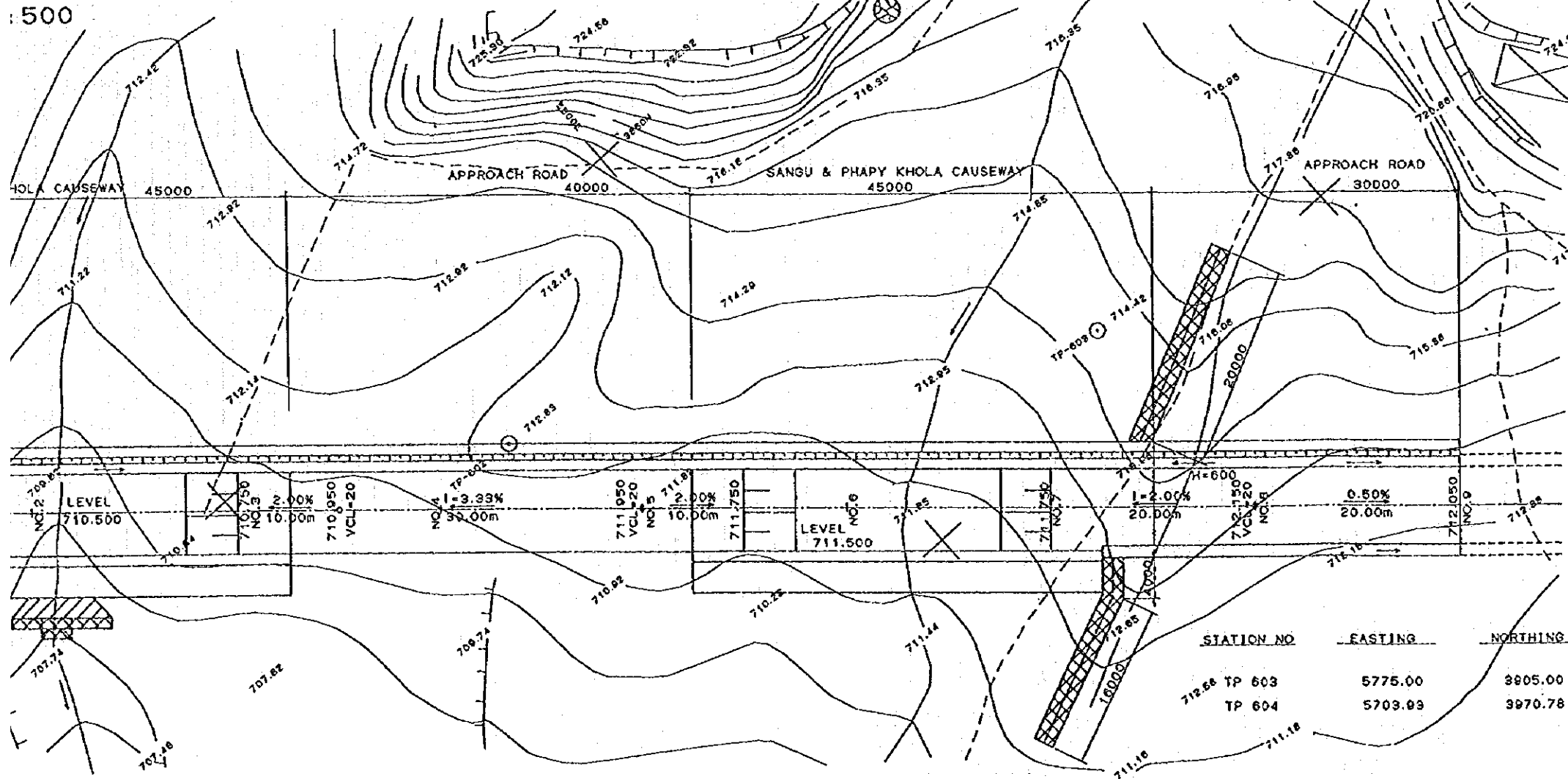
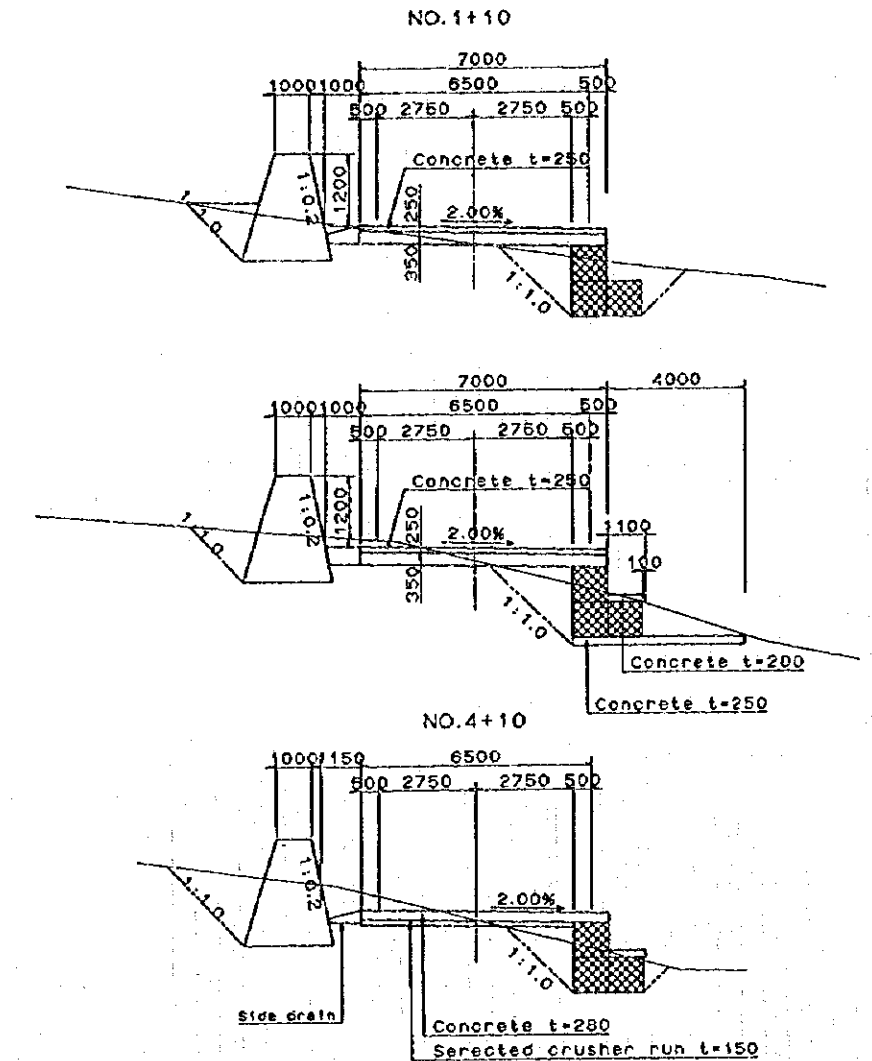


(NO.5) SANGU&PHAPY KHOLA コースウェイ一般図

SCALE 1:500



CROSS SECTION SCALE 1:200



MATERIALS

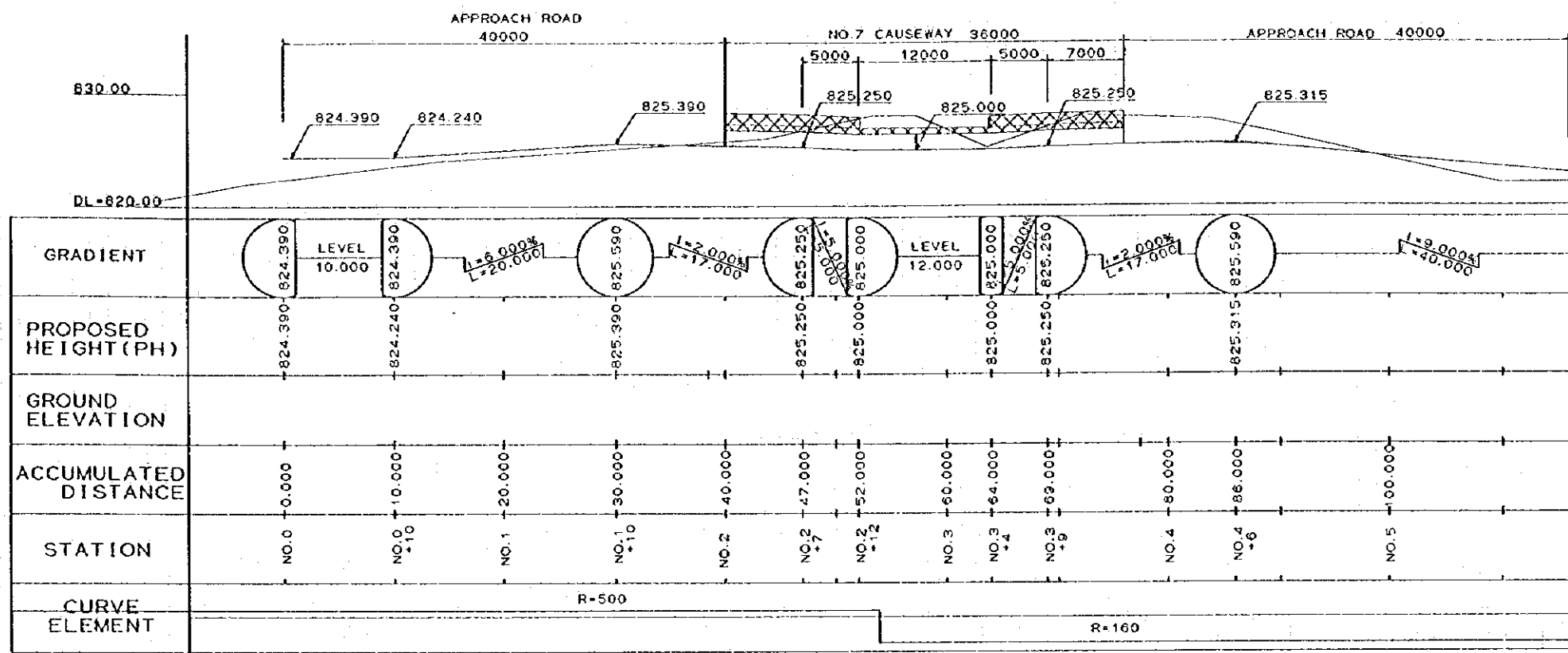
ITEM	CLASS	UNIT	QUANTITY	REMARKS
EXCAVATION		m <sup>3</sup>	2371.0	
BACKFILL		m <sup>3</sup>	549.6	
GRAVITY RETAINING WALL		m <sup>2</sup>	343.0	
CONCRETE WITH COBBLE		m <sup>3</sup>	351.0	
GABION	CAUSEWAY	m <sup>3</sup>	270.0	
PAVEMENT	t=25	m <sup>3</sup>	157.5	
PAVEMENT	t=28	m <sup>3</sup>	78.4	
BASE	CRUSHERRUN	m <sup>2</sup>	585.0	
SIDE DITCH		m	100.0	
REINFORCEMENT BAR		m <sup>3</sup>	5.3	
GABION WALL	RIVER PROTECT	m <sup>3</sup>	342.0	

STATION NO	EASTING	NORTHING
712.55 TP 603	5775.00	3905.00
TP 604	5703.83	3970.78

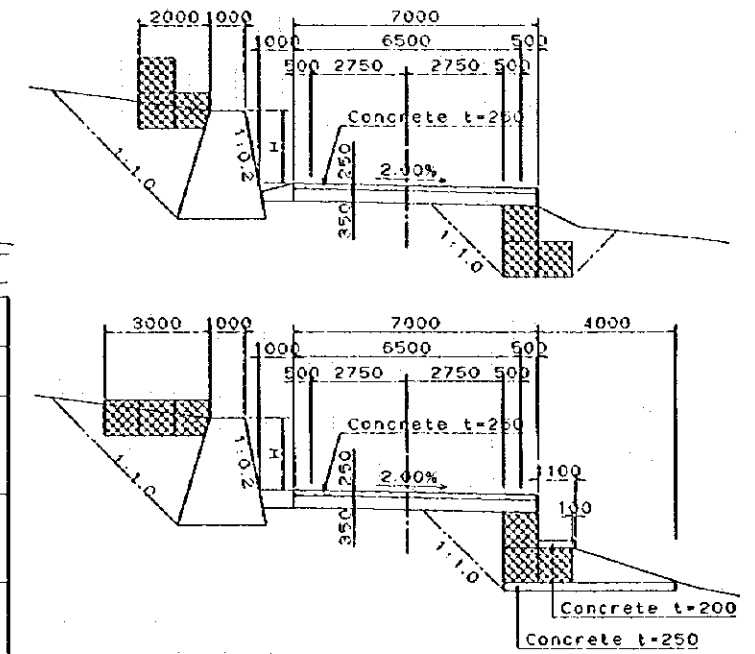
A-12 サングウ&ピャピ川コースウェイ一般図

NO.6 コースウェイ一般図

PROFILE SCALE 1:500



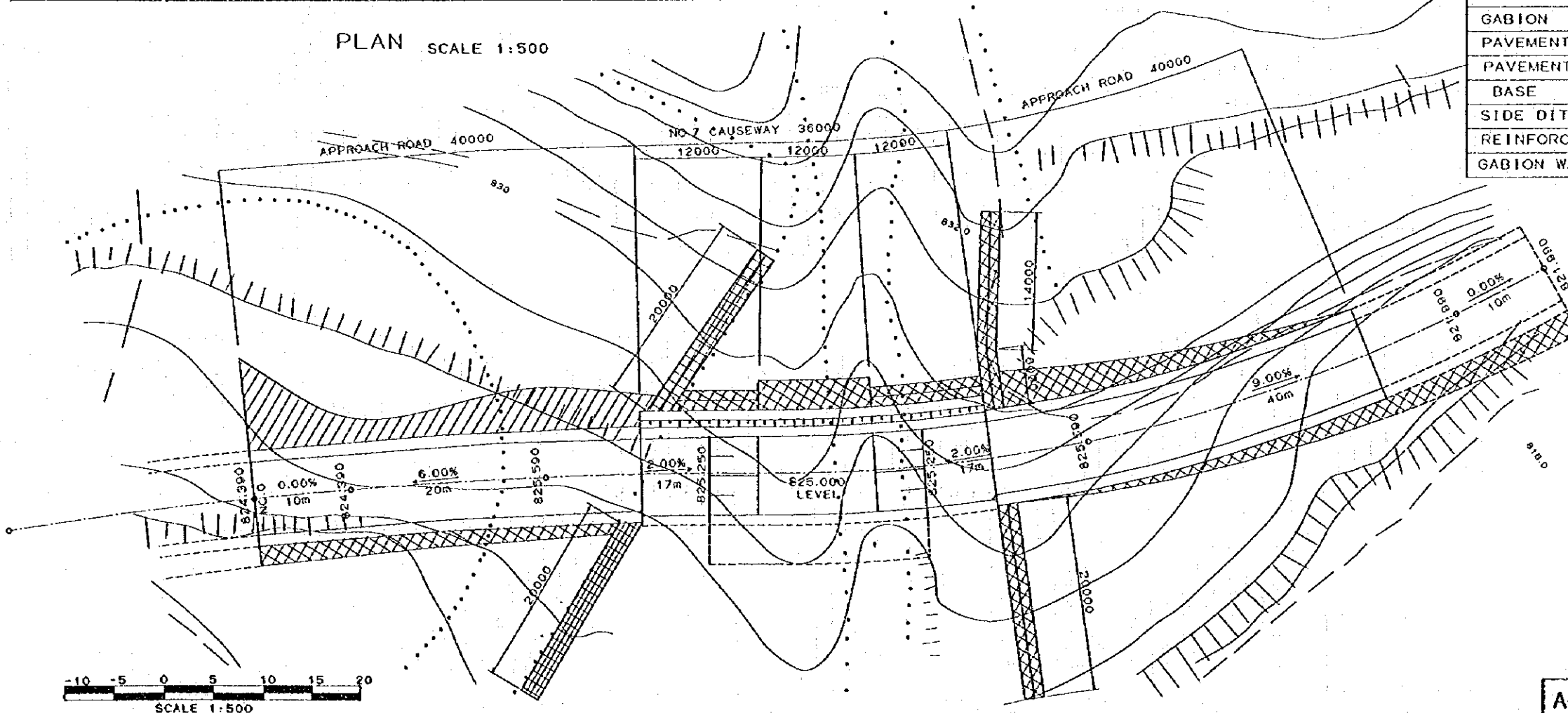
CROSS SECTION SCALE 1:200



MATERIALS

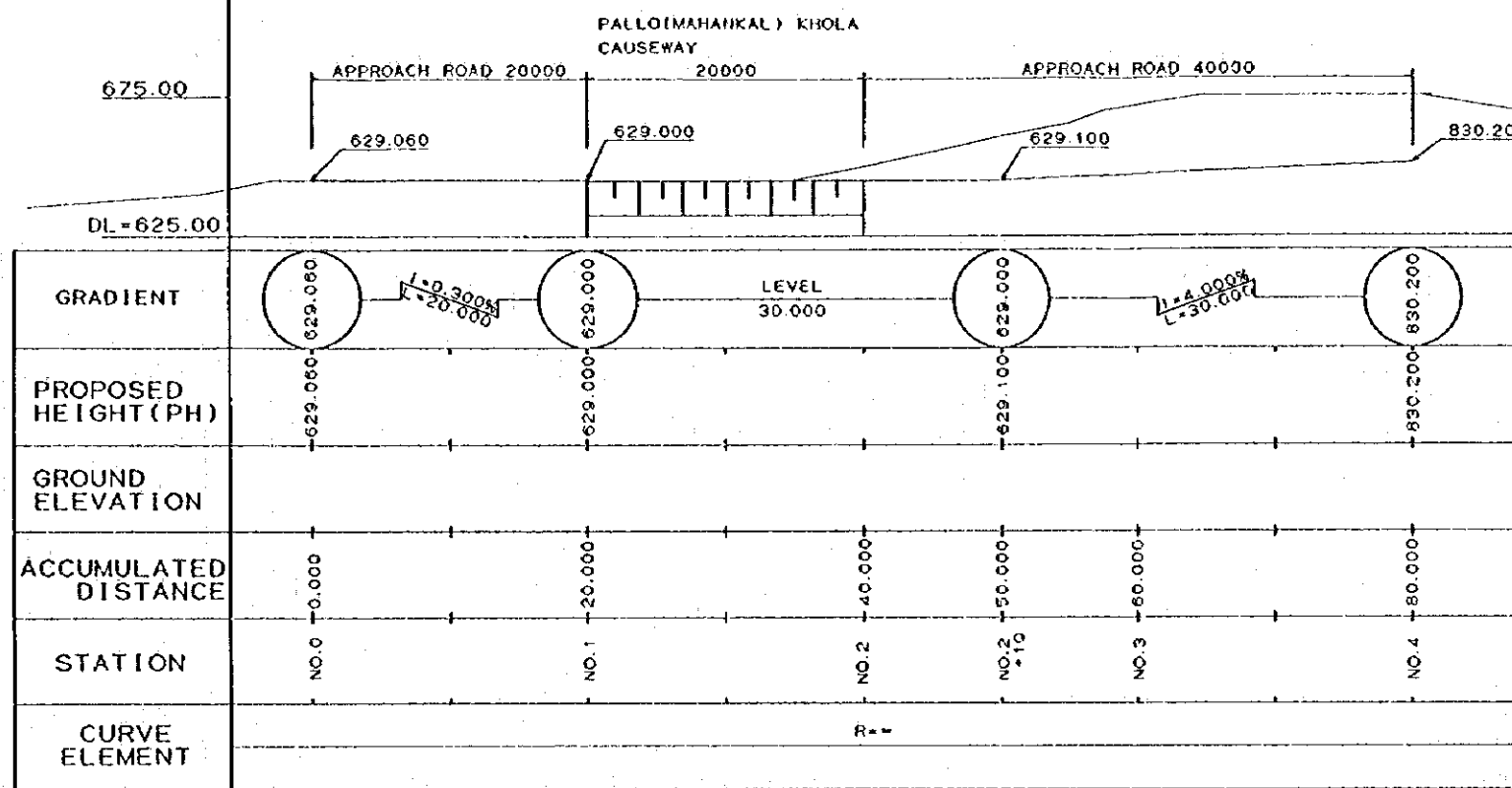
ITEM	CLASS	UNIT	QUANTITY
EXCAVATION		m <sup>3</sup>	1323.4
BACKFILL		m <sup>3</sup>	86.0
GRAVITY RETAINING WALL		m <sup>3</sup>	108.0
CONCRETE WITH COBBLE		m <sup>3</sup>	140.0
GABION	CAUSEWAY	m <sup>3</sup>	296.0
PAVEMENT	t=25	m <sup>3</sup>	63.0
PAVEMENT	t=28	m <sup>3</sup>	145.6
BASE	CRUSHERRUN	m <sup>2</sup>	520.0
SIDE DITCH		m	160.0
REINFORCEMENT BAR		t	2.1
GABION WALL	RIVER PROTECT	m <sup>3</sup>	333.0

PLAN SCALE 1:500

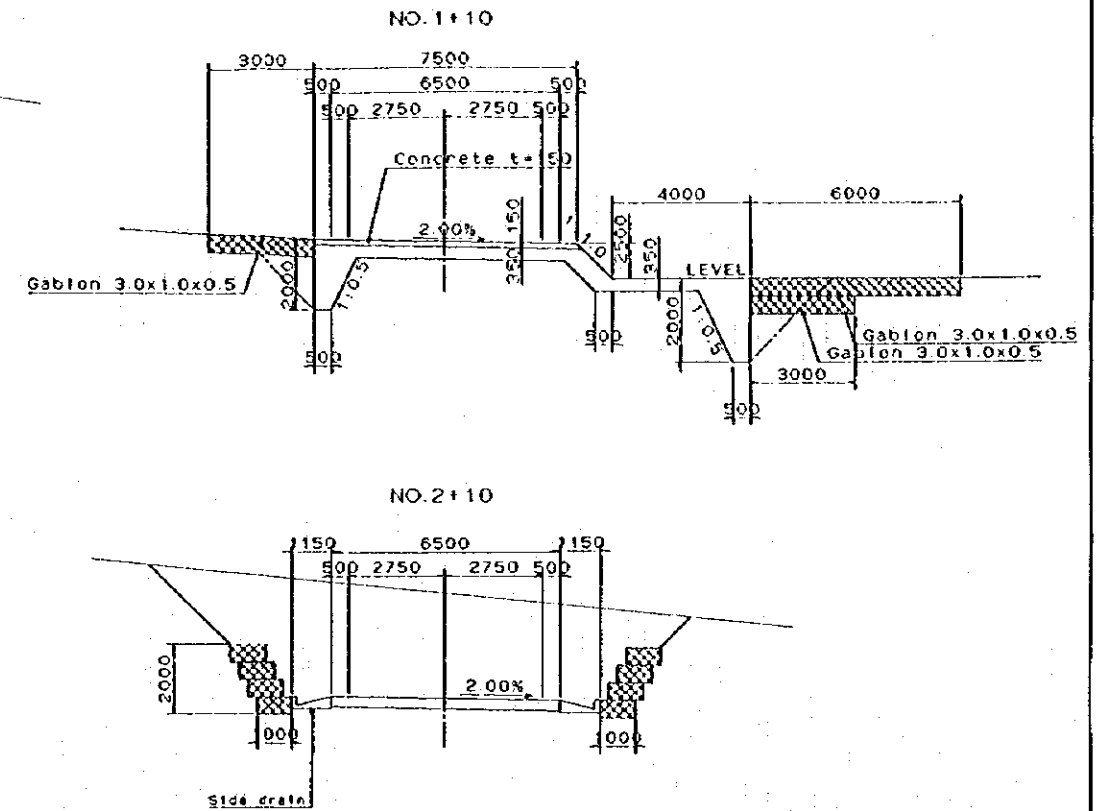


(NO.7) PALLO(MAHANKAL) KHOLA コースウェイ一般図

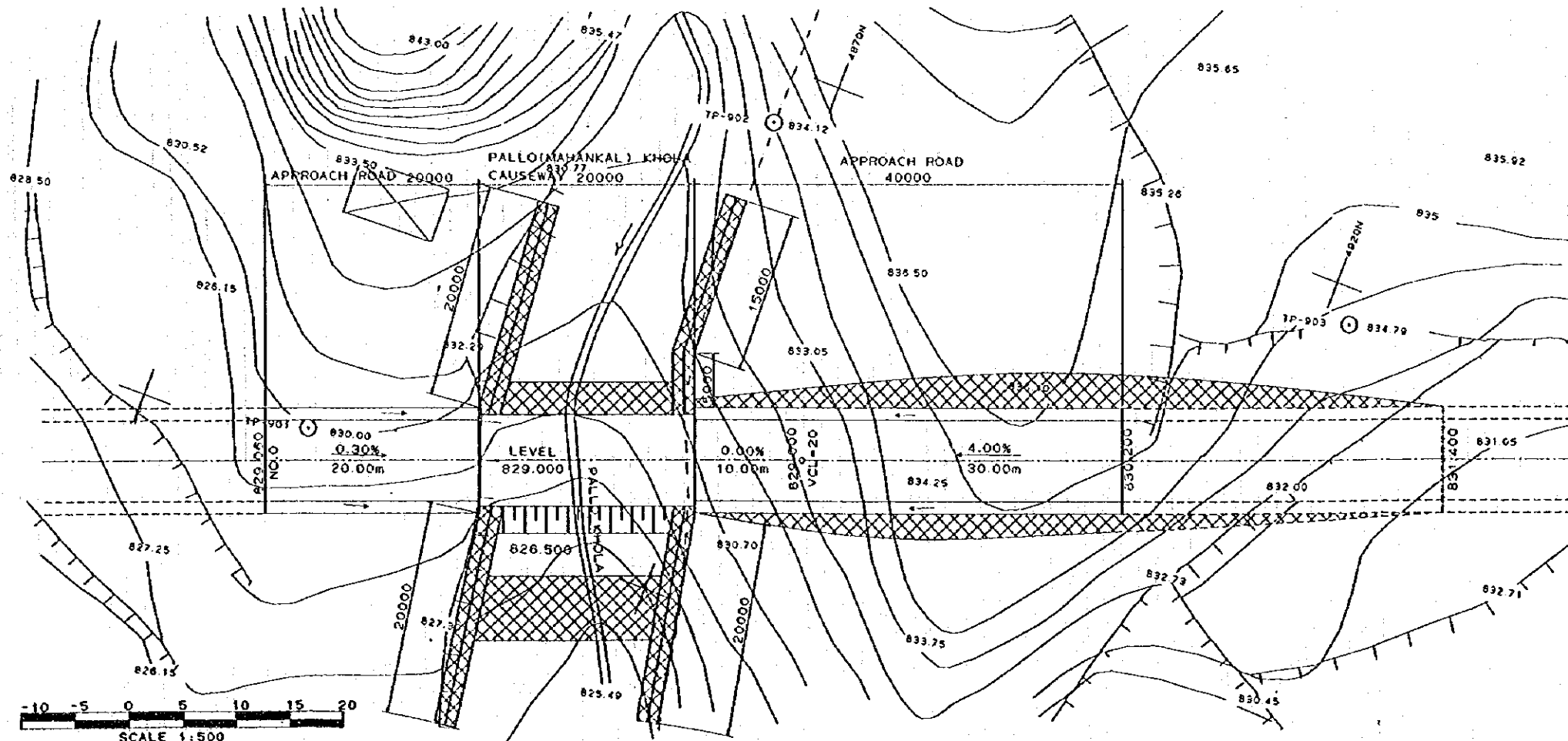
PROFILE SCALE 1:500



CROSS SECTION SCALE 1:200



PLAN SCALE 1:500

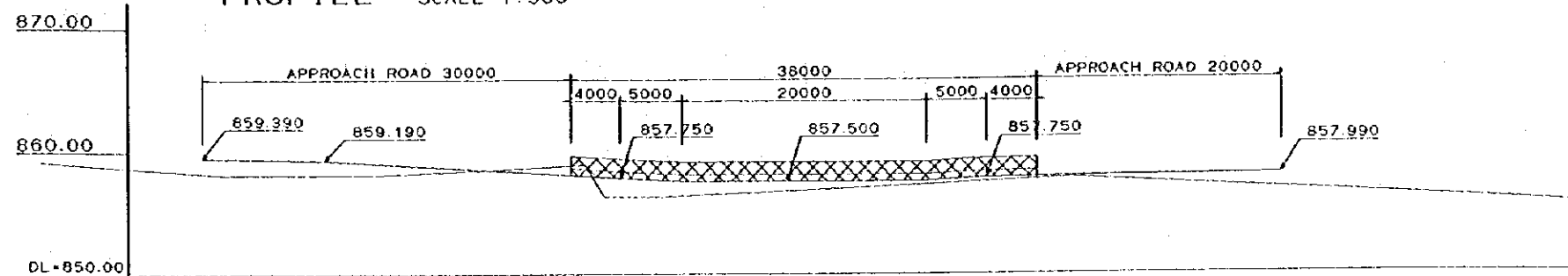


MATERIALS

ITEM	CLASS	UNIT	QUANTITY
EXCAVATION		m3	1746.5
BACKFILL		m3	117.6
CONCRETE WITH COBBLE		m3	154.0
GABION	CAUSEWAY	m3	280.0
PAVEMENT		m3	22.5
BASE	CRUSHERRUN	m2	390.0
SIDE DITCH		m	120.0
REINFORCEMENT BAR		t	2.3
GABION WALL	RIVER PROTECT	m3	337.5

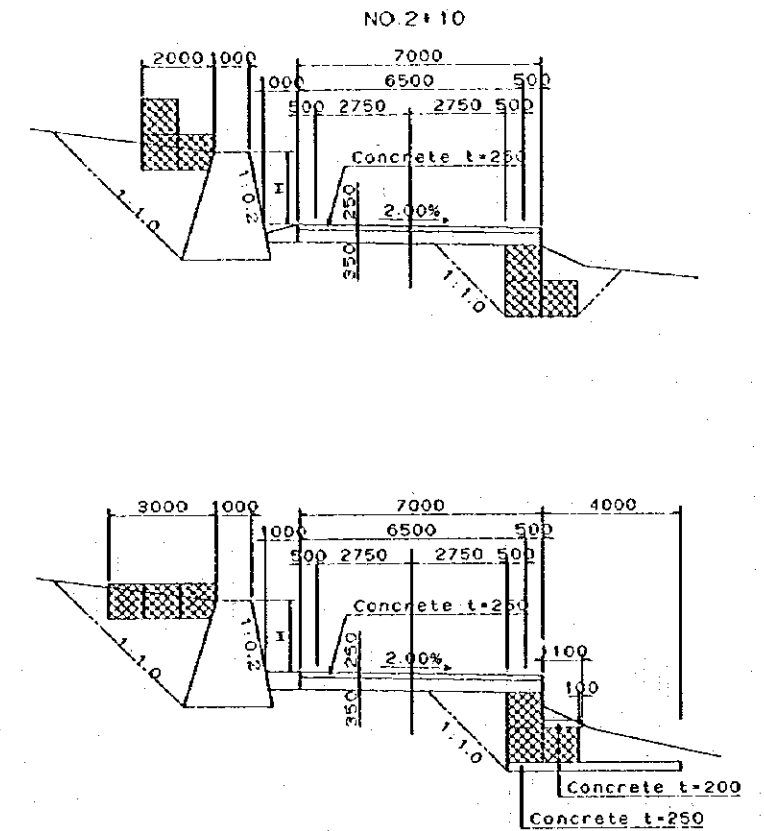
NO.8 コースウェイ一般図

PROFILE SCALE 1:500

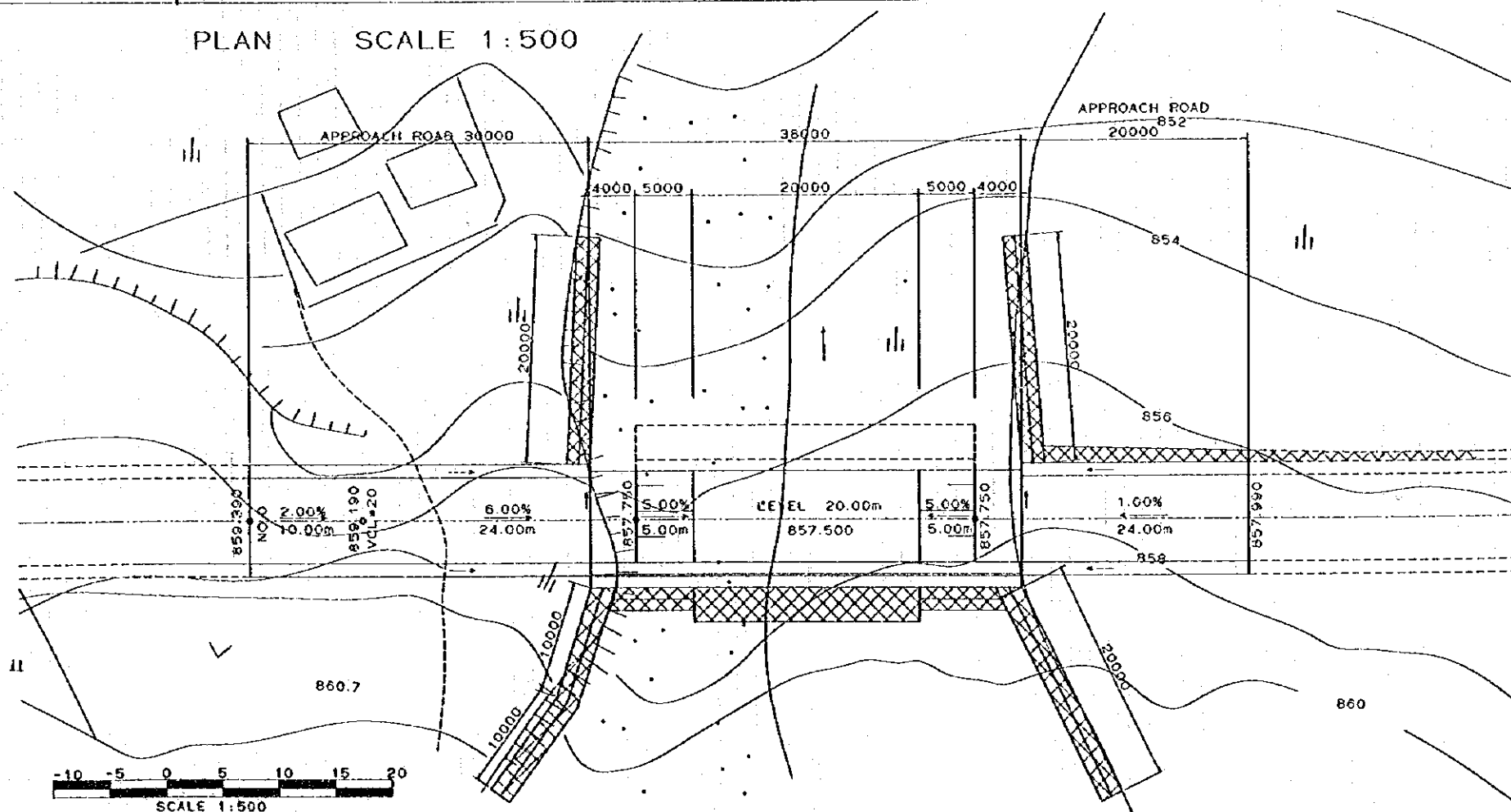


GRADIENT	NO.0 - NO.1: $\frac{1}{24.000}$ (2.00%)		NO.1 - NO.2: $\frac{1}{24.000}$ (4.17%)		NO.2 - NO.3: $\frac{1}{24.000}$ (4.17%)		NO.3 - NO.4: $\frac{1}{24.000}$ (4.17%)		NO.4 - NO.5: $\frac{1}{24.000}$ (4.17%)	
PROPOSED HEIGHT (PH)	859.390	859.190	857.750	857.500	857.500	857.750	857.500	857.990		
GROUND ELEVATION										
ACCUMULATED DISTANCE	0.000	10.000	20.000	34.000	38.000	40.000	50.000	60.000	64.000	86.000
STATION	NO.0	NO.0+10	NO.1	NO.1+14	NO.1+19	NO.2	NO.2+4	NO.3	NO.3+8	NO.5
CURVE ELEMENT	R=∞									

CROSS SECTION SCALE 1:200



PLAN SCALE 1:500



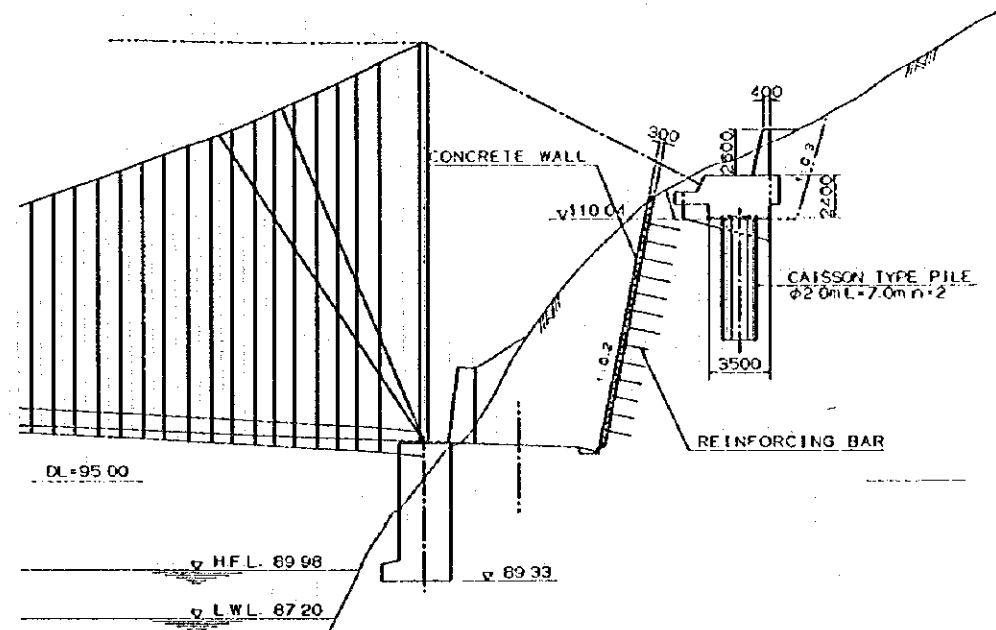
MATERIALS

ITEM	CLASS	UNIT	QUANTITY	REMARKS
EXCAVATION		m3	419.6	
BACKFILL		m3	122.4	
GRAVITY RETAINING WALL		m2	114.0	
CONCRETE WITH COBBLE		m3	146.2	
GABION	CAUSEWAY	m3	228.0	
PAVEMENT		m3	66.5	
BASE	CRUSHERRUN	m2	54.6	
SIDE DITCH		m	100.0	
REINFORCEMENT BAR		t	2.2	
GABION WALL	RIVER PROTECT	m3	360.0	

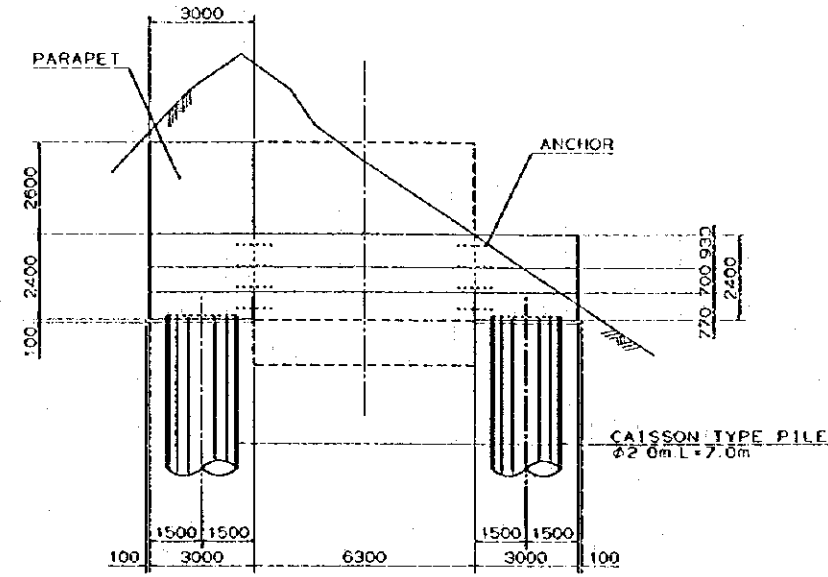


ネバルトック吊橋補強計画図

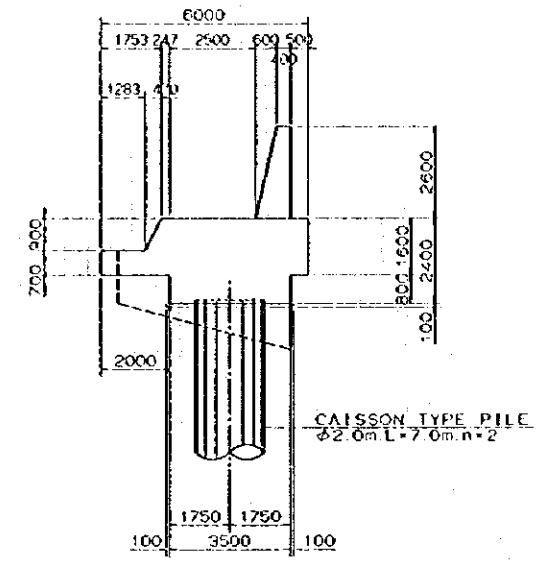
GENERAL PLAN SCALE 1:400



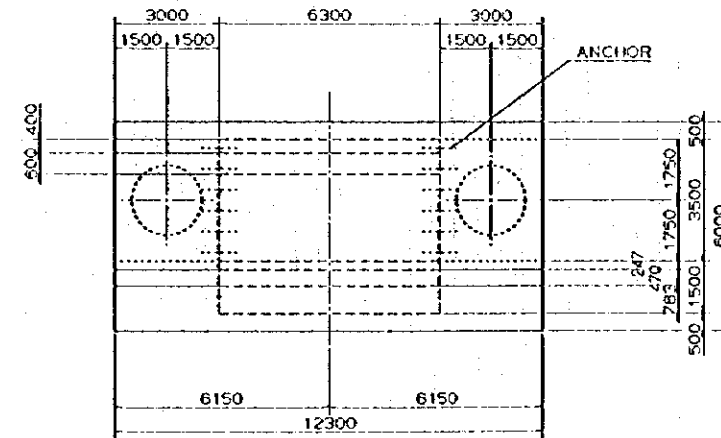
FRONT ELVATION SCALE 1:200



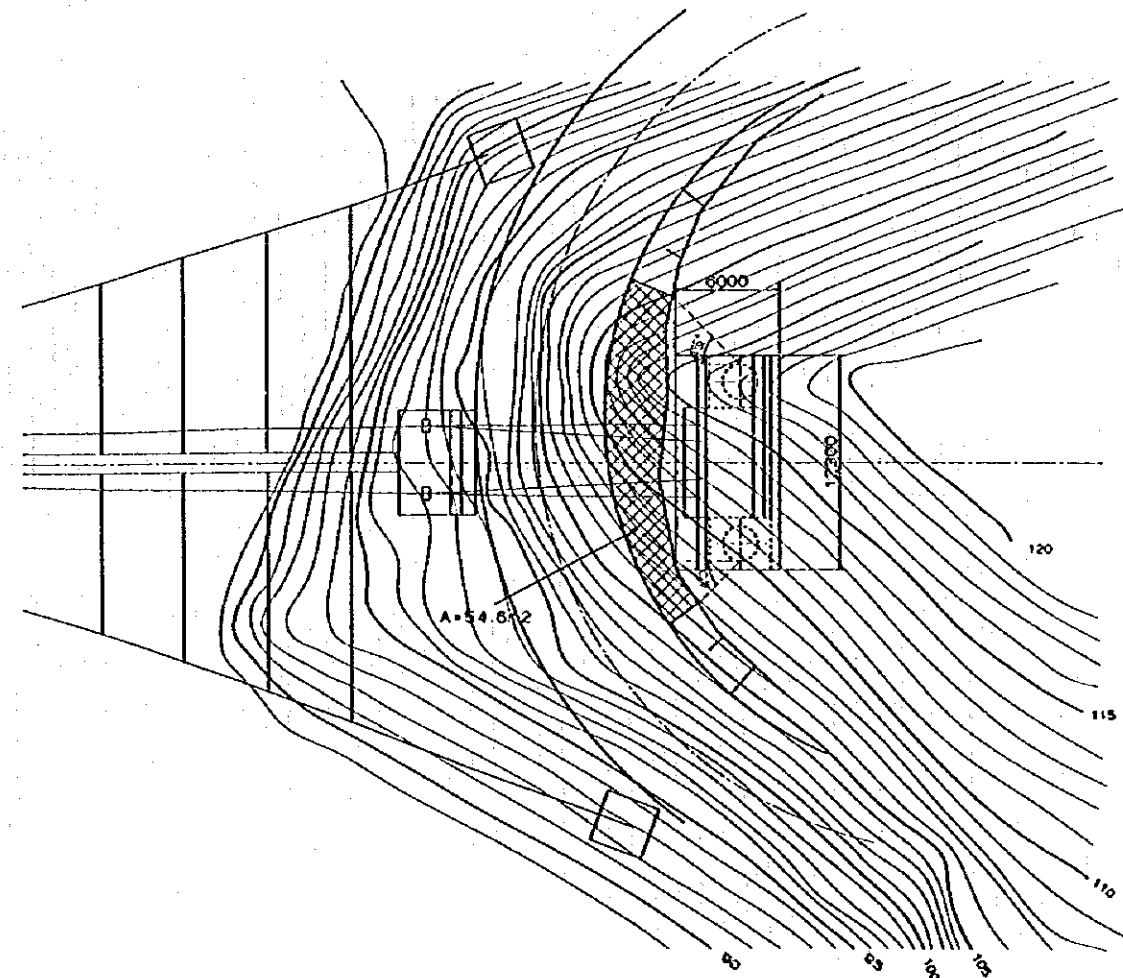
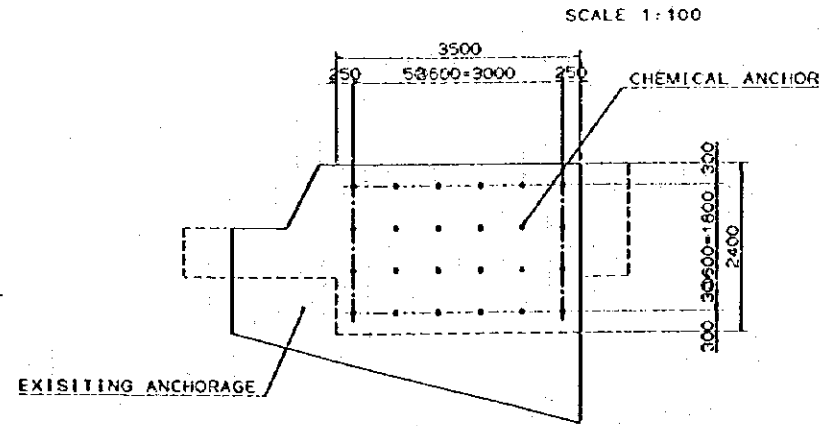
SIDE ELVATION SCALE 1:200



PLAN SCALE 1:200

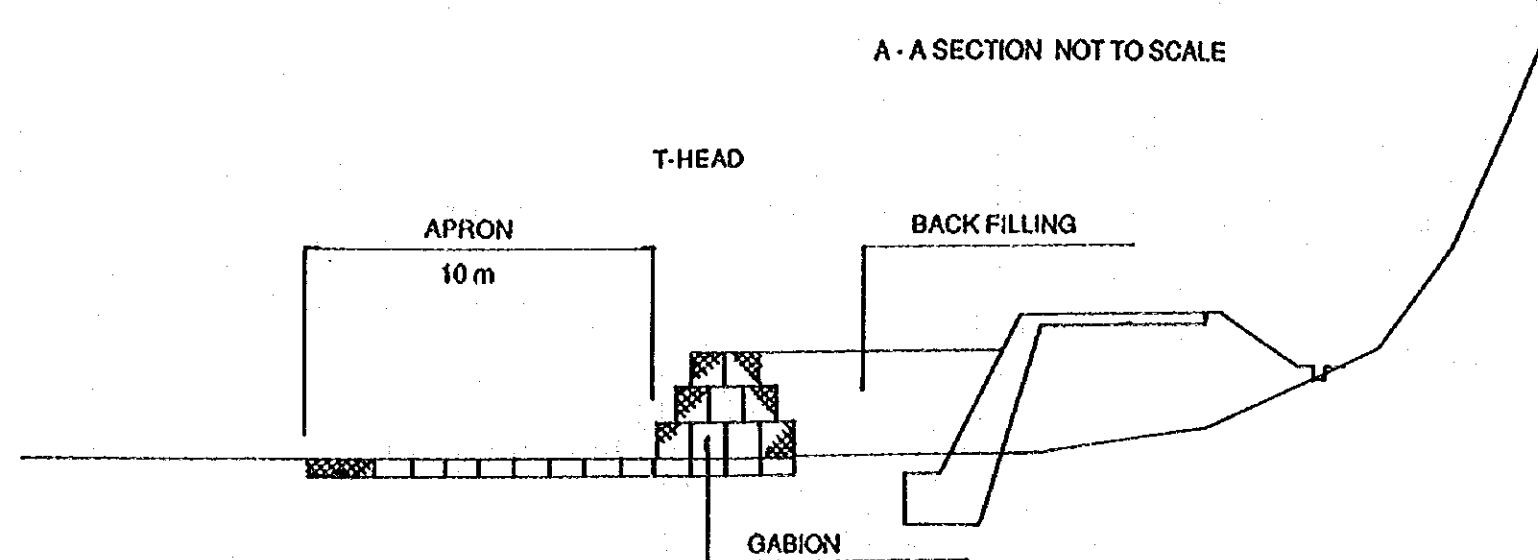
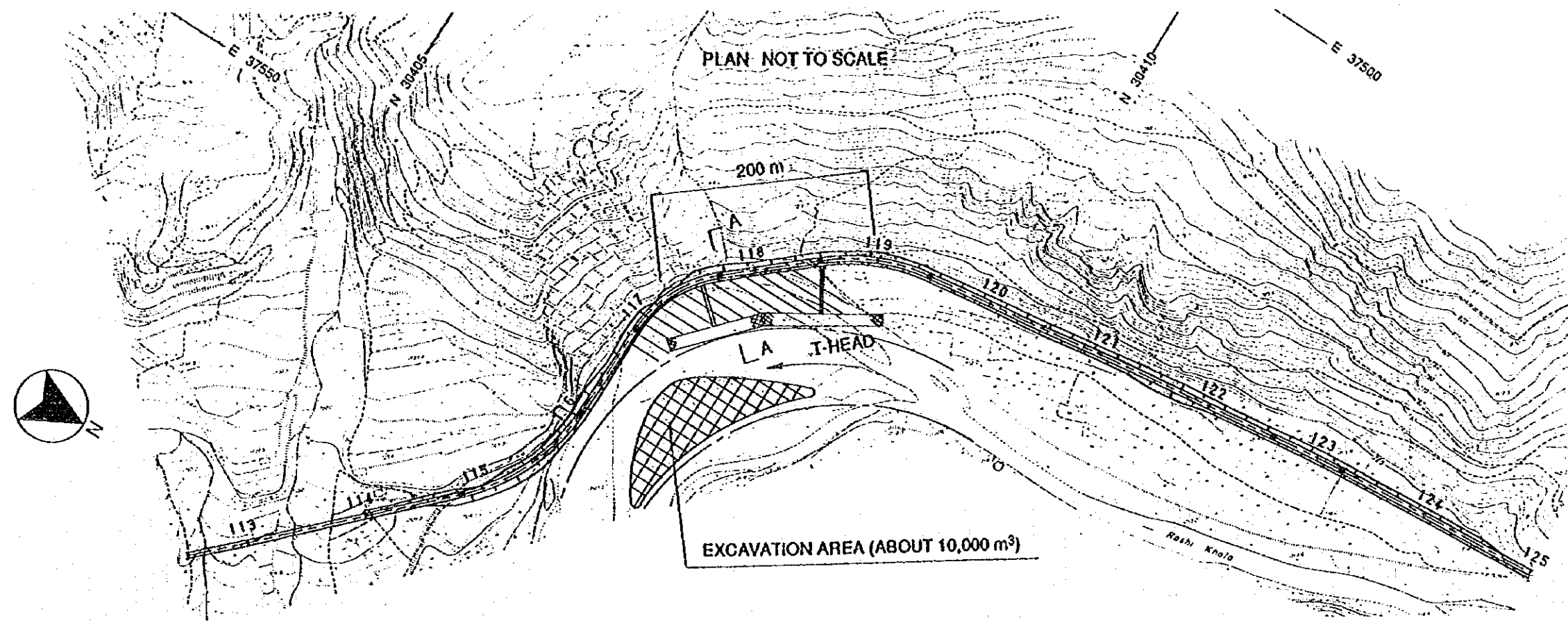


ARRANGEMENT OF RESINANCHOR SCALE 1:100



ITEM	CLASS	UNIT	QUANTITY	REMARKS
EXCAVATION		m <sup>3</sup>	329	
CONCRETE	ok-240sf/ok2	m <sup>3</sup>	735	
FORM		m <sup>2</sup>	81.1	
REINFORCEMENT BAR		tf	3.676	
CAISSON TYPE PILE		m	14.0	
CHEMICAL ANCHOR		PIECE	48	
REINFORCING BAR		m	287.6	
CONCRETE WALL		m <sup>2</sup>	287.6	
PARAPET		m	3.0	

RIVER TRAINING WORKS BY T-HEAD SPURS

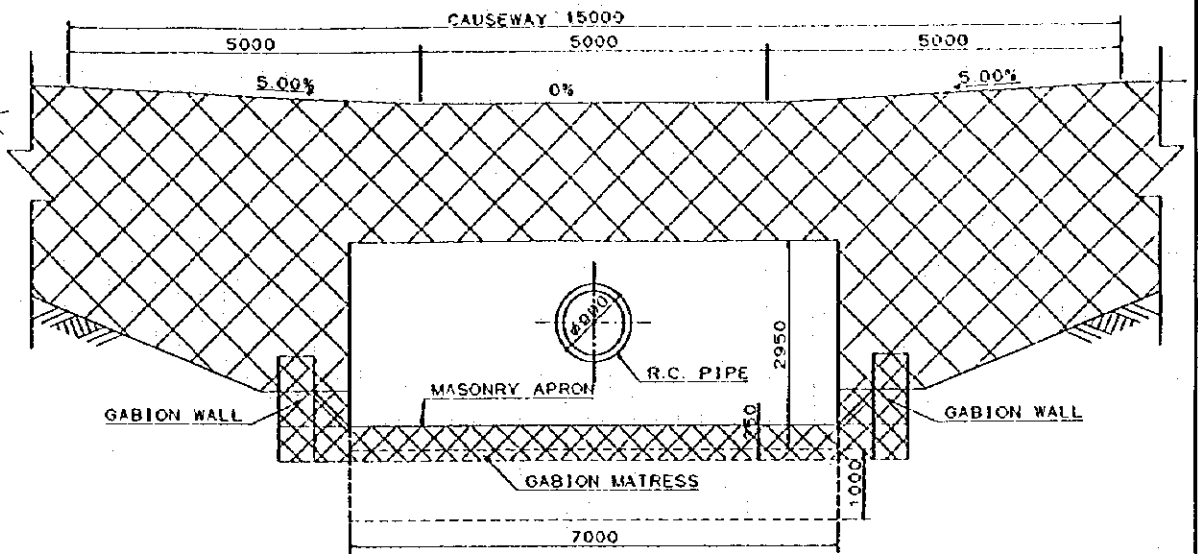
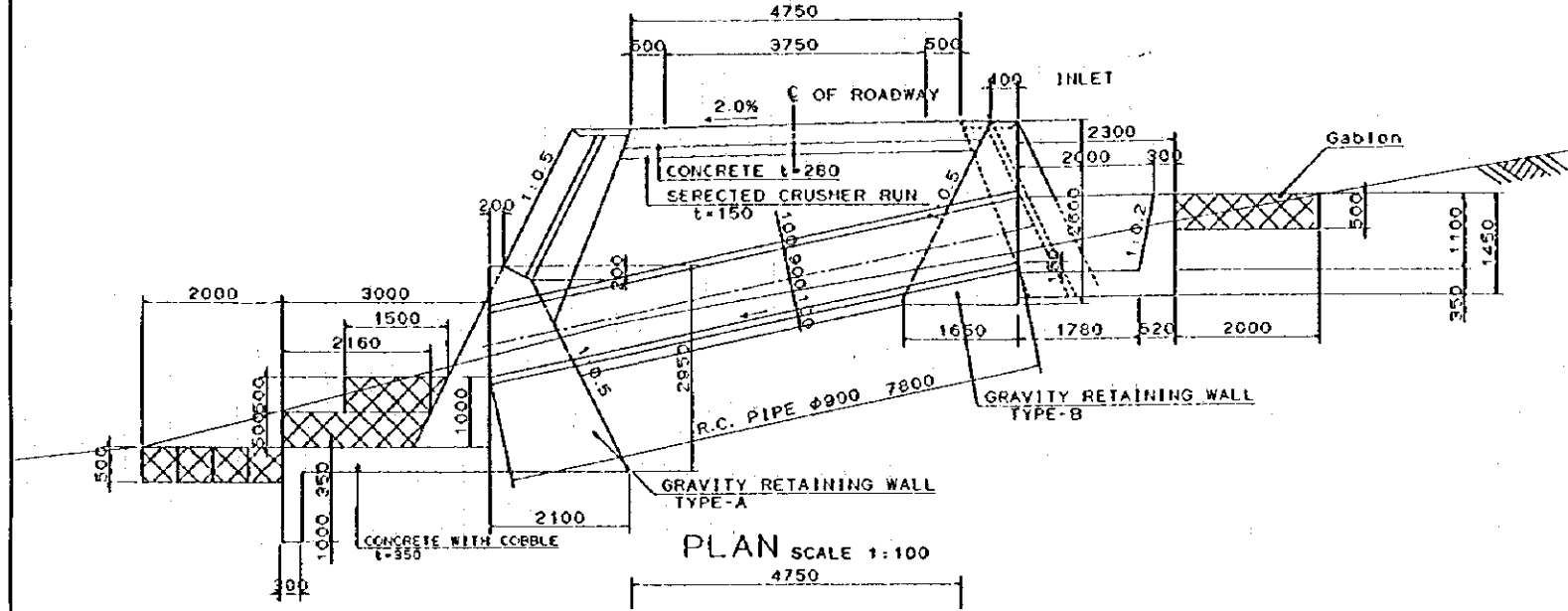


A-17 河川切り回し概要図

PROFILE SCALE 1:100

横断水路標準図  
TYPE-1:コースウェイ(パイプカルバート)

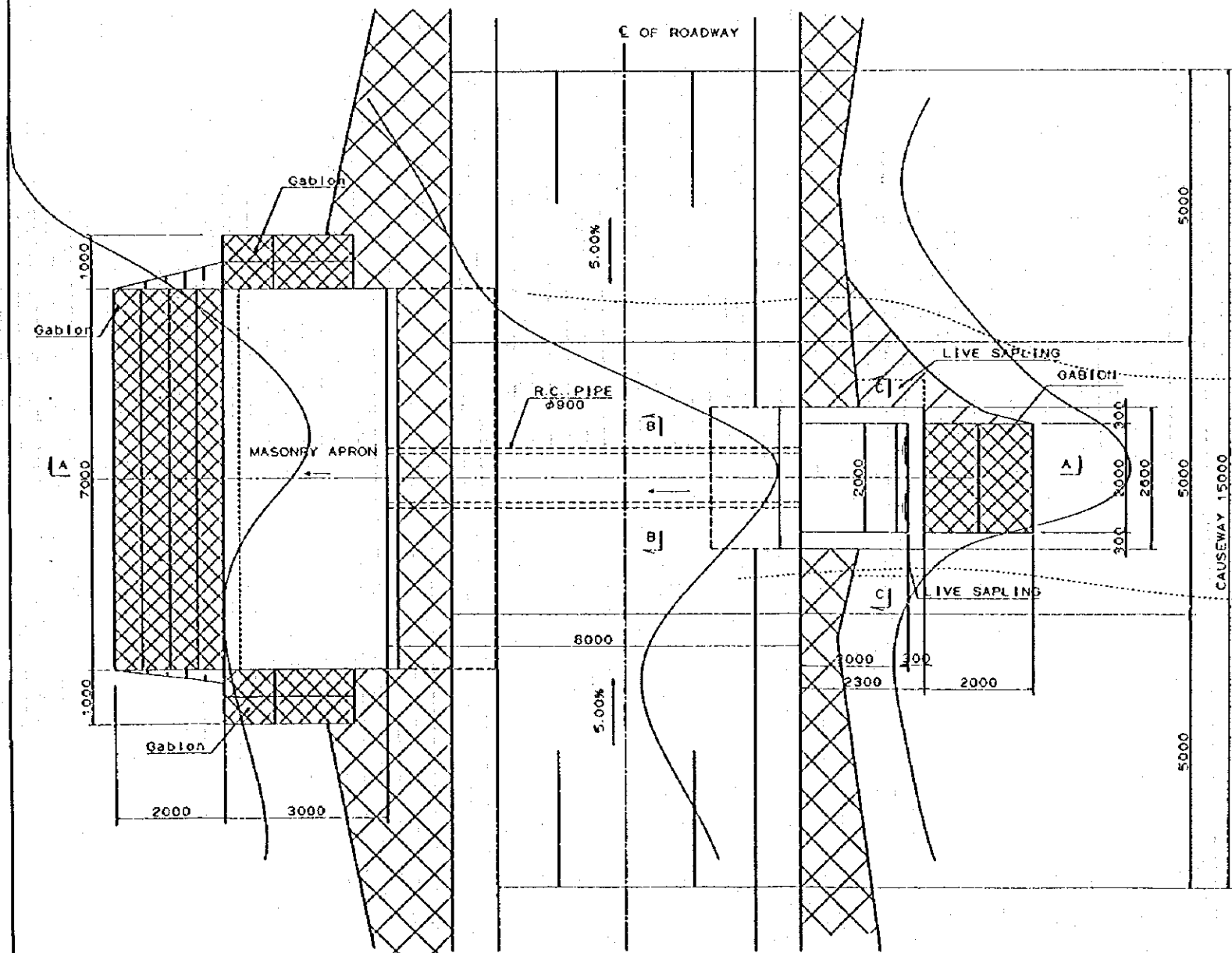
FRONT ELEVATION SCALE 1:100



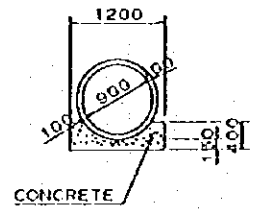
PLAN SCALE 1:100

SECTION B-B SCALE 1:100

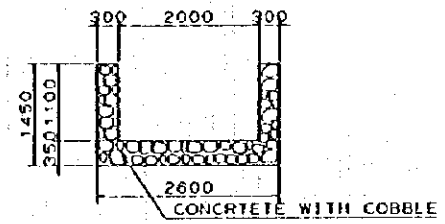
SECTION C-C SCALE 1:100



R.C. PIPE



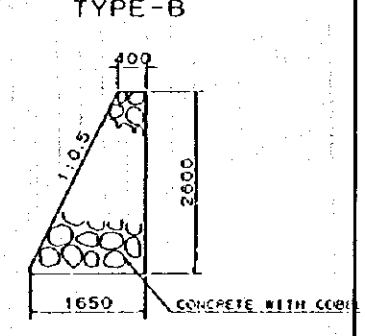
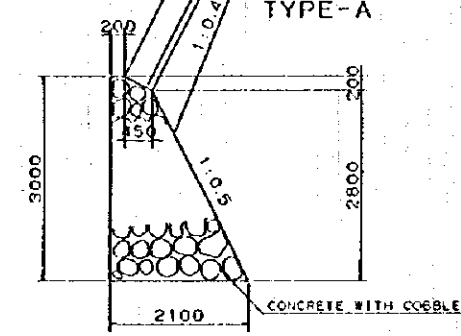
CATCH BASIN (INLET SIDE)



GRAVITY RETAINING WALL SCALE 1:100

TYPE-A

TYPE-B

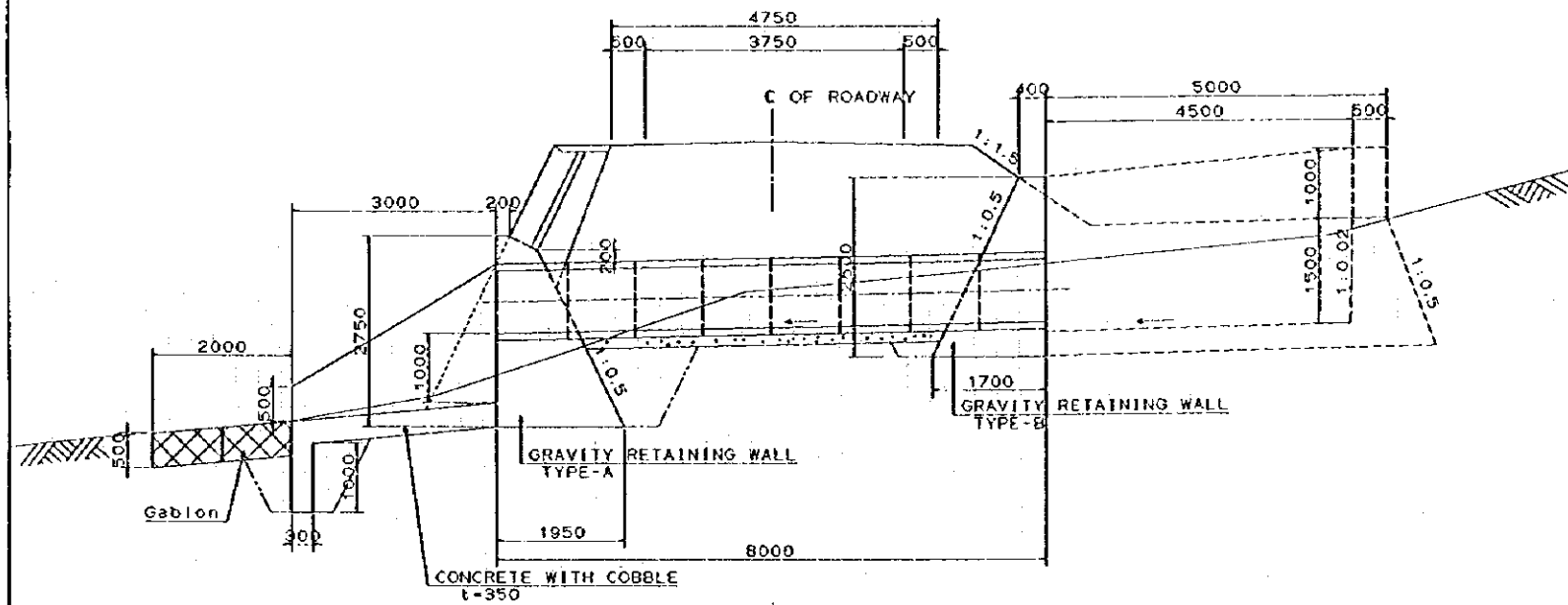


MATERIALS

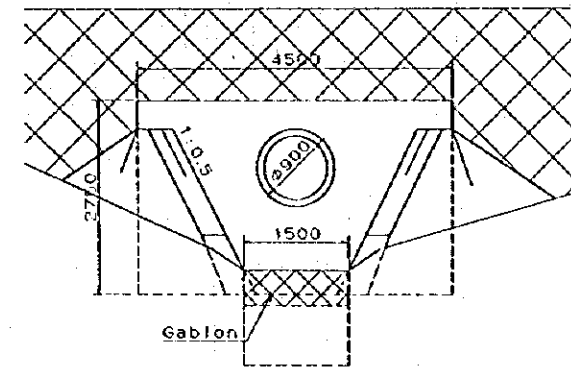
ITEM	CLASS	UNIT	QUANTITY	REMARKS
EXCAVATION		m <sup>3</sup>	67.8	
BACKFILL		m <sup>3</sup>	15.4	
R.C. PIPE	φ900	m	7.8	
G-RETAINING WALL		m <sup>3</sup>	24.5	
CONCRETE	ack-180kg/m <sup>2</sup>	m <sup>3</sup>	2.3	
CONCRETE WITH COBBLE		m <sup>3</sup>	22.6	
FORM WORK		m <sup>2</sup>	3.9	
GABION		m <sup>3</sup>	12.7	

横断水路標準圖  
TYPE-2: (R.C. PIPE  $\phi 900$ )

PROFILE A-A SCALE 1:100

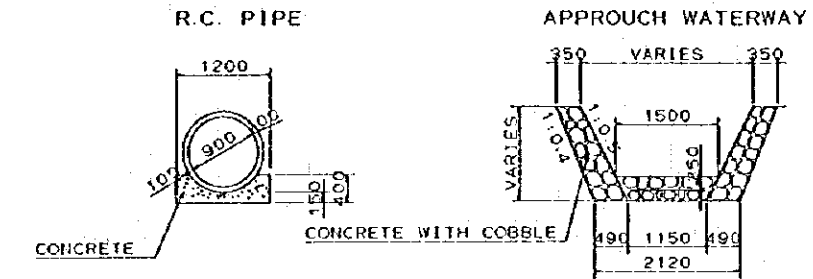


FRONT ELEVATION SCALE 1:100

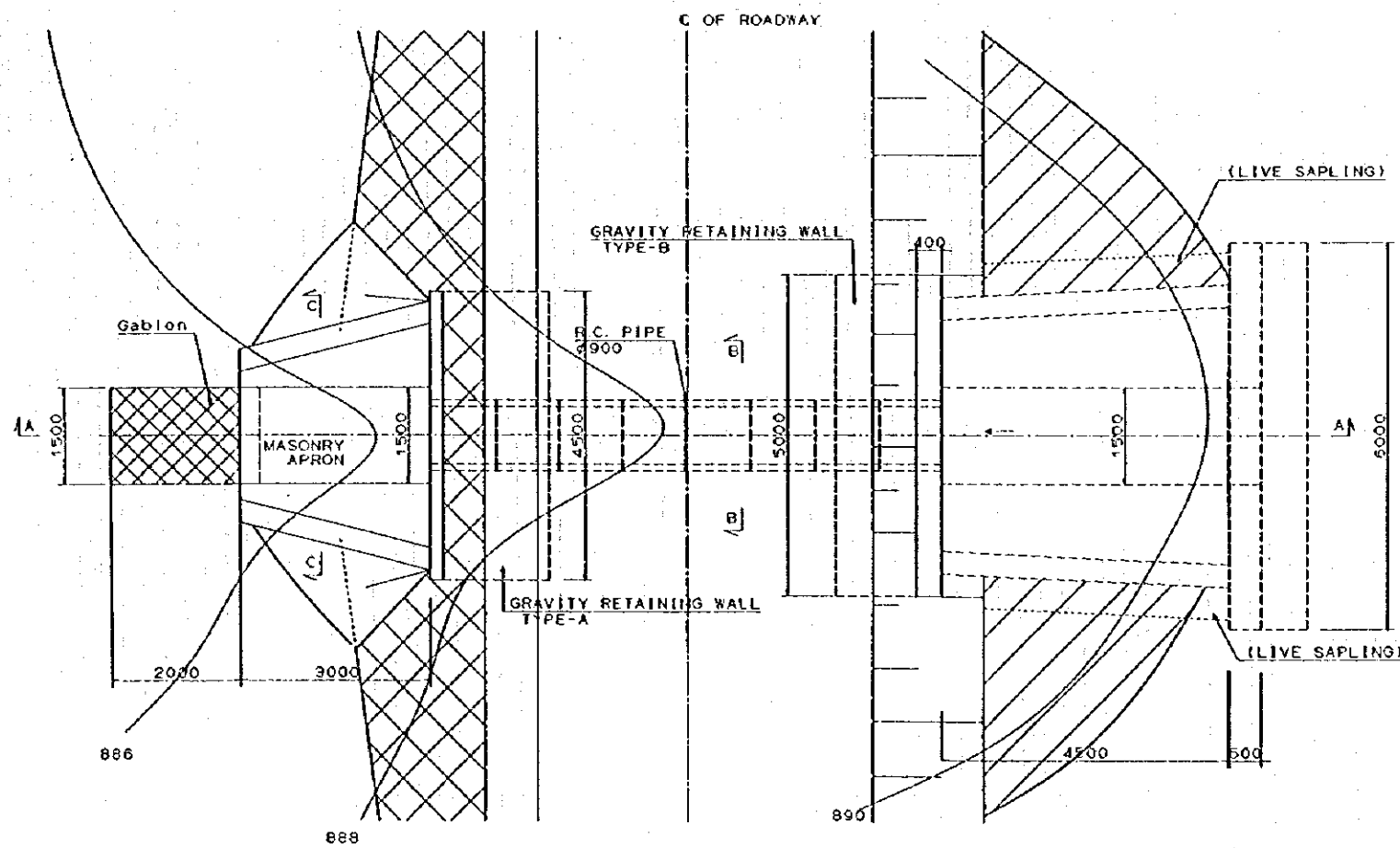


SECTION B-B SCALE 1:100

SECTION C-C SCALE 1:100



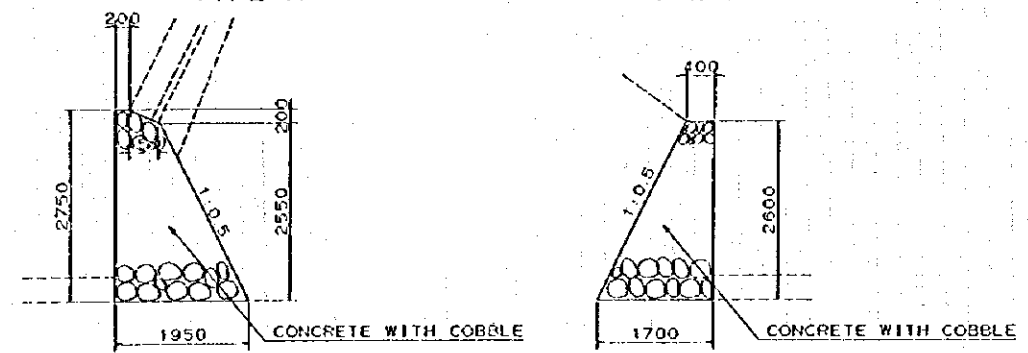
PLAN SCALE 1:100



GRAVITY RETAINING WALL SCALE 1:100

TYPE-A

TYPE-B



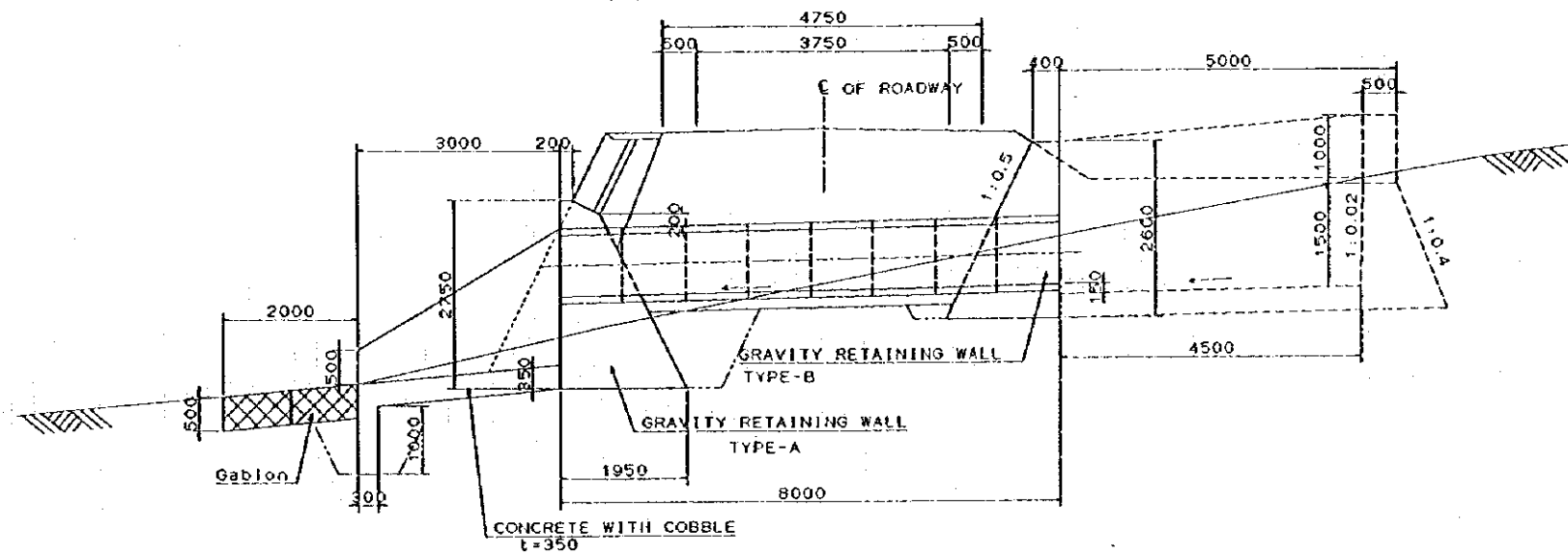
MATERIALS

ITEM	CLASS	UNIT	QUANTITY	REMARKS
EXCAVATION		m <sup>3</sup>	38.1	
BACKFILL		m <sup>3</sup>	12.8	
R.C. PIPE	$\phi 900$	m	8.0	
SUPPORTED WALL		m <sup>2</sup>	8.4	
GRAVITY WALL		m <sup>3</sup>	28.4	
CONCRETE	ock-16cke/m <sup>2</sup>	m <sup>3</sup>	2.5	
CONCRETE WITH COBBLE		m <sup>3</sup>	1.8	
FORM WORK		m <sup>2</sup>	4.2	
GABION		m <sup>3</sup>	1.5	

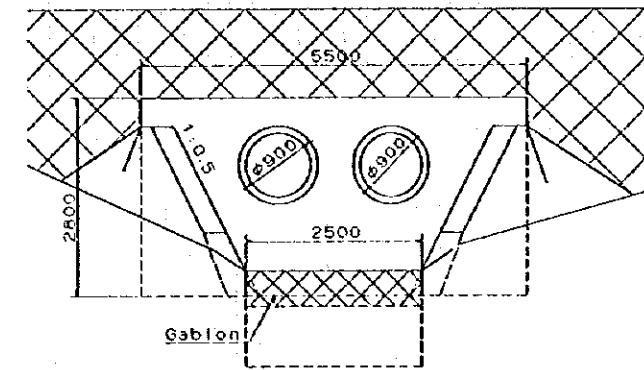
横断水路標準圖  
TYPE-3: (R.C. PIPE  $\phi 900 \times 2$ )

A-18-3 道路横断水路工標準圖

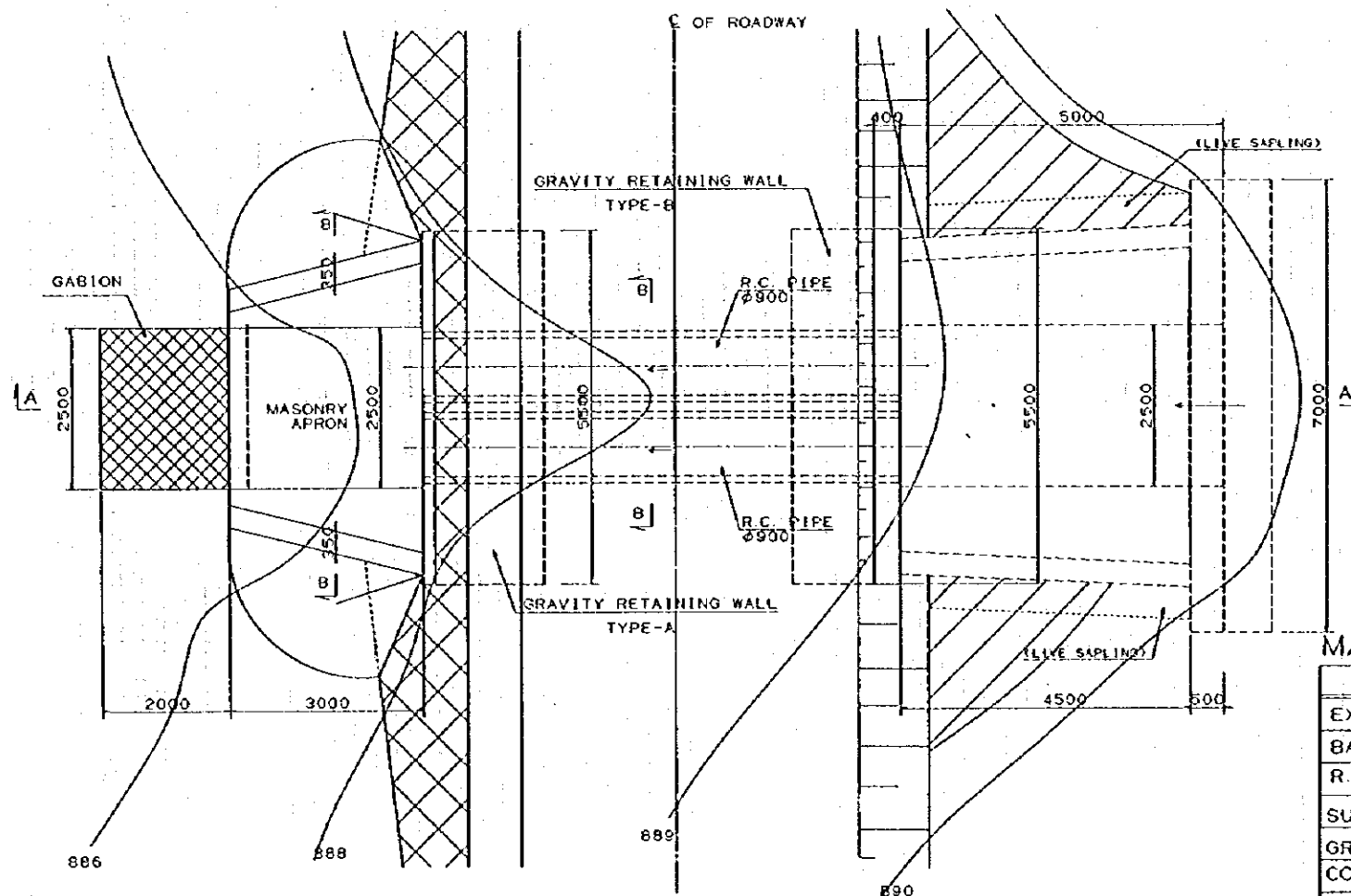
PROFILE A-A SCALE 1:100



FRONT ELEVATION SCALE 1:100

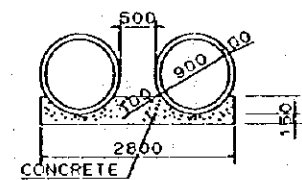


PLAN SCALE 1:100



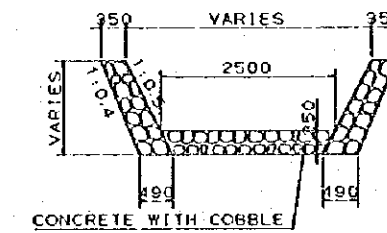
SECTION B-B SCALE 1:100

R.C. PIPE



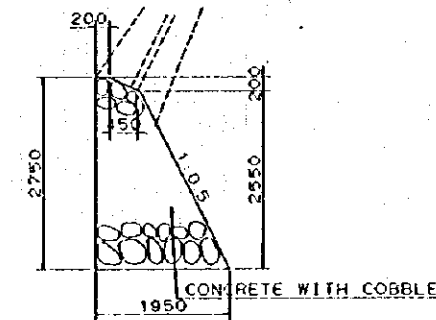
SECTION C-C SCALE 1:100

APPROACH WATERWAY

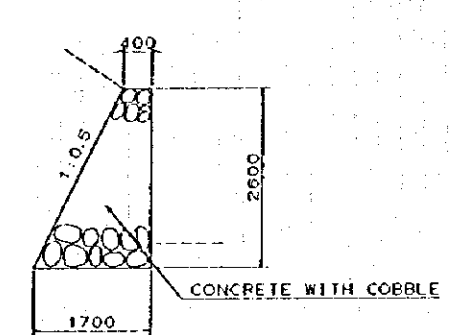


GRAVITY RETAINING WALL SCALE 1:100

TYPE-A



TYPE-B

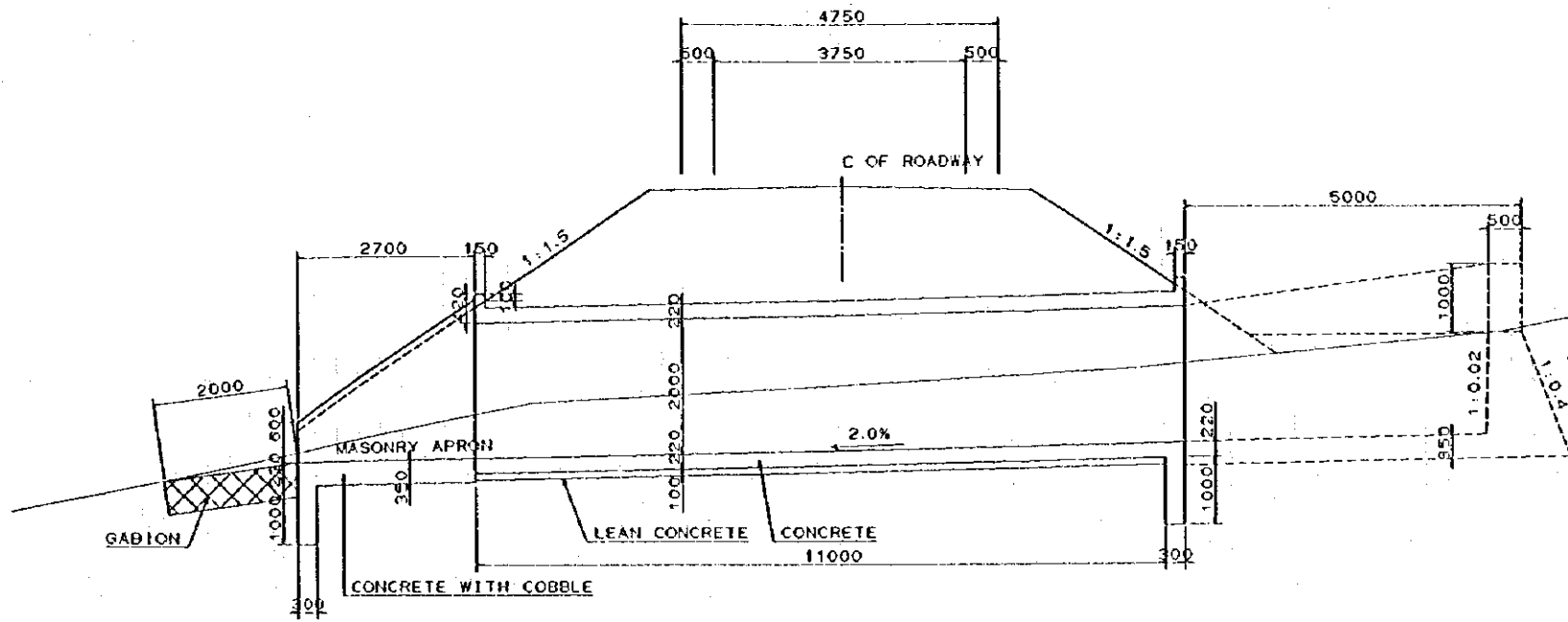


MATERIALS

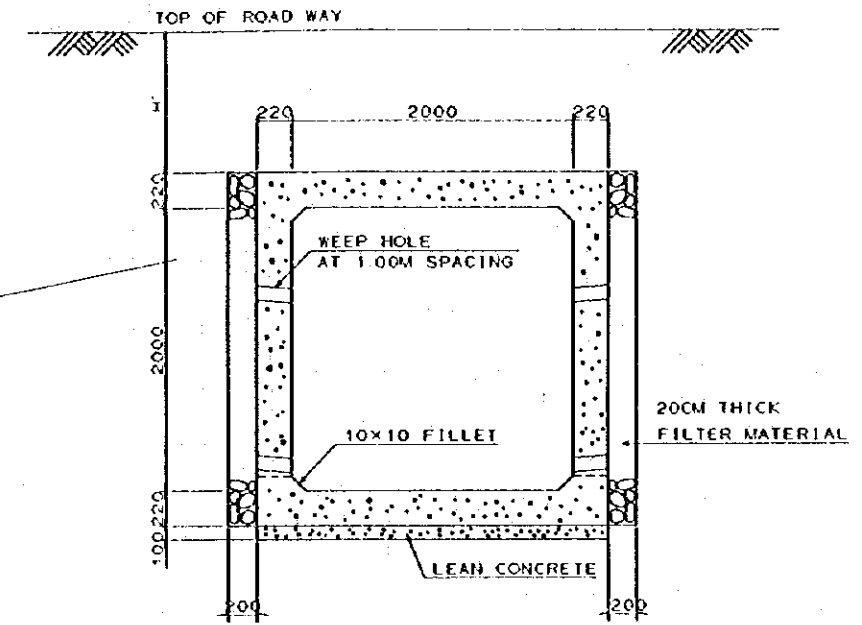
ITEM	CLASS	UNIT	QUANTITY	REMARKS
EXCAVATION		m <sup>3</sup>	49.8	
BACKFILL		m <sup>3</sup>	15.5	
R.C. PIPE	$\phi 900$	m	8.0	
SUPPORTED WALL		m <sup>2</sup>	8.4	
GRAVITY WALL		m <sup>3</sup>	33.7	
CONCRETE	$\sigma_{ck}=18\text{kgf/cm}^2$	m <sup>3</sup>	4.8	
CONCRETE WITH COBBLE		m <sup>3</sup>	3.2	
FORM WORK		m <sup>2</sup>	6.4	
GABION		m <sup>3</sup>	2.5	

横断水路標準図  
TYPE-4 : ボックスカルバート (2.00m×2.00m)

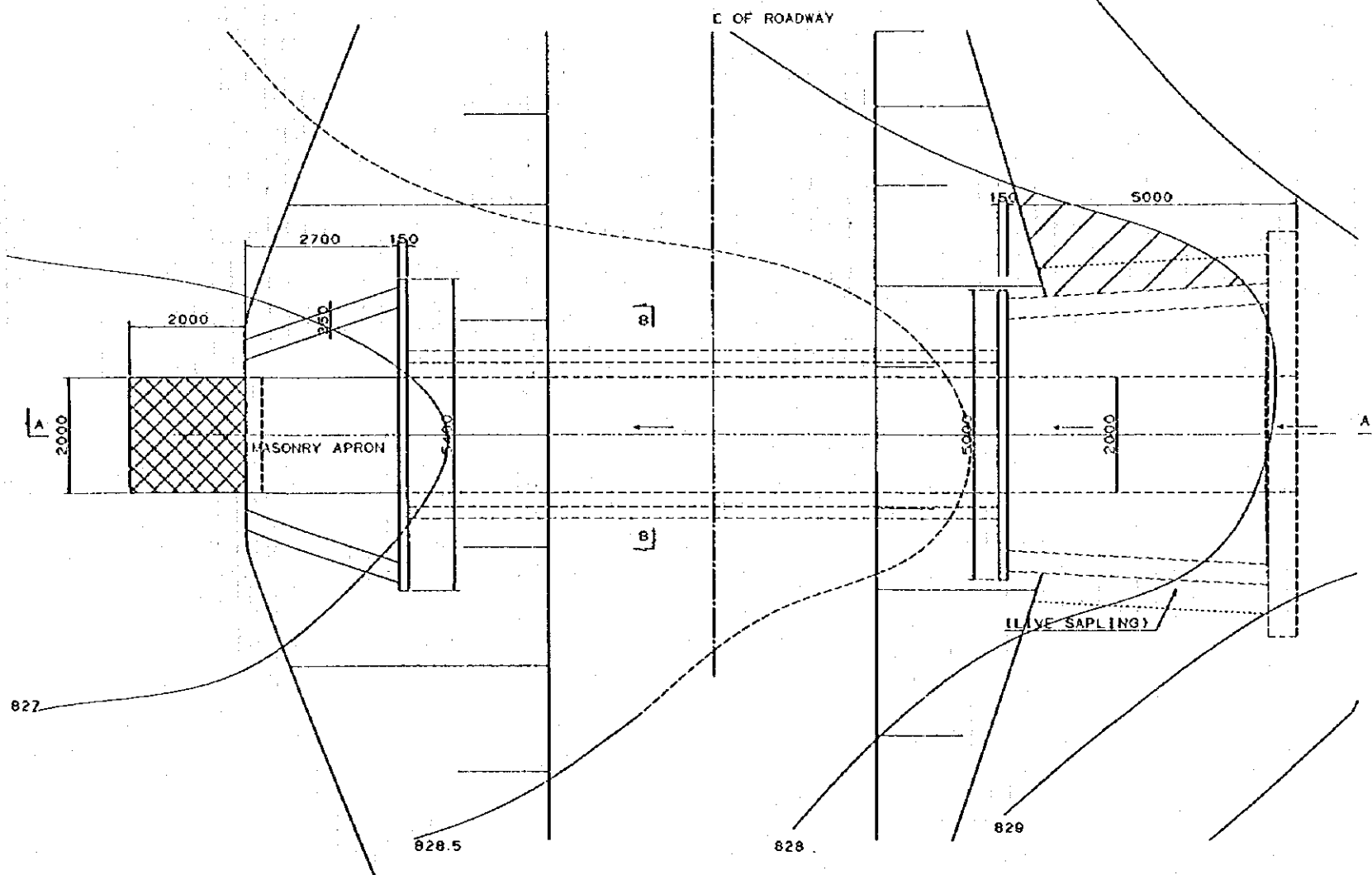
PROFILE A-A SCALE 1:100



SECTION B-B SCALE 1:50



PLAN SCALE 1:100

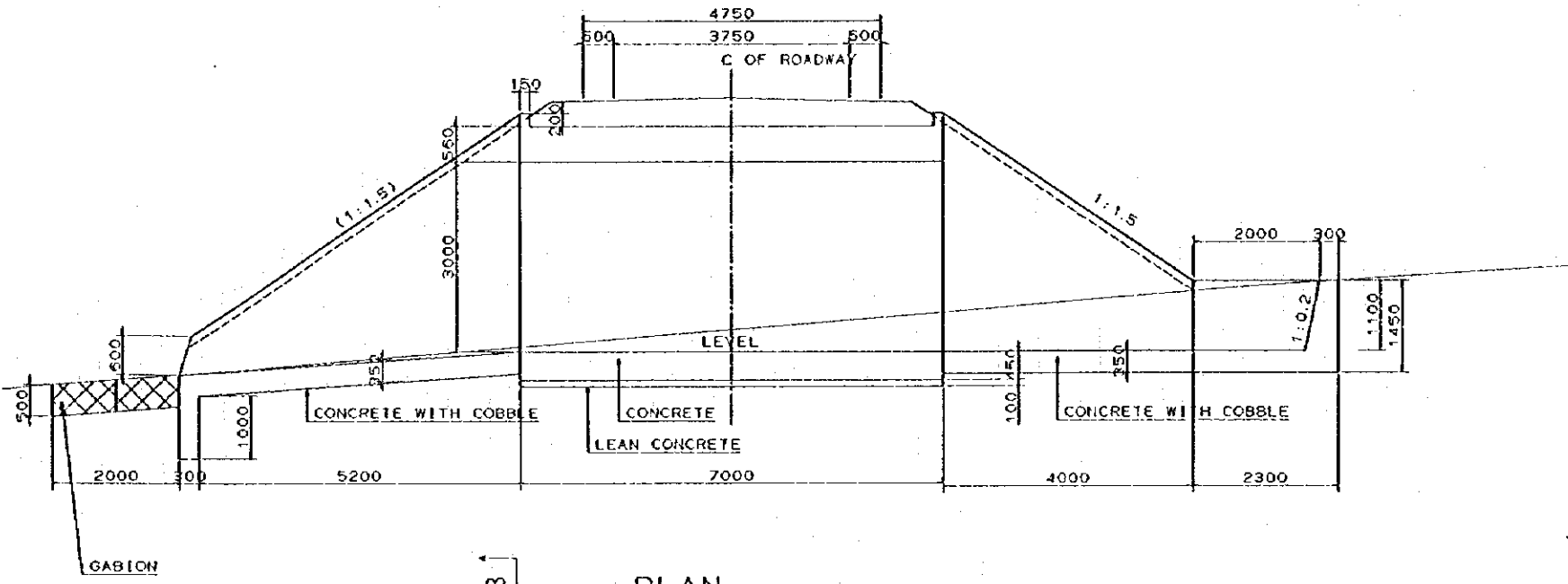


MATERIALS

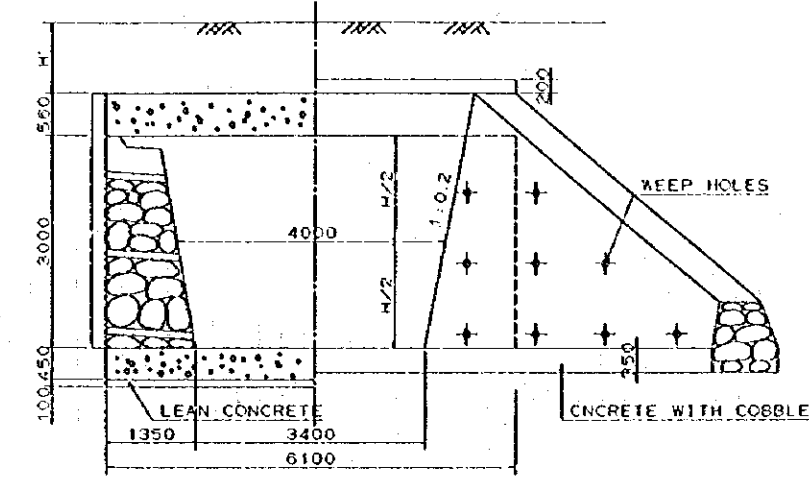
ITEM	CLASS	UNIT	QUANTITY	REMARKS
EXCAVATION		m3	117.6	
BACKFILL		m3	72.0	
SUPPORT WALL		m2	9.1	
LEAN CONCRETE	ock=180kg/m2	m3	2.7	
CONCRETE WITH COBBLE		m3	2.3	
CONCRETE	ock=240kg/m2	m3	29.1	
FORM WORK		m2	180.1	
FORM WORK	LEAN CONCRETE	m2	2.2	
REINFORCEMENT BAR	φ10	t	3.8	
SUPPORT		m3	45.2	
GABION		m3	2.0	

横断水路標準図  
TYPE-5 : スラブカルバート (B=4.00m)

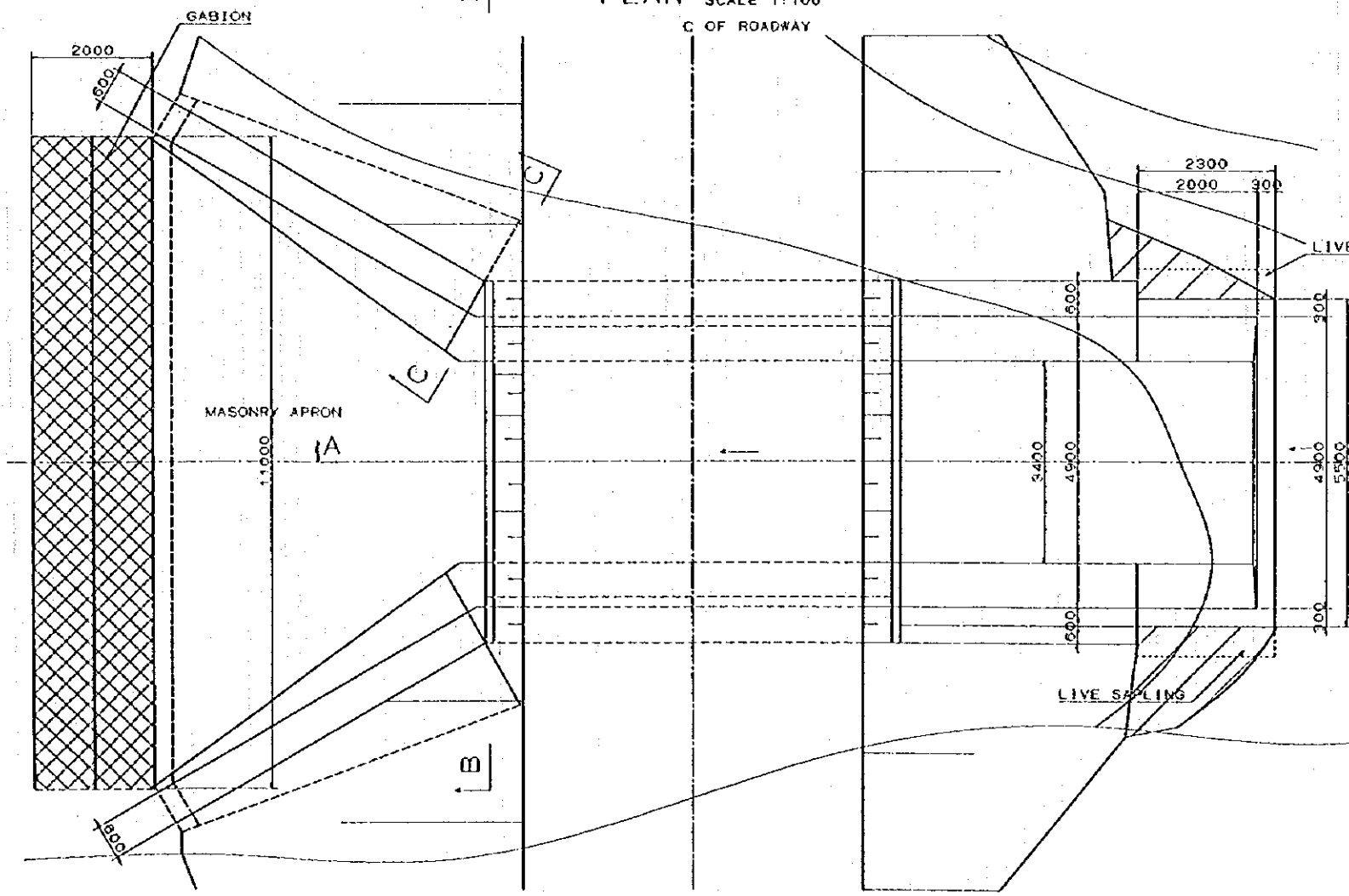
SECTION A-A SCALE 1:100



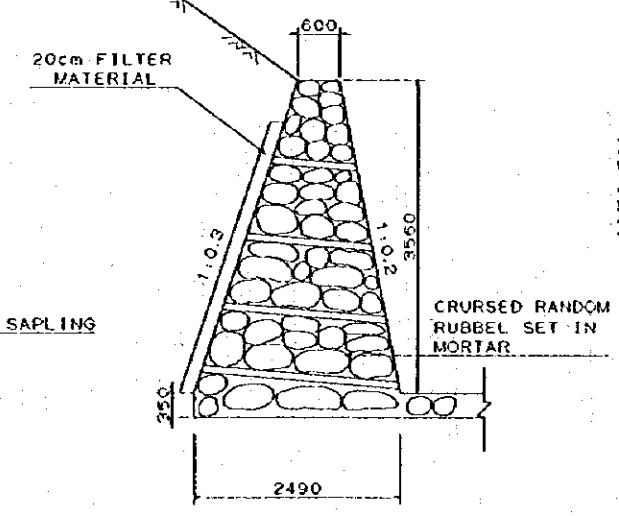
SECTION B-B SCALE 1:100



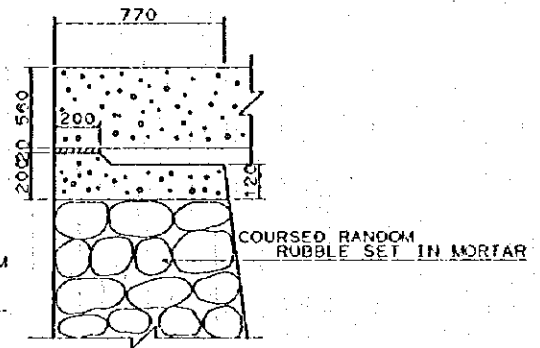
PLAN SCALE 1:100



SECTION C-C SCALE 1:100



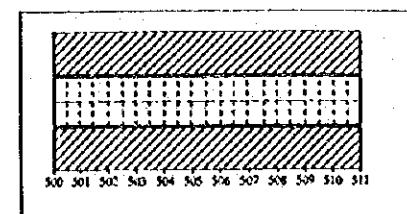
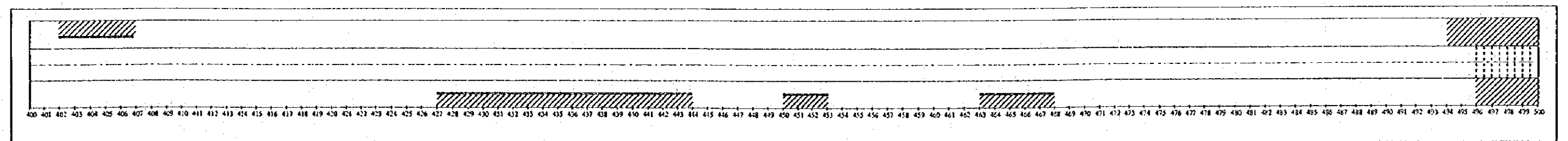
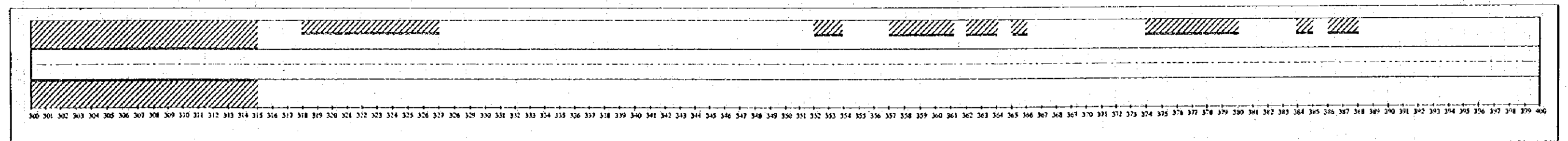
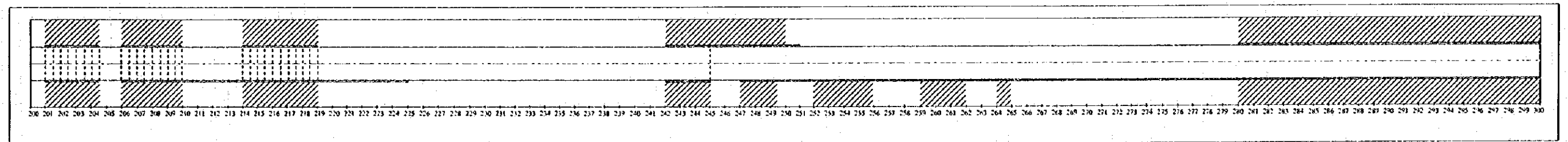
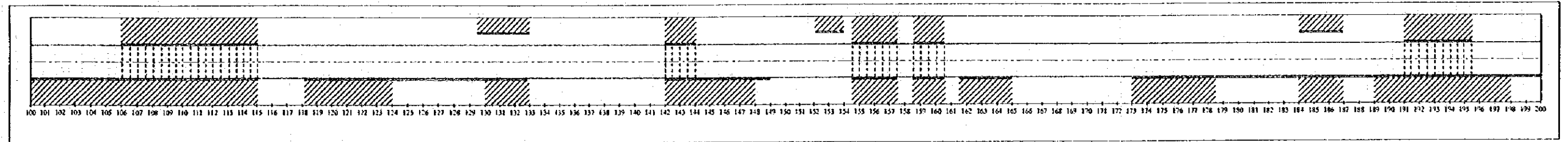
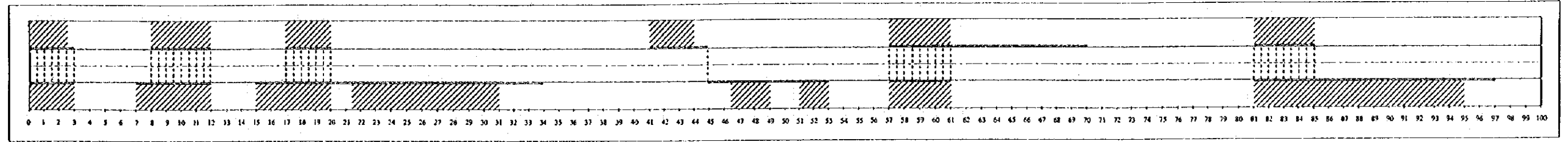
DETAIL AT R.C. SEAT SCALE 1:30



A) MATERIALS

ITEM	CLASS	UNIT	QUANTITY	REMARKS
EXCAVATION		m <sup>3</sup>	147.3	
BACKFILL		m <sup>3</sup>	81.1	
GRAVITY WALL		m <sup>3</sup>	95.1	
LEAN CONCRETE	ock-180kg/m <sup>2</sup>	m <sup>3</sup>	4.7	
CONCRETE WITH COBBLE		m <sup>3</sup>	36.1	
CONCRETE	ock-240kg/m <sup>2</sup>	m <sup>3</sup>	45.3	
FORM WORK	LEAN CONC	m <sup>2</sup>	1.4	
FORM WORK		m <sup>2</sup>	51.1	
REINFORCEMENT BAR		t	4.5	
SUPPORT		m <sup>3</sup>	84.0	
GABION		m <sup>3</sup>	11.0	
LIVE SAPLING		m <sup>2</sup>	4.1	

### Layout of Agricultural Drainage to be Relocated



Estimated Quantities	
Agricultural Drainage	= 42600 m
Cross Drainage	= 2205 m

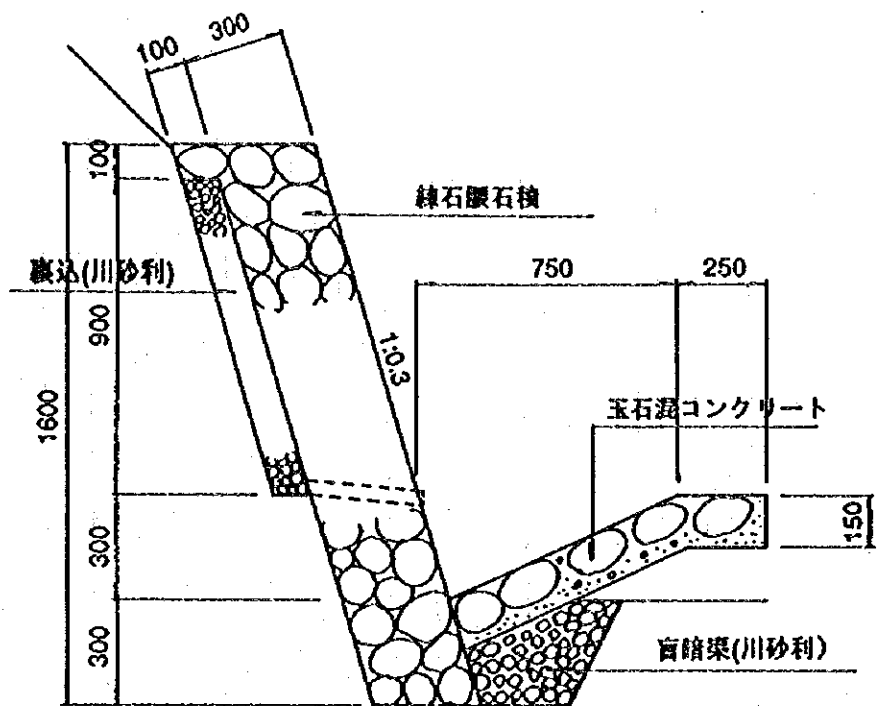
LEGEND	
	Paddy Field
	Field Acquired for Project Road
	Project Road
	Agricultural Drainage
	Cross Drainage



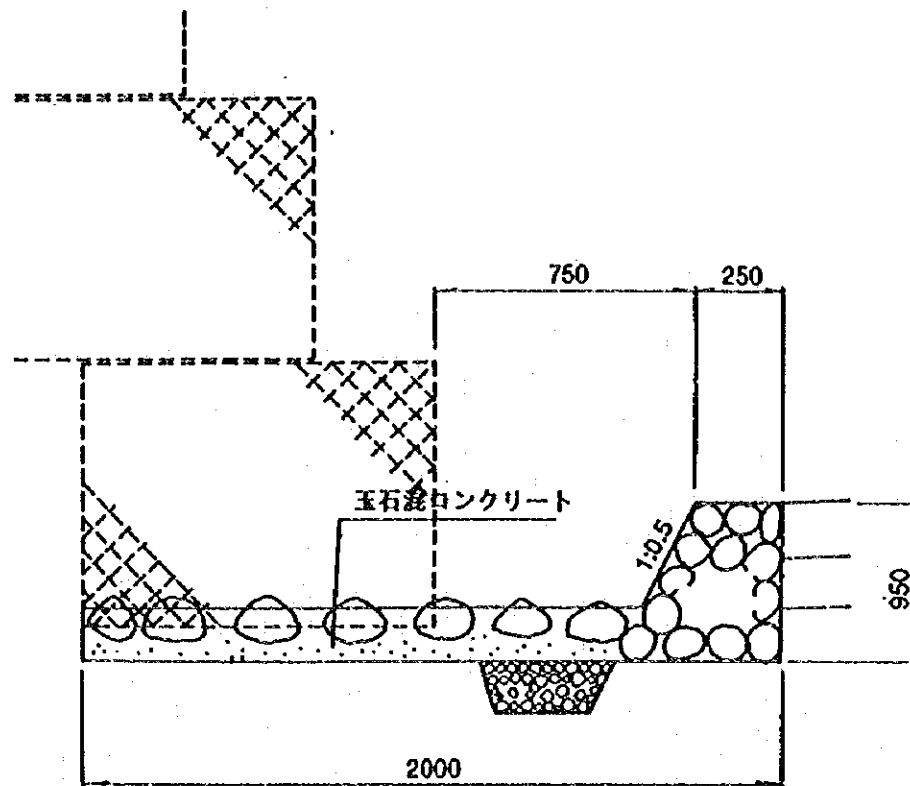
路側水路, 農業用水路詳細図 Scale: 1/20

A-20 用排水工詳細図

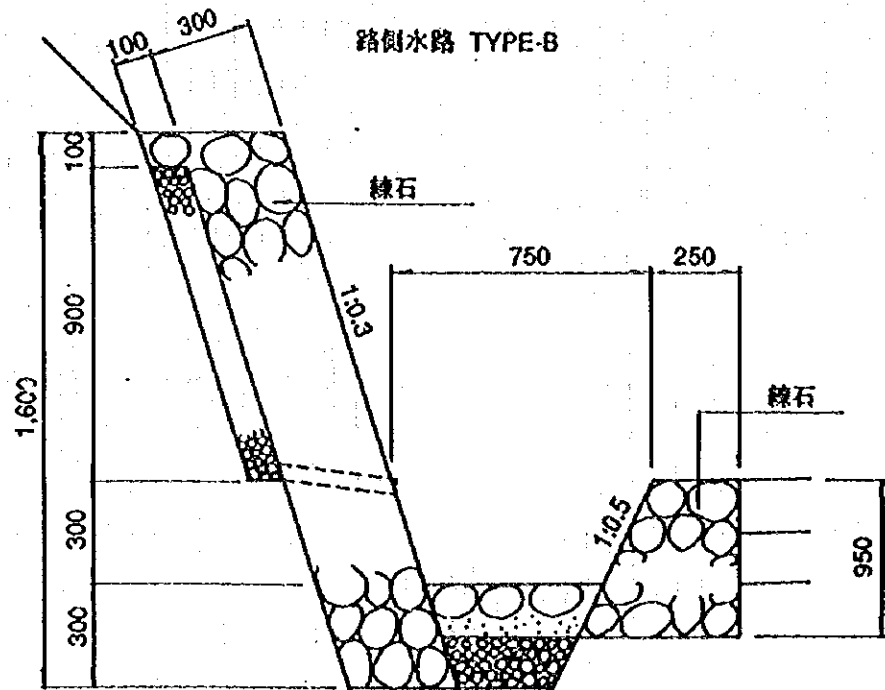
路側水路 TYPE-A



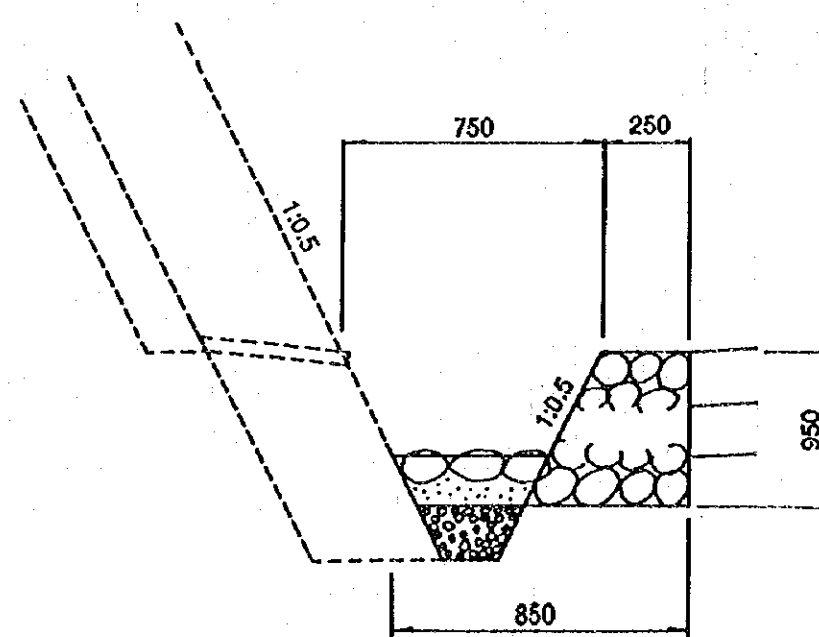
路側水路 TYPE-C



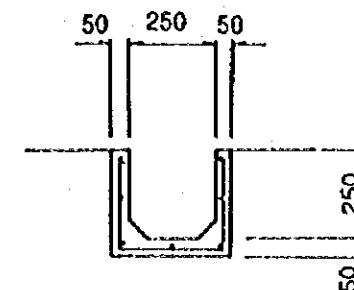
路側水路 TYPE-B



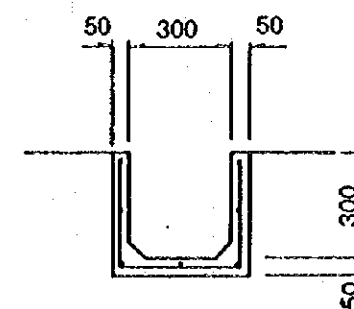
路側水路 TYPE-D



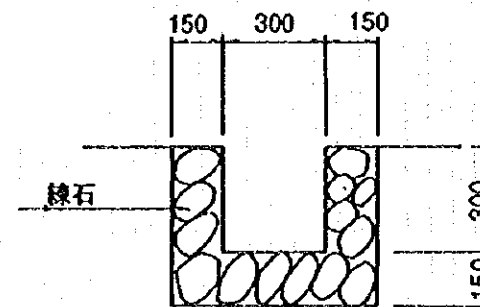
プレキャストU形水路 (250x250)



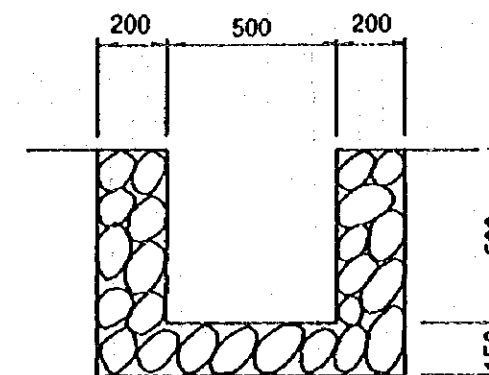
プレキャストU形水路 (300x300)



練石U形水路 (300x300)



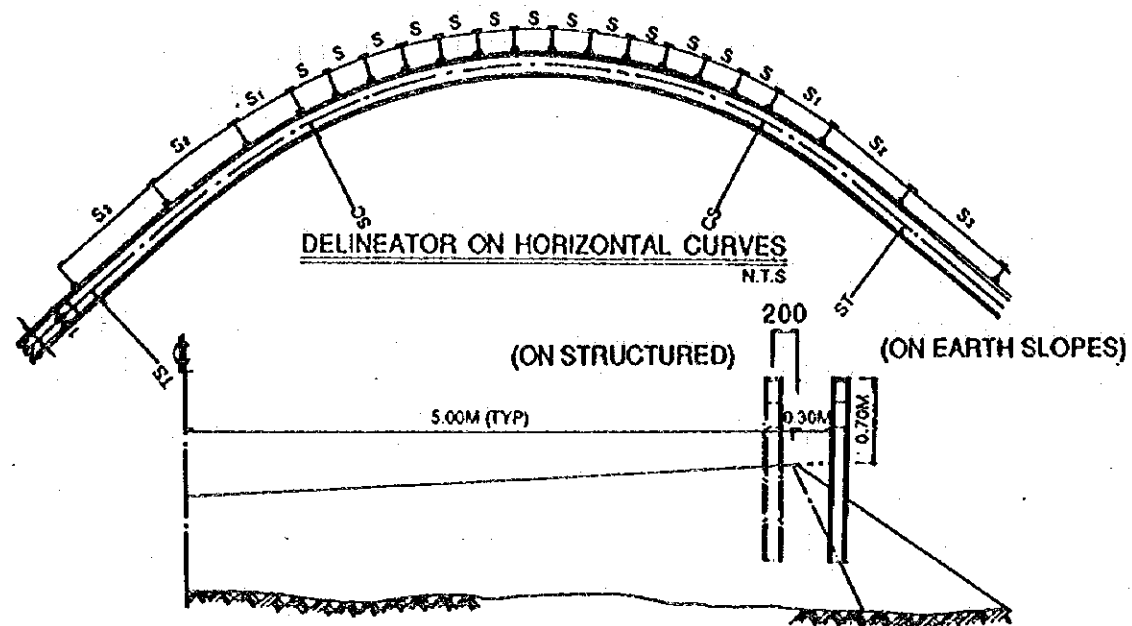
練石U形水路 (500x500)



路側水路

農業用水路

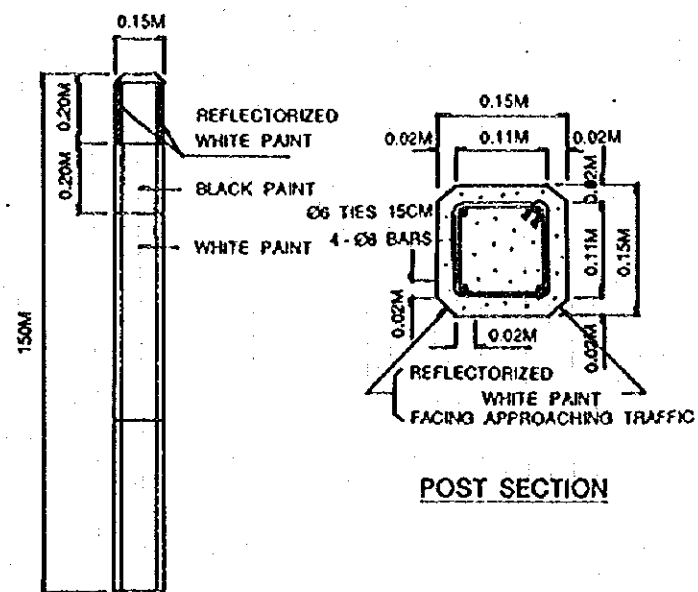
DELINEATORS NOT TO SCALE.



SPACING OF DELINEATORS (M)

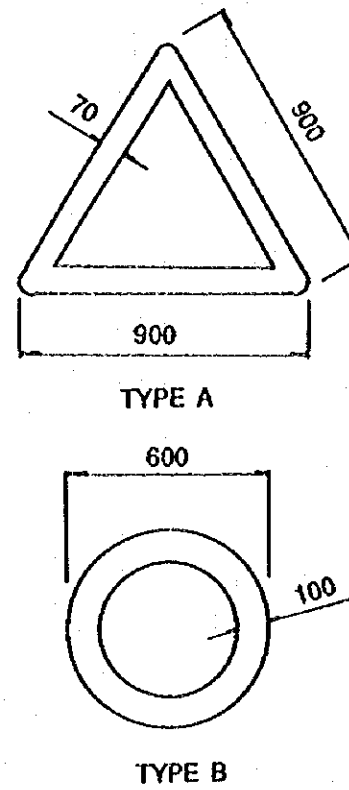
RADIUS	S	S1	S2	S3
15	4	5	10	20
20	6	7	13	24
40	7	9	16	28
60	8	11	19	32
80	9	13	22	36
100	10	15	25	40
400	30	45	50	50
>400	-	-	-	50

DELINEATOR INSTALLATION SECTION



POST SECTION

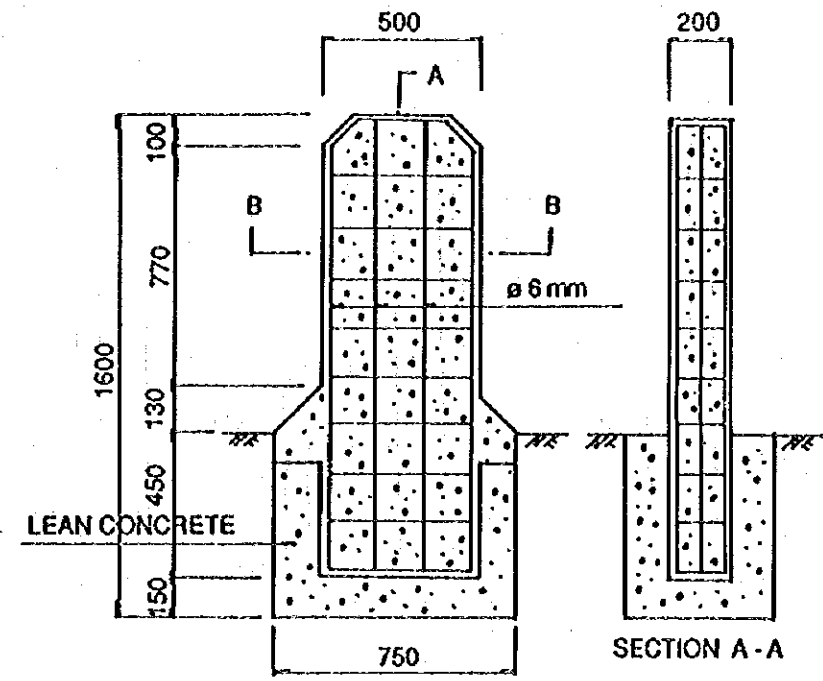
ROAD TRAFFIC SIGN NOT TO SCALE



TYPE A

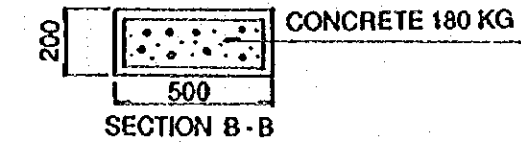
TYPE B

DISTANCE SIGN NOT TO SCALE



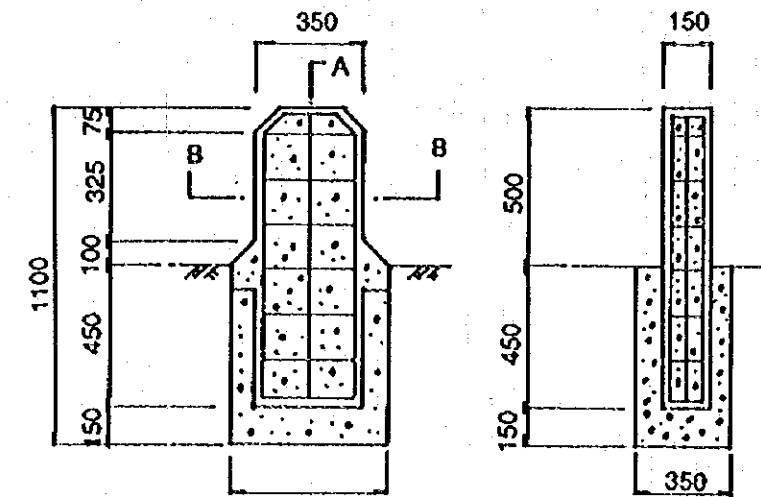
SECTIONAL ELEVATION

SECTION A-A



SECTION B-B

DISTANCE SIGN 5KM



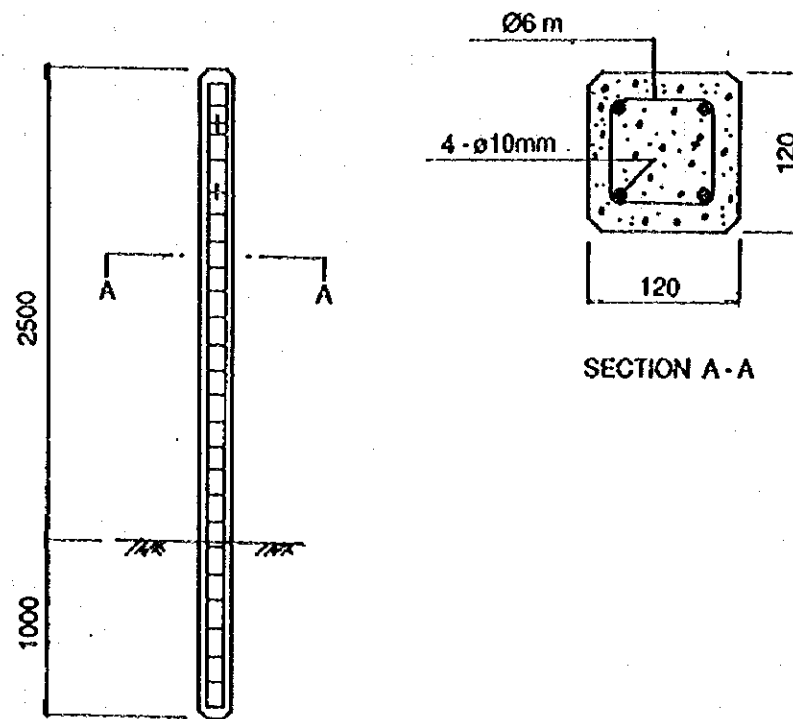
SECTIONAL ELEVATION

SECTION A-A



SECTION B-B

DISTANCE SIGN 1KM



SECTION A-A

CONCRETE POST

## 資料編 B

### 調査関連資料

B.1 調査団員氏名所属

B.2 調査日程

B.3 相手国関係者リスト

B.4 当該国の社会・経済事情

B.5 ネパール側負担経費内訳

B.6 参考資料リスト

## B1. 調査団員氏名所属

### インセプションレポート説明調査団および現地調査実施調査団

職務	氏名	所属
1. 総括	: 岡崎 有二	国際協力事業団 無償資金協力調査部調査審査課長
2. 無償資金協力	: 三谷 卓越	外務省 経済協力局無償資金協力課
3. 業務主任/道路設計	: 新開 弘毅	日本工営 (株)
4. 橋梁設計	: 清水 正明	日本工営 (株)
5. 施工計画・積算	: 山下 佳久	日本工営 (株)
6. 自然条件調査	: 石橋 晃睦	日本工営 (株)
7. 道路施設計画	: 清水 隆志	日本工営 (株)

### 基本設計概要書案説明調査団

職務	氏名	所属
1. 総括	: 米田 博	国際協力事業団 無償資金協力調査部基本設計調査第二課長
2. 計画管理	: 正木 寿一	国際協力事業団 無償資金協力業務部
3. 業務主任	: 新開 弘毅	日本工営 (株)
4. 施工計画・積算	: 山下 佳久	日本工営 (株)

B2. 調査日程

調査日程 (1995年11月26日～12月30日)

日順	日付	曜日	団員移動内容	宿泊地	調査内容
1	11/26	日	三谷、新開、清水(正)、山下、バンコク着	バンコク	団内打ち合わせ
2	27	月	カトマンズ着	カトマンズ	JICA、日本大使館打ち合わせ
3	28	火		〃	大蔵省、国家開発委員会表敬、公共事業運輸省・道路局表敬 (インベションレポートの説明、協議)
4	29	水		〃	公共事業・道路局協議
5	30	木	岡崎団長着	〃	JICA、日本大使館表敬 コンサルタント2名サイト調査
6	12/01	金	ヘリで移動	〃	サイト調査
7	2	土	車で移動	〃	ドラフトミツク(案)の検討
8	3	日		〃	公共事業運輸省・道路局表敬 (インベションレポートの説明、協議)
9	4	月		〃	ドラフトミツク(案)の検討
10	5	火		〃	ミツクの調印 JICA、日本大使館への報告
11	6	水	岡崎団長、三谷官団員帰国	〃	現地調査
12	7	木		〃	現地調査
13	8	金		〃	現地調査
14	9	土	清水(正)帰国	〃	資料整理
15～18	10～13	日～水		〃	現地調査
19	14	木	新開帰国	〃	現地調査
20	15	金		〃	現地調査
21	16	土		〃	資料整理
22	17	日		〃	現地調査
23～33	18～28	月～木		〃	現地調査
34	29	金	山下、清水(陸志)、石橋団員帰国	バンコク	移動
35	30	土		成田	移動

基本設計概要書案説明調査団調査日程（1996年2月25日～3月7日）

日順	日付	曜日	団員移動内容	宿泊地	調査内容
1	2/25	日	米田、正木、新開、山下、バンコク着	バンコク	団内打ち合わせ
2	26	月	カトマンズ着	カトマンズ	JICA、大蔵省表敬、日本大使館打ち合わせ
3	27	火		"	公共事業運輸省表敬 道路局表敬、基本設計概要書案説明
4	28	水		"	基本設計概要書案協議（道路局）
5	29	木		"	サイト調査
6	3/1	金		"	ドラフト・ミニッツの協議 ミニッツの調印、JICA報告
7	2	土	米田団長、正木官団員帰国	"	資料収集
8	3	日		"	資料収集
9	4	月		"	サイト調査
10	5	火		"	JICAネパール事務所報告 資料収集
11	6	水	新開、山下団員帰国	バンコク	日本大使館報告 移動
12	7	木		成田	移動

### B3. 相手国関係者リスト

- (1) 公共事業運輸省 (Ministry of Works and Transport)  
Acting Secretary, Mr. Varun P. Shrestha
- (2) 大蔵省 (Ministry of Finance)  
Foreign Aid Coordination Division, Joint Secretary, Mr. Madhab P. Ghimire
- (3) 国家開発委員会 (National Planning Commission)  
Member Secretary, Mr. Rabindra K. Shakya
- (4) 公共事業運輸省・道路局 (Department of Roads)  
Director General, Department of Roads, Mr. Mohan, B. Karki  
Deputy Director General, Mr. K. P. Pokharel  
Deputy Director General (Design), Mr. Suresh K. Regmi  
Deputy Director General (Planning), Mr. Shyam P. Adhikari  
Deputy Director General (Mechanical), Mr. Hari L. Rajabahak  
Senior Divisional Engineer (Foreign Aid), Mr. Pawan M. Shrestha  
Senior Divisional Engineer (MRCU), Mr. Kamal Pandey  
Engineer, Mr. Saroj K. Pradhan  
高橋公夫、JICA専門家
- (6) 防災センター (Water Induced Disaster Prevention Technical Centre)  
Director, Mr. Ronald, C. Mukunma  
杉本良作チーフアドバイザー  
徳丸周志コーディネーター  
宮島慈近砂防専門
- (7) 日本国大使館  
吉田 特命全権大使  
飯田 公使  
佐藤 二等書記官
- (8) カトマンズJICA事務所  
渡辺 事務所長  
村上 次長  
加藤 次長  
長 事務官

B.4 当該国の社会・経済事情

1994.08 1/2

国名	ネパール王国
	NEPAL

一般指標				
政体	立憲民主制	*1	面積	140.0千Km <sup>2</sup> *1
元首	King BIRENDRA	*1	人口	20,535千人 (1993年) *1
独立年月日	1768年00月00日	*1	首都	カトマンズ *1
人種(部族)構成	ニューワー、インド、チベット	*1	主要都市名	ビラハタ、パタナ *1
		*1	経済活動可人口	8,500千人 (1991年) *1
言語・公用語	ネパール語	*1	義務教育年数	2 (1992年) *2
宗教	ヒンズー教90%、仏教5%	*1	初等教育就学率	61.0% (1990年) *2
国連加盟	1955年12月		識字率	26.0% (1990年) *1
世銀・IMF加盟	1961年09月	*1	人口密度	146.0人/Km <sup>2</sup> (1992年) *2
		*1	人口増加率	2.43% (1993年) *2
			平均寿命	平均 51.98 男 51.8 女 52.1 *1
			5歳児未満死亡率	85.8/1000 (1993年) *1
			1人1日供給量	2,210.0cal/日/人 (1990年) *2

経済指標				
通貨単位	ネパール・ルピー	*1	貿易量	(1992年) *3
為替レート(IUS\$)	IUS\$= 49.35 (1994年)	*3	輸出	374.0百万ドル *2
会計年度	7月～ 6月	*1	輸入	792.0百万ドル *2
国家予算	— (1991年)	*2	輸入依存率	6.8% (1992年) *4
歳入	264.4百万	*2	主要輸出品目	じゅうたん、衣服、皮革 *1
歳出	509.7百万	*2	主要輸入品目	石油製品、肥料、機械 *1
国際収支	155.4百万ドル (1992年)	*2	日本への輸出	2.0百万ドル (1992年) *5
ODA受取額	467.00百万ドル (1992年)	*2	日本からの輸入	59.0百万ドル (1992年) *5
国内総生産(GDP)	2,891.00百万ドル (1992年)	*2		
一人当たりGDP	180.0ドル (1991年)	*2	外貨準備総額	594.3百万ドル (1994年) *1
GDP産業別構成	農業 59.0%	*2	対外債務残高	1,797.0百万ドル (1992年) *4
	鉱工業 14.0%		対外債務返済率	11.7% (1992年) *4
	サービス業 27.0%		インフレ率	20.4% (1992年) *2
産業別雇用	農業 93.0%	*2		
	鉱工業 1.0%		国家開発計画	開発5ヵ年計画 *5
	サービス業 6.0%			92～96年
経済成長率	2.1% (1992年)	*2		

気象(1970年～1979年平均) 場所: Katmandu (標高 1338m)													
月	1	2	3	4	5	6	7	8	9	10	11	12	平均/計
最高気温	18.0	19.0	25.0	28.0	30.0	29.0	29.0	28.0	28.0	27.0	23.0	19.0	25.2℃
最低気温	2.0	4.0	7.0	12.0	16.0	19.0	20.0	20.0	19.0	13.0	7.0	3.0	11.8℃
平均気温	10.0	11.5	16.0	20.0	23.0	24.0	24.5	24	23.5	20.0	15.0	11.0	18.5℃
降水量	15.0	41.0	23.0	58.0	122.0	246.0	373.0	345.0	155.0	38.0	8.0	3.0	1427.0 mm
雨期/乾期	雨 雨 雨 雨 雨 雨												

- \*1 The World Factbook(C.I.A)
- \*2 Human Development Report(UNDP)
- \*3 International Financial Statistics(IMF)
- \*4 World Debt Tables(WORLD)
- \*5 最新世界各国要覧(東京書籍)





## Cost Estimation Borne by the HMG/N

### 1. Land Acquisition and House Compensation Cost

	Land Acquisition	House Acquisition
Section I	(Both Land and House acquisition, estimated 50% of B/D study, considering that actual land acquisition will be done 50% of area within ROW)	
	Total	5,500,000 NRs
Section II-1	50% of A/C study	
	Area (m <sup>2</sup> )	311287
	Rate (NRs)	20
	Cost	6,225,740
	Total	25,820,000 NRs
Section II-2	50% of A/C study	
	Area (m <sup>2</sup> )	233,328
	Rate (NRs)	20
	Cost	4,666,550
	Total	23,170,000 NRs
Section II-3	Area (m <sup>2</sup> )	587,440
	(50% of estimated area within ROW)	
	Rate (NRs)	35
	(According to A/C study)	
	Cost	9,333,100
	Total	20,560,000 NRs
	Number	99
	(within construction width)	
	Rate (NRs)	200,000
	(According to A/C study)	
	Cost	19,800,000

### 2. Forest

Estimation at the rate of 5 persons for each Section for 4 months a year with average salary of 6000 NRs/Month

5 persons x 4 months x 6000 Nrs/month	= 120,000 NRs/section/year
Transportation (Lumpsum)	= 300,000 NRs/section/year
Administrative	= 60,000 NRs/section/year
Total	= 480,000 NRs/section/year

### 3. Maintenance office construction

Ref. attached layout plan. Cost of construction for Nepalthok and Khurkot offices are 20% as that of Banepa or Sindhuli Bazar office.

#### 4. Maintenance Administration

Office staff according to the attached sheet.

Average salary = 3,000 NRs/month

Allowance, office expenditure at 100 % of total salary

#### 5. Material

Average distance of cross drainage = 150 m

Gabion  $1 \text{ m}^3/150\text{m/year}$

Riprap  $1 \text{ m}^3/150\text{m/year}$

Gabion wire  $32.5 \text{ kg}/0.15 = 216.67 \text{ kg} \times 36 \text{ NRs} = 7800 \text{ NRs/km/year}$

Cement  $150 \text{ kg}/0.15 = 1000 \text{ kg} \times 5.1 \text{ NRs} = 5100 \text{ NRs/km/year}$

Total = 12,900 NRs/km/year

#### 6. Fuel

According to B/D study, fuel consumption is assumed to be 111 litre/hr

$700 \text{ m}^3/\text{km/year}$  of deposits are cleaned at capacity of  $40 \text{ m}^3/\text{hr} = 17.5 \text{ hr/km/year}$

$17.5 \text{ hr/km/year} \times 111 \text{ litre/hr} = 1942 \text{ litre/km/year} \times 12 \text{ NRs/litre} = 23310 \text{ NRs/km/year}$

#### 7. Labour

$2 \text{ persons/km/day} \times 100 \text{ NRs/day} \times 25 \text{ day} \times 12 \text{ month} = 60,000 \text{ NRs/km/year}$

#### 8. Spare

Annual spare equipment cost = 5% of equipment cost given in A/C study

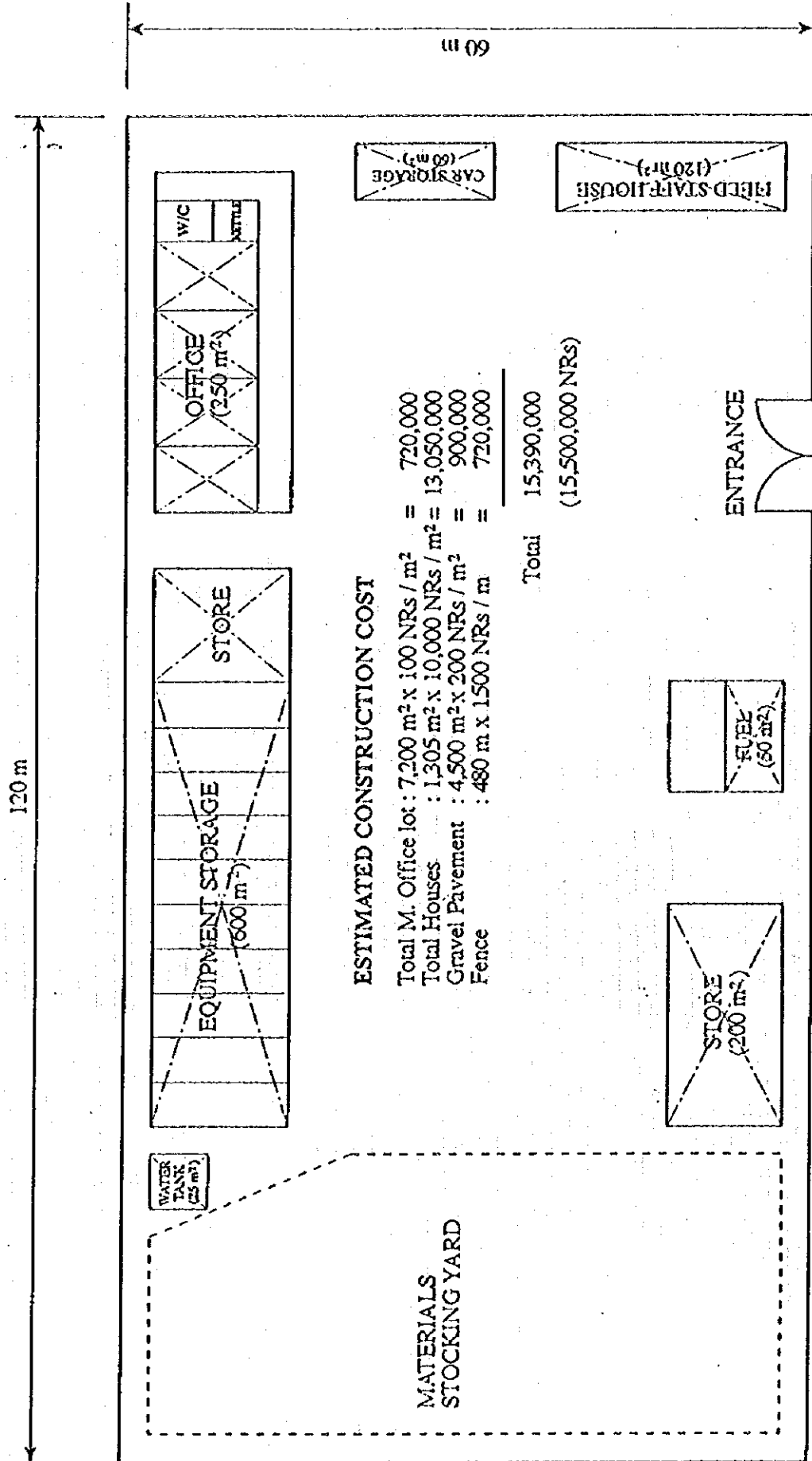
$231,000,000 \times 0.05 / 159 \text{ km} = 72,600 \text{ NRs/km/year}$

Tentative Project Implementation Schedule and Budget Allocation Schedule by HMG/N

Calendar Year	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
Detailed Design and Construction (Grant Aid)										
Construction of Maintenance office & Maintenance of Section I and Handed Over Sections (HMG Force Account)										
Land Acquisition and House Compensation (HMG Force Account)										
										Total
Land Acquisition		3,500,000								5,500,000
	Sec I		8,600,000	8,600,000	8,620,000					25,820,000
	Sec II-1			7,720,000	7,720,000	7,730,000				23,170,000
	Sec II-2	6,850,000	6,850,000	6,860,000						20,560,000
	Sec II-3									
Forest		240,000	480,000	480,000	480,000	240,000				1,920,000
Maint. Office Construction				15,500,000	15,500,000		3,100,000	3,100,000		37,200,000
Maint. Administration	36,000	180,000	2,356,000	2,556,000	2,556,000	4,716,000	5,904,000	6,984,000	8,136,000	41,796,000
Maint. Allowance & Expenditure	36,000	180,000	2,356,000	2,556,000	2,556,000	4,716,000	5,904,000	6,984,000	8,136,000	41,796,000
Material		478,000	478,000	478,000	478,000	478,000	478,000	478,000	478,000	4,302,000
	Sec I				252,000	232,000	303,000	503,000	503,000	2,518,000
	Sec II-1					206,000	413,000	413,000	413,000	1,558,000
	Sec II-2			465,000	465,000	658,000	658,000	658,000	658,000	4,220,000
	Sec II-3									
Fuel		862,000	862,000	862,000	862,000	862,000	862,000	862,000	862,000	7,758,000
	Sec I				909,000	909,000	909,000	909,000	909,000	3,454,000
	Sec II-1					746,000	746,000	746,000	746,000	3,730,000
	Sec II-2									
	Sec II-3			1,189,000	1,189,000	1,189,000	1,189,000	1,189,000	1,189,000	8,323,000
Labour		2,220,000	2,220,000	2,220,000	2,220,000	2,220,000	2,220,000	2,220,000	2,220,000	19,980,000
	Sec I				2,340,000	2,340,000	2,340,000	2,340,000	2,340,000	14,040,000
	Sec II-1					1,920,000	1,920,000	1,920,000	1,920,000	9,600,000
	Sec II-2									
	Sec II-3			3,060,000	3,060,000	3,060,000	3,060,000	3,060,000	3,060,000	24,200,000
Spair		2,686,000	2,686,000	2,686,000	2,686,000	2,686,000	2,686,000	2,686,000	2,686,000	24,174,000
	Sec I				2,830,000	2,830,000	2,830,000	2,830,000	2,830,000	16,980,000
	Sec II-1					2,320,000	2,320,000	2,320,000	2,320,000	11,600,000
	Sec II-2									
	Sec II-3			3,700,000	3,700,000	3,700,000	3,700,000	3,700,000	3,700,000	25,900,000
<b>Total</b>	<b>72,000</b>	<b>19,196,000</b>	<b>27,288,000</b>	<b>58,932,000</b>	<b>58,423,000</b>	<b>43,778,000</b>	<b>41,742,000</b>	<b>43,902,000</b>	<b>43,166,000</b>	<b>379,617,000</b>
Construction		Sec I	Sec II-3 Phase 1	Sec II-1 Phase 1	Sec II-2 Phase 1	Sec II-1 Phase 2	Sec II-2 Phase 2			
Handing Over			Sec I			Sec II-3 Phase 1	Sec II-1 Phase 1	Sec II-3 All	Entire Section	
Maintenance			Sec I			Sec II-3 Phase 1	Sec II-1 Phase 1	Sec II-3 All	Entire Section	

Calendar Year	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	Max. No. of Position
<b>POSITION</b>											
Project Manager	1	1	1	1	1	1	1	1	1	1	1
Coordinator	1	1	1	1	1						1
Maintenance Engineer	1	1	2	2	2	2	2	2	2	2	2
Bio Engineer				1	1	2	2	2	2	2	2
Maintenance Overseer		2	2	2	2	4	4	4	5	5	5
Supervisor			2	2	2	4	6	7	9	10	10
<b>MECHANICAL STAFF</b>											
Mechanical Engineer			1	1	1	2	2	2	2	2	2
Senior Mechanics & Other			6	6	6	10	10	10	10	10	10
Senior Operator			5	5	5	8	11	14	17	17	17
Mechanics & Others			14	14	14	28	35	42	49	49	49
Junior Mechanics			9	9	9	16	17	18	19	19	19
Helper			6	6	6	12	17	22	27	27	27
Driver/Heavy Driver			8	8	8	16	22	26	30	30	30
<b>ADMINISTRATIVE STAFF</b>											
Nayab Subba			2	2	2	4	4	4	4	4	4
Kharidar			1	1	1	2	3	4	5	5	5
Wireless Operator			1	1	1	2	3	4	5	5	5
Low Level (Peon, Guard etc.)			10	10	10	20	27	34	41	41	41
<b>Total Man Year</b>	<b>1</b>	<b>5</b>	<b>71</b>	<b>72</b>	<b>72</b>	<b>133</b>	<b>166</b>	<b>196</b>	<b>228</b>	<b>229</b>	
<b>* 36,000</b>	<b>36,000</b>	<b>180,000</b>	<b>2,556,000</b>	<b>2,592,000</b>	<b>2,592,000</b>	<b>4,788,000</b>	<b>5,976,000</b>	<b>7,056,000</b>	<b>8,208,000</b>	<b>8,244,000</b>	

# TENTATIVE LAYOUT PLAN OF THE BANEPA MAINTENANCE OFFICE



## ESTIMATED CONSTRUCTION COST

Total M. Office lot :	7,200 m <sup>2</sup> x 100 NRs / m <sup>2</sup>	=	720,000
Total Houses :	1,305 m <sup>2</sup> x 10,000 NRs / m <sup>2</sup>	=	13,050,000
Gravel Pavement :	4,500 m <sup>2</sup> x 200 NRs / m <sup>2</sup>	=	900,000
Fence :	480 m x 1500 NRs / m	=	720,000
<b>Total</b>			<b>15,390,000</b>
			<b>(15,500,000 NRs)</b>

## B.6 参考資料リスト

- (1) National/Regional Development Plan, (8th Plan)
- (2) Organization of HMG/N, Ministry of Works and Transport and DOR
- (3) Annual Budget and Expenditure for Road Construction and Maintenance in the part 5 years
- (4) Standard Drawings, DOR
- (5) Nepal Road Standard (2027-2045), DOR
- (6) Road Development Plans
- (7) Nepal Road Statistics 1994
- (8) Organization and Manpower of DOR, 1994
- (9) International Assistance Project List
- (10) Interim Rate Analysis Norms for Bio-Engineering and Guidelines on Bio-Engineering, (DOR)
- (11) Vegetation Structures for Stabilishing Highway Slopes, (DOR)
- (12) MountainRisk Engineering Handbook (ICIMOD)
- (13) Aniko Highway Maintenance Project, On-the-Job Training in Bioengineering Methods for DOR staff  
Training Manual, 194, ITECO AG
- (14) ADB, Second Road Improvement Project Rapti Road, D/D Report, Vol. VI, Appendix 9, Vegetation  
Structures

# TRANSPORT SECTOR BUDGET FOR FISCAL YEAR 2052/2053

## 9-8 TRANSPORT (Road Sub-Sector)

Allocated Development Budget Amount: Rs. 3,887,108

in NRs. '000

B S No:	Name	HMG/N	World Bank	A D B	Japan	India	German	Swiss	UNCDF UNDP	K/ODA	China	Grand Total
<b>National Highway (270,500)</b>												
9-8-1	Mechi Rajmarg (Phidim - Taplejung Road)	20,000		10,000								30,000
9-8-2	Sagarmatha Rajmarg (Gaighat - Dhotel Road)	20,000										20,000
9-8-3	Banepa - Sindhuli - Bardibas	1,000			44,500							45,500
9-8-4	Rapti Rajmarg (Ameliya - Musikot Road)	25,000										25,000
9-8-5	Karnali Rajmarg (Surkhet - Jumla Road)	60,000		40,000								100,000
9-8-6	Mahakali Rajmarg (Bairadi - Darchula Road)	50,000										50,000
<b>Feeder Roads (654,200)</b>												
9-8-7	Ilam - Mai - Pokhari	1,000										1,000
9-8-8	Phikkal - Sri Antu Danda	1,000										1,000
9-8-9	Basantpur - Terashum Road	10,000										10,000
9-8-10	Basantpur - Chainpur - Khadbari Road	6,000										6,000
9-8-11	Terashum - Myaglung - Mulpani	7,000										7,000
9-8-12	Bhendatar - Dadabazar - Rabi	10,000										10,000
9-8-13	Katari - Okhaldhunga	30,000		20,000					34,200			50,000
9-8-14	Bardibas - Jaleswar - Janakpur - Dhanusha	6,200										40,400
9-8-15	Charikot - Dolkha Road	5,000						4,000				9,000
9-8-16	Khimi - Manthali - Ramechhap Road	30,000										30,000
9-8-17	Kurtha - Mahadaya - Loharpatti - Rauja - Ramgopalpur - Samsi	5,000										5,000
9-8-18	Jerpai - Gokarneswar	2,000										2,000
9-8-19	Chahare Tokha	10,000										10,000
9-8-20	Galkhhi - Devidhat	5,000										5,000
9-8-21	Dumre - Beshisahar Road	15,000	100,000									115,000
9-8-22	Sajhandi - Juthapauwa - Sunde Dhunga	4,000										4,000
9-8-23	Ruudrabeni - Burtiberg - Baglung - Dhoopstan	10,000										10,000
9-8-24	Lumbini - Taulihawa - Tilaurakot	6,000										6,000
9-8-25	Baglung - Beni - Jomsom	10,000										10,000
9-8-26	Tulsipur - Purandhara - Surkhet	2,500										2,500
9-8-27	Chinchu - Jajarkot	20,000		10,000								30,000
9-8-28	Surkhet - Rani Pauwa - Dalichha	20,000		10,000								30,000
9-8-29	Sigadhi - Sanphebagar	27,500		115,800								143,300
9-8-30	Khodpe - Bajhang	50,000										50,000
9-8-31	Sahajpur - Dipayal	10,000										10,000
9-8-32	Mahendra Nagar - Daji - Jogabuda - Budhar Road	7,500										7,500



# TRANSPORT SECTOR BUDGET FOR FISCAL YEAR 2052/2053

## 9-8 TRANSPORT (Road Sub-Sector)

Allocated Development Budget Amount : Rs. 3,887,108

in NRs. '000

B/S No:	Name	HMG/N	World Bank	A D B	Japan	India	German	Swiss	UNCDF	U K/ODA	China	Grand Total
9-8-33	Sanphebagar - Mariadi	10,000										10,000
9-8-34	Sanphebagar - Magsalen	15,000										15,000
9-8-35	Baitadi - Saibanjhi - Jhulaghat	12,500										12,500
9-8-36	Biratnagar - Rangeli Road				1,000							1,000
9-8-37	Chitara - Chakradhatti - Birpur				1,000							1,000
9-8-38	Postal Roads	10,000										10,000
<b>Reconstruction &amp; Maintenance (2,305,008)</b>												
9-8-39	Road Maintenance and Rehabilitation Project	68,000	600,000					12,000				680,000
9-8-40	Road Maintenance Project	22,000								100,000		122,000
9-8-41	Second Road Improvement Project	100,000		495,000								595,000
9-8-42	Third Road Improvement Project	30,000		100,000								130,000
9-8-43	Maintenance & Rehabilitation Coordination Unit	1,500						4,800				11,100
9-8-44	Other Road Maintenance & Improvement Project	344,000										344,000
9-8-45	Road Flood Rehabilitation Project	738										738
9-8-46	Duhabi - Inarwa Road	7,500										7,500
9-8-47	Surface Improvement Project EROM	1,500								18,500		20,000
9-8-48	MRM, Belbari - Chouharwa	3,545		35,125								38,670
9-8-49	MRM, Koshi Barrage	30,000										30,000
9-8-50	Amiko Highway Maintenance Project	20,000						80,000				100,000
9-8-51	Naubise - Malekhu - Mugling - Marvandi - Rehabilitation Project	20,000	130,000								10,000	150,000
9-8-52	Pokhara - Baglung	1,000										1,000
9-8-53	Michaya - Kajari Road	2,000										2,000
9-8-54	Gorusinge - Sandhikhark	15,000										15,000
9-8-55	Nepalgunj - Bagauda Road (with Bridge)	2,500										2,500
9-8-56	Chakachake - Linwad Road	2,500										2,500
9-8-57	Bhardaha - Hsunwan Nagar	2,000										2,000
9-8-58	Other Road Black top	11,000		30,000								41,000
<b>Urban Roads (71,000)</b>												
9-8-59	Bishnumati Link Road (Kathmandu)	1,000		10,000								11,000
9-8-60	Kathmandu Valley Urban Road	60,000										60,000
<b>Bridges (409,900)</b>												
9-8-61	Suspension Bridges (Main Road)	42,113						57,687				99,800
9-8-62	Bagmati Bridge Thapathali	4,500			45,500							50,000
9-8-63	7th River Bridges (Koshi)	1,000									9,000	10,000

# TRANSPORT SECTOR BUDGET FOR FISCAL YEAR 2052/2053

9-8 TRANSPORT (Road Sub-Sector)

Allocated Development Budget Amount : Rs. 3,887,108

in NRs. '000

B S No:	Name	HMG/N	World Bank	A D B	Japan	India	German	Swiss	UNCDF UNDP	U K/ODA	China	Grand Total
9-8-64	Babai Bridge (Dang)	14,000										14,000
9-8-65	Kobajpur-Mahakali Bridges (with 17 Bridges)	5,000	25,000			20,000						50,000
9-8-66	Syali River Bridge (Kanchanpur)	17,000										17,000
9-8-67	Braunagar-Rangeli Road with Bridge (Morang)	1,000								9,000		10,000
9-8-68	Samari Bridge Tribhuvan Rajpath (Makawanpur)	500					9,500					10,000
9-8-69	Bridge & Culvert Maintenance Construction	39,100		100,000								139,100
9-8-70	Bridge Maintenance Programme	10,000										10,000
<b>Survey, Design, Study and Construction ( 12,500 )</b>												
9-8-71	Feasibility Study & Design of Roads & Bridge	12,500										12,500
<b>Miscellaneous Projects ( 54,000 )</b>												
9-8-72	Project Directorate	9,000		25,000								34,000
9-8-73	Land Compression	20,000										20,000
9-8-78	Miscellaneous Road Construction & Improvements	110,000										110,000
FY 052/053 Grand Total ---->		1,565,696	855,000	1,000,925	90,000	22,000	9,500	158,487	34,200	132,300	19,000	3,887,108
Percentage ---->		40.3%	22.0%	25.7%	2.3%	0.6%	0.2%	4.1%	0.9%	3.4%	0.5%	100.0%









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