

FEASIBILITY STUDY FOR SEPARATE SYSTEM
METROPOLITAN WATER WORKS AUTHORITY
BANGKOK
KINGDOM OF THAILAND

DRAWINGS

- 1973 -



PREPARED FOR
OVERSEAS TECHNICAL COOPERATION AGENCY OF JAPAN
DESIGNED BY
PACIFIC CONSULTANTS INTERNATIONAL CO., LTD.
& NAKANIHON ENGINEERING CONSULTANTS CO., LTD.

NONG KHAEM WATER SYSTEM



1127497(4)

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NONG KHAEM WATER SYSTEM

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LAT KRABANG WATER SYSTEM

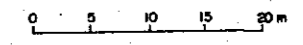
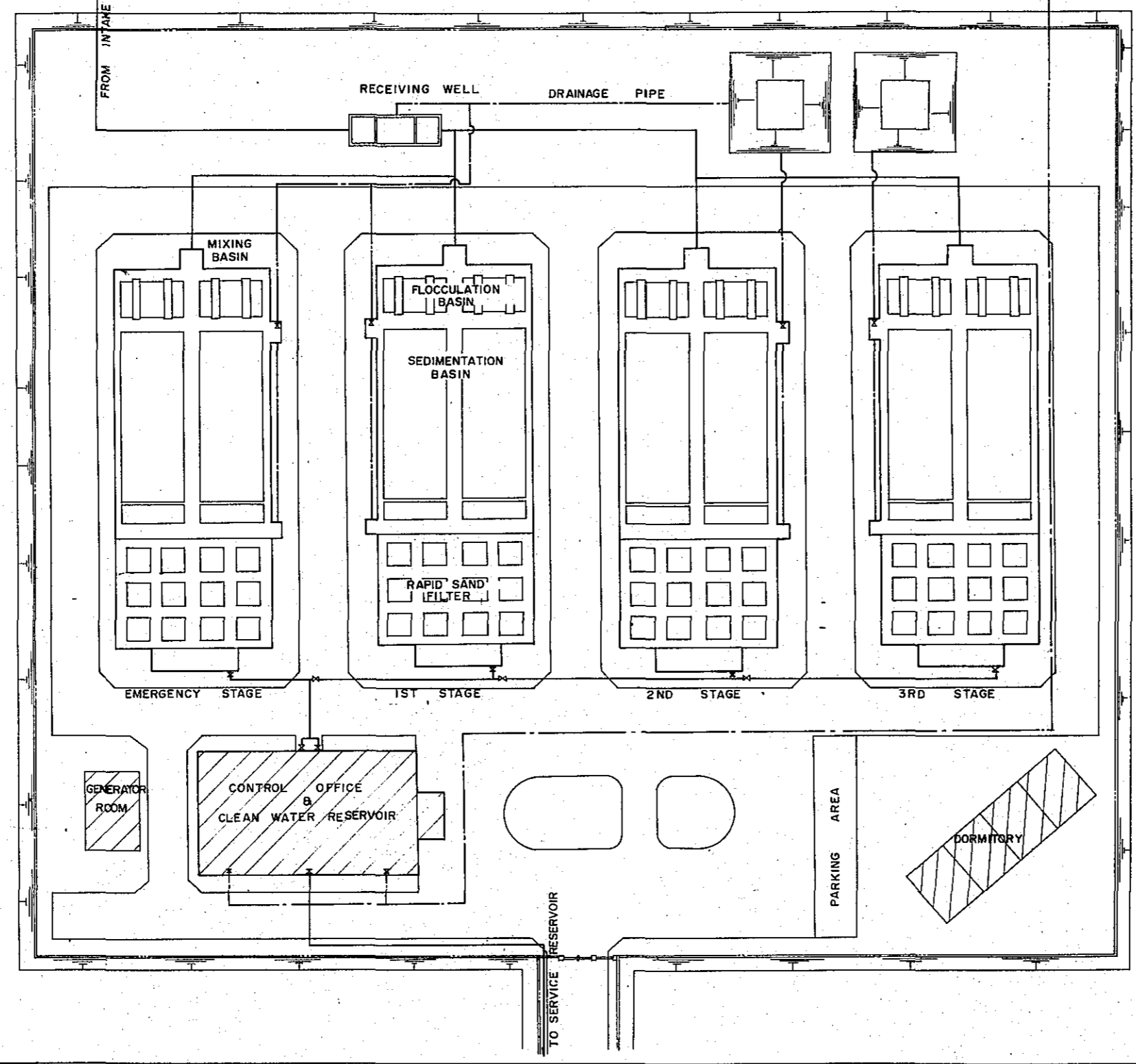
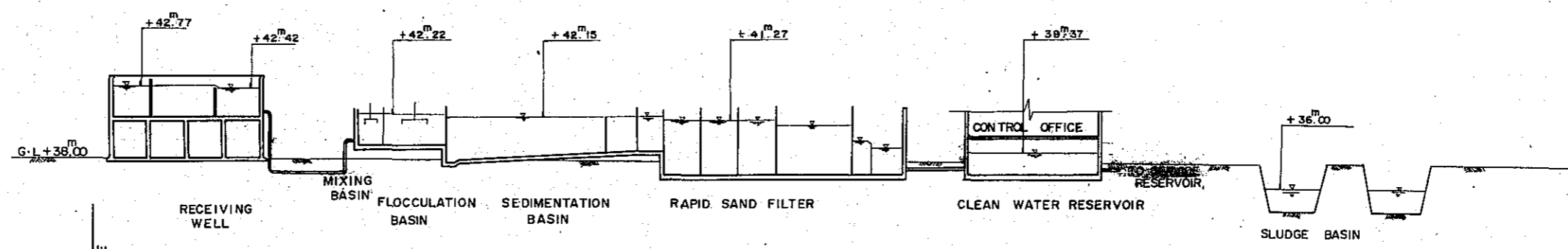
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FOR REFERENCE

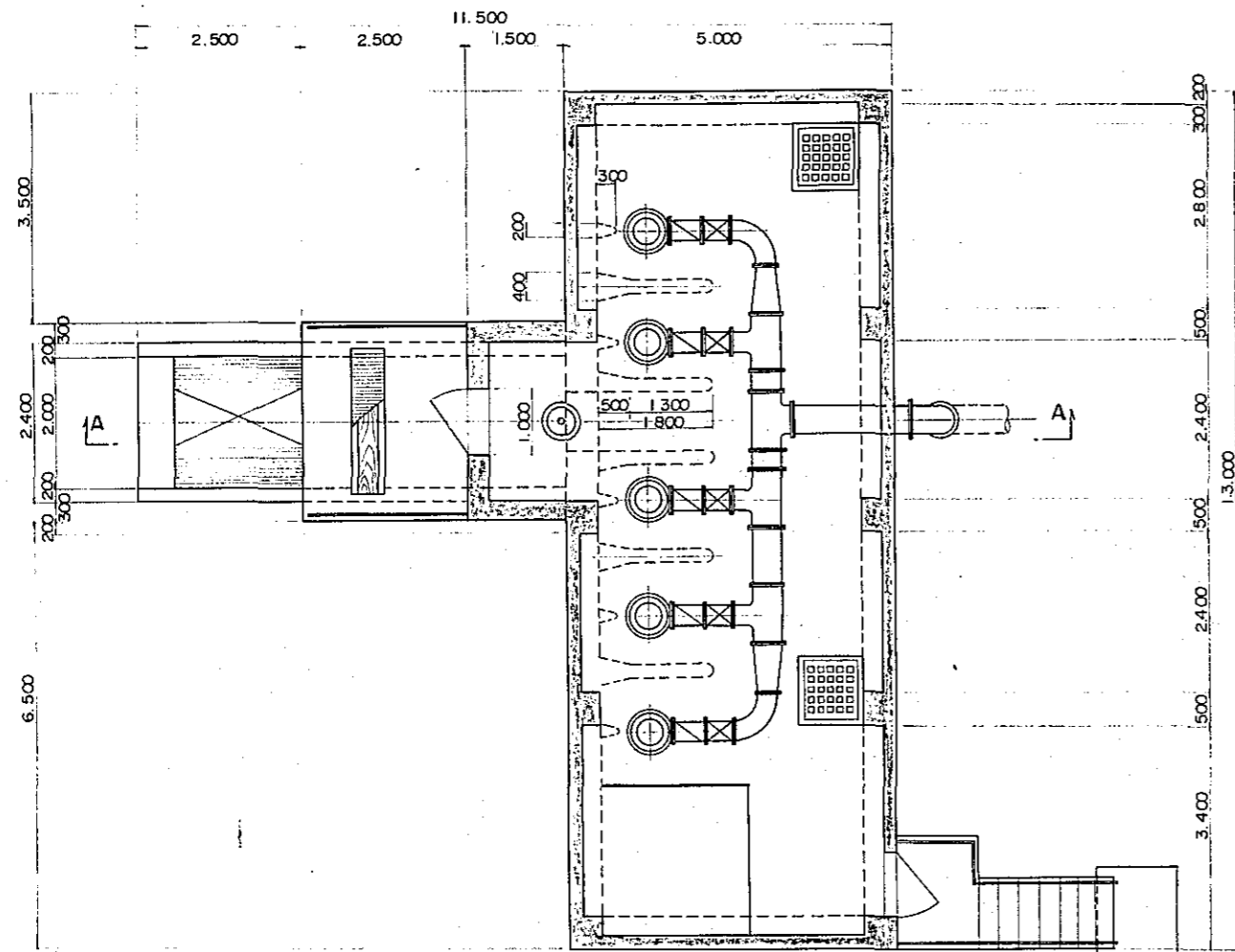
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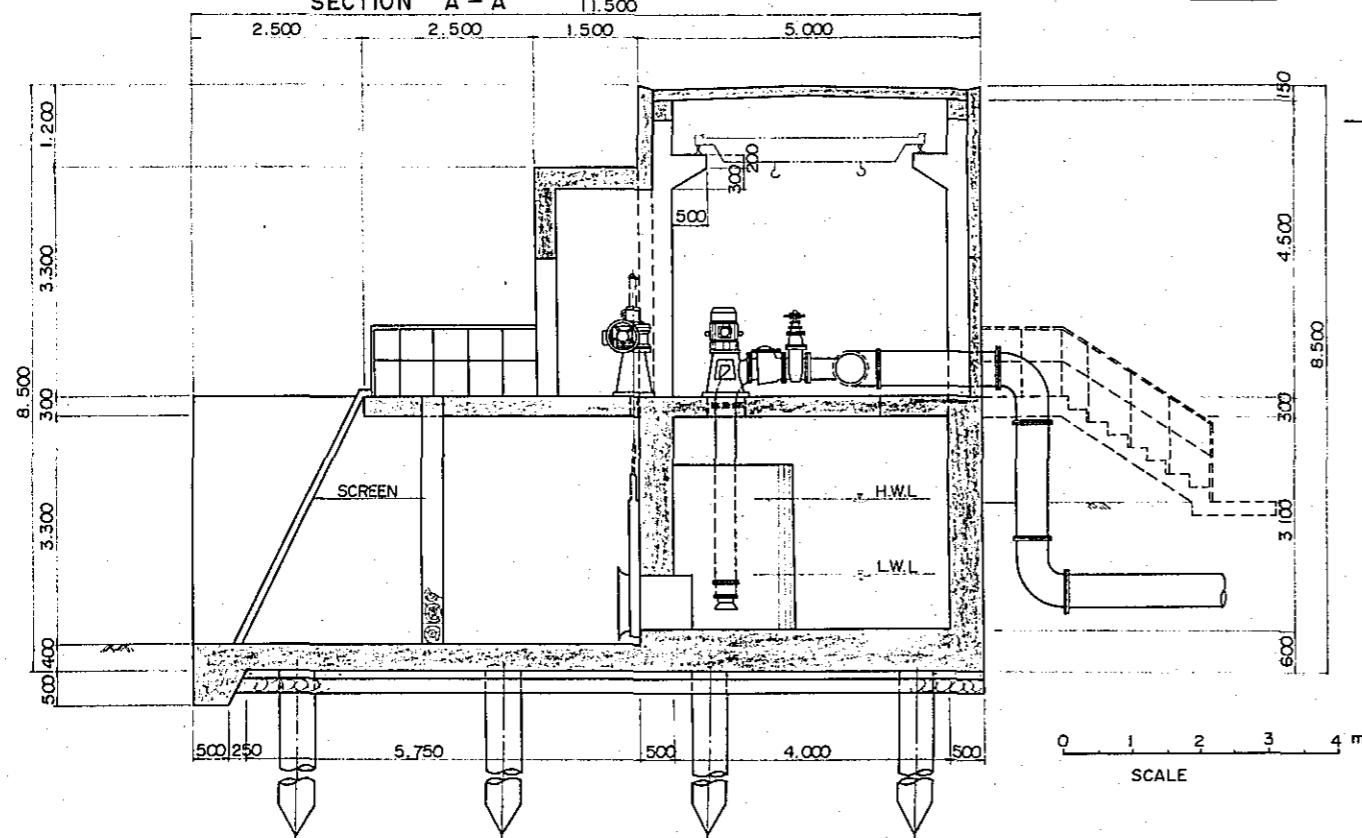
SCALE

FEASIBILITY STUDY FOR SEWAGE SYSTEM			
METROPOLITAN WATER WORKS AUTHORITY			
BANGKOK			
KINGDOM OF THAILAND			
PROJECT OF FLOW DIAGRAM			
OVERSEAS TECHNICAL COOPERATION AGENCY			
TOKYO, JAPAN			
SUBMITTED	APPROVED	SCALE	REV. NO.
DATE	DATE	NO.	N-1

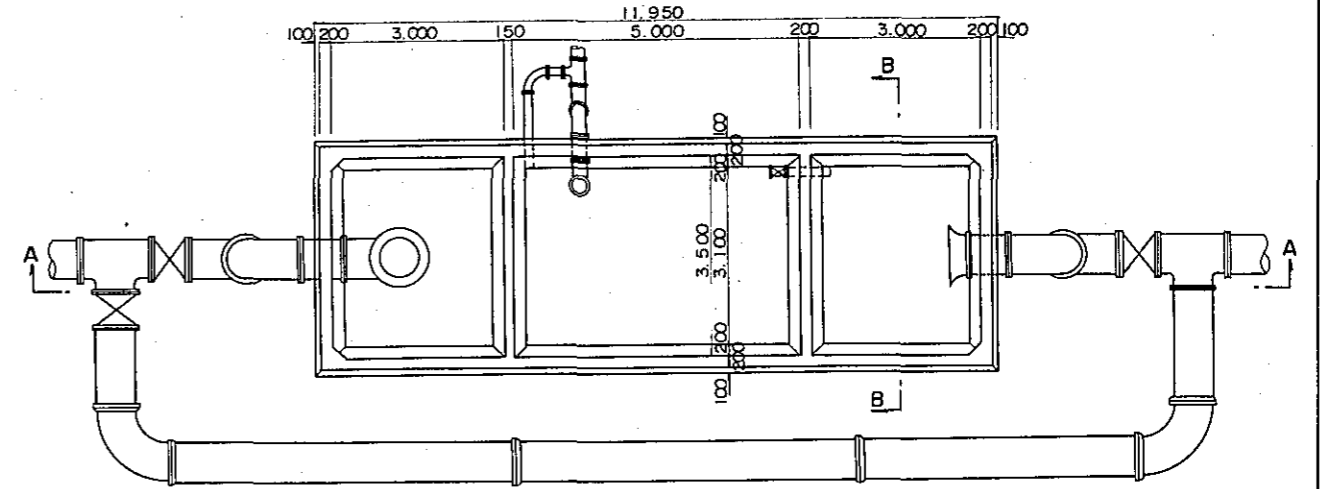
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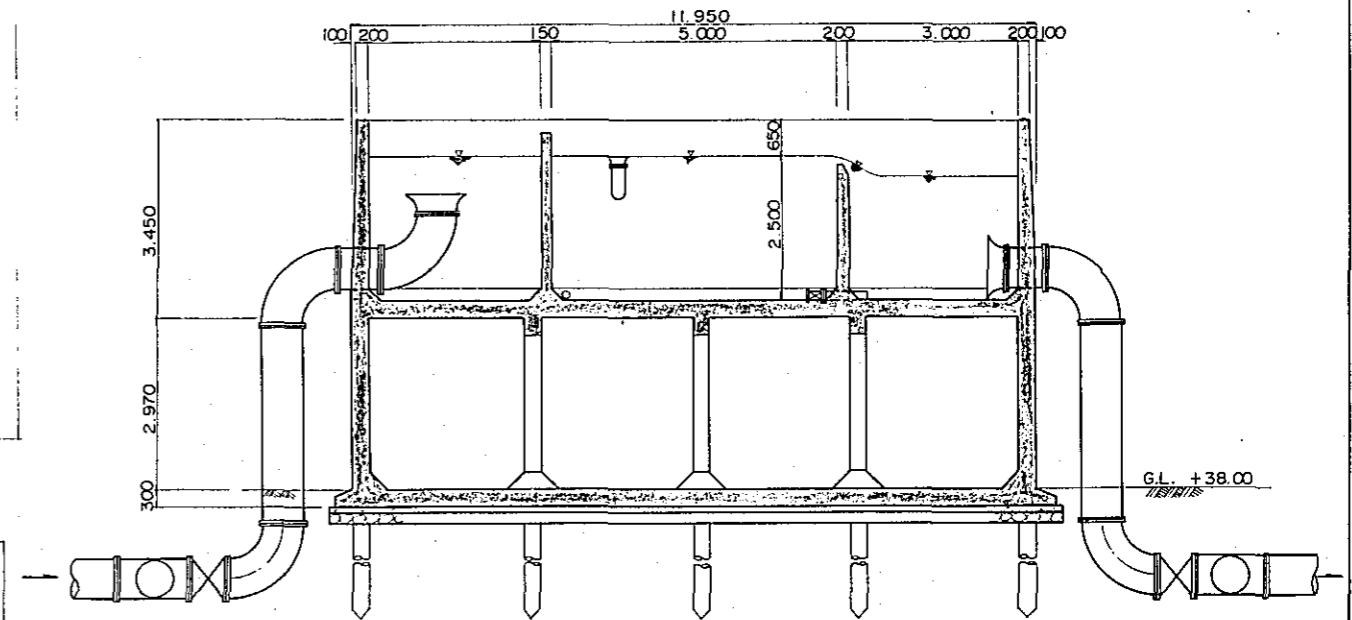
SECTION A - A



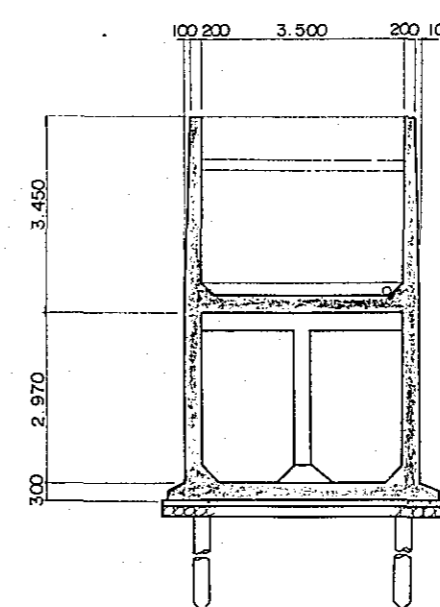
RECEIVING WELL PLAN



SECTION A - A



SECTION B - B



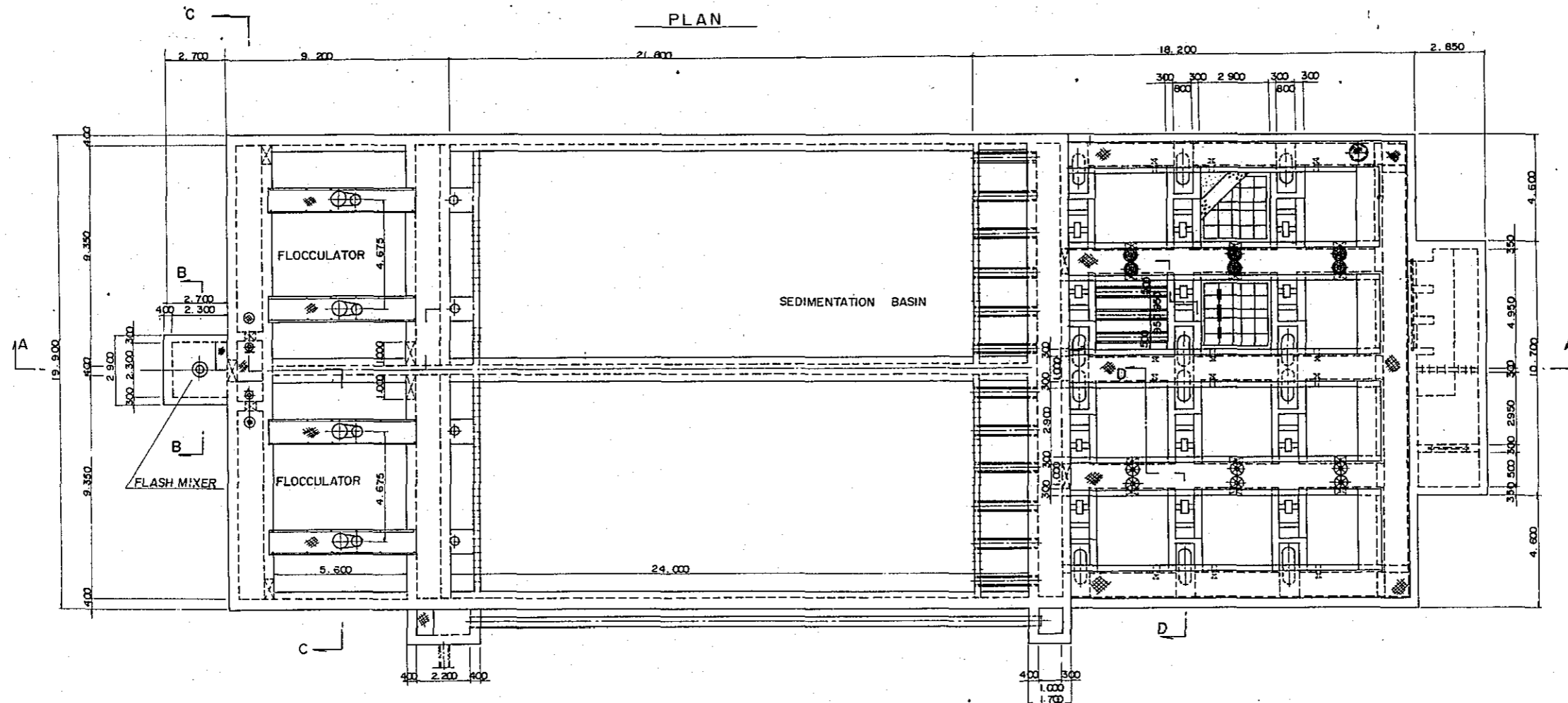
FEASIBILITY STUDY FOR SEPARATE SYSTEM
METROPOLITAN WATER WORKS AUTHORITY
BANGKOK
KINGDOM OF THAILAND

INTAKE BASIN
& RECEIVING WELL

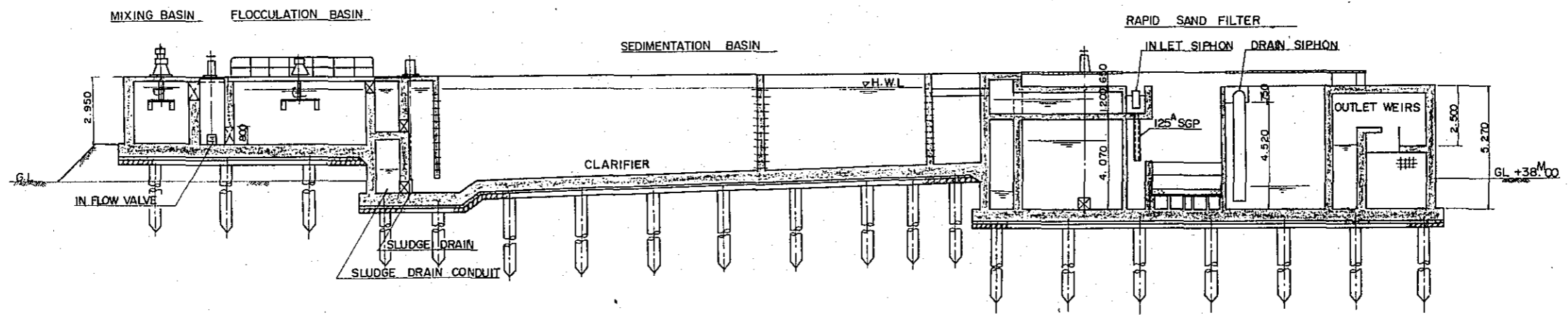
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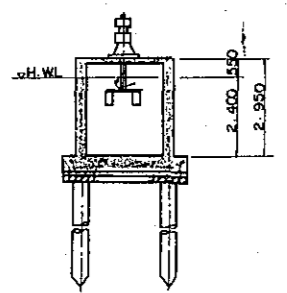
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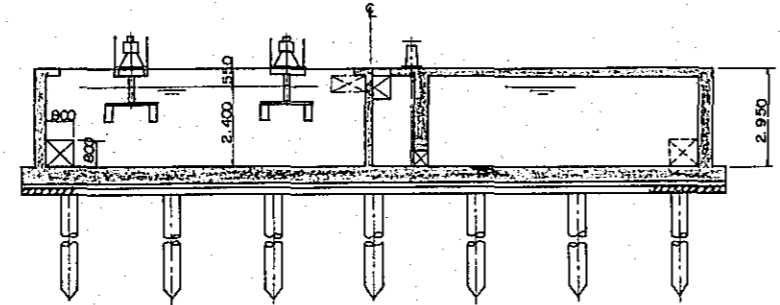
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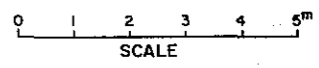
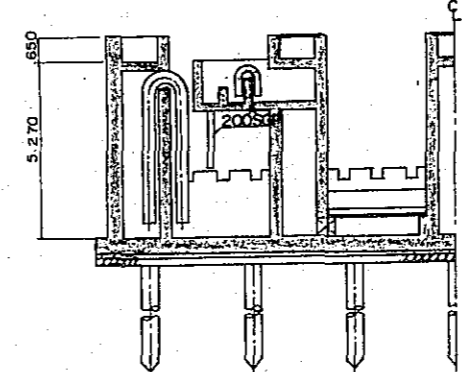
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SECTION C - C

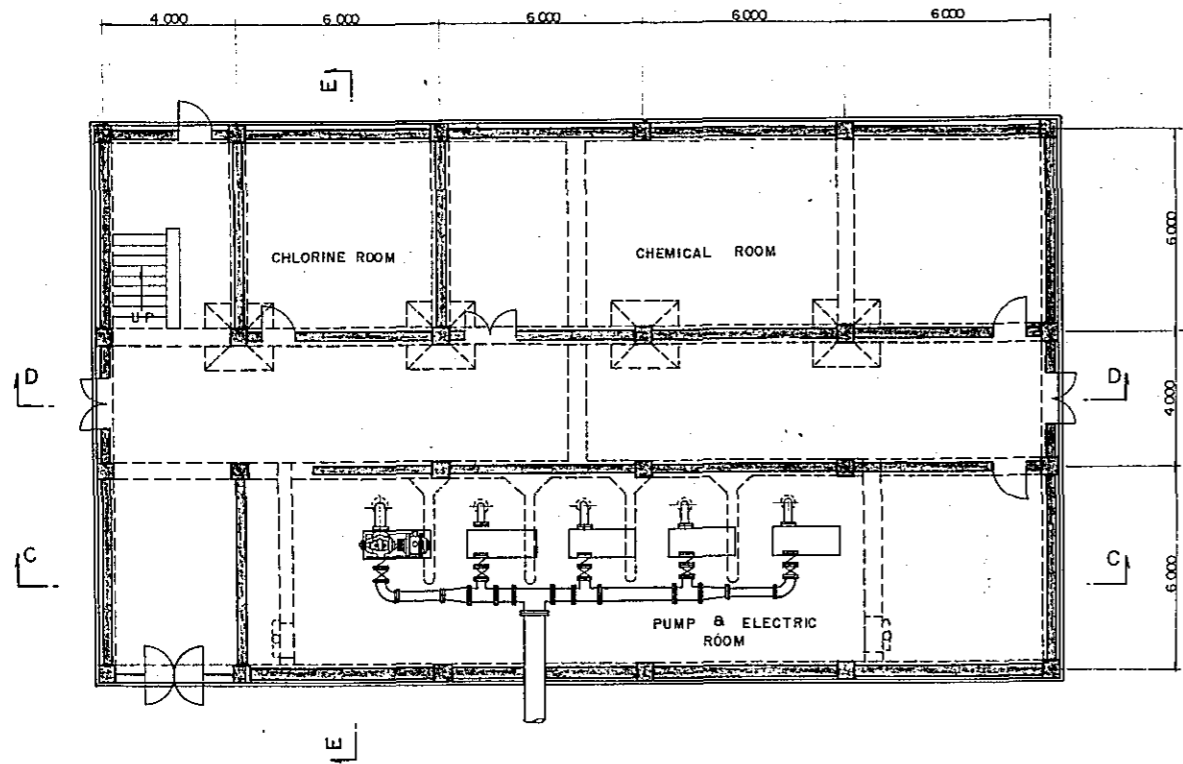


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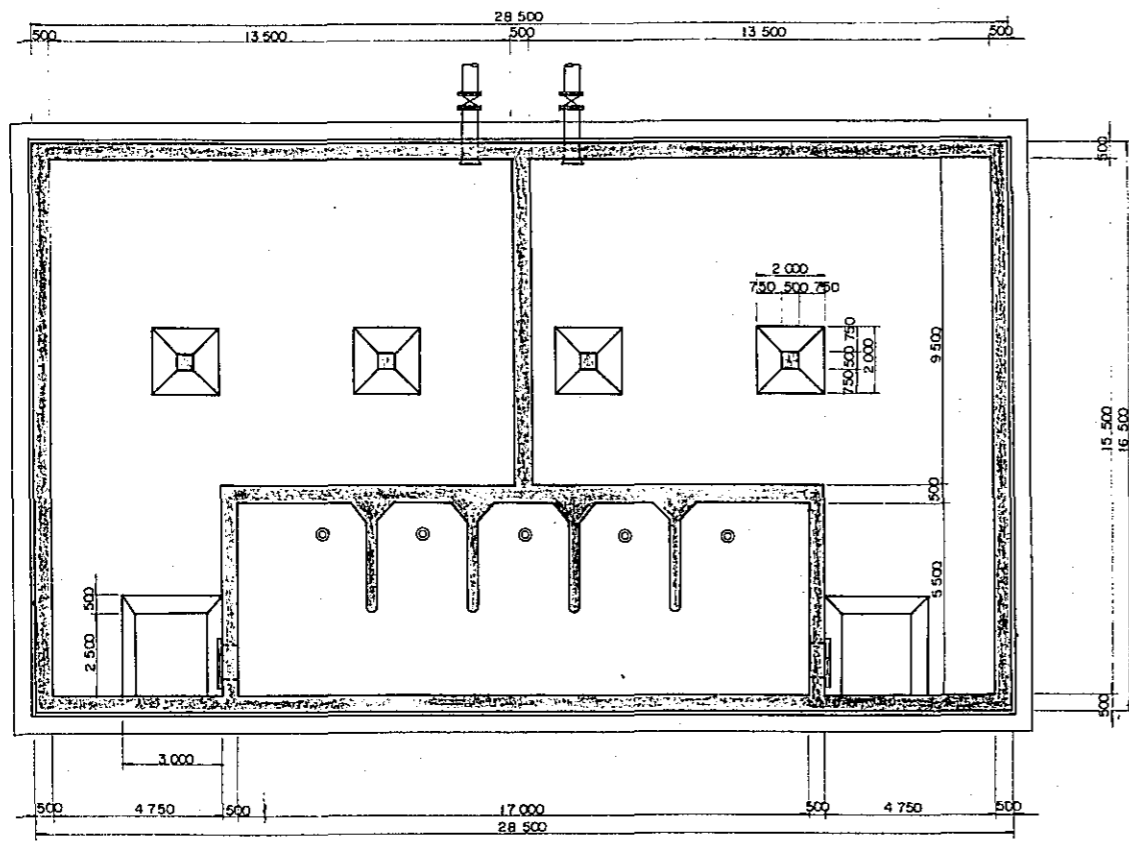


FEASIBILITY STUDY FOR SEPARATE SYSTEM METROPOLITAN WATER WORKS AUTHORITY BANGKOK KINGDOM OF THAILAND			
MIXING FLOCCULATION SEDIMENTATION BASIN & RAPID SAND FILTER			
OVERSEAS TECHNICAL COOPERATION AGENCY TOKYO, JAPAN			
SUBMITTED	APPROVED	SCALE	REV. NO.
DATE	DWG. NO. N - 3		

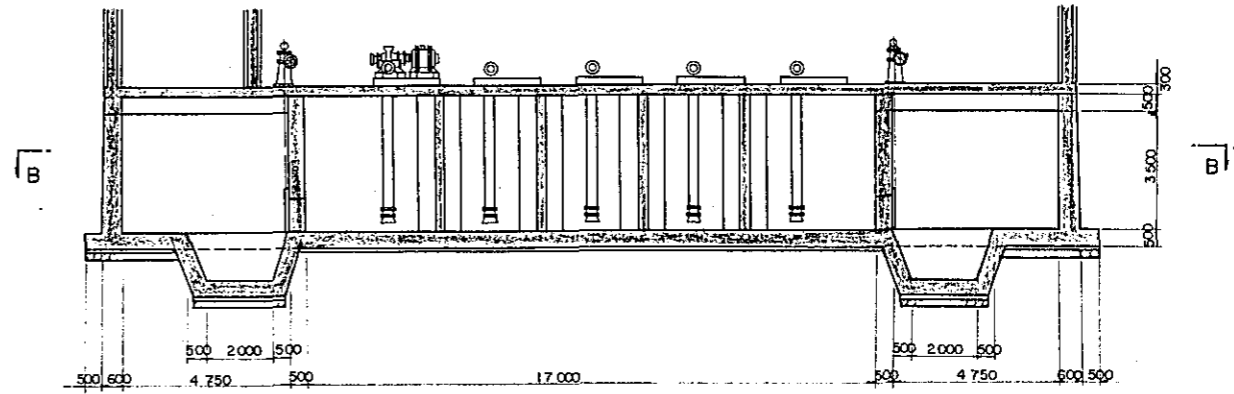
PLAN



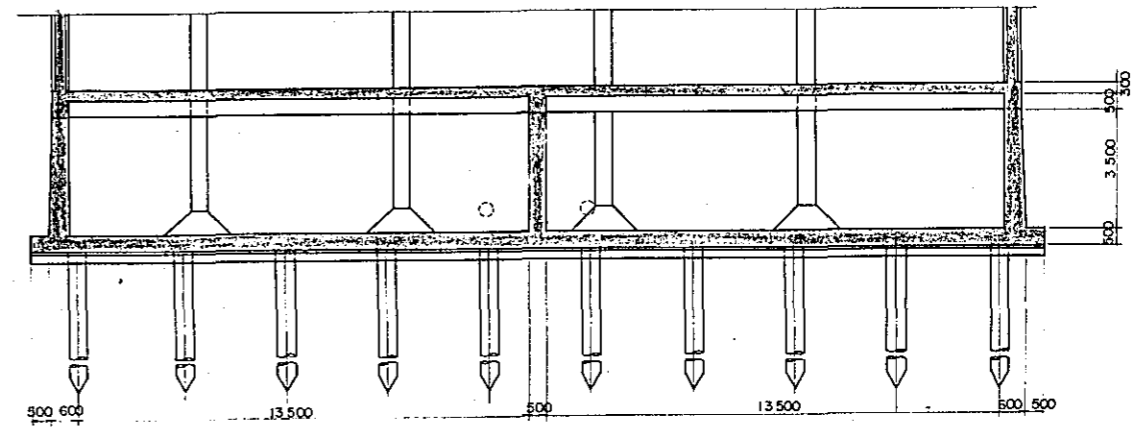
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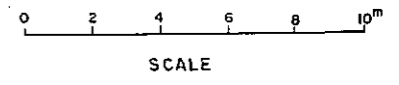
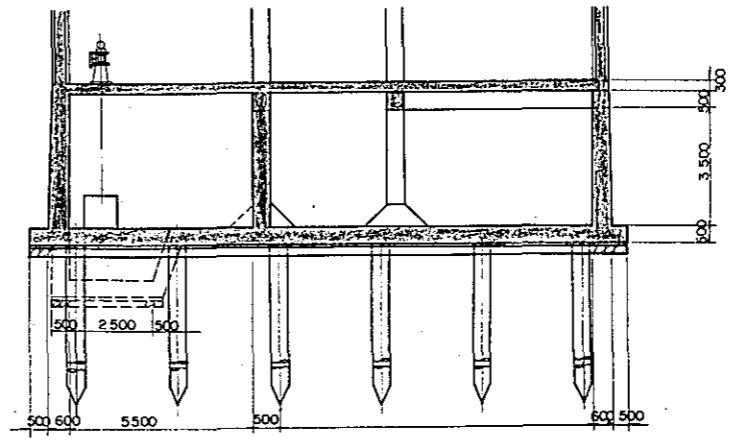
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SECTION D - D



SECTION E - E



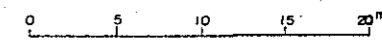
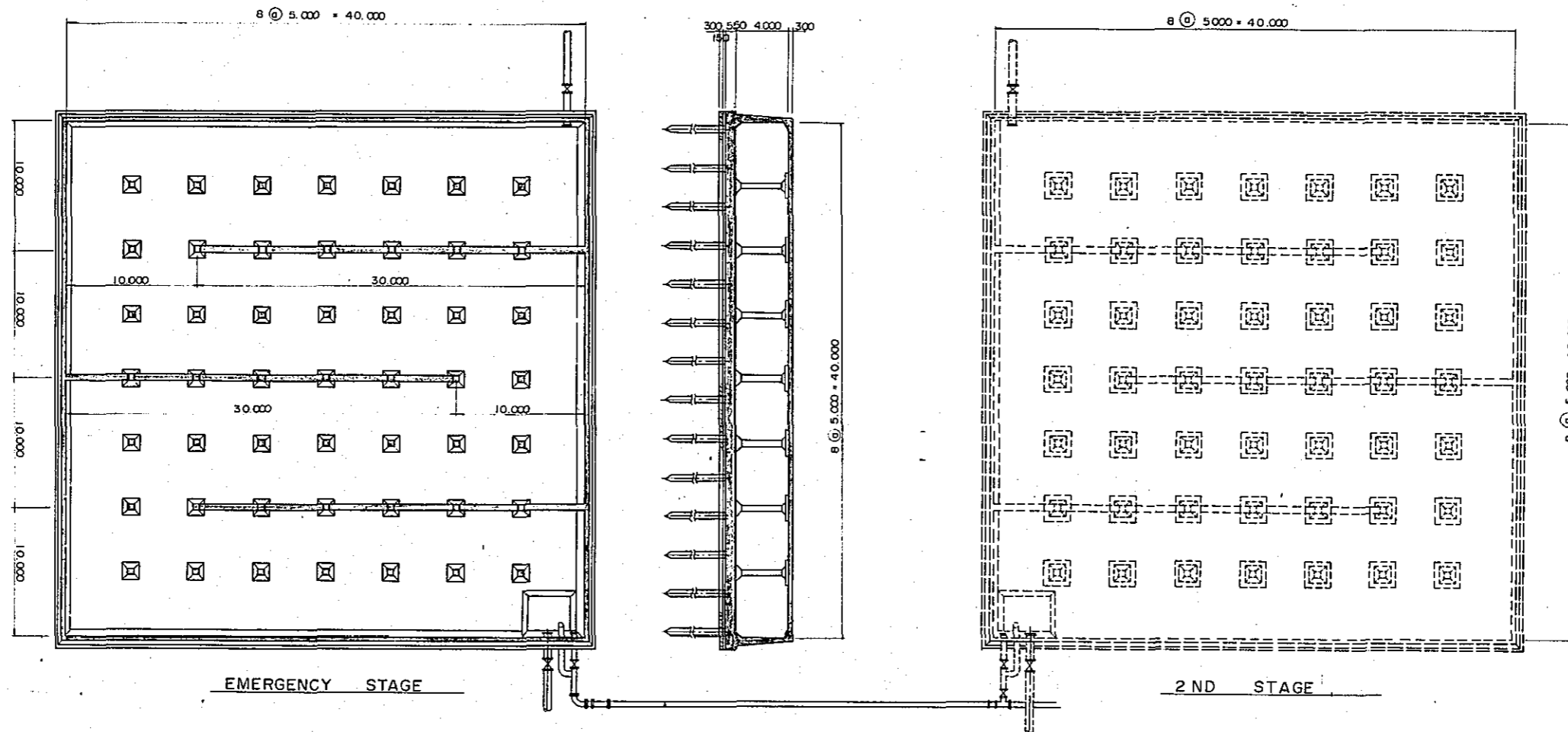
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BANGKOK
KINGDOM OF THAILAND

CLEAN WATER RESERVOIR

OVERSEAS TECHNICAL COOPERATION AGENCY
TOKYO, JAPAN

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DATE	DWG. NO. N - 4
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SCALE

PUMPING ROOM

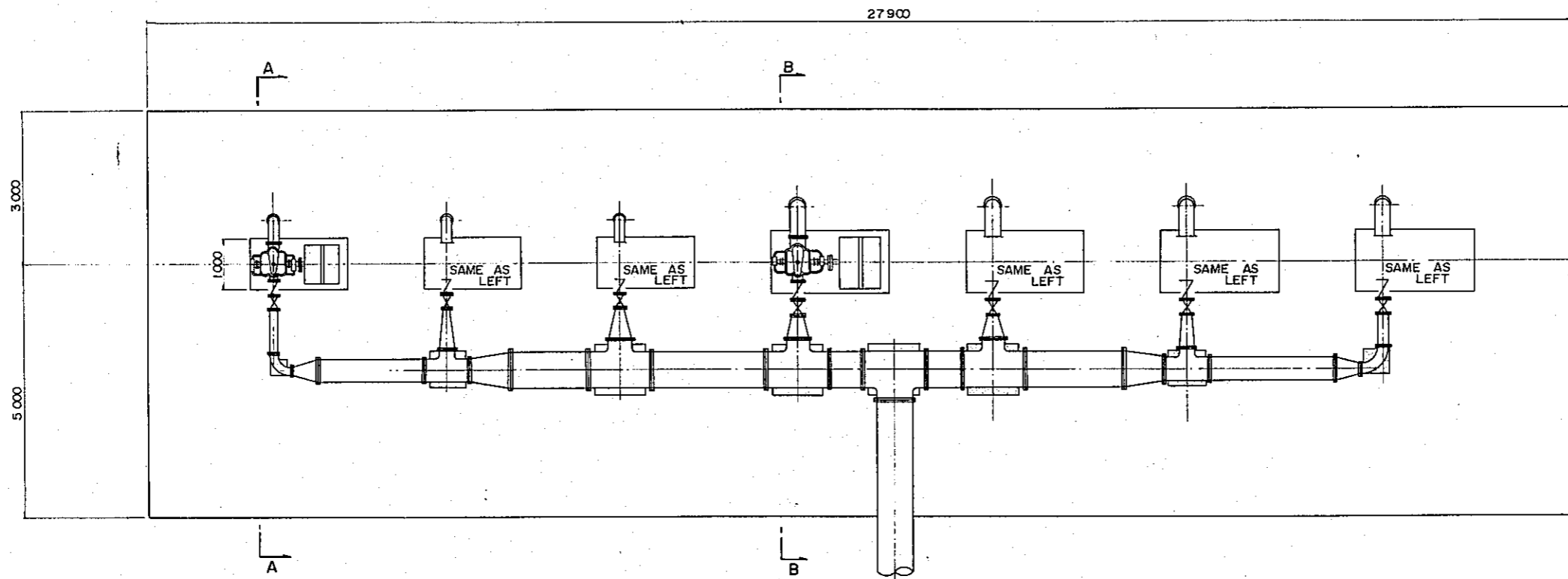
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 METROPOLITAN WATER WORKS AUTHORITY
 BANGKOK
 KINGDOM OF THAILAND

SERVICE RESERVOIR

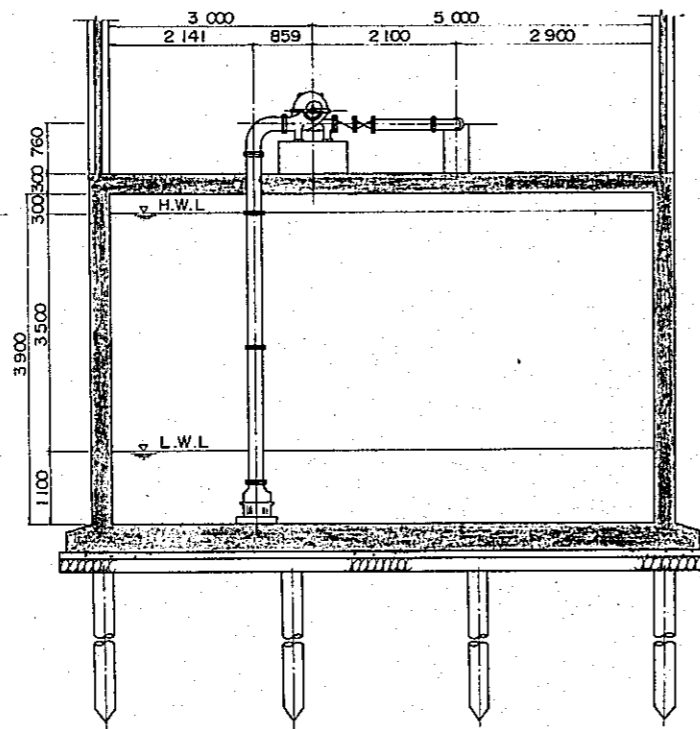
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 TOKYO, JAPAN

SUBMITTED	APPROVED	SCALE	REV. NO.

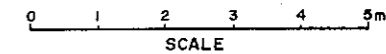
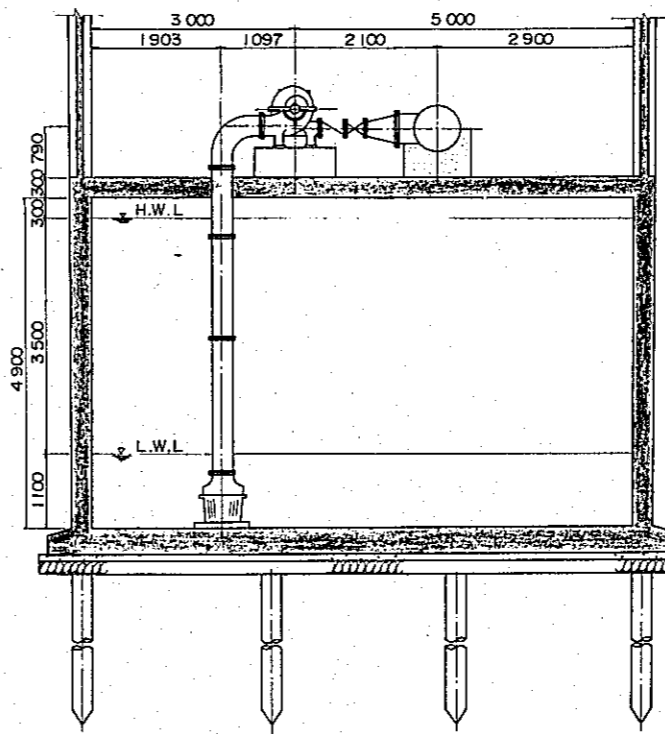
DATE _____ DWG. NO. N - 5



SECTION A - A



SECTION B - B



FEASIBILITY STUDY FOR SEPARATE SYSTEM
METROPOLITAN WATER WORKS AUTHORITY
BANGKOK
KINGDOM OF THAILAND

DISTRIBUTION
PUMPING WELL

OVERSEAS TECHNICAL COOPERATION AGENCY
TOKYO, JAPAN

SUBMITTED	APPROVED	SCALE	REV. NO.
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DATE	DWG. NO. N - 6
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LEGEND

	SANITARY DISTRICT
	PIPE LINE
	TRANSMISSION PIPE
	BOOSTER PUMP
	DIAMETER OF PIPE
	DISTANCE

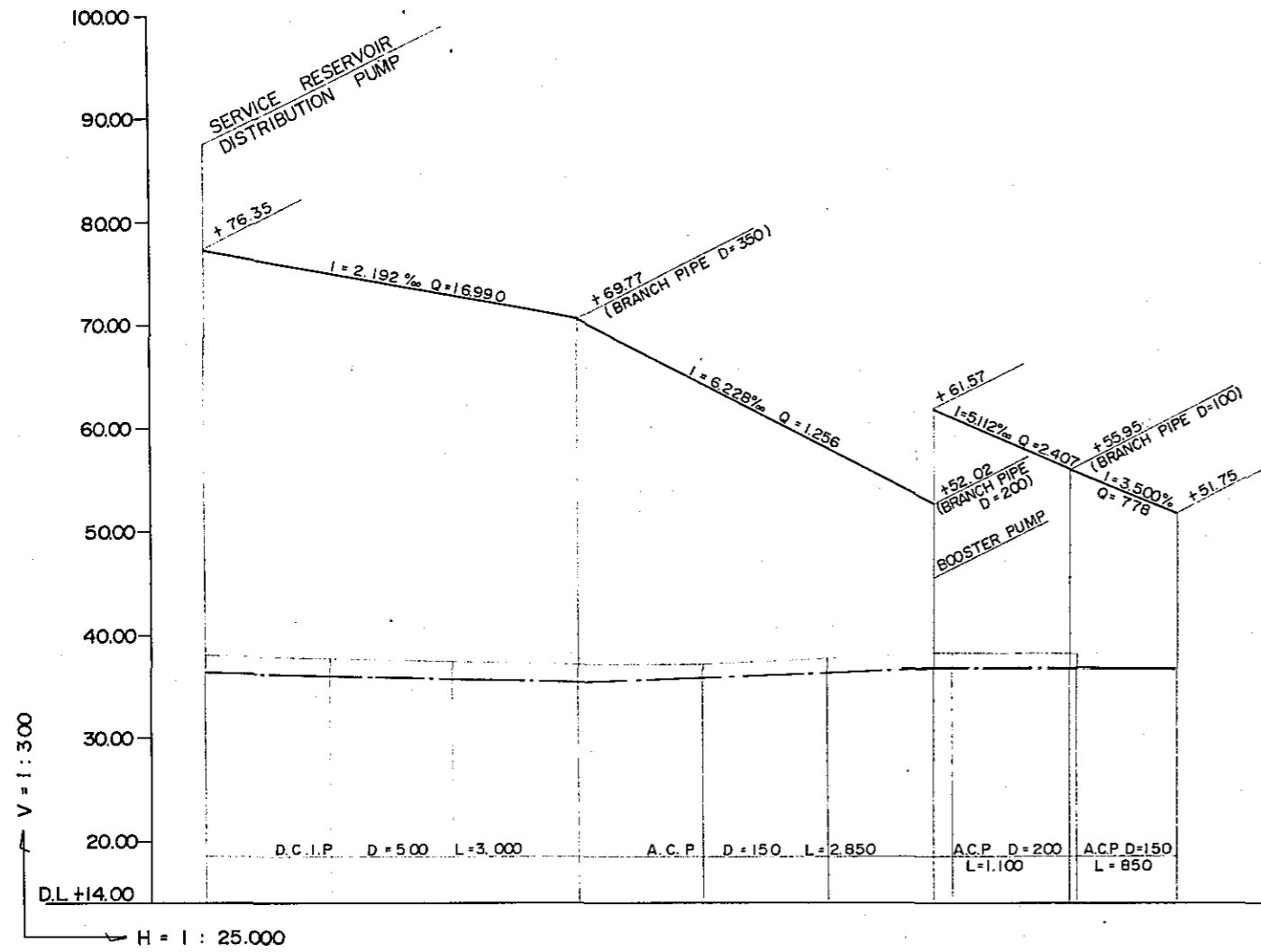
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 METROPOLITAN WATER WORKS AUTHORITY
 BANGKOK
 KINGDOM OF THAILAND

NONG KHAEM WATER SYSTEM

OVERSEAS TECHNICAL COOPERATION AGENCY
 TOKYO, JAPAN

SUBMITTED APPROVED SCALE REV. NO.

DATE DWG. NO. **N-7**



STATION	SECTIONAL DISTANCE	TOTAL DISTANCE	GROUND HEIGHT	CENTRAL HEIGHT OF PIPE	EFFECTIVE HEAD	HYDRO-DYNAMIC HEAD	STATIC HEAD
0	0	0	38.00	36.35	40.000	76.35	76.35
	1.000	1.000	37.70	36.05			
	1.000	2.000	37.30	35.65			
2	1.000	3.000	37.00	35.35	34.42	69.77	
	1.000	4.000	37.00	35.72			
	1.000	5.000	37.50	36.22			
5	850	5.850	38.00	36.70	15.32	52.02	
	150	6.000	38.00	36.70	24.87	61.57	
4	950	6.950	38.00	36.70	19.25	55.95	
	50	7.000	38.00	36.75			
1	800	7.800	38.00	36.75	15.00	51.75	76.35

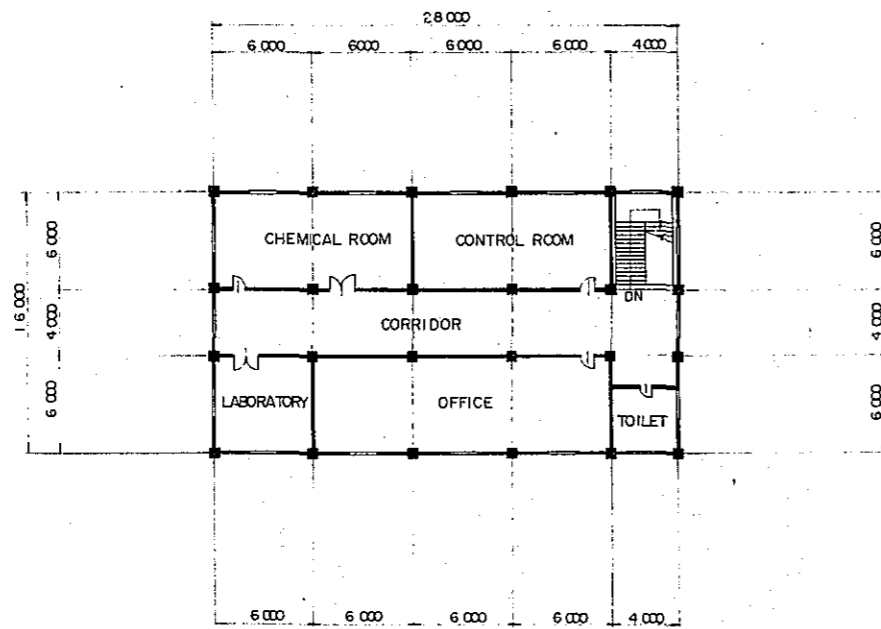
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METROPOLITAN WATER WORKS AUTHORITY
BANGKOK
KINGDOM OF THAILAND

**LONGITUDINAL SECTION
OF NONG KHAEM**

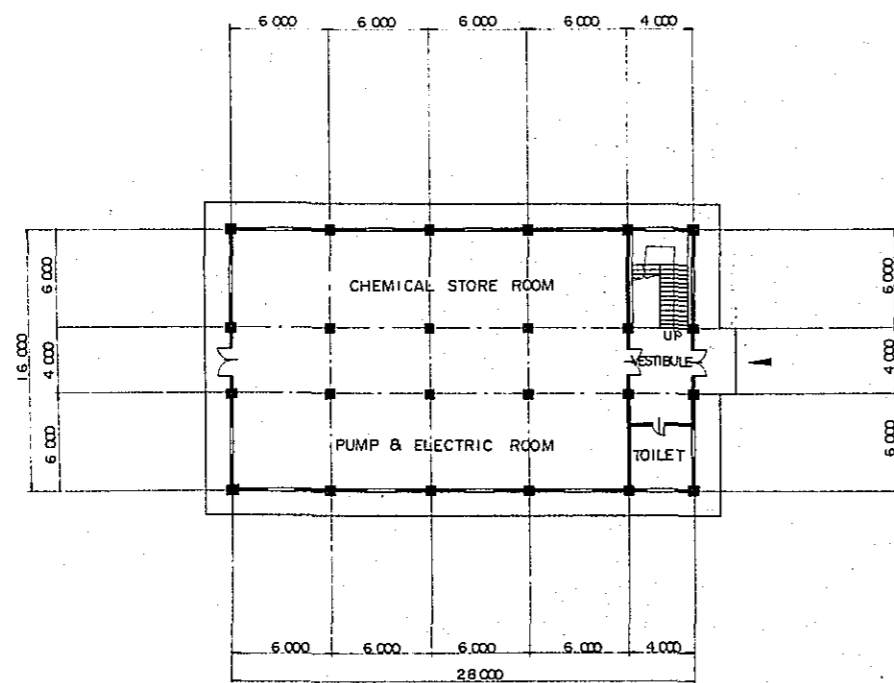
OVERSEAS TECHNICAL COOPERATION AGENCY
TOKYO, JAPAN

SUBMITTED	APPROVED	SCALE	REV. NO.

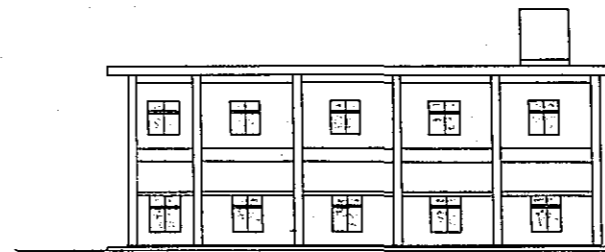
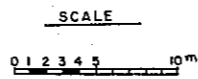
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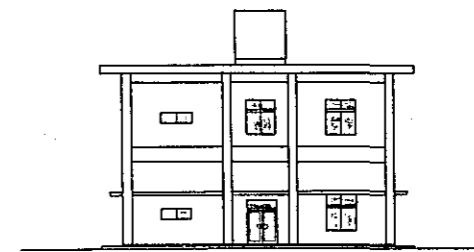
2ND FLOOR PLAN
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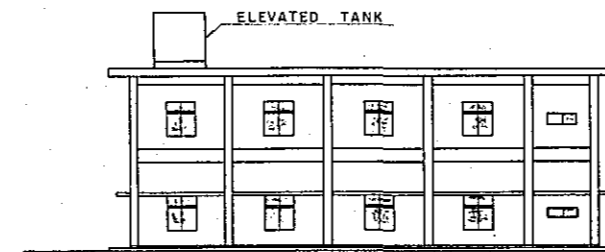
1ST FLOOR PLAN
S=1:200



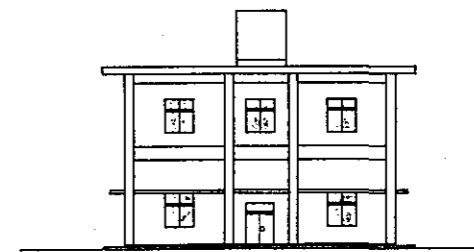
RIGHT ELEVATION
S=1:200



FRONT ELEVATION
S=1:200



LEFT ELEVATION
S=1:200



REAR ELEVATION
S=1:200

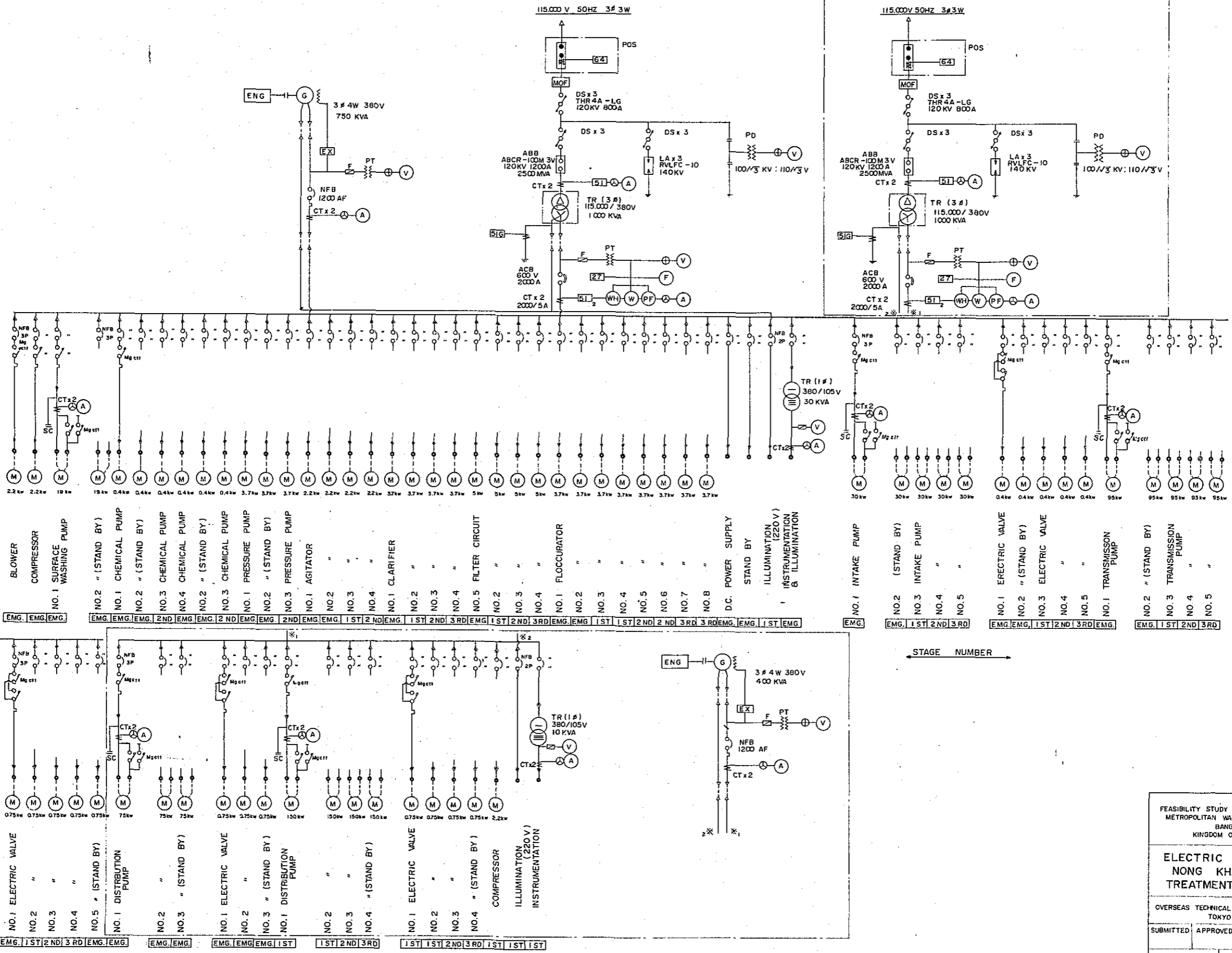
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METROPOLITAN WATER WORKS AUTHORITY
BANGKOK
KINGDOM OF THAILAND

CONTROL OFFICE

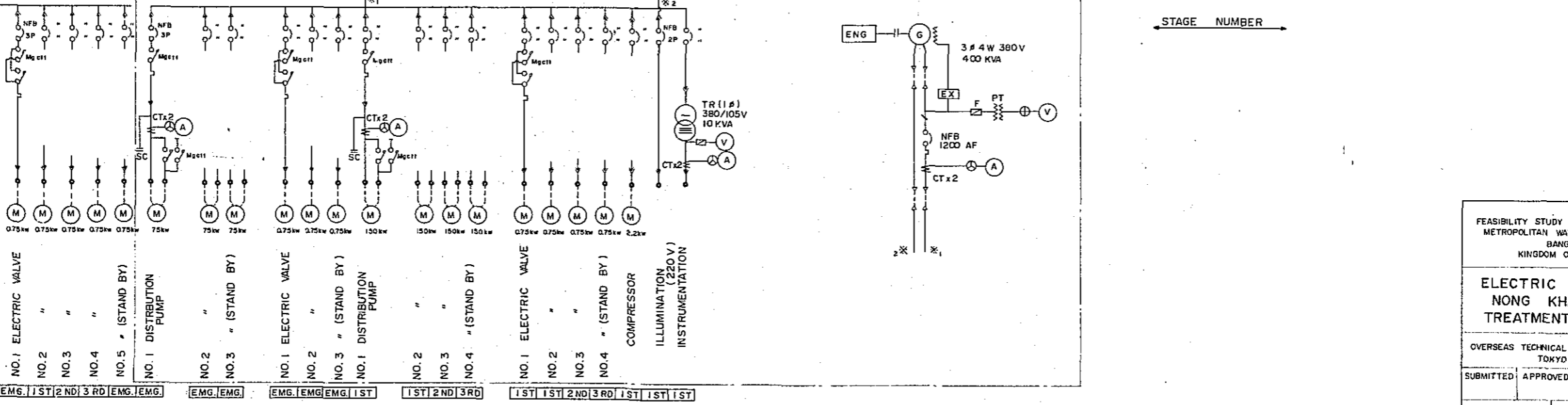
OVERSEAS TECHNICAL COOPERATION AGENCY
TOKYO, JAPAN

SUBMITTED	APPROVED	SCALE	REV. NO.
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DATE	DWG. NO. N-9
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- BLOWER 2.2kw
- COMPRESSOR 2.2kw
- NO.1 SURFACE WASHING PUMP 19kw
- NO.2 " (STAND BY) 19kw
- NO.1 CHEMICAL PUMP 0.4kw
- NO.2 " (STAND BY) 0.4kw
- NO.3 CHEMICAL PUMP 0.4kw
- NO.4 CHEMICAL PUMP 0.4kw
- NO.2 " (STAND BY) 0.4kw
- NO.3 CHEMICAL PUMP 0.4kw
- NO.1 PRESSURE PUMP 3.7kw
- NO.2 " (STAND BY) 3.7kw
- NO.3 PRESSURE PUMP 3.7kw
- NO.1 AGITATOR 2.2kw
- NO.2 " 2.2kw
- NO.3 " 2.2kw
- NO.4 " 2.2kw
- NO.1 CLARIFIER 3.7kw
- NO.2 " 3.7kw
- NO.3 " 3.7kw
- NO.4 " 3.7kw
- NO.5 FILTER CIRCUIT 5kw
- NO.2 " 5kw
- NO.3 " 5kw
- NO.4 " 5kw
- NO.1 FLOCCULATOR 3.7kw
- NO.2 " 3.7kw
- NO.3 " 3.7kw
- NO.4 " 3.7kw
- NO.5 " 3.7kw
- NO.6 " 3.7kw
- NO.7 " 3.7kw
- NO.8 " 3.7kw
- D.C. POWER SUPPLY
- STAND BY
- ILLUMINATION (220V)
- INSTRUMENTATION & ILLUMINATION
- NO.1 INTAKE PUMP 30kw
- NO.2 (STAND BY) 30kw
- NO.3 INTAKE PUMP 30kw
- NO.4 " 30kw
- NO.5 " 30kw
- NO.1 ELECTRIC VALVE 0.4kw
- NO.2 " (STAND BY) 0.4kw
- NO.3 ELECTRIC VALVE 0.4kw
- NO.4 " 0.4kw
- NO.5 " 0.4kw
- NO.1 TRANSMISSION PUMP 95kw
- NO.2 " (STAND BY) 95kw
- NO.3 TRANSMISSION PUMP 95kw
- NO.4 " 95kw
- NO.5 " 95kw



FEASIBILITY STUDY FOR SEPARATE SYSTEM
 METROPOLITAN WATER WORKS AUTHORITY
 BANGKOK
 KINGDOM OF THAILAND

**ELECTRIC SKELETON FOR
 NONG KHAEM
 TREATMENT PLANT**

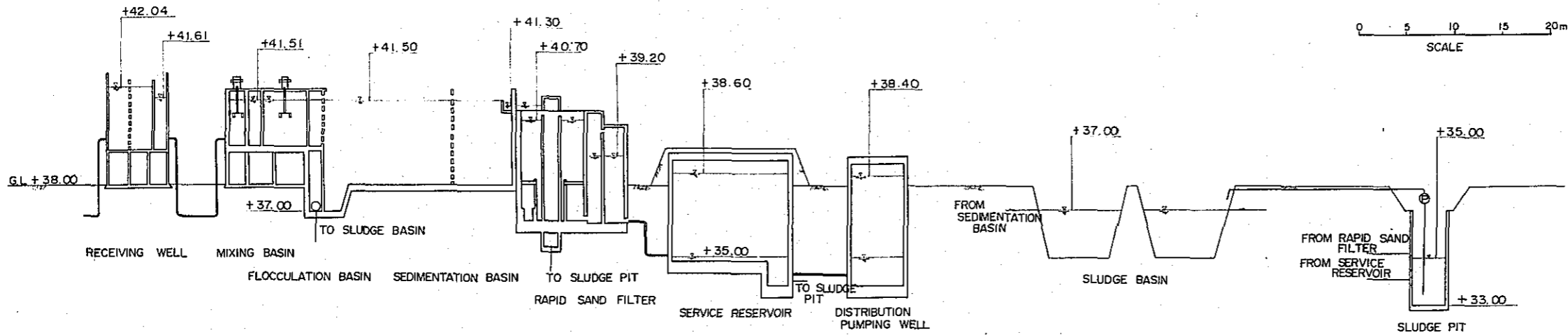
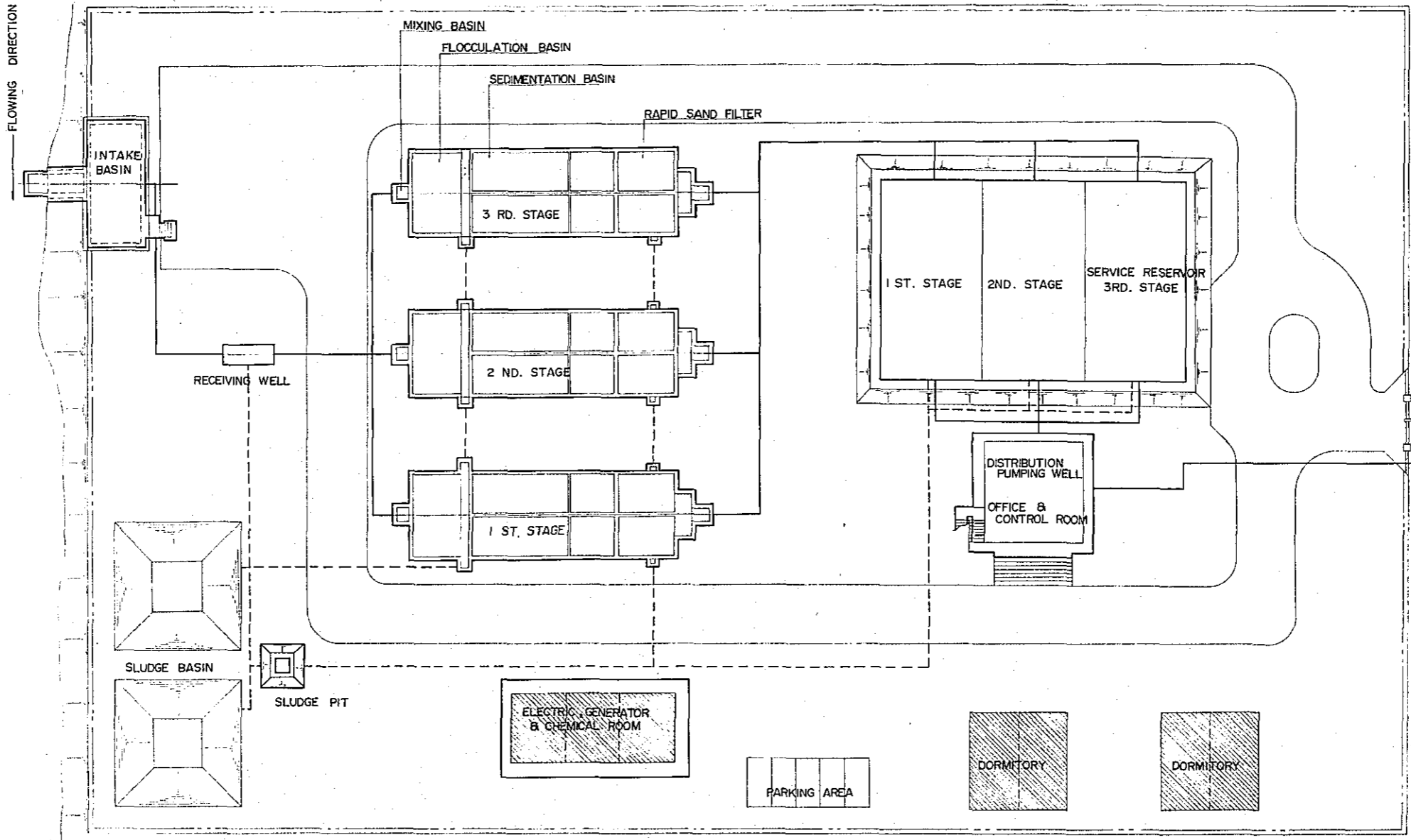
OVERSEAS TECHNICAL COOPERATION AGENCY
 TOKYO, JAPAN

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LAT KRABANG WATER SYSTEM

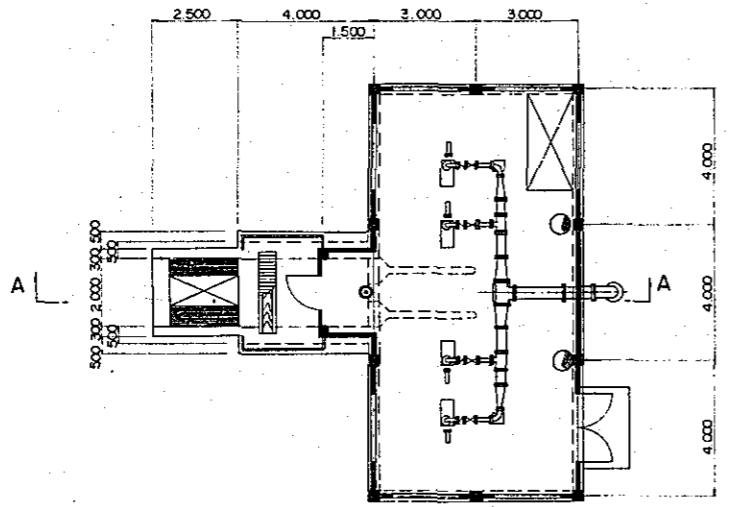
KHLONG PHRA KHANONG



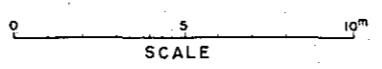
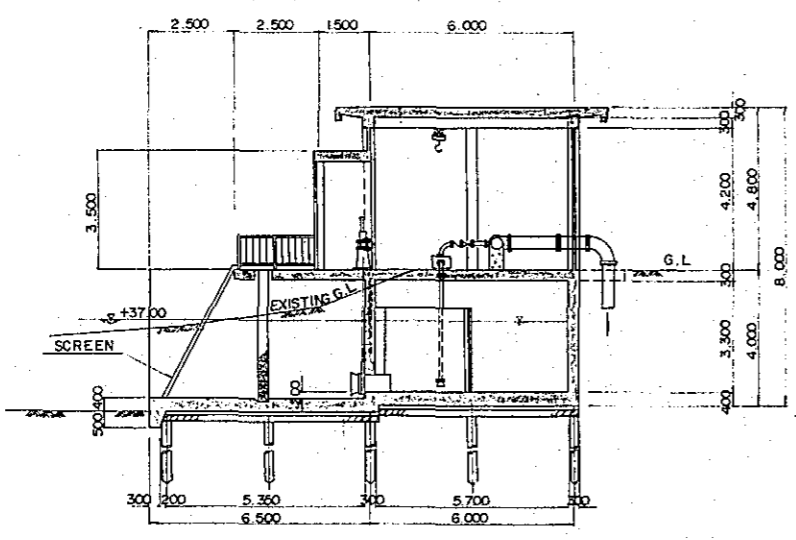
FEASIBILITY STUDY FOR SEPARATE SYSTEM METROPOLITAN WATER WORKS AUTHORITY BANGKOK KINGDOM OF THAILAND			
LAYOUT OF FLOW DIAGRAM			
OVERSEAS TECHNICAL COOPERATION AGENCY TOKYO, JAPAN			
SUBMITTED	APPROVED	SCALE	REV. NO.
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INTAKE BASIN

PLAN

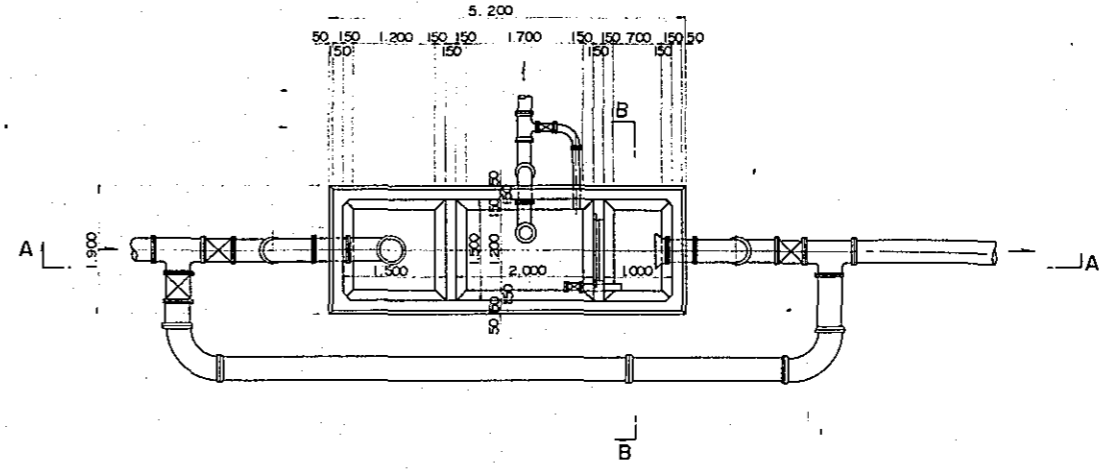


SECTION A - A

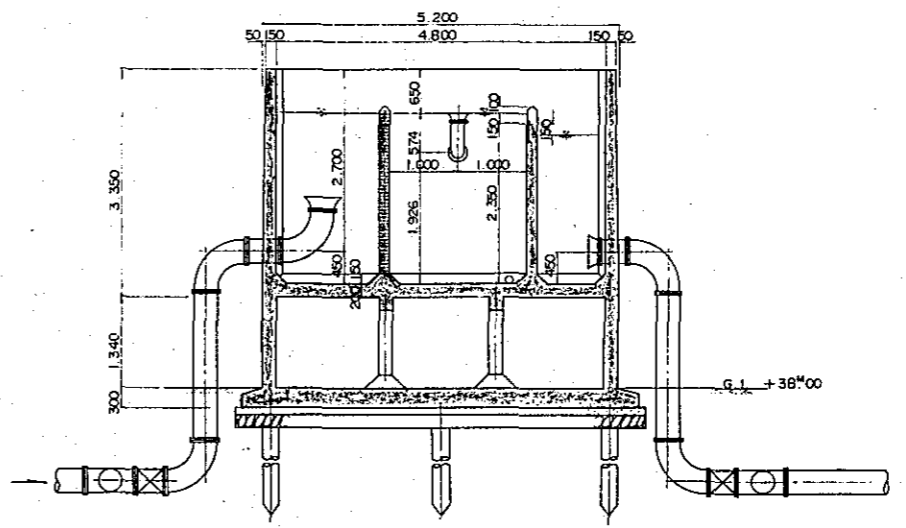


RECEIVING WELL

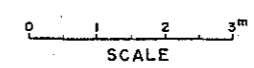
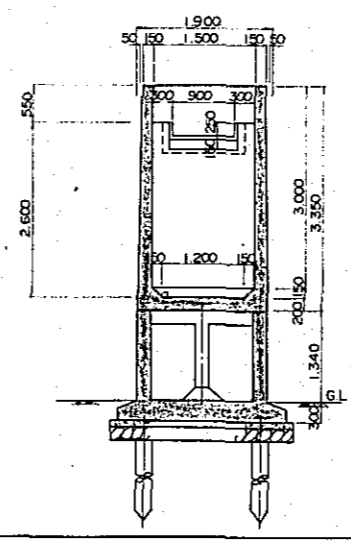
PLAN



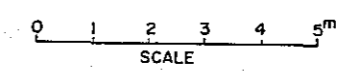
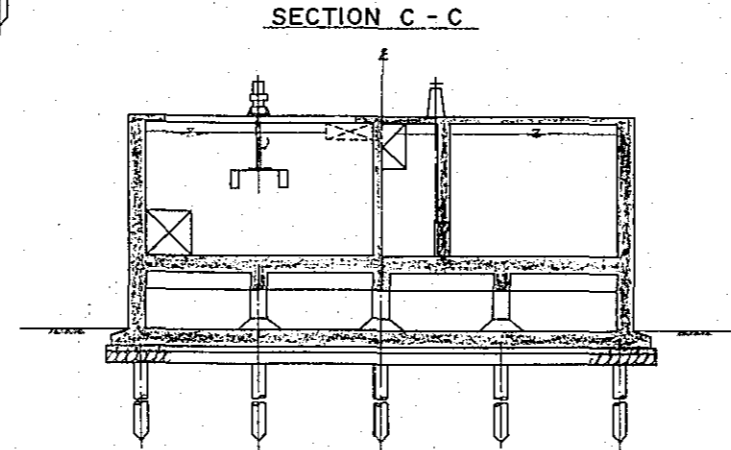
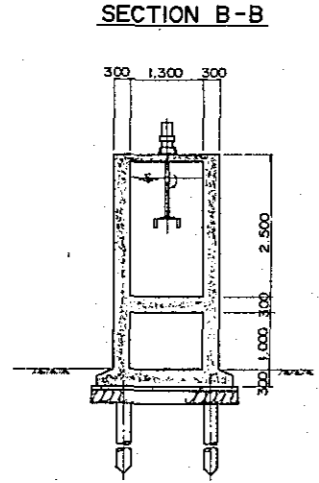
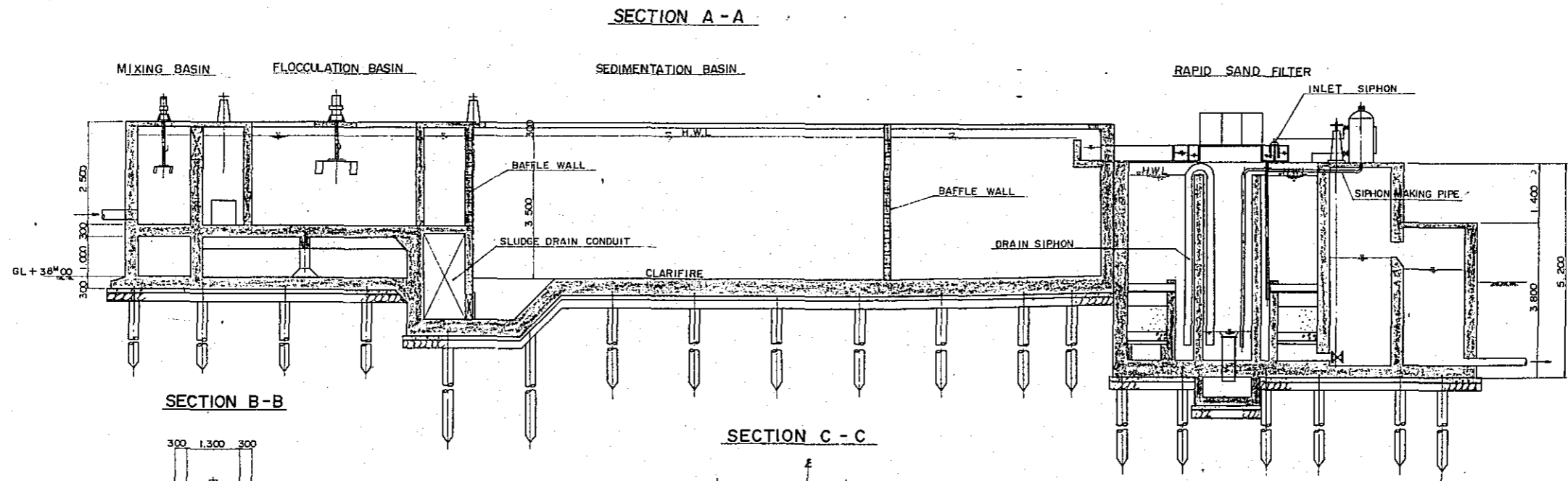
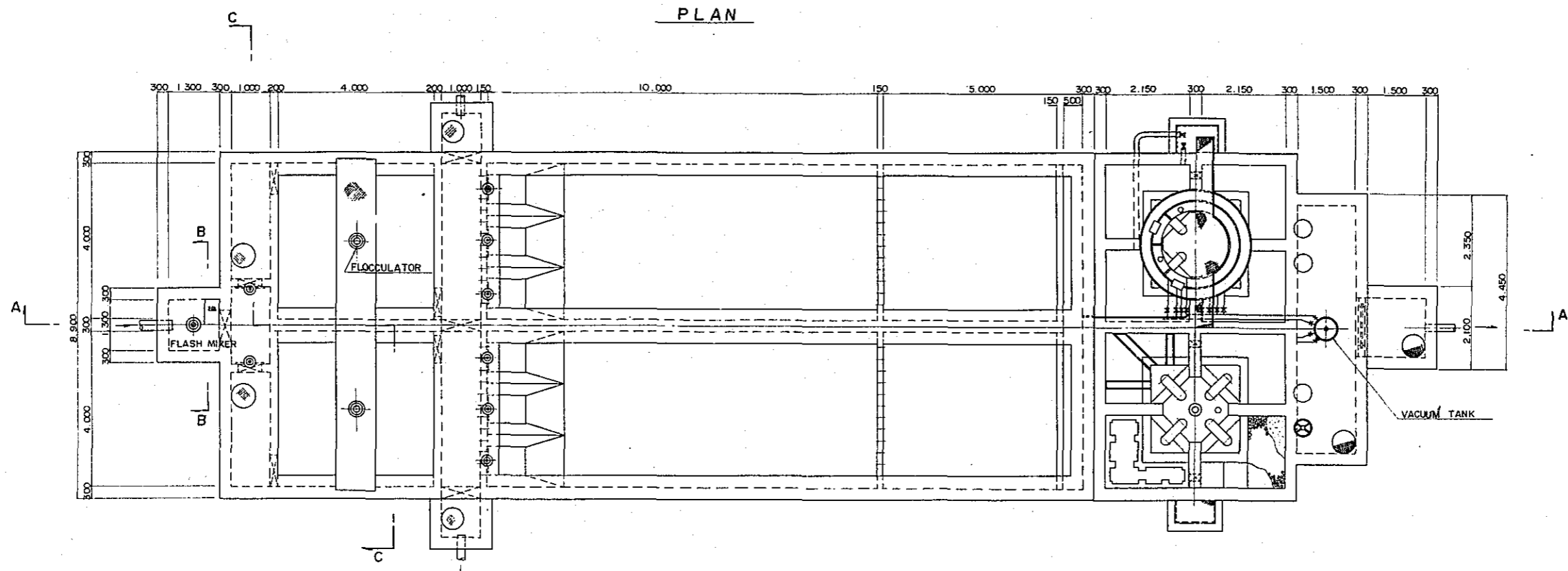
SECTION A - A



SECTION B - B

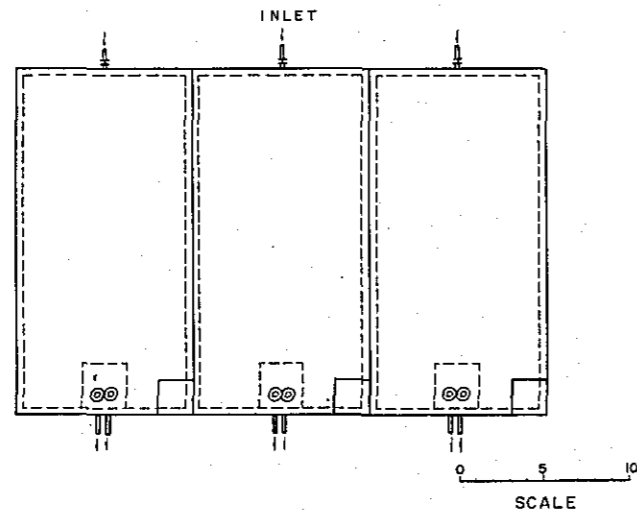


FEASIBILITY STUDY FOR SEPARATE SYSTEM METROPOLITAN WATER WORKS AUTHORITY BANGKOK KINGDOM OF THAILAND			
INTAKE BASIN & RECEIVING WELL			
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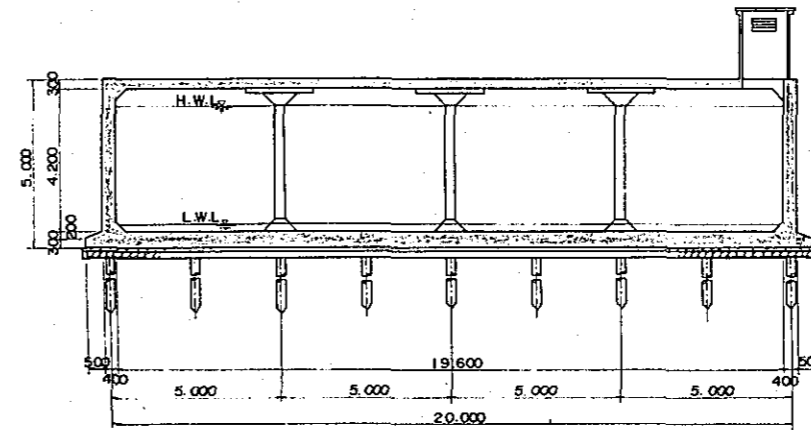


FEASIBILITY STUDY FOR SEPARATE SYSTEM METROPOLITAN WATER WORKS AUTHORITY BANGKOK KINGDOM OF THAILAND			
MIXING, FLOCCULATION, SEDIMENTATION BASIN 8. RAPID SAND FILTER			
OVERSEAS TECHNICAL COOPERATION AGENCY TOKYO, JAPAN			
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DATE	DWG. NO.	L-3	

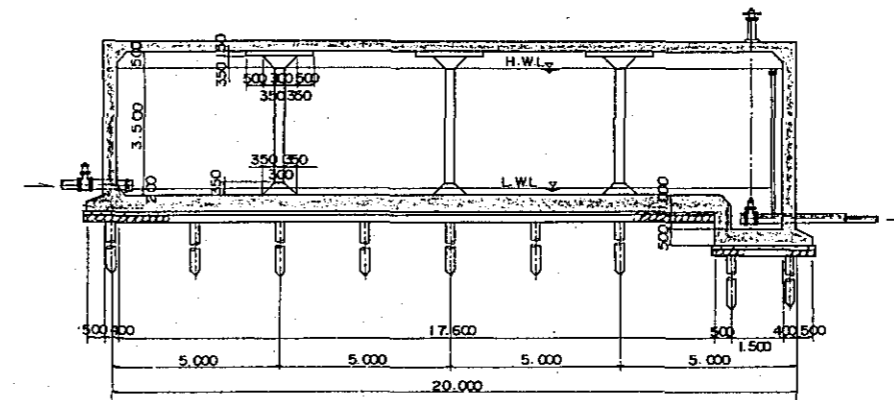
PLAN



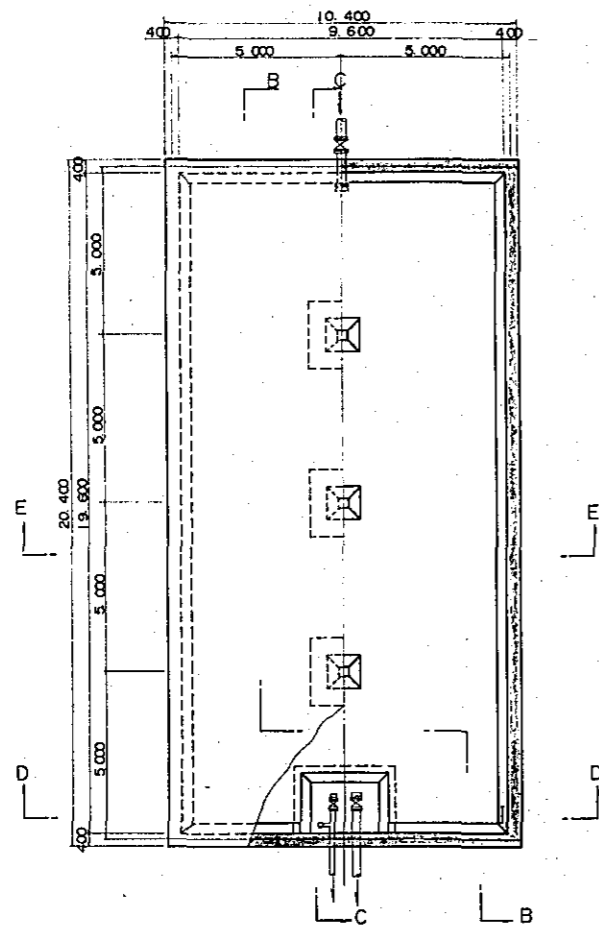
SECTION B-B



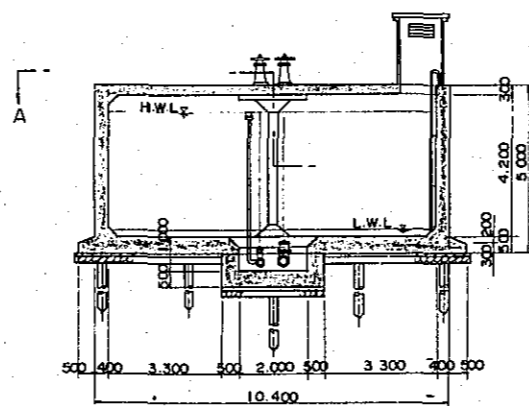
SECTION C-C



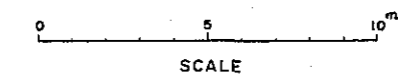
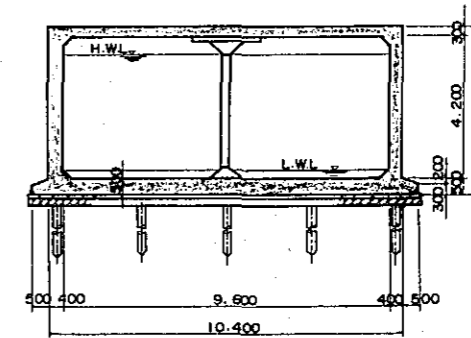
SECTION A-A



SECTION D-D



SECTION E-E



FEASIBILITY STUDY FOR SEPARATE SYSTEM
METROPOLITAN WATER WORKS AUTHORITY
BANGKOK
KINGDOM OF THAILAND

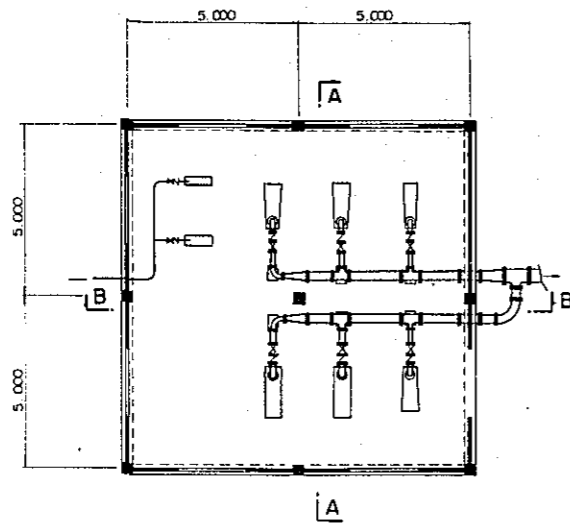
SERVICE RESERVOIR

OVERSEAS TECHNICAL COOPERATION AGENCY
TOKYO, JAPAN

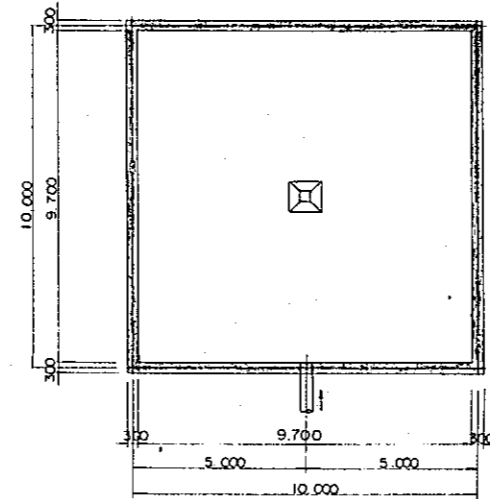
SUBMITTED	APPROVED	SCALE	REV. NO.
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DATE	DWG. NO. L-4
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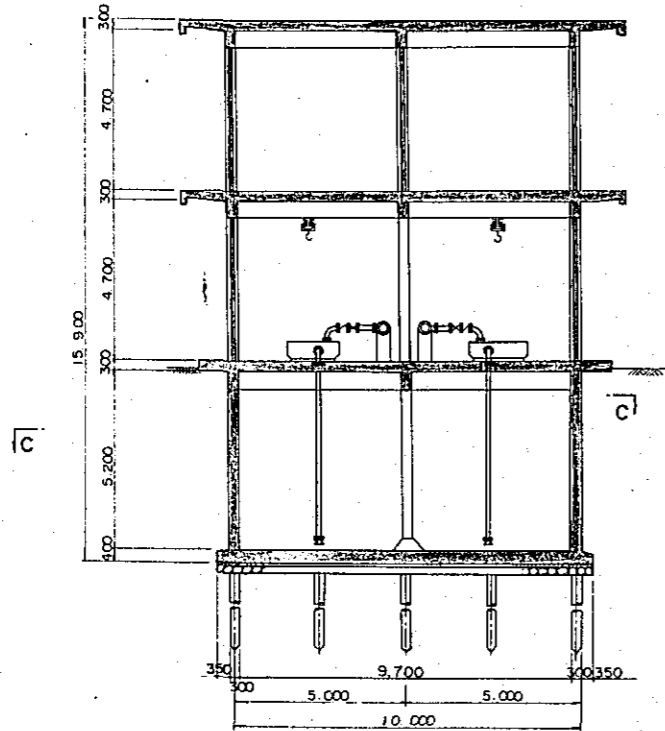
1ST FLOOR PLAN



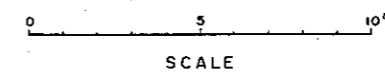
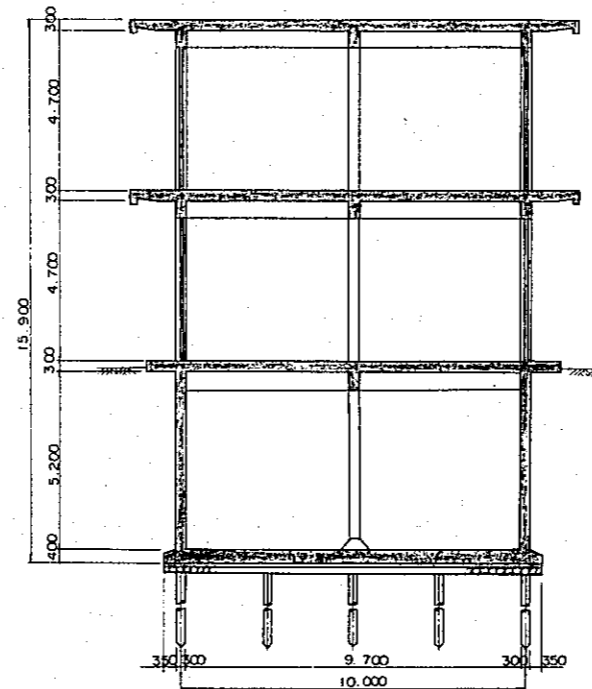
SECTION C-C



SECTION A-A



SECTION B-B



FEASIBILITY STUDY FOR SEPARATE SYSTEM
METROPOLITAN WATER WORKS AUTHORITY
BANGKOK
KINGDOM OF THAILAND

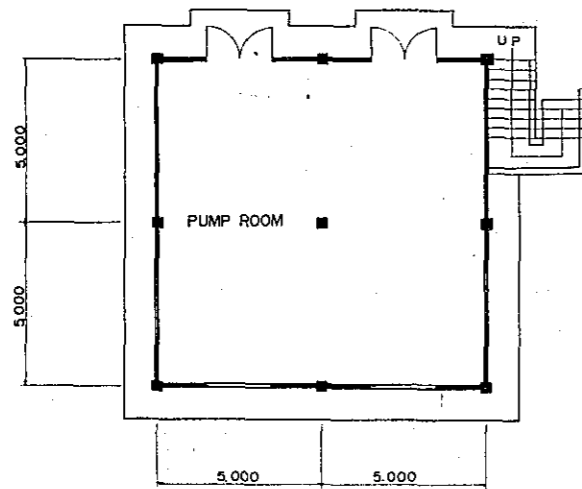
DISTRIBUTION PUMPING WELL

OVERSEAS TECHNICAL COOPERATION AGENCY
TOKYO, JAPAN

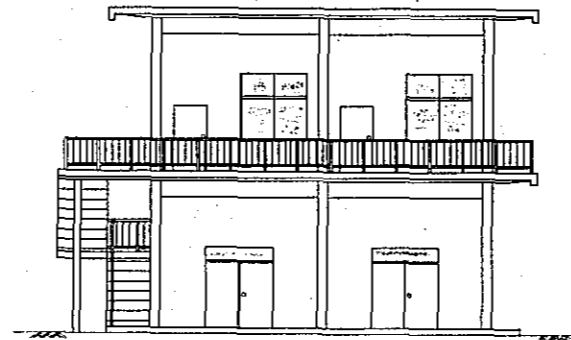
SUBMITTED	APPROVED	SCALE	REV. NO.
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DATE	DWG. NO.	L - 5
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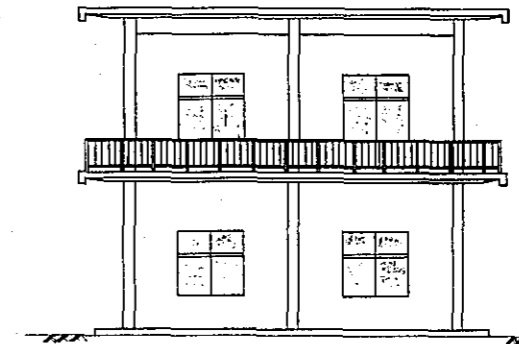
1 ST FLOOR PLAN



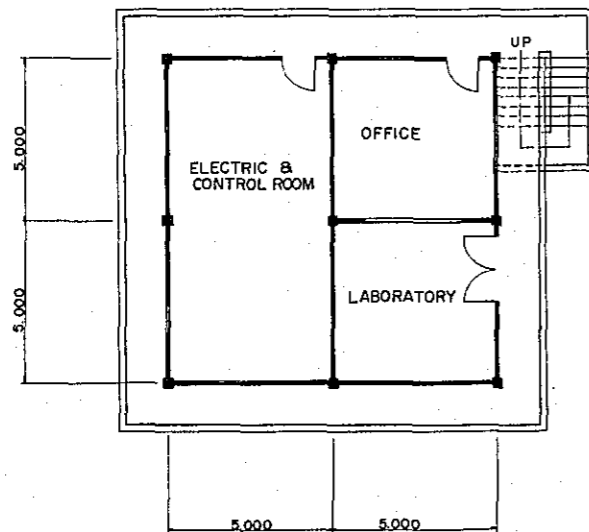
FRONT ELEVATION



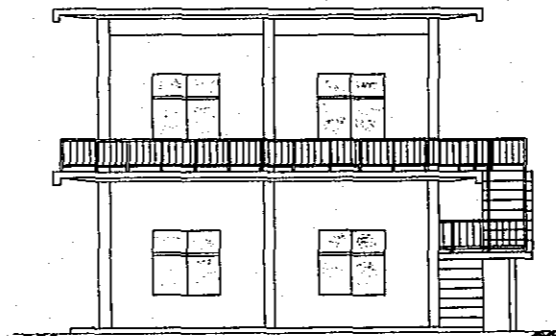
RIGHT ELEVATION



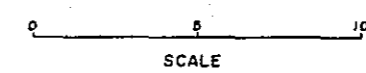
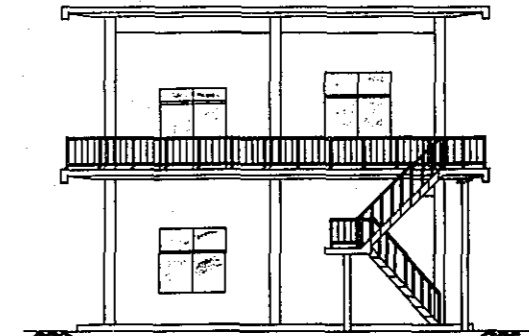
2ND FLOOR PLAN



REAR ELEVATION



LEFT ELEVATION



FEASIBILITY STUDY FOR SEPARATE SYSTEM
METROPOLITAN WATER WORKS AUTHORITY
BANGKOK
KINGDOM OF THAILAND

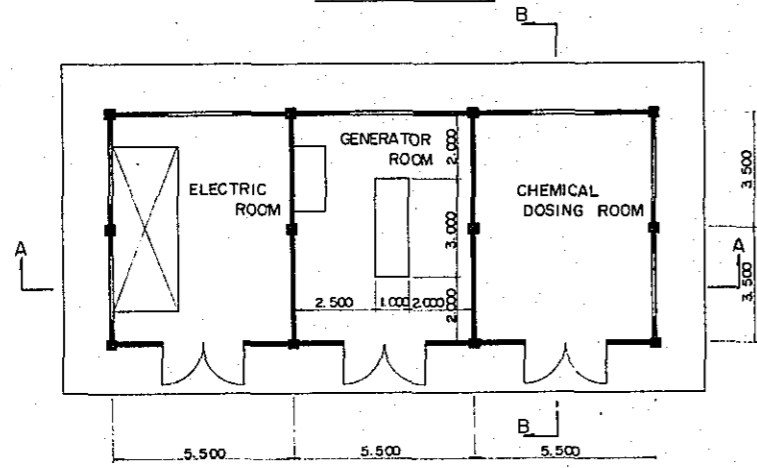
OFFICE, LABORATORY,
ELECTRIC ROOM
& CONTROL ROOM

OVERSEAS TECHNICAL COOPERATION AGENCY
TOKYO, JAPAN

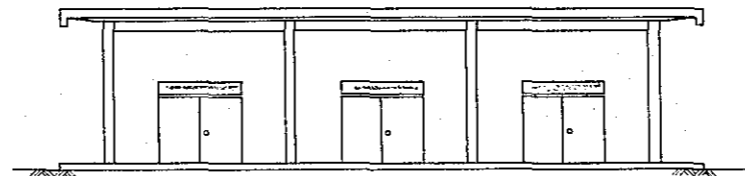
SUBMITTED	APPROVED	SCALE	REV. NO.

DATE	DWG. NO. L-6
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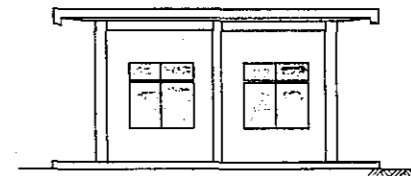
FLOOR PLAN



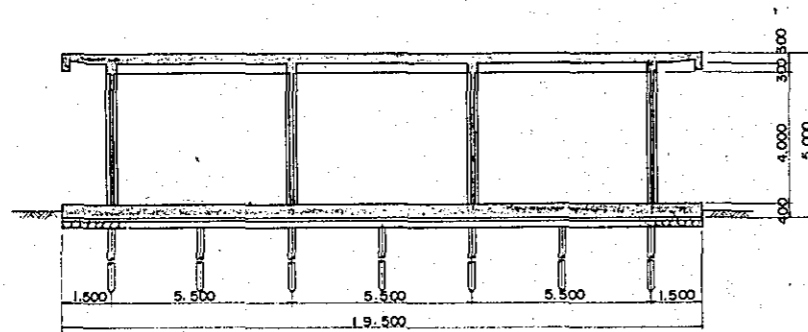
FRONT ELEVATION



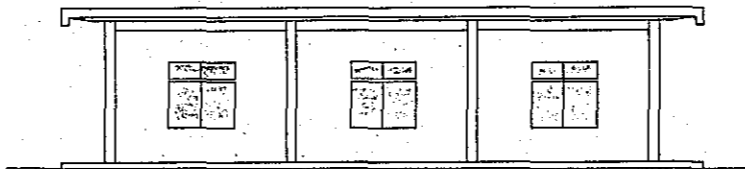
RIGHT ELEVATION



SECTION A - A



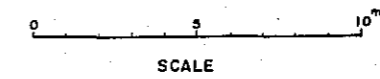
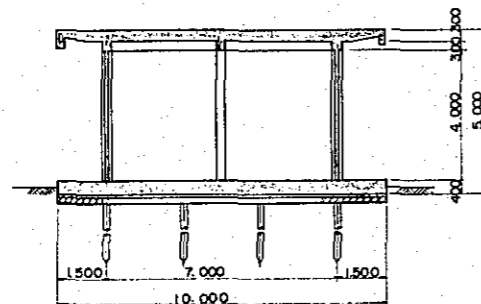
REAR ELEVATION



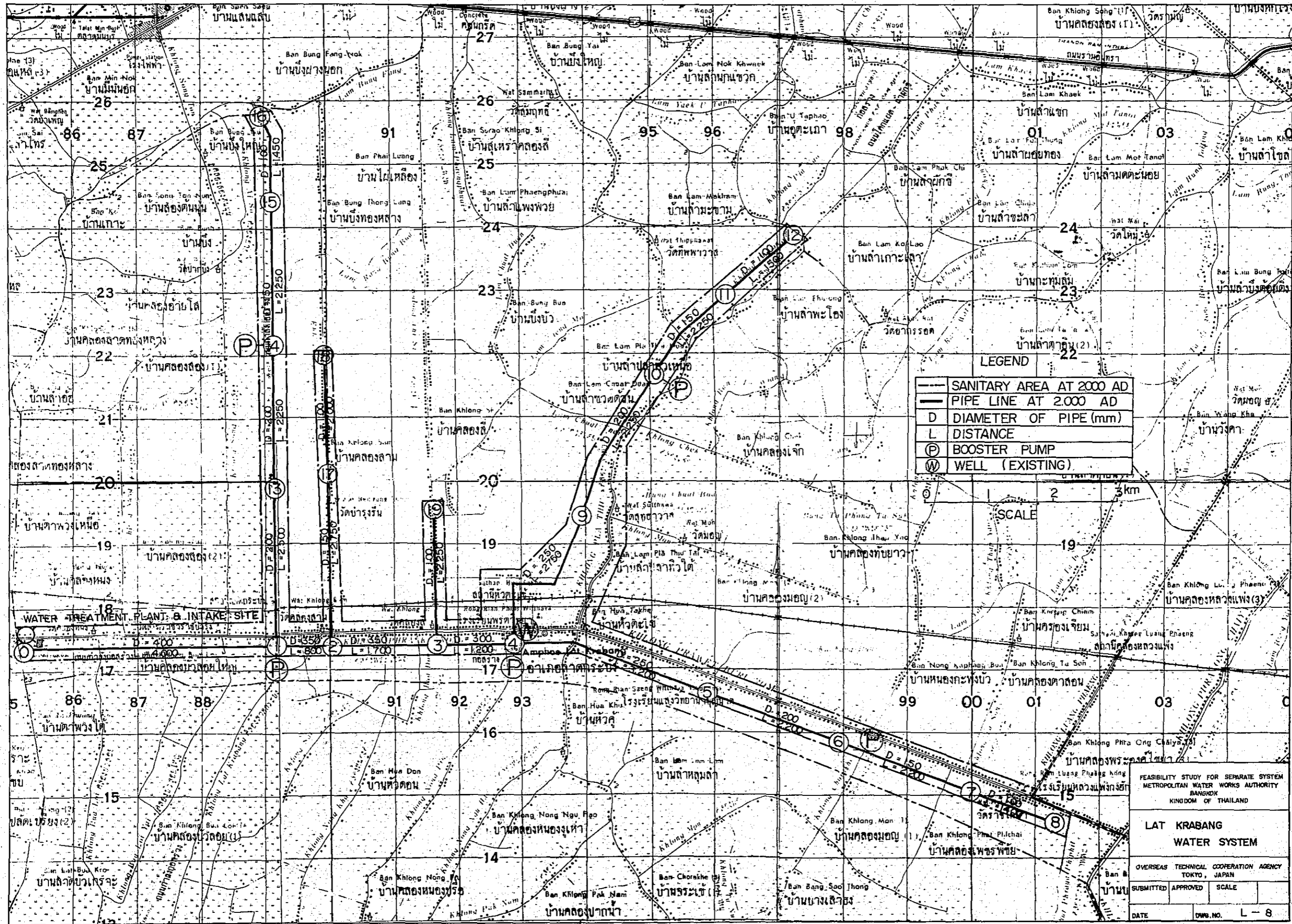
LEFT ELEVATION



SECTION B - B



FEASIBILITY STUDY FOR SEPARATE SYSTEM METROPOLITAN WATER WORKS AUTHORITY BANGKOK KINGDOM OF THAILAND			
ELECTRIC, GENERATOR & CHEMICAL DOSING ROOM			
OVERSEAS TECHNICAL COOPERATION AGENCY TOKYO, JAPAN			
SUBMITTED	APPROVED	SCALE	REV. NO.
DATE	DWG. NO.	L-7	



LEGEND

---	SANITARY AREA AT 2000 AD
—	PIPE LINE AT 2.000 AD
D	DIAMETER OF PIPE (mm)
L	DISTANCE
(P)	BOOSTER PUMP
(W)	WELL (EXISTING)

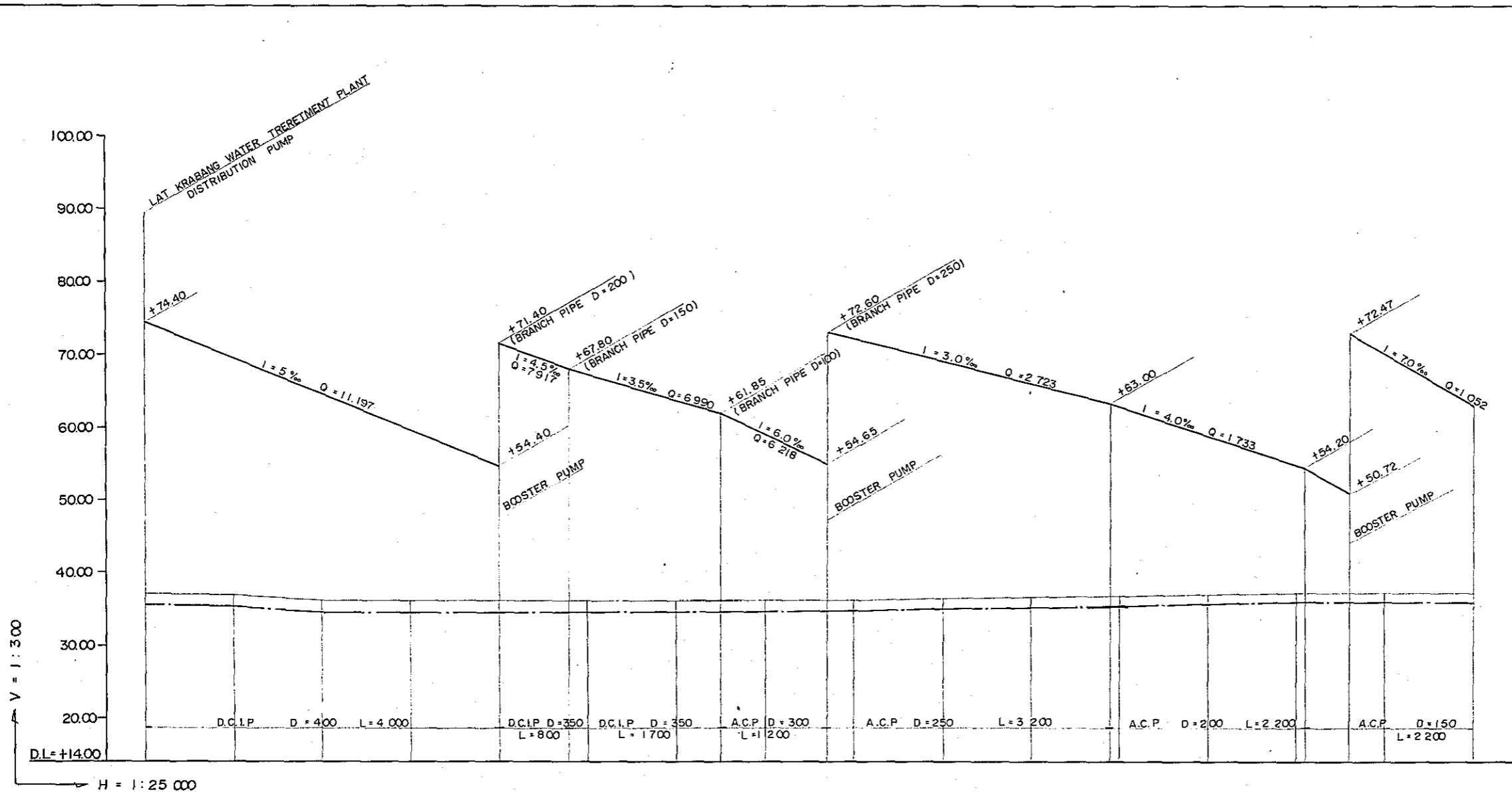
SCALE

FEASIBILITY STUDY FOR SEPARATE SYSTEM
METROPOLITAN WATER WORKS AUTHORITY
BANGKOK
KINGDOM OF THAILAND

**LAT KRABANG
WATER SYSTEM**

OVERSEAS TECHNICAL COOPERATION AGENCY
TOKYO, JAPAN

SUBMITTED	APPROVED	SCALE
DATE	DWG. NO.	L-8



STATION	SECTIONAL DISTANCE	TOTAL DISTANCE	GROUND HEIGHT	CENTRAL HEIGHT OF PIPE	REACTIVE HEAD	HYDRO DYNAMIC HEAD	STATIC HEAD
0	0	0	37.00	35.40	39.00	74.40	74.40
	1 000	1 000	36.80	35.20			
	1 000	2 000	36.00	34.40			
	1 000	3 000	36.00	34.40			
1	1 000	4 000	36.00	34.40	20.00 37.00	54.40 71.40	
2	800 700	4 800 5 000	36.00 36.00	34.42 34.42	33.38	67.80	
	1 000	6 000	36.00	34.42			
3	500	6 500	36.00	34.42	27.43	61.85	
	1 000	7 000	36.00	34.65			
4	700 1 000	7 700 8 000	36.00 36.00	34.65 34.67	50.00 57.95	54.85 72.60	
	1 000	9 000	36.20	34.87			
	1 000	10 000	36.40	35.07			
5	900 1 000	10 900 11 000	36.60 36.60	35.27 35.30	27.73	63.00	
	1 000	12 000	36.60	35.00			
6	1 000 100	13 000 13 100	37.00 37.00	35.70 35.70	18.50	54.20	
	500	13 600	37.00	35.72	15.00 36.73	50.72 72.47	
	400	14 000	37.00	35.72			
	1 000	15 000	37.00	35.72			74.40

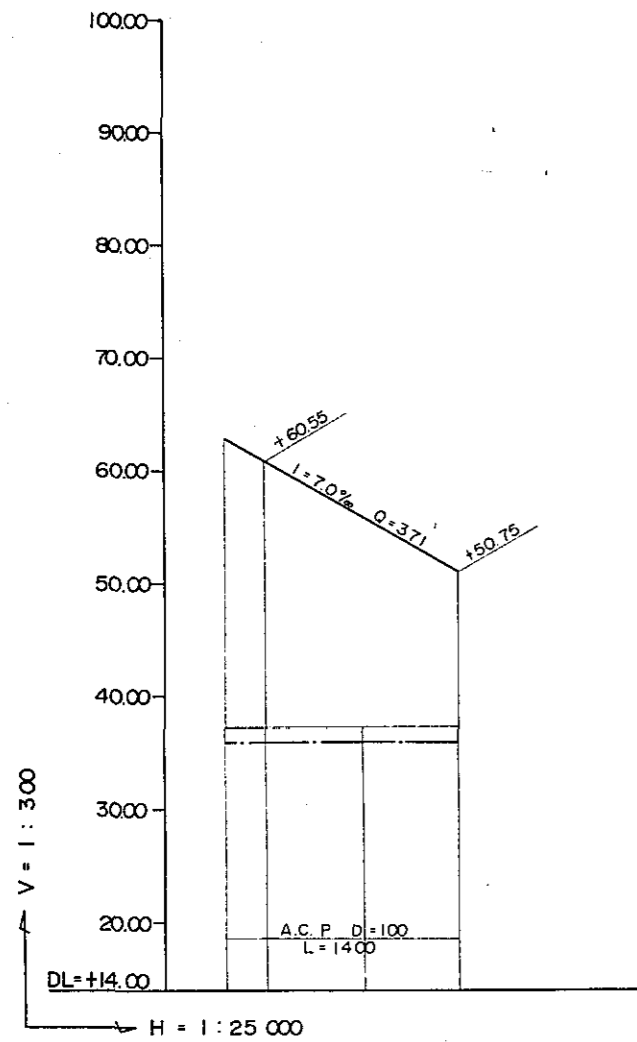
FEASIBILITY STUDY FOR SEPARATE SYSTEM
METROPOLITAN WATER WORKS AUTHORITY
BANGKOK
KINGDOM OF THAILAND

**LONGITUDINAL SECTION
OF LAT KRABANG (I)**

OVERSEAS TECHNICAL COOPERATION AGENCY
TOKYO, JAPAN

SUBMITTED	APPROVED	SCALE	REV. NO.

DATE _____ DWG. NO. L-9



STATION	SECTIONAL DISTANCE	TOTAL DISTANCE	GROUND HEIGHT	CENTRAL PIPE HEIGHT	EFFECTIVE HEAD	HYDRO. HEAD	STATIC HEAD
7	0	15 000	37.00	35.72	24.83	60.55	74.40
	300	15 300	37.00	35.72			
	700	16 000	37.00	35.75			
8	700	16 700	37.00	35.75	15.00	50.75	74.40

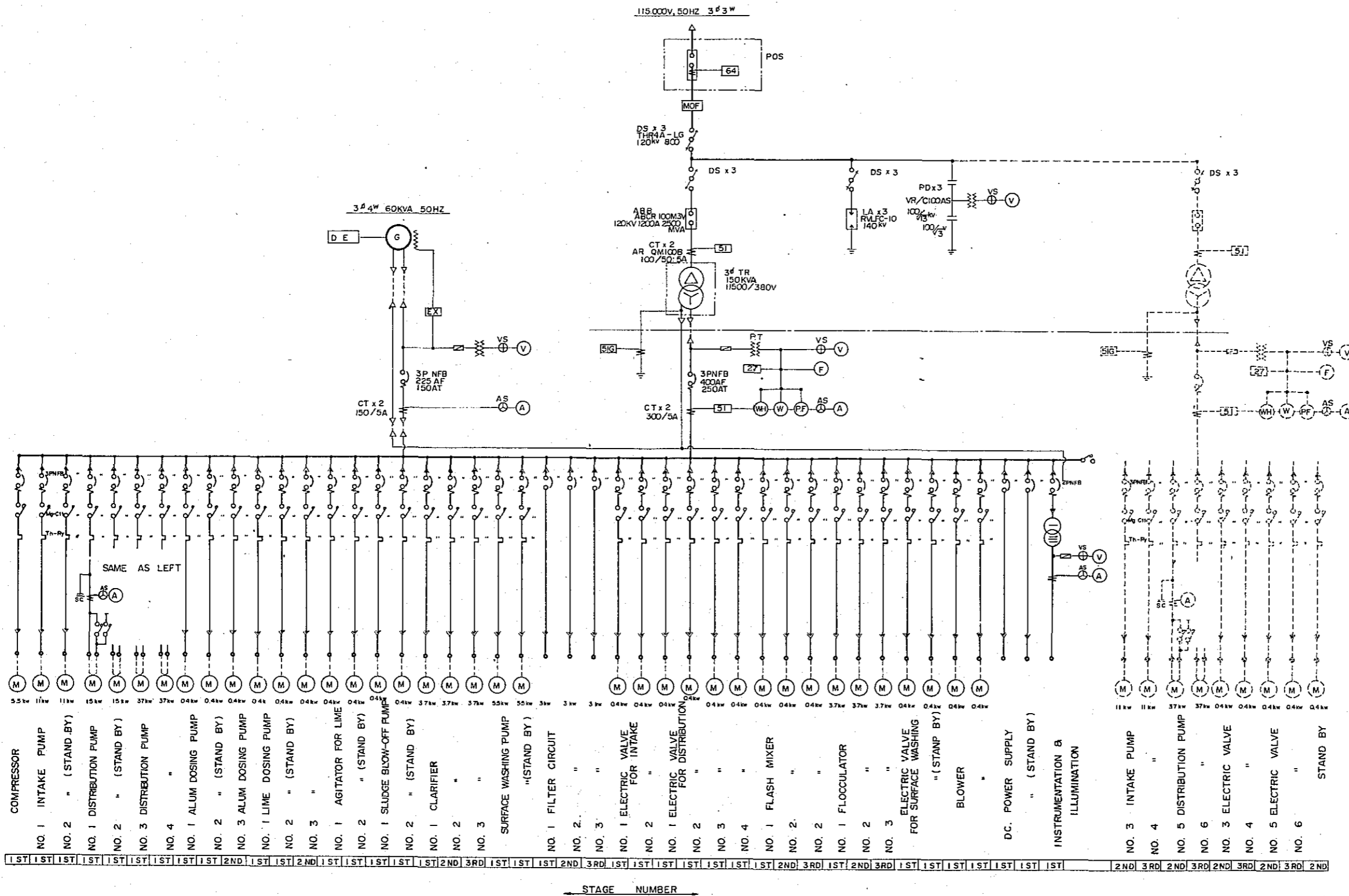
FEASIBILITY STUDY FOR SEPARATE SYSTEM
METROPOLITAN WATER WORKS AUTHORITY
BANGKOK
KINGDOM OF THAILAND

LONGITUDINAL SECTION
OF LAT KRABANG (2)

OVERSEAS TECHNICAL COOPERATION AGENCY
TOKYO, JAPAN

SUBMITTED APPROVED SCALE REV. NO.

DATE DWG. NO. L-10



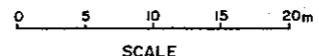
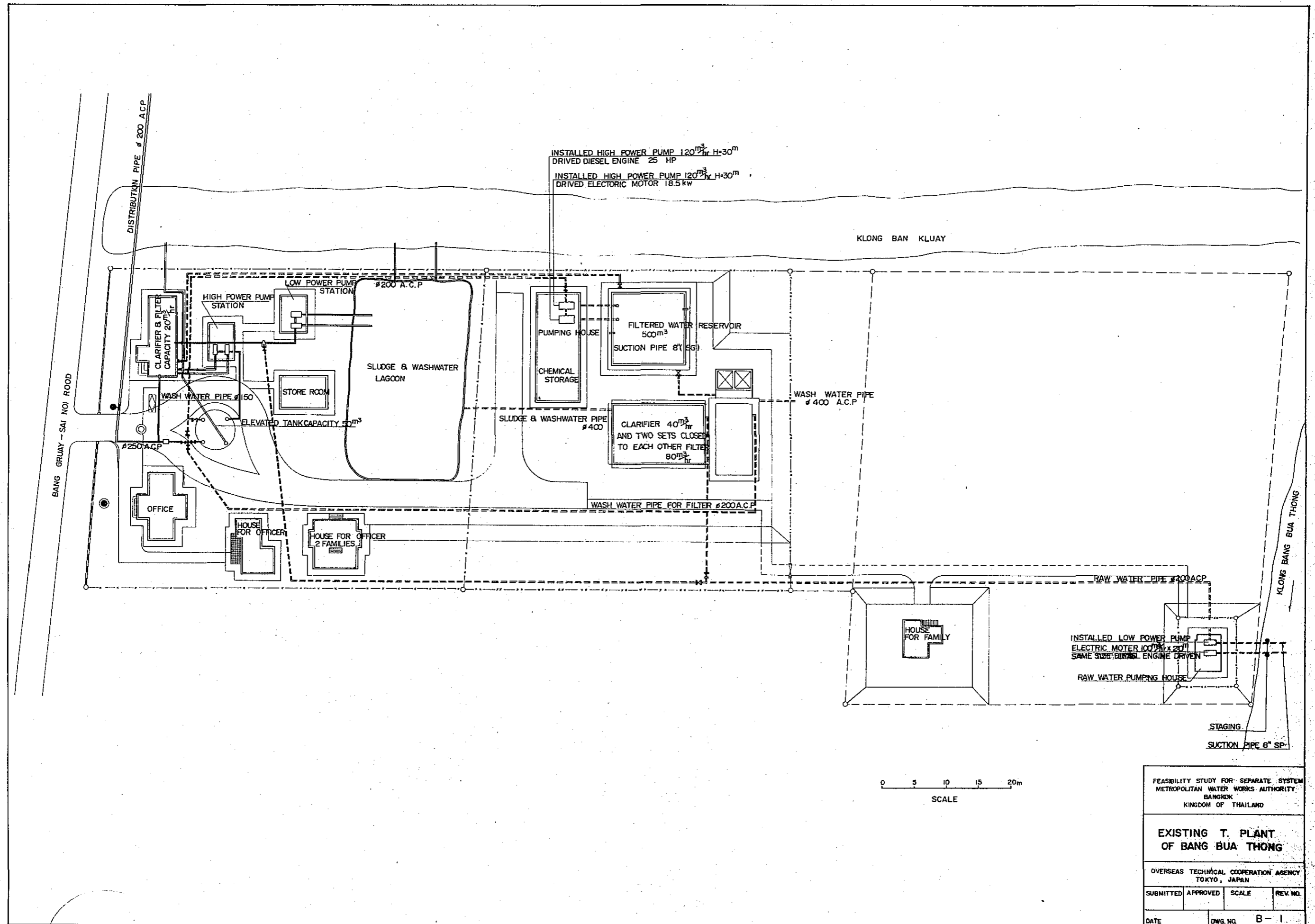
FEASIBILITY STUDY FOR SEPARATE SYSTEM
 METROPOLITAN WATER WORKS AUTHORITY
 BANGKOK
 KINGDOM OF THAILAND

**ELECTRIC
 SKELETON FOR LAT-KRABANG**

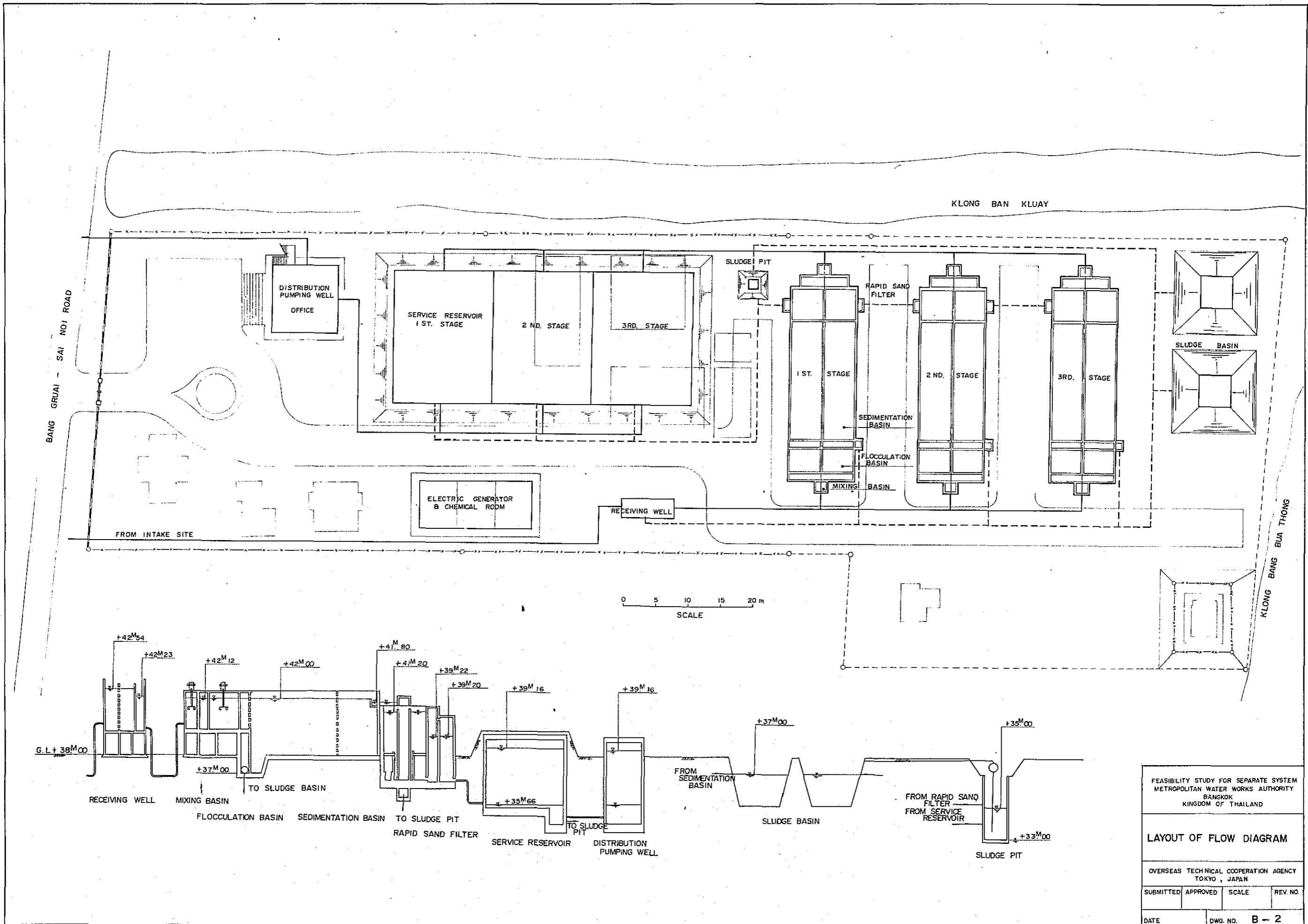
OVERSEAS TECHNICAL COOPERATION AGENCY
 TOKYO, JAPAN

SUBMITTED	APPROVED	SCALE	REV. NO.
DATE	DWG. NO.	L-11	

**BANG BUA THONG, BANG YAI
& SAI NOI WATER SYSTEM**

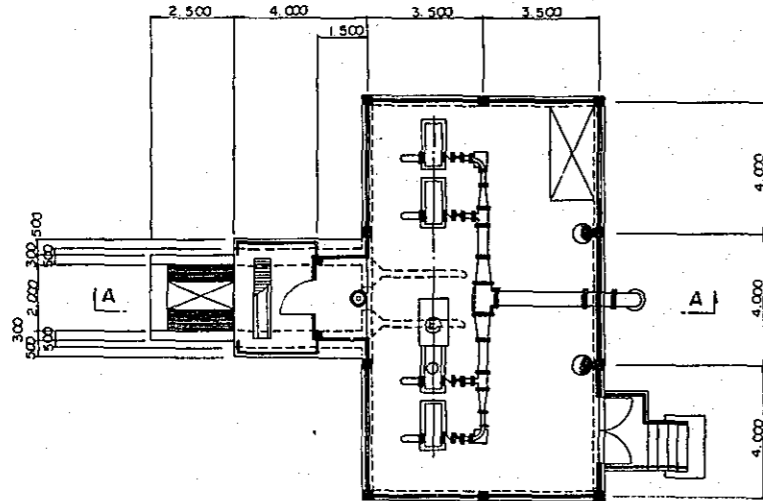


FEASIBILITY STUDY FOR SEPARATE SYSTEM METROPOLITAN WATER WORKS AUTHORITY BANGKOK KINGDOM OF THAILAND			
EXISTING T. PLANT OF BANG BUA THONG			
OVERSEAS TECHNICAL COOPERATION AGENCY TOKYO, JAPAN			
SUBMITTED	APPROVED	SCALE	REV. NO.
DATE	DWG. NO.	B-1	

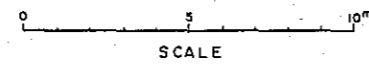
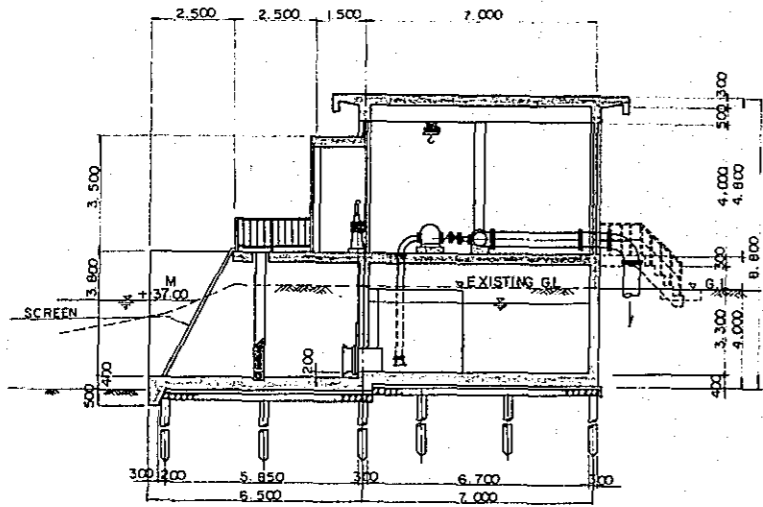


FEASIBILITY STUDY FOR SEPARATE SYSTEM METROPOLITAN WATER WORKS AUTHORITY BANGKOK KINGDOM OF THAILAND			
LAYOUT OF FLOW DIAGRAM			
OVERSEAS TECHNICAL COOPERATION AGENCY TOKYO, JAPAN			
SUBMITTED	APPROVED	SCALE	REV. NO.
DATE	DWG. NO. B - 2		

INTAKE BASIN
PLAN

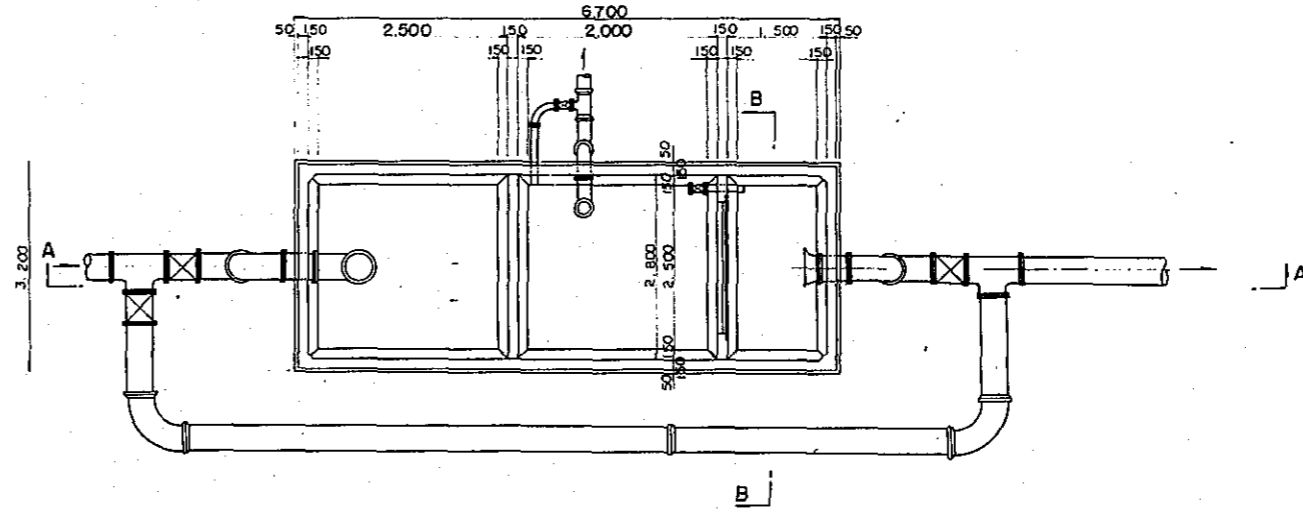


SECTION A-A

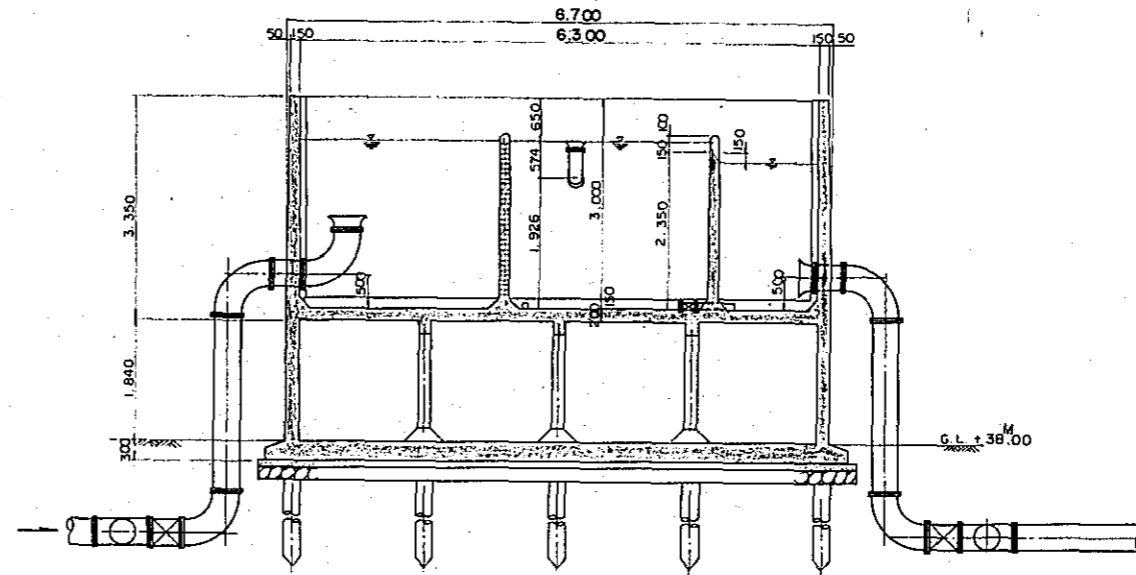


RECEIVING WELL

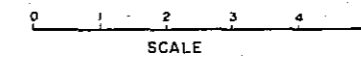
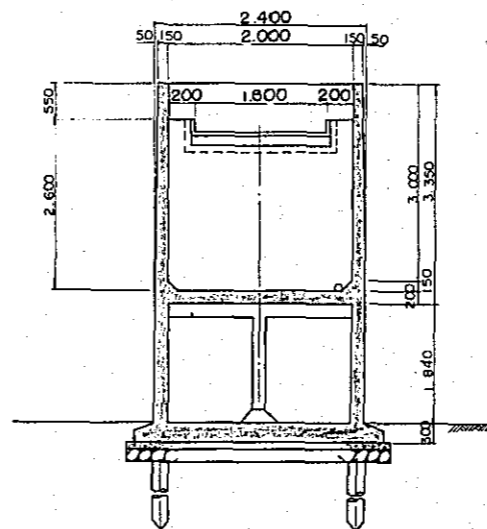
PLAN



SECTION A-A



SECTION B-B



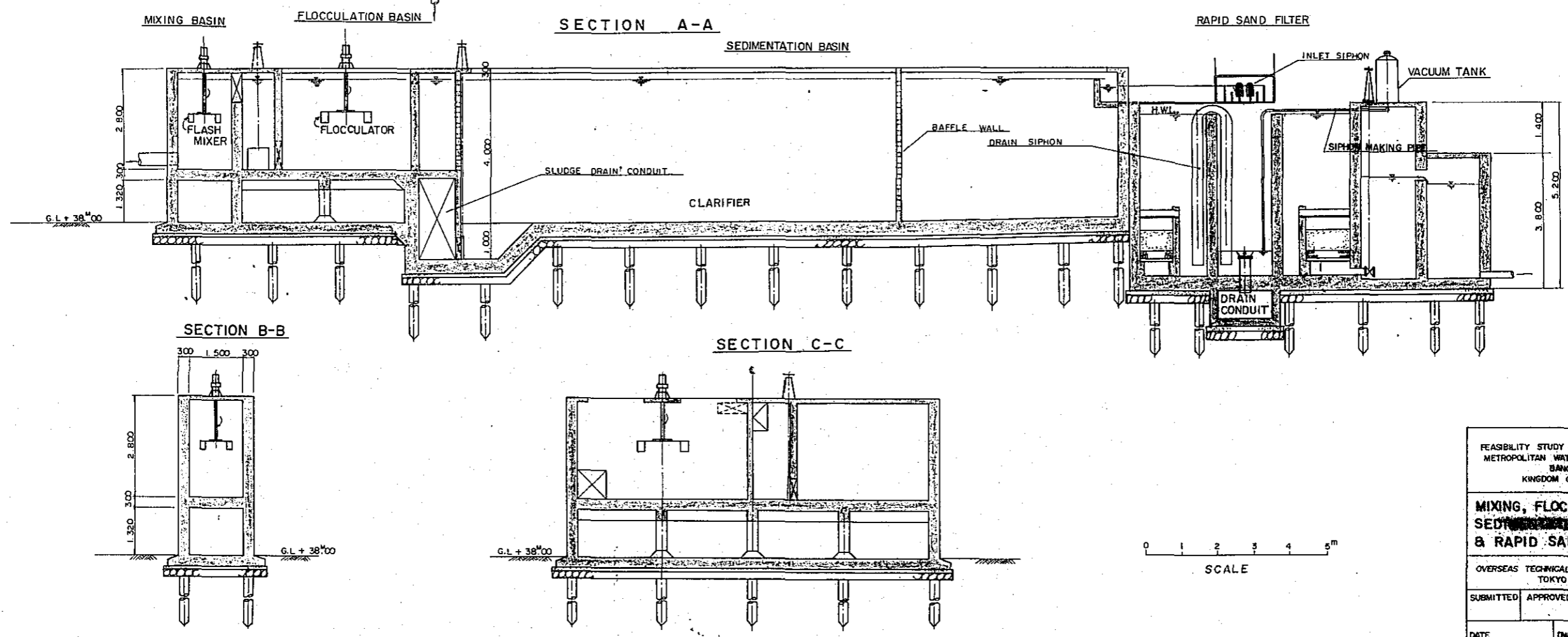
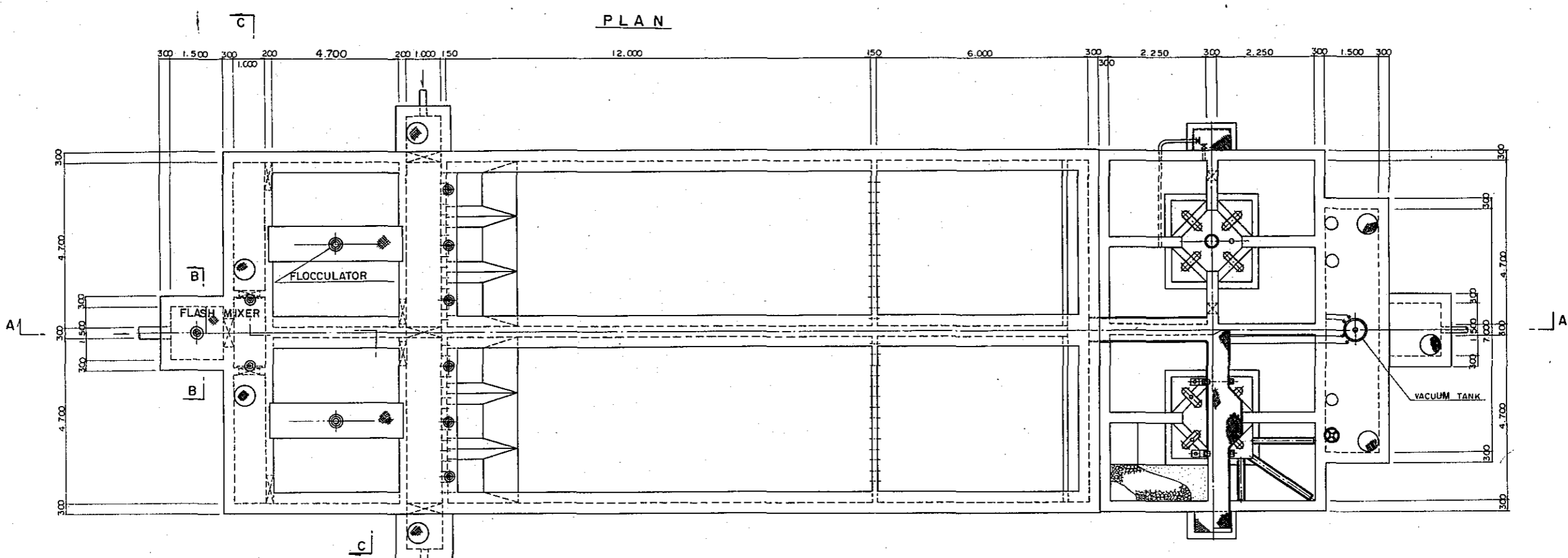
FEASIBILITY STUDY FOR SEPARATE SYSTEM
METROPOLITAN WATER WORKS AUTHORITY
BANGKOK
KINGDOM OF THAILAND

INTAKE BASIN & RECEIVING WELL

OVERSEAS TECHNICAL COOPERATION AGENCY
TOKYO, JAPAN

SUBMITTED	APPROVED	SCALE	REV. NO.

DATE DWG. NO. B-3



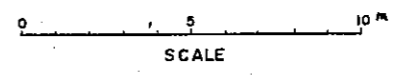
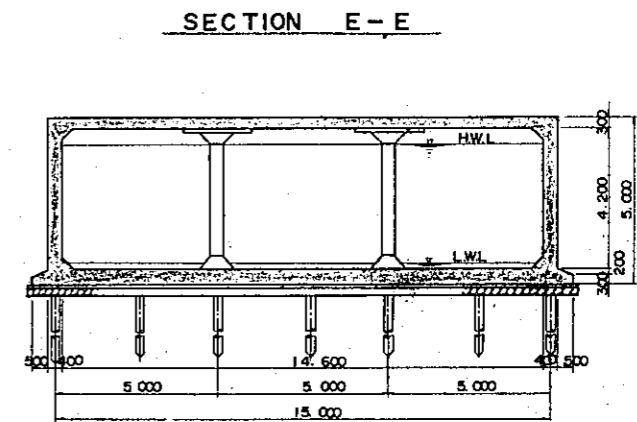
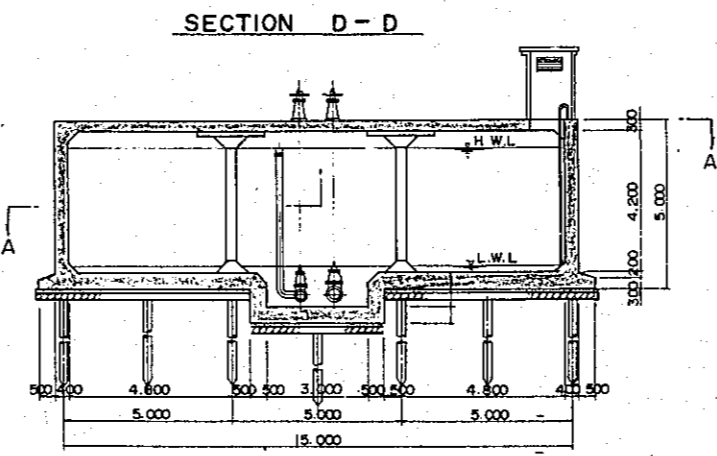
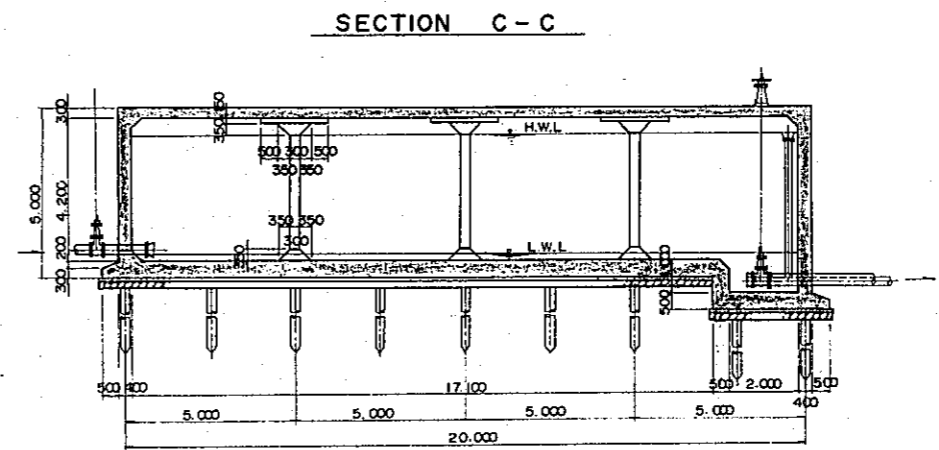
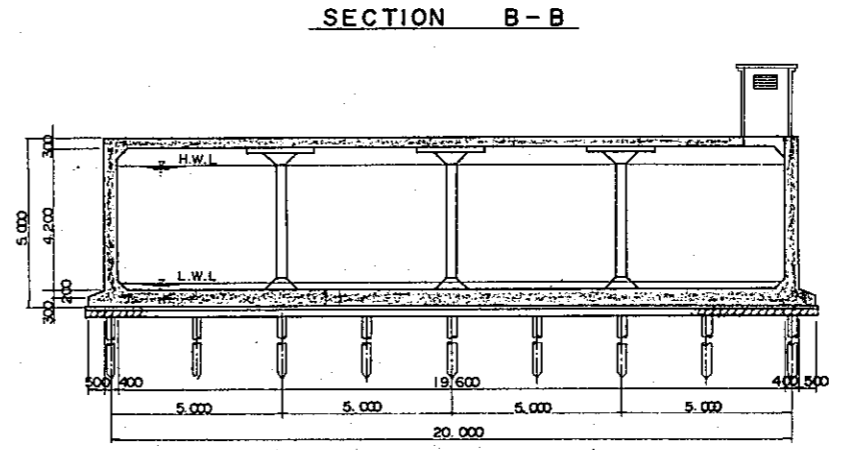
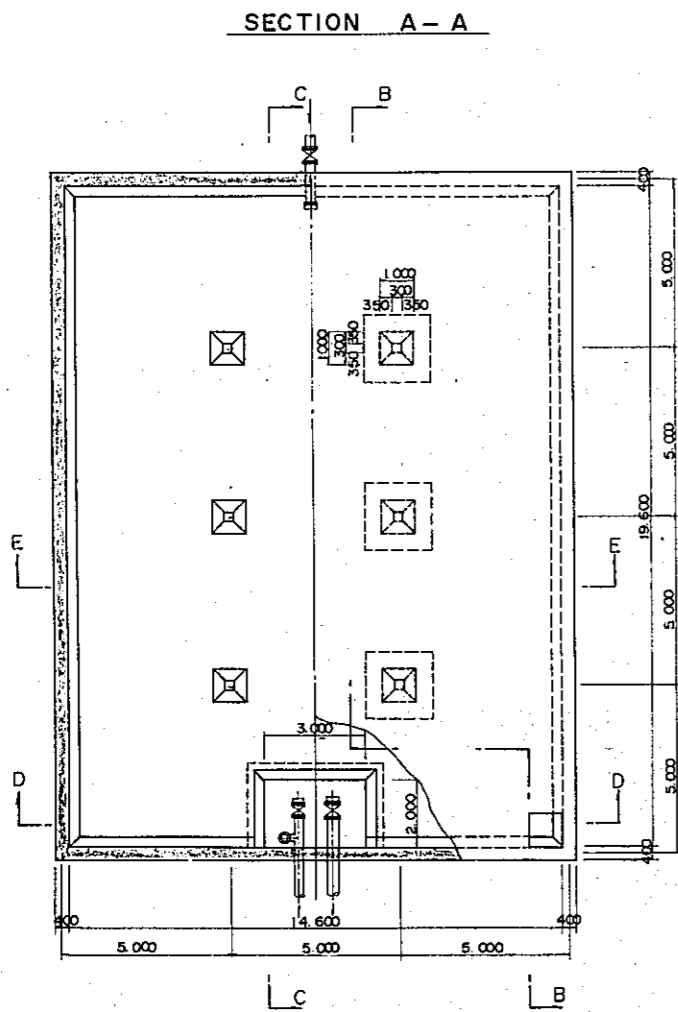
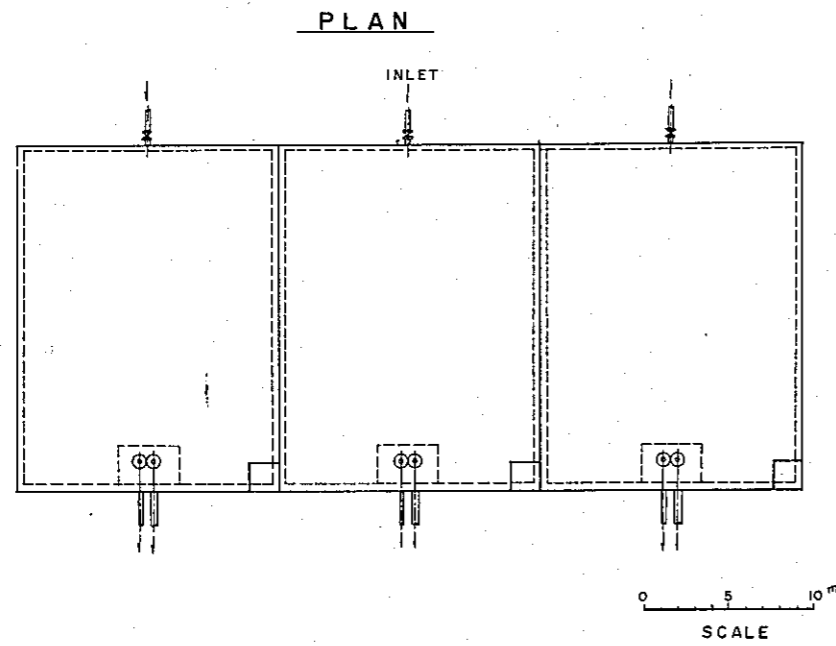
FEASIBILITY STUDY FOR SEPARATE SYSTEM
METROPOLITAN WATER WORKS AUTHORITY
BANGKOK
KINGDOM OF THAILAND

**MIXING, FLOCCULATION,
SEDIMENTATION & RAPID SAND FILTER**

OVERSEAS TECHNICAL COOPERATION AGENCY
TOKYO, JAPAN

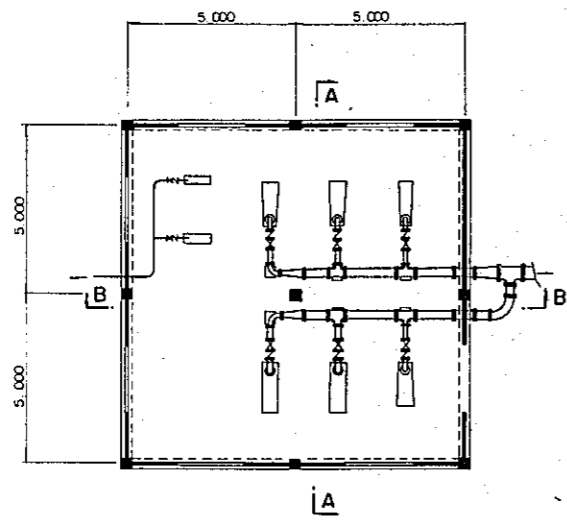
SUBMITTED	APPROVED	SCALE	REV. NO.

DATE: DWG. NO. **B - 4**

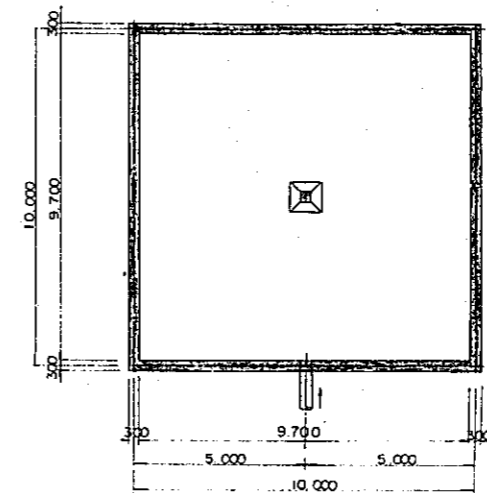


FEASIBILITY STUDY FOR SEPARATE SYSTEM METROPOLITAN WATER WORKS AUTHORITY BANGKOK KINGDOM OF THAILAND			
SERVICE RESERVOIR			
OVERSEAS TECHNICAL COOPERATION AGENCY TOKYO, JAPAN			
SUBMITTED	APPROVED	SCALE	REV. NO.
DATE	DWG. NO.	B-5	

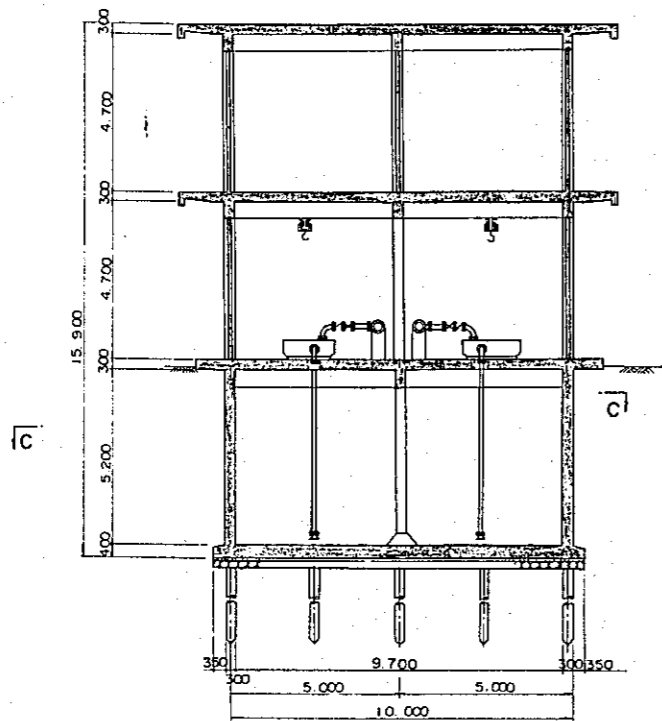
1ST FLOOR PLAN



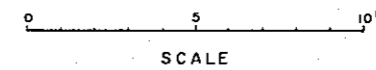
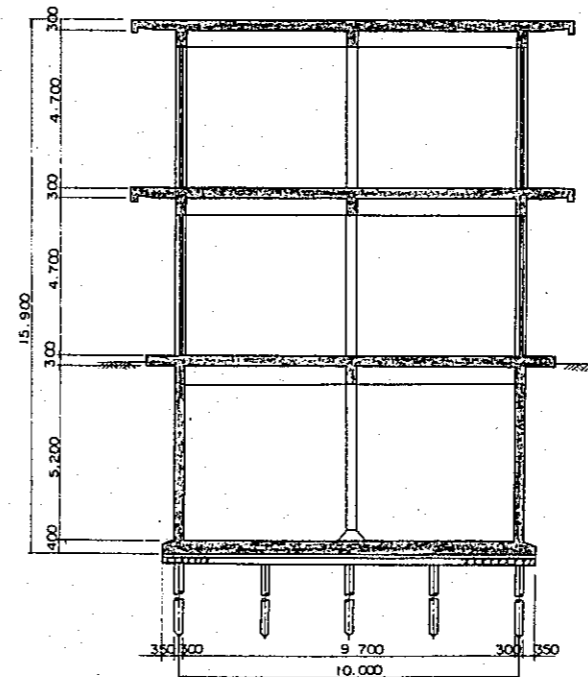
SECTION C-C



SECTION A-A



SECTION B-B



FEASIBILITY STUDY FOR SEPARATE SYSTEM
METROPOLITAN WATER WORKS AUTHORITY
BANGKOK
KINGDOM OF THAILAND

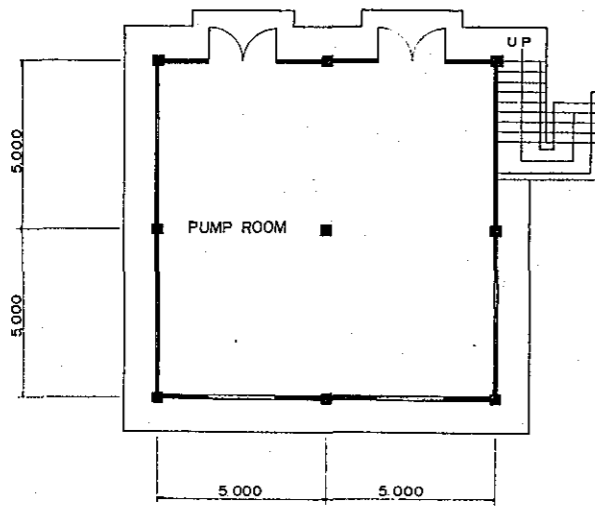
DISTRIBUTION PUMPING WELL

OVERSEAS TECHNICAL COOPERATION AGENCY
TOKYO, JAPAN

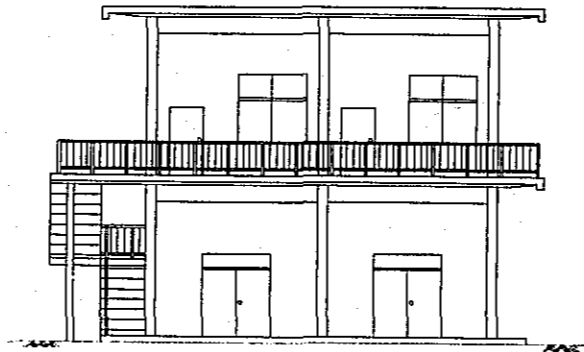
SUBMITTED	APPROVED	SCALE	REV. NO.
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DATE	DWG. NO. B-6
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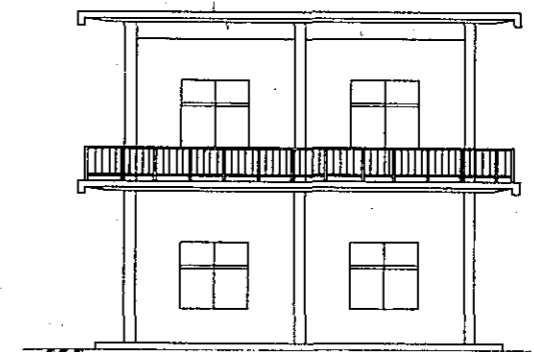
1 ST FLOOR PLAN



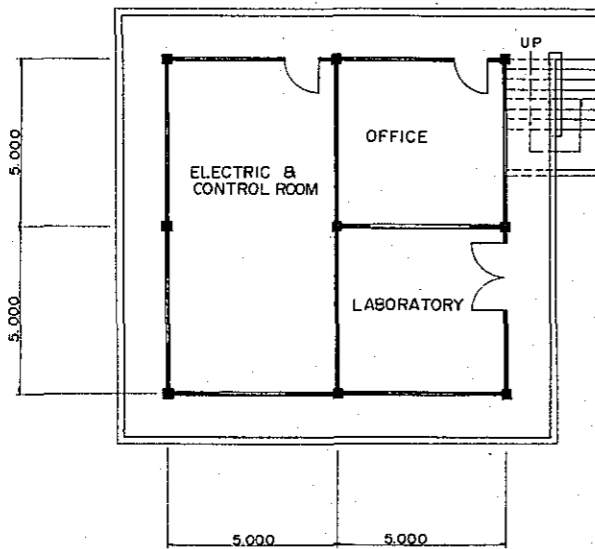
FRONT ELEVATION



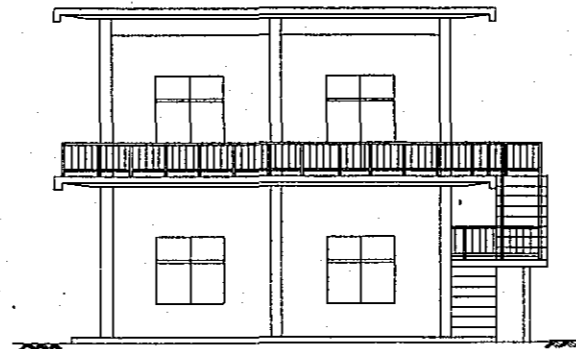
RIGHT ELEVATION



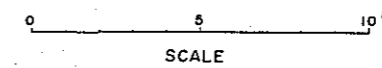
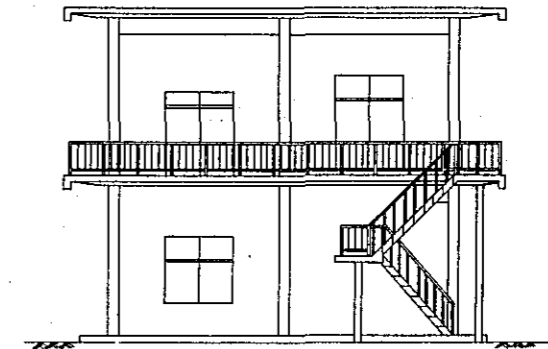
2ND FLOOR PLAN



REAR ELEVATION



LEFT ELEVATION



FEASIBILITY STUDY FOR SEPARATE SYSTEM
METROPOLITAN WATER WORKS AUTHORITY
BANGKOK
KINGDOM OF THAILAND

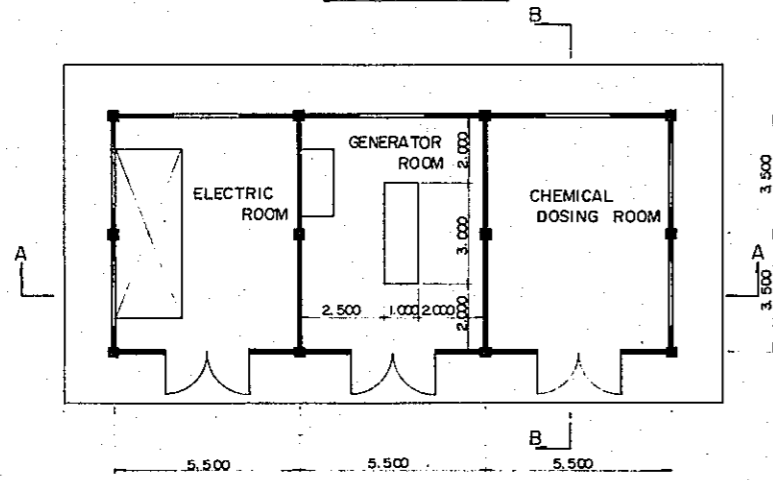
OFFICE, LABORATORY,
ELECTRIC ROOM
& CONTROL ROOM

OVERSEAS TECHNICAL COOPERATION AGENCY
TOKYO, JAPAN

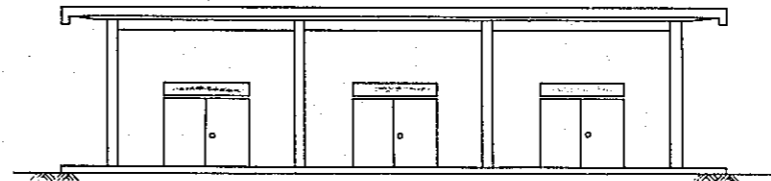
SUBMITTED	APPROVED	SCALE	REV. NO.
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DATE	DWG. NO. B-7
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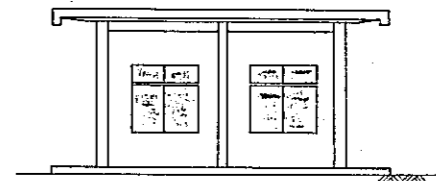
FLOOR PLAN



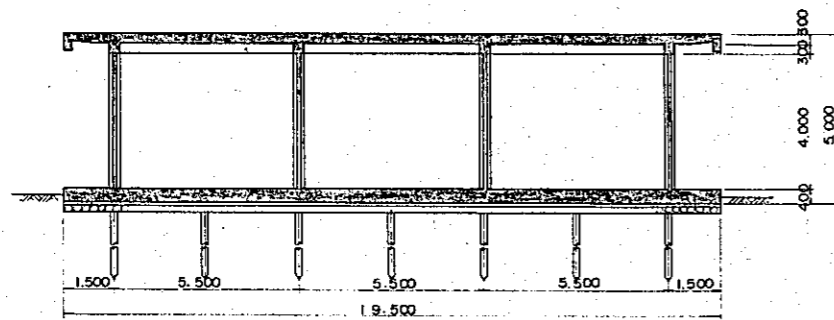
FRONT ELEVATION



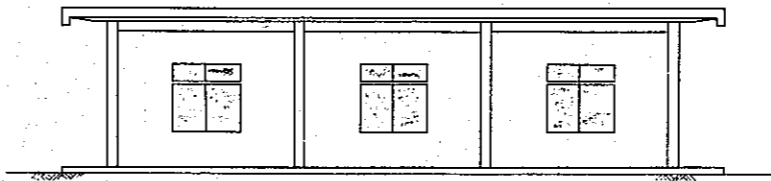
RIGHT ELEVATION



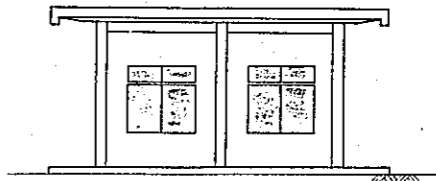
SECTION A - A



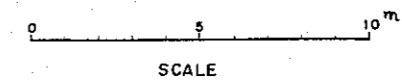
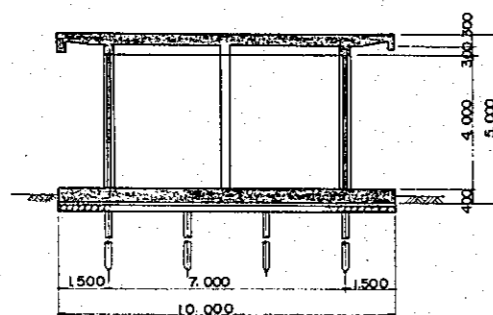
REAR ELEVATION



LEFT ELEVATION



SECTION B - B



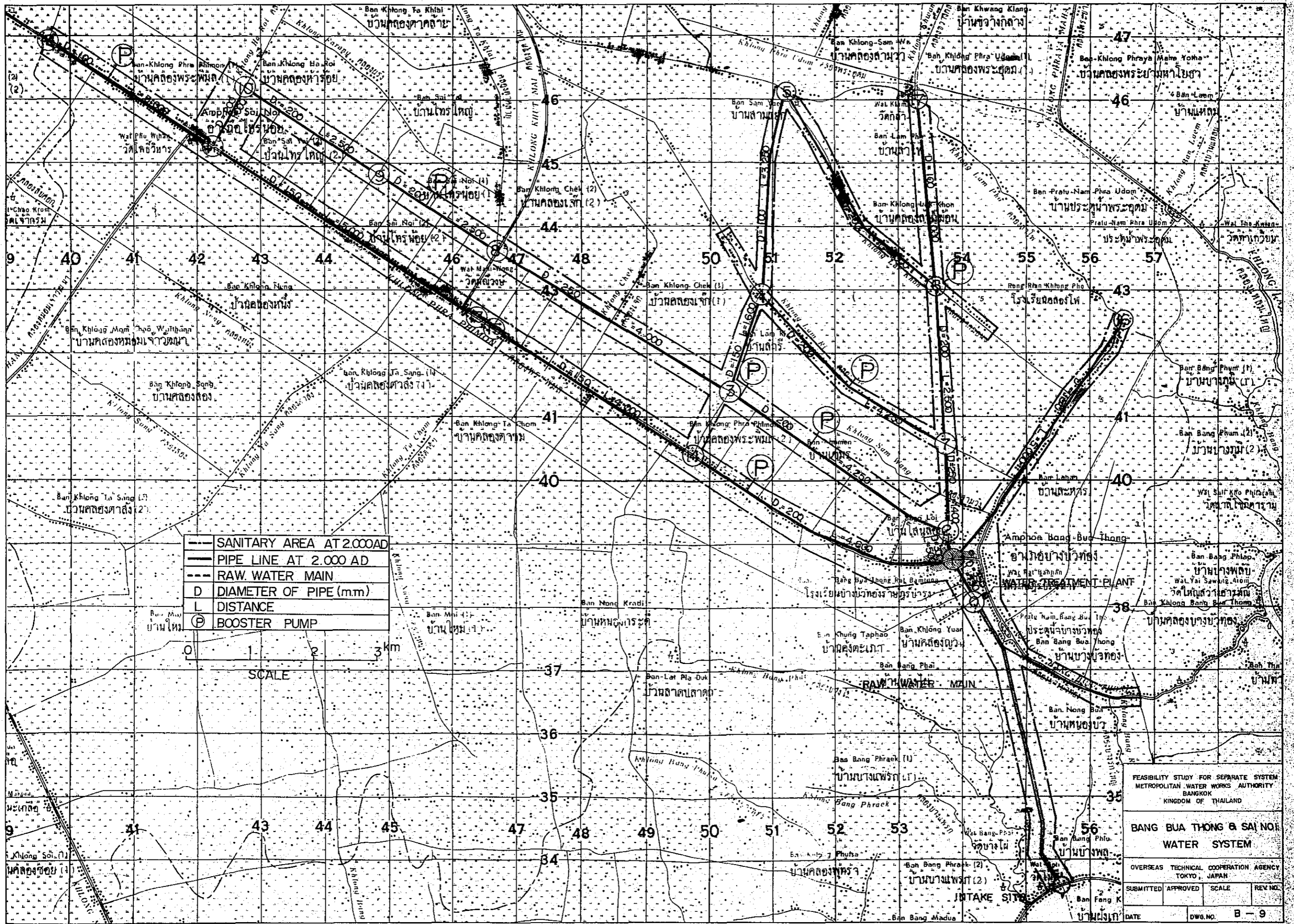
FEASIBILITY STUDY FOR SEPARATE SYSTEM
METROPOLITAN WATER WORKS AUTHORITY
BANGKOK
KINGDOM OF THAILAND

ELECTRIC, GENERATOR
& CHEMICAL DOSING ROOM

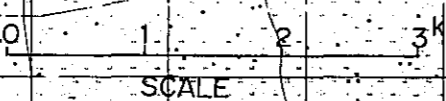
OVERSEAS TECHNICAL COOPERATION AGENCY
TOKYO, JAPAN

SUBMITTED APPROVED SCALE REV. NO.

DATE DWG. NO. B-8



---	SANITARY AREA AT 2.000 AD
---	PIPE LINE AT 2.000 AD
---	RAW WATER MAIN
D	DIAMETER OF PIPE (m.m)
L	DISTANCE
⊙	BOOSTER PUMP



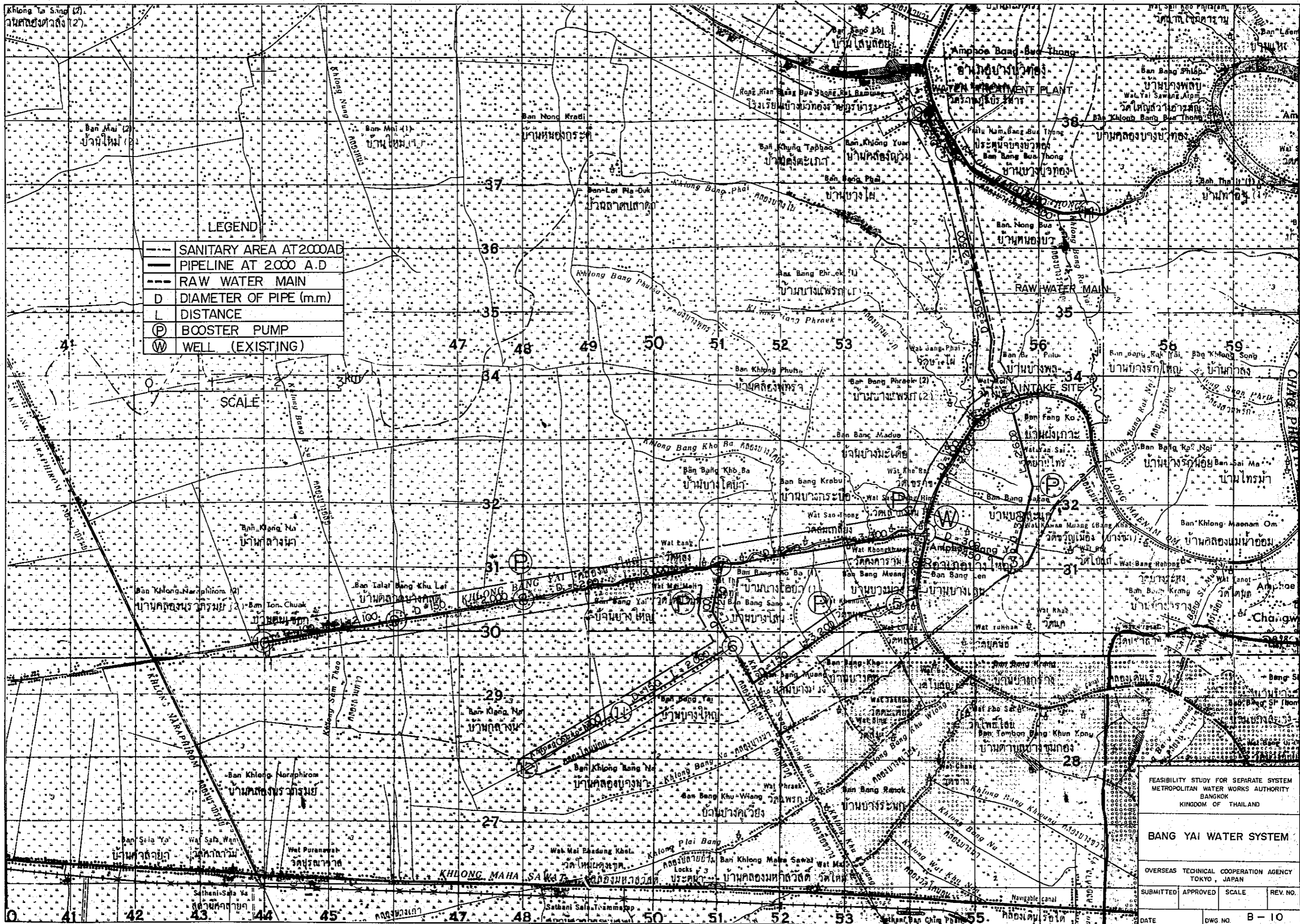
FEASIBILITY STUDY FOR SEPARATE SYSTEM
METROPOLITAN WATER WORKS AUTHORITY
BANGKOK
KINGDOM OF THAILAND

**BANG BUA THONG & SAI NOI
WATER SYSTEM**

OVERSEAS TECHNICAL COOPERATION AGENCY
TOKYO, JAPAN

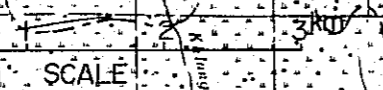
SUBMITTED	APPROVED	SCALE	REV. NO.

DATE _____ DWG. NO. B-9



LEGEND

---	SANITARY AREA AT 2000 A.D.
—	PIPELINE AT 2000 A.D.
---	RAW WATER MAIN
D	DIAMETER OF PIPE (m.m)
L	DISTANCE
(P)	BOOSTER PUMP
(W)	WELL (EXISTING)



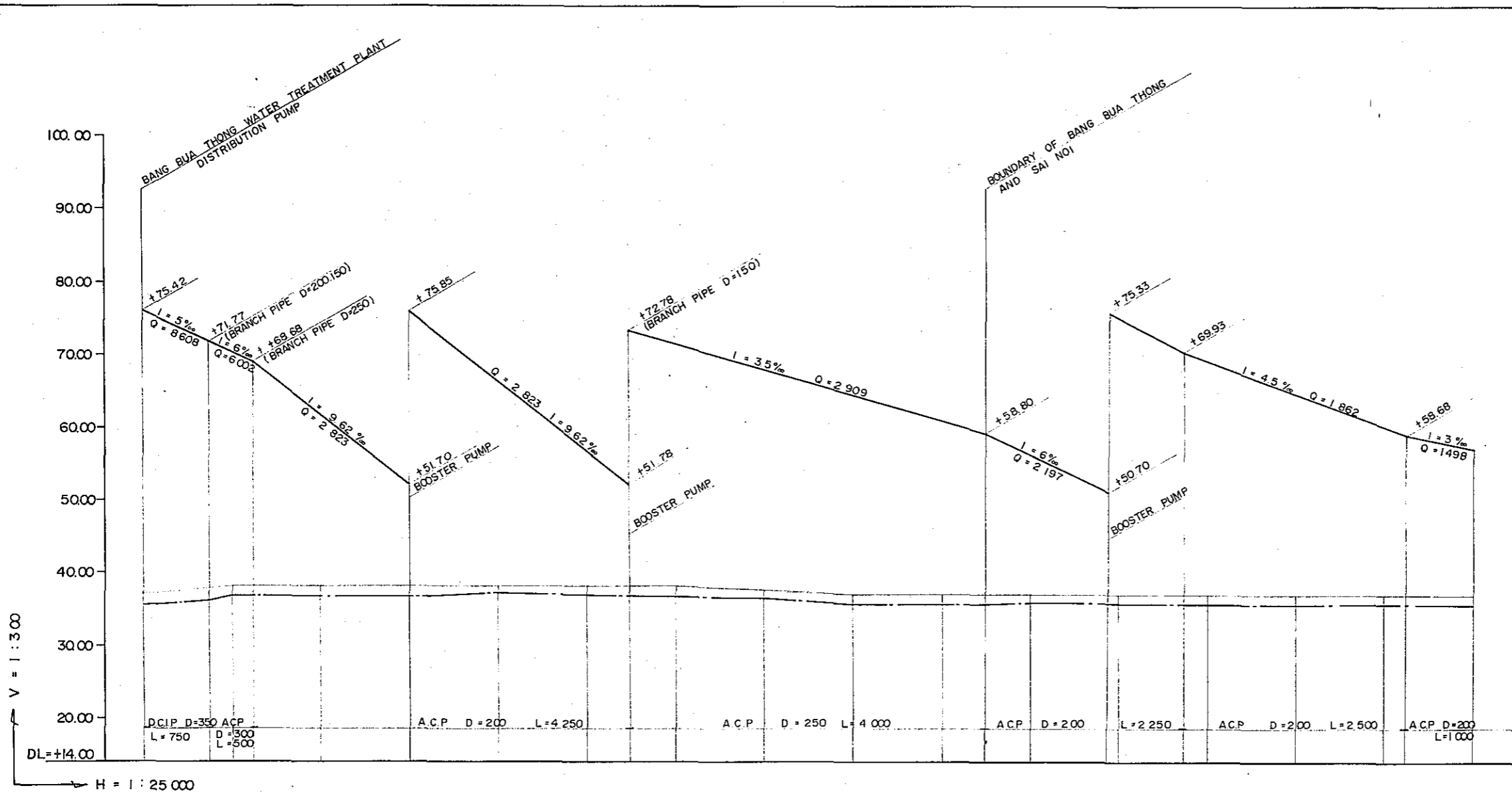
FEASIBILITY STUDY FOR SEPARATE SYSTEM
 METROPOLITAN WATER WORKS AUTHORITY
 BANGKOK
 KINGDOM OF THAILAND

BANG YAI WATER SYSTEM

OVERSEAS TECHNICAL COOPERATION AGENCY
 TOKYO, JAPAN

SUBMITTED	APPROVED	SCALE	REV. NO.

DATE _____ DWG. NO. B-10



STATION	SECTIONAL DISTANCE	TOTAL DISTANCE	GROUND HEIGHT	CENTRAL HEIGHT OF PIPE	EFFECTIVE HEAD	HYDRO DYNAMIC HEAD	STATIC HEAD
0	0	0	37.00	35.42	40.00	75.42	75.42
1	750	750	37.75	36.12	35.65	71.77	
2	250	1,000	38.00	36.65	32.03	68.67	
	250	1,250	38.00	36.65			
	750	2,000	38.00	36.70			
	1,000	3,000	38.00	36.70	15.00	51.70	
	1,000	4,000	38.50	37.20	39.15	75.85	
	1,000	5,000	38.20	36.90			
3	500	5,500	38.10	36.78	15.00	51.78	
	500	6,000	38.00	36.67	36.00	72.78	
	1,000	7,000	37.50	36.17			
	1,000	8,000	37.00	35.67			
	1,000	9,000	37.00	35.67			
	500	9,500	37.00	35.67	23.13	58.80	
	850	10,350	37.00	35.70	15.00	50.70	
	1,500	11,850	37.00	35.70	39.63	75.33	
9	750	11,750	37.00	35.70	34.23	69.93	
	250	12,000	37.00	35.70			
	1,000	13,000	37.00	35.70			
	1,000	14,000	37.00	35.70			
	250	14,250	37.00	35.70	22.98	58.68	
10	750	15,000	37.00	35.70			75.42

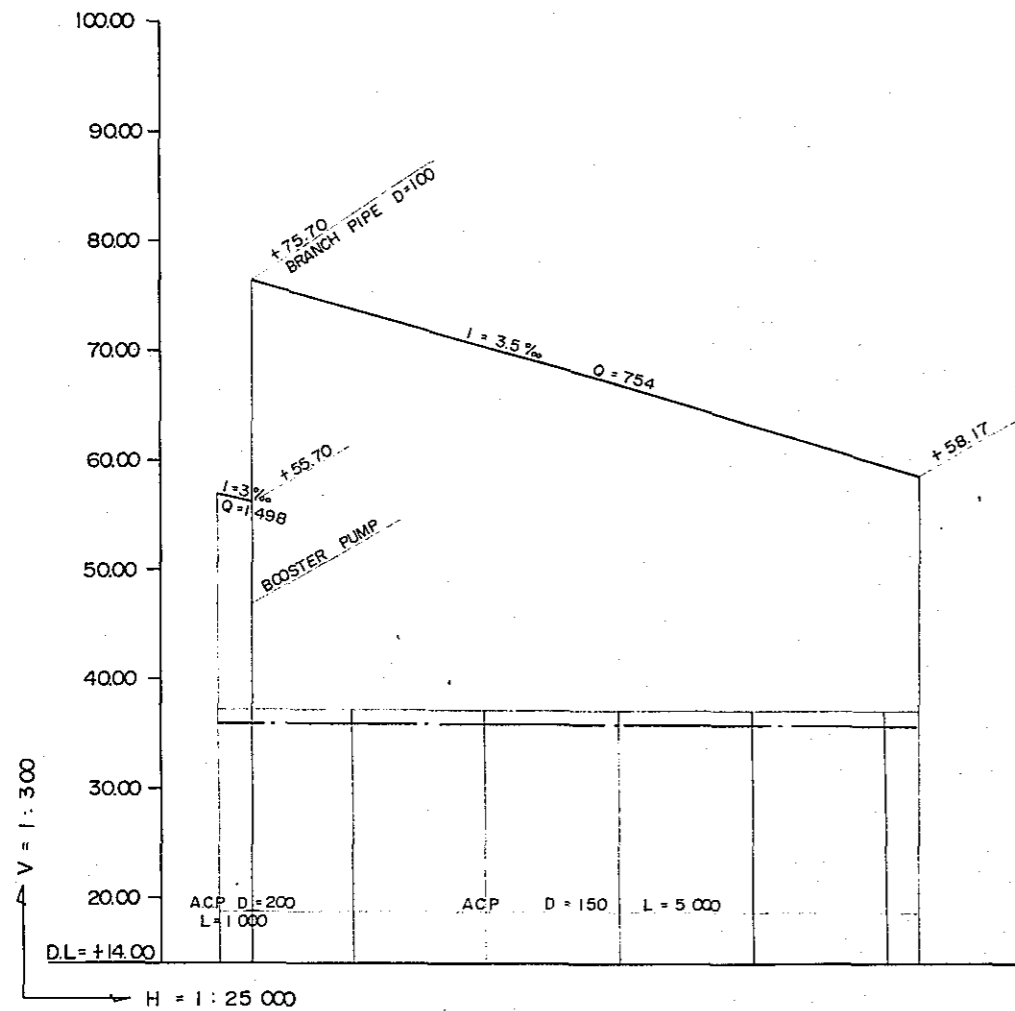
FEASIBILITY STUDY FOR SEPARATE SYSTEM
 METROPOLITAN WATER WORKS AUTHORITY
 BANGKOK
 KINGDOM OF THAILAND

**LONGITUDINAL SECTION
 OF BANG BUA TONG
 & SAI NOI (I)**

OVERSEAS TECHNICAL COOPERATION AGENCY
 TOKYO, JAPAN

SUBMITTED	APPROVED	SCALE	REV. NO.

DATE _____ DWG. NO. **B-11**



STATION	SECTIONAL DISTANCE	TOTAL DISTANCE	GROUND HEIGHT	CENTRAL POINT OF PIPE	EFFECTIVE HEAD	HYDRAULIC HEAD	STATIC HEAD
(1)	0	15 000	37.00	35.70	20.00	55.70	75.70
	250	15 250	37.00	35.70	40.00	75.70	75.70
	750	16 000	37.00	35.72			
	1 000	17 000	37.00	35.72			
	1 000	18 000	37.00	35.72			
	1 000	19 000	37.00	35.72			
	1 000	20 000	37.00	35.72			
	250	20 250	37.00	35.72	22.45		75.42

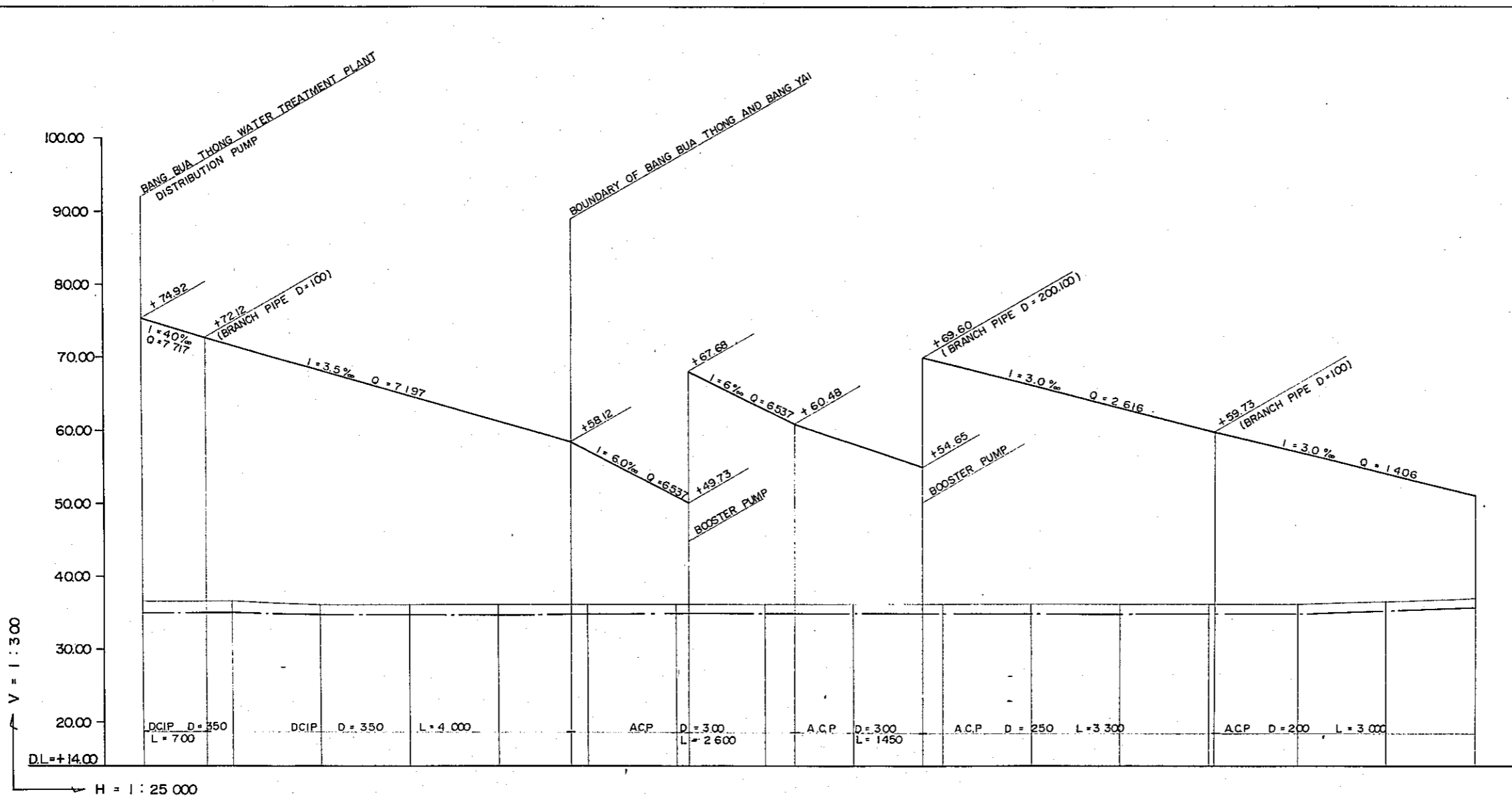
FEASIBILITY STUDY FOR SEPARATE SYSTEM
METROPOLITAN WATER WORKS AUTHORITY
BANGKOK
KINGDOM OF THAILAND

**LONGITUDINAL SECTION
OF BANG BUA THONG
& SAI NOI (2)**

OVERSEAS TECHNICAL COOPERATION AGENCY
TOKYO, JAPAN

SUBMITTED	APPROVED	SCALE	REV. NO.

DATE _____ DWG. NO. **B-12**



STATION	SECTIONAL DISTANCE	TOTAL DISTANCE	GROUND HEIGHT	INTERNAL HEIGHT OF PIPE	EFFECTIVE HEAD	HYDRAULIC HEAD	STATIC HEAD
0	0	0	36.50	34.92	40.00	74.92	74.92
1	700	700	36.50	34.92	37.20	72.12	72.12
2	300	1000	36.50	34.92			
	1000	2000	36.00	34.42			
	1000	3000	36.00	34.42			
	1000	4000	36.00	34.42			
	700	4700	36.00	34.42	23.70	58.12	58.12
	300	5000	36.00	34.65			
3	1000	6000	36.00	34.65	15.08	49.73	49.73
	100	6100	36.00	34.65	33.03	67.68	67.68
	900	7000	36.00	34.65			
	300	7300	36.00	34.65	25.83	60.48	60.48
	1000	8000	36.00	34.65			
4	750	8750	36.00	34.65	20.00	54.65	54.65
	250	9000	36.00	34.67	34.95	69.60	69.60
	1000	10000	36.00	34.67			
	1000	11000	36.00	34.67			
	1000	12000	36.00	34.67	25.03	59.73	59.73
	950	13000	36.00	34.70			
	1000	14000	36.50	35.20			
	1000	15000	37.00	35.70			
7	1000	15000					

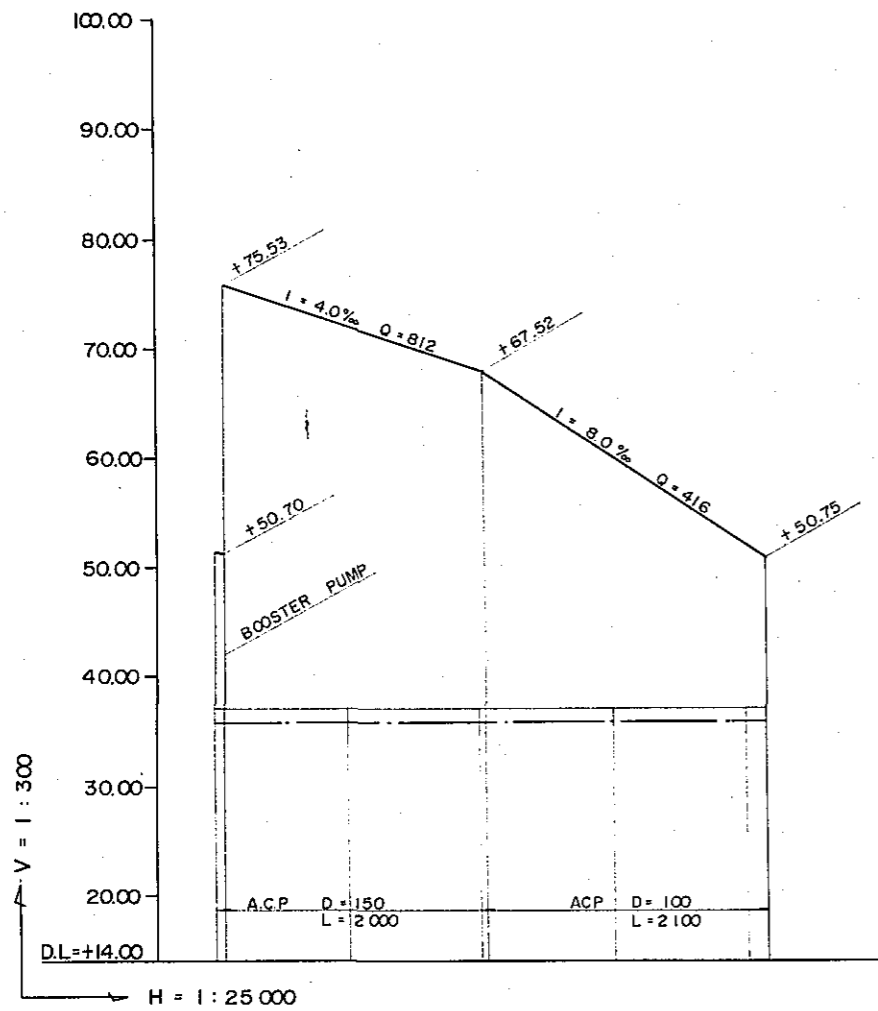
FEASIBILITY STUDY FOR SEPARATE SYSTEM
 METROPOLITAN WATER WORKS AUTHORITY
 BANGKOK
 KINGDOM OF THAILAND

**LONGITUDINAL SECTION
 OF BANG YAI (1)**

OVERSEAS TECHNICAL COOPERATION AGENCY
 TOKYO, JAPAN

SUBMITTED APPROVED SCALE REV. NO.

DATE DWG. NO. B-13



STATION	SECTIONAL DISTANCE	TOTAL DISTANCE	GROUND HEIGHT	CENTRAL HEIGHT OF PIPE	EFFECTIVE HEAD	INROSS DYNAMIC HEAD	STATIC HEAD
8	50	15 000	37.00	35.70	15.00	50.70	74.92
	950	16 000	37.00	35.72	39.83	75.53	
9	1 000	17 000	37.00	35.72	31.80	67.52	
	50	17 050	37.00	35.75			
	950	18 000	37.00	35.75			
10	1 000	19 000	37.00	35.75	15.00	50.75	74.92
	150	19 150	37.00	35.75			

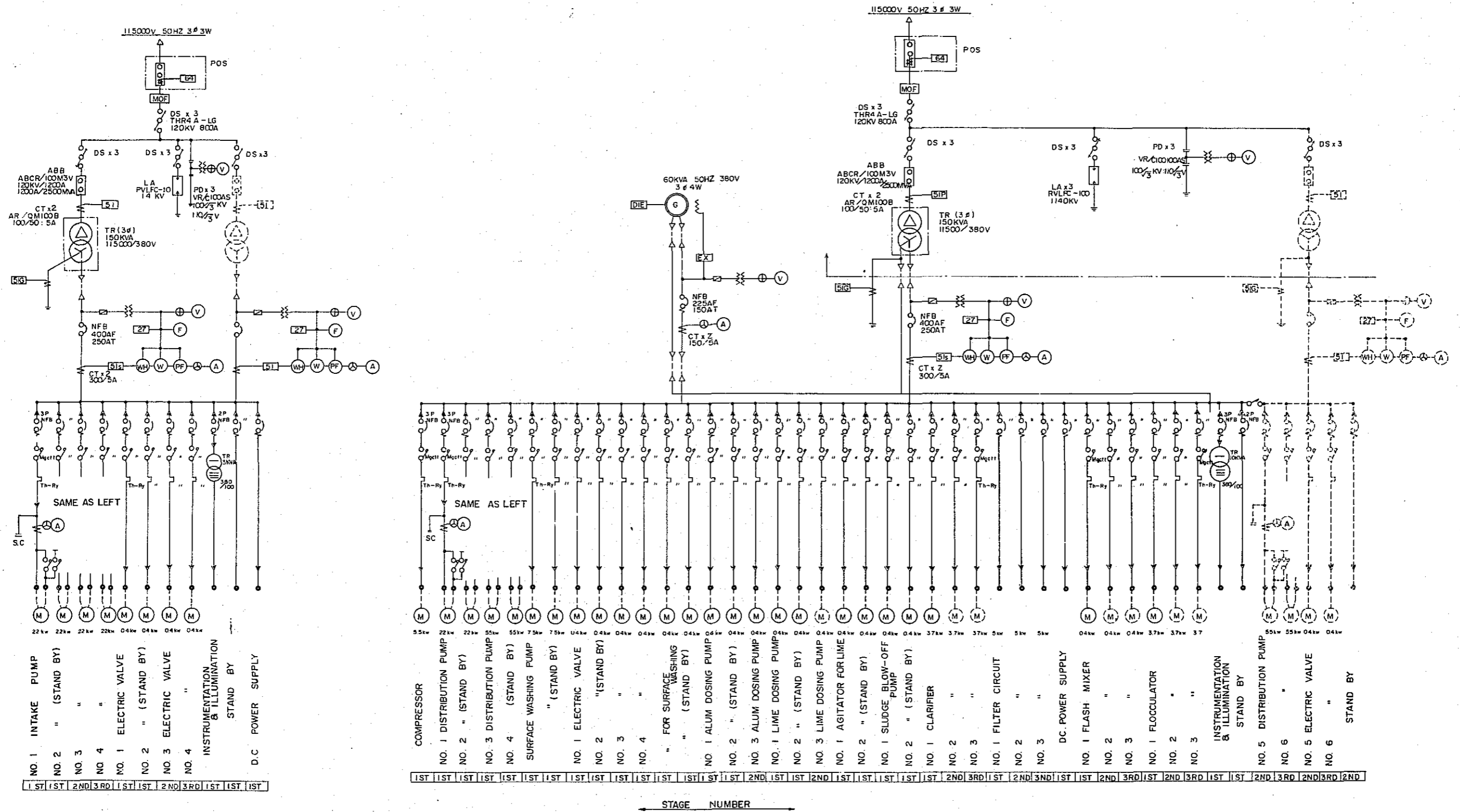
FEASIBILITY STUDY FOR SEPARATE SYSTEM
METROPOLITAN WATER WORKS AUTHORITY
BANGKOK
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**LONGITUDINAL SECTION
OF BANG YAI (2)**

OVERSEAS TECHNICAL COOPERATION AGENCY
TOKYO, JAPAN

SUBMITTED	APPROVED	SCALE	REV. NO.

DATE _____ DWG. NO. B-14



INTAKE SITE

TREATMENT PLANT

- NO. 1 INTAKE PUMP
- NO. 2 " (STAND BY)
- NO. 3 "
- NO. 4 "
- NO. 1 ELECTRIC VALVE
- NO. 2 " (STAND BY)
- NO. 3 ELECTRIC VALVE
- NO. 4 "
- INSTRUMENTATION & ILLUMINATION STAND BY
- D.C POWER SUPPLY

- COMPRESSOR
- NO. 1 DISTRIBUTION PUMP
- NO. 2 " (STAND BY)
- NO. 3 DISTRIBUTION PUMP
- NO. 4 " (STAND BY)
- SURFACE WASHING PUMP
- " (STAND BY)
- NO. 1 ELECTRIC VALVE
- NO. 2 " (STAND BY)
- NO. 3 "
- NO. 4 "
- FOR SURFACE WASHING
- " (STAND BY)
- NO. 1 ALUM DOSING PUMP
- NO. 2 " (STAND BY)
- NO. 3 ALUM DOSING PUMP
- NO. 1 LIME DOSING PUMP
- NO. 2 " (STAND BY)
- NO. 3 LIME DOSING PUMP
- NO. 1 AGITATOR FOR LIME
- NO. 2 " (STAND BY)
- NO. 1 SLUDGE BLOW-OFF PUMP
- NO. 2 " (STAND BY)
- NO. 1 CLARIFIER
- NO. 2 "
- NO. 3 "
- NO. 1 FILTER CIRCUIT
- NO. 2 "
- NO. 3 "
- DC. POWER SUPPLY
- NO. 1 FLASH MIXER
- NO. 2 "
- NO. 3 "
- NO. 1 FLOCCULATOR
- NO. 2 "
- NO. 3 "
- INSTRUMENTATION & ILLUMINATION STAND BY
- NO. 5 DISTRIBUTION PUMP
- NO. 6 "
- NO. 5 ELECTRIC VALVE
- NO. 6 "
- STAND BY

1ST 1ST 2ND 3RD 1ST 1ST 2ND 3RD 1ST 1ST 1ST

1ST 1ST 1ST 1ST 1ST 1ST 1ST 1ST 1ST 1ST 1ST 1ST 1ST 1ST 1ST 2ND 1ST 1ST 2ND 1ST 1ST 1ST 1ST 1ST 2ND 3RD 1ST 2ND 3RD 1ST 1ST 2ND 3RD 1ST 1ST 2ND 3RD 2ND 3RD 2ND

STAGE NUMBER

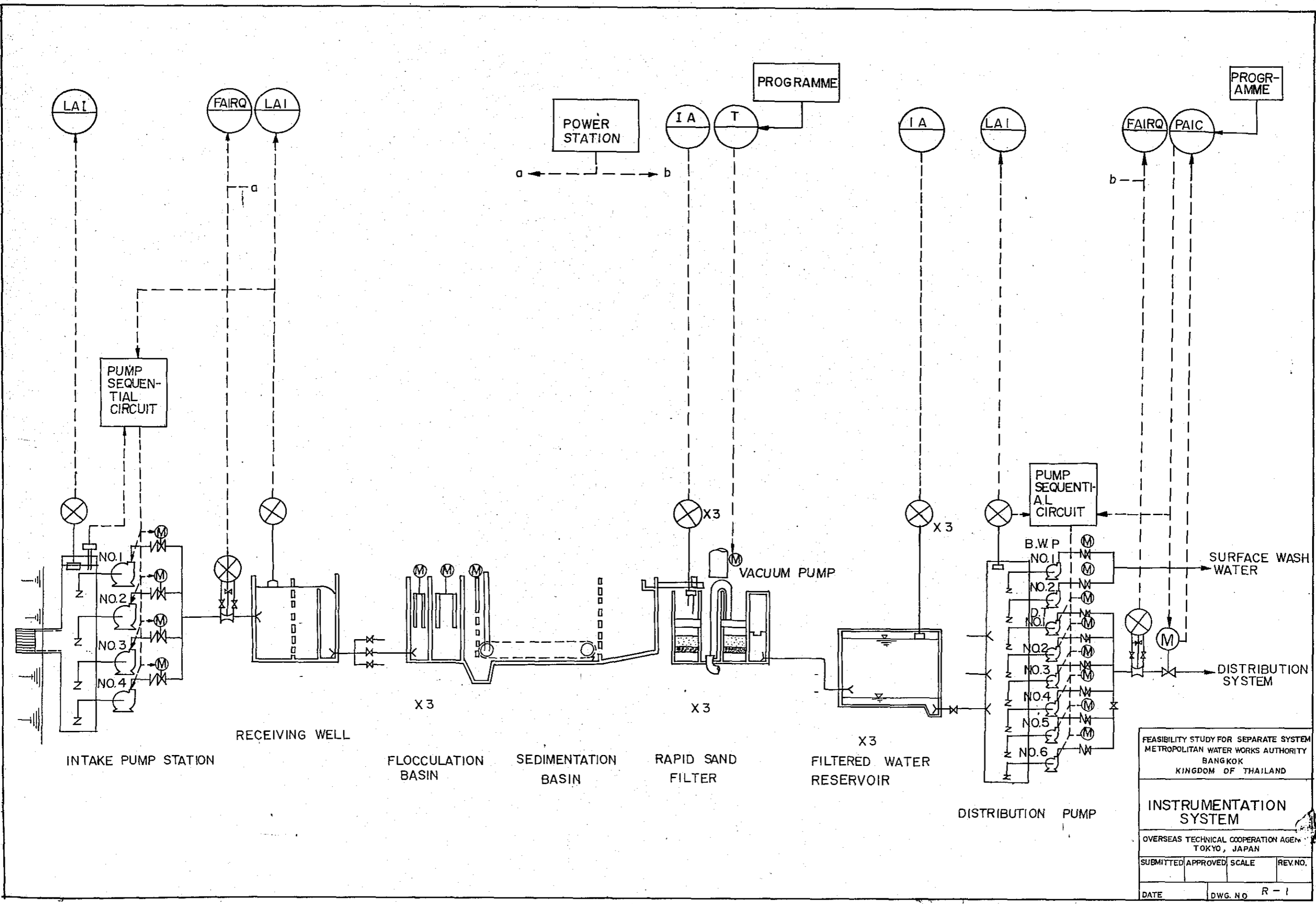
FEASIBILITY STUDY FOR SEPARATE SYSTEM
 METROPOLITAN WATER WORKS AUTHORITY
 BANGKOK
 KINGDOM OF THAILAND

**ELECTRIC SKELETON FOR
 BANG - BUATHONG
 TREATMENT PLANT**

OVERSEAS TECHNICAL COOPERATION AGENCY
 TOKYO, JAPAN

SUBMITTED	APPROVED	SCALE	REV. NO.
DATE	DWG. NO.	B-15	

FOR REFERENCE



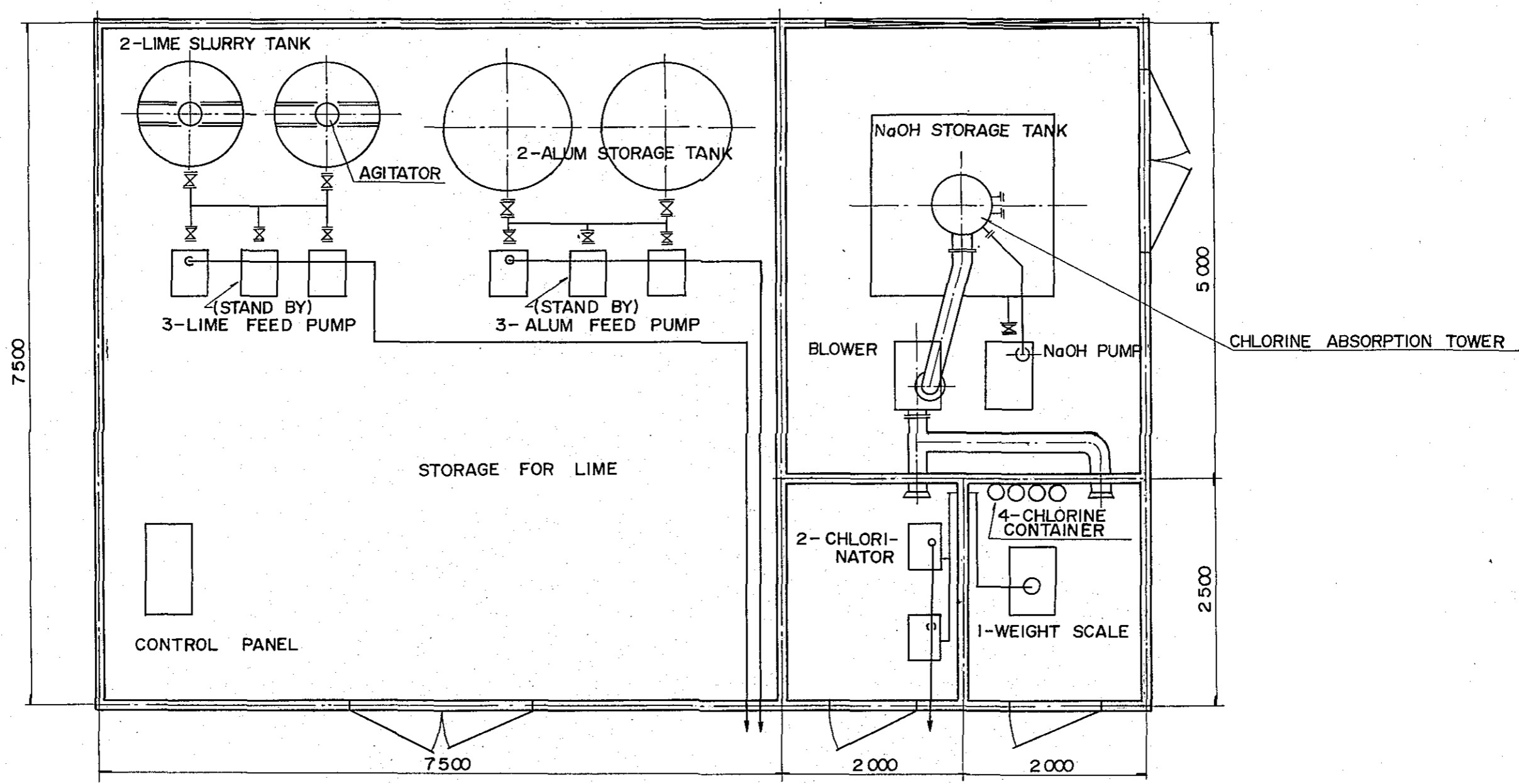
FEASIBILITY STUDY FOR SEPARATE SYSTEM
 METROPOLITAN WATER WORKS AUTHORITY
 BANGKOK
 KINGDOM OF THAILAND

INSTRUMENTATION SYSTEM

OVERSEAS TECHNICAL COOPERATION AGENCY
 TOKYO, JAPAN

SUBMITTED	APPROVED	SCALE	REV. NO.
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DATE _____ DWG. NO. R-1



FEASIBILITY STUDY FOR SEPARATE SYSTEM			
METROPOLITAN WATER WORKS AUTHORITY			
BANGKOK			
KINGDOM OF THAILAND			
CHEMICAL DOSING SYSTEM			
OVERSEAS TECHNICAL COOPERATION AGENCY			
TOKYO, JAPAN			
SUBMITTED	APPROVED	SCALE	REV. NO.
DATE	DWG. NO.	R - 2	

