

PERUSAHAAN UMUM LISTRIK NEGARA

497-0267

**PERUSAHAAN UMUM LISTRIK NEGARA  
AGENCY OF MINISTRY OF MINES AND ENERGY  
GOVERNMENT OF THE REPUBLIC OF INDONESIA**



**RURAL ELECTRIFICATION PROJECT  
CONTRACT AID/ASIA-C - 1357  
AID LOAN NO. 497 - T - 052**

**CHAS.T. MAIN INTERNATIONAL, INC**

RURAL ELECTRIFICATION PROJECT - INDONESIA  
UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT  
LOAN NO. 497-T-052

MONTHLY REPORT NO. 31

FOR

APRIL 1981

SUBMITTED BY  
CHAS.T. MAIN INTERNATIONAL, INC.

RURAL ELECTRIFICATION PROJECT  
MONTHLY REPORT  
APRIL 1981

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I. INTRODUCTION

A. THE CONTRACT

Contract AID/ASIA-C-1357 was executed on September 18, 1978 between the United States Agency for International Development and Chas. T. Main International, Inc. following the completion of a Loan Agreement, AID Loan November 497-T-052, dated May 6, 1978, and a Grant Agreement, dated March 30, 1978, between the Republic of Indonesia and The United States of America for the implementation of a Rural Electrification Project, AID Project Number 497-0267.

Funding for Contract AID/ASIA-C-1357 is contained in the Grant Agreement. No Letter-of-Credit is involved in this contract. The date of implementation of the contract was September 18, 1978.

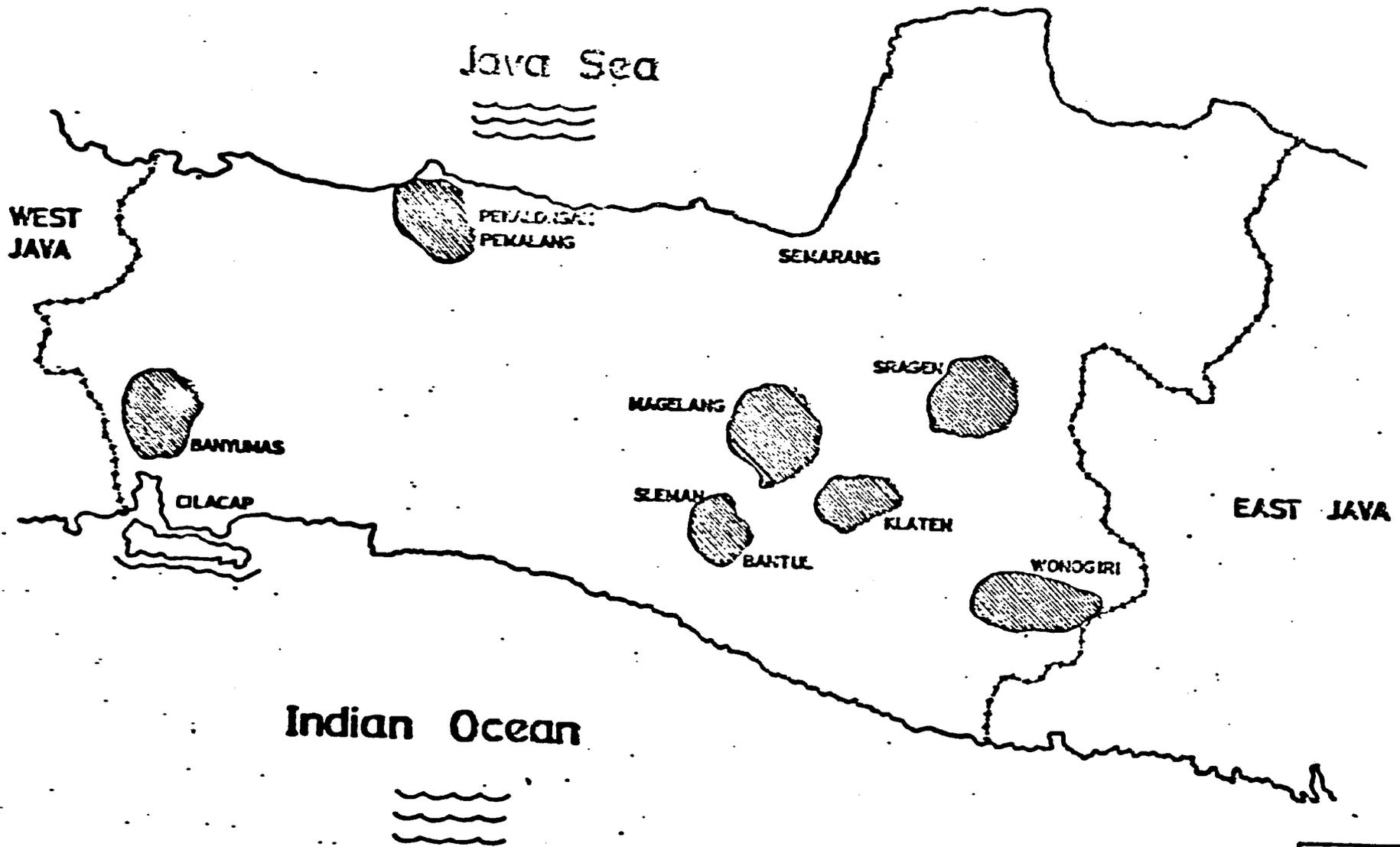
B. DESCRIPTION OF PROJECT

The objective of this project is to assist the Government of Indonesia (GOI) in its plan to provide areawide electric power distribution facilities in ten specified areas.

Seven of the project areas are located in the Province of Central Java, and the distribution systems for these areas will be operated by Perusahaan Umum Listrik Negara (PLN). Information presented in this report applies to the Central Java Project Areas only.

The project will consist of approximately 2,500 kilometers of overhead primary and secondary distribution lines and is planned to encompass at least 440 towns and villages. The completed project will insure the availability of reliable, inexpensive electric service to an estimated 260,000 rural homes. Approximately 130,000 consumers will be connected during the first three years of operation, and the remainder connected during the following twelve years.

**CENTRAL JAVA**  
**RURAL ELECTRIFICATION**  
**PROJECT SERVICE AREAS**



SCALE : NONE

CTM-109

The seven Central Java Project Service Areas are shown on CTM Map No. 109, page 2 of this report. These seven areas will be connected to the existing PLN, Central Java grid for their power requirements. Project Service Areas, number of villages served, approximate number of consumer connections and the estimated total number of power recipients are as follows :

<u>SERVICE AREA</u>	<u>VILLAGES SERVED</u>	<u>APPROXIMATE NO. OF CONNECTIONS</u>	<u>ESTIMATED NO. OF RECIPIENTS</u>
Klaten	95	25,000	225,000
Pem/Pek	103	20,000	180,000
Bantul	21	20,000	180,000
Wonogiri	54	15,000	135,000
Sragen	49	15,000	135,000
Magelang	83	20,000	180,000
Banyumas	<u>35</u>	<u>15,000</u>	<u>135,000</u>
TOTALS	440	130,000	1,170,000

The above tabulations reflect project expectations after the first three years of commercial operation.

## II. SCOPE OF SERVICES

The scope of MAIN's services is to assist the PLN staff located at Semarang and Central Java in all phases of the design and construction of seven rural electric distribution systems. The engineering assistance will consist of, among other things, circuit routing and phasing, structure selection, conductor selection, protection and sectionalizing, and estimating of material and equipment requirements. MAIN will prepare material and equipment bid documents and assist PLN in the evaluation of bids, the preparation and administration of material and equipment supply contracts and the receipt and distribution of materials and equipment. MAIN will also assist PLN during the construction phase of the project by inspecting construction for quality and quantities of work, maintenance of construction schedules and the inventory and documentation of completed construction.

### III. PROJECT ACTIVITIES & PROGRESS

#### A. ENGINEERING

##### 1. DISTRIBUTION SYSTEMS

The preparation of distribution system construction maps by PLN staff continued throughout the reporting period. The status of completion of the construction maps and structure data sheets for the various systems are shown in Table 1. During the reporting period, the maps for Klaten were completed. Table 1 has been amended during this reporting period to more specifically detail the status of maps and structure data sheets.

During the reporting period, MAIN's staff continued an engineering review of the construction maps and SDS sheets for Bantul, Klaten, and Magelang. It should be noted that the dates of completion of field checking and revisions of construction drawing have been revised. This rescheduling is necessary due to present vacancy in MAIN's field construction staff and impending home leave - vacation periods for the remaining members of that staff.

##### 2. HEADQUARTERS COMPLEXES

During the reporting period, PLN design and drafting personnel continued to complete the design and construction drawings based on continuing consultations between PLN, AID and MAIN technical staff. Construction specifications are being prepared apace. The tender document to be used by PLN for the solicitation of construction bids is being prepared.

It is estimated that the construction drawings and specifications and the tender documents will be submitted to AID for review and approval approximately mid-May, 1981.

AID has agreed to increase the allocated funds from the Loan to cover the anticipated increase in construction costs previously reported. The amount of funds allocated for headquarters complex construction now totals \$ 1,697,760,00.

TABLE NO. 1  
STATUS OF MAP AND STRUCTURE DATA SHEETS  
MONTH ENDING APRIL, 1981

Construction Beginning Sequence	PROJECT AREA	No. of Maps	P L N			M A I N		Complete Field Checking & Revisions
			Construction Maps			Structure Data Sheets		
			% (1) Complete	No. Complete	Date of Completion	% Complete	Date of Completion	
7	BANYUMAS/CILACAP	311	78.4	87	RE 12/31/81	100	9/30/80	RE 3/31/82
2	KLATEN	352	100	352	A 4/30/81	100	10/31/80	RE 8/15/81
1	MAGELANG	423	100	423	A 12/31/80	100	9/30/80	RE 9/30/81
R 6	PEKALONGAN/PEMALANG	560	77.5	112	RE 10/15/81	100	8/31/80	RE 3/31/82
3	SLEMAN/BANTUL	268	97	241	RE 6/30/81	100	8/31/80	RE 8/31/81
R 5	SRAGEN	364	79	109	RE 8/31/81	100	9/30/80	RE 1/30/82
4	WONOGIRI	530	100	530	A 10/31/80	100	9/31/80	RE 12/15/81

A - ACTUAL

E - ESTIMATED

R - REVISED

(1) INCLUDED FIELD STAKING

B. PROCUREMENT

1. TOOLS AND EQUIPMENT

During the reporting period, Bank Indonesia opened Letters-of-Credit with Wells Fargo Bank International for the following contracts :

<u>Contract No.</u>	<u>Contractor</u>	<u>L/C No.</u>	<u>Date</u>
Pj.215/PST/80	Ohm International	0103/16909/PL	April 24, 1981
Pj.223/PST/80	" "	0103/16910/PL	" "
Pj.265/PST/80	Cable Handling & Stringing Equipment	0103/16911/PL	" "
Pj.269/PST/80	ITT Export	0103/16912/PL	" "

The sole remaining contract in this procurement group to be covered by a Letter-of-Credit is Pj. 216/PST/80 with Merican-Curtis, Inc. this L/C is delayed because import permits for the vehicles contained in the contract has not yet been issued by the Ministry of Trade.

PLN has received claims for additional funds from Maison International, Inc. (\$ 26,217.00) and Cable Handling & Stringing Equipment, Inc. (amount not stated). The basis for these claims is receipt of L/Cs after the 120 day limit stated in the contracts. Maison has been repeatedly asked for documentary justification of their claim but they have not responded with the documents necessary to validate their claim. Cable Handling & Stringing Equipment, Inc. has stated that their claim being submitted, but not yet received, will contain amount of funds claimed and validating documents.

Shipping

The complete shipment of communications equipment and maintenance shop equipment furnished under contract no. Pj.196/PST/80 arrived at the Port of Semarang on the U.S. flag carrier "Brinton Lykes". The shipment is retained by Indonesian Customs until an import permit is available for the communications equipment.

## 2. MATERIALS AND EQUIPMENT

During the reporting period, two contracts were executed covering materials in this procurement group. These contracts were :

Pj. 100/PST/81    FUTURA TRADING, INC.  
Pj. 101/PST/81    FUTURA TRADING, INC.

Thus, seven (7) contracts in this group remain to be executed. The two (2) contracts which required SEKNEG approval have been approved by that agency and are included in the number of contracts awaiting execution.

An initial request was made by PLN for issuance of Letters-of-Commitment for four (4) contracts executed previous to this reporting period.

Of the seven (7) contracts remaining to be executed, three (3) contracts are assigned to Ohm International, Inc. On April 4, 1981, a representative of Ohm International, Inc. (Ohm) stated that Ohm would not sign these contracts due to difficulty obtaining Letters-of-Credit for their contracts to furnish tools and equipment. Later in this reporting period, Ohm made a presentation to USAID - Washington stating that they would not sign subject contracts without agreements to increases in contract prices and assurance of L/C s within a given period.

The additional demands of Ohm are without legal basis. The bidding procedures and associated correspondence, offerings, and acceptances were made by PLN and Ohm within the limits of time agreed to by both parties. While Ohm's bid bond had lapsed, Ohm had agreed to extensions to the bid period and PLN had assigned the contracts to Ohm, with resultant acceptance by Ohm, within the agreed-to bid period extensions.

Further delay in the execution of Ohm's contracts will result in delayed beginning of construction, for these contracts will supply basic line hardware needed to begin construction.

### 3. HOUSEWIRING MATERIALS AND METERS

A preliminary evaluation of bids, without recommendations, for housewiring materials and meters was submitted to PLN on April 11, 1981 for consultation. A meeting was held on April 22, 1981 between PLN and MAIN to discuss various aspects of the evaluation. The evaluation will be completed in the near future.

PLN decided to request AID concurrence to local procurement of service entrance weatherheads, cable clips, roof flashings, and cement. There had been no response by bidders to these items which had been listed in the IFB.

### 4. CONDUCTORS

During the reporting period, PLN conducted further negotiations with P.T. Kabelindo Murni, P.T. Sucaco, P.T. Voksel Electric, and P.T. Indotrijaya in an attempt to find a conductor supplier who would agree to furnish the required conductor at a price that the Netherlands Government would approve. The Netherlands Government were advised of the results of the continuing negotiations; however, PLN has had no reply to their communications.

### 5. POLES

During the reporting period, the wood pole supplier delivered 103 treated wood poles to the Project. A total of 1725 poles have been delivered.

As of this reporting period, the contractor supplying steel poles has delivered and set 1406 steel RS poles.

### 6. ADDITIONAL LINE HARDWARE

During the reporting period, MAIN amended the previously prepared initial draft of the IFB relating to these materials in accordance with comments solicited from PLN and AID. The final draft of this IFB awaits resolution of the length of bid period to be specified.

## 7. FUNDING

The present accumulated value of procurement contracts and funds committed by Letter of Commitment from the USAID loan are shown in Table 2.

A spread sheet showing additional details of contracts, Letters of Commitment and Letters of Credit is contained in the Appendix.

## C. CONSTRUCTION

### 1. DISTRIBUTION SYSTEMS

Line construction continued at Sleman/Bantul, Klaten, and Magelang with the hauling and setting of poles. The quantity and type of poles set are as follows :

<u>SITE</u>	<u>STEEL RS</u>	<u>WOOD</u>
Sleman/Bantul	301	105
Klaten	1095	-
Magelang	10	547

### 2. HEADQUARTERS COMPLEXES

During the reporting period, site works construction proceeded at all sites. The respective contract and construction data for the various sites are shown in table 3. It is noted that the construction at the Klaten and Magelang sites have been completed.

## D. PROJECT PROGRESS

The Project progress chart showing the scheduling and progress status of engineering and construction activities is contained herein. A tabulation of project percent completion is contained in the Appendix. As of this reporting period, percent completion is :

Scheduled : 10.84%

Actual : 10.63%

Scheduled progress slipped by 0.21% during the period due to contractors failure to maintain construction progress at some headquarters complex sites and to maintain an average number of RS poles set.

TABLE 2

COMMITTED FUNDS - AID LOAN

As of : April 30, 1981

<u>NO.</u>	<u>CONTRACT SUPPLIER</u>	<u>AMOUNT</u>	<u>NO.</u>	<u>LETTER OF COMMITMENT</u>	
				<u>BANK</u>	<u>AMOUNT *</u>
Pj. 191/PST/1980	Mitsum Int'l. Ltd.	\$ 322,267.55	497-T-05207	CitiBank NA	\$ 322,267.55
Pj. 195/PST/1980	New World Research Corp.	821,722.00	497-T-05208	CitiBank NA	821,722.00
Pj. 198/PST/1980	Hyundai Corp.	327,804.00	497-T-05209	CitiBank NA	327,804.00
Pj. 213/PST/1980	Ohm International	169,185.17 )	497-T-05210	Wells Fargo	1,326,715.29
Pj. 216/PST/1980	Mexican Curtis, Inc.	569,473.00 )			
Pj. 233/PST/1980	Ohm International	69,149.65 )			
Pj. 263/PST/1980	Cable Handling & Strapping Equip. Inc.	314,714.96 )			
Pj. 269/PST/1980	ITT Export Corp.	195,171.76 )			
<b>PRESENT TOTAL</b>		<b>: \$ 2,792,485.07</b>	<b>PRESENT TOTAL :</b>		<b>\$ 2,805,759.20</b>

\* Includes Bank Charges

As of April 30, 1981.

TABLE 3  
SITE DEVELOPMENT CONTRACTS  
HEADQUARTERS COMPLEXES

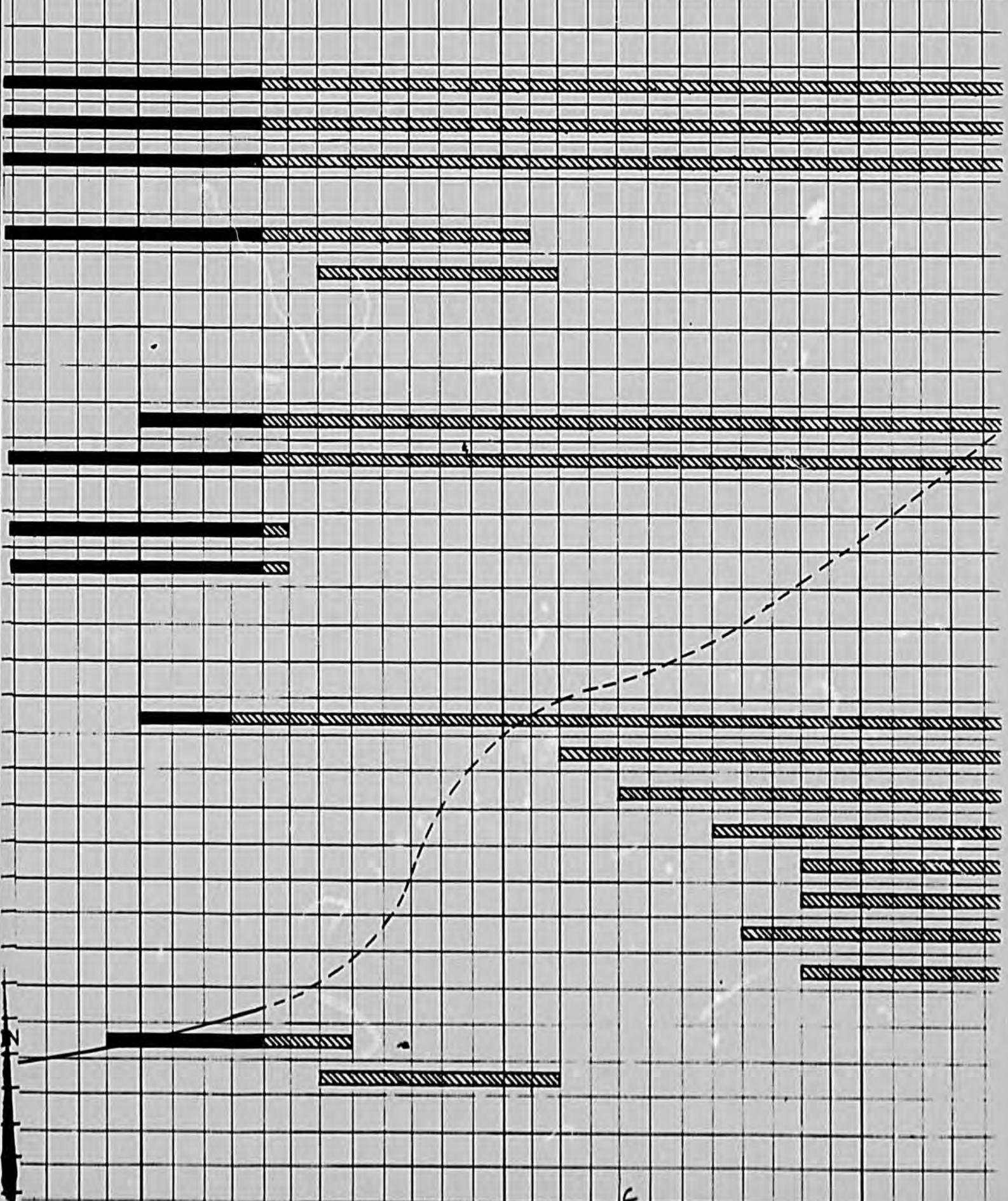
<u>SITE</u>	<u>BID REC'D</u>	<u>CONTRACT AWARD</u>	<u>CONSTRUCTION</u>	<u>% COMP.</u>	<u>SCHEDULED CONSTRUCTION COMPLETE</u>
BANTU S	OCT. 9, 1980	DEC. 15, 1980	JAN. 1, 1981	47	JUNE 15, 1981
KLATEN	OCT. 9, 1980	NOV. 8, 1980	NOV. 10, 1980	100	JUNE 10, 1981
MAGELANG	AUG. 25, 1980	SEPT. 22, 1980	OCT. 10, 1980	100	APRIL 13, 1981
PEKALONGAN	AUG. 9, 1980	NOV. 10, 1980	NOV. 15, 1980	53	APRIL 10, 1981
SLEMAN-BANTUL	AUG. 25, 1980	SEPT. 15, 1980	SEPT. 29, 1980	99	FEB. 22, 1981
SRAGEN	OCT. 9, 1980	DEC. 1, 1980	DEC. 9, 1980	77	APRIL 30, 1981
MONOGIRI	OCT. 9, 1980	NOV. 3, 1980	NOV. 15, 1980	90.5	APRIL 25, 1981



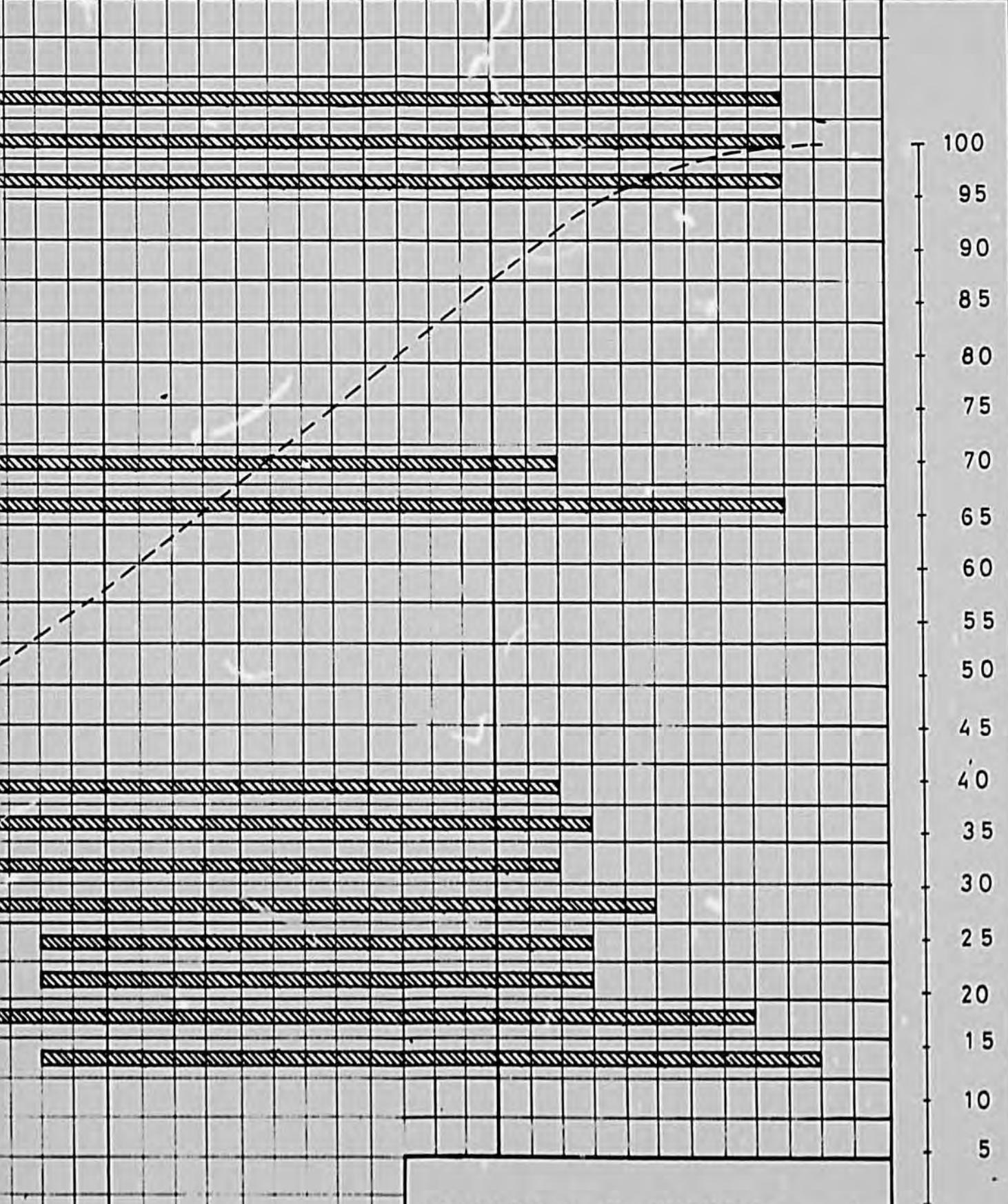


# CONSTRUCTION PROGRESS TION SYSTEM - CENTRAL JAVA

1981												1982																				
S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M



1983												1984												PERCENT COMP'L		
O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S		O	N



IV. ADMINISTRATION

A. PERSONNEL

Table 4 lists the job classifications and associated manmonths allocated to MAIN. Also shown are the personnel assigned and manmonths consumed for each job classification.

Mr. N.G. Popov, of MAIN's Construction Management Division at Boston, arrived at Jakarta on April 26, 1981 for a supervisory visit to the Project. Mr. Popov will consult with PLN and AID on various project matters.

B. LOGISTICS

Table A-2, Appendix. lists the continuing logistic support furnished by PLN to MAIN.

C. OTHER

During Mr. Popov's discussions with AID, AID commented on the timing and content of the monthly reports submitted by MAIN. Promptness of reports; elaboration of problem areas and solutions; unclear display of drawing status; and log of visitors and reasons for visits were stated as report deficiencies. These deficiencies will be corrected in future reports.

TABLE 4

JOB CLASSIFICATIONS & MANMONTHS

THROUGH : March 26, 1981

JOB CLASSIFICATIONS	LOCATION	AGENCY		PERSONNEL ASSIGNED	MANMONTH		% CONS.	% REMAIN
		PLN	DGC		ALLOCATED	CONSUMED		
Project Director	Jakarta	x	x	D. A. Dowling	40	28.8	72.0	28.0
Business Manager	Semarang	x	x	R. N. Key	39	28.6	73.3	26.7
Administrative Ass't	Jakarta	x	x	P. Korin	24	8.2	34.1	65.9
Area Manager	Semarang	x		H. E. Johnson	24	5.7	23.8	76.2
Lead Elect. Engineer	"	x		F. W. Hill	38	25.0	65.8	34.2
Civil Engineer	"	x		B. R. Morrow	24	17.1	71.3	28.7
Architect	"	x		-	3	-	-	-
Distrib. Const. Sup'r.	"	x		J. W. Pitts	37	27.4	74.1	25.9
Field Supervisor	"	x		J. J. Bennett	34	23.2	68.2	31.8
Field Supervisor	"	x		J. V. Hardman	35	24.0	68.6	31.4
Lead Elect. Engineer	Jakarta		x	G. Smith	39	25.6	65.6	34.4
Elect. Engineer	"		x		24	24.0	100.0	- 0 -
Electrical Engineer	"		x	E. Borja	24	7.5	31.3	68.7
Electrical Engineer	"		x	C. S. Saniel	24	9.2	38.3	61.7
Electrical Engineer	"		x	R. Resabal	24	4.0	16.7	83.3
Civil Engineer	"		x	V. H. Sidiongco	24	9.5	39.6	60.4
Senior Draftsman	"		x	D. K. Hoffer	24	13.2	55.0	45.0
Field Supervisor	Lampung		x	F. Cachin	35	26.7	76.3	23.7
Field Supervisor	Lombok		x	C. T. Nuez	35	21.4	61.1	38.9
Field Supervisor	L u w u		x	R. Garcia	35	26.9	76.9	23.1
Materials Supervisors	Jakarta		x	P. Wilson	12	.9	7.5	92.5
Boston Office					90	47.4	52.7	47.3
					<u>688</u>	<u>404.3</u>		

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X. FINANCIAL

A. Following is a summary of costs invoiced through March 31, 1981 :

	<u>Budget</u>	<u>Invoiced</u>		<u>Paid</u>
		<u>To Date</u>	<u>This Period</u>	<u>To Date</u>
U.S. AID	\$ 5,355,261	\$ 2,594,432	\$ 105,222	\$ 2,382,511
PLN		Rp.57.588.441,-Rp.3.204.497,-		Rp.54.383.944,-

B. A detailed breakdown by Contract line item of MAIN's invoices to U.S. AID is as follows:

<u>Description</u>	<u>Budget</u>	<u>Costs To Date</u>			
		<u>PLN</u>	<u>DGC</u>	<u>TOTAL</u>	
Salaries & Wages	\$ 1,484,257	\$ 406,753	\$ 401,057	\$ 807,810	
Fringe Benefits	278,636	65,023	70,339	135,362	
Allowances	382,355	92,720	99,240	191,960	
Travel & Transportation	959,825	201,862	182,144	384,006	
Other Direct Costs	450,037	39,112	103,357	142,469	
Overhead	1,390,151	381,841	376,752	758,593	
Fee	410,000	87,338	86,894	174,232	
<b>T O T A L</b>	<b>:</b>	<b>\$ 5,355,261</b>	<b>\$ 1,274,649</b>	<b>\$ 1,319,783</b>	<b>\$ 2,594,432</b>
		*****	*****	*****	*****

## VI. PROBLEM AREAS

### A. POLES

Lack of wood poles continues to hamper construction progress due to inability of supplier to provide quality poles in sufficient quantities. PLN and USAID have taken action to alleviate this problem by USAID concurrence to a PLN proposal to supply and use steel secondary poles and pre-stressed spun concrete poles. PLN has initiated procurement action executing contracts for the supply of steel poles and negotiated impending contracts for the supply of concrete poles.

To accelerate the production of concrete poles, PLN has succeeded in getting the grounding conductor supplier, Hyundai Corp., to advance shipping dates for this conductor by approximately two (2) months. This action will permit earlier manufacture and delivery of concrete poles.

### B. LINE MATERIALS AND EQUIPMENT

Procurement action has lagged due to administrative reviews, supplier delays in signing contracts and the administrative processes involved in issuance of Letters-of-Commitment and Letters-of-Credit. PLN and USAID have begun to coordinate their respective activities in these matters to a greater degree and are emphasizing attention and action to reduce the time which these activities consume.

Another problem which has arisen, and previously discussed in Section III.B.2 of this report, is the refusal of Ohm International, Inc. to sign the contracts resulting from their bid response to the Material and Equipment IFB.

Delays in the execution of these contracts will result in delayed construction and positive action must be taken to minimize the adverse impact on the Project of these delays.

## VII. OFFICIAL VISITS & TRIPS

### A. OFFICIAL VISITS

During the reporting period, there were no official visits by PLN or AID officials to the Project.

Mr. Irwan, of AID's technical staff was in Semarang intermittently throughout the reporting period to review headquarters complex construction drawings and specifications.

### B. PROJECT TRIPS

During the period, MAIN field staff members made several lengthy trips to Magelang, Klaten and Sleman to assist PLN pole setting activities at Magelang and Klaten and to review construction drawings in the field. Several trips were made to Jakarta by MAIN staff members to coordinate project administrative, procurement and technical matters with PLN-PUSAT and AID.

### C. PROJECT COORDINATION MEETINGS

Project coordination meetings were held at PLN Pusat on April 1, 1981 and April 15, 1981. Both of the meetings were attended by project officials of PLN and AID and supervisory members of NRECA and MAIN staffs. The meetings were chaired by MAIN, who also prepared and distributed the minutes of the respective meetings.

The meetings have proved to be effective in promoting the exchange of views and information between the participating members and in bringing into sharp focus the various aspects of the project which require prompt action. This is particularly true of problems which have plagued the various

procurement actions. As a consequence of these meetings, various administrative matters relating to procurement have be more aggressively performed and timely results obtained.

The next scheduled coordination meeting will be held in Jakarta on May 4, 1981.

VIII. PROJECT CORRESPONDENCE

A. The following communications were issued from MAIN's Semarang office during the reporting period :

<u>Addressee</u>	<u>Letter No.</u>	<u>Date</u>	<u>Subject</u>
P. I. Ring	S - 7250	April 4, 81	Rupiah PLN Invoice No. 35
New World Research	S - 7252	April 6, 81	Housewiring Materials to PLN
USAID	S - 7254	April 6, 81	Utility & Housing expense invoice No. 14
New World Research	S - 7256	April 7, 81	Housewiring Materials.
Mr. Soedarso	S - 7262.	April 8, 81	Distribution Transformers in the amount of \$ 1,640,840.00
New World Research	S - 7266	April 10, 81	Housewiring Materials Fund
PLN Pusat	S - 7268	April 11, 81	R.E. Preliminary Evaluation Housewiring IFB.
Mr. Basoeki	S - 7282	April 18, 81	R.E.P. Central Java Contract No. Pj. 029/PST/81.
Mr. Tony Yogyakarta	S - 7286	April 20, 81	Papers of Jimmy Pitts
USAID	S - 7290	April 21, 81	R.E.P. Contract No. AID/ASIA-C-1357. Monthly Report - February 1981.
MAIN Boston	S - 7294	April 25, 81	J. W. Pitts Sea Shipment
PLN Pusat	S - 7296	April 25, 81	R.E.P. Central Java Contract No. Pj. 029/PST/81
USAID	S - 7302	April 27, 81	Invoice No. AID - 72R

B. The following communications were issued from MAIN's Jakarta office during the reporting period :

<u>Addressee</u>	<u>Letter No.</u>	<u>Subject</u>
Ir. Soedarso	J - 3858	Letter - R.E. Project Central Java Contract No. Pj.195/PST/80 Letter of Credit No. 0103/17157/PL.
Mr. A Grayson	J - 3865	Distribution Engineer - Central Java Contract AID/ASIA-C-1357
All Concerned	J - 3870	Transmittal Minutes for Coordination Meeting.
Futura	J - 3872	Telex - Central Java Distribution Materials Successful Bidders.
R.A. Doucette	J - 3873	R.E. Contract No. AID/ASIA-C-1357 Home Leave / Vacation Mr. J. J. Bennett
Mr. A Grayson	J - 3874	Personnel - Central Java R.E. Program.
Ken Jordan	J - 3880	Telex - Contract Pj. 265/PST/80.
Curran	J - 3888	Telex - Coordination Meeting
Ir. Wiratmoko Setiadji	J - 3889	Coordination Meeting
R A Doucette	J - 3891	Mr. James W. Pitts
Mr. Popov	J - 3892	Telex - Reassignment of Jim Pitts
Merican Curtis	J - 3893	Telex - CJ Tools & Equipment Contract No. Pj. 216/PST/80.
R A Doucette	J - 3899	Comments on Chas. T. Main International, Inc. Performance Evaluation under Contract AID/ASIA-C-1357.
Ken Jordan/ Cable Handling & Str. Equip.	J - 3907	Telex - Contract 265
All Concerned	J - 3925	Coordination Meeting # 2.
All Concerned	J - 3927	Minutes of Housewiring Evaluation Meeting.

<u>Addressee</u>	<u>Letter No.</u>	<u>Subject</u>
Ir. Soedarso	J - 3935	Drafts of Request to issue Letters of Commitment.
Birdsall/ Futura Trading	J - 3939	Telex - Central Java Conductor
Curran	J - 3940	Telex - Central Java Outstanding Invoice Spare Parts.
Mr. Wiratmoko Setiadji	J - 3942	Coordination Meeting # 3.
Mr. Wiratmoko Setiadji	J - 3946	Coordination Meeting # 3.
Secretary of The Cabinet	J - 3948	Mr. Beryl Morrow

IX. CONSTRUCTION PHOTOGRAPHS



SETTING RS POLES - KLATEN



SETTING RS POLES - KLATEN



PLN RESTAKING - KLATEN

TABLE A - 1

PRE DESIGN LINE STAKING

<u>Service Area</u>	<u>No. Villages</u>	<u>Circuit Length - Total KM.</u>			<u>% of Feasibility Study Requirements</u>
		<u>Three Phase</u>	<u>Single Phase</u>	<u>Sec. Only</u>	
Sleman/Bantul	21	30	192.8	172.6	130
Banyumas	35	45.6	135.6	64.6	102
Klaten	102	64.5	246.3	303.8	112
Magelang	83	51.6	277.8	86.1	131
Pemalang/ Pekalongan	136	73.1	226.1	197.7	153
Sragen	55	35.1	217.3	236.4	149
Wonogiri	54	58.7	346.5	255.7	181

TABLE A-2  
LOGISTICS SUPPORT

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<u>PERSONNEL</u>	<u>HOUSING</u>		<u>TRANSPORT</u>
	<u>LOCATION</u>	<u>BY</u>	
J. J. Bennett & Family	Semarang	PLN	PLN
D. A. Dowling & Family	Jakarta	AID	Vehicle by PLN operation by DGC
J. V. Hardman & Family	Semarang	PLN	PLN
F. W. Hill & Family	Semarang	PLN	PLN
H. E. Johnson	Semarang	PLN	PLN
R. N. Key & Family	Semarang	PLN	PLN
B. R. Morrow & Family	Semarang	PLN	PLN
J. W. Pitts & Family	Semarang	PLN	PLN

PLN provides offices at Semarang for MAIN and full logistic support consisting of secretarial personnel, drivers and all operational necessiters.

PLN provides office facilities at Jakarta and partial operational support for that office.

CONTRACT No	CONTRACTOR	DATE OF CONTRACT	EFFECTIVE DATE OF CONTRACT	FOF
Pj. 195/PST/80	New World Research Corp.	30-7-80		Lab. & Test I Vehicular Equ Ground Rods
Pj. 196/PST/80	Maison International Ltd.	18-8-80		Communication Maint. Shop I
Pj. 198/PST/80	Hyundai Corp.	5-8-80		Grounding Mat
Pj. 215/PST/80	Ohm International, Inc.	8-9-80		Distr. Hand T
Pj. 216/PST/80	Merican Curtis, Inc.	8-9-80		Maintenance T
Pj. 223/PST/80	Ohm International, Inc.	23-9-80		Compression T
Pj. 265/PST/80	Cable Handling & Stringing Equipment Inc.	27-10-80		Stringing Equ
Pj. 269/PST/80	ITT Export Corp.	10-11-80		Distr. Line T
Pj. 029/PST/81	Irby Construction Co.	20-2-81		Service Mater Protective dc
Pj. 030/PST/81	Copperweld Industries	23-2-81		Guy Strand
Pj. 031/PST/81	McGraw Edison Co.	23-2-81		Protective dc
Pj. 032/PST/81	Produtos Para Linhas Preformadas LTDA	23-2-81		Conductor Sp
Pj. 100/PST/81	Futura Trading, Inc.	27-4-81		Copper Conduc Service Condu
Pj. 101/PST/81	Futura Trading, Inc.	27-4-81		Crossarms & I Insulators Insulators

A-3-1

# SUMMARY OF CONTRACT STATUS

## CONTRACT FOR MATERIAL & EQUIPMENT

FOR SUPPLY OF	LETTER OF COMMITMENT		
	CORRESPONDENT BANK	No	DATE
Lab. & Test Equipment    \$ 197,822.00	CITI BANK N.A.	497-T-05208	2-1-81
Vehicular Equipment        113,900.00			
Ground Rods                 .510,000.00			
Communication Equipment   225,073.71	CITI BANK N.A.	497-T-05207	25-11-80
Maint. Shop Equipment      97,193.84			
Grounding Material         327,804.00	CITI BANK N.A.	497-T-05209	21-1-81
Distr. Hand Tools           169,185.17	WELLS FARGO BANK INTERNATIONAL	497-T-05210	12-2-81
Maintenance Trucks        569,473.00			
Compression Tools         69,149.78			
Stringing Equipment        314,714.96			
Distr. Line Tools           198,171.76			
Service Materials           268,107.50			
Protective devices         187,408.88			
Guy Strand                 390,177.99			
Protective devices         87,619.20			
Conductor Specialties      144,831.00			
Copper Conductors         18,303.98			
Service Conductors         486,049.56			
Crossarms & Braces         125,597.10			
Insulators                 221,803.50			
Insulators                 85,471.75			

A-3-2

**TABLE A-3**

**AS OF : APRIL 30, 1981**

**SHEET OF**

COMMITMENT		LETTER OF CREDIT			
DATE	EXPIRE. DATE	BANK INDONESIA No	DATE	CORRESPONDENT No	BANK DATE
8	2-1-81	1-11-82	0103/17157/PL	18-3-81	
7	25-11-80	1-11-82	0103/16410/PL	18-12-80	
9	21-1-81	1-11-82	0103/16903/PL	18-2-81	
			0103/16909/PL	29-4-81	
0	12-2-81	31-1-83			
			0103/17610/PL	29-4-81	
			0103/17611/PL	29-4-81	
			0103/17612/PL	29-4-81	

A-3-3



# SUMMARY OF SHIPPING MATERIALS & EQUIPMENT

	INVOICE TOTAL	BILL OF LADING No	LADING DATE	DATE OF ARRIVAL PORT	.. WAREHOUSE	
	\$ 224,857.57 97,193.84	007	Jan. 23, 1981	March 1981		Ret
			A-4-1			

TABLE A-4

AS OF: APRIL 30, 1981

SHEET 1 OF 1

HOUSE	REMARKS
	<p>Retained by customs due to lack of import permit.</p> <p>A-4-3</p>

APPENDIX

PERCENT COMPLETION  
ENGINEERING & CONSTRUCTION PROGRESS

<u>PERIOD</u>	<u>SCHED.</u>	<u>ACT.</u>	<u>PERIOD</u>	<u>SCHED.</u>	<u>ACT.</u>
SEPT. 78	-	.01	NOV. 81	33.76	
OCT. 78	-	.04	DEC. 81	37.71	
NOV. 78	-	.06	JAN. 82	40.69	
DEC. 78	-	.13	FEB. 82	41.88	
JAN. 79	-	.24	MAR. 82	42.75	
FEB. 79	-	.36	APR. 82	43.63	
MAR. 79	-	.49	MAY 82	44.92	
APR. 79	-	.63	JUN. 82	46.21	
MAY 79	-	.78	JUL. 82	47.5	
JUN. 79	-	.97	AUG. 82	49.21	
JUL. 79	-	1.16	SEPT. 82	51.43	
AUG. 79	-	1.35	OCT. 82	53.9	
SEPT. 79	-	1.53	NOV. 82	56.17	
OCT. 79	-	1.70	DEC. 82	58.51	
NOV. 79	-	1.86	JAN. 83	60.85	
DEC. 79	-	1.99	FEB. 83	63.23	
JAN. 80	-	2.11	MAR. 83	65.63	
FEB. 80	-	2.24	APR. 83	68.04	
MAR. 80	-	2.35	MAY 83	70.46	
APR. 80	-	2.46	JUN. 83	72.89	
MAY 80	-	2.56	JUL. 83	75.32	
JUN. 80	-	2.67	AUG. 83	77.74	
JUL. 80	-	2.78	SEPT. 83	80.17	
AUG. 80	-	2.88	OCT. 83	82.58	
SEPT. 80	-	2.99	NOV. 83	85.0	
OCT. 80	-	3.1	DEC. 83	87.39	
NOV. 80	-	3.71	JAN. 84	89.77	
DEC. 80	-	4.65	FEB. 84	92.09	
JAN. 81	-	6.0	MAR. 84	93.83	
FEB. 81	-	7.48	APR. 84	95.31	
MAR. 81	-	9.06	MAY 84	96.75	
APR. 81	10.84	10.63	JUN. 84	97.7	
MAY 81	12.15	-	JUL. 84	98.6	
JUN. 81	13.50	-	AUG. 84	99.46	
JUL. 81	14.71	-	SEPT. 84	99.55	
AUG. 81	19.0	-	OCT. 84	100.0	
SEPT. 81	24.37	-			
OCT. 81	30.66	-			



APPENDIX  
ENGINEERING & CONSTRUCTION  
PROGRESS CHART

PURPOSE

USAID has requested a monthly record and display of Project engineering and construction progress which documents the level of effort expended in these project activities to construct the project facilities. The goals are to determine actual progress as compared to scheduled progress and to more effectively identify discrete areas of activity which may become delayed. The ultimate purpose, of course, is the development of a management tool to assist in bringing the project to a successful completion in accordance with the project schedule.

The parameters used to develop the bars and the status curve are labor, in terms of manmonths, and time. Plotted completion will then correlate with visible construction, the stated USAID goal. The effect of funds expended for procurement of materials is not contained in the input data.

The plotted data is pragmatically based on existing project conditions as they exist now. No consideration is given to original project schedules or previous planning. The plot displays past progress to date as it occurred, in terms of manmonths, and the plotted future progress is based as realistically as possible on factual conditions and assumptions now considered valid.

METHODOLOGY

Manmonths are determined, generally, from construction units required times the predicted rates of construction unit completion. Time frames are established from the quantities of assigned manpower times the manmonths required, coordinated with the time of availability of materials.

Quantities of line construction units were tabulated from the distribution system construction documents (SDS sheets). PIN distribution construction unit work rates, developed from previous PIN construction activities, were then used to translate quantities of various construction units to total manmonths required to construct the various units.

The required manmonths were then allocated to assigned PLN crews and PLN-contracted labor forces to determine construction periods for various activities, these periods beginning with assumed dates of material availability and sequenced by required line construction activities.

The time periods of the various line construction activities are plotted as a bar chart. The quantity of manmonths, expended by periods and continuously summed, are plotted as a curve of percentage of overall project completion.

The construction schedule and percent of project completion curve shown are based on the following conditions for labor supply and the following assumptions for material availability :

LABOR

1. PLN-P 1 RING will assign construction crews as follows :
  - (a) 4 each 18-man crews to frame and conductor 3-phase lines at all sites.
  - (b) 3 each 6-man crews at each site to
    - (1) install all required guys
    - (2) frame and conductor all 1-phase, secondary, and underbuild secondary circuits
    - (3) Install all transformers and all apparatus on all circuits.
2. PLN-Wilayah XIII will assign forces to accomplish housewiring-service installations and to install meters.
3. PLN-P 1 RING will contract labor forces to set poles and install anchors.
4. PLN-P 1 RING will contract all labor to construct headquarters complex facilities.
5. Engineering manmonths by PLN and MAIN are based on the number of persons who participated in such activity and who are scheduled to participate in such activity.

## MATERIAL AVAILABILITY

It is assumed that :

1. All contract suppliers of distribution materials and equipment will have their respective Letters-of-Credit not later than August 1, 1981.
2. All contract suppliers of housewiring materials and meters will have their respective Letters-of-Credit, or equivalent, not later than January 1, 1982.
3. Sufficient quantities of conductor will be available at the sites to begin and continue conductor stringing as shown.
4. All material suppliers will ship materials in accordance with the shipping schedules contained in their respective contracts.
5. Average period of four (4) months after shipping time allowed for shipping, Indonesian customs clearing, warehousing, and distribution of materials to various sites.

Monthly evaluation of actual construction progress, for comparison with monthly scheduled progress, will be accomplished by comparing the amount of installed construction units with quantities scheduled and reducing the results in terms of manmonths, the basic parameter of the progress chart.

If any conditions on which the schedule is based change to a degree which would affect the accuracy of the charting, the schedule will be revised to reflect the changed condition. If any of the assumptions made prove to be invalid, the schedule will be revised to reflect the changes necessary.