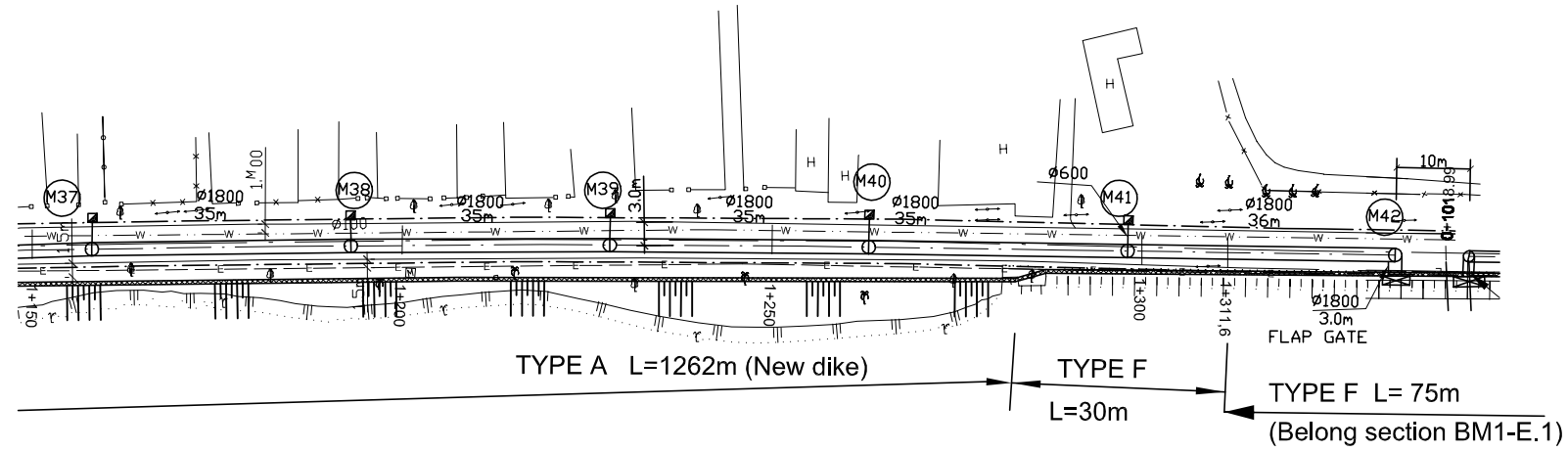
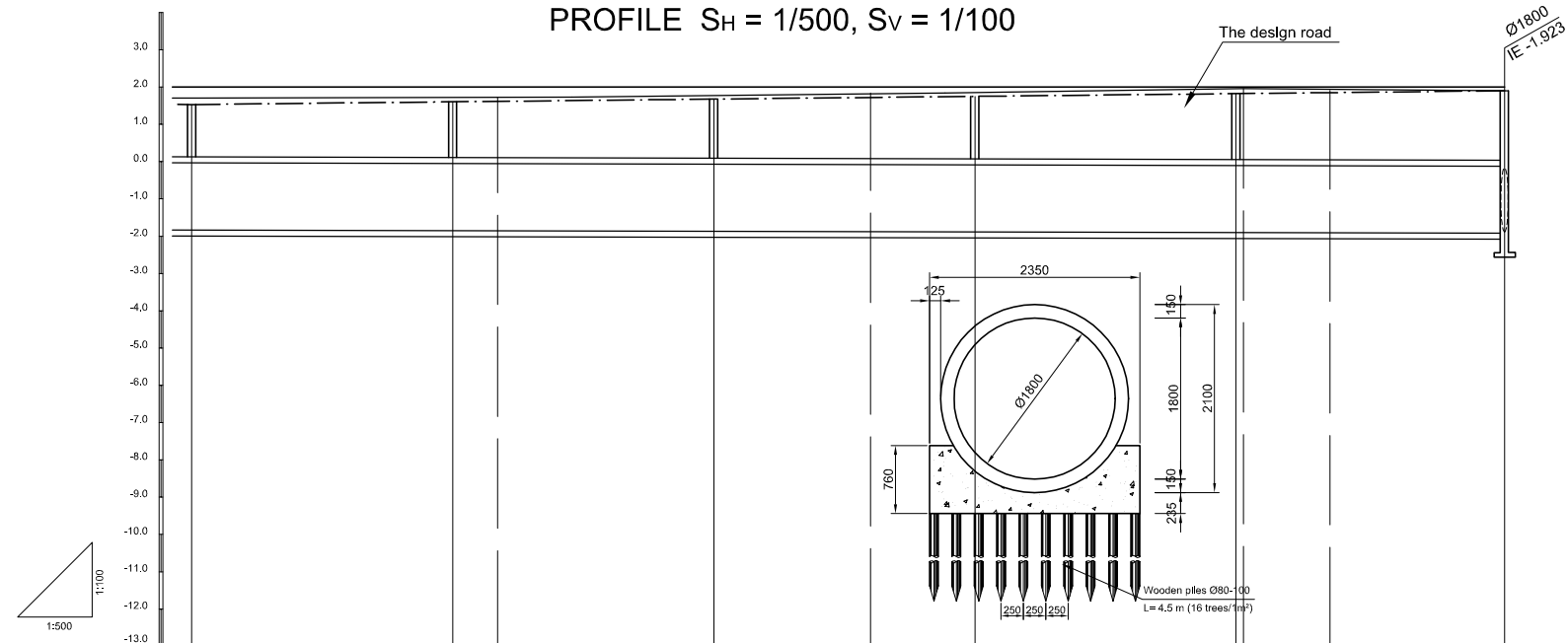


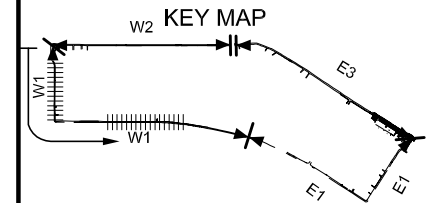
PLAN S = 1/500



PROFILE $S_H = 1/500, S_V = 1/100$



Location of Survey	1+200							1+250	1+300		
Manhole Number	M37	M38		M39		M40		M41	M42		
Diameter (mm)	Ø1800	Ø1800	Ø1800	Ø1800	Ø1800	Ø1800	Ø1800	Ø1800	Ø1800	Ø1800	
Gradient (‰)	0.5‰	0.5‰	0.5‰	0.5‰	0.5‰	0.5‰	0.5‰	0.5‰	0.5‰	0.5‰	
Length (m)	35.00	35.00	35.00	35.00	35.00	35.00	36.00				
Gradient of Road (‰)	2.1										
Design road Elevation (m)	1.531	1.605	1.618	1.679	1.723	1.752	1.826	1.828	1.853	1.900	
Existing Ground Elevation (m)	1.70	1.72	1.73	1.77	1.84	1.87	1.96	1.96	1.91	1.90	
Earth Covering (m)	1.418	1.509	1.523	1.600	1.653	1.690	1.781	1.783	1.814	1.873	
Invert Elevation (m)	-1.837	-1.854	-1.855	-1.871	-1.880	-1.888	-1.905	-1.905	-1.911	-1.923	
Total Accumulation Length (m)	1152.00	1187.00	1193.00	1222.00	1243.00	1257.00	1292.00	1293.00	1305.00	1328.00	



LEGEND

- Sewer Line
- Sewer Line
- Planned Sewer
- Existing Sewer
- Telephone Cable
- Electric Cable
- Water Pipe
- Outlet Without Flap Gate
- Outlet With Flap Gate
- Temporary dike
- Design road
- No. 1 Manhole (<600mm)
- No. 2 Manhole (<1000mm)
- No. 3 Manhole (<1500mm)
- No. 4 Manhole (<2000mm)
- Spacial Manhole
- Inlet
- Existing Manhole
- Existing Inlet
- Telephone Cable Inspection Chamber
- Electric Cable Inspection Chamber
- Fire Hydrant

NO.	DATE	DESCRIPTIONS	BY	APRO.

REVISIONS

PROJECT MANAGEMENT UNIT FOR
HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT

THE DETAILED DESIGN STUDY ON HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT PROJECT
IN THE SOCIALIST REPUBLIC OF VIET NAM

PACKAGE B
PUMP DRAINAGE IMPROVEMENT
BEN ME COC(1) AREA
**PLAN AND PROFILE OF SEWER, ROAD
AND TEMPORARY DIKE (15)**
BM1 - W1 (M37-M42)

SCALE : AS SHOWN

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

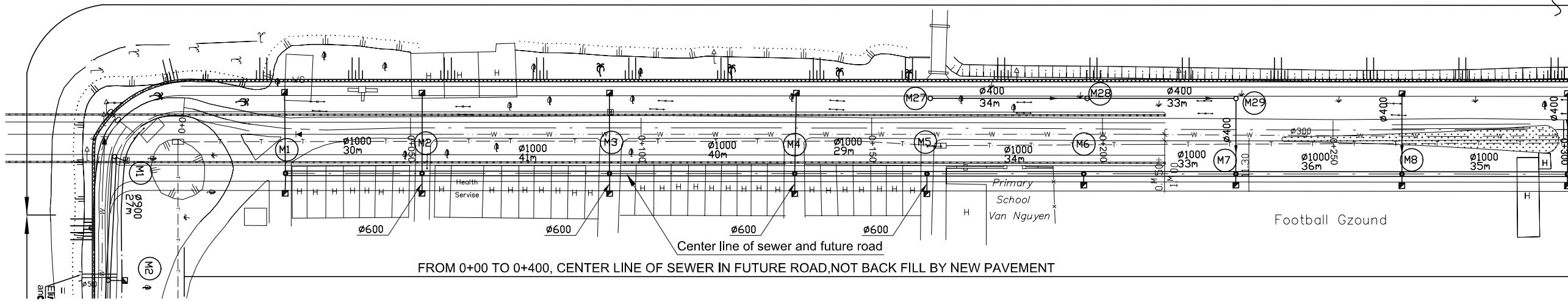
PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED TOKUMASU TOSHIAKI	CHECKED KONDO MASAMI
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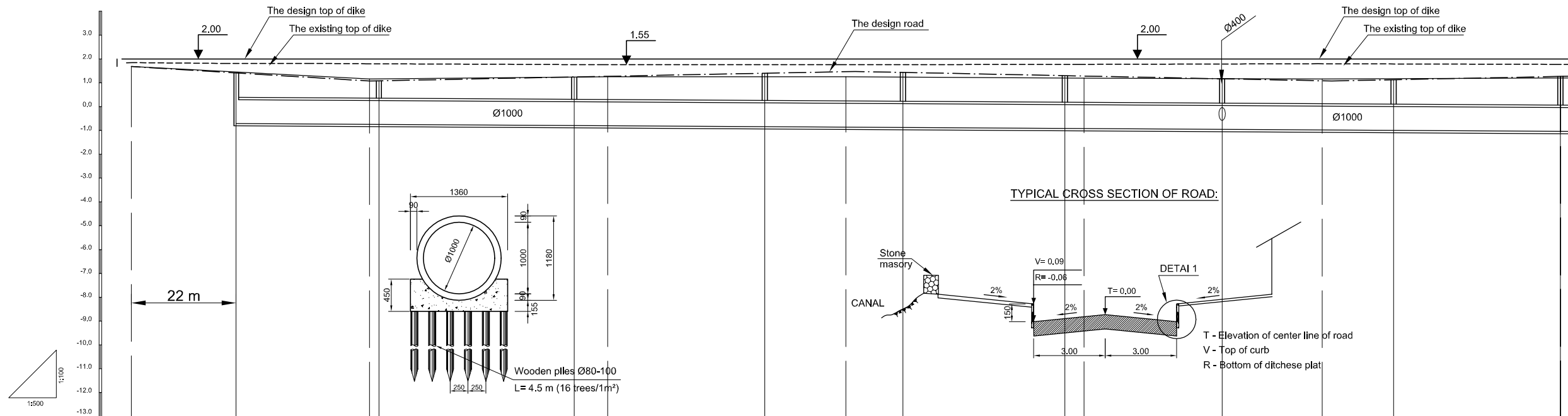
DATE : JUNE 2001 DWG. No. PB - PDI - BMC1- 215

PLAN S = 1/500

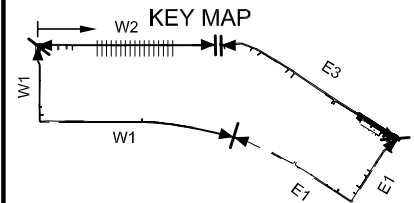
TAU HU CANAL
 TEMPORARY DIKE CONSTRUCTION - TYPE C- (RAISING OF EXISTING REVETMENT CONSTRUCTED BY OWM) L=910m



PROFILE S_H = 1/500, S_V = 1/100



Location of Survey	0.00	0+50	0+100	0+150	0+200	0+250	0+300										
Manhole Number	M1	M2	M3	M4	M5	M6	M7	M8	M9								
Diameter (mm)	ø1000	ø1000	ø1000	ø1000	ø1000	ø1000	ø1000	ø1000	ø1000								
Gradient (‰)	1.2‰	1.2‰	1.2‰	1.2‰	1.2‰	1.2‰	1.2‰	1.2‰	1.2‰								
Length (m)	30.00	41.00	40.00	29.00	34.00	33.00	36.00	35.00									
Gradient of Road (‰)	52.00	11	3	100.00	100.00	3	4	48.00									
Design road Elevation (m)	1.680	1.438	1.122	1.100	1.223	1.244	1.343	1.394	1.400	1.370	1.268	1.256	1.169	1.106	1.100	1.152	1.292
Existing Ground Elevation (m)	1.68	1.43	1.16	1.17	1.24	1.25	1.25	1.23	1.19	1.19	1.17	1.16	1.16	1.17	1.17	1.20	1.21
Earth Covering (m)		0.772	0.751	0.926	0.954	1.092	1.164	1.153	1.092	1.086	1.033	0.996	1.039	1.241	1.427		
Invert Elevation (m)		-0.705	0.740	-0.741	-0.793	-0.800	-0.839	-0.860	-0.873	-0.914	-0.920	-0.954	-0.980	-0.997	-1.040		
Total Accumulation Length (m)	0.00	28.00	30.00	71.00	78.00	111.00	128.00	140.00	174.00	178.00	207.00	228.00	243.00	278.00			



LEGEND

- Sewer Line
- Sewer Line
- Planned Sewer
- Existing Sewer
- Telephone Cable
- Electric Cable
- Water Pipe
- Outlet Without Flap Gate
- Outlet With Flap Gate
- Temporary dike
- Design road
- No. 1 Manhole (<600mm)
- No. 2 Manhole (<1000mm)
- No. 3 Manhole (<1500mm)
- No. 4 Manhole (<2000mm)
- Spacial Manhole
- Inlet
- Existing Manhole
- Existing Inlet
- Telephone Cable Inspection Chamber
- Electric Cable Inspection Chamber
- Fire Hydrant

NO.	DATE	DESCRIPTIONS	BY	APRO.
REVISIONS				

PROJECT MANAGEMENT UNIT FOR
 HO CHI MINH CITY
 WATER ENVIRONMENT IMPROVEMENT

THE DETAILED DESIGN STUDY ON HO CHI MINH CITY
 WATER ENVIRONMENT IMPROVEMENT PROJECT
 IN THE SOCIALIST REPUBLIC OF VIET NAM

PACKAGE B
 PUMP DRAINAGE IMPROVEMENT
 BEN ME COC(1) AREA
**PLAN AND PROFILE OF SEWER, ROAD
 AND TEMPORARY DIKE (16)**
 BM1 - W2 (M1-M9)

SCALE : AS SHOWN

JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

PACIFIC CONSULTANTS INTERNATIONAL

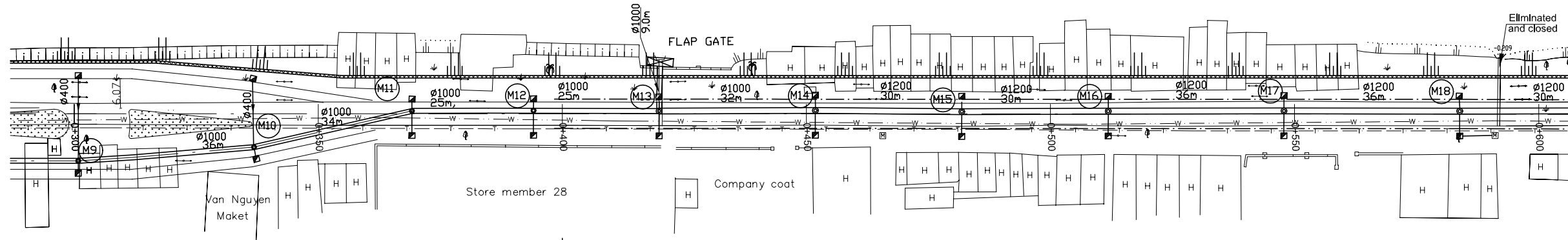
DESIGNED: TOKUMASU TOSHIKI
 CHECKED: KONDO MASAMI

DATE : JUNE 2001 DWG. No. PB - PDI - BMC1- 216

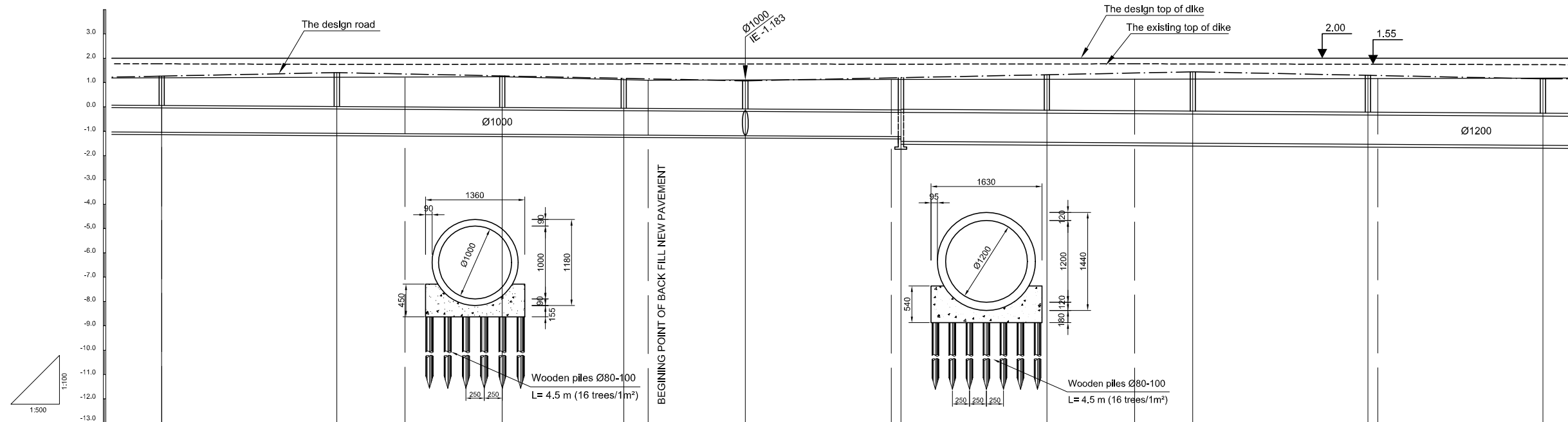
PLAN S = 1/500

TAU HU CANAL

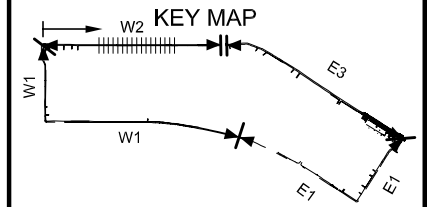
TEMPORARY DIKE CONSTRUCTION - TYPE C - (RAISING OF EXISTING REVETMENT CONSTRUCTED BY OWM) L=910m



BACK FILL BY NEW PAVEMENT FROM 0+400 TO 0+850
 PROFILE $S_H = 1/500$, $S_V = 1/100$



Location of Survey	0+300	0+350	0+400	0+450	0+500	0+550									
Manhole Number	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18					
Diameter (mm)	ø1000	ø1000	ø1000	ø1000	ø1000	ø1200	ø1200	ø1200	ø1200	ø1200					
Gradient (‰)	1.2‰	1.2‰	1.2‰	1.2‰	1.2‰	1.2‰	1.2‰	1.2‰	1.2‰	1.2‰					
Length (m)	36.00	34.00	25.00	25.00	32.00	30.00	30.00	36.00	36.00	36.00					
Gradient of Road (‰)	4		4			4			4						
Design road Elevation (m)	1.292	1.436	1.380	1.300	1.200	1.198	1.100	1.220	1.228	1.348	1.420	1.468	1.324	1.316	1.180
Existing Ground Elevation (m)	1.20 1.21	1.22	1.24	1.24	1.14	1.10	1.11	1.13	1.13	1.14	1.14	1.14	1.16	1.16	1.18
Earth Covering (m)	1.427	1.390	1.333	1.263	1.268	1.193	1.350	1.359	1.485	1.580	1.641	1.540	1.536	1.440	1.476
Invert Elevation (m)	-1.040 -1.039	-1.081	-1.100	-1.123	-1.153	-1.160	-1.183	-1.220	-1.221	-1.457	-1.480	-1.493	-1.536	-1.540	-1.580
Total Accumulation Length (m)	278.00	314.00	328.00	348.00	373.00	378.00	398.00	428.00	430.00	460.00	478.00	490.00	526.00	528.00	562.00



LEGEND

- Sewer Line
- Planned Sewer
- Existing Sewer
- Telephone Cable
- Electric Cable
- Water Pipe
- Outlet Without Flap Gate
- Outlet With Flap Gate
- Temporary dike
- Design road
- No. 1 Manhole (<600mm)
- No. 2 Manhole (<1000mm)
- No. 3 Manhole (<1500mm)
- No. 4 Manhole (<2000mm)
- Special Manhole
- Inlet
- Existing Manhole
- Existing Inlet
- Telephone Cable Inspection Chamber
- Electric Cable Inspection Chamber
- Fire Hydrant

NO.	DATE	DESCRIPTIONS	BY	APRO.
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REVISIONS

PROJECT MANAGEMENT UNIT FOR
 HO CHI MINH CITY
 WATER ENVIRONMENT IMPROVEMENT

THE DETAILED DESIGN STUDY ON HO CHI MINH CITY
 WATER ENVIRONMENT IMPROVEMENT PROJECT
 IN THE SOCIALIST REPUBLIC OF VIET NAM

PACKAGE B
 PUMP DRAINAGE IMPROVEMENT
 BEN ME COC(1) AREA
**PLAN AND PROFILE OF SEWER, ROAD
 AND TEMPORARY DIKE (17)**
 BM1 - W2 (M9-M18)

SCALE : AS SHOWN

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

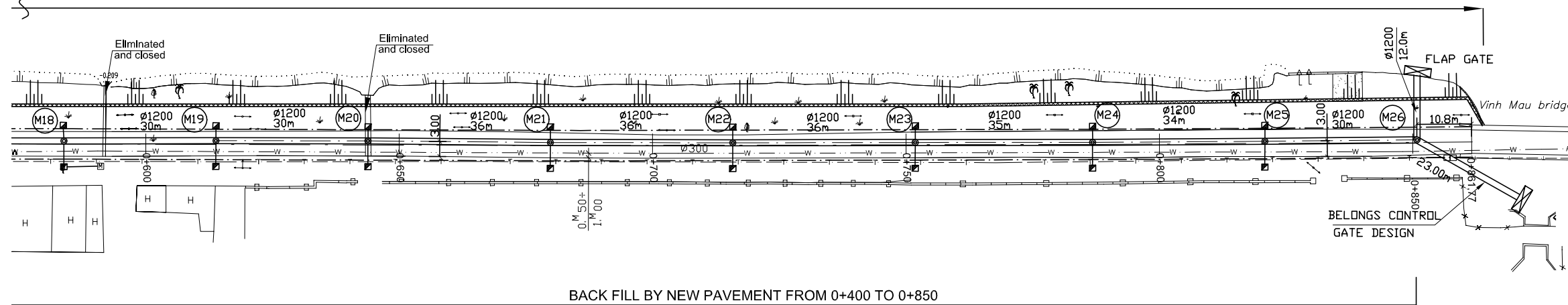
PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED TOKUMASU TOSHIKI	CHECKED KONDO MASAMI
------------------------------	-------------------------

DATE : JUNE 2001 DWG. No. PB - PDI - BMC1- 217

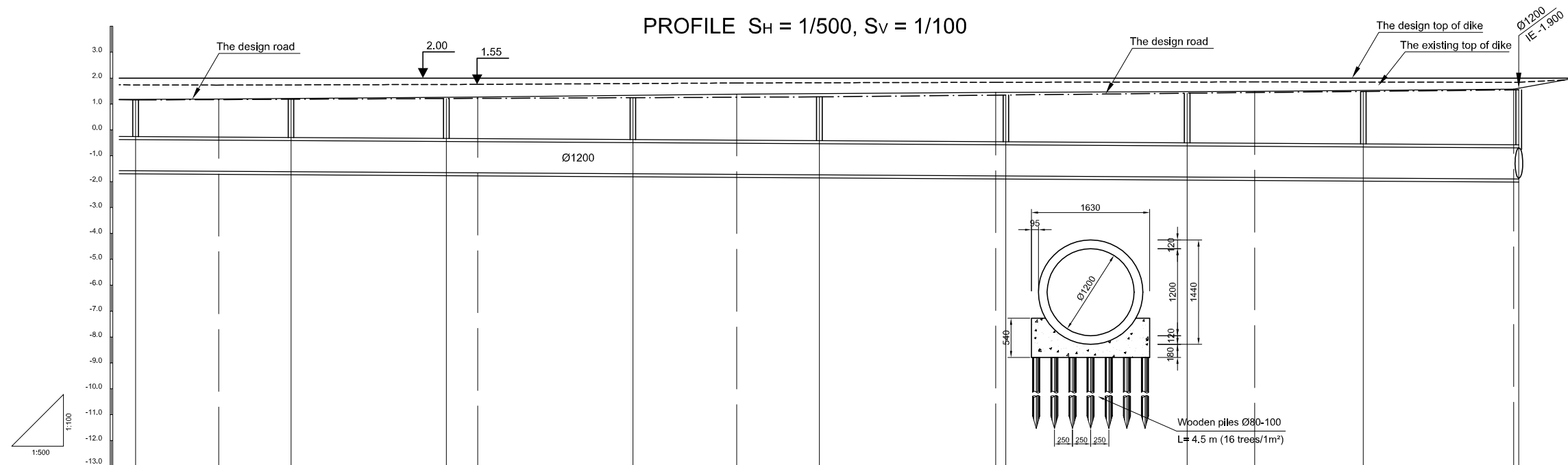
PLAN S = 1/500

TEMPORARY DIKE CONSTRUCTION - TYPE C - (RAISING OF EXISTING REVETMENT CONSTRUCTED BY OWM) L=910m

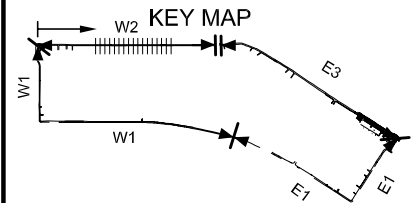


BACK FILL BY NEW PAVEMENT FROM 0+400 TO 0+850

PROFILE S_H = 1/500, S_V = 1/100



Location of Survey	0+600		0+650			0+700		0+750		0+800		0+850		0+861.7
Manhole Number	M18	M19	M20	M21	M22	M23	M24	M25	M26					
Diameter (mm)	Ø1200	Ø1200	Ø1200	Ø1200	Ø1200	Ø1200	Ø1200	Ø1200	Ø1200					
Gradient (‰)	1.2‰	1.2‰	1.2‰	1.2‰	1.2‰	1.2‰	1.2‰	1.2‰	1.2‰					
Length (m)	30.00	30.00	36.00	36.00	36.00	35.00	34.00	30.00						
Gradient of Road (‰)	1													2
Design road Elevation (m)	1.180	1.196	1.207	1.234	1.240	1.267	1.287	1.300	1.368	1.372	1.442	1.468	1.510	1.569
Existing Ground Elevation (m)	1.18	1.19	1.21	1.26	1.27	1.34	1.38	1.40	1.45	1.45	1.46	1.49	1.52	1.57
Earth Covering (m)	1.476	1.503	1.566	1.560	1.642	1.687	1.718	1.828	1.833	1.893	1.988	2.054	2.149	2.150
Invert Elevation (m)	-1.580	-1.600	-1.616	-1.652	-1.660	-1.695	-1.720	-1.738	-1.780	-1.781	-1.823	-1.840	-1.864	-1.900
Total Accumulation Length (m)	562.00	578.00	592.00	622.00	628.00	658.00	678.00	694.00	728.00	730.00	765.00	778.00	799.00	828.00



LEGEND

- Sewer Line
- Sewer Line
- Planned Sewer
- Existing Sewer
- Telephone Cable
- Electric Cable
- Water Pipe
- Outlet Without Flap Gate
- Outlet With Flap Gate
- Temporary dike
- Design road
- No. 1 Manhole (<600mm)
- No. 2 Manhole (<1000mm)
- No. 3 Manhole (<1500mm)
- No. 4 Manhole (<2000mm)
- Spatial Manhole
- Inlet
- Existing Manhole
- Existing Inlet
- Telephone Cable Inspection Chamber
- Electric Cable Inspection Chamber
- Fire Hydrant

NO.	DATE	DESCRIPTIONS	BY	APRO.

REVISIONS

PROJECT MANAGEMENT UNIT FOR
HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT

THE DETAILED DESIGN STUDY ON HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT PROJECT
IN THE SOCIALIST REPUBLIC OF VIET NAM

PACKAGE B
PUMP DRAINAGE IMPROVEMENT
BEN ME COC(1) AREA
**PLAN AND PROFILE OF SEWER, ROAD
AND TEMPORARY DIKE (18)**
BM1 - W2 (M18-M26)

SCALE : AS SHOWN

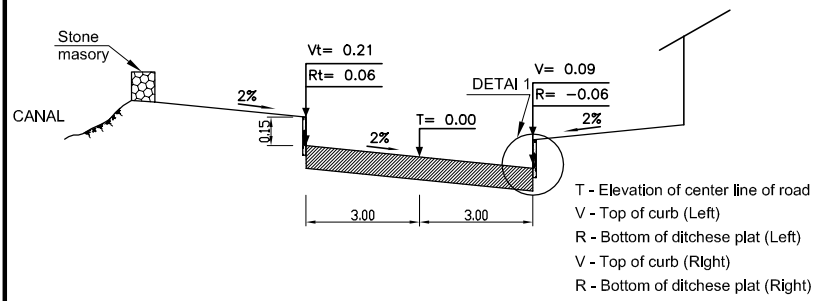
JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED: TOKUMASU TOSHIAKI
CHECKED: KONDO MASAMI

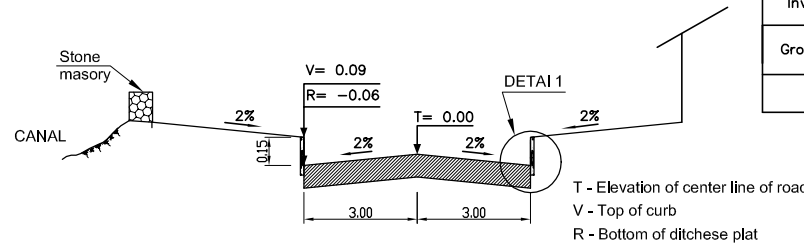
DATE : JUNE 2001 DWG. No. PB - PDI - BMC1-218

TYPICAL CROSS SECTION OF ROAD:



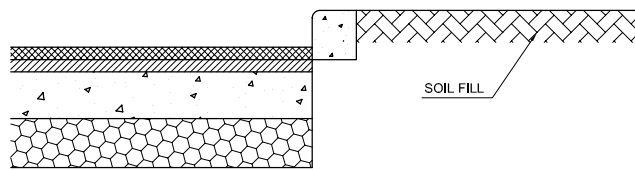
T - Elevation of center line of road
 V - Top of curb (Left)
 R - Bottom of ditchse plat (Left)
 V - Top of curb (Right)
 R - Bottom of ditchse plat (Right)

TYPICAL CROSS SECTION OF ROAD:



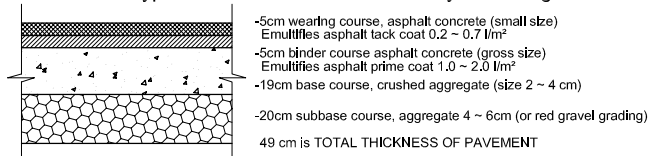
T - Elevation of center line of road
 V - Top of curb
 R - Bottom of ditchse plat

DETAIL 1:

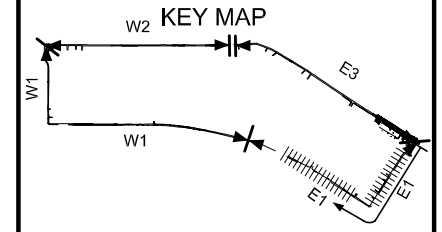
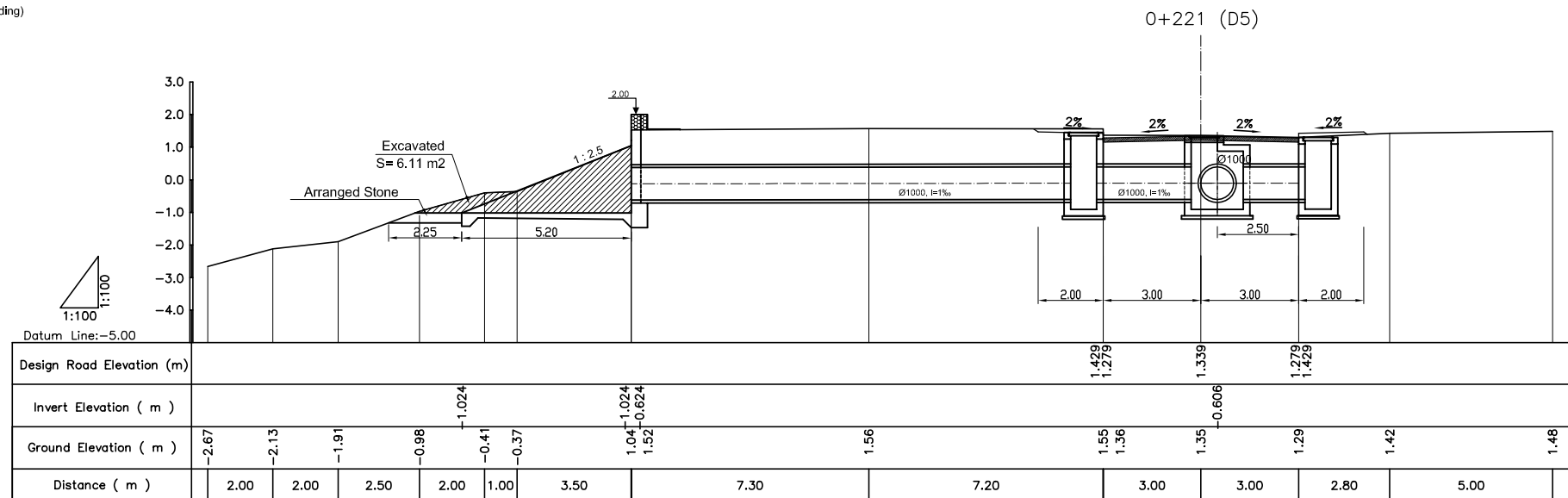
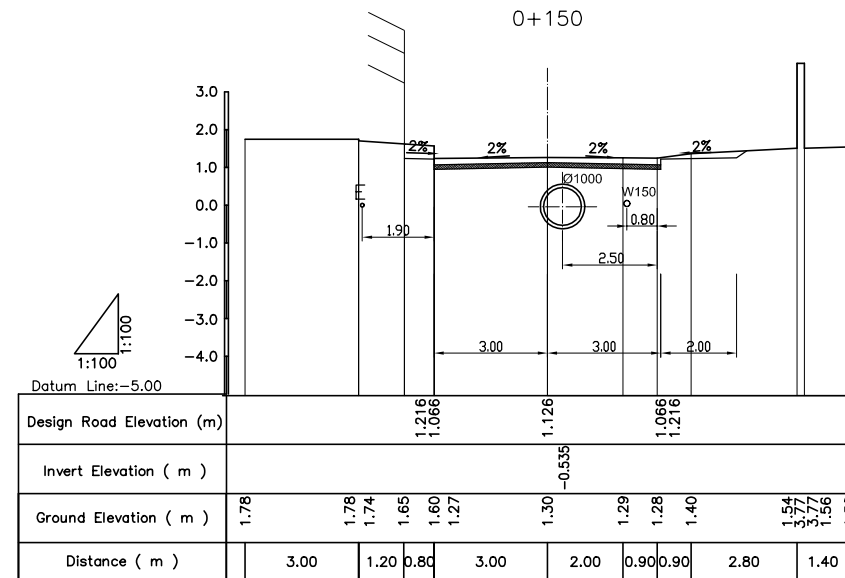
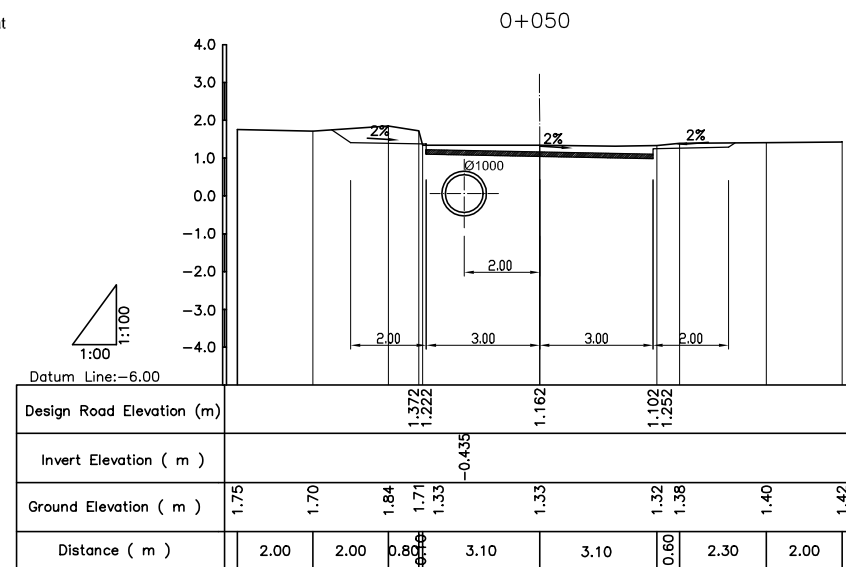
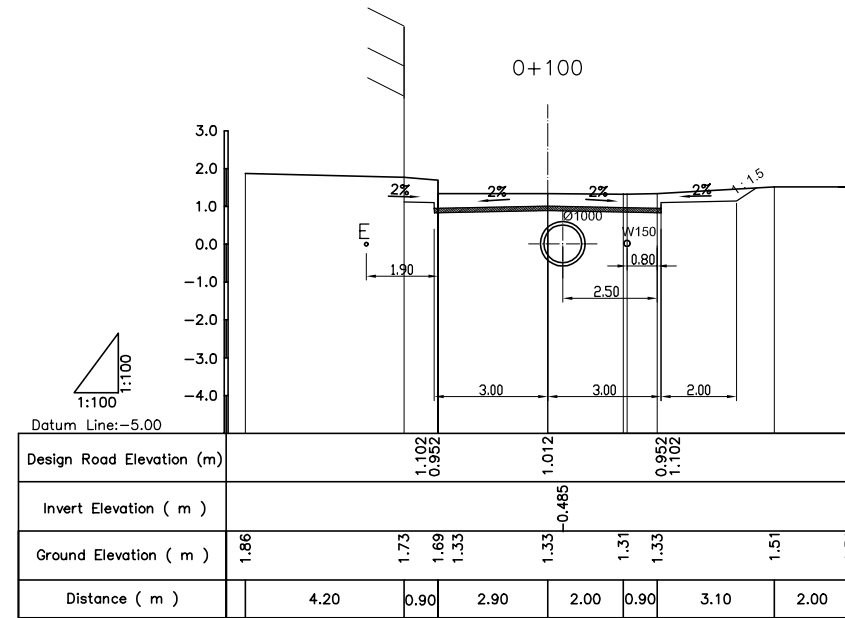
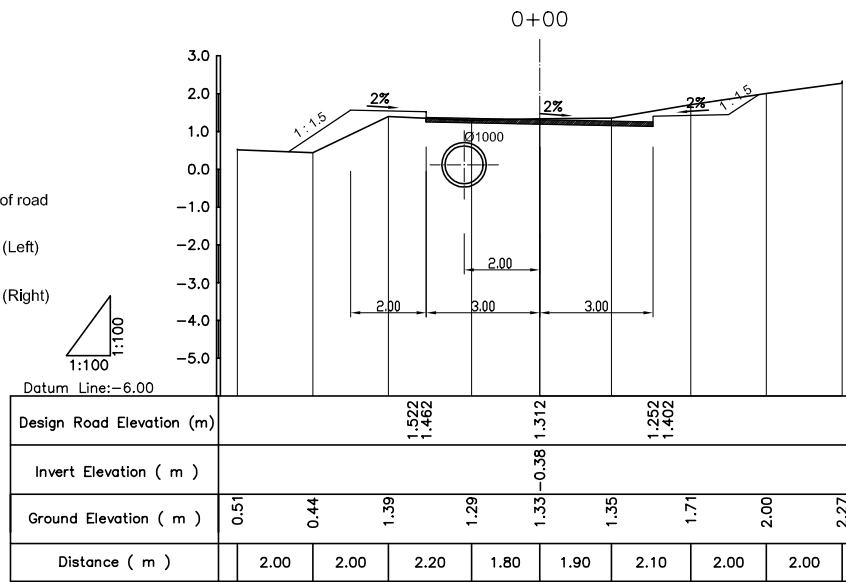


TYPICAL ROAD SURFACE:

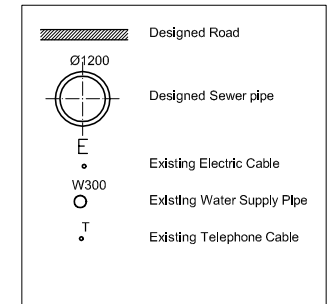
Type P3: demand elastic module $E_{yc} = 1600 \text{ kg/cm}^2$



- 5cm wearing course, asphalt concrete (small size)
Emulifies asphalt tack coat 0.2 ~ 0.7 lm^2
- 5cm binder course asphalt concrete (gross size)
Emulifies asphalt prime coat 1.0 ~ 2.0 lm^2
- 19cm base course, crushed aggregate (size 2 ~ 4 cm)
- 20cm subbase course, aggregate 4 ~ 6cm (or red gravel grading)
- 49 cm is TOTAL THICKNESS OF PAVEMENT



LEGEND



NO.	DATE	DESCRIPTIONS	BY	APRO.

REVISIONS

PROJECT MANAGEMENT UNIT FOR
 HO CHI MINH CITY
 WATER ENVIRONMENT IMPROVEMENT

THE DETAILED DESIGN STUDY ON HO CHI MINH CITY
 WATER ENVIRONMENT IMPROVEMENT PROJECT
 IN THE SOCIALIST REPUBLIC OF VIET NAM

PACKAGE B
 PUMP DRAINAGE IMPROVEMENT
 BEN ME COC(1) AREA

CROSS SECTION OF SEWER, ROAD
 AND TEMPORARY DIKE (1)

BM1-E1(0+00 - 0+221(D5))

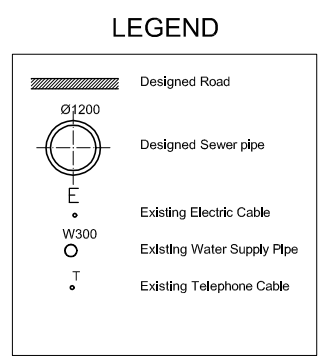
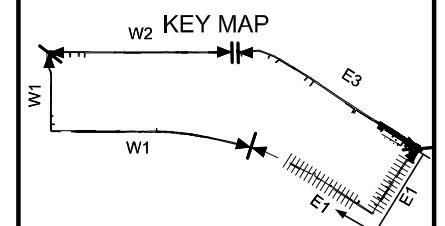
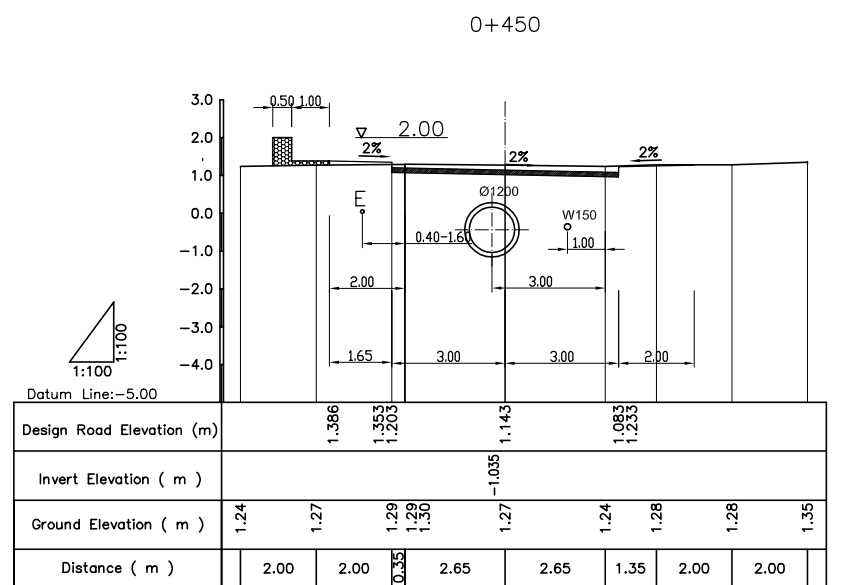
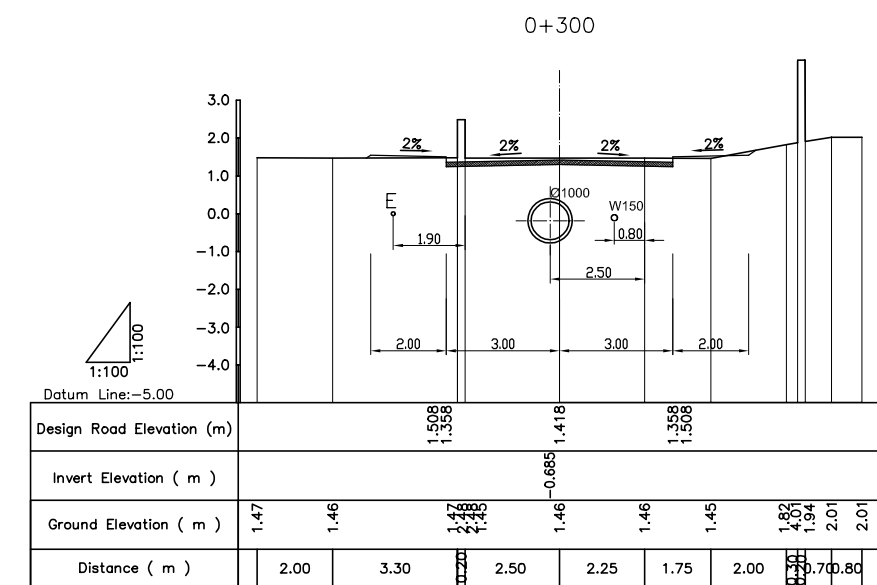
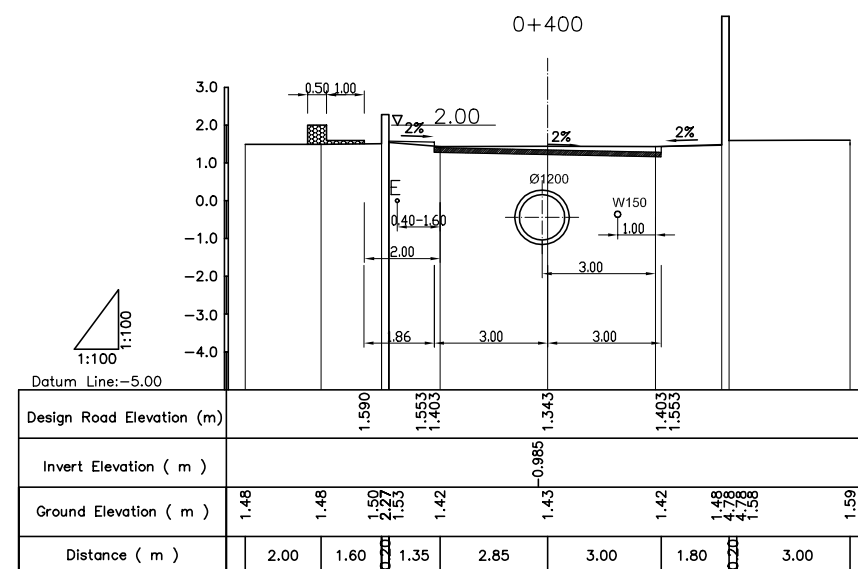
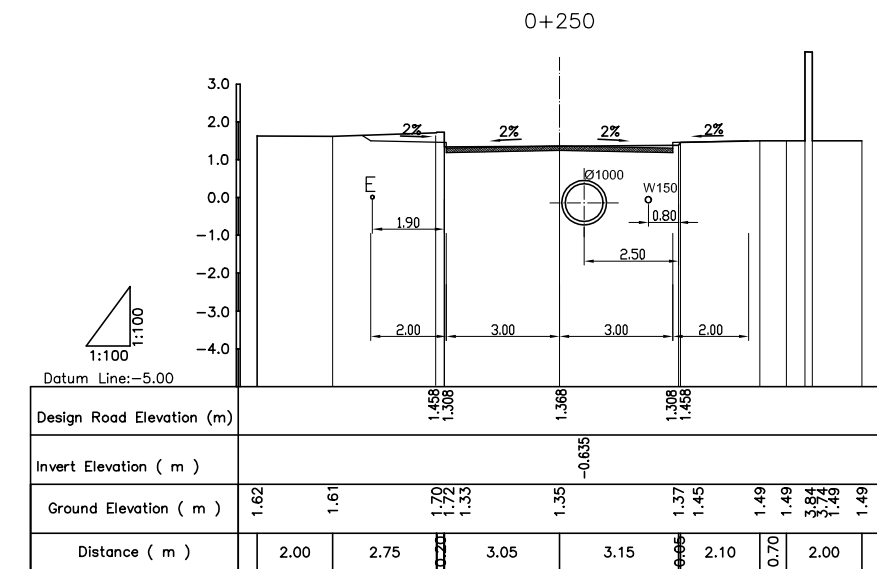
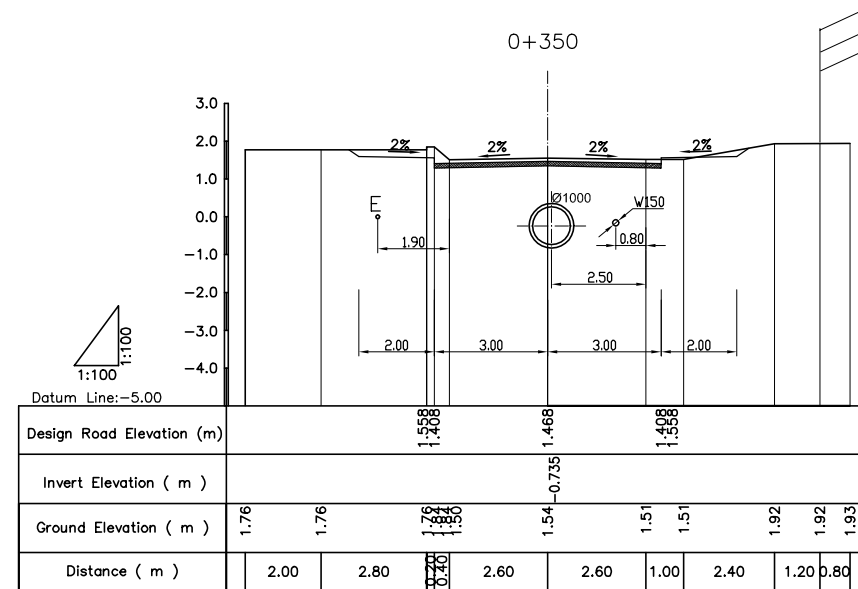
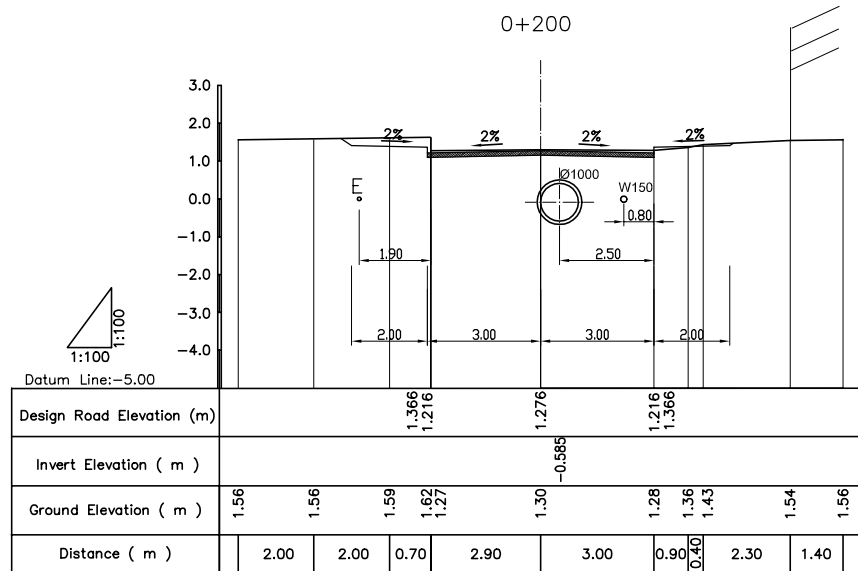
SCALE : 1:100

JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

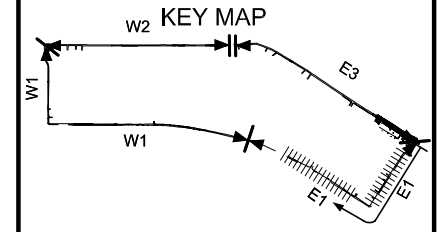
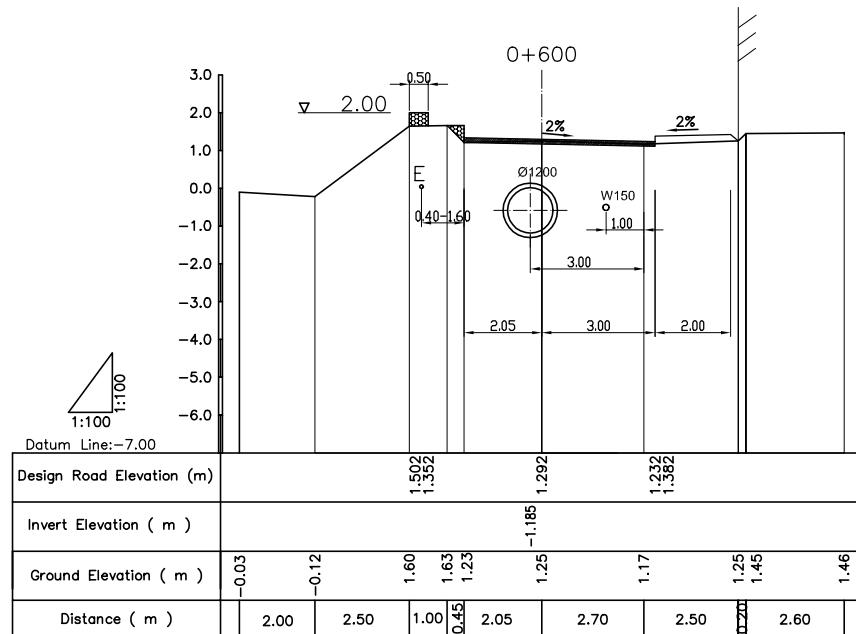
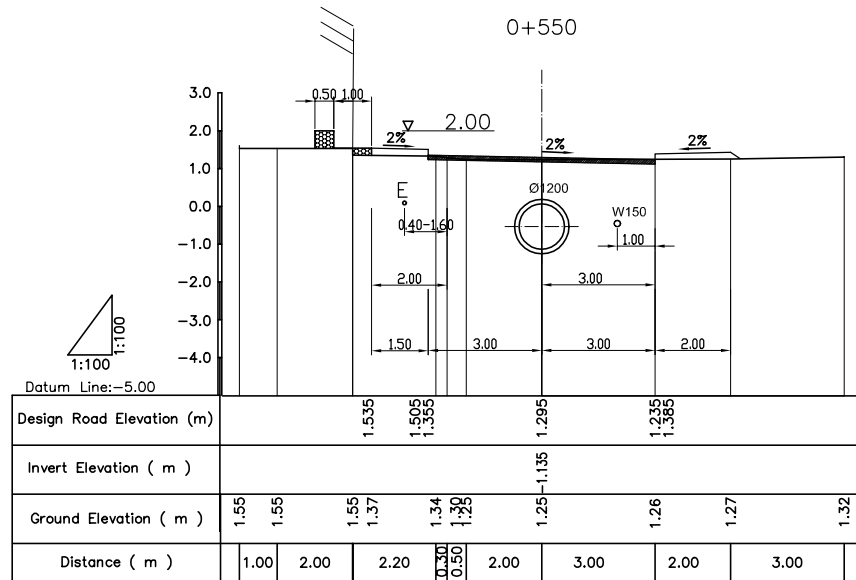
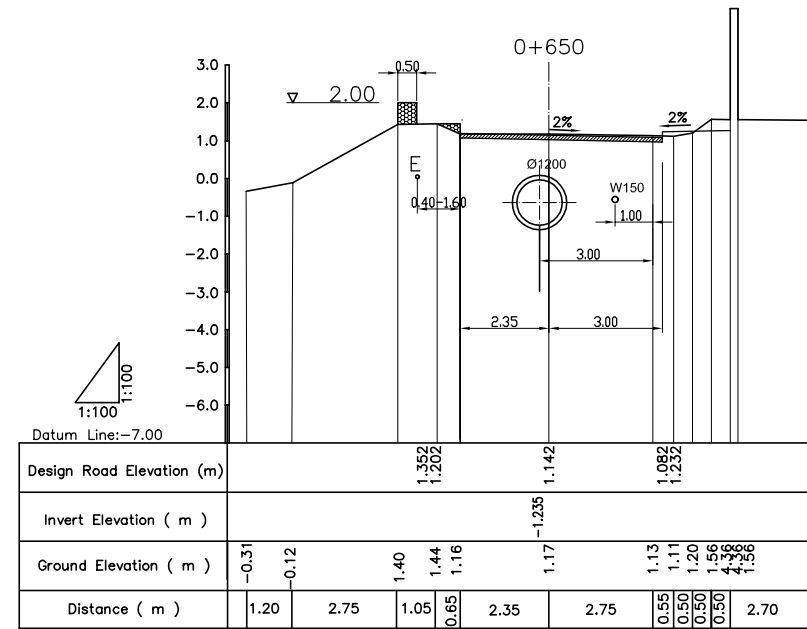
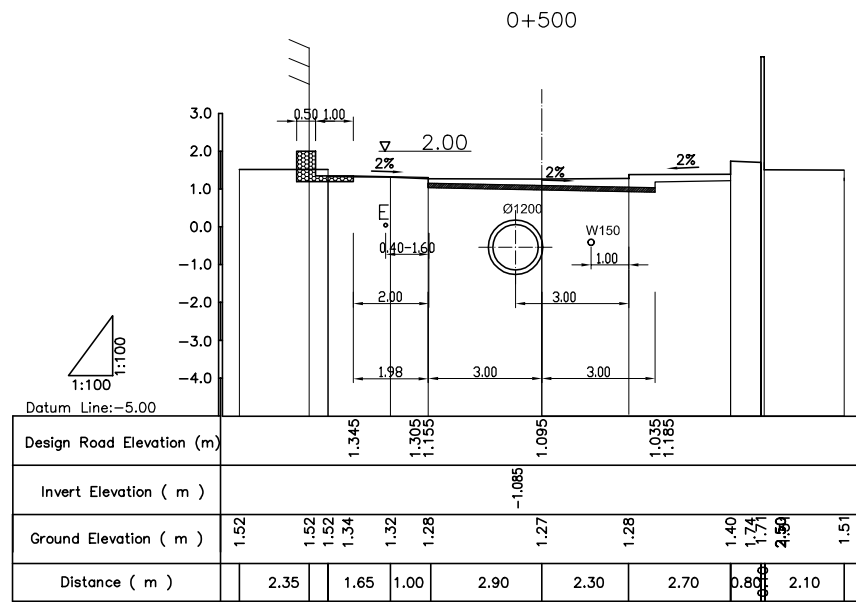
PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED: TOKUMASU TOSHIKI
 CHECKED: KONDO MASAMI

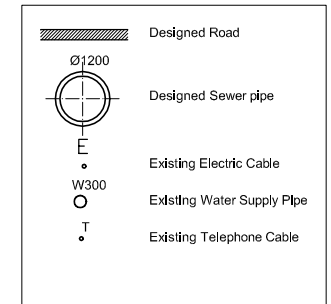
DATE : JUNE 2001 DWG. No. PB - PDI - BMC1-219



NO.	DATE	DESCRIPTIONS	BY	APRO.
REVISIONS				
PROJECT MANAGEMENT UNIT FOR HO CHI MINH CITY WATER ENVIRONMENT IMPROVEMENT				
THE DETAILED DESIGN STUDY ON HO CHI MINH CITY WATER ENVIRONMENT IMPROVEMENT PROJECT IN THE SOCIALIST REPUBLIC OF VIET NAM				
PACKAGE B PUMP DRAINAGE IMPROVEMENT BEN ME COC(1) AREA CROSS SECTION OF SEWER, ROAD AND TEMPORARY DIKE (2) BM1- E1(0+200 - 0+450)				
SCALE :		1:100		
JICA		JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		
PACIFIC CONSULTANTS INTERNATIONAL				
DESIGNED TOKUMASU TOSHIKI		CHECKED KONDO MASAMI		
DATE : JUNE 2001		DWG. No. PB - PDI - BMC1-220		



LEGEND



NO.	DATE	DESCRIPTIONS	BY	APRO.

REVISIONS

PROJECT MANAGEMENT UNIT FOR
HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT

THE DETAILED DESIGN STUDY ON HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT PROJECT
IN THE SOCIALIST REPUBLIC OF VIET NAM

PACKAGE B
PUMP DRAINAGE IMPROVEMENT
BEN ME COC(1) AREA

CROSS SECTION OF SEWER, ROAD
AND TEMPORARY DIKE (3)

BM1- E1(0+500 - 0+650)

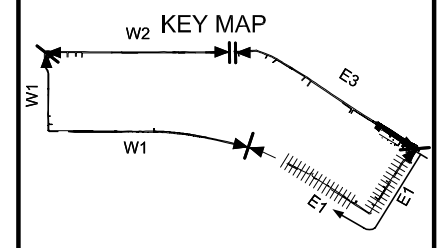
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JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

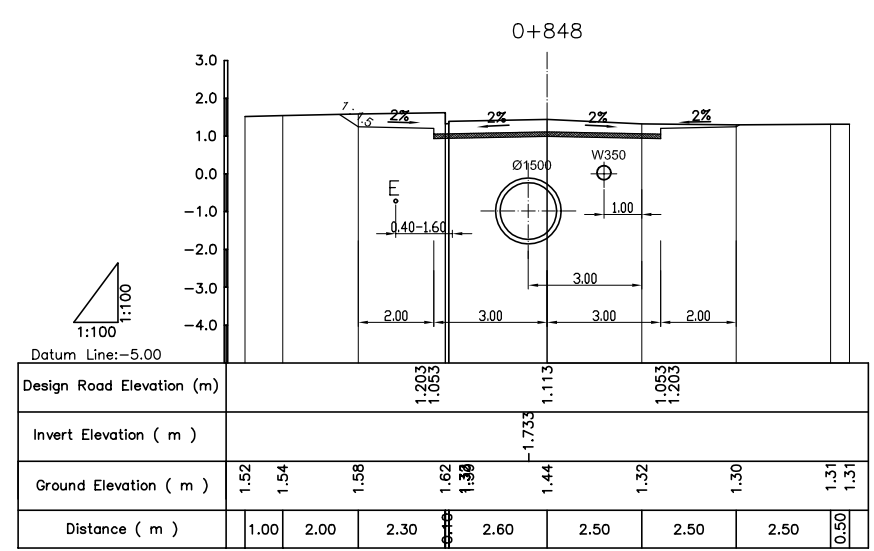
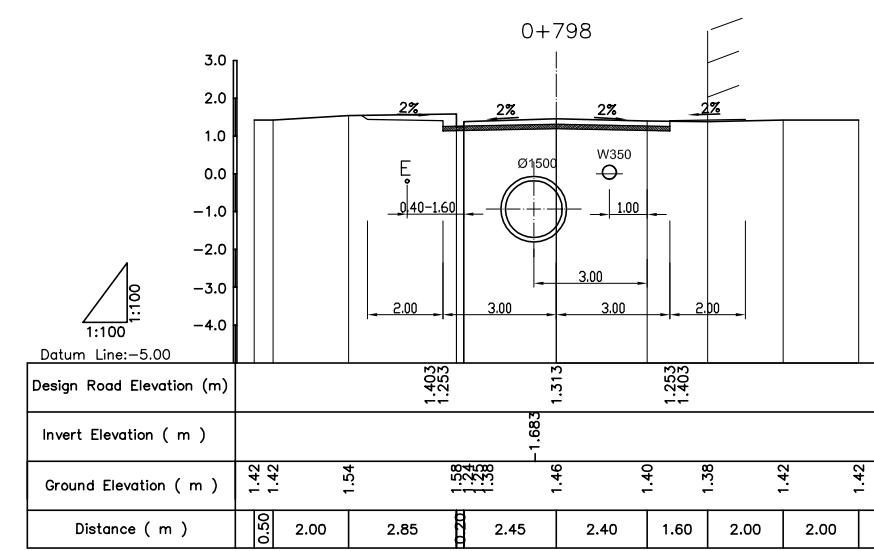
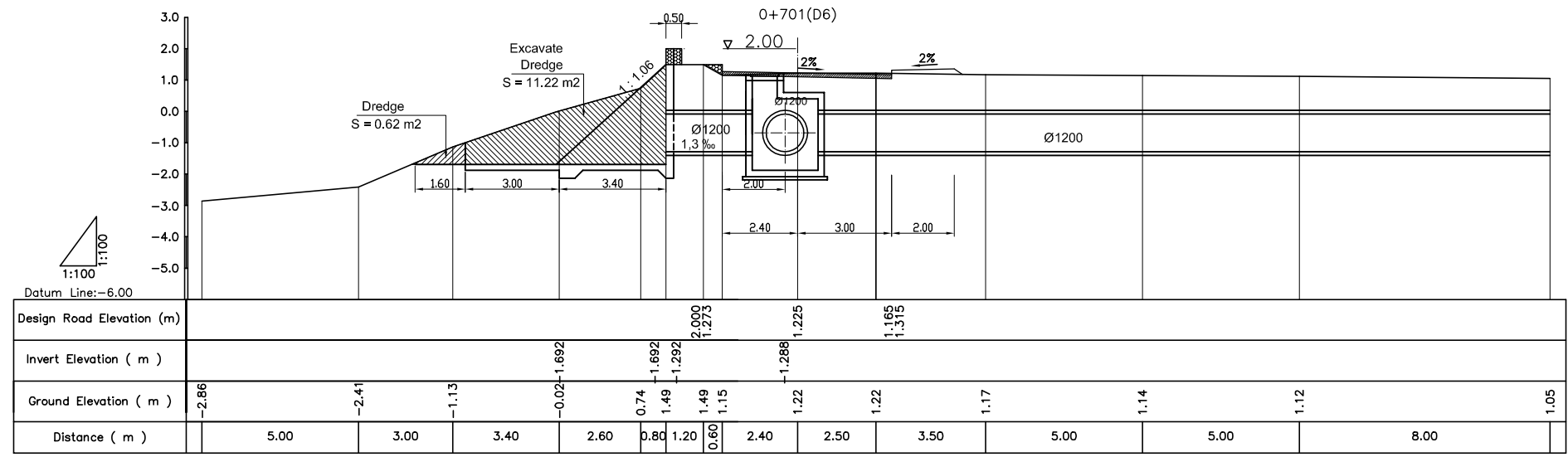
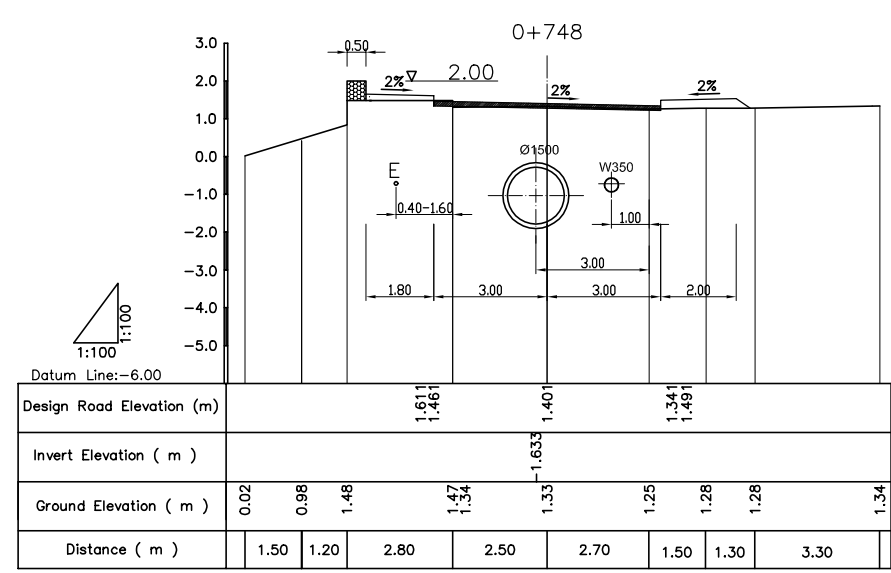
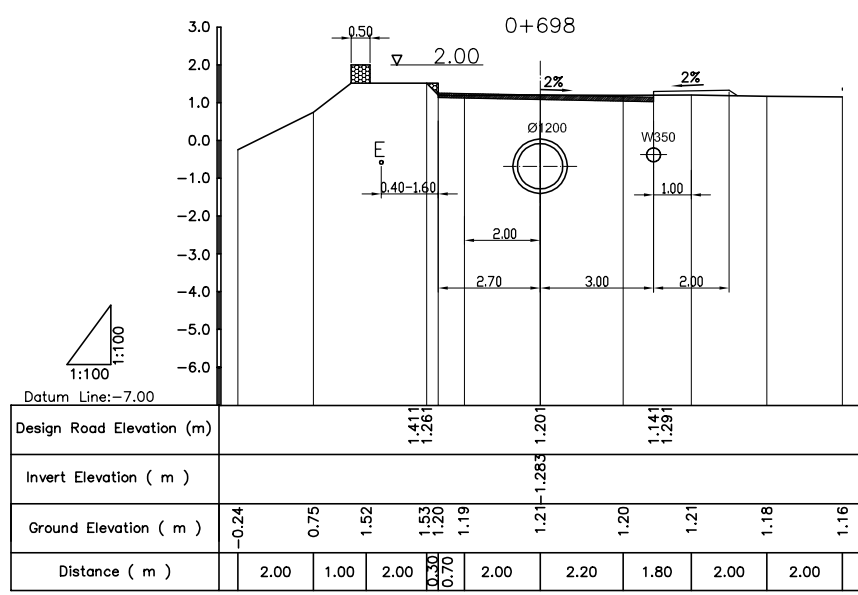
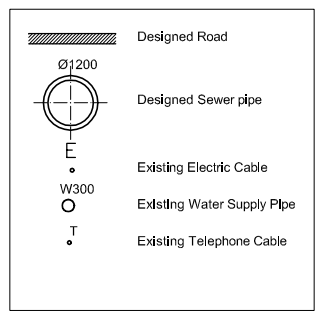
PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED: TOKUMASU TOSHIKI
CHECKED: KONDO MASAMI

DATE: JUNE 2001 DWG. No. PB - PDI - BMC1-221



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WATER ENVIRONMENT IMPROVEMENT

THE DETAILED DESIGN STUDY ON HO CHI MINH CITY
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IN THE SOCIALIST REPUBLIC OF VIET NAM

PACKAGE B
PUMP DRAINAGE IMPROVEMENT
BEN ME COC(1) AREA
CROSS SECTION OF SEWER, ROAD
AND TEMPORARY DIKE (4)
BM1- E1(0+698 - 0+848)

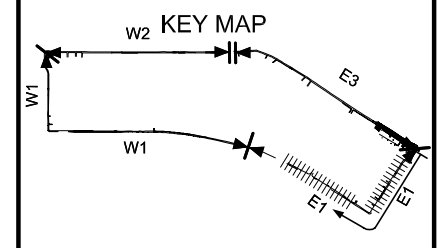
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AGENCY (JICA)

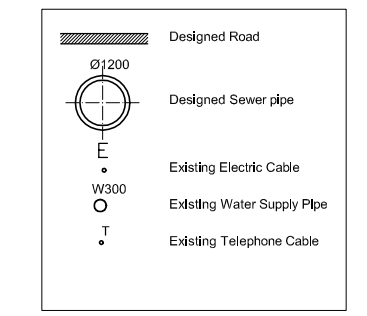
PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED: TOKUMASU TOSHIKI
CHECKED: KONDO MASAMI

DATE: JUNE 2001
DWG. No. PB - PDI - BMC1-222



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PROJECT MANAGEMENT UNIT FOR
HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT

THE DETAILED DESIGN STUDY ON HO CHI MINH CITY
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PACKAGE B
PUMP DRAINAGE IMPROVEMENT
BEN ME COC(1) AREA

CROSS SECTION OF SEWER, ROAD
AND TEMPORARY DIKE (5)

BM1- E1(0+898 - 1+018.99)

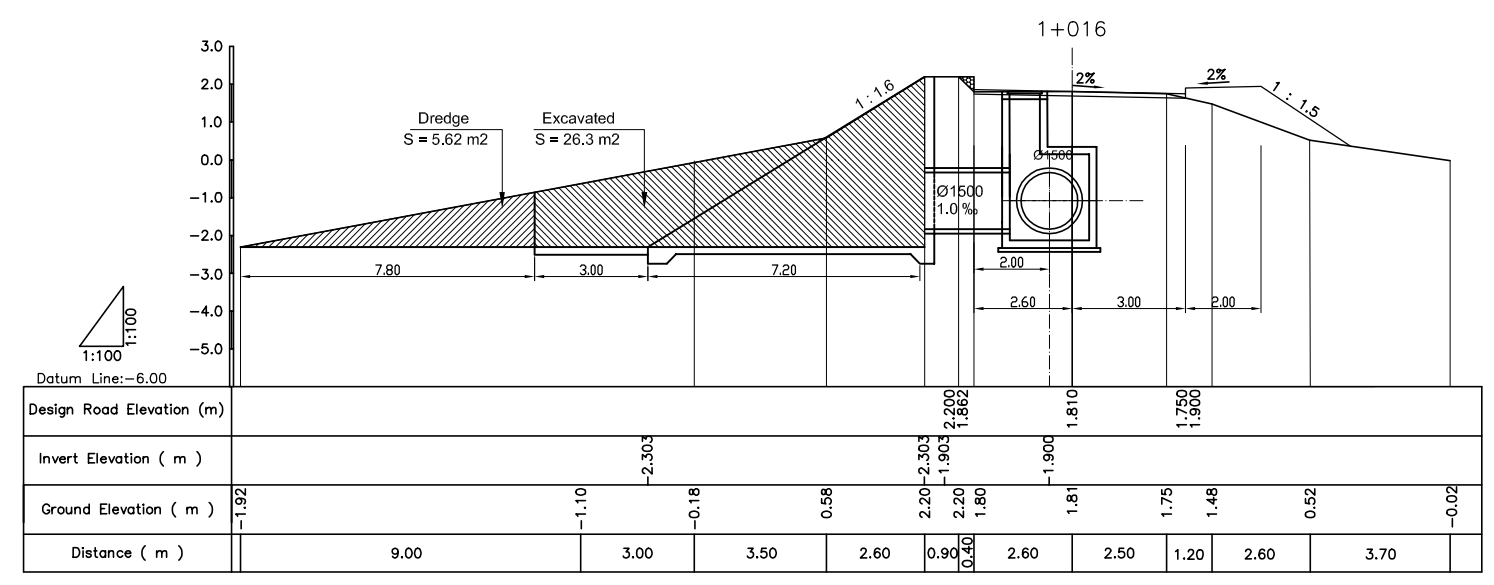
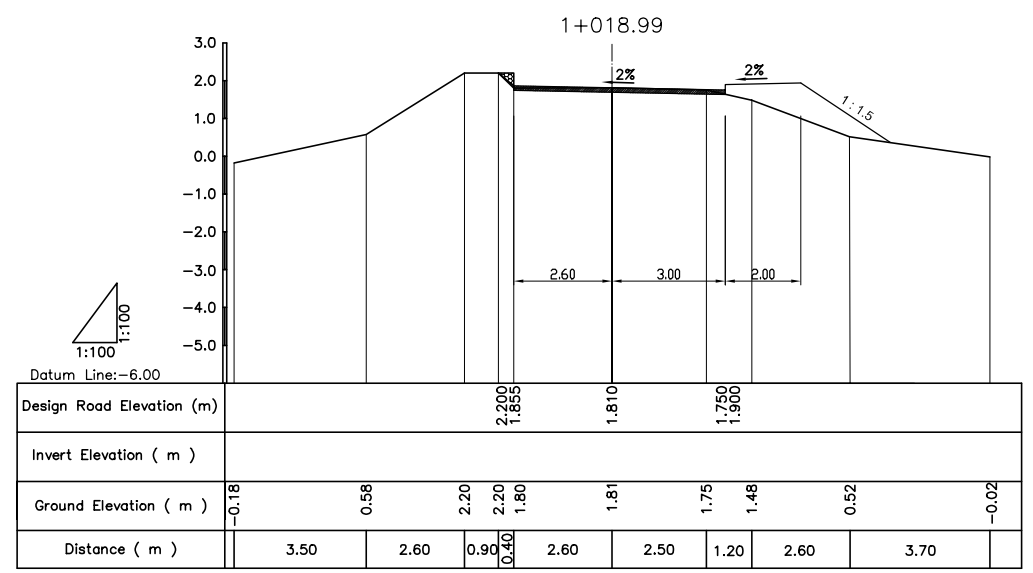
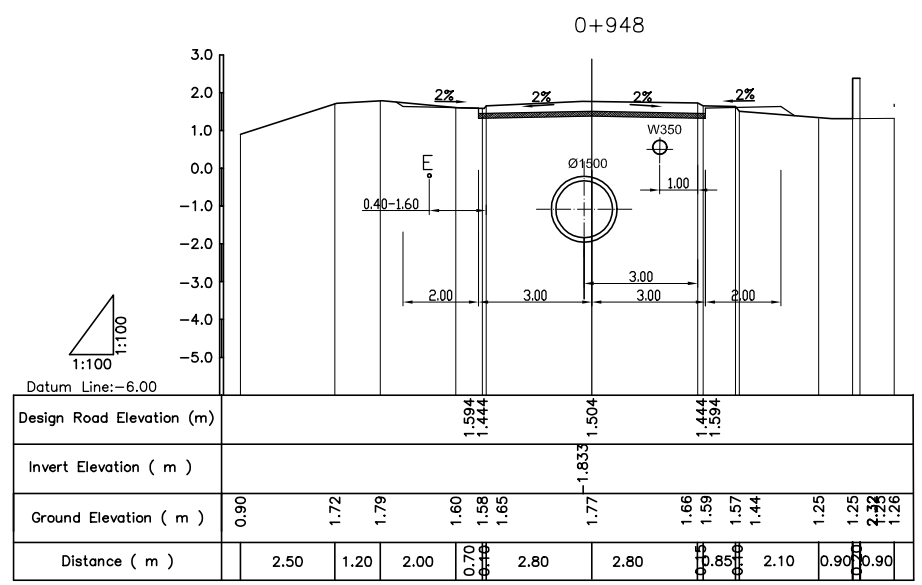
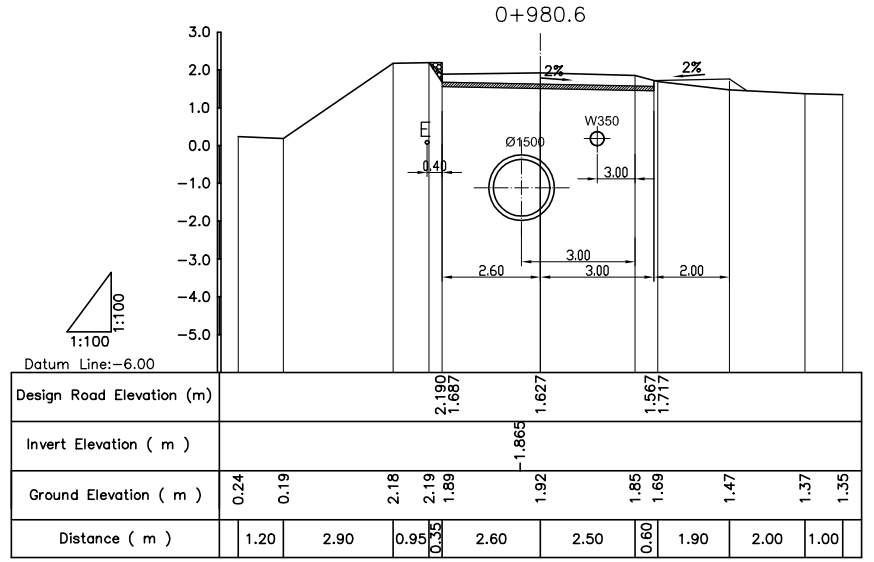
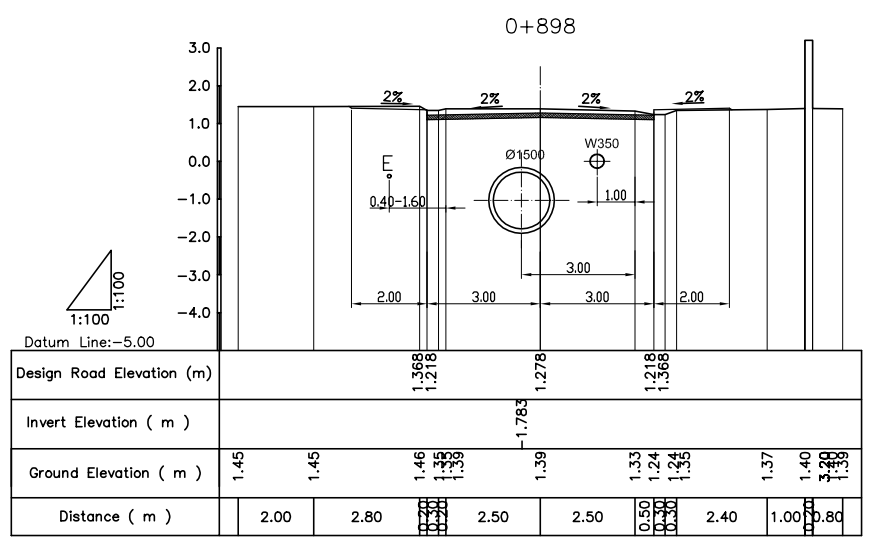
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JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

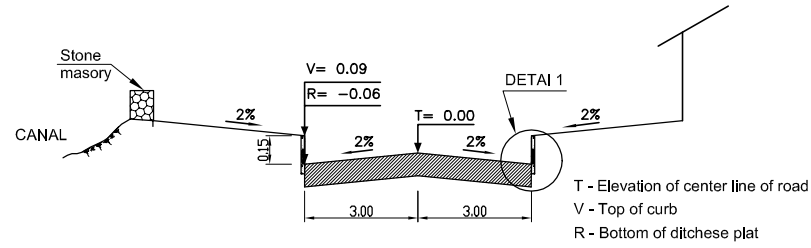
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DESIGNED TOKUMASU TOSHIKI	CHECKED KONDO MASAMI
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DATE : JUNE 2001 DWG. No. PB - PDI - BMC1-223

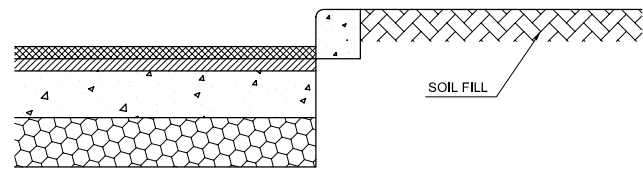


TYPICAL CROSS SECTION OF ROAD:

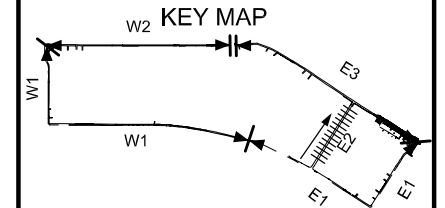
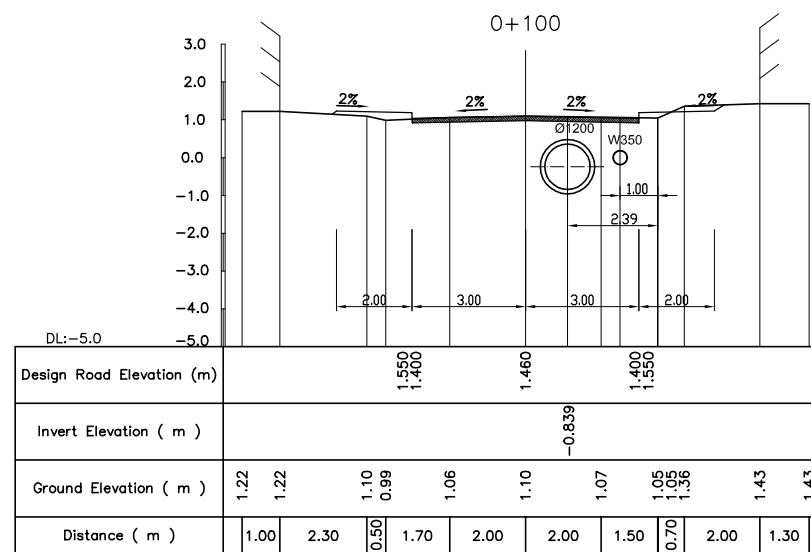
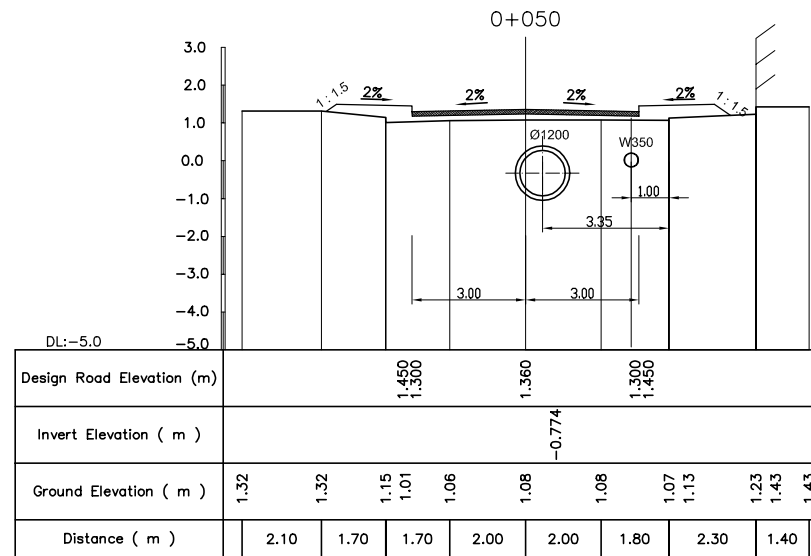
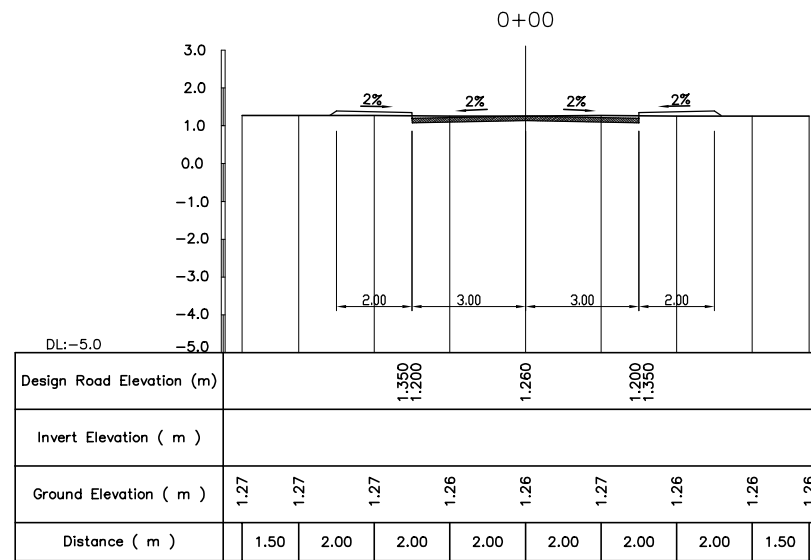
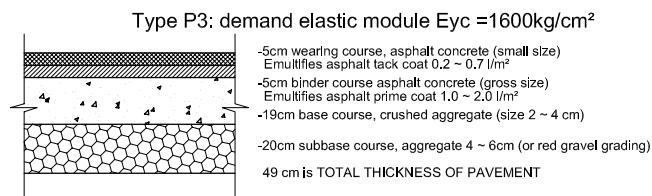


T - Elevation of center line of road
V - Top of curb
R - Bottom of ditchse plat

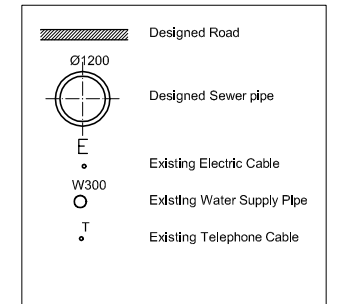
DETAIL 1:



TYPICAL ROAD SURFACE:



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PACKAGE B
PUMP DRAINAGE IMPROVEMENT
BEN ME COC(1) AREA

CROSS SECTION OF SEWER, ROAD
AND TEMPORARY DIKE (6)

BM1- E2 (0+00 - 0+100)

SCALE : 1:100

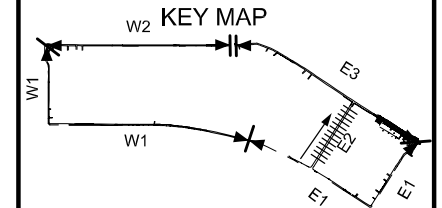
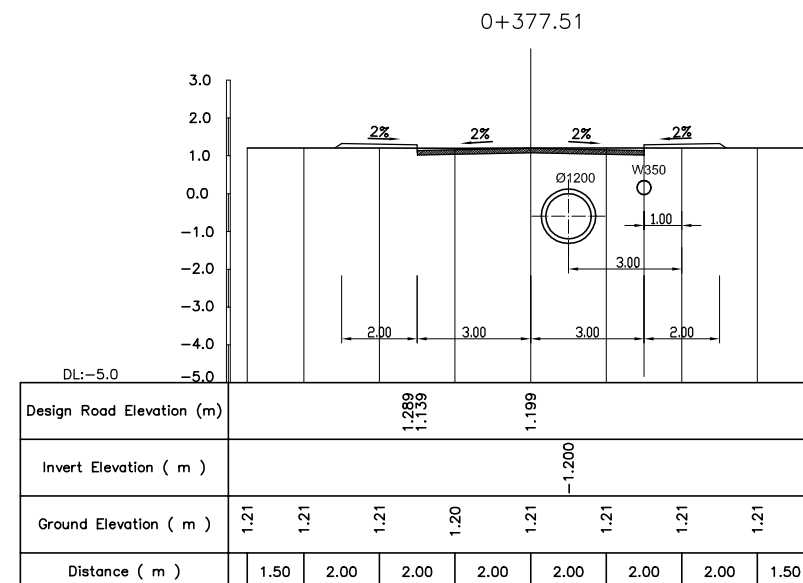
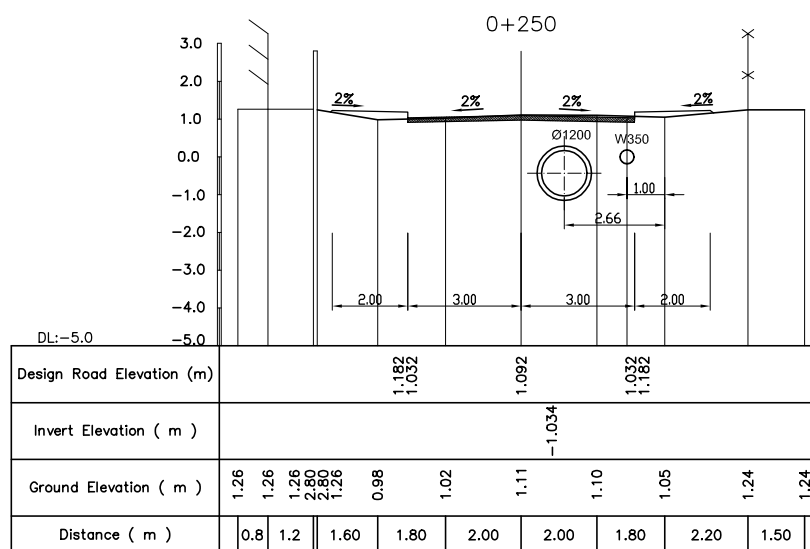
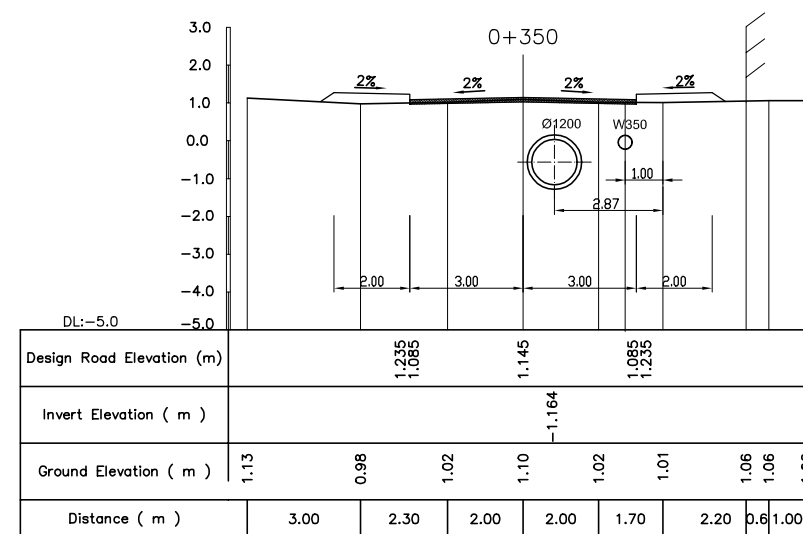
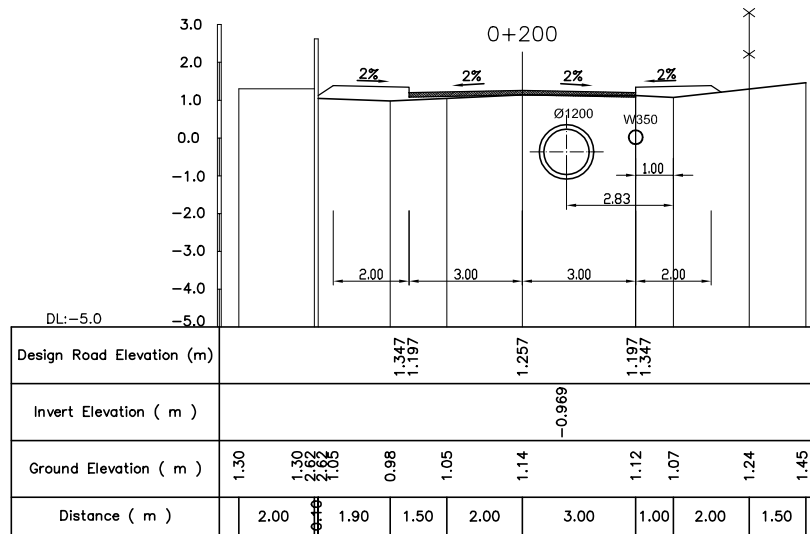
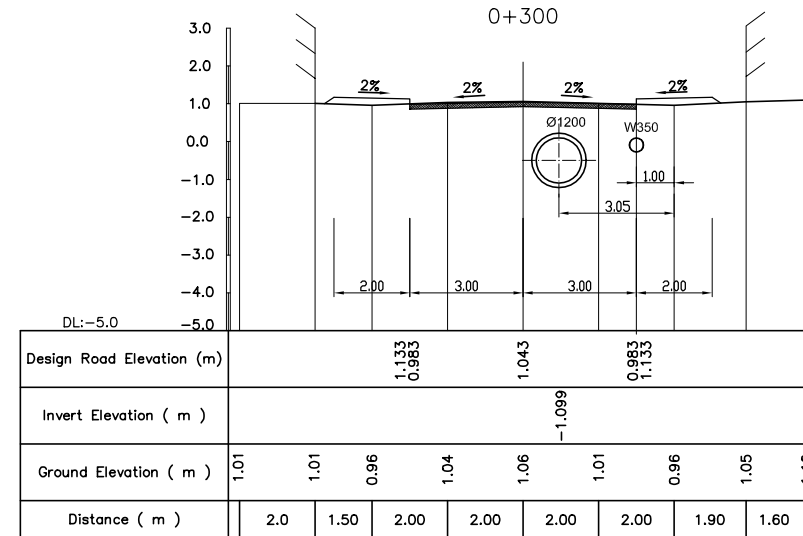
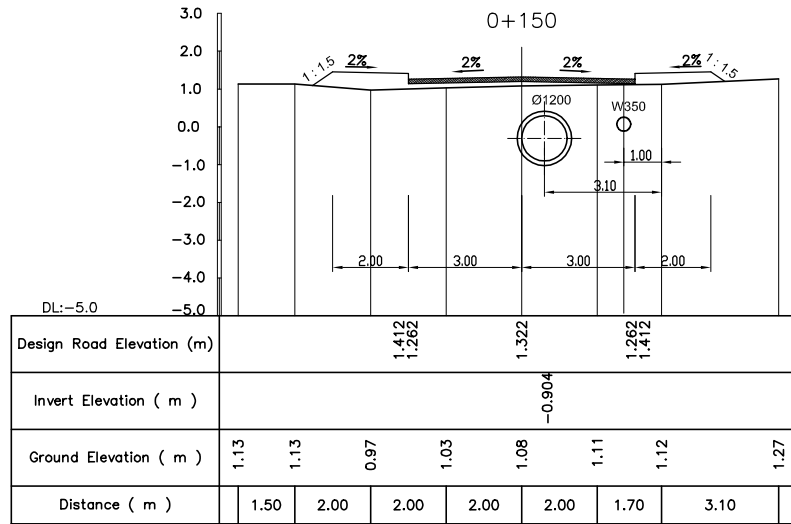
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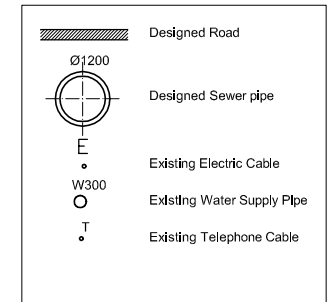
DESIGNED
TOKUMASU TOSHIKI

CHECKED
KONDO MASAMI

DATE : JUNE 2001 DWG. No. PB - PDI - BMC1-224



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PUMP DRAINAGE IMPROVEMENT
BEN ME COC(1) AREA

CROSS SECTION OF SEWER, ROAD
AND TEMPORARY DIKE (7)

BM1- E2 (0+150 - 0+377.51)

SCALE : 1:100

JICA JAPAN INTERNATIONAL COOPERATION
AGENCY (JICA)

PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED
TOKUMASU TOSHIKI

CHECKED
KONDO MASAMI

DATE : JUNE 2001 DWG. No. PB - PDI - BMC1-225