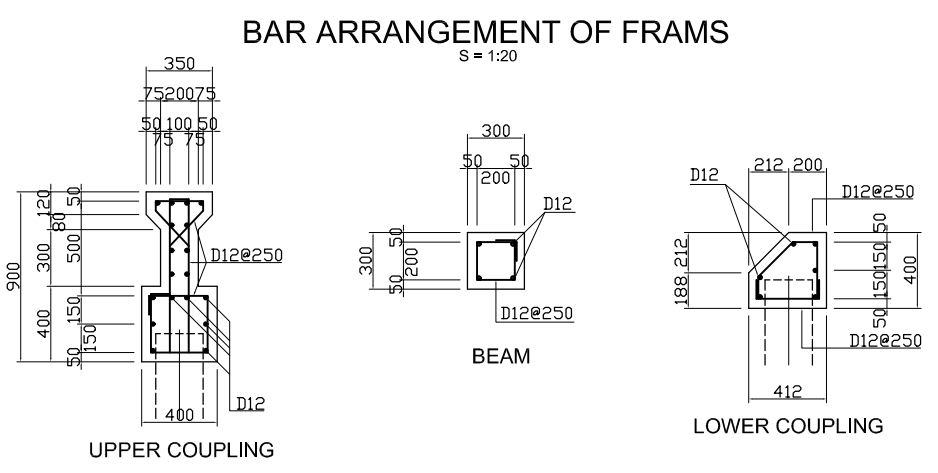
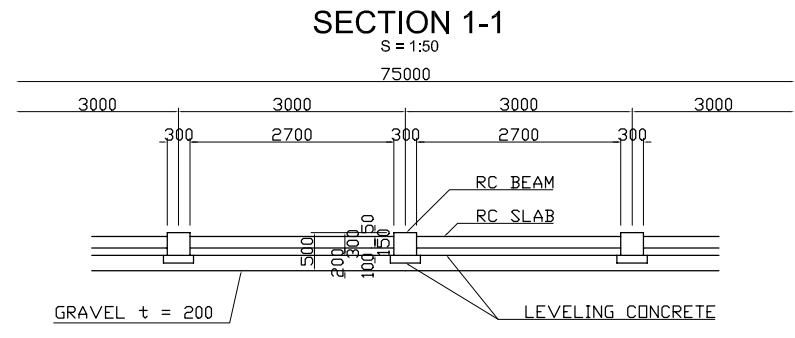
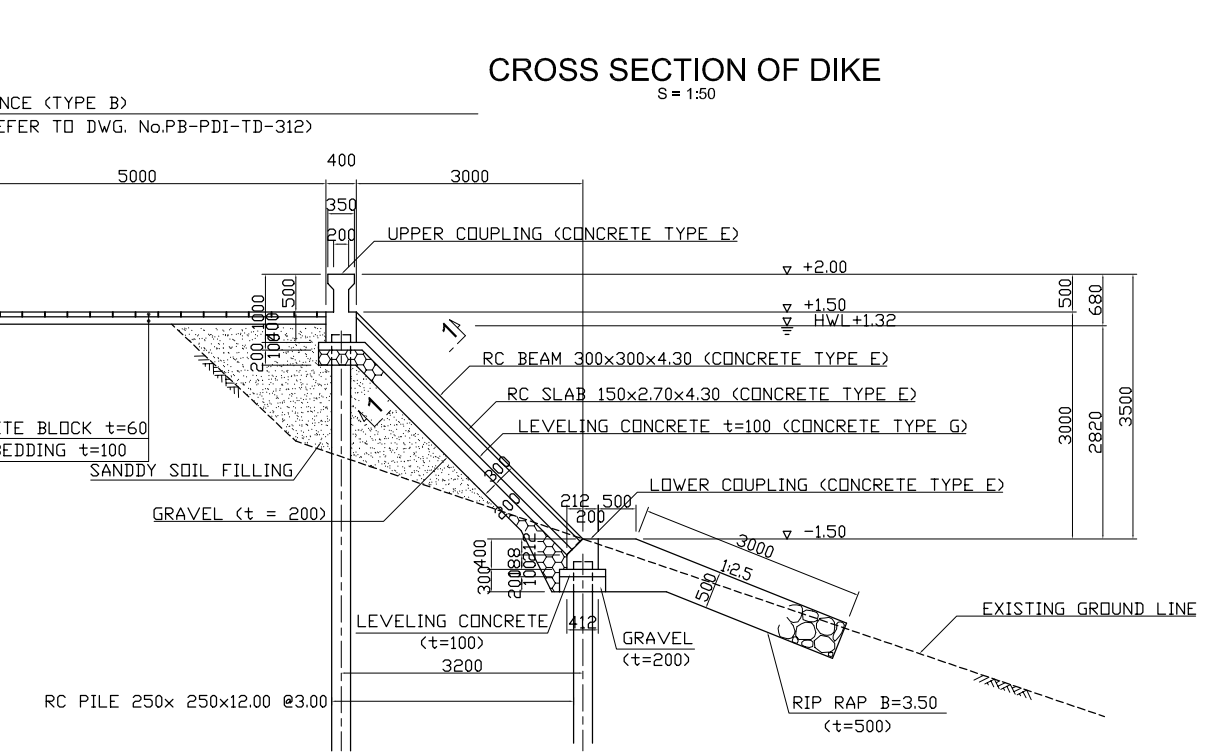
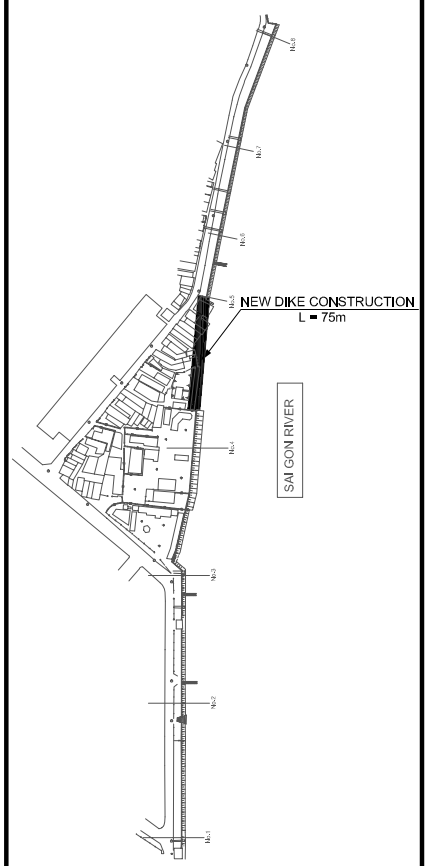
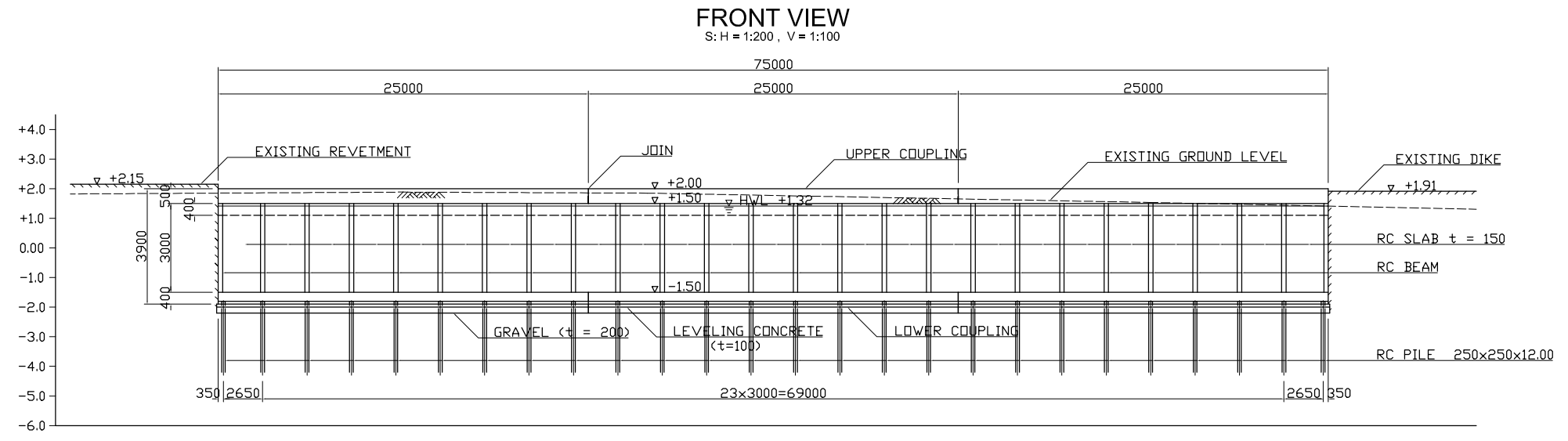
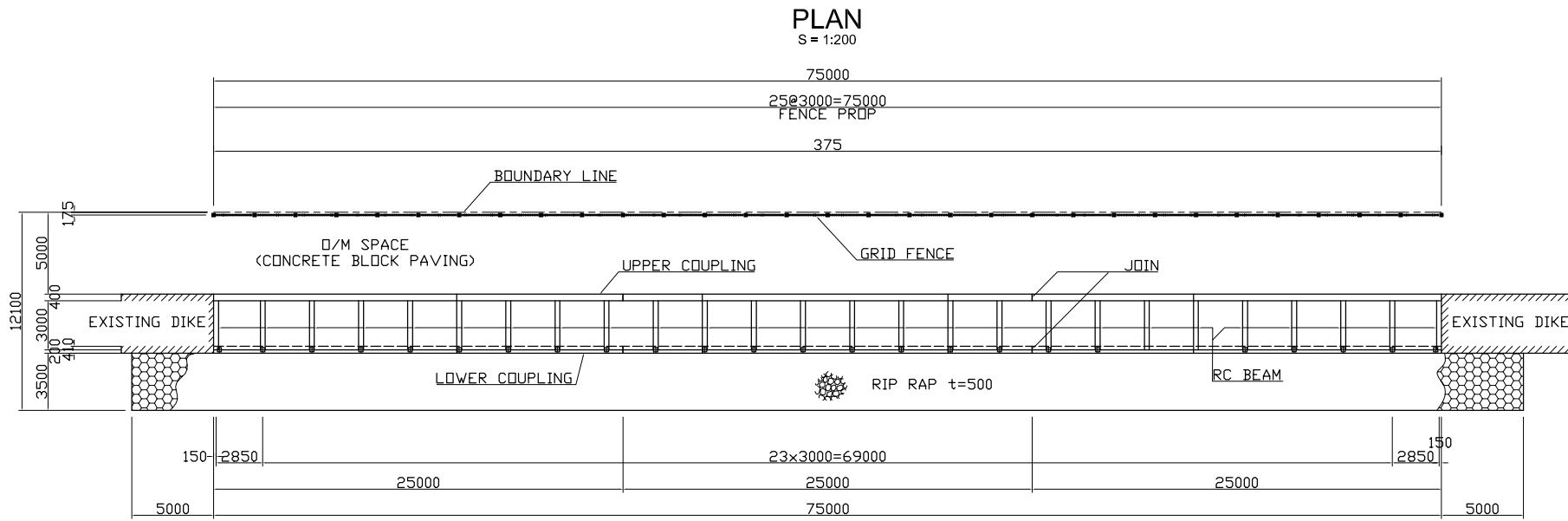
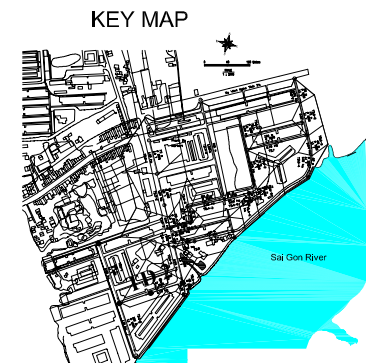


**THANH DA PUMP DRAINAGE IMPROVEMENT AREA**

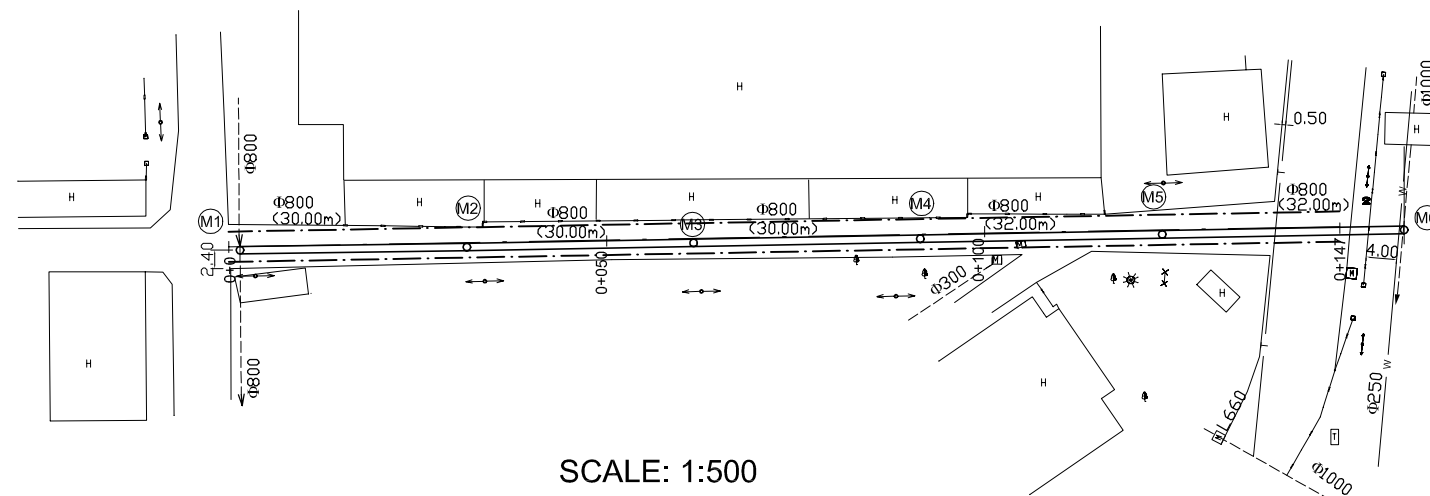


NO.	DATE	DESCRIPTIONS	BY	APRO.
REVISIONS				
PROJECT MANAGEMENT UNIT FOR HO CHI MINH CITY WATER ENVIRONMENT IMPROVEMENT				
THE DETAILED DESIGN ON HO CHI MINH CITY WATER ENVIRONMENT IMPROVEMENT PROJECT IN THE SOCIALIST REPUBLIC OF VIET NAM				
PACKAGE B PUMP DRAINAGE IMPROVEMENT THANH DA AREA  DIKE ALONG SAIGON RIVER				
SCALE : 1/20, 1/50				
JAPAN INTERNATIONAL COOPERATION AGENCY ( JICA )				
PACIFIC CONSULTANTS INTERNATIONAL				
DESIGNED		CHECKED		
DATE :		DWG. No. PB - PDI - TD - 201		



**LEGEND**

	Sewer Line
	Sewer Line
	Planned Sewer
	Existing Sewer
	Telephone Cable
	Electric Cable
	Water Pipe
	Outlet Without Flap Gate
	Outlet With Flap Gate
	Design road
	No. 1 Manhole
	No. 2 Manhole
	No. 3 Manhole
	No. 4 Manhole
	Spacial Manhole
	Inlet
	Existing Manhole
	Existing Inlet
	Telephone Cable Inspection Chamber
	Electric Cable Inspection Chamber
	Fire Hydrant

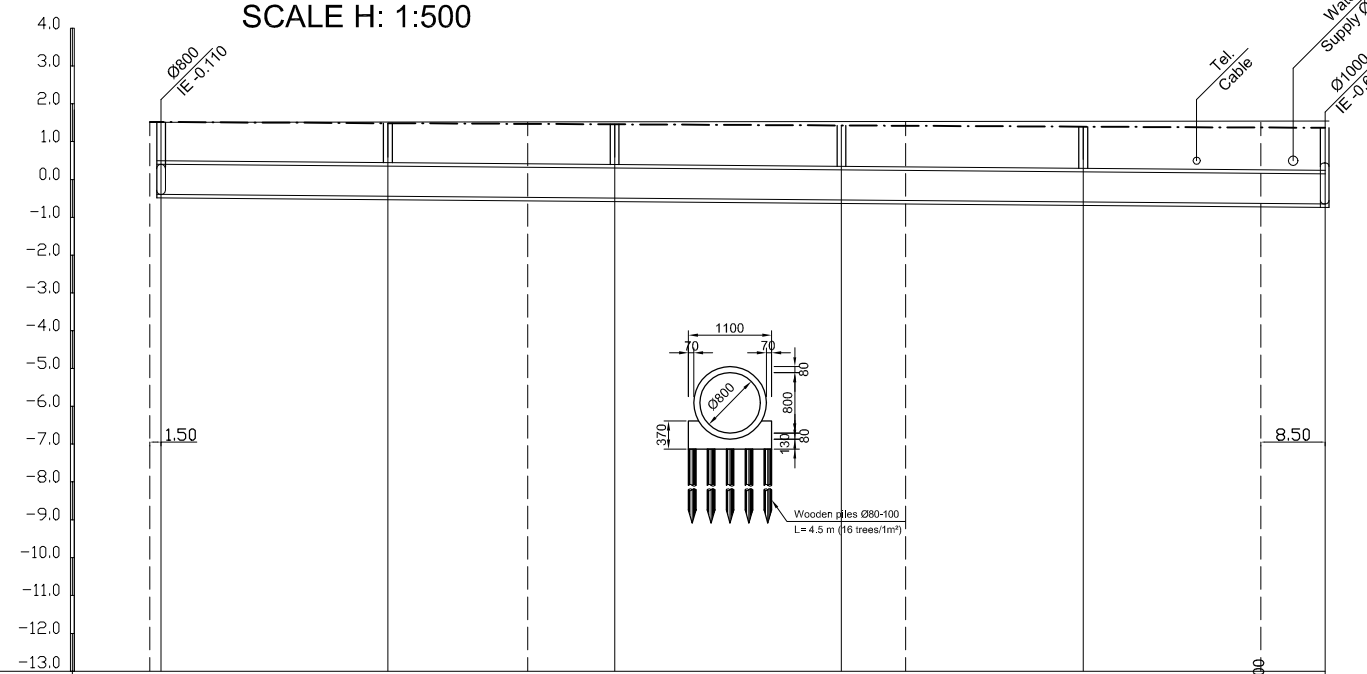
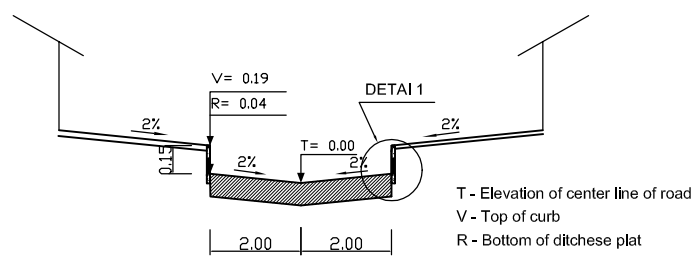


SCALE: 1:500

SCALE V: 1:100

SCALE H: 1:500

**TYPICAL CROSS SECTION OF ROAD:**



Location of Survey	0+00	0+30.00	0+60.00	0+90.00	0+122.00	0+145.50	1+147.00
Manhole number	M1	M2	M3	M4	M5	M6	
Diameter (mm)	ø800	ø800	ø800	ø800	ø800	ø800	
Gradient (‰)	1.7‰	1.7‰	1.7‰	1.7‰	1.7‰	1.7‰	
Length (m)	30.00	30.00	30.00	32.00	32.00		
Gradient of Road (‰)	155.5						
Design road Elevation (m)	1.520 1.519	1.489	1.471	1.459	1.429	1.420	1.397 1.374 1.365
Existing Ground Elevation (m)	1.52 1.52	1.53	1.53	1.52	1.47	1.46	1.46 1.46 1.46
Earth Covering (m)	1.028	1.086	1.121	1.126	1.136	1.136	1.180 1.216 1.230
Invert Elevation (m)	-0.388	-0.440	-0.471	-0.490	-0.541	-0.556	-0.600 -0.636 -0.650
Total Length (m)	0.00	30.00	48.00	60.00	90.00	98.50	122.00 145.50 154.00

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  
THANH DA AREA  
**PLAN AND PROFILE  
OF SEWER AND ROAD (1)  
( TD.2 )**

SCALE : AS SHOW

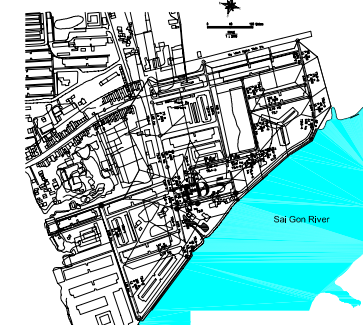
JICA JAPAN INTERNATIONAL COOPERATION AGENCY ( JICA )

PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED \_\_\_\_\_ CHECKED \_\_\_\_\_

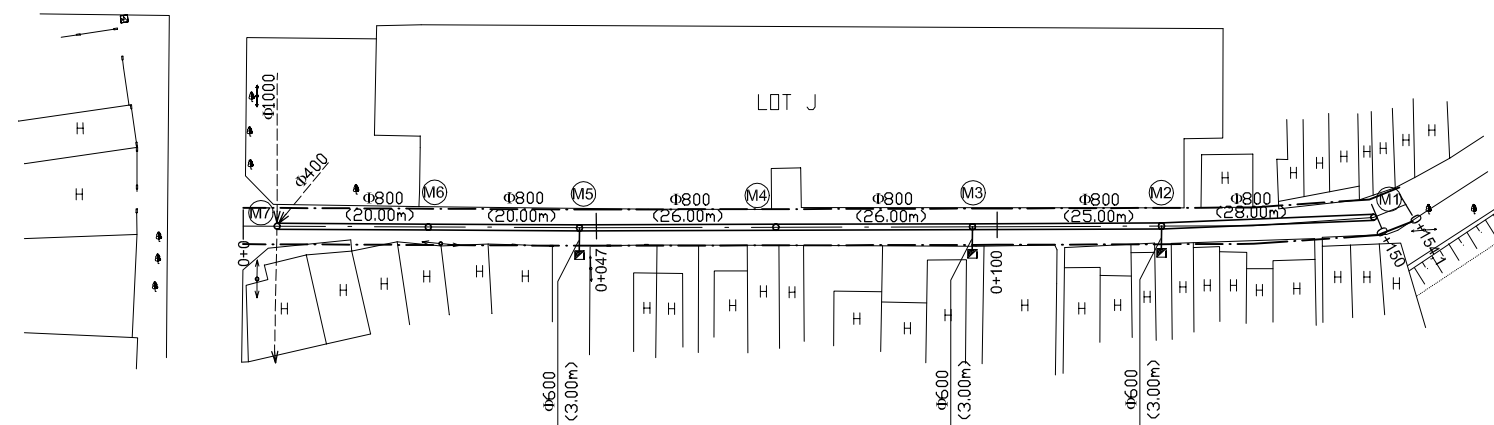
DATE : \_\_\_\_\_ DWG. No. PB - PDI - TD - 202

KEY MAP



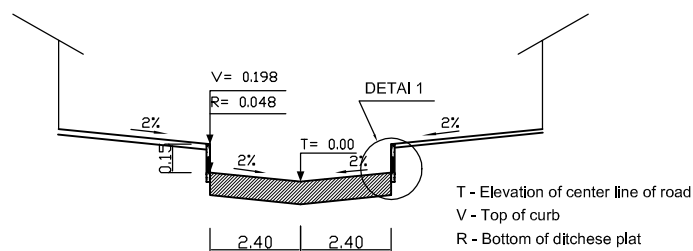
LEGEND

	Sewer Line
	Sewer Line
	Planned Sewer
	Existing Sewer
	Telephone Cable
	Electric Cable
	Water Pipe
	Outlet Without Flap Gate
	Outlet With Flap Gate
	Design road
	No. 1 Manhole
	No. 2 Manhole
	No. 3 Manhole
	No. 4 Manhole
	Special Manhole
	Inlet
	Existing Manhole
	Existing Inlet
	Telephone Cable Inspection Chamber
	Electric Cable Inspection Chamber
	Fire Hydrant

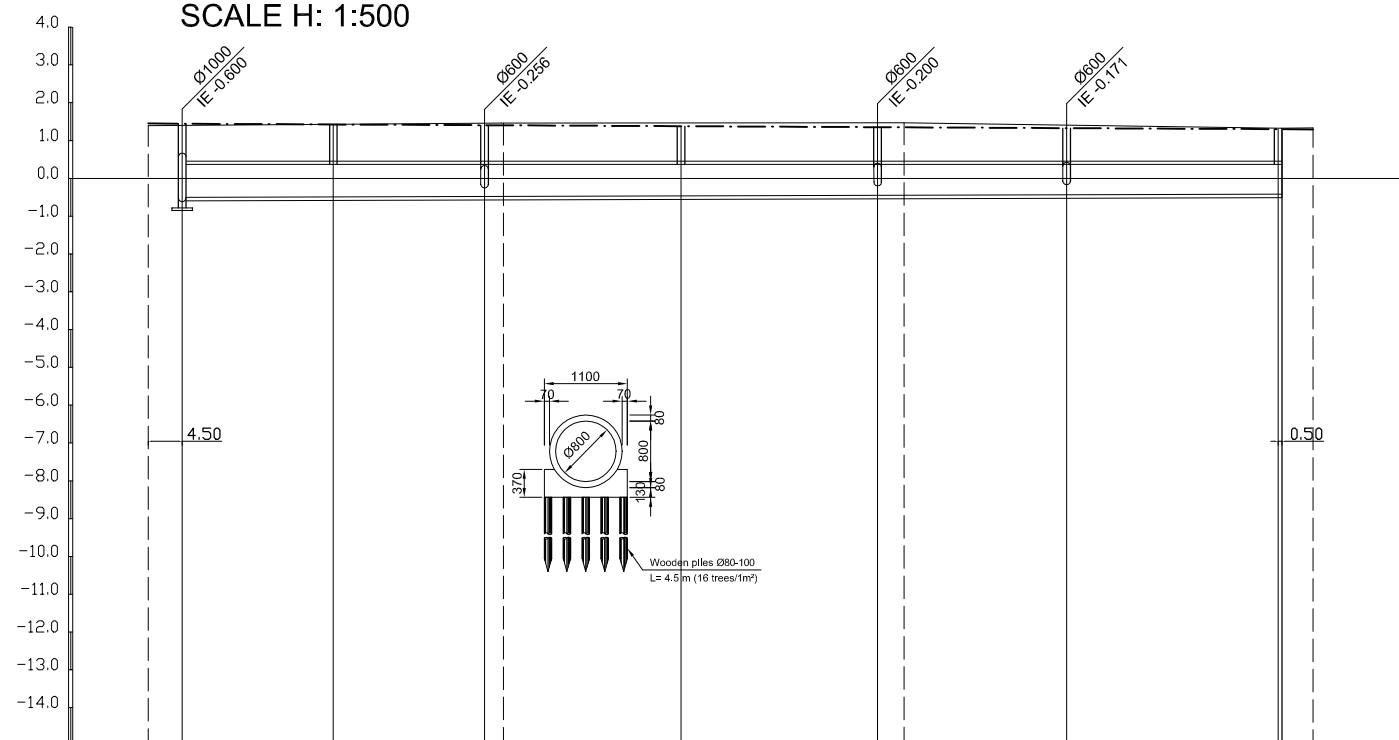


SCALE: 1:500

TYPICAL CROSS SECTION OF ROAD:



SCALE V: 1:100  
SCALE H: 1:500



Location of Survey	0+00	0+47	0+100	0+154								
Manhole number	M7	M6	M5	M4	M3	M2	M1					
Diameter (mm)	ø800	ø800	ø800	ø800	ø800	ø800	ø800					
Gradient (‰)	1.1‰	1.1‰	1.1‰	1.1‰	1.1‰	1.1‰	1.1‰					
Length (m)	20.00	20.00	26.00	26.00	25.00	28.00						
Gradient of Road (‰)	1											
Design road Elevation (m)	1.450	1.445	1.425	1.705	1.403	1.380	1.354	1.350	1.328	1.300	1.296	
Existing Ground Elevation (m)	1.40	1.41	1.43	1.46	1.46	1.47	1.48	1.48	1.41	1.33	1.33	1.34
Earth Covering (m)	1.030	1.030	1.028	1.036	1.033	1.017	1.000	0.995	0.901	0.790		
Invert Elevation (m)	-0.500	-0.478	-0.456	-0.453	-0.427	-0.400	-0.395	-0.371	-0.340			
Total Length (m)	0.00	20.00	40.00	42.50	66.00	92.00	95.50	117.00	145.00	45.50	49.10	

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  
THANH DA AREA  
PLAN AND PROFILE  
OF SEWER AND ROAD (2)  
( TD.5 )

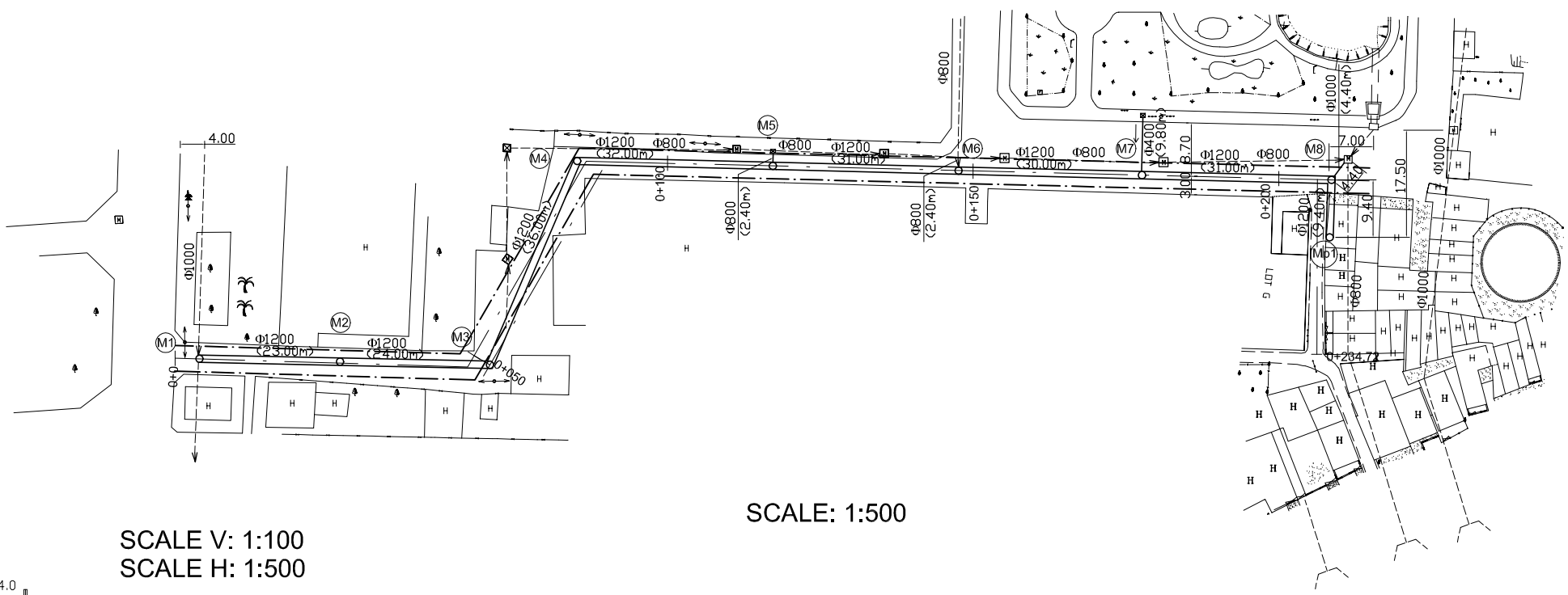
SCALE : AS SHOW

JICA JAPAN INTERNATIONAL COOPERATION  
AGENCY ( JICA )

PACIFIC CONSULTANTS INTERNATIONAL

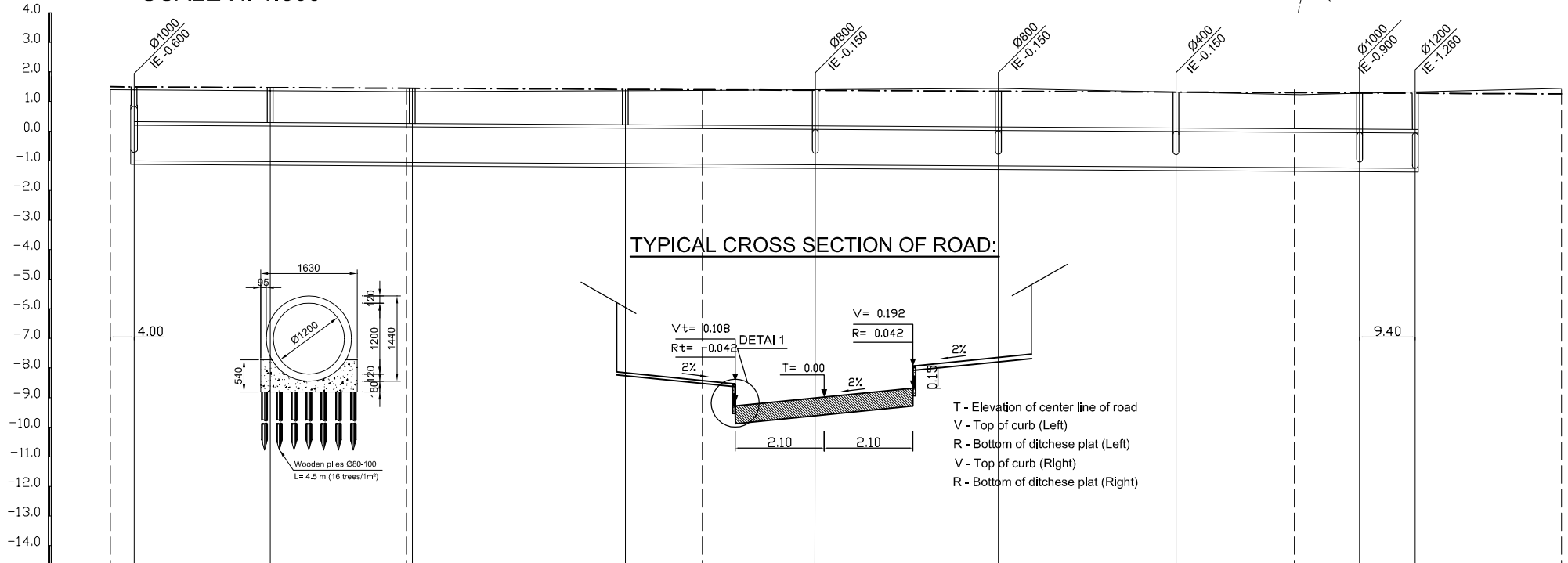
DESIGNED CHECKED

DATE : DWG. No. PB - PDI - TD - 203



SCALE: 1:500

SCALE V: 1:100  
SCALE H: 1:500



Location of Survey	0+00		0+50		0+100		0+150		0+200		0+245			
Manhole number	M1		M2		M3		M4		M5		M6			
Diameter (mm)	ø1200		ø1200		ø1200		ø1200		ø1200		ø1200			
Gradient (‰)	1.2‰		1.2‰		1.2‰		1.2‰		1.2‰		1.2‰			
Length (m)	23.00		24.00		36.00		32.00		31.00		30.00			
Gradient of Road (‰)	1													
Design road Elevation (m)	1.500	1.496	1.473	1.450	1.449	1.413	1.400	1.381	1.350	1.320	1.300	1.289	1.280	1.255
Existing Ground Elevation (m)	1.41	1.40	1.37	1.34	1.34	1.37	1.38	1.41	1.45	1.32	1.24	1.29	1.29	1.45
Earth Covering (m)	1.080	1.078	1.078	1.076	1.076	1.150	1.180	1.230	1.305	1.211	1.160	1.220	1.230	
Invert Elevation (m)	-1.000	-1.028	-1.056	-1.056	-1.100	-1.120	-1.140	-1.175	-1.211	-1.240	-1.248	-1.260	-1.260	
Total Length (m)	7.00	0.00	23.00	46.00	47.00	83.00	96.00	115.00	146.00	176.00	196.00	207.00	216.40	241.40

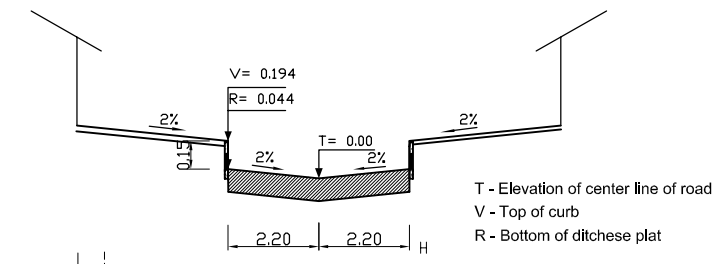
**KEY MAP**

**LEGEND**

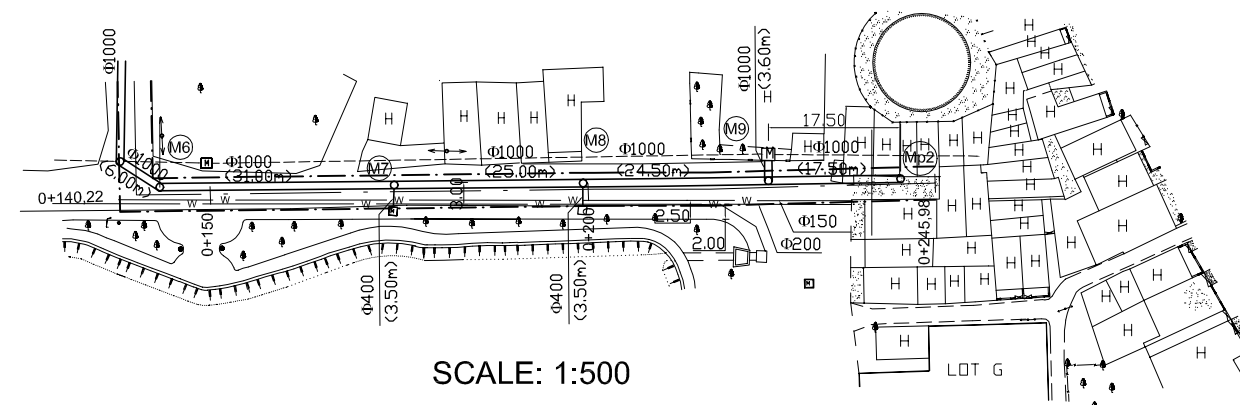
- Sewer Line
- Sewer Line
- Planned Sewer
- Existing Sewer
- Telephone Cable
- Electric Cable
- Water Pipe
- Outlet Without Flap Gate
- Outlet With Flap Gate
- Design road
- No. 1 Manhole
- No. 2 Manhole
- No. 3 Manhole
- No. 4 Manhole
- Special Manhole
- Inlet
- Existing Manhole
- Existing Inlet
- Telephone 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 THANH DA AREA  PLAN AND PROFILE OF SEWER AND ROAD (3) ( TD.4-1, TD.4-3, TD.4-6 )				
SCALE : AS SHOW				
JAPAN INTERNATIONAL COOPERATION AGENCY ( JICA )				
PACIFIC CONSULTANTS INTERNATIONAL				
DESIGNED		CHECKED		
DATE :		DWG. No. PB - PDI - TD - 204		

TYPICAL CROSS SECTION OF ROAD:

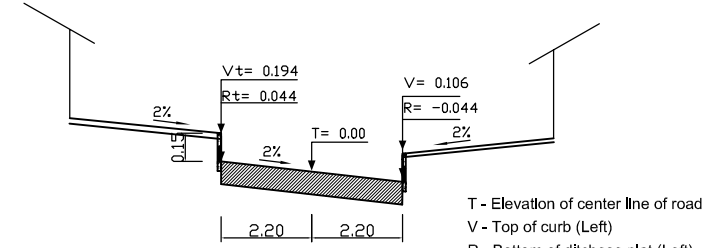


T - Elevation of center line of road  
V - Top of curb  
R - Bottom of ditch plate

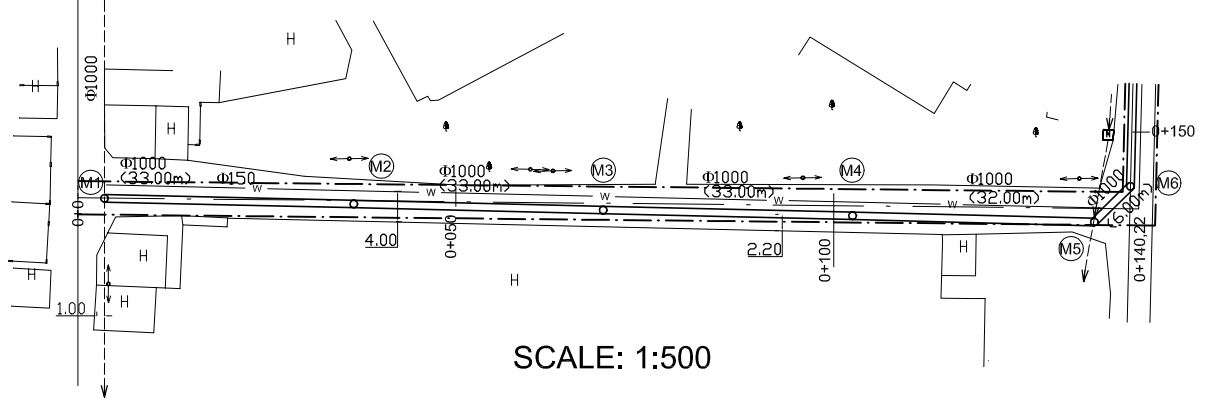


SCALE: 1:500

TYPICAL CROSS SECTION OF ROAD:

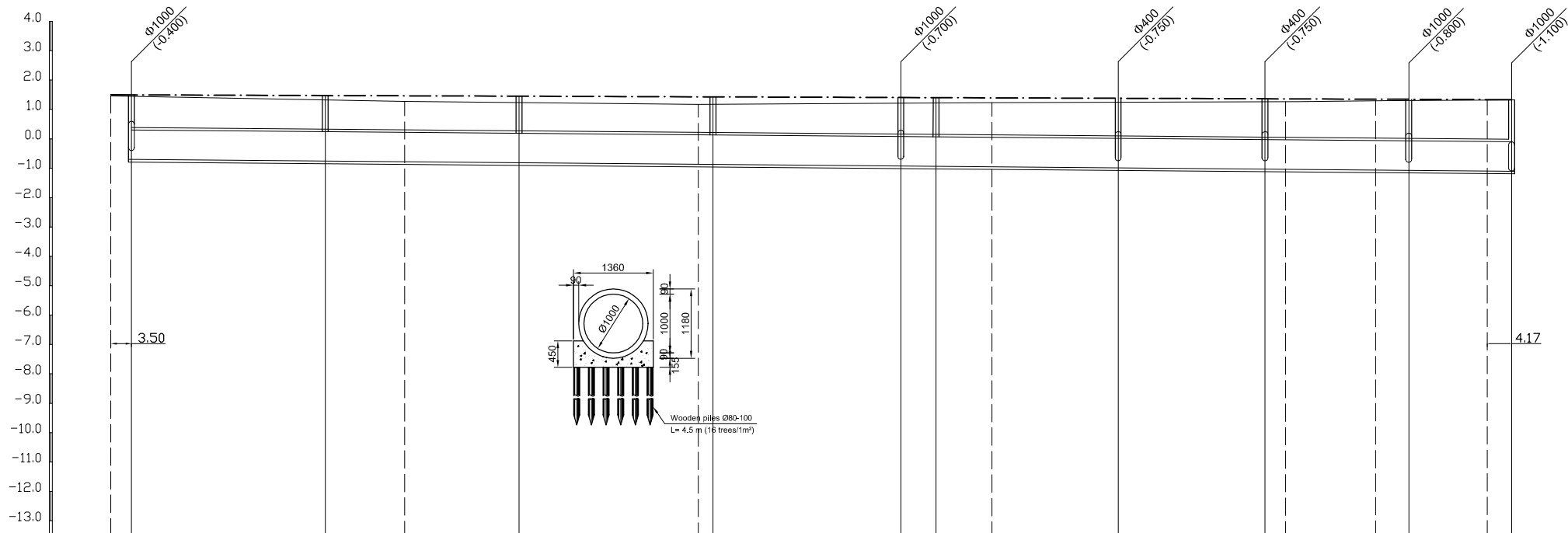


T - Elevation of center line of road  
V - Top of curb (Left)  
R - Bottom of ditch plate (Left)  
V - Top of curb (Right)  
R - Bottom of ditch plate (Right)



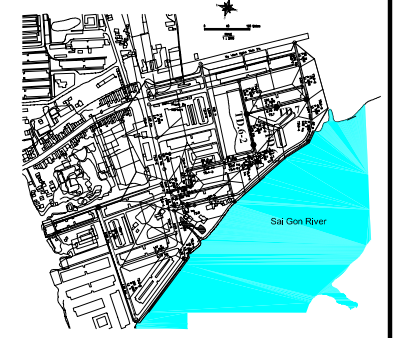
SCALE: 1:500

SCALE V: 1:100  
SCALE H: 1:500



Location of Survey	0+00	0+50	0+100	0+150	0+200						
Manhole number	M1	M2	M3	M4	M5	M6	M7	M8	M9	Mp2	
Diameter (mm)	ø1000	ø1000	ø1000	ø1000	ø1000	ø1000	ø1000	ø1000	ø1000	ø1000	
Gradient (%)	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	
Length (m)	33.00	33.00	33.00	32.00	6.00	31.00	25.00	24.50	17.5		
Gradient of Road (%)	2						1				
Design road Elevation (m)	1.500 1.493	1.427	1.400	1.361	1.300 1.295	1.231 1.237	1.247	1.268	1.293 1.297	1.312 1.318	1.331 1.335
Existing Ground Elevation (m)	1.47 1.46	1.33	1.28	1.24	1.18 1.18	1.22 1.23	1.24	1.26	1.27 1.27	1.31 1.31	1.31 1.31
Earth Covering (m)	1.070	0.996	0.970	0.962	0.955 0.958	1.053 1.073	1.097	1.149	1.205 1.212	1.278 1.290	1.310 1.320
Invert Elevation (m)	-0.70	-0.756	-0.780	-0.812	-0.865 -0.868	-0.923 -0.933	-0.947	-0.979	-1.025 -1.032	-1.058 -1.070	-1.090 -1.100
Total Length (m)	0.00	33.00	46.50	66.00	96.50 99.00	131.00 137.00	146.50	166.00	193.00 196.50	212.00 217.50	230.83 235.00

KEY MAP



LEGEND

- Sewer Line
- Sewer Line
- Planned Sewer
- Existing Sewer
- Telephone Cable
- Electric Cable
- Water Pipe
- Outlet Without Flap Gate
- Outlet With Flap Gate
- Design road
- No. 1 Manhole
- No. 2 Manhole
- No. 3 Manhole
- No. 4 Manhole
- 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  
THANH DA AREA  
PLAN AND PROFILE  
OF SEWER AND ROAD (4)  
( TD.7, TD.6-2, TD.6-3 )

SCALE : AS SHOW

JICA JAPAN INTERNATIONAL COOPERATION AGENCY ( JICA )

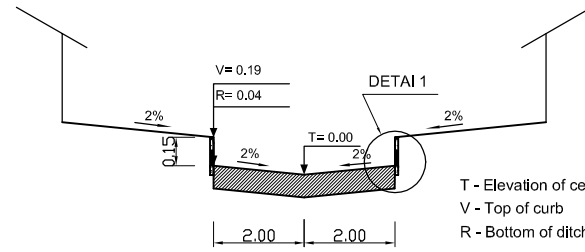
PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED CHECKED

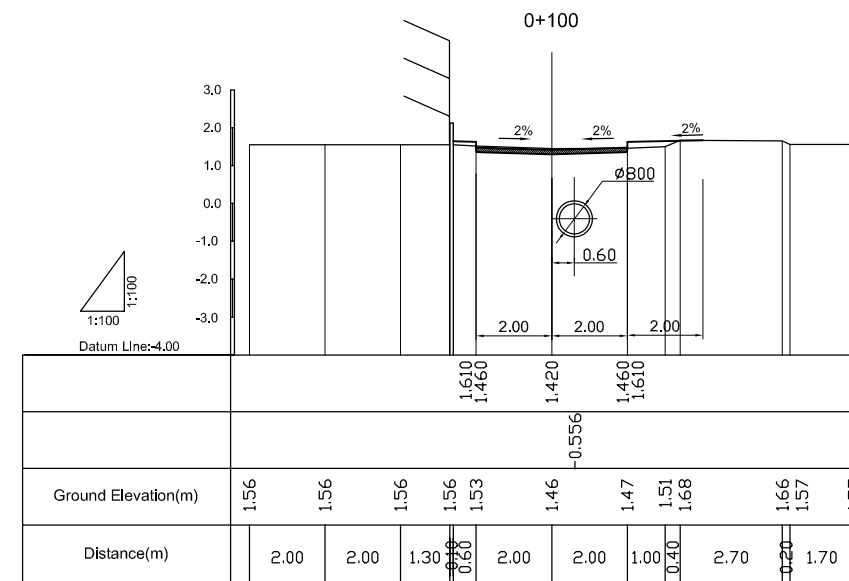
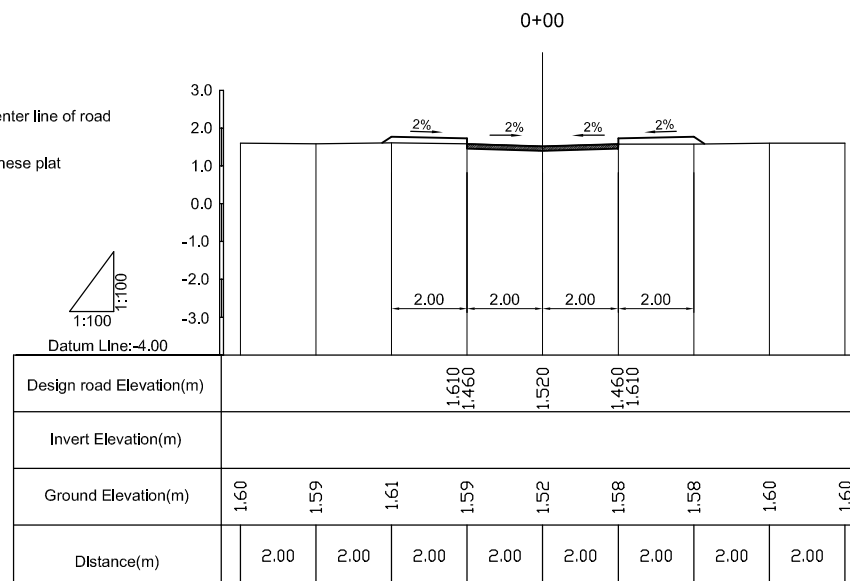
DATE : DWG. No. PB - PDI - TD - 205



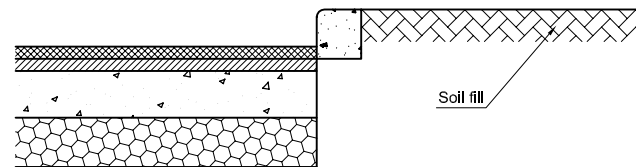
**TYPICAL CROSS SECTION OF ROAD:**



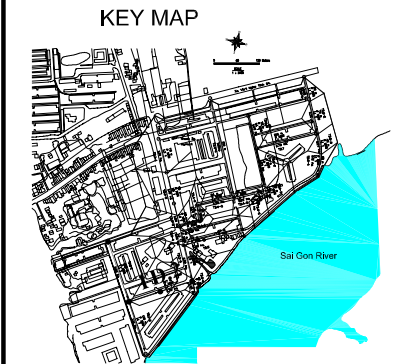
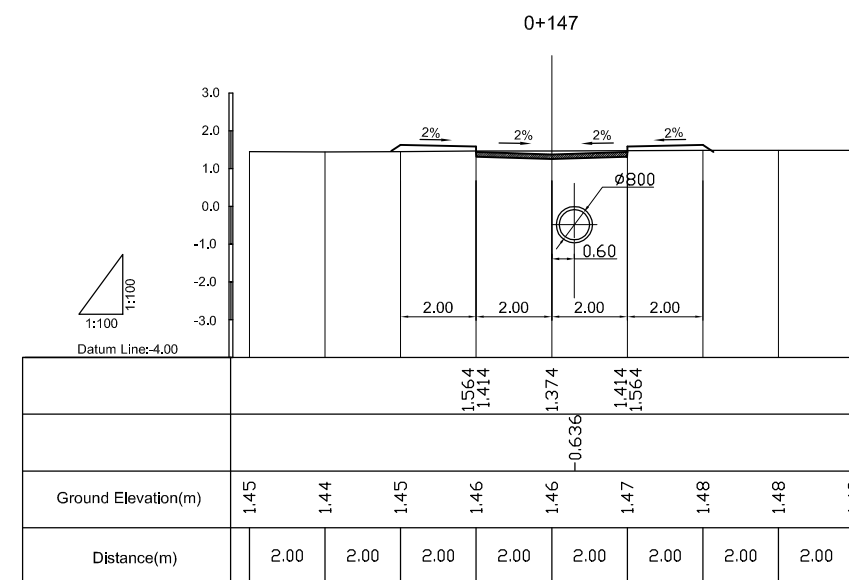
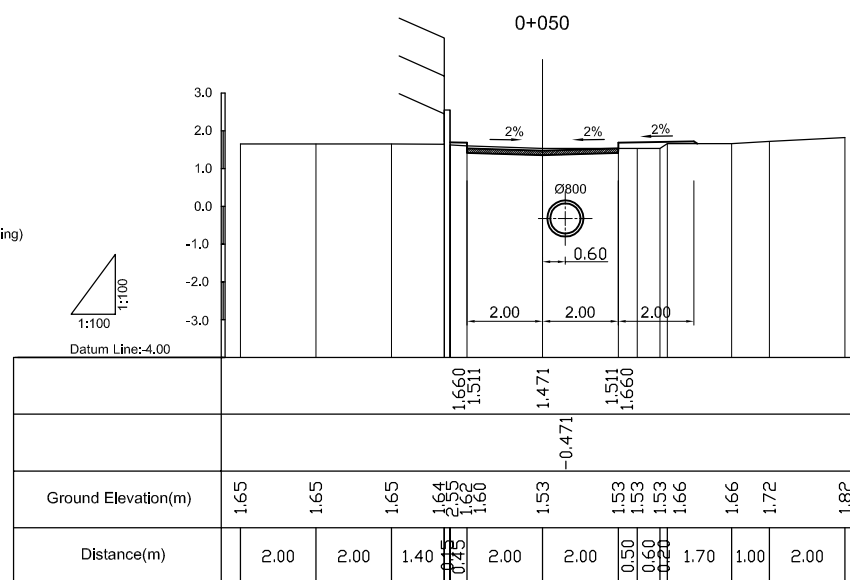
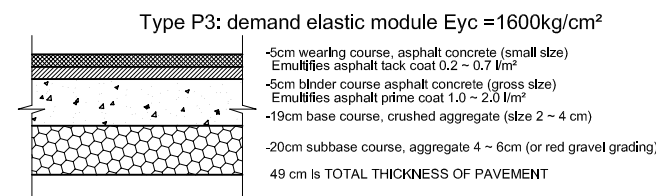
T - Elevation of center line of road  
V - Top of curb  
R - Bottom of ditch/seplat



**DETAIL 1:**



**TYPICAL ROAD SURFACE:**



**LEGEND**

	Designed Road
	Designed Sewer pipe
	Existing Electric Cable
	Existing Water Supply Pipe
	Existing Telephone Cable


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  
THANH DA AREA  
**CROSS SECTION  
OF SEWER AND ROAD (1)  
( TD.2 )**

SCALE : AS SHOW

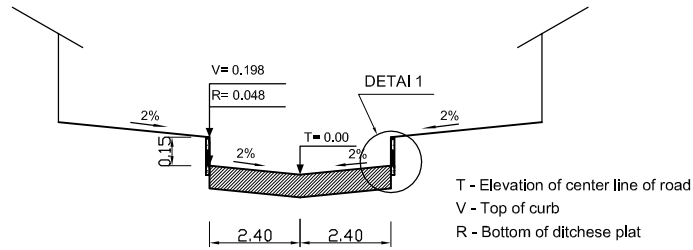
JICA JAPAN INTERNATIONAL COOPERATION  
AGENCY ( JICA )

PACIFIC CONSULTANTS INTERNATIONAL

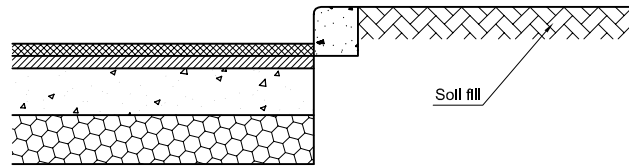
DESIGNED \_\_\_\_\_ CHECKED \_\_\_\_\_

DATE : \_\_\_\_\_ DWG. No. PB - PDI - TD - 206

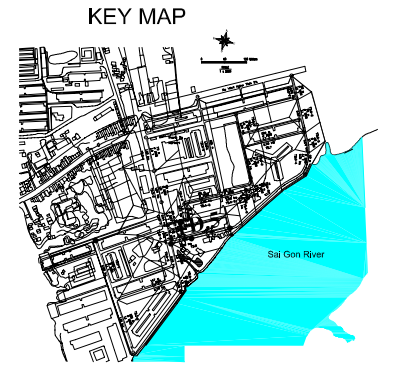
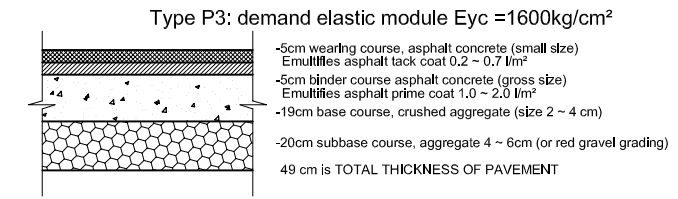
**TYPICAL CROSS SECTION OF ROAD:**



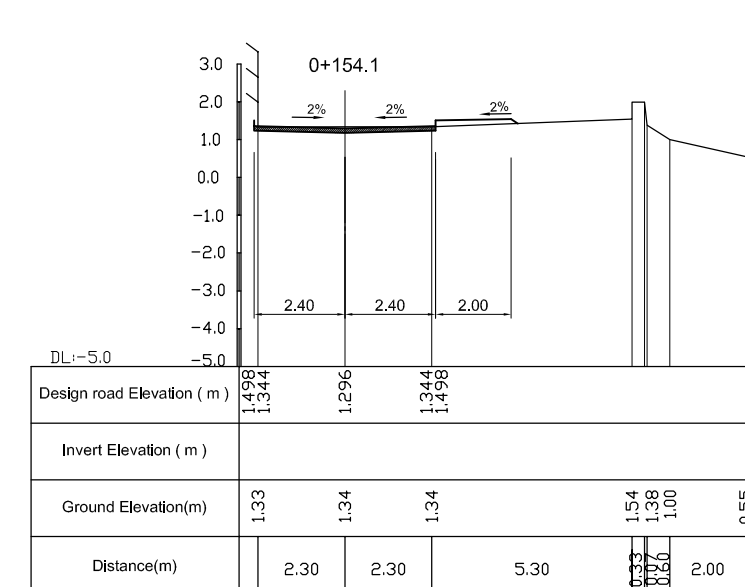
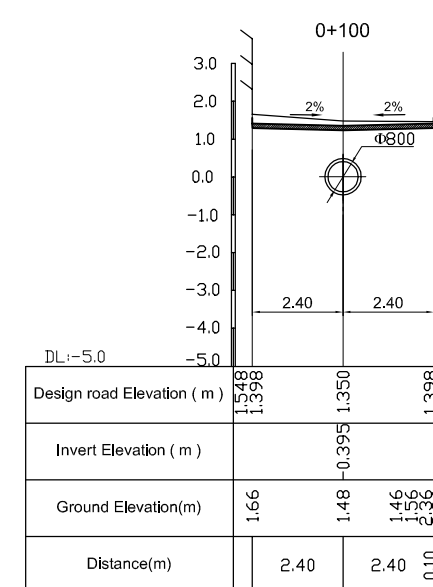
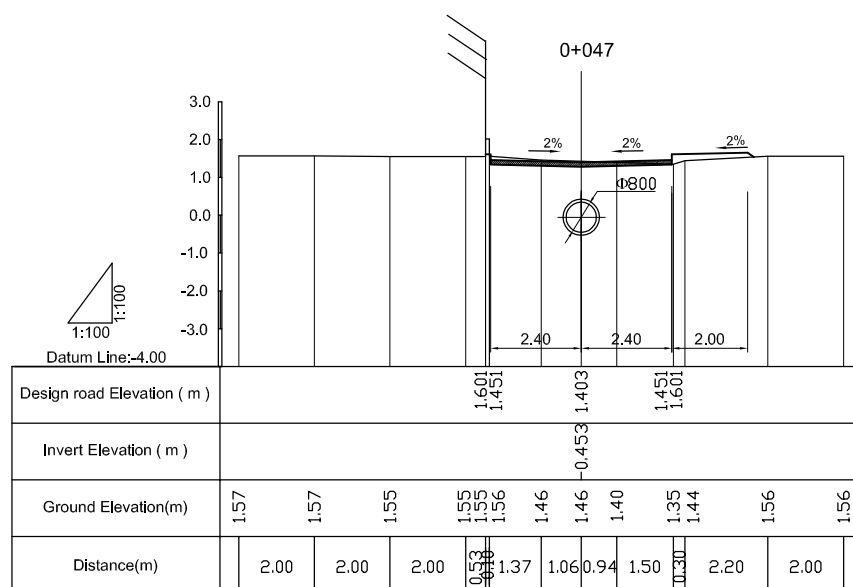
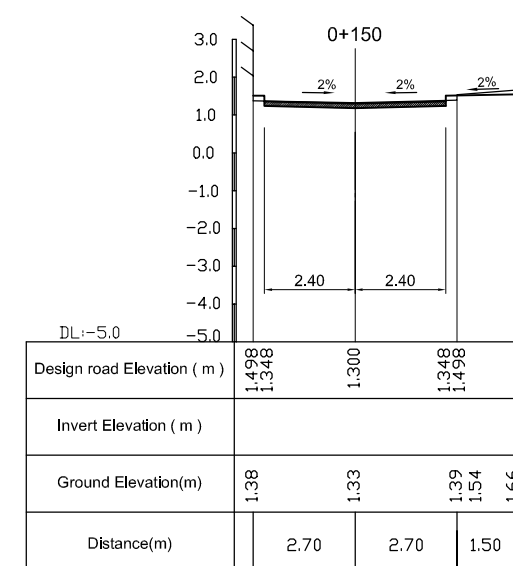
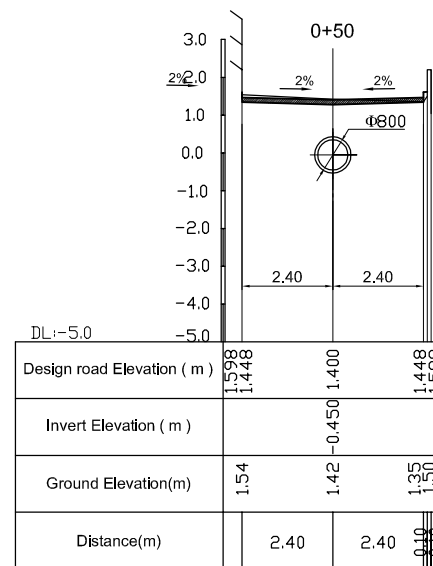
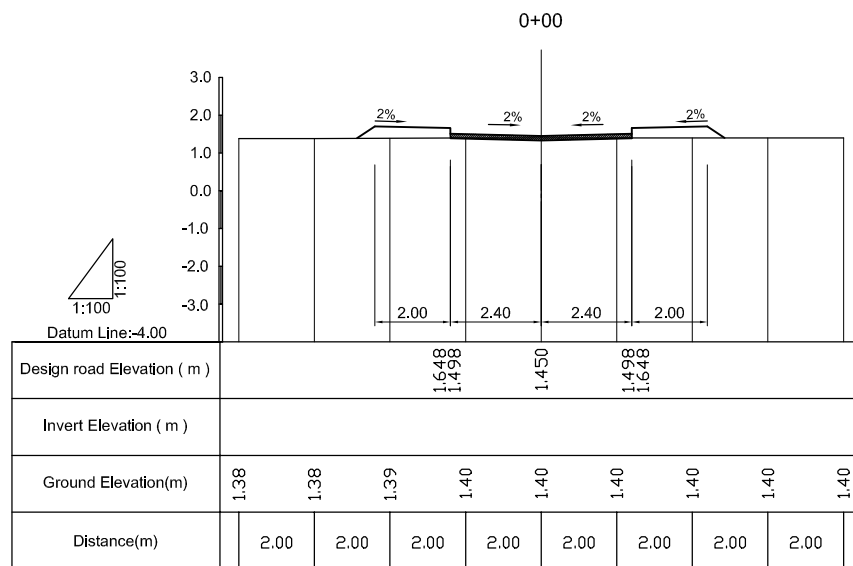
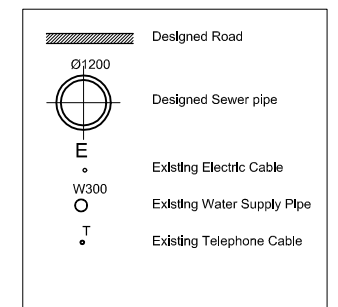
**DETAIL 1:**



**TYPICAL ROAD SURFACE:**



**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  
THANH DA AREA

**CROSS SECTION  
OF SEWER AND ROAD (2)**  
( TD.5 )

SCALE : AS SHOW

JICA JAPAN INTERNATIONAL COOPERATION AGENCY ( JICA )

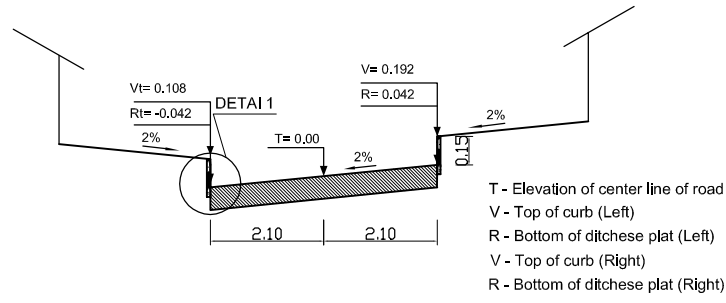
PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED: \_\_\_\_\_ CHECKED: \_\_\_\_\_

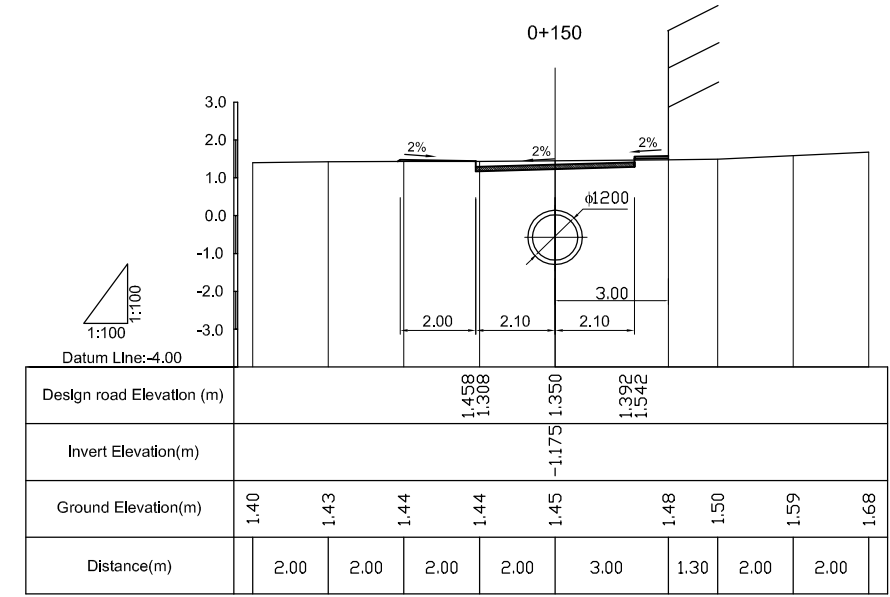
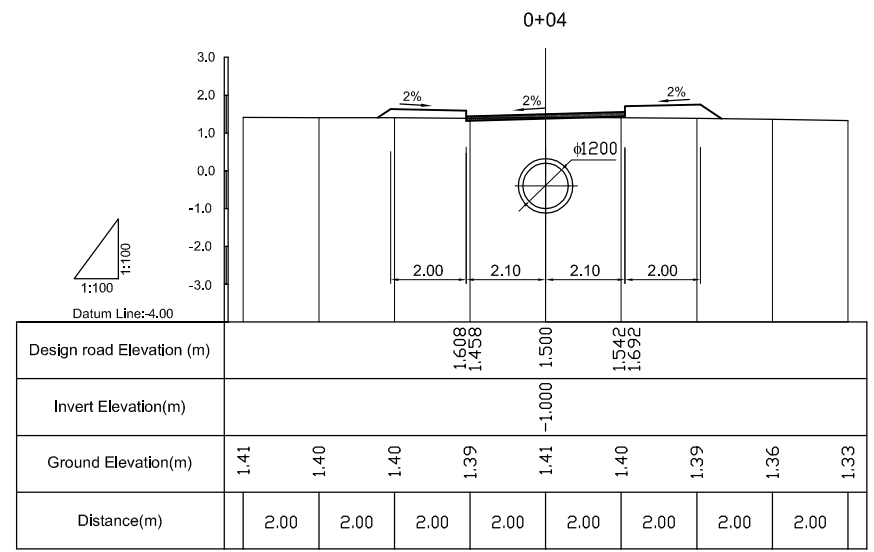
DATE: \_\_\_\_\_ DWG. No. PB - PDI - TD - 207



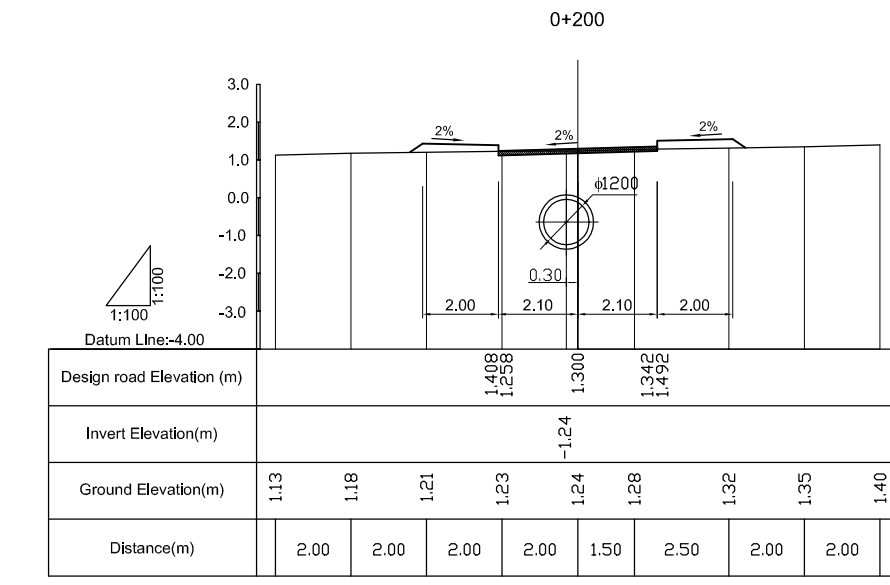
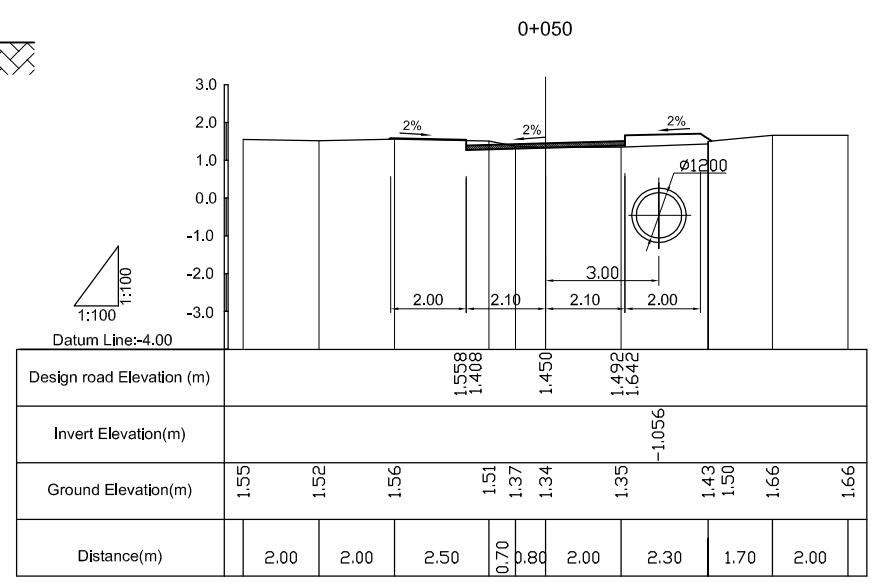
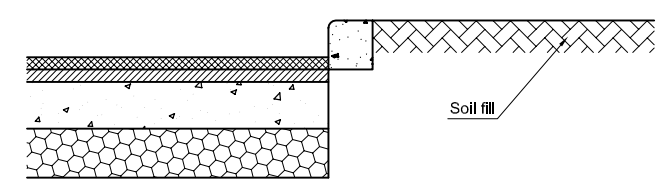
**TYPICAL CROSS SECTION OF ROAD:**



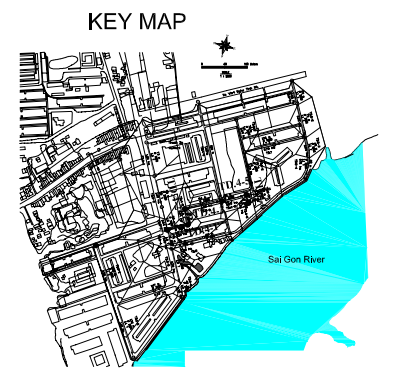
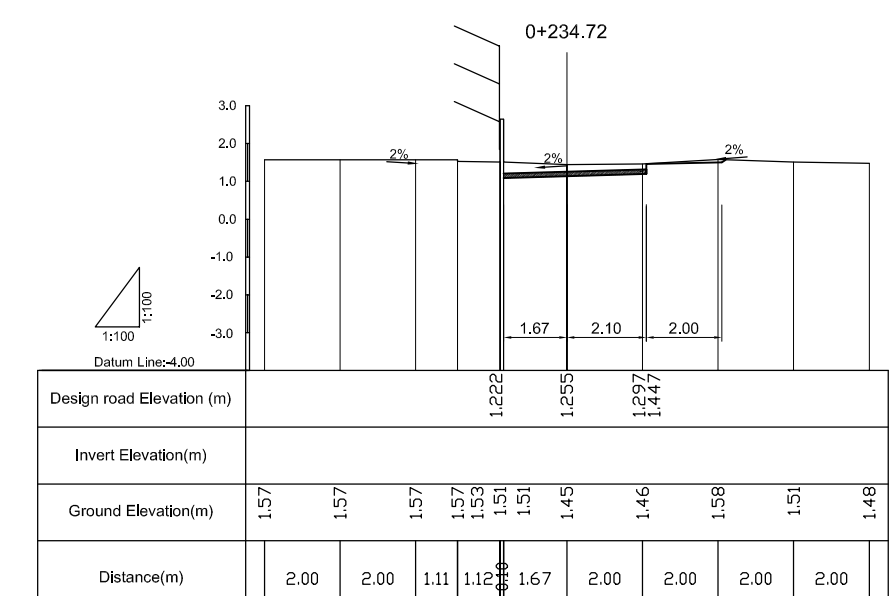
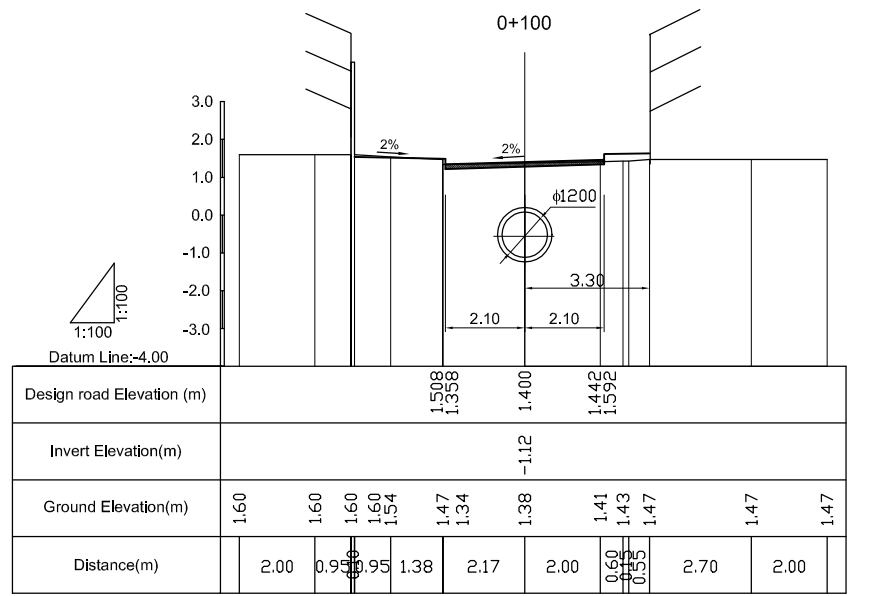
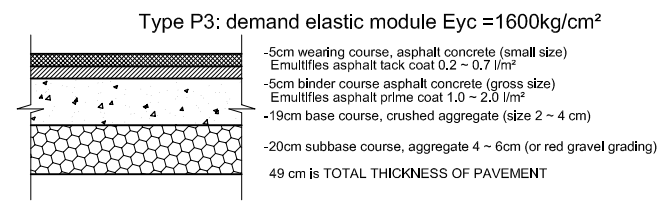
T - Elevation of center line of road  
 V - Top of curb (Left)  
 R - Bottom of ditchese plat (Left)  
 V - Top of curb (Right)  
 R - Bottom of ditchese plat (Right)



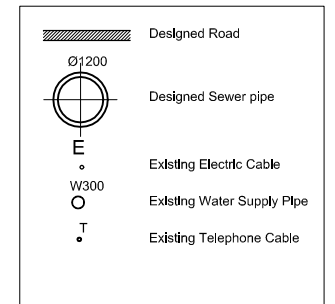
**DETAIL 1:**



**TYPICAL ROAD SURFACE:**



**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 THANH DA AREA <b>CROSS SECTION OF SEWER AND ROAD (3)</b> (TD.4-1, TD.4-3, TD.4-6)				
SCALE : AS SHOW				
JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)				
PACIFIC CONSULTANTS INTERNATIONAL				
DESIGNED		CHECKED		
DATE :		DWG. No. PB - PDI - TD - 208		