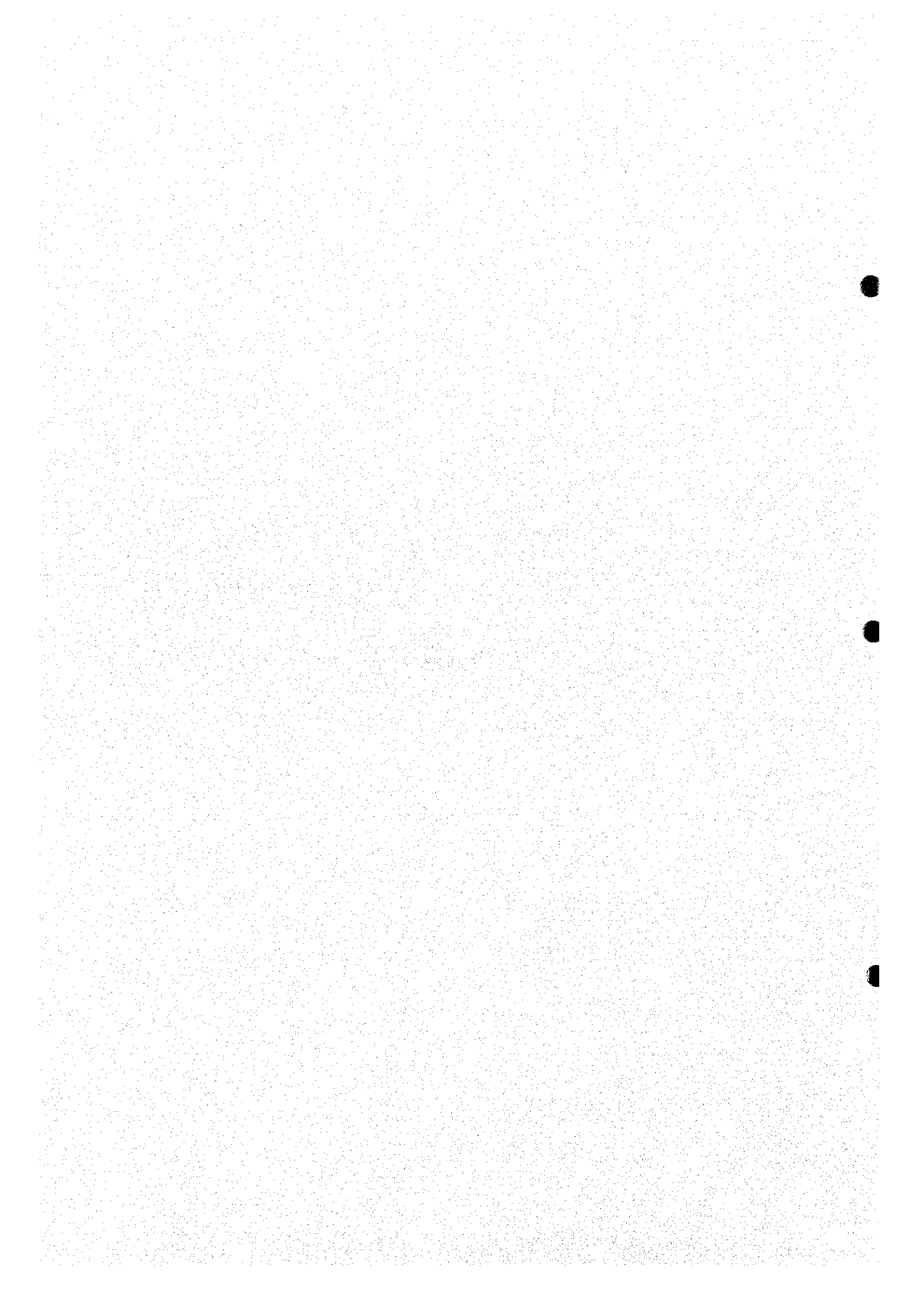


CHAPTER 11
PROJECT IMPLEMENTATION



CHAPTER 11 PROJECT IMPLEMENTATION

11.1 Implementation Method and Time Schedule

11.1.1 Executing System

Project Component

As mentioned in "CHAPTER 1, 1.1 Background", the component of "Urban Drainage System Improvement" is one of the three (3) components proposed for the urgent realization of the flood control, urban drainage and water resources development in Semarang City. The other two (2) components are "Construction of Jatibarang Multipurpose Dam" and "West Floodway/Garang River Improvement".

Executing Organization

It is proposed that the component "Urban Drainage System Improvement" is executed as mentioned below.

The organization for project implementation is expected to be the Directorate General of Human Settlement (DGHS), Ministry of Public Works (MPW). Actual project execution is to be entrusted to the Office for Housing Facilities Improvement Project Implementation Unit.

This Detailed Design (D/D) Study (Component : Urban Drainage System) is presently being managed by the Directorate of Technical Guidance, Directorate General of Water Resources Development (DGWRD), under a Steering Committee composed of offices of DGWRD such as the Directorate of Planning and Programming, the Directorate of Construction Guidance for Central Indonesia, and the JRATUNSELUNA Project Office.

Executing Method

As mentioned before, the detailed engineering design for the Project is being conducted under the JICA Development Assistance Program. It is expected that construction of the Project will be carried out immediately after this D/D Study.

The construction of the Project is expected to be undertaken with financial assistance from the Japan Bank for International Cooperation (JBIC), former OECF. Therefore, the procedure for execution of construction will follow the guidelines of JBIC as well as the laws and regulations of the Government of Indonesia for the procurement of engineering services and

construction contractors. The implementation schedule as well as the acquisition of project funds, which are discussed below, are prepared assuming that the Project will be financed by the loan funds from JBIC of Japan.

11.1.2 Project Packaging and Construction Schedule

Aiming at an effective implementation of the project, the whole construction works are divided into some sub-components (contract package). Packaging the project works is basically made based on factors such as nature of the project, topographical condition, construction method, project cost and so on.

The contract package for the project of Urban Drainage System Improvement was discussed between JRATUNSELUNA Project Office and the JICA Study Team. Consequently, the following three (3) contract packages were selected (refer to Fig. 11.1.1).

Package 1 : Semarang River Drainage System Improvement

Package 2 : Asin River Drainage System Improvement

Package 3 : Bandarharjo Drainage System Improvement

Based on the construction plan, each work of the package, with regard to construction time, is allocated as shown in Figs. 11.1.2, 11.1.3 and 11.1.4. As the figures show, the whole construction period is estimated to be 40 months.

11.1.3 Implementation Schedule

The implementation schedule is prepared to achieve prompt construction of the Project so as to release properties from inundation damage and improve the environmental conditions in the central area of Semarang City. Necessary undertakings and activities are incorporated in the Implementation Schedule as shown in Fig. 11.1.5.

This D/D Study is scheduled to be completed by March 2000 at the draft final report level, and the final report will be submitted in July 2000. During the D/D Study, environmental impact assessment and inventory survey for compensation such as land acquisition and house evacuation are simultaneously undertaken. Furthermore, the preparation works for loan acquisition (foreign currency portion) and local fund for compensation will be executed as a pre-construction works. Then, construction of the Project is executed during the period from January 2001 and completed in April 2004.

The major work items for the project implementation are listed in the table below together with the period estimated.

Major Work Item	Period
1. Detailed Design	
1-1. Detailed Design including Tender Documents	Aug. 1997 - Mar. 2000
1-2. Approval on ANDAL and RKL/RPL	Sep. 1999
2. Required Administration Works	
2-1. Fund Requirement	Nov. 1999 - Jan. 2000
2-2. Land Acquisition and Compensation	Apr. 2000 - Sep. 2000
3. Loan Acquisition	
3-1. Request for Loan	Jan. 1999 - Dec. 1999
3-2. Loan Appraisal	Jan. 2000 - Feb. 2000
3-3. Pledge/Loan Agreement	Apr. 2000 - Jul. 2000
4. Construction of the Project	
4-1. Selection and Contract of Consultant	May. 2000 - Jul. 2000
4-2. PQ, Tendering and Contract for Construction	Aug. 2000 - Dec. 2000
4-3. Construction	
Package 1	Jan. 2001 - Oct. 2003
Package 2	Jan. 2001 - Apr. 2004
Package 3	Jan. 2001 - Apr. 2004

11.2 Fund Requirement

11.2.1 Project Cost and Loan Amount

The total project cost is estimated at Rp. 219,559 million (¥ 3,635 million), excluding value added tax. Assuming that the Project is implemented with financial assistance from the JBIC, Japan, the loan amount is estimated as follows:

- (1) In case the total eligible cost is larger than 85% of the total project cost, Upper limit of total loan amount shall be 85% of the total project cost.
- (2) In case the total eligible cost is less than 85% of the total project cost, the total loan amount shall be the total eligible cost.

Non-eligible costs are considered for the following categories, but they could be included in the total project cost:

- (1) Land acquisition cost,
- (2) Compensation,
- (3) Tax and duties as well as government administration cost, and

- (4) Interest during construction.

The total project cost is adjusted so as to estimate the loan amount as follows:

Item	Amount (million Rp)	Amount (million ¥)
1. Construction Base Cost	150,531	2,493
2. Engineering Service Cost	12,019	199
3. Compensation Cost	4,793	79
4. Subtotal-1 (Items 1 to 3)	167,343	2,771
5. Administration Cost	10,873	180
6. Physical Contingencies (6% of 6.)	10,041	166
7. Price Contingency	31,302	518
8. Subtotal-2	219,559	3,635
9. Value Added Tax	20,083	333
Grand Total	239,642	3,968

From the table above, the eligible cost (total of construction base cost, engineering service cost, price contingency and physical contingency) is estimated at Rp. 200,835 million corresponding to 83.8 % of the total project cost. Therefore, the total loan amount including physical contingencies and price contingency is estimated to be Rp. 200,835 million.

11.2.2 Disbursement Schedule

The disbursement schedule is prepared as discussed below.

- (1) Annual Disbursement Schedule

Annual disbursement schedule for the Project is prepared in accordance with the implementation schedule as presented in Table 11.1.1.

- (2) Operation, Maintenance and Replacement Cost

Operation, maintenance and replacement cost was discussed in "CHAPTER 10, 10.3.3 Necessary Cost", and summarized below.

Annual O&M Cost for Salary, Maintenance and Operation	Rp. 366 million
Annual O&M Cost for Dredging	Rp. 255 million
Total	Rp. 622 million
(Percentage to Total Construction Base Cost)	(0.24 %)

11.3 Works Required for Project Implementation

11.3.1 Clearance of Environmental Issue

Under the Ministry of Public Works (DPU), the study on environmental impact analysis is conducted taking account of the importance for the protection of natural and social environment. The Environmental Impact Study (AMDAL) has to be carried out at the stage of feasibility study, and its results seem to be of great significance to judge whether the project is feasible or not.

During this D/D Study, in accordance with the government regulation "PP No.51/1993" and the regulation from the State Minister of Environment No. Kep. 39/MENKLH/8/1996, the following reports were duly prepared and submitted to the Central Committee (KOMPUS) for approval.

- (1) Terms of Reference of the Environmental Impact Statement (KA-ANDAL)
- (2) Environmental Impact Assessment (ANDAL)
- (3) Environmental Management Plan (RKL)
- (4) Environmental Monitoring Plan (RPL)

The results of AMDAL and ANDAL were discussed in the official meetings organized by both regional and central committees (called KOMDA and KOMPUS, respectively) to evaluate the project in terms of environment. Through the several meetings, ANDAL, RKL and RPL documents were modified based on the comments and suggestions from the committee members, and were submitted again. Then, the final reports were approved by KOMPUS.

11.3.2 Compensation Works

Compensation works consist of land acquisition and house evacuation.

Land acquisition is necessary for construction of the proposed Asin Retarding Pond, Asin Pumping Station, Baru Retarding Pond, Bandarharjo West Secondary channel and Baru Conveyance Channel. The total area required is 47,000 m² and belongs to the Semarang Harbor Authority. Presently the area is unused land and the change of land use into drainage facilities were approved by the Mayor of Semarang City. Therefore it is expected that the land acquisition will be executed smoothly without any delay after the completion of JICA's detailed design works.

As to the house evacuation, only three (3) units of house are affected in Asin Drainage System Improvement (Package-2). The land for relocation is to be prepared in the construction work of Asin Retarding Pond. It is recommended that the project office take necessary action for the house evacuation immediately after the detailed design.

TABLES

CHAPTER 11
PROJECT IMPLEMENTATION

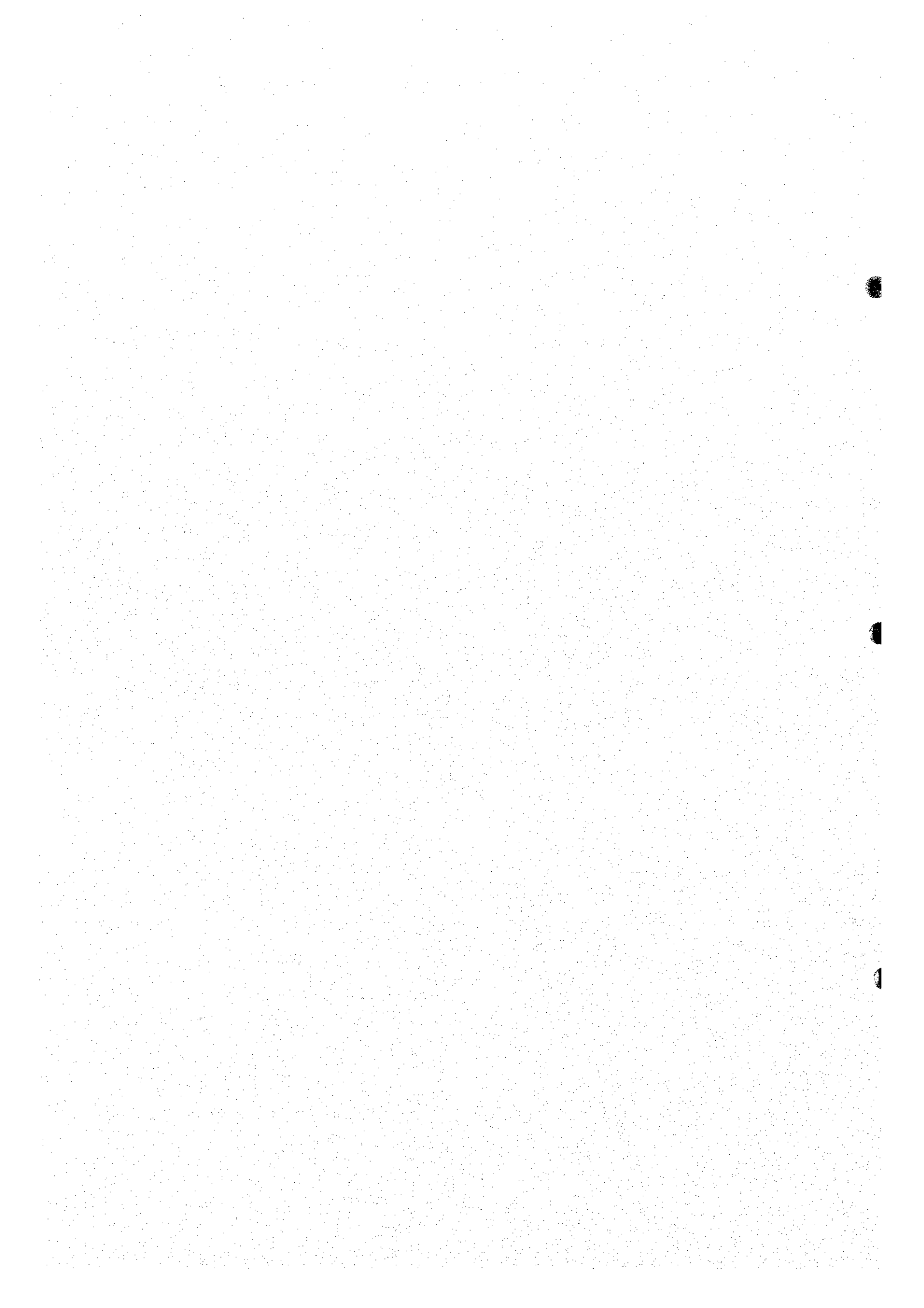
Table 11.1.1 DISBURSEMENT SCHEDULE

Work Name	Currency	2000	2001	2002	2003	Total
Package-1	Rupiah	0	0	11,040,854,269	16,779,382,117	27,820,236,387
	Converting into Yen	0	0	182,811,530	277,828,549	460,640,080
Package-2	Rupiah	0	20,154,076,404	57,816,334,893	37,550,785,085	115,521,196,382
	Converting into Yen	0	333,705,840	957,307,506	621,755,919	1,912,769,265
Package-3	Rupiah	0	13,198,070,903	42,609,257,276	12,227,819,174	68,035,147,352
	Converting into Yen	0	218,530,150	705,512,757	202,464,980	1,126,507,886
Administration Cost	Rupiah	0	2,537,228,570	7,093,319,319	4,235,508,224	13,866,056,113
	Converting into Yen	0	42,010,756	117,449,296	70,130,419	229,590,472
Engineering Service Cost	Rupiah	14,654,935,794				14,654,935,794
	Converting into Yen	242,652,532	0	0	0	242,652,532
Compensation Cost	Rupiah		5,925,988,512			5,925,988,512
	Converting into Yen	0	98,120,943	0	0	98,120,943
Total	Rupiah	14,654,935,794	41,815,364,388	118,559,765,757	70,793,494,600	245,823,560,540
	Converting into Yen	242,652,532	692,367,689	1,963,081,089	1,172,179,867	4,070,281,177

Note : All costs include price and physical contingencies and tax.

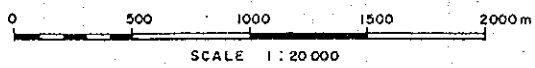
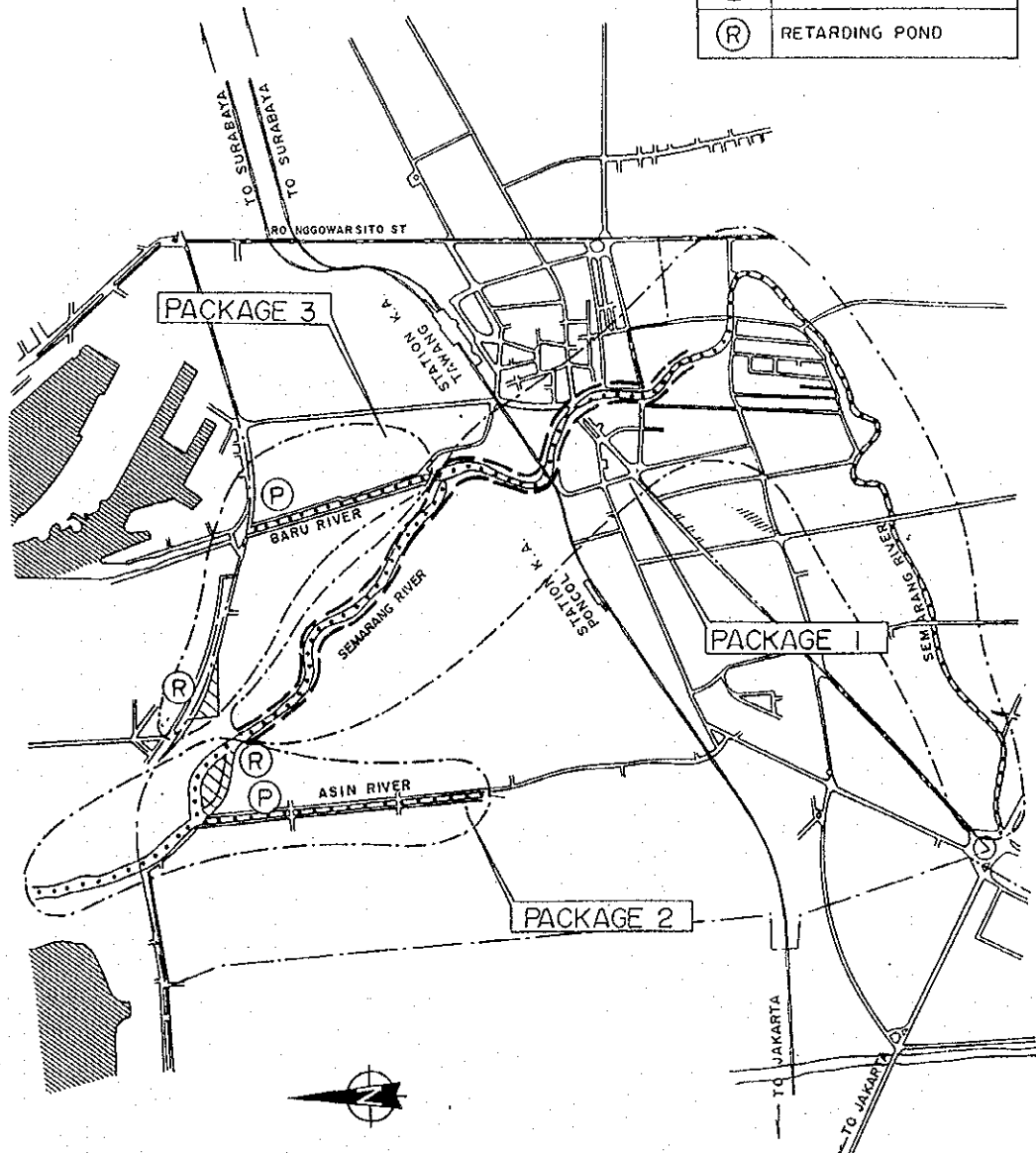
FIGURES

CHAPTER 11
PROJECT IMPLEMENTATION



LEGEND

.....	DREDGING & EXCAVATION
==	DIKE RAISING
(P)	PUMPING STATION
(R)	RETARDING POND



THE DETAILED DESIGN OF FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA

JAPAN INTERNATIONAL COOPERATION AGENCY

Fig. 11.1.1

CONTRACT PACKAGES OF SEMARANG RIVER, ASIN RIVER, AND BANDARHARJO DRAINAGE SYSTEM IMPROVEMENT

CONSTRUCTION TIME SCHEDULE OF SEMARANG RIVER DRAINAGE SYSTEM IMPROVEMENT

Work Item	Unit	Quantity	1 st year												2 nd year												3 rd year											
			1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
1. Preparation Office Others			[Activity bars spanning across multiple months in 1st, 2nd, and 3rd years]																																			
2. River Improvement Dredging	m ³	58,400	[Activity bars for 1st, 2nd, and 3rd years]																																			
3. Diike Raising Earth works Wet Stone Masonry	L.S. m ³	1 1,670	[Activity bars for 1st, 2nd, and 3rd years]																																			
4. Closure of All Drainage Outlets into Semarang River	nos.	56	[Activity bars for 1st, 2nd, and 3rd years]																																			
5. Inspection Road Pavement	m ²	58,700	[Activity bars for 1st, 2nd, and 3rd years]																																			

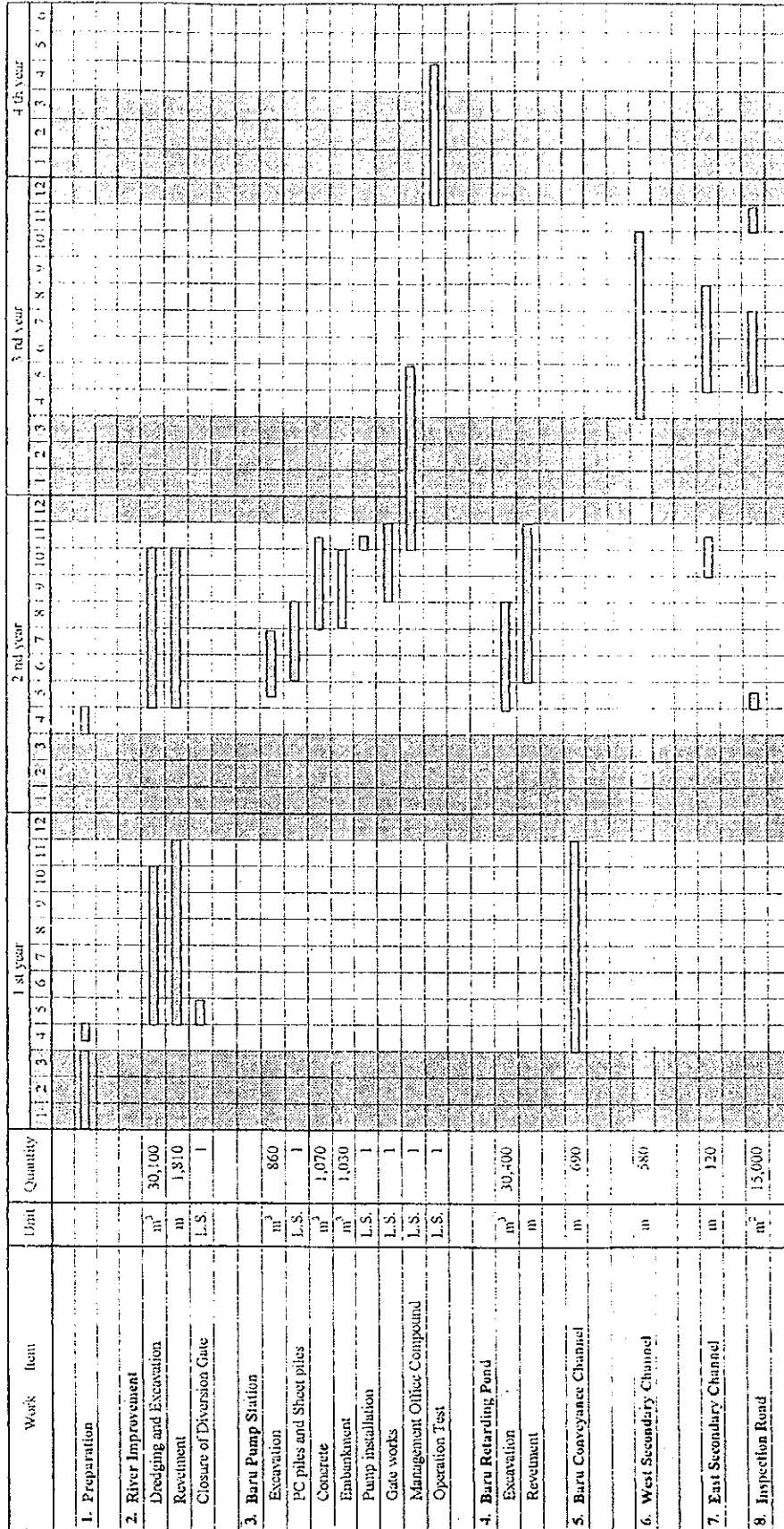
THE DETAILED DESIGN OF FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA

JAPAN INTERNATIONAL COOPERATION AGENCY

Fig. 11.1.2

CONSTRUCTION TIME SCHEDULE OF PACKAGE I (SEMARANG RIVER DRAINAGE SYSTEM IMPROVEMENT)

CONSTRUCTION TIME SCHEDULE OF BANDAR HARJO DRAINAGE SYSTEM IMPROVEMENT



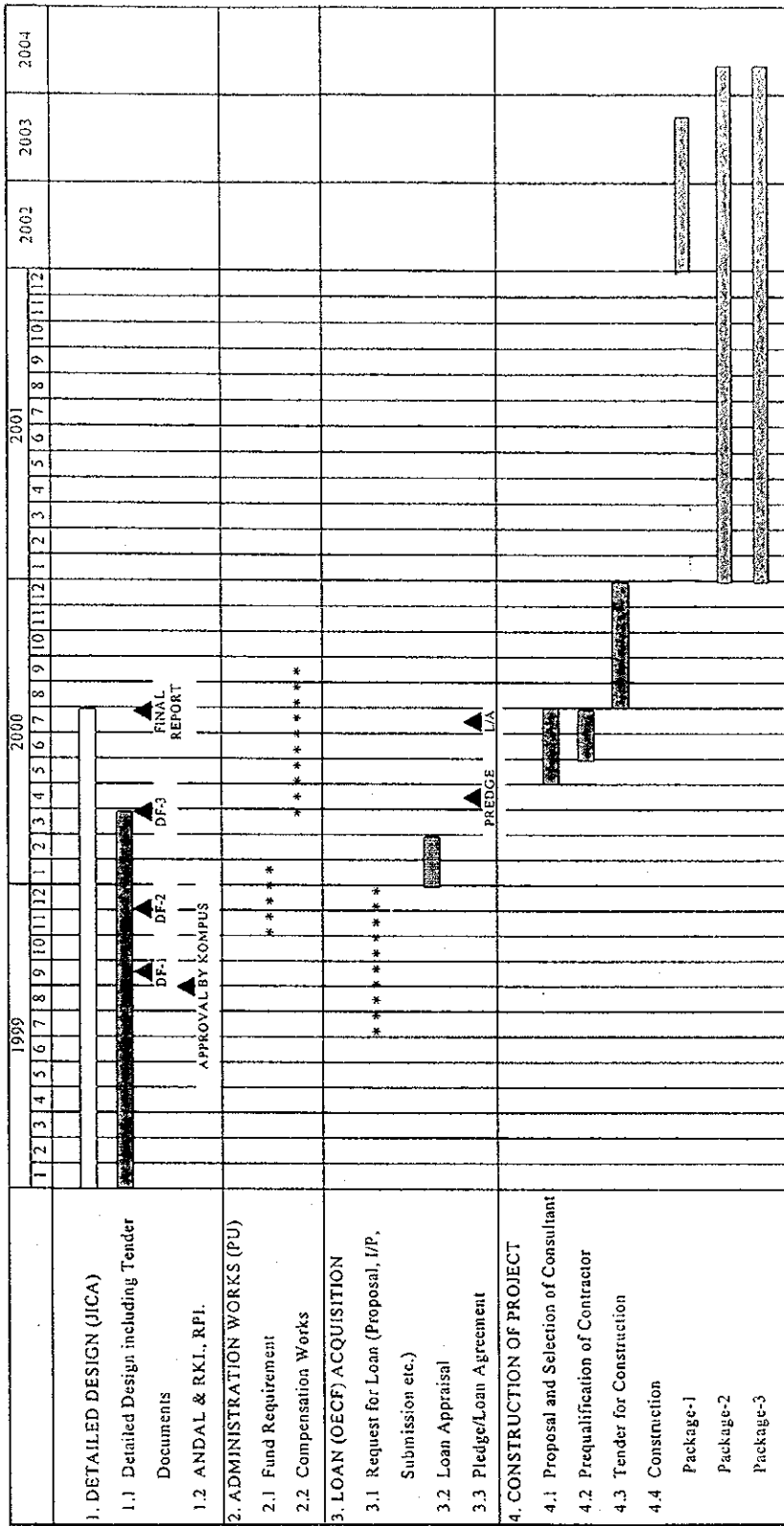
THE DETAILED DESIGN OF FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA

JAPAN INTERNATIONAL COOPERATION AGENCY

Fig. 11.1.4

CONSTRUCTION TIME SCHEDULE OF PACKAGE 3

(BANDAR HARJO DRAINAGE SYSTEM IMPROVEMENT)



L/A : Loan Agreement

Legend : DF-1 : Draft final report for West Floodway/Garang River Improvement
 DF-2 : Draft final report for Urban Drainage System Improvement
 DF-3 : Draft final report for Construction of Jatibarang Multipurpose Dam

THE DETAILED DESIGN OF FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA

JAPAN INTERNATIONAL COOPERATION AGENCY

Fig. 11.1.5

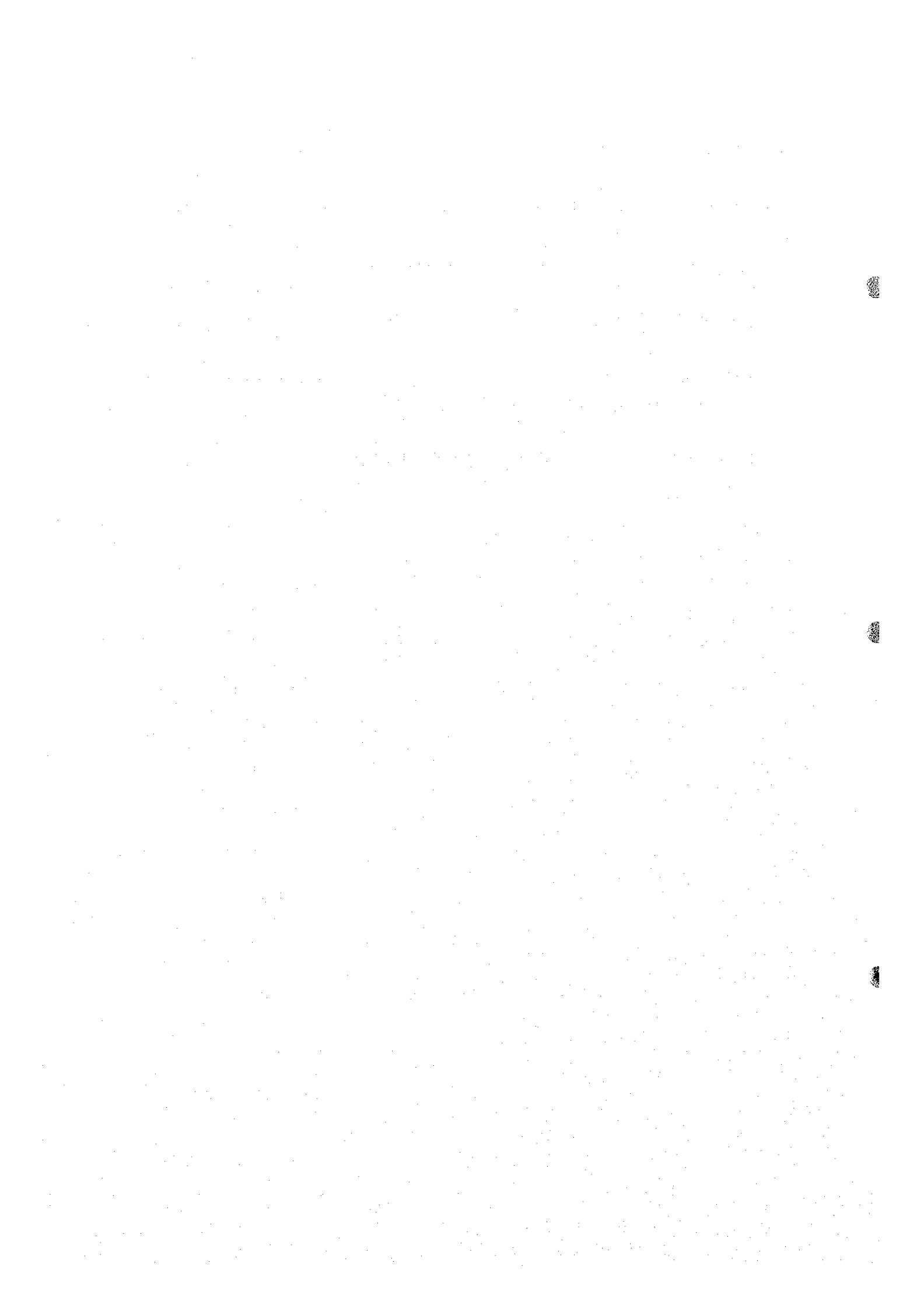
IMPLEMENTATION SCHEDULE OF URBAN DRAINAGE SYSTEM IMPROVEMENT.

APPENDICES



APPENDICES

- Appendix-A Coordination Meeting on the Detailed Design (September 8, 1997)
- Appendix-B Urban Drainage Improvement (January 27, 1998)
- Appendix-C Interim Report (2) (August 5, 1998)
- Appendix-D Urban Drainage Facilities of JICA Project and Expansion of the North Ring Road in Semarang City (March 8, 1999)
- Appendix-E Interim Report (5) (December 16, 1999)



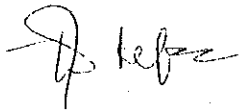
MEMORANDUM
OF
COORDINATION MEETING
ON
THE DETAILED DESIGN
OF
FLOOD CONTROL, URBAN DRAINAGE
AND WATER RESOURCES DEVELOPMENT
IN SEMARANG IN THE REPUBLIC OF INDONESIA

A meeting chaired by Ir. Susmono, Head of Sub-Directorate of Implementation on Central Region II of Directorate General of Human Settlement (DGHS), was held at his office on September 8, 1997. The main purpose of the meeting is to coordinate among DGHS, Kotamadya Semarang and the Study Team dispatched by the Japan International Cooperation Agency (hereinafter called JICA Study Team) with regard to demarcation of the area and works for urban drainage improvement in the Bandarharjo area in line with the item (3) of the Minutes of Meeting on the Inception Report of the captioned project signed on August 22, 1997. The attendant list of the meeting is attached in Annex-1.

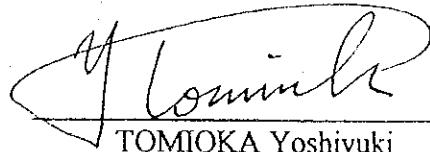
The explanation of the agenda with references attached in Annex-2 and submitted by the JICA Study Team was made at the beginning of the meeting, afterward exchange of mutual view was made and the following issues were finally confirmed.

- (1) DGHS and Kotamadya Semarang agree the proposal of the JICA Study Team that the detailed design of the primary drainage facilities proposed in the Bandarharjo East and West areas, such as pumping station, retarding pond and river/trunk drainage channel improvement, is conducted in the JICA study. The detailed design of secondary and tertiary drainage channel in the area is conducted by the Central Government of Indonesia and local government (Semarang City). The design of the secondary and tertiary drainage channels shall be coordinated with the primary channels which will be designed by the JICA Study Team, and for the propose of the design for the secondary and tertiary drainage channels, the JICA Study Team will provide main technical information to DGHS and Semarang City after determination of the definitive plan.
- (2) Since the preparation of the detailed design of the raising project of North Ring Road, Ronggowarsito Street and the national railway in the Bandarharjo East area in parallel with JICA study is difficult to be conducted by Indonesian Side, the JICA Study Team will propose to OECF to include the design of the raising works as well as the implementation of the works in the future OECF program for the fulfillment of drainage function of the Bandarharjo East area.

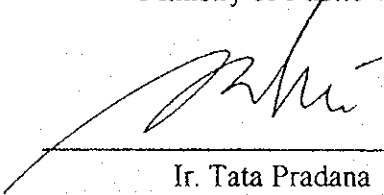
Jakarta, September 8, 1997



Ir. Widaya Alfisa Dipl. SE
Head of Sub-Directorate of Environmental,
Sanitation, Directorate of Technical Guidance,
Directorate General of Human Settlements
Ministry of Public Works



TOMIOKA Yoshiyuki
Team Leader
JICA Study Team



Ir. Tata Pradana
Head of Project Management Unit
SSUDP
Department of Public Works,
Kotamadya Semarang

Attachment:

Annex-1 : List of Attendants

Annex-2 : Agenda of coordination Meeting of the Detailed Design of Urban Drainage in
Semarang on September 8, 1997.

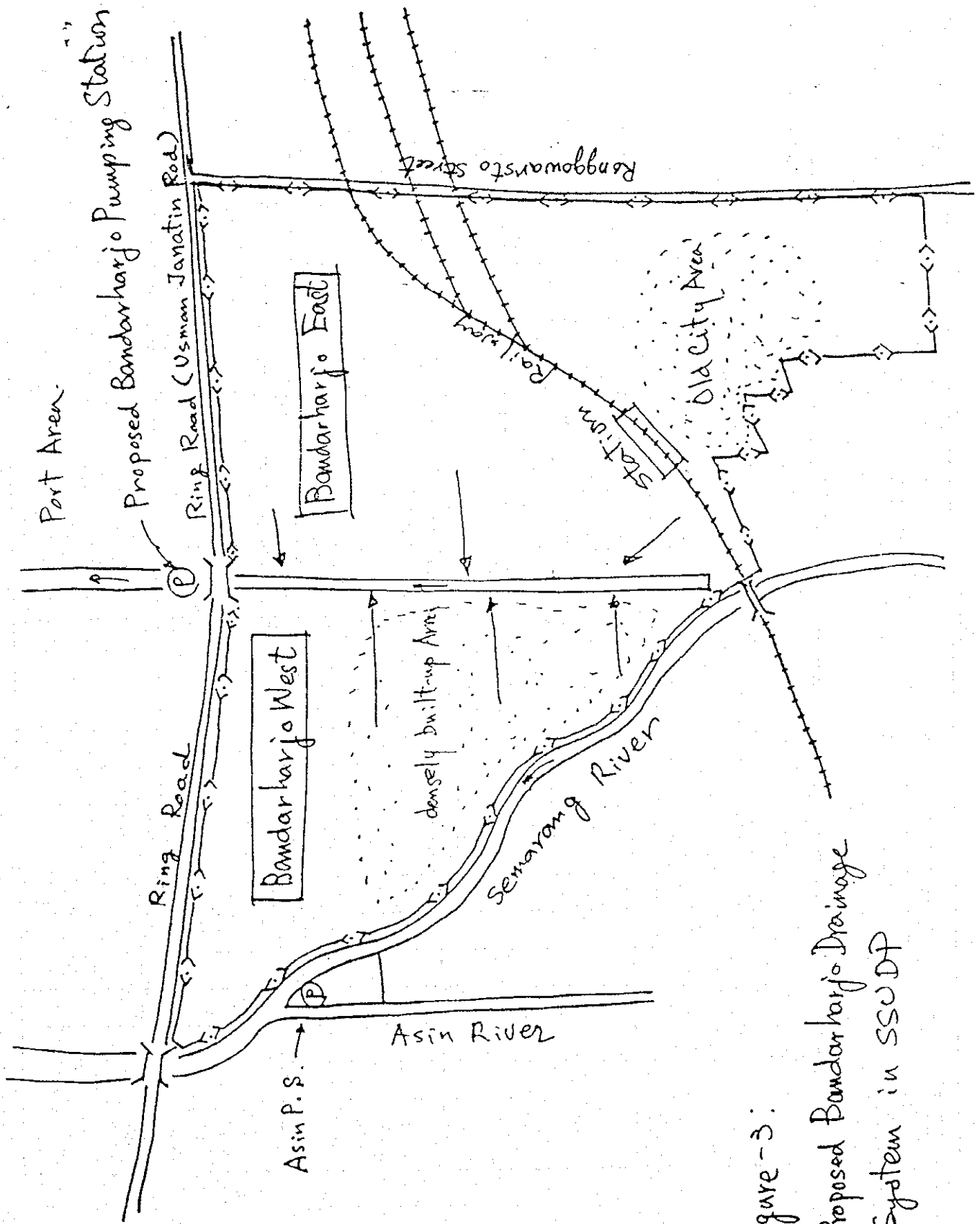


Figure-3:
Proposed Bandarharjo Drainage
System in SSODP

Fig. 7 STUDY SCHEDULE

YEAR	2000																	
	I			II			I			II								
	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2
PHASE	P U A S E I I																	
	I 9 9 8																	
MONTH																		
STUDY SITE	JAPAN FIRST STUDY IN INDONESIA DATA COLLECTION FIELD RECONNAISSANCE PHOTOGRAMMETRIC, TOPOGRAPHICAL SURVEY GEOLOGICAL, SOIL MECHANICAL SURVEY ENVIRONMENTAL, SOCIAL IMPACT STUDY ENVIRONMENTAL STUDY FOR BANDAL																	
BASIC SURVEY	SECOND STUDY IN INDONESIA THIRD STUDY IN INDONESIA FORTH STUDY IN INDONESIA FIFTH STUDY IN INDONESIA SIXTH STUDY IN INDONESIA SEVENTH STUDY IN INDONESIA EIGHTH STUDY IN INDONESIA																	
GENERAL	ORGANIZATION/INSTITUTION DRAINAGE MANAGEMENT PLAN																	
WEST	DETAILED DESIGN HYDRAULIC/STRUCTURAL ANALYSIS, DRAWING TENDER DOCUMENT																	
DUODWAY	DEFINITIVE PLAN																	
GARANG	DETAILED DESIGN HYDRAULIC/STRUCTURAL ANALYSIS, DRAWING TENDER DOCUMENT																	
REVER	DETAILED DESIGN HYDRAULIC/STRUCTURAL ANALYSIS, DRAWING TENDER DOCUMENT																	
BARROVE	DETAILED DESIGN HYDRAULIC/STRUCTURAL ANALYSIS, DRAWING TENDER DOCUMENT																	
MENT	DETAILED DESIGN HYDRAULIC/STRUCTURAL ANALYSIS, DRAWING TENDER DOCUMENT																	
JATI BARANG	DETAILED DESIGN HYDRAULIC/STRUCTURAL ANALYSIS, DRAWING TENDER DOCUMENT																	
DAM	DETAILED DESIGN HYDRAULIC/STRUCTURAL ANALYSIS, DRAWING TENDER DOCUMENT																	
SUSTERIC	DETAILED DESIGN HYDRAULIC/STRUCTURAL ANALYSIS, DRAWING TENDER DOCUMENT																	
TION	DETAILED DESIGN HYDRAULIC/STRUCTURAL ANALYSIS, DRAWING TENDER DOCUMENT																	
URBAN	DETAILED DESIGN HYDRAULIC/STRUCTURAL ANALYSIS, DRAWING TENDER DOCUMENT																	
MANAGEMENT	DETAILED DESIGN HYDRAULIC/STRUCTURAL ANALYSIS, DRAWING TENDER DOCUMENT																	
BARROVE	DETAILED DESIGN HYDRAULIC/STRUCTURAL ANALYSIS, DRAWING TENDER DOCUMENT																	
MENT	DETAILED DESIGN HYDRAULIC/STRUCTURAL ANALYSIS, DRAWING TENDER DOCUMENT																	
SEMINAR	SEMINAR (1) SEMINAR (2) SEMINAR (3)																	
REPORTING	IC/R IT/R(1) IT/R(2) PR/R(1) PR/R(2) PR/R(3) DF/R F/R																	

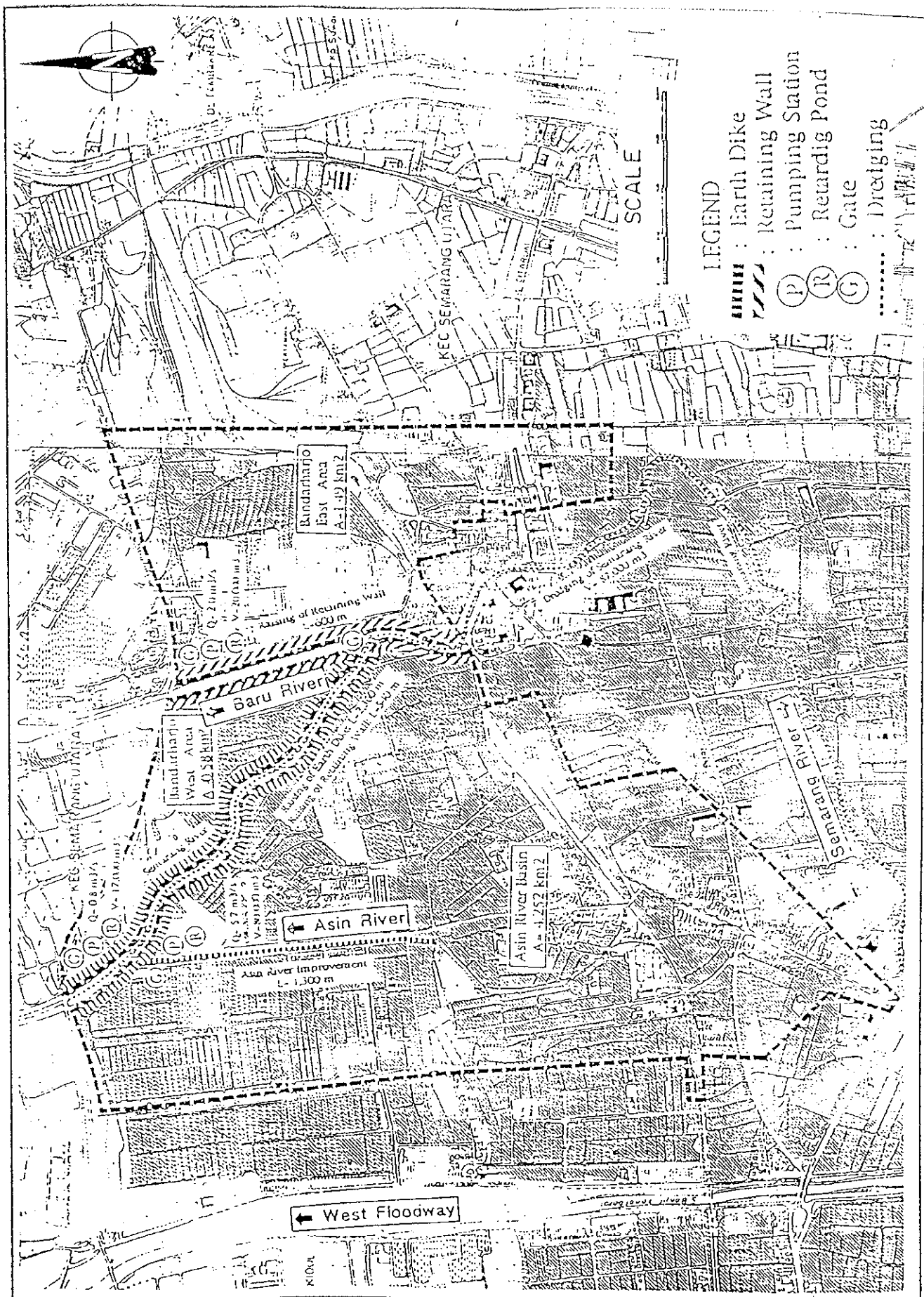


Fig. 1 TARGET AREAS FOR URBAN DRAINAGE SYSTEM IMPROVEMENT AND LOCATION OF URBAN DRAINAGE FACILITIES

1. Scope of Work for Urban Drainage System Improvement Project in JICA Study

The JICA study on urban drainage system improvement in Semarang city consists of the review of the previous JICA feasibility study including basic field surveys (Aug. 1997 - Nov. 1997), the preparation of definitive plan (Dec. 1997 - Mar. 1998) and detailed design (May. 1998 - Jan. 2000) for the following urban drainage facilities proposed in the previous feasibility study:

(1) Pumping Station and Retarding Pond

- (a) Asin Pumping Station ($Q=5.7 \text{ m}^3/\text{s}$) and Retarding Pond ($V=80,000 \text{ m}^3$)
- (b) Bandarharjo West Pumping Station ($Q=0.8 \text{ m}^3/\text{s}$) and Retarding Pond ($V=16,700 \text{ m}^3$)
- (c) Bandarharjo East Pumping Station ($Q=2.0 \text{ m}^3/\text{s}$) and Retarding Pond ($V=28,000 \text{ m}^3$)

(2) Drainage Channel Improvement

- (a) Semarang River Improvement: Length: $L=6,900 \text{ m}$, Dredging Volume: $V=87,000 \text{ m}^3$
- (b) Asin River Improvement: Length: $L=1,300 \text{ m}$
- (c) Baru River Improvement: Length: $L=800 \text{ m}$
- (d) Reconstruction of a Road Bridge on Asin River and a Gate structure on Baru River
- (e) Drainage Channel Improvement
 - (i) Bandarharjo West Drainage Area: Length: $L=800 \text{ m}$
 - (ii) Bandarharjo East Drainage Area: Length: $L=700 \text{ m}$

The location of the above proposed urban drainage facilities and the study schedule are shown in Attached Figure - 1 and 2 respectively.

2. Proposed Plan for the Remainder of SSUDP

According to the Draft Mid Term Review Report of SSUDP submitted to DGCK on July 1997, a drainage improvement project of Baru River basin consisting of Bandarharjo East and West drainage areas is proposed to execute as one of the remainder of SSUDP due to the following reasons:

- (1) The urban renewal project including the tertiary drainage channel improvement for the Old City area has been implemented in SSUDP as a tourism development project and a

densely built-up area in Bandarharjo West will be renewed soon. The both areas as well as around the railway station are regularly inundated during high tide because these area can not drain by gravitation due to the serious land subsidence. Urgent pump drainage improvement project is expected to execute.

- (2) As some of the original drainage projects and sewerage project in SSUDP was deleted on several reasons, a total remaining budget of approximately Rp. 10 billion (Loan: Rp. 6.4 billion, Local: Rp. 3.6 billion) can be use for the drainage improvement project of Baru River basin.
- (3) If the feasibility study and final engineering design of the above project are implemented and approved in time, the project will be completely on a critical path with reference to the loan closing date of 30 September 1999.

The proposed drainage improvement system of Baru River basin is shown in Attached Figure-3, which is different from the JICA proposal as follows:

- (1) Bandarharjo East and West are combined and formed in one drainage zone.
- (2) Drain of Bandarharjo West area is changed from the Semarang River to the Baru River.
- (3) Bandarharjo West Pumping station is deleted.
- (4) The Baru River is closed from the Semarang River. Accordingly the Baru River can not divert a discharge of 6 m³/s from the Semarang River. The discharge capacity of downstream stretch of the Semarang River should be increased.

3. Additional Road and Railway Raising Project in Bandarharjo East Area

The drainage conditions along the coastal areas in Northern Semarang have been deteriorated due to the effect of land subsidence. These areas can not drain by gravity flow any more and regularly inundated during high tide. Some part of the Ring Road (Usman Janatin Road) and the railway crossing with the Ronggowarsto Street in the Bandarharjo East area are inundated in the spring tide of the dry season. This means that these road and railway should be raised to prevent from the flood due to high tide. However, this program is out of scope of JICA study. If Semarang city will be able to execute the detailed design of the captioned road and railway raising project by own finance, the JICA study team may propose that the project should be included in the future implementation program by a financial assistance of OECF.

LIST OF ATTENDANTS

Name	Position
DGHS	
1. Ir. Susmono	Head of Sub-Directorate of Implementation for Central Region II, Directorate of Implementation for Central Region
2. Ir. Tanozisoichi Mase, MSc	Staff of Sub-Directorate of Implementation for Central Region II, Directorate of Implementation for Central Region
3. Ir. Reifeldi	Staff of Sub-Directorate of Environmental Sanitation, Directorate of Technical Guidance
Kotamadya Semarang	
1. Ir. Tata Pradana	Head of Project Management Unit-SSUDP, Department of Public Works, Kotamadya Semarang
JICA Indonesia Office	
1. Ms. TAKEUCHI Tomoko	Assistant Resident Representative for Industry, Economic Infrastructure Development Program
JICA Expert	
1. Mr. UEDA Tatsuhiko	JICA Expert on Wastewater & Stormwater Management, DGHS
2. Mr. TANAKA Tsuyoshi	JICA Expert on Wastewater & Stormwater Engineering, DGHS
JICA Study Team	
1. Mr. TOKUMASU Toshiaki	Urban Drainage Planner

**AGENDA
OF
COORDINATION MEETING
ON
THE DETAILED DESIGN OF URBAN DRAINAGE IN SEMARANG
ON
8 SEPTEMBER 1997**

1. Demarcation of Scope of Works of JICA Project and SSUDP

The urban drainage improvement project of the Baru River basin consisting of Bandarharjo East and West areas, which are included in JICA project area, has been proposed to execute in SSUDP, according to Draft Mid Term Review Report of SSUDP submitted to DGCK on July 1997. Demarcation of the both projects is required without loss of time.

2. Additional Project in Bandarharjo East Drainage Zone

The Usman Janatin Street and the railway crossing with Ronggowarsito Street in Bandarharjo East area have not been able to fulfill their function as a polder, because their ground elevation was already under the high tide level. The road and railway raising projects, which are out of scope of JICA study, are required to execute.

MINUTES OF MEETING
ON
INTERIM REPORT(2)
OF
THE DETAILED DESIGN
OF
FLOOD CONTROL, URBAN DRAINAGE
AND WATER RESOURCES DEVELOPMENT
IN SEMARANG IN THE REPUBLIC OF INDONESIA

Date : August 5, 1998

Place : Conference room of Secretary Directorate General
Cipta Karya, Cipta Karya Building, Jl. R.Patah I/1, Jakarta

Attendance : Please refer to the attached sheets.

A meeting regarding the captioned report was held between the Directorate of Technical Development, Directorate General of Human Settlements (DGHS), Ministry of Public Works and the local government of Semarang (hereinafter referred to as the Indonesian Side), and JICA Study Team (hereinafter referred to as the Study Team) in the presence of the Advisory Committee of Japan International Cooperation Agency (JICA) (hereinafter referred to as the Japanese Side).

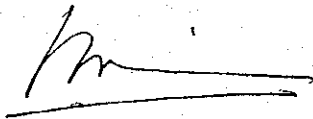
The meeting was called to order at 1:30 p.m. with Mr. Gembong Priyono, the Director General of DGHS, presiding. The Study Team explained the contents of the Interim Report (2) and the Indonesian Side, in principle agreed on the definitive plan of the Improvement of the Urban Drainage System in Semarang Area (hereinafter referred to as "the Project"). The main points discussed and confirmed in the meeting are summarized as follows.

- (1) Director General of DGHS told the meeting that the general concepts of the detailed design of the Urban Drainage Improvement which was established in the Definitive Plan and presented in the Interim Report (2), shall not be changed.
- (2) The Indonesian Side has their own urgent and temporary drainage plan in Bandarharjo Area (West Bandarharjo Area and the Old City Area). However, as the pump facilities by the above plan shall be temporary and be removed after the completion of the Project, it will not affect the detailed design and implementation of the Project.
- (3) The Indonesian Side may consider the reutilization of existing pump facilities (used pump from the other projects) for the proposed pumping stations. However, the Study Team shall continue the detailed design with an idea of new pump facilities.

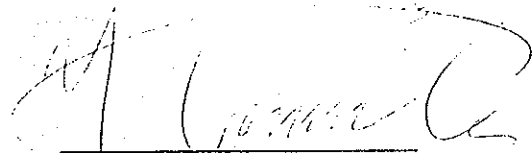
- (4) The Study Team included the cost of walls along both sides of the existing railways, However, the walls will bring problems to the railway, and these problems will be discussed between PERUMKA (National Railway Company) and DGHS. The detailed design of the subject mentioned above shall not be included in the Study but be conducted in the construction implementation stage.

The Indonesian Side, at the end of the meeting, expressed sincere and strong intention of urgent implementation of the Project and is expecting financial support from the Government of Japan.

Jakarta, August 6, 1998

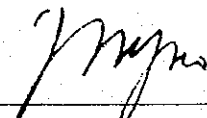


Aim Abdurachim Idris
Director of Directorate of Technical
Development, Directorate General of
Human Settlements,
Ministry of Public Works

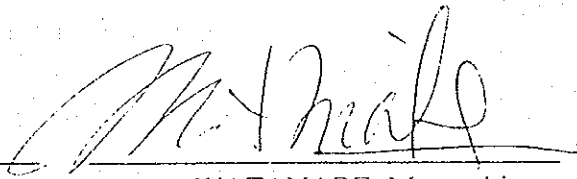


TOMIOKA Yoshiyuki
Team Leader
JICA Study Team

Witnessed by:



Gembong Priyono
Director General of Directorate
General of Human Settlements,
Ministry of Public Works



WATANABE Masayuki
Chairman
JICA Advisory Committee

LIST OF ATTENDANCE

Name	Position
<u>Indonesian Side</u>	
DGHS	
1. Gembong Priyono	Director General, Directorate General of Human Settlements
2. Aim Abdurachim Idris	Director of Directorate of Technical Development, Directorate General of Human Settlements
3. Hari. Sidharta	Secretary of Directorate General of Human Settlements
4. Widia Alfisa	Sub-Director of Environmental Sanitation, Directorate of Technical Development
5. Darminto	Sub-Director of Directorate of Foreign Aid Administration of DGHS
6. Tata Pradana	Project Manager of SSUDP, Semarang City
7. Susmono	Sub-director of Implementation on Central Region II
8. Murti Widowo	Chief of DPU Semarang City
9. Setia Budhy. A	Sub-Director of Directorate of Program Development
10. Reifeldi	Staff of Sub Directorate of Environmental Sanitation, Directorate of Technical Development
11. Dwityo A. Soeranto	Staff of Sub Directorate of Environmental Sanitation, Directorate of Technical Development
12. Cut Lisa	Staff of Sub Directorate of Environmental Sanitation, Directorate of Technical Development
13. Faizal	Staff of Directorate of Program Development
14. Savitri R.	Staff of Sub Directorate of Environmental Sanitation, Directorate of Technical Development
15. Mohammad S.	Staff of Directorate of Central Region
16. Djoko Ismono	Staff of Provincial PU of Central Jawa
<u>JICA Advisory Committee</u>	
I. WATANABE Masayuki	Chairman

2. MATSUMIYA Yosuke Member

JICA Study Team

1. TOMIOKA Yoshiyuki Team Leader
2. FURUTAGUCHI Masashi Assistance Team Leader/River Planner
3. MIURA Mitsuo City Drainage Engineer

JICA Expert

1. UEDA Tatsuhiko JICA Expert on Wastewater & Stormwater Management
2. UMEDA Kazuo JICA Expert on Water Resources Development
3. SHINTAKU Hiroaki JICA Expert on Water Resources Planning and Management

JICA Indonesia Office

1. Kazuto Kitano Assistant Resident Representative , JICA

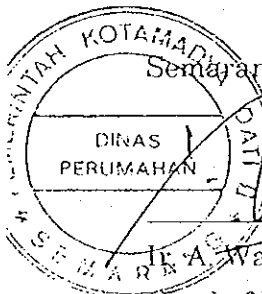
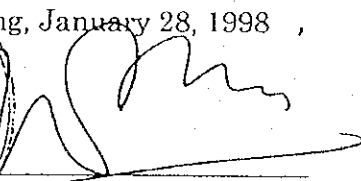
MEMORANDUM ON MEETING
FOR
URBAN DRAINAGE IMPROVEMENT
OF THE PROJECT OF
FLOOD CONTROL, URBAN DRAINAGE AND
WATER RESOURCES DEVELOPMENT
IN SEMARANG IN THE REPUBLIC OF INDONESIA

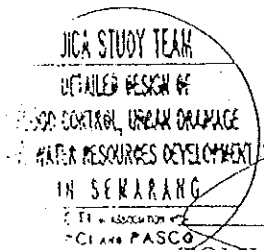
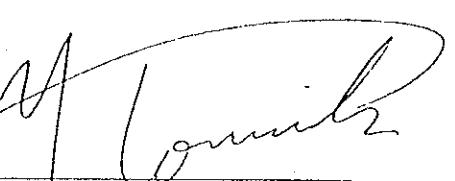
A meeting chaired by Ir. A. Wasis, Head of Housing Department, Kotamadja Semarang, was held at a meeting room of the Semarang City municipal office on January 27, 1998. The purpose of the meeting is to explain the proposed drainage facilities in the project by the JICA Study Team and to confirm the locations and the areas of the proposed facilities between Kotamadja Semarang and the JICA Study Team. The list of attendance of the meeting is attached hereto.

The issues confirmed by both Kotamadja Semarang and JICA Study Team are described hereinafter.

1. The location of Asin River Pumping Station together with the retarding pond was agreed by Kotamadja Semarang as proposed by the JICA Study Team as illustrated in the attached Fig. 1.
2. The development plan of Bandarharjo Area shall be redesigned by the shift of the alignment of a part of Semarang River which include an area of 20m wide along the river bank for resettlement of existing factories of smoked fish as shown in Fig. 1. by Kotamadja Semarang.
3. The alignment of a secondary channel which connects Baru River Pumping Station and its retarding pond will be changed to an alignment along North Ring Road as shown in Fig. 1.
4. The other drainage facilities proposed by the JICA Study Team and presented in the Interim Report (1) are agreed by Kotamadja Semarang.
5. A team from Kotamadja Semarang (consisting of Bappeda, DPU cq. Seksi Pengairan, Dinas Perumahan and PT. WISWAKHARMAN) and the JICA

Study Team will have a coordination meeting with PT. INDO PERKASA USAHA TAMA (PT. IPU) at the site as soon as possible to establish the new alignment of Semarang River including the resettlement area of 20m wide for smoked fish factories.

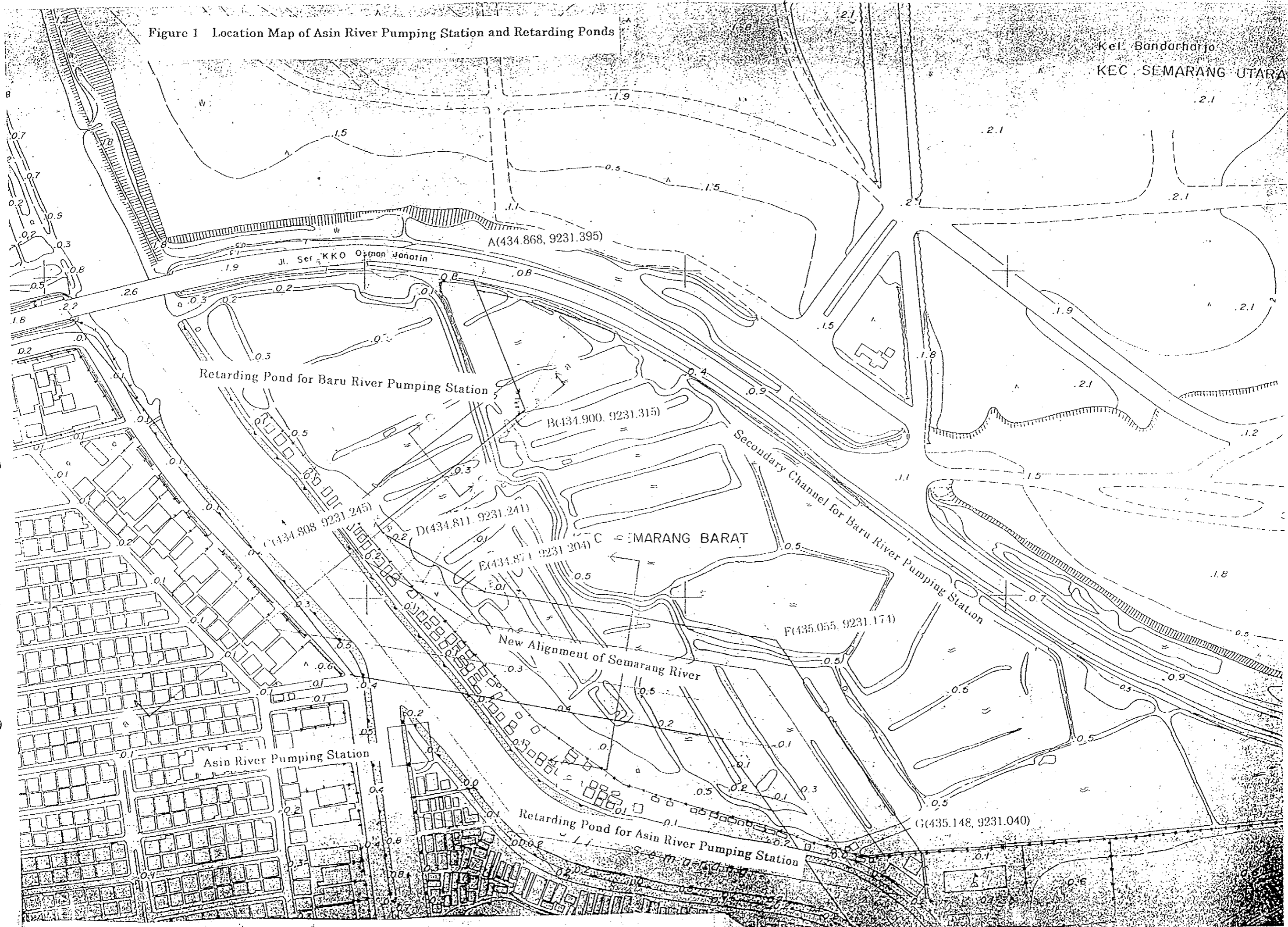
 Semarang, January 28, 1998 ,

Wasis
Head of Housing Department
Kotamadja Semarang

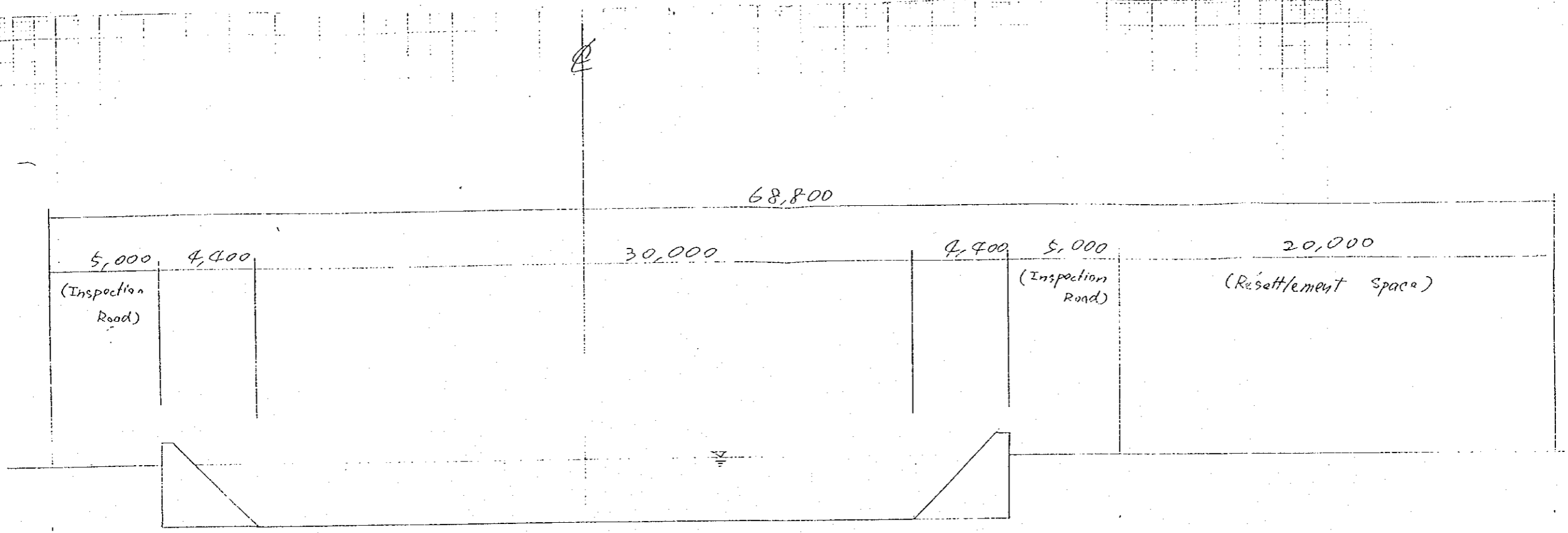
 JICA STUDY TEAM
DETAILED DESIGN OF
WATER CONTROL, URBAN DRAINAGE
AND WATER RESOURCES DEVELOPMENT
IN SEMARANG
An association of
JICA and PASCO

TOMIOKA Yoshiyuki
Leader of JICA Study Team

Attachment :

1. List of Attendance
2. Fig. 1 Location of Proposed Main Drainage Facilities

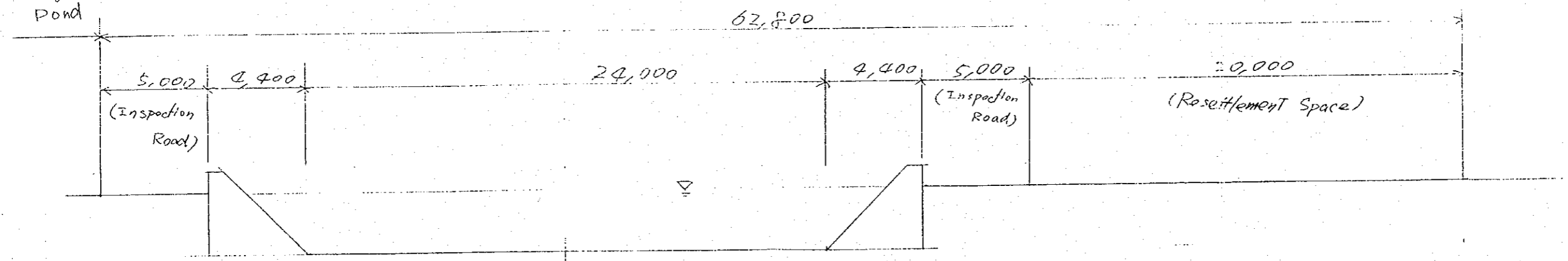
Figure 1 Location Map of Asin River Pumping Station and Retarding Ponds





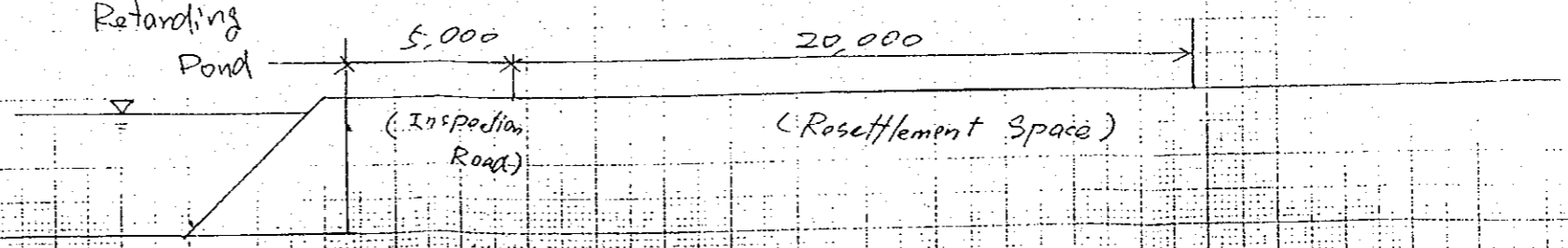
Cross Section A-A

Retarding Pond



Cross Section B-B

Retarding Pond



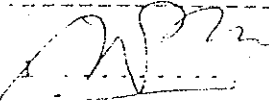
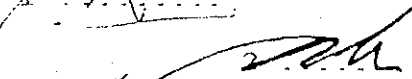
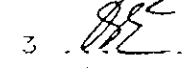
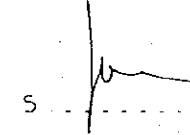

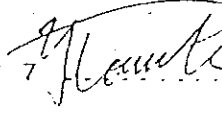
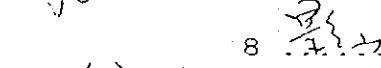

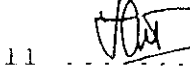
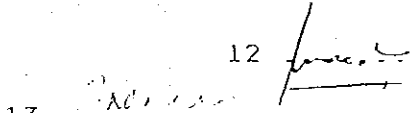
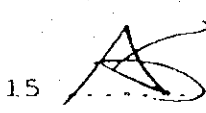

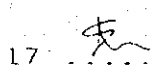
Cross Section C-C

109R 1 79

DAFTAR HADIR

HARI : SELASA
 TANGGAL : 27 JANUARI 1998
 J A M : 09.00 WIB
 TEMPAT : RUANG RAPAT DINAS PERUMAHAN
 KODYA DATI II SEMARANG
 ACARA : MEMBICARAKAN PENANGANAN PERUMAHAN
 KAWASAN URBAN RENEWAL - BANDARHARJO.

D-HADIR

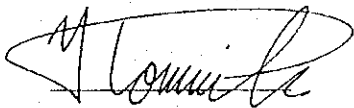
	N A M A	INSTANSI	TANDA TANGAN
	2	3	4
1	A. WABIS	Din Perumahan	
2	TATA PRABANA	PMU	
3	SUGENG.	PT. INDAH KARYA	
4	M. EDI WALUYO.	"	
5	WASAITO	"	
6			
7	TEMIKA Yoshuyuki	JICA leader of JICA Team	
8	KAGEYAMA Kazuyoshi	Jica Study Team	
9	Acharyach	Konsultan PT. Wisnu	
10			
11	ROSYIP HURDOO	PMU	
12	Widyono	P.A.P. ul	
13			
14	AUNURROFIEQ	Rappeda	
15	Ady Basmit	Wahidharm	
16			
17	Mudhyono	"	
18			
19			
20			

MEMORANDUM ON MEETING
FOR
URBAN DRAINAGE FACILITIES OF JICA PROJECT
AND EXPANSION OF THE NORTH RING ROAD
IN SEMARANG CITY

A Meeting was held in the P3T Nas Jateng office between the JICA Study Team and P3T Nas Jateng on the above subject on March 8, 1999. The JICA Study Team explained the plan of the drainage facilities along the North Ring Road whose detailed design is on going and both sides agreed on the following items;

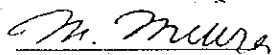
- (1) The location of the drainage facilities designed by JICA Study Team, namely Bandarharjo West Secondary Channel (section A-A), Baru Retarding Pond (section B-B), Baru Conveyance Channel (section C-C and section D-D), Baru Pumping Station and Bandarharjo East Secondary Channel (refer to Fig.1 to 7), do not have conflict with the expansion plan of the North Ring Road, as the new lane of the North Ring Road is planned to be expanded to the north of the existing lane between Semarang River and Jl.Mpu Tantular which is located between Baru River and Jl.Ronggowarsito.
- (2) A part of Baru Conveyance Channel (section D-D) is planned within the R.O.W of the North Ring Road with a condition that 1.5 m of depth is set between the top of the box culvert and the ground surface as shown in Fig.6. The Inspection road along Baru Conveyance Channel(refer to Fig.6) is cancelled from the design as P3T Nas Jateng is planning a drainage channel at the location. Instead P3T Nas Jateng allows the maintenance organization of the drainage system to utilize the shoulder of the North Ring Road for maintenance purpose. For the access to manholes for Baru Conveyance Channel, bridges across a drainage channel, which will be installed along the North Ring Road by P3T Nas Jateng, are planned and designed by JICA Study Team.

Mr.Tomioka Yoshiyuki

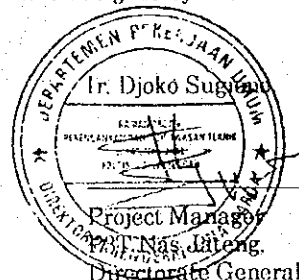


Team Leader
JICA Study Team

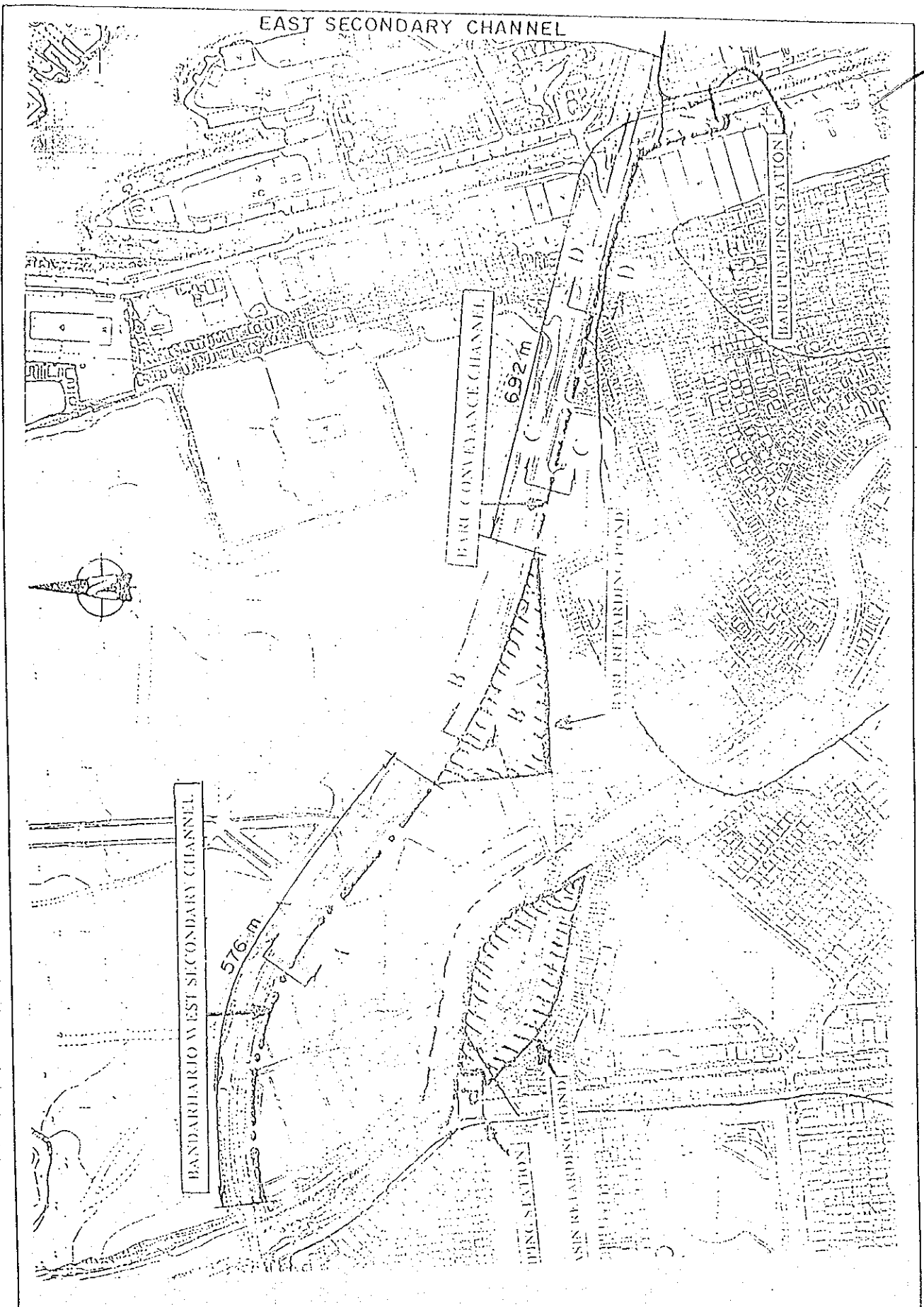
Mr.Miura Mitsuo



Drainage Engineer
JICA Study Team



Project Manager
P3T Nas Jateng,
Directorate General of Highway

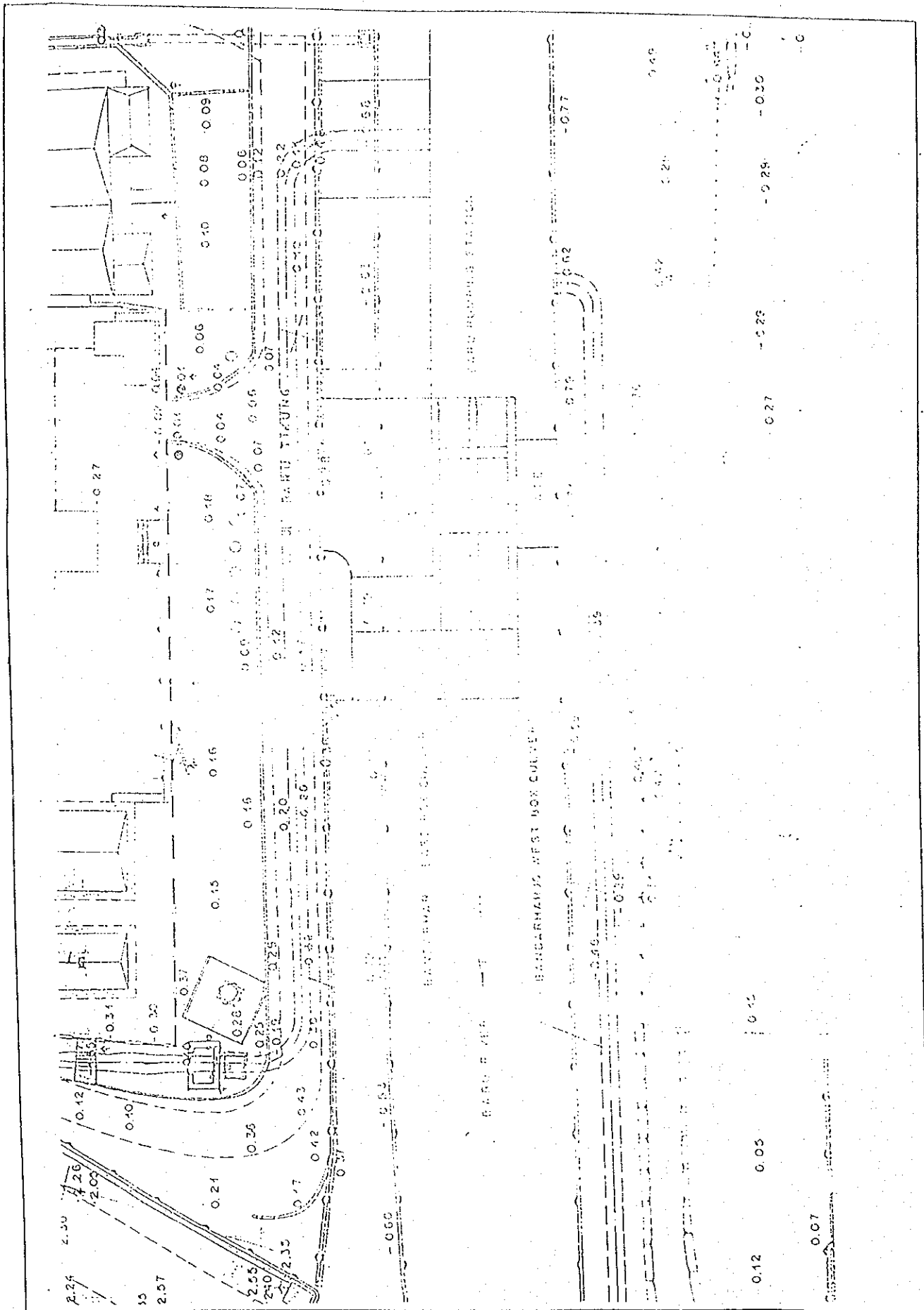


THE DETAILED DESIGN OF FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA

FIG. 1

LOCATION OF DRAINAGE FACILITIES

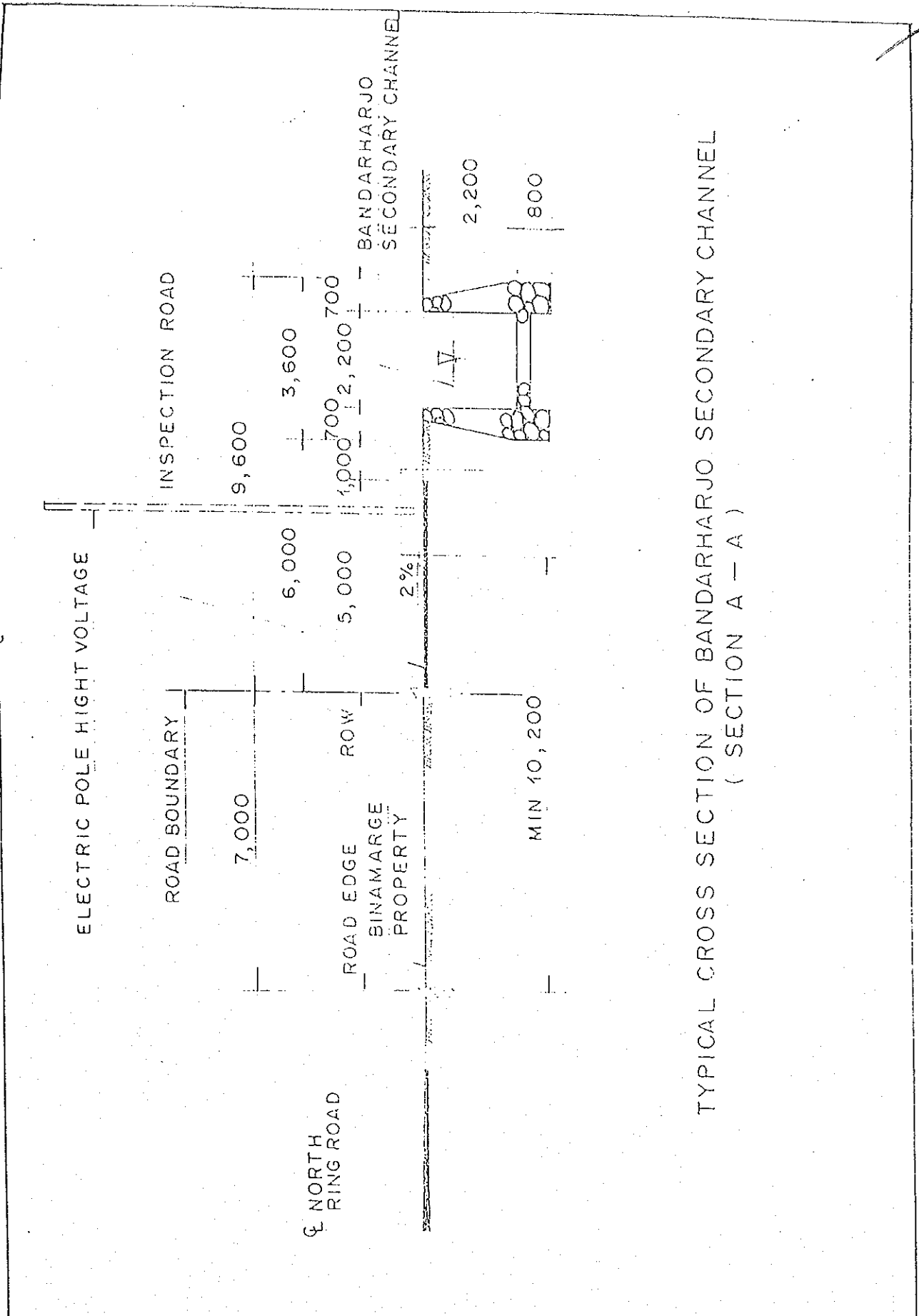
JAPAN INTERNATIONAL COOPERATION AGENCY



THE DETAILED DESIGN OF FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA

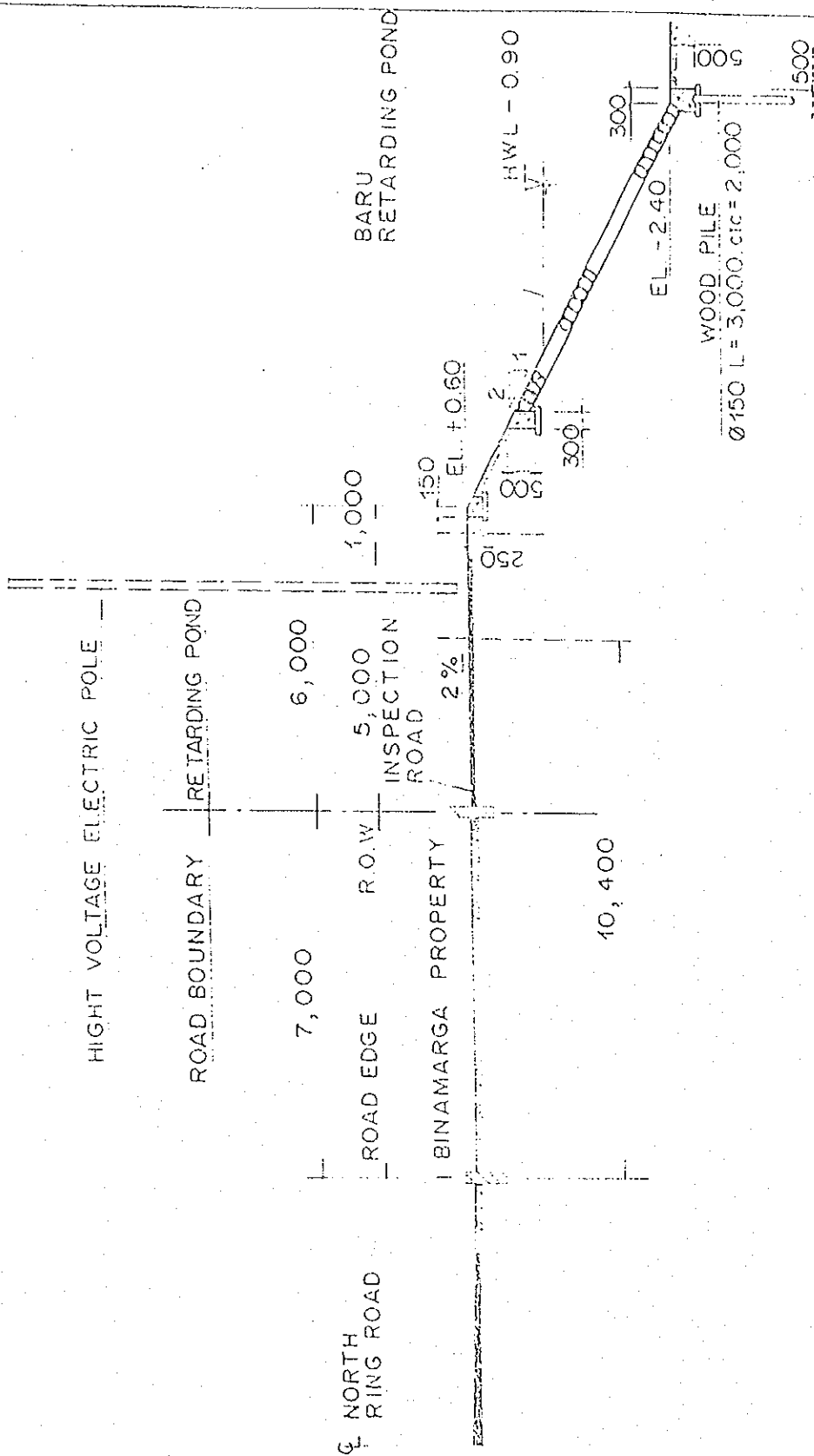
JAPAN INTERNATIONAL COOPERATION AGENCY

FIG. 2
LOCATION OF BANDARHARJO EAST SECONDARY CHANNEL



TYPICAL CROSS SECTION OF BANDARHARJO SECONDARY CHANNEL
(SECTION A - A)

THE DETAILED DESIGN OF FLOOD CONTROL, DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA

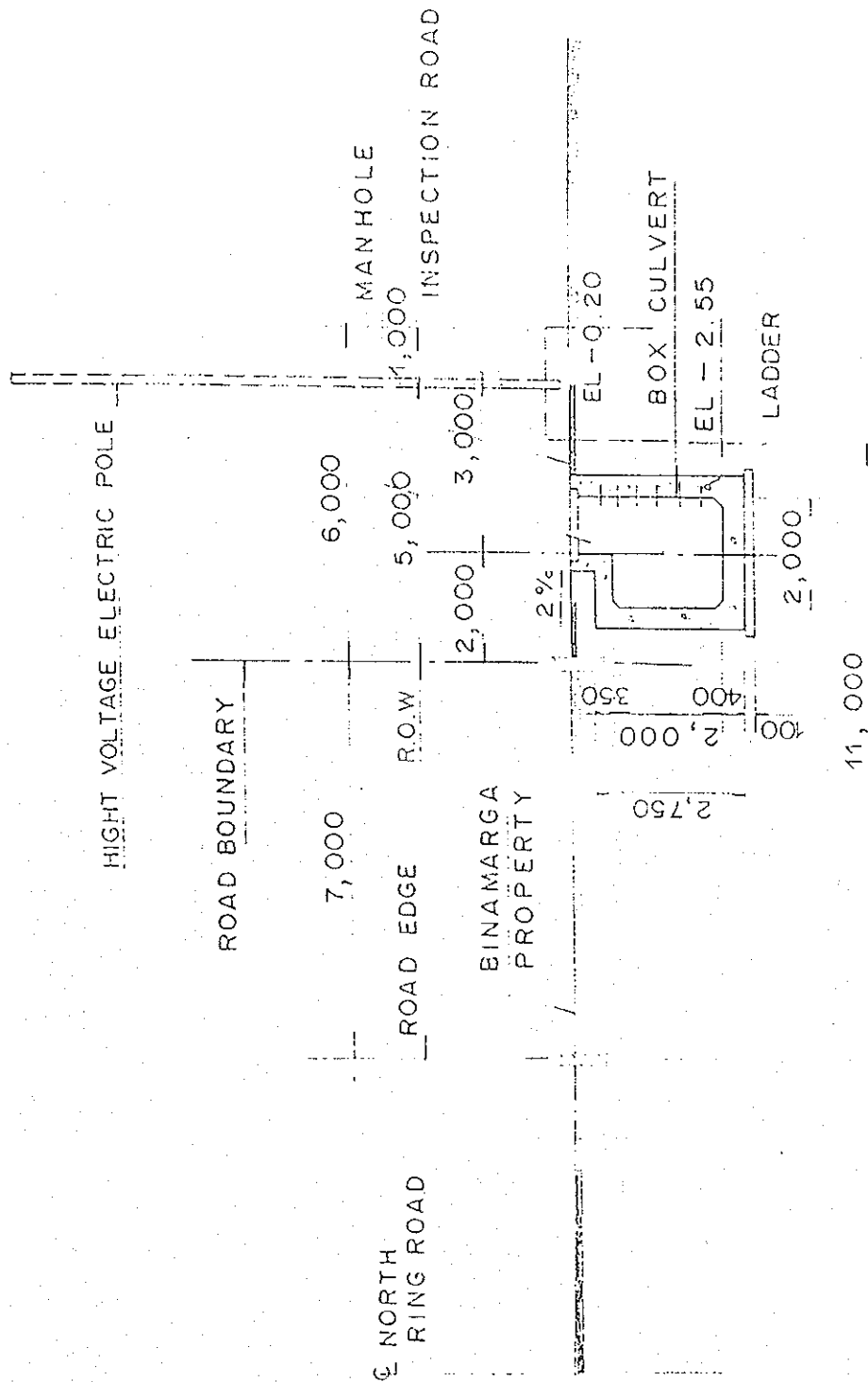


TYPICAL CROSS SECTION OF BARU RETARDING POND
(SECTION B - B)

THE DETAILED DESIGN OF FLOOD CONTROL, DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG, THE REPUBLIC OF INDONESIA

4
A CROSS SECTION OF BARU RETARDING POND

JAPAN INTERNATIONAL COOPERATION AGENCY

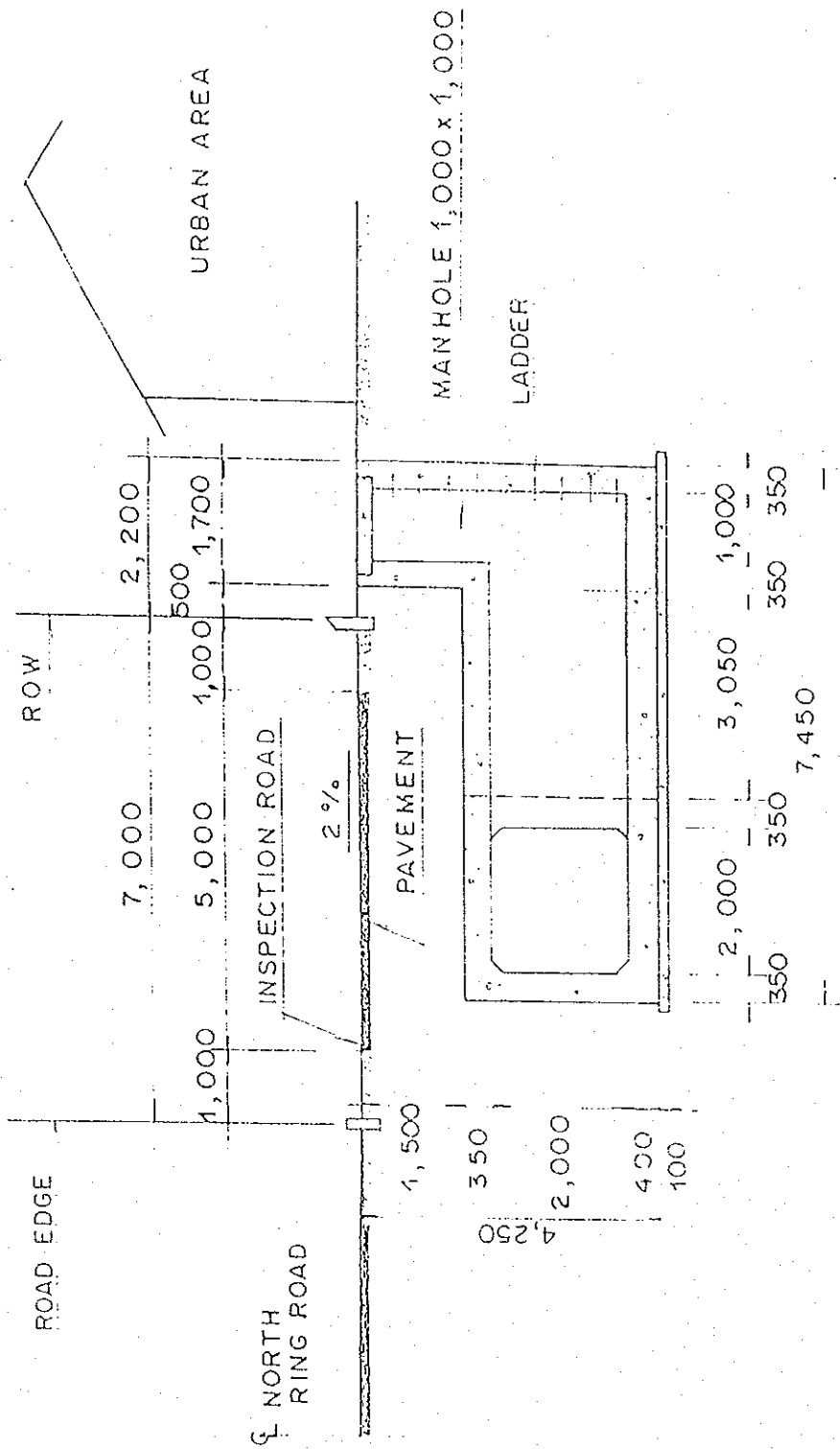


TYPICAL CROSS SECTION OF BARU CONVEYANCE CHANNEL TYPE A
(SECTION C - C)

THE DETAILED DESIGN OF FLOOD CONTROL
DRAINAGE AND WATER RESOURCES DEVELOPMENT
IN SEMARANG IN THE REPUBLIC OF INDONESIA

JAPAN INTERNATIONAL COOPERATION AGENCY

5
CROSS SECTION OF BARU CONVEYANCE
CHANNEL

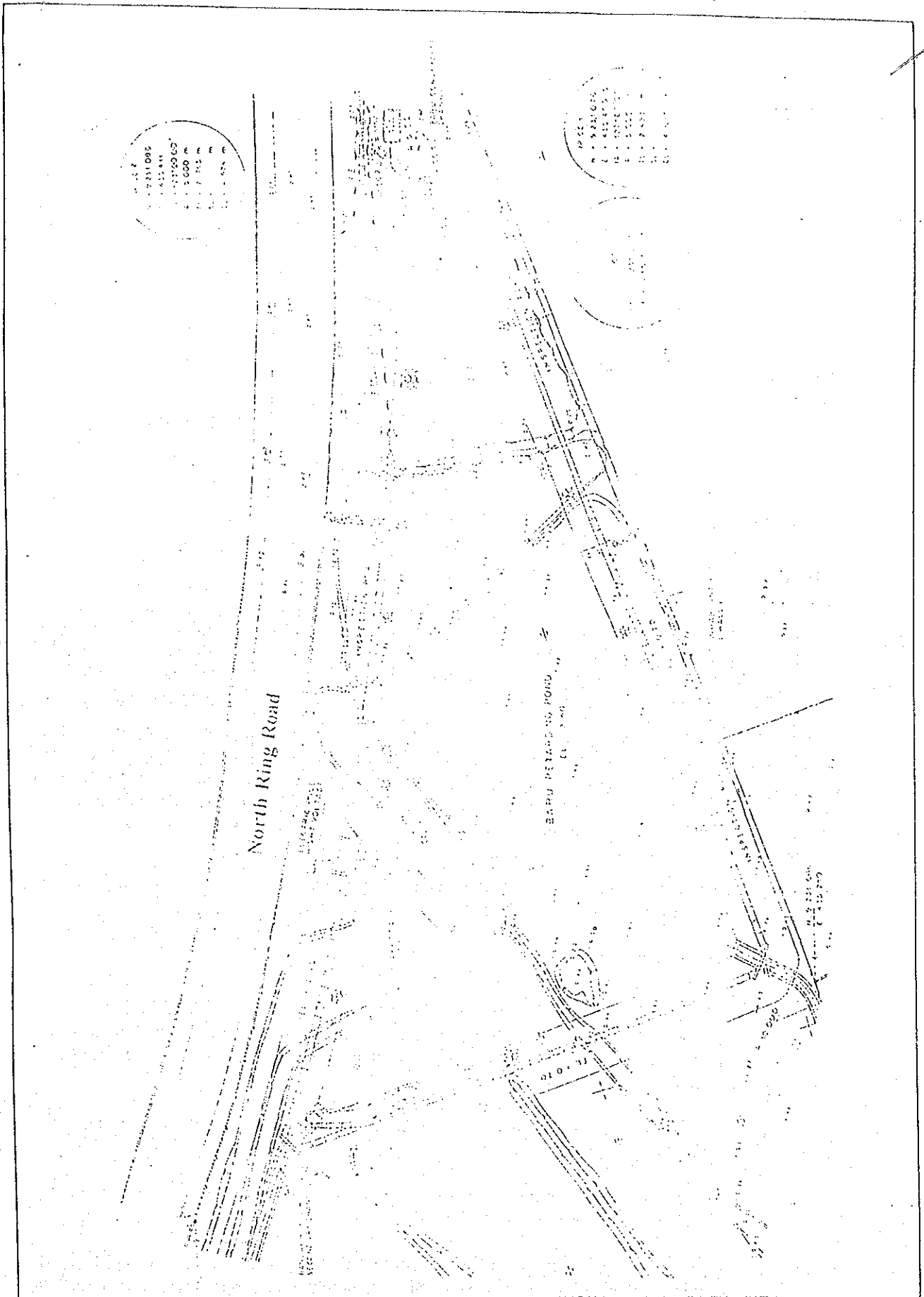


TYPICAL CROSS SECTION OF BARU CONVEYANCE CHANNEL TYPE B
(SECTION D - D)

THE DETAILED DESIGN OF FLOOD CONTROL
DRAINAGE AND WATER RESOURCES DEVELOPMENT
IN SEMARANG IN THE REPUBLIC OF INDONESIA

6
CROSS SECTION OF BARU CONVEYANCE
CHANNEL

JAPAN INTERNATIONAL COOPERATION



THE DETAILED DESIGN OF FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA

FIG. 7
PLAN OF BARU RETARDING POND

JAPAN INTERNATIONAL COOPERATION AGENCY

MINUTE OF MEETING
ON
INTERIM REPORT (5)
OF
FLOOD CONTROL, URBAN DRAINAGE
AND WATER RESOURCES DEVELOPMENT
IN SEMARANG IN THE REPUBLIC OF INDONESIA

Date : December 16, 1999

Place : Conference room of Kanwil Office of Public Works Central Java
Jl. Gubernur Budiono G , Semarang

Attendance : Please refer to the attached sheet.

Minutes :

A meeting with the main purpose of presenting Interim Report (5) in which the draft final report for the component of the Urban Drainage System Improvement and the progress of the detailed design of Jatibarang Dam are presented, was held between the Kanwil Office and other agencies concerned (hereinafter referred to as Indonesian Side) and JICA Study Team (Japanese Side).

Interim Report (5) of the captioned project was submitted to the Indonesian Side by the JICA Study Team prior to the meeting. Then the meeting was called to order at 9:00 AM and was chaired by Mr. Djoko Ismono of Kanwil Office. At the beginning of the meeting, presentation of the report was made by Mr. Tomioka, Leader, Mr. Miura, a chief drainage engineer and Mr. Mishina, a chief dam engineer of the JICA Study Team, and subsequently discussion was made in the form of question and answer to exchange ideas of their mutual concerns.

All the contents of the report are basically understood and accepted by the Indonesian Side. The main points discussed and confirmed in the meeting are summarized as follows.

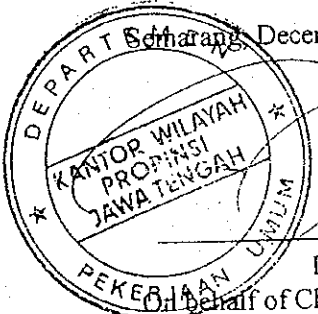
(Urban Drainage System Improvement)

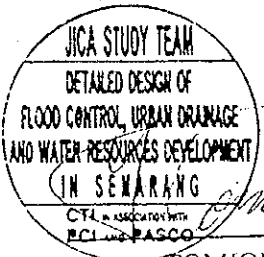
- (1) An idea of construction of a retarding pond and a gate at the river mouth of Semarang River was not adopted in Master Plan Study Stage, on the ground that the pump drainage area becomes larger (almost double of the proposed plan) and the pump size also becomes larger making the project cost higher.
- (2) The contaminated soil shall be treated by mixing with cement of 7% of the solid and disposed to the spoil area.
- (3) The Harbor Authority commented that the land for the retarding ponds are now hired by a private developer, PT Citra Buana.
- (4) The organization for operation/maintenance proposed by Japanese side is an example and to be discussed further within Indonesian Side to realize an appropriate operation and maintenance, which is a prerequisite of loan by Japanese Government.

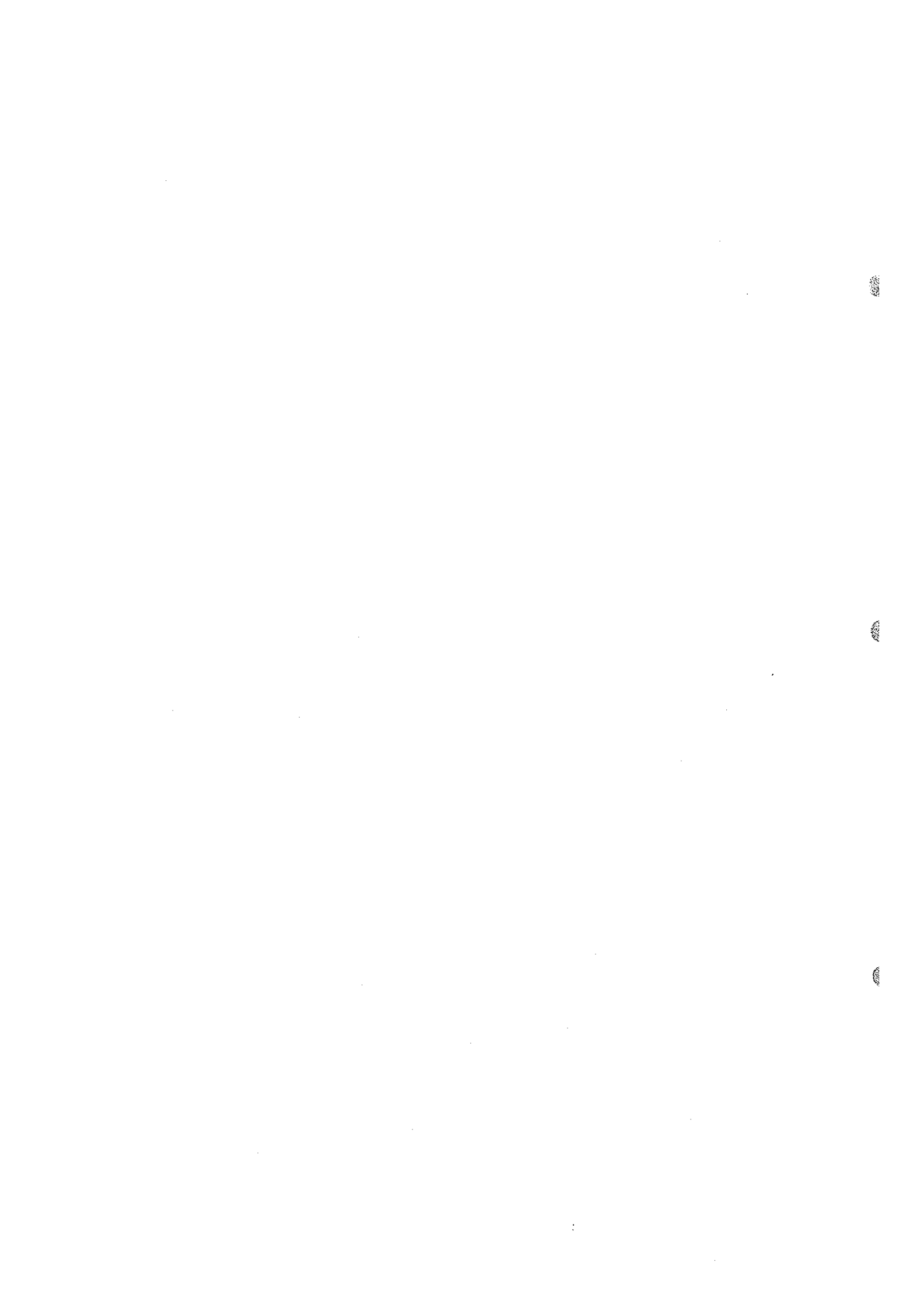
- (5) Sub District Officer (Camat) will support the socialization of the habitants in his district for establishing the O&M budget .
- (6) The drainage system of the reclamation area to the north of the North Ring road is out of the Study Area and is not covered by the Project.
- (7) The Implementation schedule is proposed in the Report but the request of loan and the promotion of the project are all depend upon the Indonesian Government.
- (8) The packaging of the implementation of the project is also depend upon the intention of the Indonesian Government.

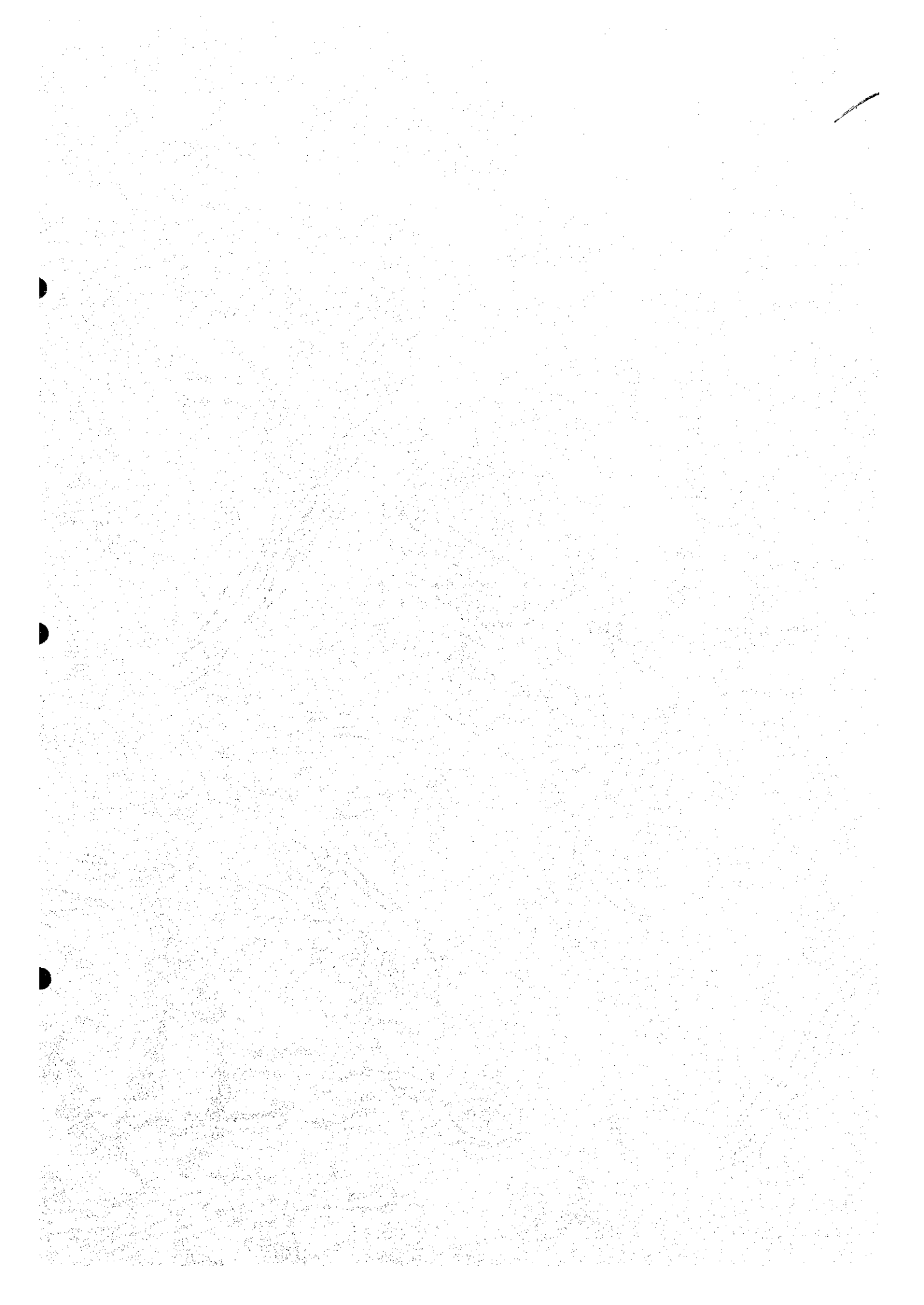
(Jatibarang Multi-purpose Dam Construction)

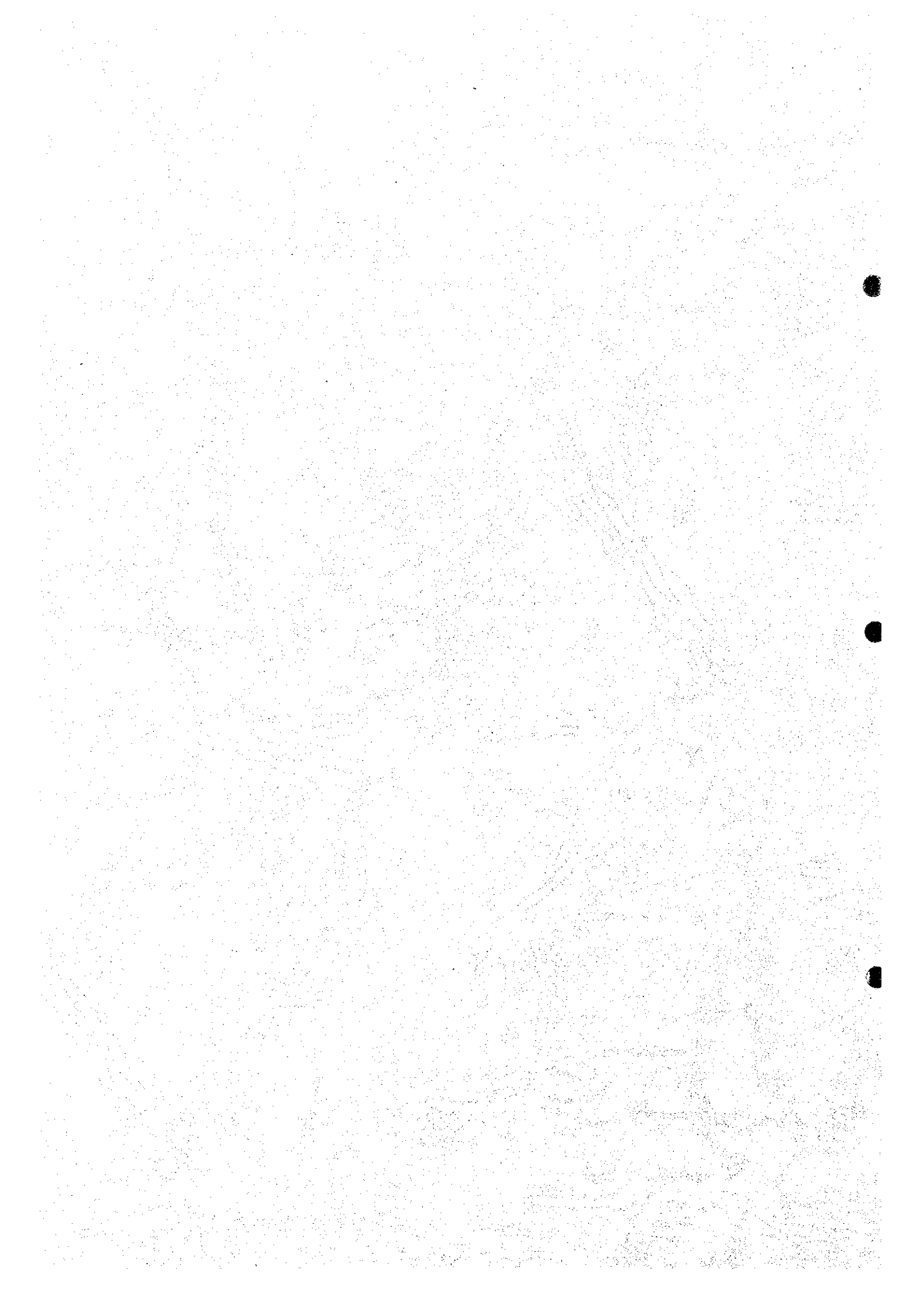
- (9) Safety against seepage through the foundation rock of the dam and the safety against land slide in the reservoir area have already studied and checked in the previous reports of the Study.


 Semarang, December 17, 1999
 Djoko ISMONO
 On behalf of Chief of Kanwil of Public Works
 Central Java


 TOMIOKA Yoshiyuki
 Leader of
 JICA Study Team









JICA