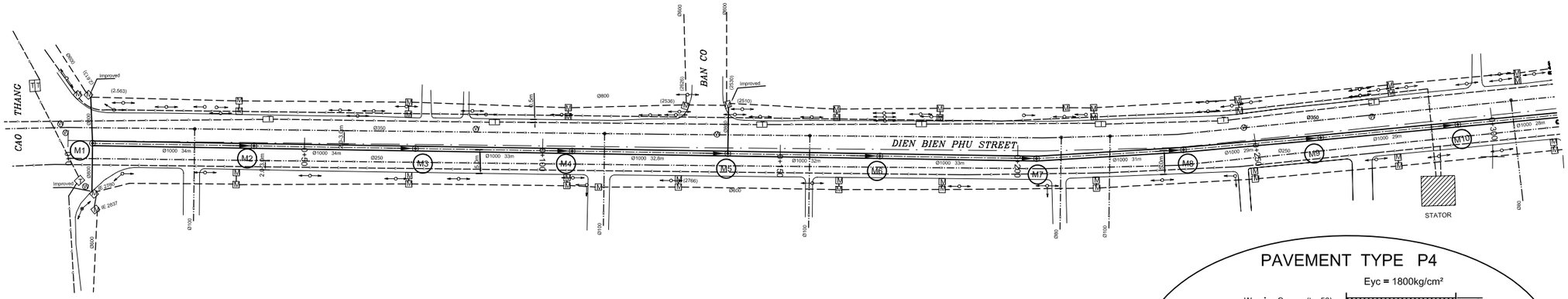
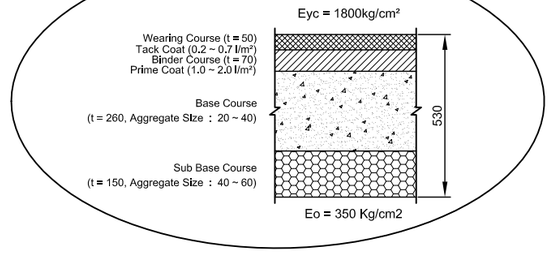
EXISTING COMBINED SEWER IMPROVEMENT

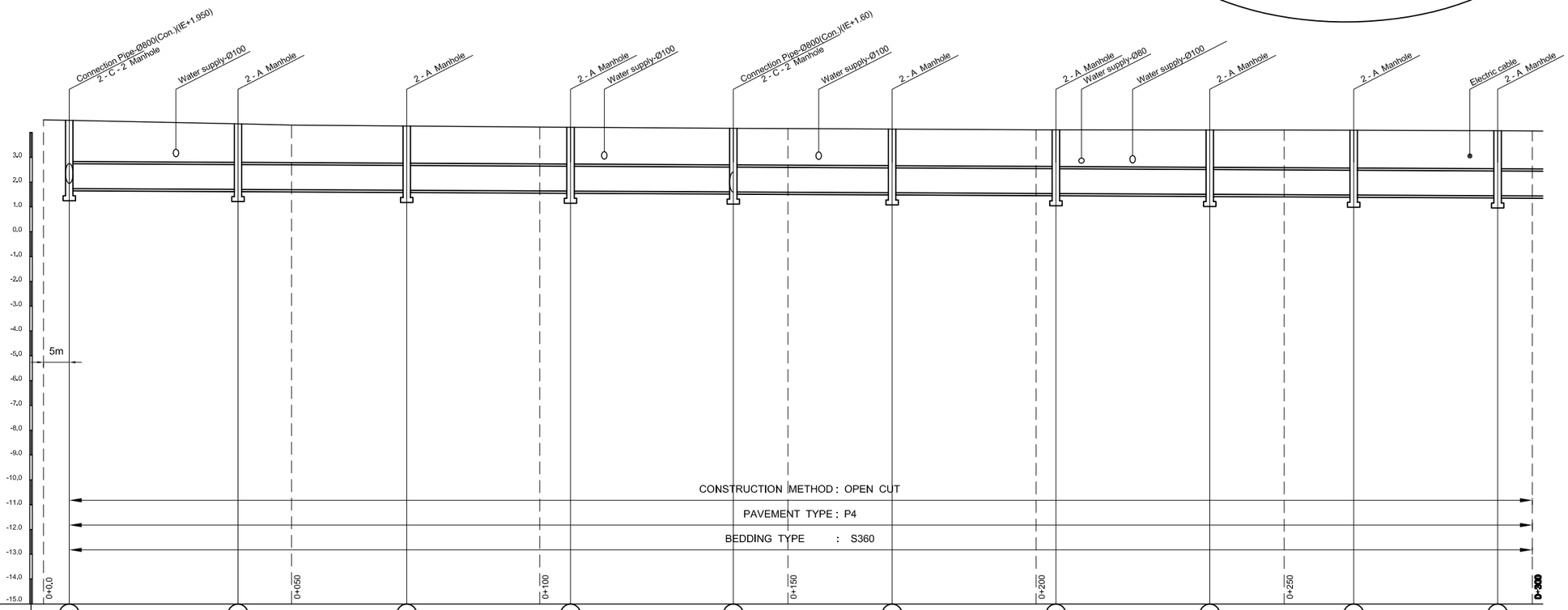
PLAN S = 1/500



PAVEMENT TYPE P4



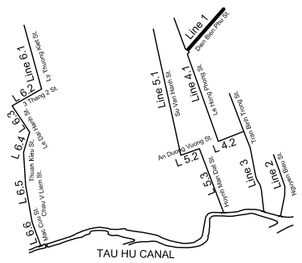
PROFILE S_H = 1/500, S_V = 1/100



Manhole Number	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10
Diameter (mm)	Ø1000	Ø1000	Ø1000	Ø1000	Ø1000	Ø1000	Ø1000	Ø1000	Ø1000	
Gradient (‰)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Length (m)	34	34	33	32.8	32	33	31	29	29	

Existing Ground Elevation (m)	4.51	4.49	4.35	4.30	4.26	4.22	4.21	4.17	4.16	4.14	4.11	4.11	4.10	4.10	4.09	4.07	4.06
Earth Covering (m)	1.65	1.55	1.49	1.47	1.47	1.47	1.47	1.49	1.51	1.52	
Invert Elevation (m)	1.75	1.71	1.70	1.68	1.66	1.65	1.61	1.60	1.58	1.55	1.55	1.52	1.50	1.49	1.46	1.45
Total Accumulation Length (m)	0.0	34.0	44.8	68.0	94.8	101.0	133.8	144.8	165.8	194.8	198.8	229.8	244.8	258.8	287.8	294.8

KEYMAP



LEGEND

- Sewer Line
- Sewer Line
- Planded Sewer
- Existing Sewer
- Telephone Cable
- Electric Cable
- Water Pipe
- Outlet Without Flap Gate
- Outlet With Flap Gate
- Manhole
- Special Manhole
- Diversion Chamber
- Diversion Chamber with Manhole
- Existing Manhole
- Existing Inlet
- Telephone Cable Inspection Chamber
- Electric Cable Inspection Chamber
- Fire Hydrant
- S4 - Area to be Required for Shaft
- Sewer Connected from The Right Side
- Sewer Connected from The Left Side

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 D
EXISTING COMBINED SEWER IMPROVEMENT

PLAN AND PROFILE ECSI - LINE 1 (1)

SCALE : As Shown

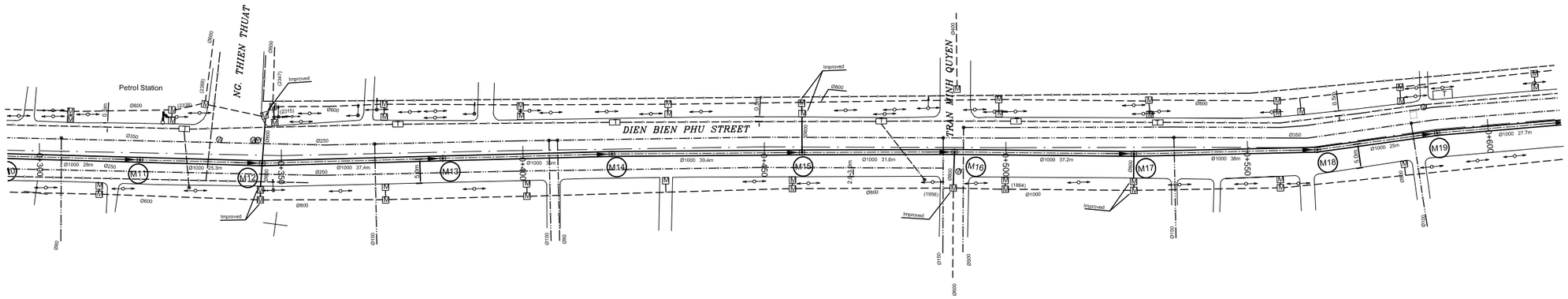
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

PACIFIC CONSULTANTS INTERNATIONAL

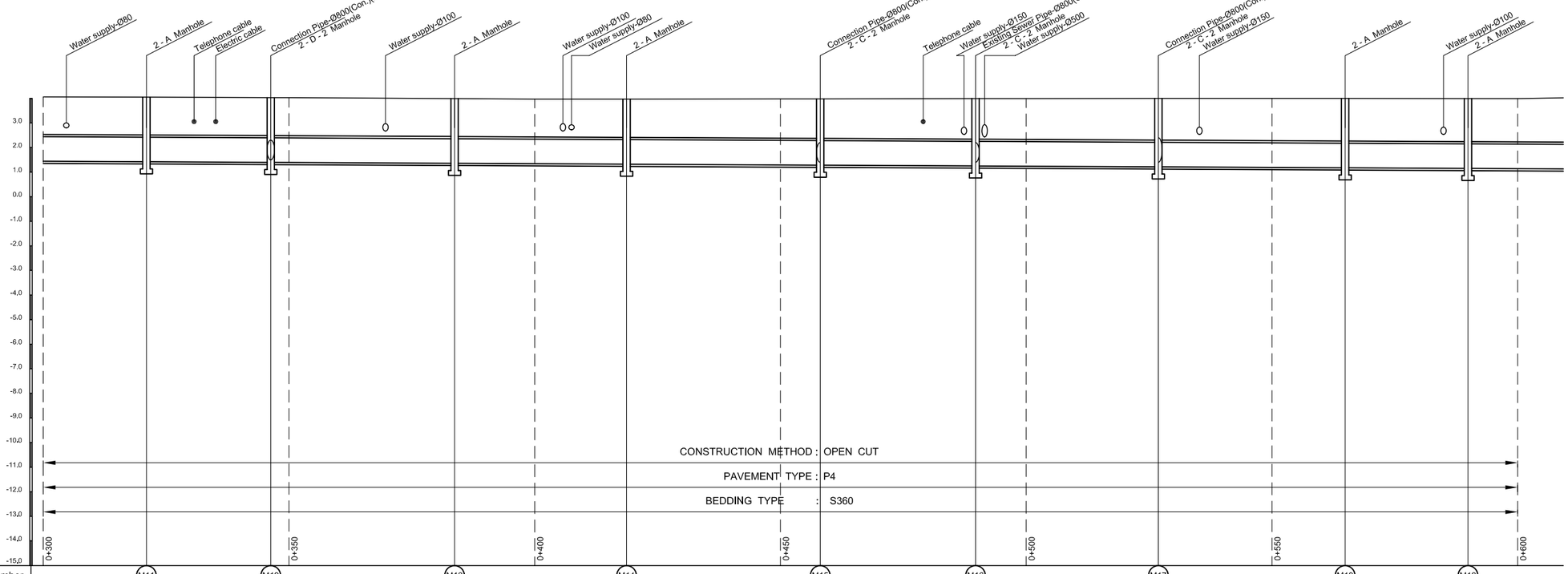
DESIGNED	CHECKED
KATSUKI TAKAAKI	KONDO MASAMI

DATE : JUNE 2001 | DWG. No. PD - ECSI - 201

PLAN S = 1/500

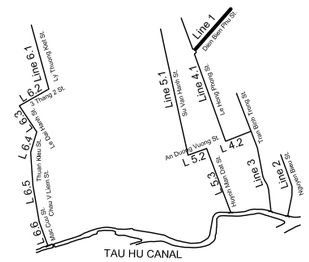


PROFILE S_H = 1/500, S_V = 1/100



Manhole Number	M11	M12	M13	M14	M15	M16	M17	M18	M19
Diameter (mm)	Ø1000	Ø1000	Ø1000	Ø1000	Ø1000	Ø1000	Ø1000	Ø1000	Ø1000
Gradient (‰)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Length (m)	28	25.3	37.4	35	39.4	31.6	37.2	38	25	27.7
Existing Ground Elevation (m)	4.06	4.05	4.03	4.03	3.99	3.97	3.97	3.98	3.98	3.99	3.99	4.00	4.00	4.00	3.99	3.99
Earth Covering (m)		1.53	1.53		1.53		1.54		1.59	1.64		1.68		1.72	1.74	
Invert Elevation (m)	1.45	1.43	1.41	1.41	1.37	1.36	1.34	1.31	1.30	1.26	1.25	1.23	1.21	1.19	1.16	1.15
Total Accumulation Length (m)	294.8	315.8	341.1	344.8	378.5	394.8	413.5	444.8	452.9	484.5	494.8	521.7	544.8	559.7	584.7	594.8

KEYMAP



LEGEND

- Sewer Line
- Sewer Line
- Planded Sewer
- Existing Sewer
- Telephone Cable
- Electric Cable
- Water Pipe
- Outlet Without Flap Gate
- Outlet With Flap Gate
- Manhole
- Special Manhole
- Diversion Chamber
- Diversion Chamber with Manhole
- Existing Manhole
- Existing Inlet
- Telephone Cable Inspection Chamber
- Electric Cable Inspection Chamber
- Fire Hydrant
- S4 - Area to be Required for Shaft
- Sewer Connected from The Right Side
- Sewer Connected from The Left Side

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 D
EXISTING COMBINED SEWER IMPROVEMENT

PLAN AND PROFILE ECSI - LINE 1 (2)

SCALE : As Shown

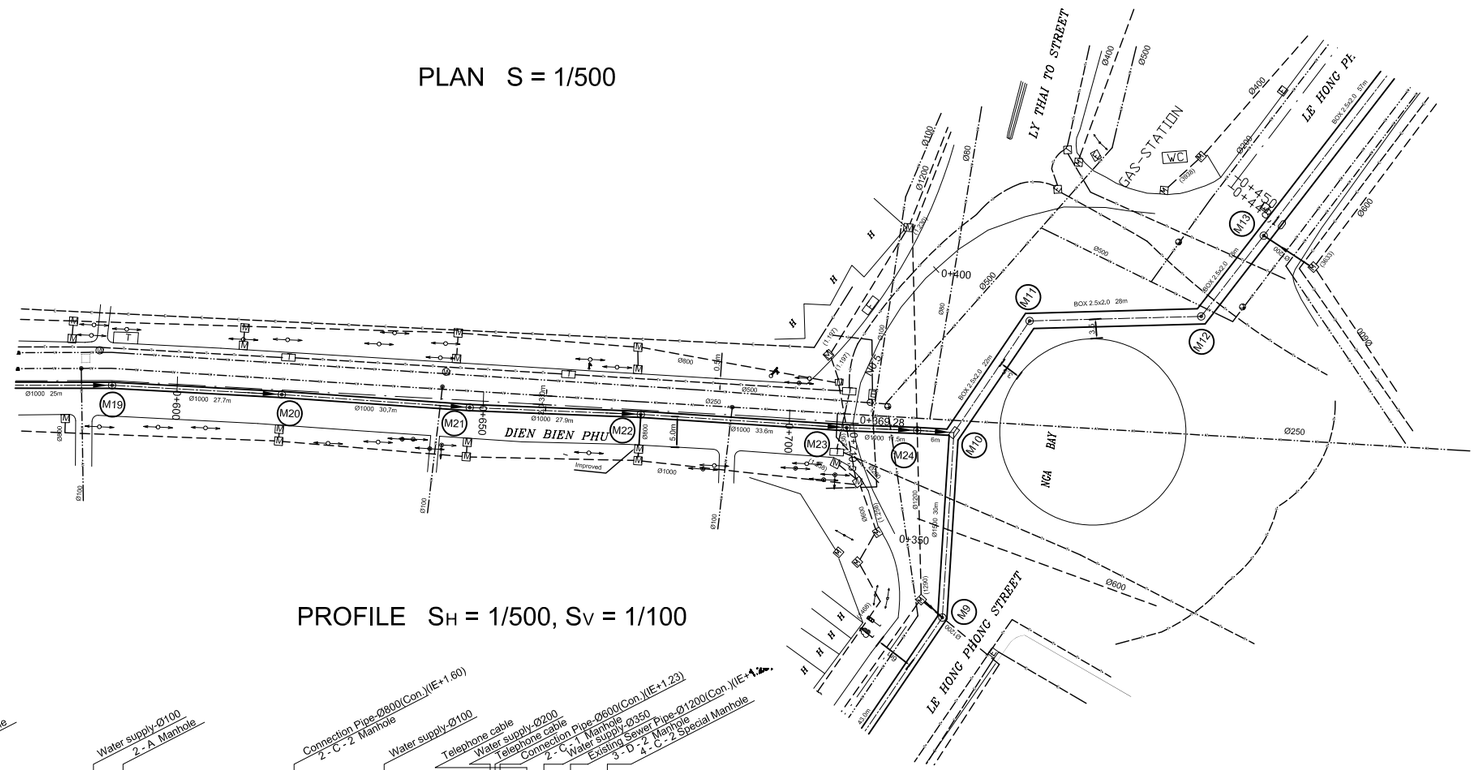
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

PACIFIC CONSULTANTS INTERNATIONAL

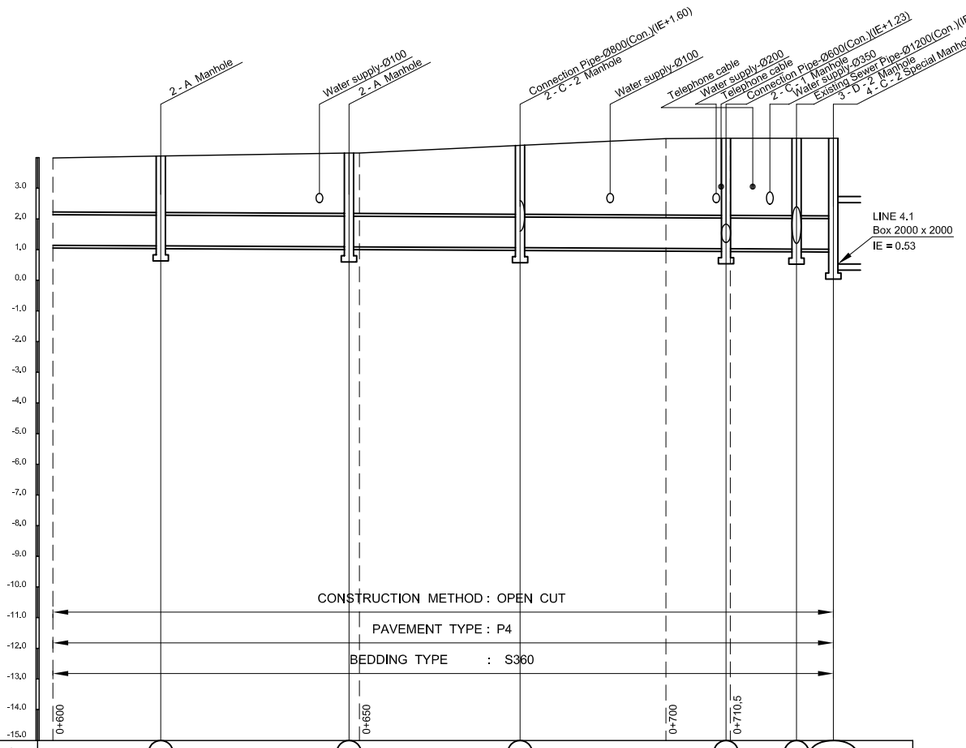
DESIGNED	CHECKED
KATSUKI TAKAAKI	KONDO MASAMI

DATE : JUNE 2001 | DWG. No. PD - ECSI - 202

PLAN S = 1/500

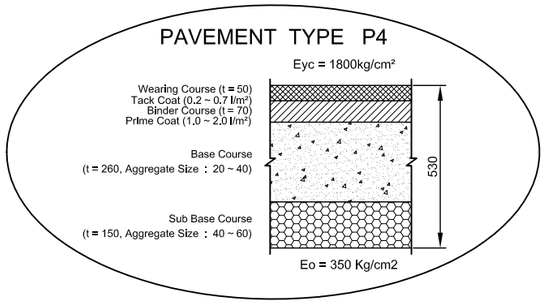


PROFILE S_H = 1/500, S_V = 1/100

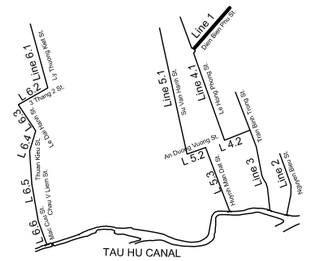


Manhole Number	M20	M21	M22	M23	M24	M10LHP
Diameter (mm)	Ø1000	Ø1000	Ø1000	Ø1000	Ø1000	Ø1000
Gradient (‰)	1.0	1.0	1.0	1.0	1.0	1.0
Length (m)	27.7	30.7	27.9	33.6	11.5	6
Existing Ground Elevation (m)	3.99 / 4.05	4.15 / 4.15	4.40	4.62	4.63 / 4.63	4.63 / 4.63
Earth Covering (m)	1.82	1.95	2.23	2.50	2.51	2.51
Invert Elevation (m)	1.15 / 1.14	1.11 / 1.11	1.08	1.05	1.04 / 1.04	1.03 / 1.03
Total Accumulation Length (m)	594.8 / 612.4	643.1 / 644.8	671.0	694.8	704.6 / 705.3	716.1 / 722.1

PAVEMENT TYPE P4



KEYMAP



LEGEND

- Sewer Line
- Sewer Line
- Planded Sewer
- Existing Sewer
- Telephone Cable
- Electric Cable
- Water Pipe
- Outlet Without Flap Gate
- Outlet With Flap Gate
- Manhole
- Special Manhole
- Diversion Chamber
- Diversion Chamber with Manhole
- Exlsting Manhole
- Existing Inlet
- Telephone Cable Inspection Chamber
- Electric Cable Inspection Chamber
- Fire Hydrant
- S4 - Area to be Required for Shaft
- Sewer Connected from The Right Side
- Sewer Connected from The Left Side

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 D
EXISTING COMBINED SEWER IMPROVEMENT

PLAN AND PROFILE ECSI - LINE 1 (3)

SCALE : As Shown

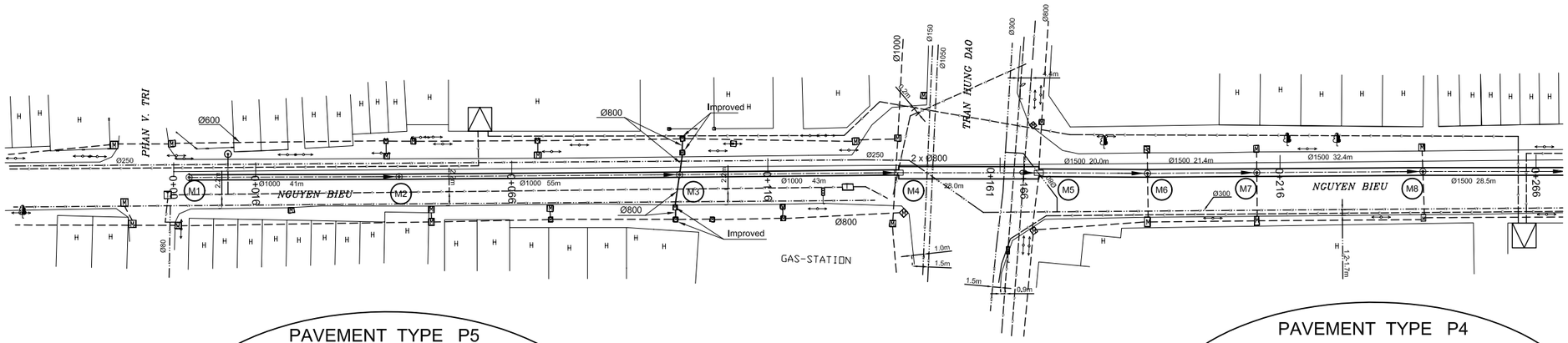
JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

PACIFIC CONSULTANTS INTERNATIONAL

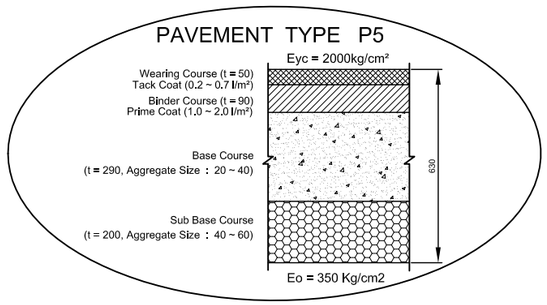
DESIGNED	CHECKED
KATSUKI TAKAAKI	KONDO MASAMI

DATE : JUNE 2001 | DWG. No. PD - ECSI - 203

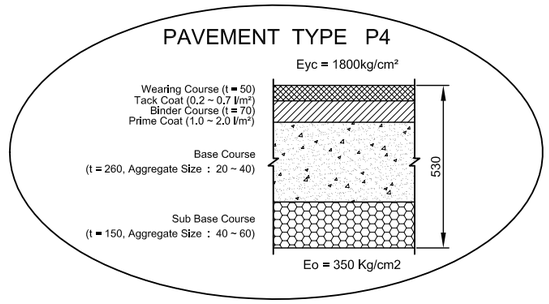
PLAN S = 1/500



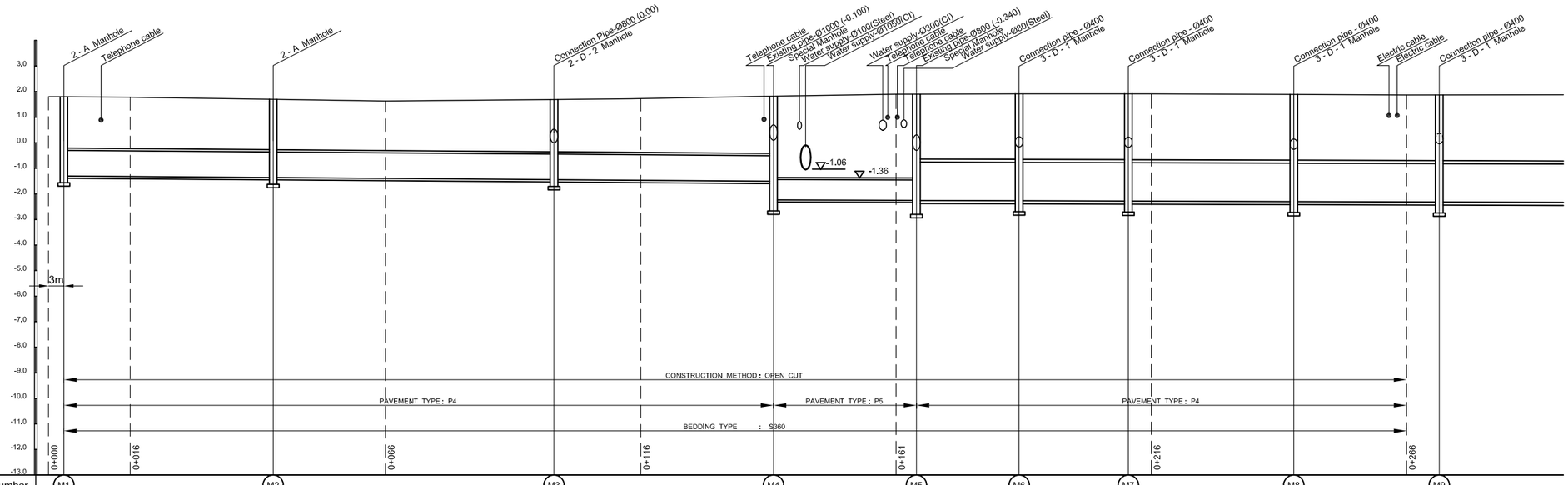
PAVEMENT TYPE P5



PAVEMENT TYPE P4

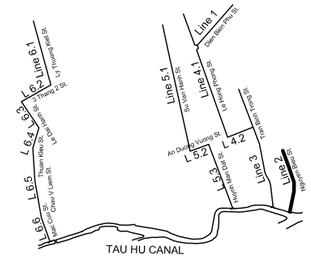


PROFILE S_H = 1/500, S_V = 1/100



Manhole Number	M1	M2	M3	M4	M5	M6	M7	M8	M9
Diameter (mm)	Ø1000	Ø1000	Ø1000	2 Ø 800	Ø1500	Ø1500	Ø1500	Ø1500	Ø1500
Gradient (‰)	1.5	1.5	1.5	0.6	0.6	0.6	0.6	0.6	0.6
Length (m)	41.0	55.0	43.0	28.0	20.1	21.4	32.4	28.5	37.0
Existing Ground Elevation (m)	1.80	1.78	1.70	1.63	1.69	1.72	1.82	1.90 / 1.90	1.91 / 1.91	1.91 / 1.91	1.89	1.87	1.87
Earth Covering (m)	2.01	2.01	1.97	1.94	2.04	2.10	2.24 / 3.18	3.27 / 3.28 / 2.54	2.56	2.57 / 2.57	2.57	2.56	2.57
Invert Elevation (m)	-1.30	-1.32	-1.36	-1.40	-1.44	-1.47	-1.51 / -2.24	-2.25 / -2.26	-2.27	-2.28 / -2.28	-2.30	-2.31	-2.32
Total Accumulation Length (m)	0.00	13.0	41.0	63.0	96.0	113.0	139.0	163.0	167.0	187.1	208.5 / 213.0	240.9	263.0	269.4

KEYMAP



LEGEND

- Sewer Line
- Sewer Line
- Planded Sewer
- Existing Sewer
- Telephone Cable
- Electric Cable
- Water Pipe
- Outlet Without Flap Gate
- Outlet With Flap Gate
- Manhole
- Special Manhole
- Diversion Chamber
- Diversion Chamber with Manhole
- Existing Manhole
- Existing Inlet
- Telephone Cable Inspection Chamber
- Electric Cable Inspection Chamber
- Fire Hydrant
- S4 - Area to be Required for Shaft
- Sewer Connected from The Right Side
- Sewer Connected from The Left Side

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 D
EXISTING COMBINED SEWER IMPROVEMENT

PLAN AND PROFILE
ECSI - LINE 2 (1)

SCALE : AS SHOWN

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED	CHECKED
KATSUKI TAKAAKI	KONDO MASAMI

DATE : JUNE 2001 | DWG. No. PD - ECSI - 204