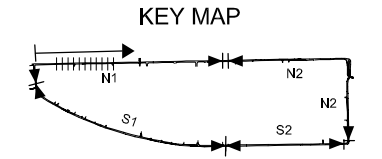


BEN ME COC (2) PUMP DRAINAGE IMPROVEMENT AREA

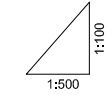
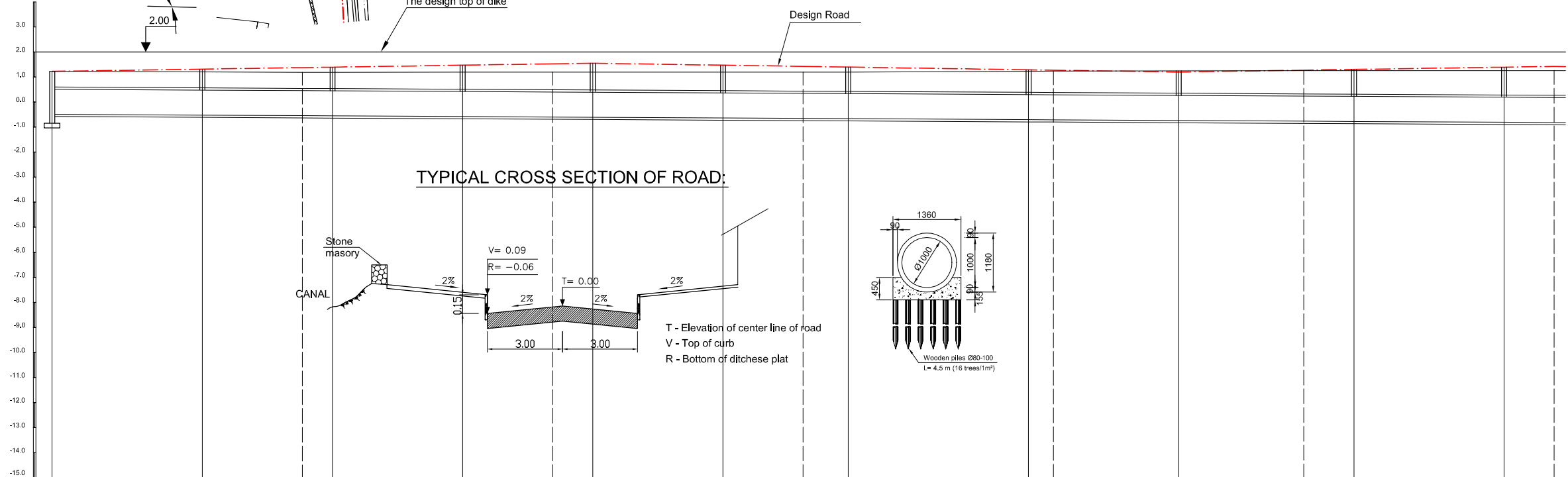
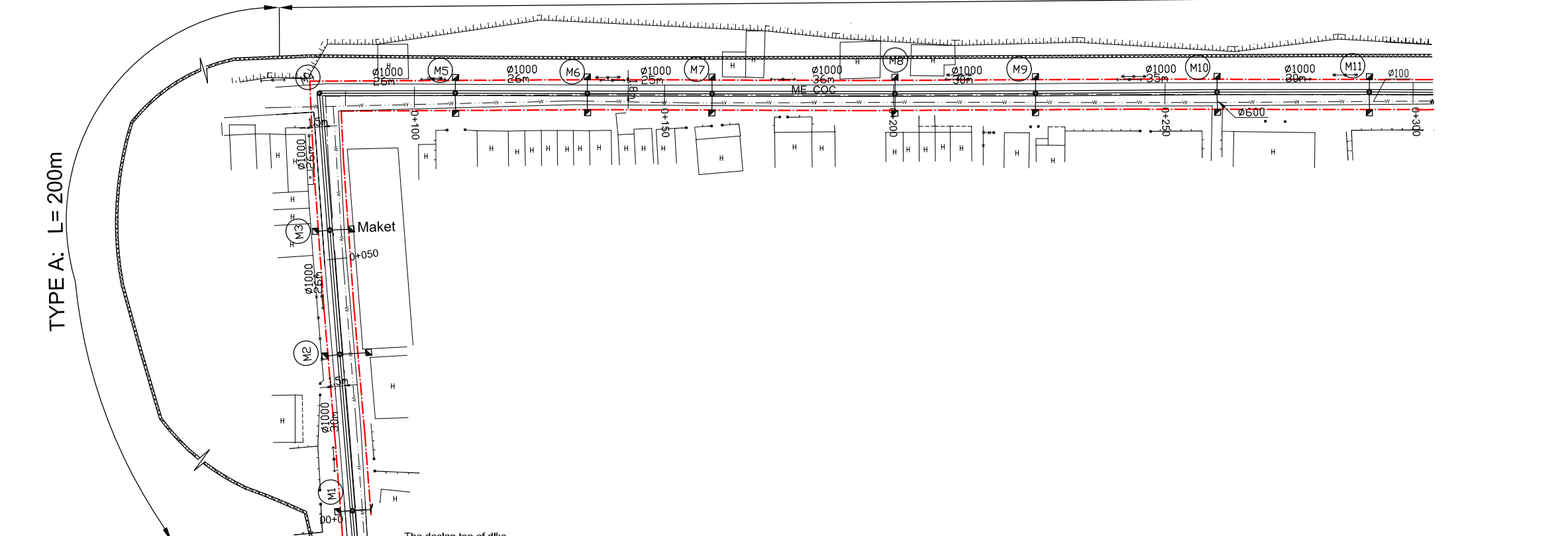
TEMPORARY DIKE CONSTRUCTION - TYPE C: L = 920m

TYPE A: L= 200m



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
- 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



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	M10	M11						
Diameter (mm)	Ø1000	Ø1000	Ø1000	Ø1000	Ø1000	Ø1000	Ø1000	Ø1000	Ø1000	Ø1000	Ø1000						
Gradient (‰)	1.1‰	1.1‰	1.1‰	1.1‰	1.1‰	1.1‰	1.1‰	1.1‰	1.1‰	1.1‰	1.1‰						
Length (m)	30.00	26.00	26.00	26.00	26.00	25.00	36.00	30.00	35.00	30.00							
Gradient of Road (‰)	3.0‰			108.00			117.00			3.0‰		75.00					
Road design Elevation (m)	1.230	1.320	1.380	1.398	1.476	1.530	1.554	1.476	1.428	1.401	1.293	1.278	1.308	1.398	1.428		
Existing Ground Elevation (m)	1.23	1.21	1.19	1.19	1.20	1.20	1.20	1.20	1.20	1.20	1.23	1.24	1.25	1.26	1.26	1.26	
Earth Covering (m)	0.624	0.747	0.829	0.854	0.960	1.034	1.067	1.017	0.967	0.970	0.901	0.892	0.844	0.947	0.988	1.111	1.152
Invert Elevation (m)	-0.484	-0.517	-0.539	-0.546	-0.574	-0.594	-0.603	-0.631	-0.649	-0.659	-0.698	-0.704	-0.731	-0.759	-0.770	-0.803	-0.814
Total Accumulation Length (m)	0.0	30.0	50.0	56.0	82.0	100.0	108.0	134.0	150.0	159.0	195.0	200.0	225.0	250.0	260.0	290.0	300.0

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 (2) AREA
PLAN AND PROFILE OF SEWER,
ROAD AND TEMPORARY DIKE(1)
BM2 - N1 (M1-M11)

SCALE : AS SHOWN

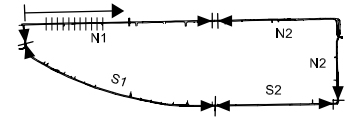
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

PACIFIC CONSULTANTS INTERNATIONAL

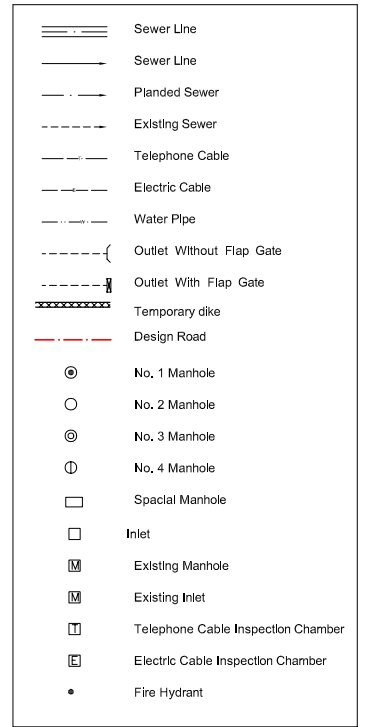
DESIGNED _____ CHECKED _____

DATE : _____ DWG. No. PB - PDI - BMC2- 201

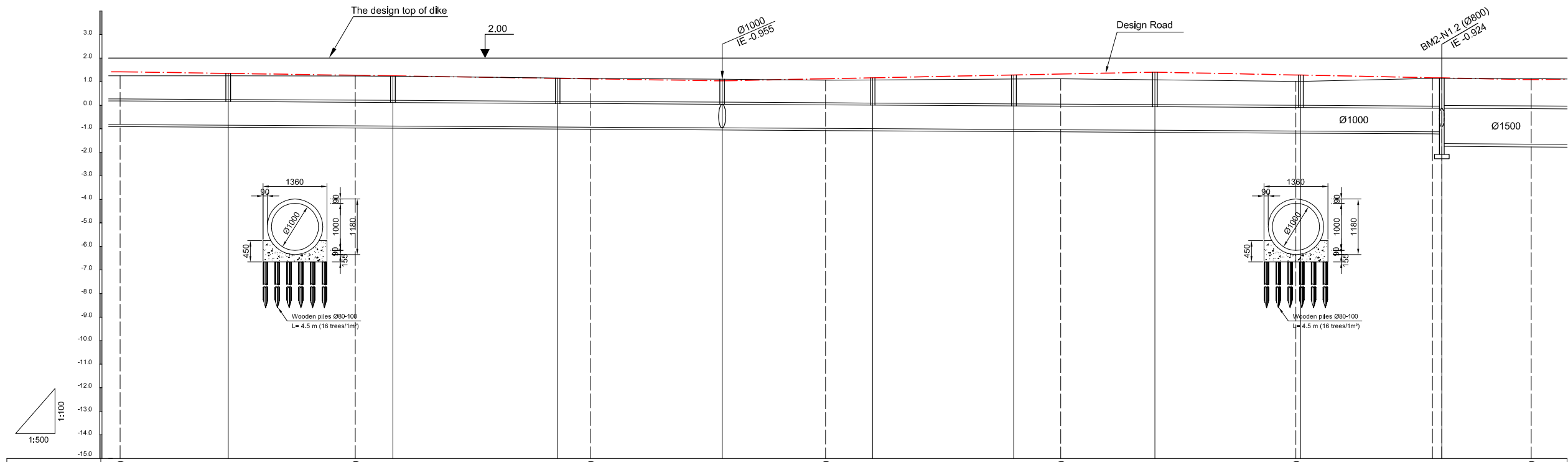
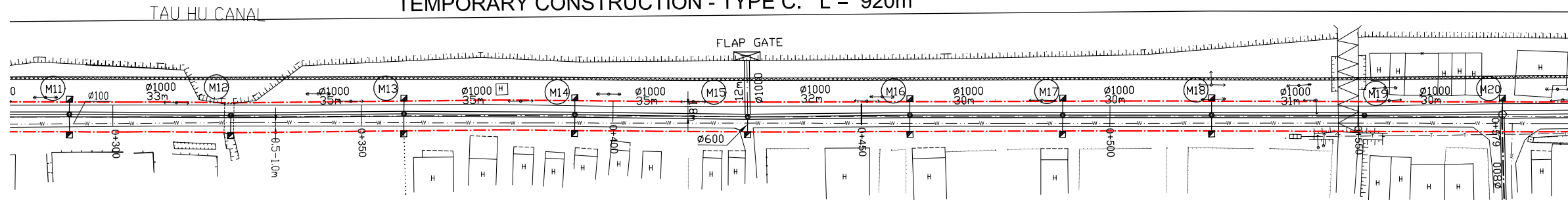
KEY MAP



LEGEND



TEMPORARY CONSTRUCTION - TYPE C: L = 920m



Location of Survey	0+300		0+350		0+400		0+450		0+500		0+550		0+600				
Manhole Number	M12		M13		M14		M15		M16		M17		M18				
Diameter (mm)	Ø1000		Ø1000		Ø1000		Ø1000		Ø1000		Ø1000		Ø1500				
Gradient (‰)	1.1‰		1.1‰		1.1‰		1.1‰		1.1‰		1.1‰		1.1‰				
Length (m)	33.00		35.00		35.00		35.00		32.00		30.00		33.00				
Gradient of Road (‰)																	
Road design Elevation (m)	1.428	1.359	1.278	1.254	1.149	1.128	1.044	1.132	1.172	1.292	1.332	1.412	1.292	1.288	1.176	1.168	1.092
Existing Ground Elevation (m)	1.26	1.26	1.25	1.24	1.16	1.15	1.11	1.07	1.08	1.12	1.13	1.09	1.02	1.02	1.15	1.15	1.14
Earth Covering (m)	1.152	1.108	1.057	1.042	0.975	0.962	0.909	1.021	1.072	1.225	1.276	1.378	1.291	1.288	1.207	1.201	1.116
Invert Elevation (m)	-0.814	-0.839	-0.869	-0.878	-0.916	-0.924	-0.955	-0.979	-0.990	-1.023	-1.034	-1.056	-1.089	-1.090	-1.121	-1.123	-1.644
Total Accumulation Length (m)	300.0	323.0	350.0	358.0	393.0	400.0	428.0	450.0	460.0	490.0	500.0	520.0	550.0	551.0	579.0	581.0	600.0

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 (2) AREA
PLAN AND PROFILE OF SEWER,
ROAD AND TEMPORARY DIKE (2)
BM2 - N1 (M11-M20)

SCALE : AS SHOWN

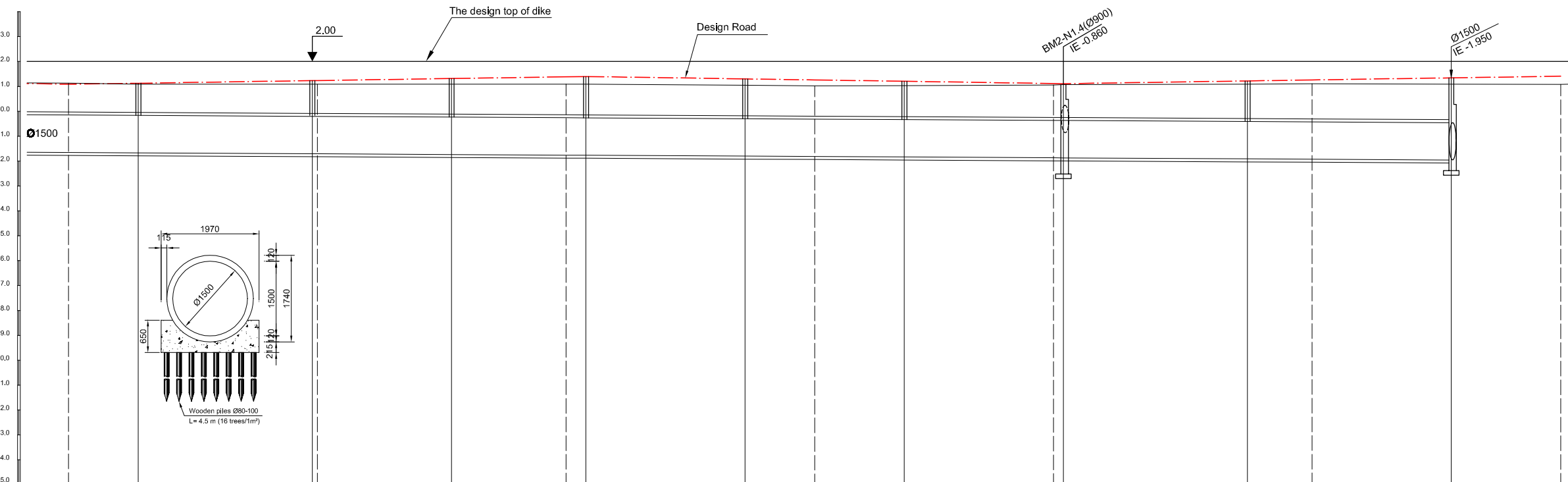
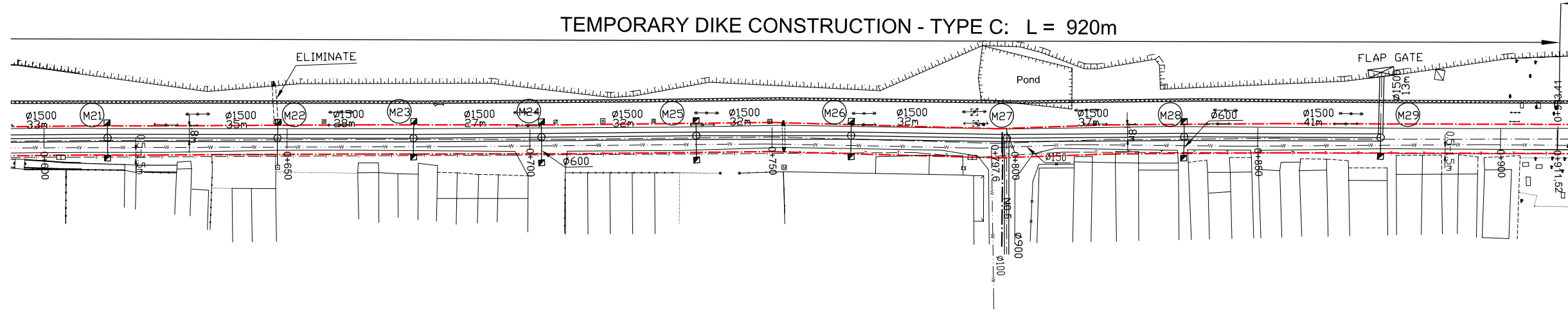
JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED: [] CHECKED: []

DATE: [] DWG. No. PB - PDI - BMC2- 202

TEMPORARY DIKE CONSTRUCTION - TYPE C: L = 920m



Location of Survey	0+600		0+650		0+700		0+750		0+800		0+850		0+900	
Manhole Number	M21		M22		M23		M24		M25		M26		M27	
Diameter (mm)	Ø1500		Ø1500		Ø1500		Ø1500		Ø1500		Ø1500		Ø1500	
Gradient (%)	1.1‰		1.1‰		1.1‰		1.1‰		1.1‰		1.1‰		1.1‰	
Length (m)	33.00		35.00		28.00		27.00		32.00		32.00		37.00	
Gradient of Road (%)	3.0‰		3.0‰		3.0‰		3.0‰		3.0‰		3.0‰		3.0‰	
Road design Elevation (m)	1.092	1.134	1.239	1.242	1.323	1.392	1.404	1.308	1.266	1.212	1.122	1.116	1.227	1.266
Existing Ground Elevation (m)	1.14	1.10	1.10	1.10	1.10	1.10	1.10	1.05	1.03	1.04	1.06	1.08	1.10	1.11
Earth Covering (m)	1.116	1.174	1.317	1.321	1.432	1.526	1.543	1.482	1.455	1.421	1.364	1.360	1.512	1.565
Invert Elevation (m)	-1.644	-1.660	-1.698	-1.699	-1.729	-1.754	-1.759	-1.794	-1.809	-1.829	-1.862	-1.864	-1.905	-1.919
Total Accumulation Length (m)	600.0	614.0	648.0	650.0	677.0	700.0	704.0	736.0	750.0	768.0	798.0	800.0	837.0	850.0

KEY MAP

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
- 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
BEN ME COC (2) AREA

**PLAN AND PROFILE OF SEWER,
ROAD AND TEMPORARY DIKE (3)**

BM2 - N1 (M21-M29)

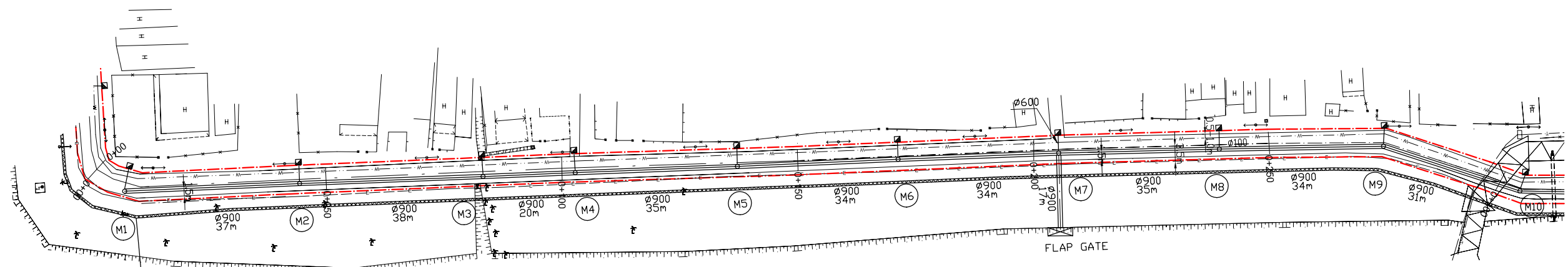
SCALE : AS SHOWN

JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

PACIFIC CONSULTANTS INTERNATIONAL

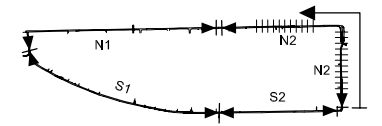
DESIGNED: _____ CHECKED: _____

DATE: _____ DWG. No. PB - PDI - BMC2- 203



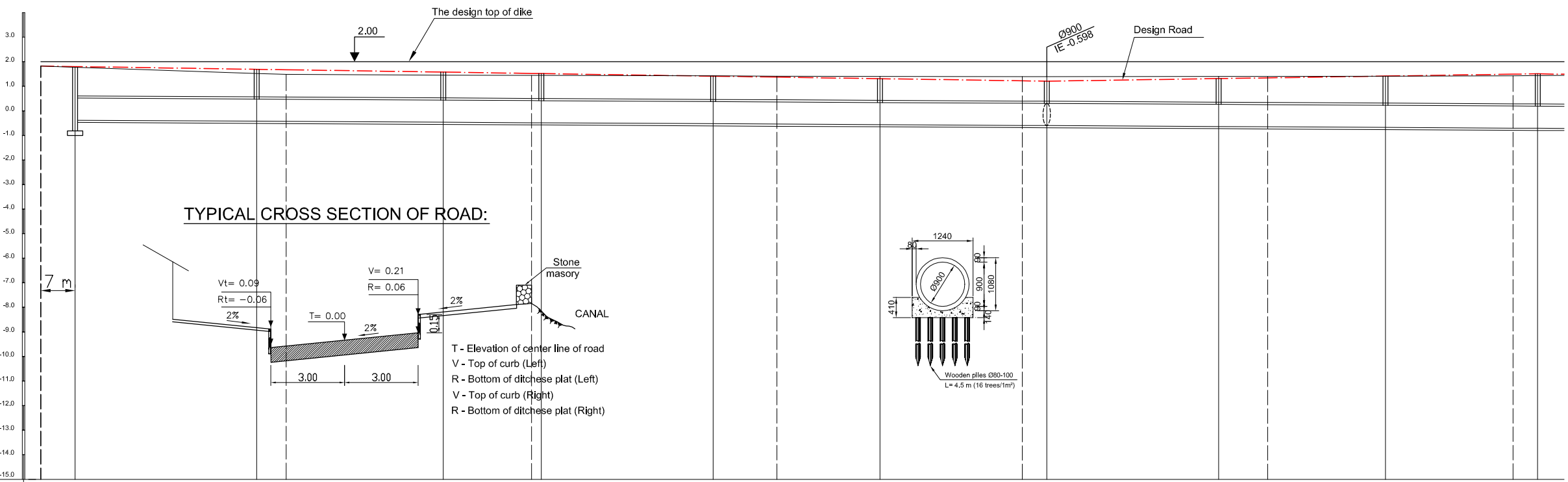
TEMPORARY DIKE CONSTRUCTION - TYPE A: L = 389m

KEY MAP

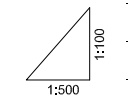


LEGEND

- 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
- 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



TYPICAL CROSS SECTION OF ROAD:



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	M10							
Diameter (mm)	Ø900	Ø900	Ø900	Ø900	Ø900	Ø900	Ø900	Ø900	Ø900	Ø900							
Gradient (‰)	1.1‰	1.1‰	1.1‰	1.1‰	1.1‰	1.1‰	1.1‰	1.1‰	1.1‰	1.1‰							
Length (m)	37.00	38.00	20.00	35.00	34.00	34.00	35.00	34.00	31.00								
Gradient of Road (‰)	205.00				3.0‰			3.0‰			100.00						
Road design Elevation (m)	1.83	1.809	1.698	1.680	1.584	1.530	1.524	1.419	1.380	1.317	1.230	1.215	1.320	1.350	1.422	1.500	1.515
Existing Ground Elevation (m)	1.83	1.78	1.53	1.49	1.46	1.45	1.45	1.43	1.42	1.41	1.40	1.40	1.41	1.41	1.42	1.43	1.44
Earth Covering (m)		1.200	1.129	1.118	1.057	1.023	1.019	0.953	0.928	0.888	0.833	0.823	0.967	1.008	1.106	1.213	1.233
Invert Elevation (m)	-0.381	-0.421	-0.428	-0.463	-0.483	-0.485	-0.524	-0.538	-0.561	-0.593	-0.598	-0.637	-0.648	-0.674	-0.703	-0.708	-0.708
Total Accumulation Length (m)	0.0	37.0	43.0	75.0	93.0	95.0	130.0	143.0	164.0	193.0	198.0	233.0	243.0	267.0	293.0	298.0	298.0

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 (2) AREA
**PLAN AND PROFILE OF SEWER,
ROAD AND TEMPORARY DIKE (4)**
BM2 - N2 (M1-M10)

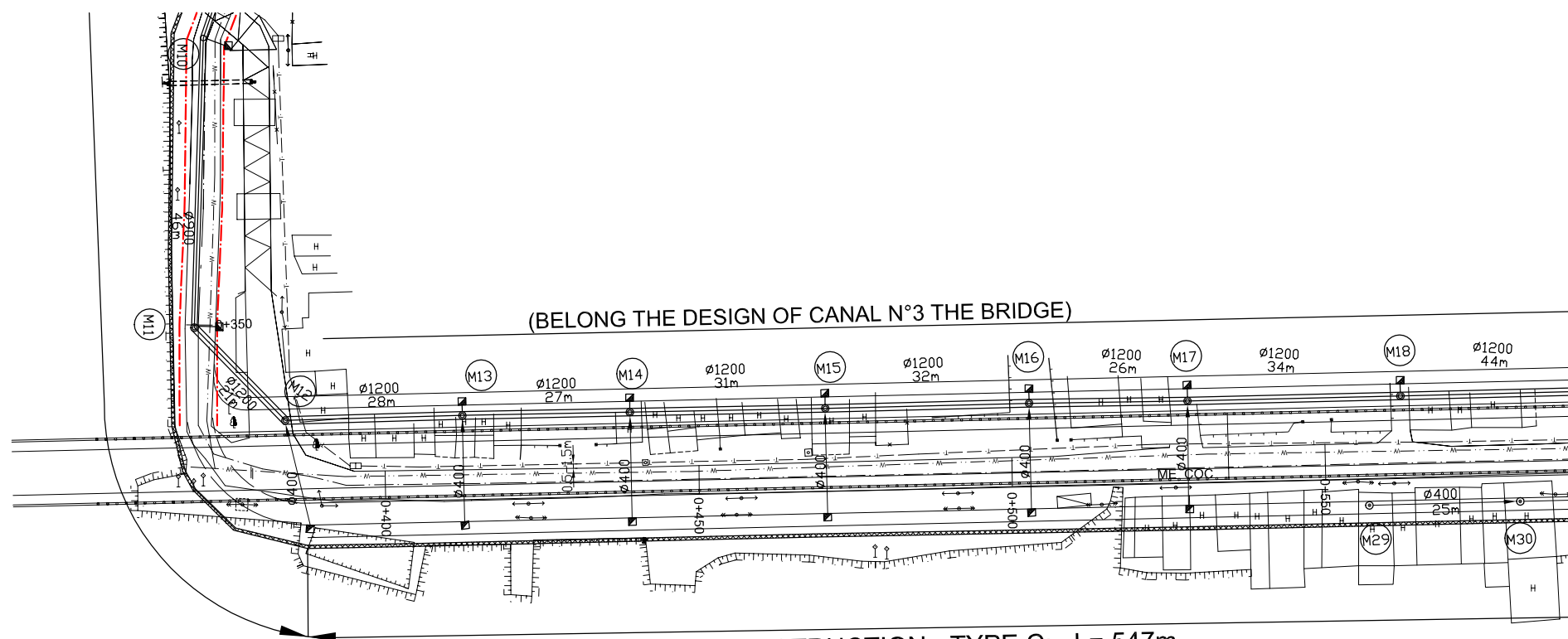
SCALE : AS SHOWN

JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

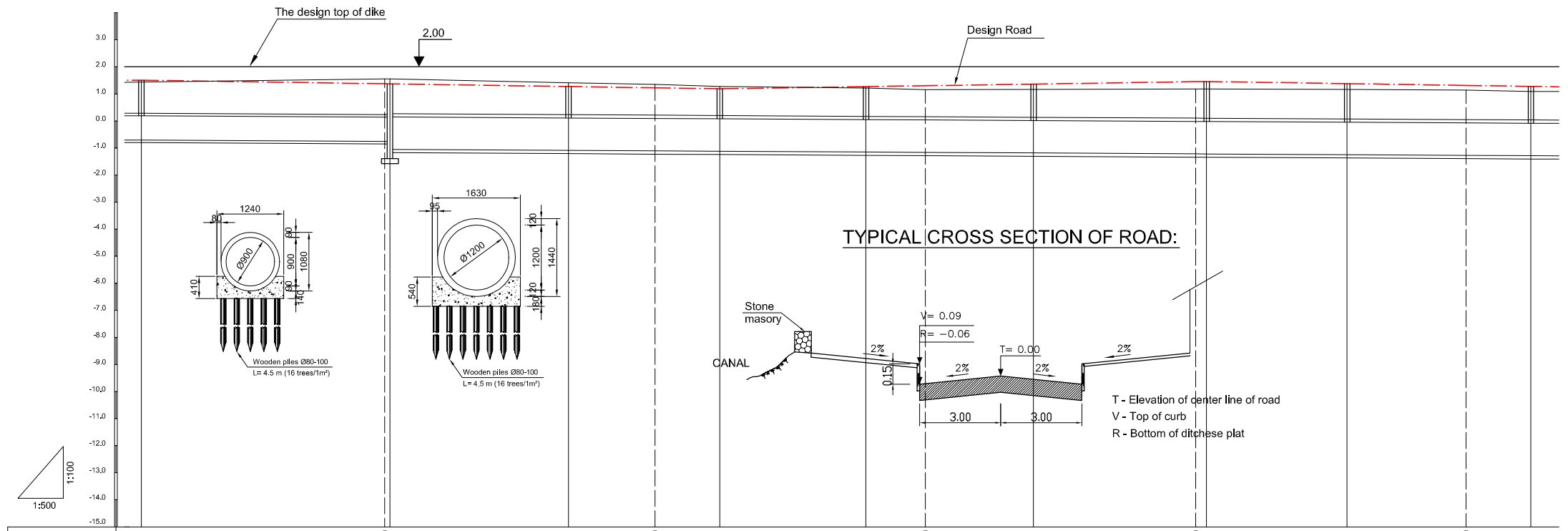
PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED CHECKED

DATE : DWG. No. PB - PDI - BMC2- 204

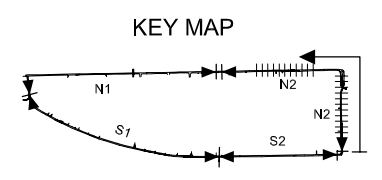


TEMPORARY DIKE CONSTRUCTION - TYPE C: L= 547m



TYPICAL CROSS SECTION OF ROAD:

Location of Survey	0+350	0+400	0+450	0+500	0+550					
Manhole Number	M10	M11	M12	M13	M14	M15	M16	M17	M18	
Diameter (mm)	Ø900	Ø1200	Ø1200	Ø1200	Ø1200	Ø1200	Ø1200	Ø1200	Ø1200	
Gradient (%)	1.1‰	1.1‰	1.1‰	1.1‰	1.1‰	1.1‰	1.1‰	1.1‰	1.1‰	
Length (m)	46.00	33.00	28.00	27.00	31.00	32.00	26.00	34.00		
Gradient of Road (‰)	107.00		3.0‰			90.00		60.00		3.0‰
Road design Elevation (m)	1.515	1.380 1.377	1.278	1.230	1.194	1.275 1.308	1.368	1.458 1.464	1.386	1.320 1.284
Existing Ground Elevation (m)	1.44	1.56 1.56	1.42	1.36	1.28	1.22 1.16	1.17	1.19 1.19	1.17	1.15 1.10
Earth Covering (m)	1.233	1.148 1.146	1.070	1.040	1.017	1.128 1.173	1.255	1.378 1.366	1.337	1.295 1.272
Invert Elevation (m)	-0.708	-0.758 -0.759 -1.059	-1.082	-1.100	-1.113	-1.143 -1.155	-1.177	-1.210 -1.212	-1.241	-1.265 -1.278
Total Accumulation Length (m)	298.0	343.0 344.0	377.0	393.0	405.0	432.0 443.0	463.0	493.0 495.0	521.0	543.0 555.0



LEGEND

- Sewer Line
- Sewer Line
- Planted Sewer
- Existing Sewer
- Telephone Cable
- Electric Cable
- Water Pipe
- Outlet Without Flap Gate
- Outlet With Flap Gate
- Temporary dike
- 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
BEN ME COC (2) AREA

**PLAN AND PROFILE OF SEWER,
ROAD AND TEMPORARY DIKE (5)**

BM2 - N2 (M10-M18)

SCALE : AS SHOWN

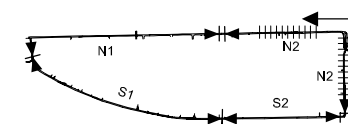
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

PACIFIC CONSULTANTS INTERNATIONAL

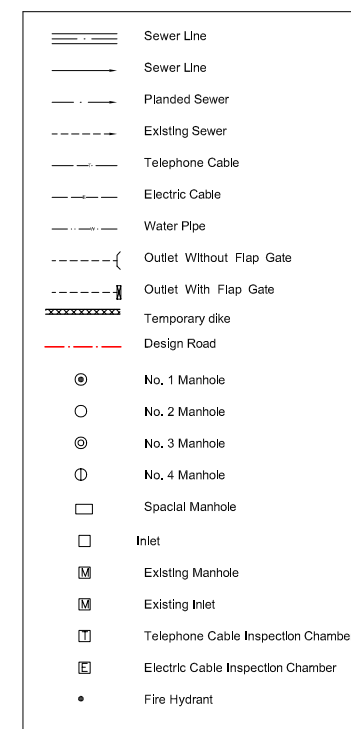
DESIGNED: _____ CHECKED: _____

DATE: _____ DWG. No. PB - PDI - BMC2- 205

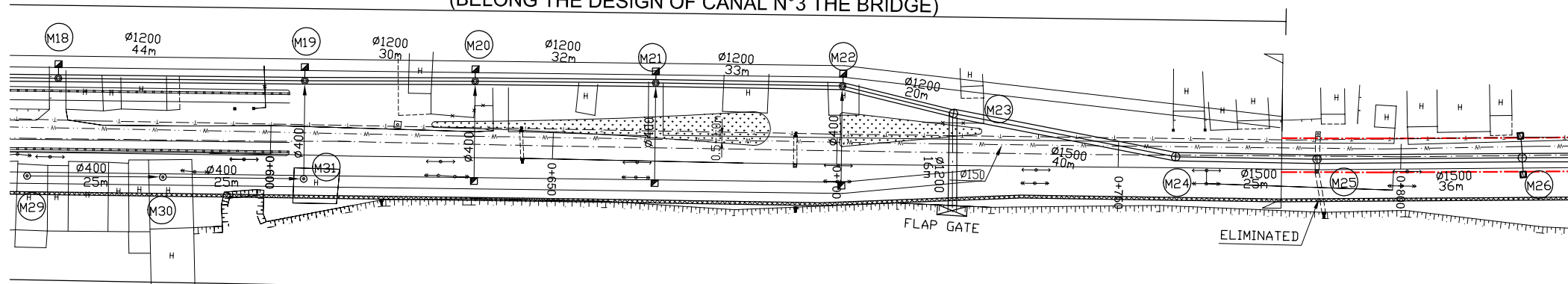
KEY MAP



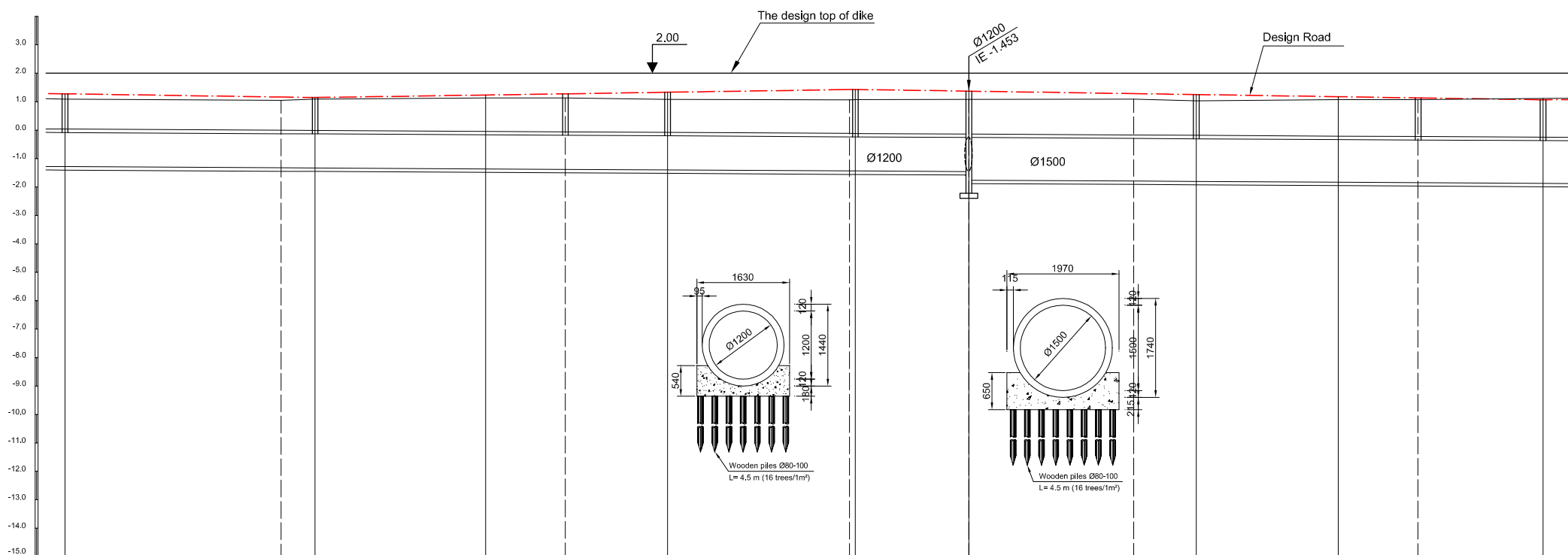
LEGEND



(BELONG THE DESIGN OF CANAL N°3 THE BRIDGE)



TEMPORARY CONSTRUCTION DIKE - TYPE C: L = 547m



Location of Survey	0+600		0+650		0+700		0+750		0+800					
Manhole Number	M18	M19	M20	M21	M22	M23	M24	M25	M26					
Diameter (mm)	Ø1200	Ø1200	Ø1200	Ø1200	Ø1200	Ø1500	Ø1500	Ø1500						
Gradient (‰)	1.1‰	1.1‰	1.1‰	1.1‰	1.1‰	1.1‰	1.1‰	1.1‰						
Length (m)	44.00	30.00	32.00	33.00	20.00	40.00	25.00	36.00						
Gradient of Road (‰)	3.0‰		3.0‰		95.00		121.00		3.0‰					
Road design Elevation (m)	1.284	1.170	1.152	1.242	1.284	1.338	1.434	1.437	1.377	1.290	1.257	1.182	1.140	1.074
Existing Ground Elevation (m)	1.10	1.05	1.10	1.14	1.14	1.09	1.07	1.08	1.09	1.10	1.04	1.08	1.08	1.12
Earth Covering (m)	1.272	1.200	1.189	1.312	1.369	1.443	1.574	1.578	1.540	1.455	1.434	1.387	1.360	1.318
Invert Elevation (m)	-1.278	-1.32	-1.327	-1.360	-1.375	-1.395	-1.430	-1.431	-1.453	-1.785	-1.797	-1.825	-1.840	-1.864
Total Accumulation Length (m)	555.0	593.0	599.0	629.0	643.0	661.0	693.0	694.0	714.0	743.0	754.0	779.0	793.0	815.0

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 (2) AREA
PLAN AND PROFILE OF SEWER,
ROAD AND TEMPORARY DIKE (6)
BM2 - N2 (M18-M26)

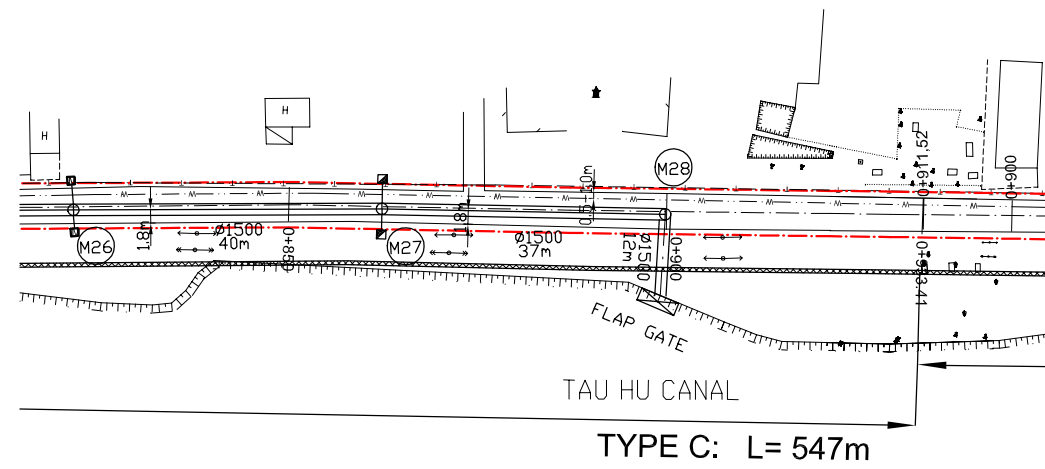
SCALE : AS SHOWN

JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

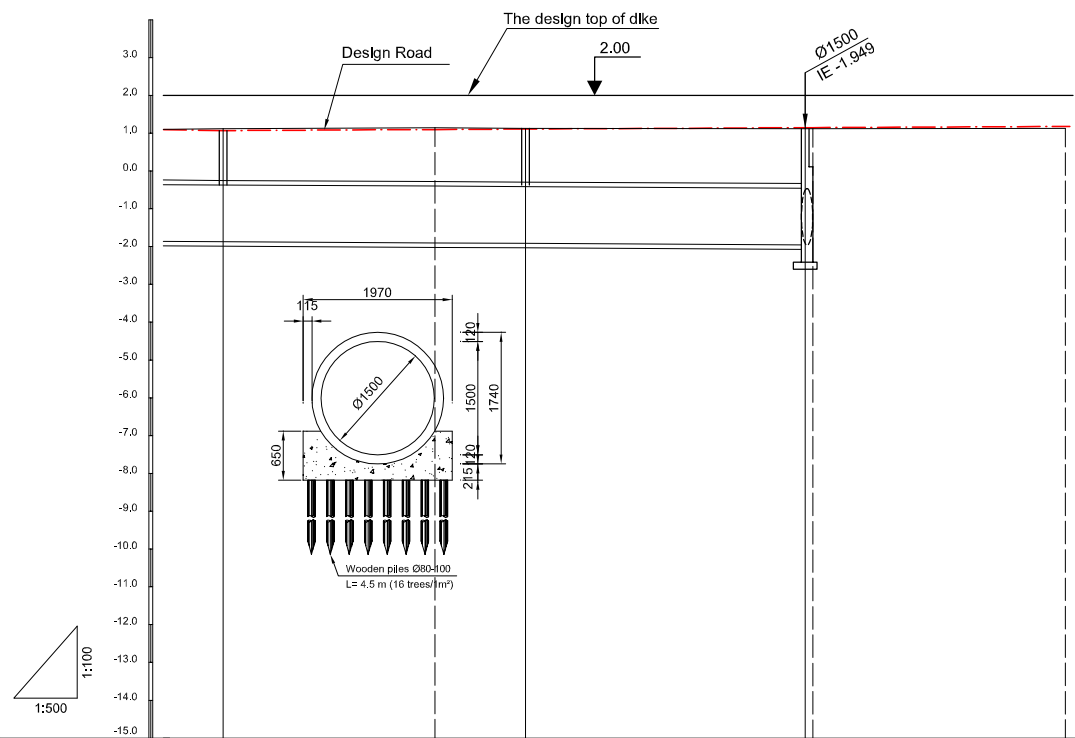
PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED CHECKED

DATE : DWG. No. PB - PDI - BMC2- 206

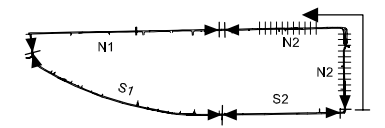


TYPE C: L= 547m



Location of Survey	0+850		0+900	
Manhole Number	M26	M27	M28	
Diameter (mm)	Ø1500		Ø1500	
Gradient (‰)	1.1‰		1.1‰	
Length (m)	40.00		37.00	
Gradient of Road (‰)	1.0‰			
Road design Elevation (m)	1.074	1.102	1.114	1.151
Existing Ground Elevation (m)	1.12	1.15	1.13	1.12
Earth Covering (m)	1.318	1.377	1.402	1.480
Invert Elevation (m)	-1.864	-1.895	-1.908	-1.949
Total Accumulation Length (m)	815.0	843.0	855.0	892.0
				893.0
				926.4

KEY MAP



LEGEND

	Sewer Line
	Sewer Line
	Planded Sewer
	Existing Sewer
	Telephone Cable
	Electric Cable
	Water Pipe
	Outlet Without Flap Gate
	Outlet With Flap Gate
	Temporary dike
	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.
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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 (2) AREA
**PLAN AND PROFILE OF SEWER,
ROAD AND TEMPORARY DIKE (7)**
BM2 - N2 (M26-M28)

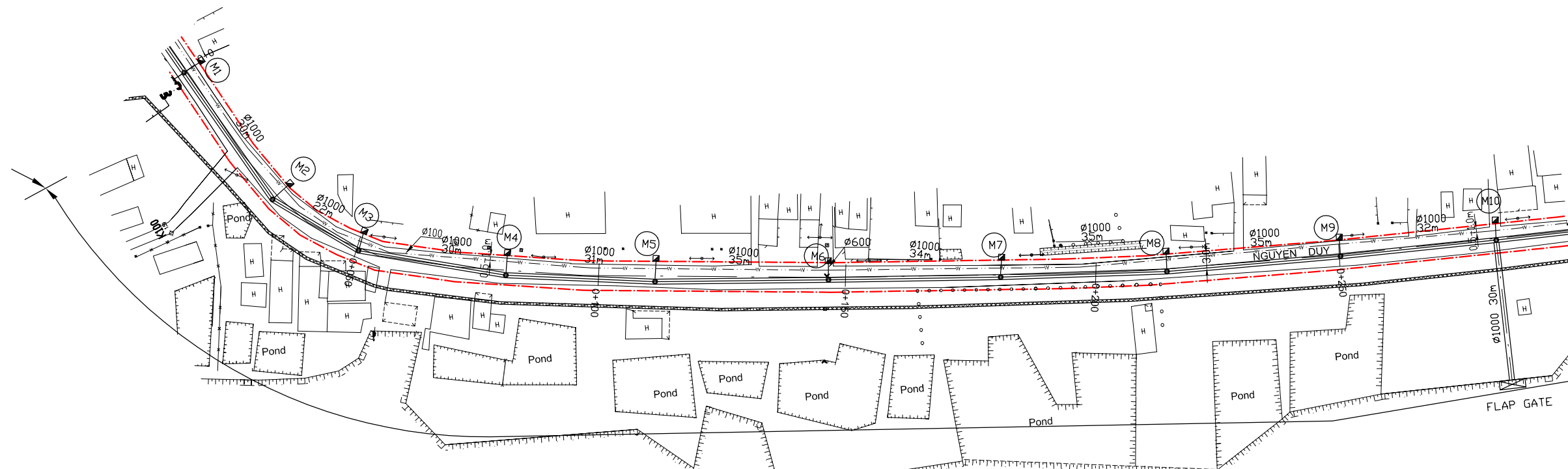
SCALE : AS SHOWN

JAPAN INTERNATIONAL COOPERATION
AGENCY (JICA)

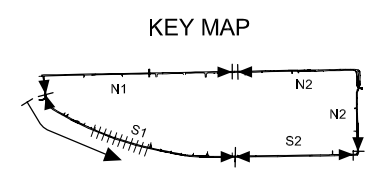
PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED _____ CHECKED _____

DATE : _____ DWG. No. PB - PDI - BMC2- 207

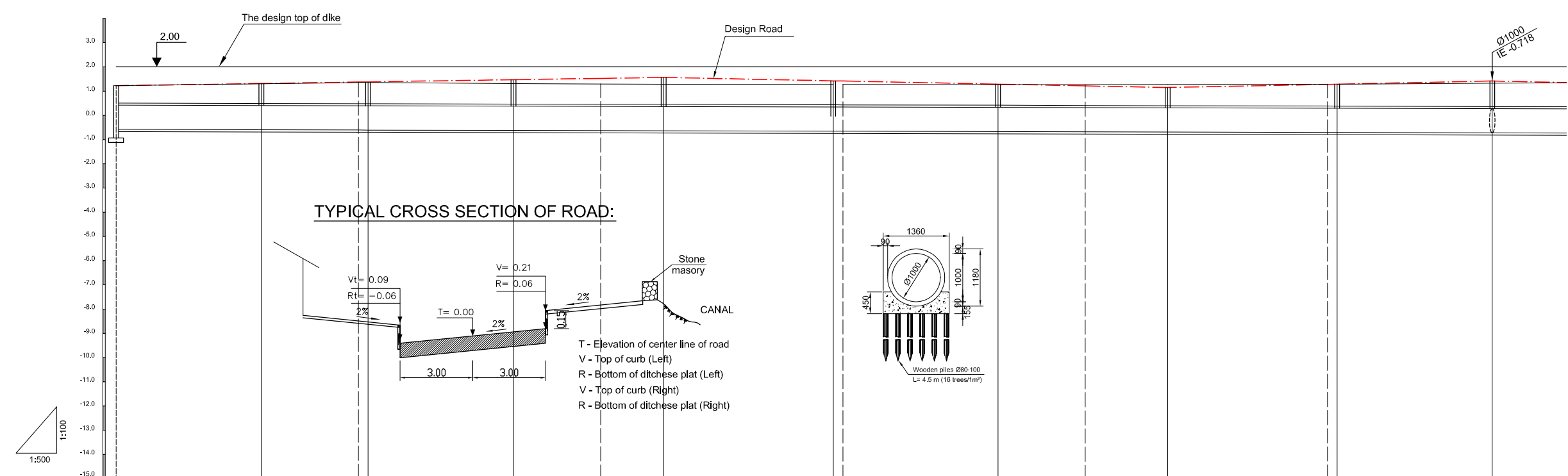


TEMPORARY DIKE CONSTRUCTION - TYPE A: L = 920m



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
- 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



Location of Survey	0+00	0+50	0+100	0+150	0+200	0+250						
Manhole Number	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10		
Diameter (mm)	Ø1000	Ø1000	Ø1000	Ø1000	Ø1000	Ø1000	Ø1000	Ø1000	Ø1000	Ø1000		
Gradient (‰)	0.5‰	0.5‰	0.5‰	0.5‰	0.5‰	0.5‰	0.5‰	0.5‰	0.5‰	0.5‰		
Length (m)	30.00	22.00	30.00	31.00	35.00	34.00	35.00	35.00	32.00			
Gradient of Road (‰)	3.0‰		113.00			104.00		4.0‰		67.00		
Road design Elevation (m)	1.230	1.320	1.380 1.386	1.476	1.530	1.569	1.429 1.421	1.293	1.221	1.153	1.285 1.285 1.293	1.421
Existing Ground Elevation (m)	1.23	1.31	1.36 1.36	1.32	1.30	1.29	1.28 1.28	1.27	1.27	1.28	1.29 1.29	1.33
Earth Covering (m)	0.731	0.831	0.892 0.913	1.012	1.073	1.129	0.990 0.998	0.879	0.816	0.764	0.897 0.921	1.057
Invert Elevation (m)	-0.576	-0.591	-0.601 -0.602	-0.617	-0.626	-0.633	-0.650 -0.651	-0.667	-0.676	-0.684	-0.701 -0.702	-0.718
Total Accumulation Length (m)	0.00	30.0	50.0 52.0	82.0	100.0	113.0	148.0 150.0	182.0	200.0	217.0	250.0 252.0	284.0

NO.	DATE	DESCRIPTIONS	BY	APRO.
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PACKAGE B
PUMP DRAINAGE IMPROVEMENT
BEN ME COC (2) AREA
**PLAN AND PROFILE OF SEWER,
ROAD AND TEMPORARY DIKE (8)**
BM2 - S1 (M1-M10)

SCALE : AS SHOWN

JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED CHECKED

DATE : DWG. No. PB - PDI - BMC2- 208