4. MAPS FOR EXISTING DRAINAGE PIPES WITH CAPACITY CALCULATION TABLE

LEGEND

Existing Drain

⊙ 600 Pipe Diameter (mm)

⊡ 1200x1000 Box Culvert

Index

	1	7
	2	8

(MAP. No. 1)

EXISTING DRAINAGE PIPES

LEGEND

- Existing Drain
- ⊙ 600 Pipe Diameter (mm)
- ▭1200 x 1000 Box Culvert (1000 mm / 1200 mm)
- (1) No. of Drain Refer to Capacity Calculation Table (P ▭)

Index

	1	7
	2	8
	3	9

(MAP No 2)

EXISTING DRAINAGE PIPES

LEGEND

- Existing Drain
- ⊙ 600 Pipe Diameter (mm)
- ▣1200 x 1000 Box Culvert (1000 mm / 1200 mm)
- (1) No. of Drain Refer to Capacity Calculation Table (P□)

Index

	2	8
	3	9
	4	10

(MAP. No. 3)

EXISTING DRAINAGE PIPES

LEGEND

- ⟶ Existing Drain
- ⊙ 600 Pipe Diameter (mm)
- ⊡1200x1000 Box Culvert (□ 1000 mm, 1200 mm)
- (1) No. of Drain Refer to Capacity Calculation Table (P □)

Index

	3	9
	4	10
	5	11

(MAP. No. 4)

EXISTING DRAINAGE PIPES

LEGEND

- Existing Drain
- ⊙ 600 Pipe Diameter (mm)
- ▭1200 x 1000 Box Culvert (1000 mm / 1200 mm)

Index

	4	10
	5	11

(MAP. No. 5)

EXISTING DRAINAGE PIPES

LEGEND

Existing Drain

⊙ 600 Pipe Diameter (mm)

▣1200 x 1000 Box Culvert 1000 mm / 1200 mm

Index

1	7	
2	8	

(MAP. No. 7)

EXISTING DRAINAGE PIPES

LEGEND

⊙ 600 Existing Drain Pipe Diameter (mm)

□1200x1000 Box Culvert

1200mm × 1000mm

Index

1	7	
2	8	
3	9	

(MAP. No. 8)

EXISTING DRAINAGE PIPES

LEGEND

- Existing Drain
- ø 600 Pipe Diameter (mm)
- ø1200 x 1000 Box Culvert (1000mm, 1200mm)

Index

2	8	
3	9	
4	10	14

(MAP. No. 9)

EXISTING DRAINAGE PIPES

LEGEND

- Existing Drain
- ⊙ 600 Pipe Diameter(mm)
- ⊡1200 x 1000 Box Culvert (1000 mm / 1200 mm)
- A 1 Point Name Refer to Profile

Index

3	9	
4	10	14
5	11	

(MAP. No 10)

EXISTING DRAINAGE PIPES

LEGEND

Existing Drain
⊙ 600 Pipe Diameter (mm)
▣1200x1000 Box Culvert (1000 mm × 1200 mm)

Index

4	10	14
5	11	

(MAP. No.11)

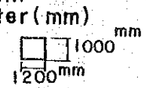
EXISTING DRAINAGE PIPES

LEGEND

Existing Drain

⊙ 600 Pipe Diameter (mm)

□1200x1000 Box Culvert



Index

9		
10	14	
11		

(MAP. No.14)

EXISTING DRAINAGE PIPES

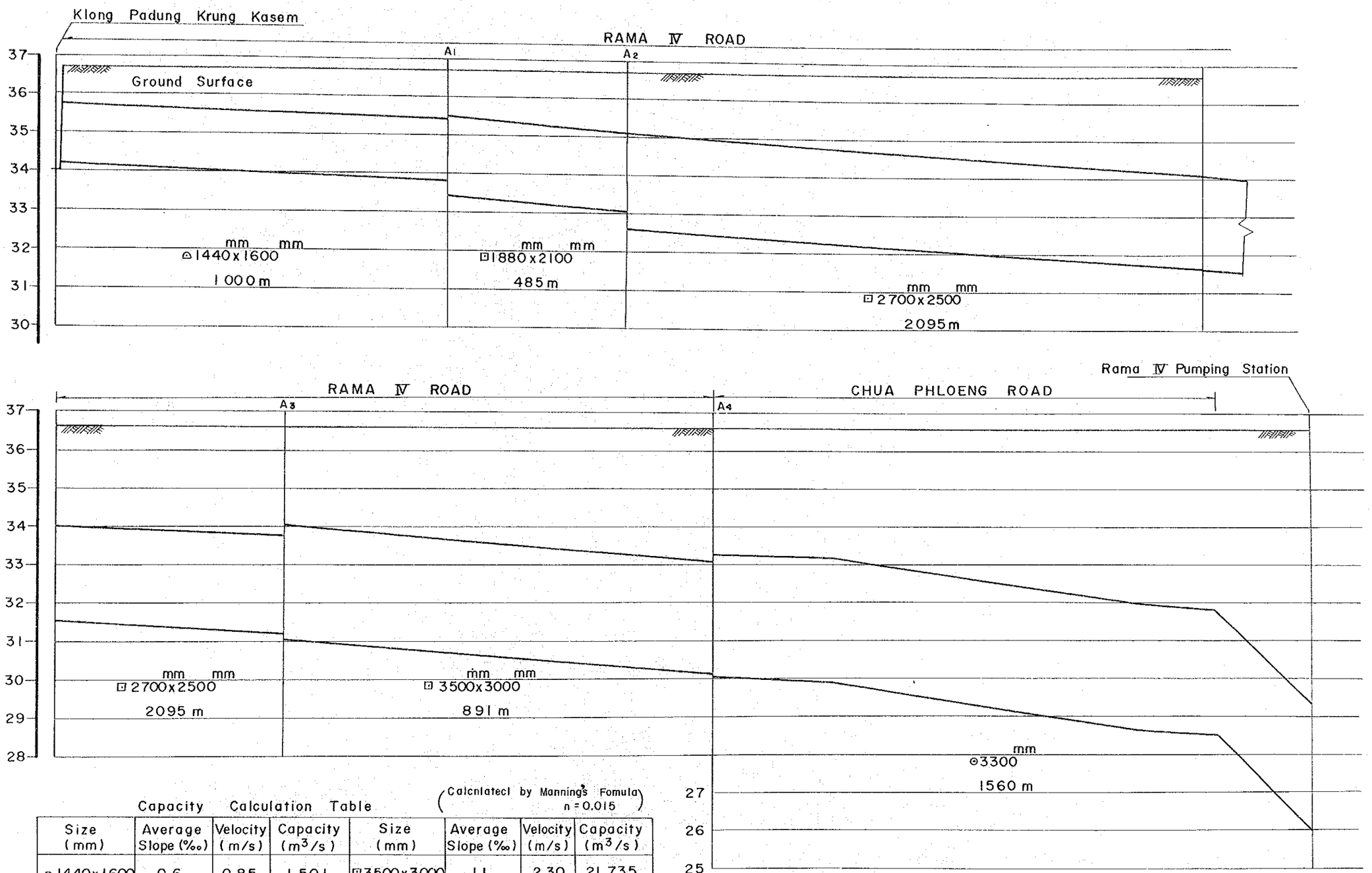
Capacity Calculation Table for Evaluation of Existing Drain

Drain NO	Diameter (mm)	Slope (‰)	Velocity (Full Flow) (m/s)	Capacity (Full Flow) (m^3/s)	Drain NO	Diameter (mm)	Slope (‰)	Velocity (Full Flow) (m/s)	Capacity (Full Flow) (m^3/s)	Drain NO	Diameter (mm)	Slope (‰)	Velocity (Full Flow) (m/s)	Capacity (Full Flow) (m^3/s)
1	□600x1600	1.0	0.83	0.717	25	⊙800	0.3	0.40	0.199	49	⊙500	4.6	1.13	0.222
2	□400x1200	1.0	0.64	0.276	26	⊙600	1.5	0.73	0.206	50	⊙600	0.7	0.50	0.141
3	⊙600	4.3	1.23	0.348	27	⊙600	1.9	0.82	0.232	51	⊙800	4.4	1.51	0.759
4	⊙600	0.5	1.33	0.376	28	⊙600	0.1	0.19	0.054	52	⊙600	1.0	0.60	0.168
5	⊙1000	0.7	0.70	0.550	29	□800x1250	1.3	1.07	0.963	53	⊙1200	—	—	—
6	⊙800	1.5	0.88	0.444	30	□400x500	1.3	0.64	0.115	54	⊙1000	1.0	0.84	0.657
7	⊙1000	3.2	1.50	1.178	31	⊙600	0.8	0.53	0.151	55	⊙1000	10.0	2.65	2.078
8	⊙800	2.6	1.16	0.584	32	⊙1200	0.7	0.79	0.894	56	⊙600	1.3	0.68	0.192
9	⊙1200	3.3	1.70	1.923	33	⊙1200	1.6	1.20	1.352	57	⊙600	1.5	0.73	0.206
10	□400x600	0.5	0.41	0.089	34	⊙800	1.6	0.91	0.458	58	⊙600	1.2	0.65	0.184
11	⊙800	1.3	0.82	0.413	35	⊙600	0.2	0.27	0.076	59	⊙600	0.3	0.33	0.093
12	⊙600	1.3	0.70	0.192	36	⊙600	0.4	0.38	0.106	60	⊙800	1.7	0.94	0.473
13	⊙600	1.2	0.65	0.184	37	⊙800	4.0	1.44	0.725	61	⊙800	0.2	0.32	0.162
14	⊙600	1.4	0.70	0.199	38	⊙1000	1.2	0.92	0.720	62	⊙800	3.9	1.44	0.725
15	⊙600	1.5	0.73	0.206	39	⊙1200	0.7	0.79	0.894	63	⊙600	0.4	0.38	0.106
16	⊙600	2.5	0.94	0.266	40	⊙1200	1.1	0.99	1.121	64	⊙800	2.5	1.14	0.573
17	⊙600	1.3	0.68	0.192	41	⊙800	1.1	0.76	0.380	65	⊙800	3.1	1.25	0.628
18	⊙500	0.7	0.44	0.087	42	⊙1500	1.4	1.34	2.373	66	⊙600	1.0	0.60	0.168
19	⊙600	08	0.53	0.151	43	⊙1200	0.5	0.67	0.756	67	⊙800	1.4	0.85	0.429
20	⊙600	0.3	0.33	0.093	44	□400x800	1.0	0.61	0.176	68	⊙800	0.9	0.68	0.344
21	⊙600	0.3	0.33	0.093	45	□400x600	1.0	0.58	0.125					
22	⊙600	0.9	0.57	0.160	46	⊙1500	2.9	1.87	3.299					
23	⊙1000	4.9	1.85	1.452	47	⊙600	1.7	0.78	0.219					
24	⊙600	0.9	0.57	0.160	48	⊙1000	3.6	1.59	1.249					

Note : Refer to Maps from NO. 1 to NO.14

Calculations were Performed by Manning's Formula with n = 0.015

5. PROFILE AND CALCULATION TABLE OF RAMA IV DRAIN



Capacity Calculation Table (Calculated by Manning's Fomula n = 0.015)

Size (mm)	Average Slope (‰)	Velocity (m/s)	Capacity (m^3/s)	Size (mm)	Average Slope (‰)	Velocity (m/s)	Capacity (m^3/s)
⌓1440x1600	0.6	0.85	1.501	⊡3500x3000	1.1	2.30	21.735
⊡1880x2100	1.0	1.55	5.507	⊙3300	1.4	2.19	18 769
⊡2700x2500	0.7	1.58	9.599				

LEGEND

⌓ Semielliptic Sape
⊡ Box Culvert
⊙ Round Sape

A1 Point Name

Refer to Maps for Existing Drainage Pipes No. 10

SCALE VERTICAL 1:100 HORIZONTAL 1:10,000

PROFILE AND CALCULATION TABLE OF RAMA V DRAIN