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# REPUBLIK INDONESIA

DEPARTEMEN PEKERJAAN UMUM  
DIREKTORAT JENDRAL BINA MARGA



**ACEH ROAD BETTERMENT PROJECT**

**MONTHLY PROGRESS REPORT**

**NOVEMBER 1979**

**LOUIS BERGER INTERNATIONAL INC.**

**P. T. ASA ENGINEERING PERTAMA**

**CONSULTING ENGINEERS**



LOUIS BERGER INTERNATIONAL, INC.  
Architects - Engineers - Economists - Planners



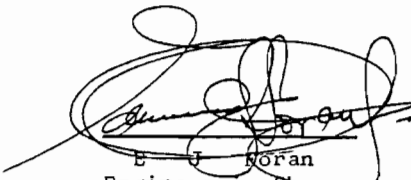
P.T. ASA ENGINEERING PERTAMA  
Architects - Engineers - Constructors - Real Estate  
Developers - Modular Home Manufacturers.

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ACEH ROAD BETTERMENT PROJECT  
MONTHLY PROGRESS REPORT  
NOVEMBER 1979

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ACEH ROAD BETTERMENT PROJECT  
MONTHLY PROGRESS REPORT  
NOVEMBER 1979

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PART I

SUMMARY REPORT

PROJECT MAP

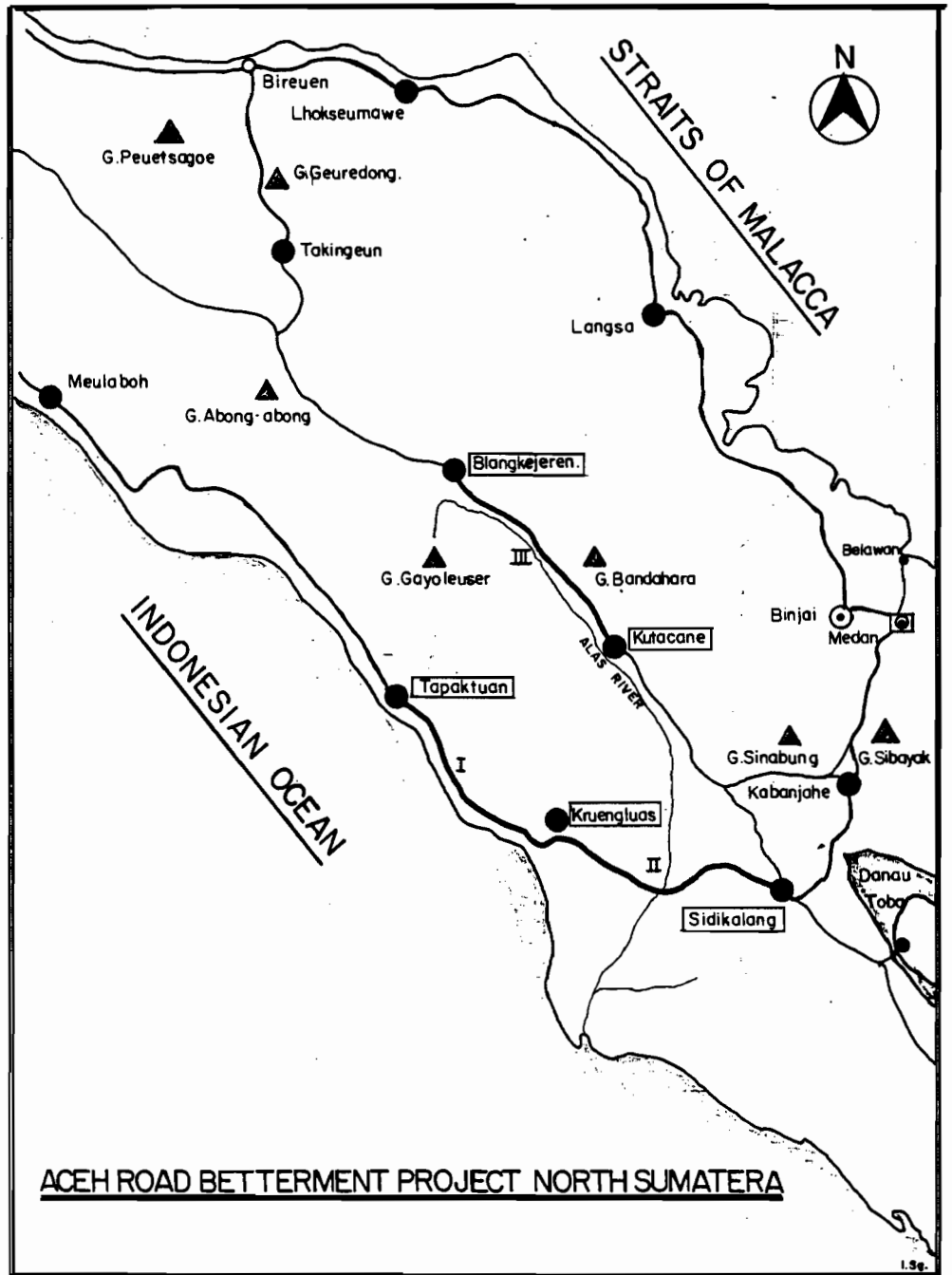
The Aceh Road Betterment Project is located in the province of Aceh and North Sumatera.

The three sections of the Project are shown on the attached map :

Section I - 96 km : Tapaktuan - Kruengluas Road  
located on the South coast of  
the Aceh Province

Section II - 117 km : Sidikalang - Kruengluas Road  
which is partially in North  
Sumatera and partially in Aceh  
Province

Section III - 105 km : Kutacane - Blangkajeren Road  
which is in the central area  
of the Aceh Province.



**ACEH ROAD BETTERMENT PROJECT NORTH SUMATERA**

GENERAL SUMMARY

GENERAL SUMMARY

CONSTRUCTION

I. Tapaktuan - Kruengluas

This construction contract was terminated in February of 1979. To date no plans have been made to continue work on this section except for work under the Bina Marga AWCAS program.

II. Sidikalang - Kruengluas

Continued heavy rains hampered roadway construction progress. Most of the month was spent in keeping the roadway open to construction traffic and removing slide material. The beams on the Lae Simbolon bridge have been set and grouted; the handrails and safety walk are completed; paving of the structure and road approaches will be started late December or early January subject to weather conditions. Setting of the beams for Lae Leam has commenced this month.

III. Kotacane - Blangkajeren

Heavy rains during this month slowed construction. The contractor laid 1.6 km of Penetration Macadam pavement and placed or total of 126 m<sup>3</sup> of structural concrete.

IV. Design/Survey Program

The field survey work continues to progress on all section. The information is being sent to the design office in Medan where it is used for preparation of the design plans.



A Summary description is as follows :

A. Survey

Section I - Tapaktuan - Kruengluas

Only minor additional survey was carried out along this section, mainly to gather general topo & water crossing.

Section IIa - Lae Buluhdidi - Subulusalam

Completion of detail surveys of each water crossing was continued during this month.

b.- Subulusalam - Gelombang

The final stake out of final alignment was started at the Subulusalam end following the existing track and the old Bina Marga alignment.

Section III - Kutacane - Kruengluas

Survey work has continued during this month incorporating all existing topo and the AWCAS improvement work in our drawings. This information will facilitate the design of the recommended alignment.

B. Design

General

- High priority was given during this month to the Landslides Investigation. Two reports Part I & II on slope stability in highways design and construction were prepared by this office. Part I, was submitted during the lecture in Jakarta. Part II report will be submitted during the next report period.

Section I - Tapaktuan - Kruengluas

The design has proceed incorporating the final alignment in the Bina Marga standard sheets. Preliminary layouts of proposed waterways structures are underway.

Section IIa - Lae Buluhdidi - Subulusalam

Plotting of water crossing field information in progressing satisfactorily.

Section IIb - Subulusalam - Gelombang

During this report period, horizontal & vertical alignment layouts of the proposed alignment were started. These include all & box culverts layouts.

Section III - As programmed the previous month, the full report of the reviewed drainage structures for all water crossings was completed during this month. Report, includes sizing and approx. location of the structures. Plotting of existing topo and AWCAS road is progressing satisfactorily.

C. Percentage of Completion

Work progress has declined this month in relation with our proposed work schedule due primarily to the Rainy season. At the end of this report period, the percentage of work completed is estimated to be : survey 24.2%, design 12.5%, total 36.7% of the total programme of work.

For detailed work progress of survey & design, refer to Bar Chart, page 7.

SURVEY AND DESIGN

November '79

SCHEDULE PROGRESS	S = SURVEY D = DESIGN	1979						1980						% TO DATE					
		J	J	A	S	O	N	D	J	F	M	A	M	J	J	S	D	TOT.	
Section I : TAPAKTUAN - KRUENGLUAS (96Km)																		63	
Horizontal, Align - Plan	S																90	40	65
Vertical, Align - Plan	D																90	40	65
Cross Sections	D																-	40	40
Permanent Ref & B.M.	S																90	-	90
Culverts & Bridges	D																90	25	57
Section II : a) BULUHDI - SUBULUSALAM (22km)																			24
Horizontal, Align - Plan	S																20	10	15
Vertical, Align - Profile	D																20	10	15
Cross Sections	D																-	-	-
Permanent Ref & B.M.	S																40	-	40
Culverts & Bridges	D																80	20	50
b) SUBULUSALAM - KRUENGLUAS (50 Km)																			32
Align. Reconnaissance	S																100	-	100
Preliminary Traverse - Lay out	D																100	80	90
Horizontal, Align - Plan	S																10	5	7
Vertical, Align - Profile	D																10	5	7
Cross Sections	D																-	5	5
Permanent Ref & B.M.	S																10	-	10
Culverts & Bridges	D																10	5	7
Section III : KM.44 - BLANGKEJEREN ( 60Km)																			55
Horizontal Alignment	S																40	30	35
Vertical Alignment	D																40	30	35
Cross Sections	D																-	30	30
Permanent Ref & B.M.	S																100	-	100
Culverts & Bridges	D																100	55	77
Addit. Soils Investigation - I, II, III.	S																-	-	-
Revision of Quantity Estimate	D																-	-	-

COMPLETED 

HEADQUARTERS AND SURVEY & DESIGN  
STAFF

HEADQUARTERS STAFF

<u>Classification</u>	<u>Begin Period</u>	<u>End Period</u>	<u>Variation</u>	<u>Location</u>		
				<u>Sk</u>	<u>Mdn</u>	<u>Jkt</u>
<u>Expatriate</u>						
Engineer-in-Charge	1	1	0	1	-	-
Dy Engineer-in-Charge	<u>1</u>	<u>-</u>	<u>-1</u>	<u>-</u>	<u>-</u>	<u>-</u>
	2	1	-1	1	-	-
<u>Indonesian</u>						
Progress Engineer and Cont.Admin.	1	1	0	1	-	-
Ass.Material Eng.	2	-	-2	-	-	-
Chief Laboratory	1	-	-1	-	-	-
Lab Technicians	2	-	-2	-	-	-
Admin. Manager	1	1	0	1	-	-
Purchasing Officer	1	1	0	-	1	-
Jr Accountant	1	1	0	1	-	-
Secretaries	2	2	0	1	-	1
Draftsman	1	1	0	1	-	-
Clerk	2	2	0	2	-	-
Radio Operator	1	1	0	1	-	-
Drivers	6	4	-2	3	1	-
Office janitor	5	5	0	4	-	1
Guard	<u>3</u>	<u>3</u>	<u>0</u>	<u>2</u>	<u>1</u>	<u>2</u>
	29	22	-7	15	3	4
Total Personnel	31	23	-8	16	3	4

DESIGN AND SURVEY STAFF

Classification	Begin Period	End Period	Variation	Sdk	Location		
					Mdn	Tpn	Kc
<u>Expatriate</u>							
Chief Design Eng	1	1	0	-	1	-	-
Bridge Design Eng	1	1	0	-	1	-	-
Alignment Eng.	1	1	0	1	-	-	-
Expat. Surveyor	<u>2</u>	<u>2</u>	<u>0</u>	<u>-</u>	<u>-</u>	<u>1</u>	<u>1</u>
	5	5	0	1	2	1	1
<u>Indonesian</u>							
Civil Engineer	4	3	-1	-	2	1	-
Surveyor	3	3	0	1	-	-	2
Instrumentmen	7	7	0	2	-	4	1
Draftsmen	9	9	0	-	8	1	-
Secretary	1	1	0	-	1	-	-
Clerk	1	1	0	-	1	-	-
Drivers	6	6	0	-	3	1	2
Survey Aides	15	15	0	5	-	4	6
Office Janitor	1	1	0	-	1	-	-
Guard	<u>1</u>	<u>1</u>	<u>0</u>	<u>-</u>	<u>1</u>	<u>-</u>	<u>-</u>
	48	47	-1	8	17	11	11
Total Personnel	53	52	-1	9	19	12	12

PART II

SECTION REPORTS

SIDIKALANG - KRUENGLUAS SECTION



SIDIKALANG - KRUENGLUAS SECTION

GENERAL

ROADS:

Due to the heavy rain(460mm) in this period, most of the Contractor force was used to maintain the road, remove land slides, and repair the subgrade.

BRIDGE:

All beams for Lae Simbolon bridge have been set, railing and approach slab also have been cast.

At Lae Leam bridge setting of beams is in progress.

R.C.P.:

This period the Contractor installed 182 linear meter R.C.P. of  $\emptyset$  60 cm and  $\emptyset$  100 cm.

EQUIPMENT UTILIZATION

TYPE	QUANTITY	P E R C E N T				REMARKS
		Operating	Idle	Down	+/- Change	
Bulldozer	8*	46	16	38	- 3	*3 for AWCAS
Motorgrader	4*	36	10	54	+10	*1 for AWCAS
Excavator	1	50	40	10	- 2	.
Loader	4	69	26	5	- 2	
Compactor	12*	58	35	7	+16	*3 for AWCAS
Crusher	2	51	49	-	-33	
Pavement	5	33	67	-	+26	
Conc.Mixer	7	12	88	14	+ 4	
Crane	2	35	21	44	+16	
Piling Eq.	3	-	-	-	-	
Dump truck	30	49	9,5	41,5	-	
Conc.Vibrator	6	15	85	-	+ 9	
Tamping rammer	5	14	86	-	-	

ROAD CONSTRUCTION

ACTIVITY	Length complete (km)		REMARKS
	This month	To date	
Pipe culvert $\phi 60$	9 m	25,4	
$\phi 80$	-	22,7	
$\phi 100$	173 m	36	
Subgrade	-	-	
Subbase	-	20.4	
Base	-	19	
Macadam	-	19	

BRIDGE CONSTRUCTION

Sta	Type	% Complete		R e m a r k s
		This month	To Date	
59 + 350	48 m bridge	3	93	Beams already set and also railing had cast
42 + 250	32 m	-	88	setting beams
38 + 910	2 x 2 box	-	100	
36 + 800	25 m bridge	-	100	
36 + 240	25 m bridge	-	100	
34 + 820	17 m bridge	-	100	
28 + 200	1 - 3 x 3 box	-	100	
27 + 460	25 m bridge	-	100	
25 + 740	1-1.8x1.8 box	-	100	
25 + 633	1.8x1.8 box	-	100	
24+631	1.8x1.8 box	-	100	
22 + 800	19 m bridge	-	100	

ENGINEER FORCE REPORT  
SIDIKALANG - KRUENGLUAS SECTION

<u>Classification</u>	<u>Begin Period</u>	<u>End Period</u>	<u>Variation</u>
<u>Expatriate</u>			
Resident Engineer	<u>1</u>	<u>1</u>	<u>0</u>
	1	1	0
<u>Indonesian</u>			
Ass. Res.Engineer	2	3	+1
Chief Lab.Technician	0	1	+1
Inspector	2	2	0
Surveyor	1	1	0
Instrumentmen	3	3	0
Quantity Technician	1	1	0
Laboratory Technician	1	3	+2
Junior Inspector	1	1	0
Draftsman	1	1	0
Clerk	1	1	0
Lab Helper	2	2	0
Chainman	2	2	0
Rodman	2	2	0
Driver	<u>6</u>	<u>7</u>	<u>+1</u>
Total	25	30	+5
Total Personnel	26	31	+5

RAINFALL NOVEMBER 1979  
SIDIKALANG - KRUENGLUAS SECTION

<u>D a t e</u>	<u>RAINFALL mm</u>
1	-
2	0,4
3	27,2
4	17,5
5	2,9
6	1,5
7	-
8	33
9	9
10	16
11	5,2
12	11,1
13	6,8
14	85
15	11
16	6,5
17	18,6
18	34,4
19	1,5
20	10,2
21	11,3
22	2
23	29,5
24	13,8
25	86
26	20
27	-
28	-
29	-
30	-
Total:	<u>460,4</u>

## RECORD OF CONTROL TESTS

For month of : NOVEMBER 1979.

SECTION II. LABORATORY SDEL - KR. LUAS	SECTION OF ROAD PAVEMENT	EMBANKMENT	SUB GRADE	SUB - BASE	BASE	BASE ( CRUSH STONE )	MACADAM	SURFACING ( ASPHALT )	SHOULDER	CONCRETE
	NO OF TESTS	THIS MONTH	THIS MONTH	THIS MONTH	THIS MONTH	THIS MONTH	THIS MONTH	THIS MONTH	THIS MONTH	THIS MONTH
Liquid limit			4	2		2				
Plastic limit			4	2		2				
Linear shrinkage										
Particle-size analysis fine			4							1
Analysis of mat. C. AGG.				1		1	1	1		1
Specific gravity fine				1		1				1
Bulk density of aggregate				2			1			1
Abration by loss angles				2						
Abration by sodium / mag.										
Agg. least dimension										
Agg. crushing value										
Clay lump							1			1
Compaction proctor standard										
Compaction proctor mod			4	2		2				
Compaction C.B.R. standard										
Compaction C.B.R. mod			4	2						
Sand equivalent test				2		2				
% Air void of compacted stone base										
Field C.B.R.										
Field moisture content				1		5				
Field density				1		5				
Asphalt content										
Thickness determination										
Surface finish										
Slump test										2
Cement test										
Concrete test by comp.										52
Concrete switch hammer										
Organic impurities test										1
Special test <del>Cement mortar</del> Grout shrinkage.										28
Special test ogerhand brg. found										
Total no. of tests			20	18		20	3	1		88

KUTACANE - BLANGKAJEREN SECTION

KUTACANE - BLANGKAJEREN SECTION

GENERAL

Heavy rains slowed progress this month. A further 1.6 km of penetration macadam was laid and surfacing now extends to km 17.8. The crusher produced 1040 cu m of macadam aggregates over 21 working days. A total of 126 cu m of structural concrete was cast.

EQUIPMENT UTILIZATION

T Y P E	AVERAGE QUANTITY (NOTE 1)	OPERATION % (NOTE 2)	IDLE %	DOWN TIME %	CHANGE OPERATION FROM LAST MONTH %
Bulldozer	5	33	7	60	+ 3
Grader	4	37	13	50	+ 1
Excavator	1	54	42	4	+30
Loader	6	39	11	50	0
Compactor	8	48	27	25	+ 4
Crusher	2	16	69	15	-16
Dump trucks	34	32	17	51	0

Note :

1. Does not include equipment on AWCAS
2. Based on a 7 x 8 = 56 hours week.

BRIDGE & BOX CULVERTS

STATION	TYPE	% COMPLETE		REMARKS
		THIS MONTH	TO DATE	
6 + 200	2-2.7x3.0 box	0	98	Stream exc.to complete
8 + 800	2-3.0x3.0 box	2	97	Retaining wall to comp.
10 + 280	2-3.0x1.8 box	0	98	Stream exc.to comp.
10 + 890	4-span x10m bridge	15	90	3 out of 4 spans cast
11 + 320	3-3.0x3.3 box	0	100	completed
11 + 650	3-3.0x3.2 box	0	100	"
12 + 600	2-3.0x3.0 box	0	100	"
13 + 280	2-3.0x3.0 box	0	100	"
14 + 500	2-3.0x3.0 box	0	100	"
15 + 800	3-span x10m bridge	5	32	Footing and column of pier No.2 cast
16 + 740	2-2.4x2.5 box	0	100	Completed
17 + 110	2-2.4x2.7 box	0	100	"
18 + 970	2-3.0x2.7 box	0	98	Rip Rap to complete
19 + 200	2-3.0x3.9 box	0	98	Rip Rap to complete
19 + 380	1-1.8x1.8 box	0	95	Rip Rap stream Exc.to complete
20 + 700	2-2.4x1.8 box	13	98	To slab, curbs and railing cast
21 + 860	14-3.0x3.25 box	18	21	part of bottom slab, five walls+wingwall cast
23 + 191	2-2.4x2.1 box	15	96	To slab & Curb cast
23 + 458	1-2.4x2.4 box	24	29	Bottom slab cast
24 + 270	4-3.0x3.0 box	0	3	Structure Excavation
24 + 458	1-3.0x2.10 box	1	4	Structure excavation
25 + 858	2-3.0x2.10 box	3	6	Up stream toe wall cast
26 + 329	2-2.4x2.4 box	10	10	Toe walls cast
26 + 448	1-2.4x1.8 box	2	2	Structure excavation



ROAD CONSTRUCTION

ACTIVITY	K.M. Complete		REMARKS
	This month	To Date	
Earthworks	0.4	18.5	Extends to km 18.9
Subbase	0.5	17.0	Extends to km 18.0
Base	1.4	16.6	Extends to km 18.0
Prime	1.3	16.3	Extends to km 17.9
Penetration macadam	1.6	15.9	Extends to km 17.8

ENGINEER FORCE REPORT  
KUTACANE - BLANGKAJEREN SECTION

<u>Classification</u>	<u>Begin Period</u>	<u>End Period</u>	<u>Variation</u>
<u>Expatriate</u>			
Resident Engineer	<u>1</u>	<u>1</u>	<u>0</u>
	1	1	0
<u>Local Personnels</u>			
Ass Resident Engineer	1	2	+1
Inspectors	4	4	0
Quantity Technician	1	1	0
Laboratory Tech.	2	2	0
Instrumentmen	2	2	0
Draftsmen	1	1	0
Rodmen	7	7	0
Clerk	1	1	0
Drivers	6	5	-1
Lab Labour	1	1	0
Radio Operator	1	1	0
Janitor	<u>1</u>	<u>1</u>	<u>0</u>
Total	28	28	0
Total Personnels	29	29	0

RAINFALL      NOVEMBER 1979  
KUTACANE - BLANGKAJEREN SECTION

<u>D a t e</u>	<u>RAINFALL</u> <u>mm</u>
1	-
2	12
3	36
4	-
5	-
6	-
7	13
8	27
9	-
10	-
11	8
12	30
13	19
14	8
15	20
16	31
17	10
18	2
19	3
20	27
21	4
22	17
23	10
24	1
25	-
26	17
27	11
28	-
29	-
30	-
	<hr/>
Total:	306

## RECORD OF CONTROL TESTS

For month of : November 1979

SECTION LABORATORY KUTACANE	SECTION OF ROAD PAVEMENT	EMBANKMENT	SUB - GRADE	SUB - BASE	BASE	BASE ( CRUSH STONE )	MACADAM	SURFACING ( ASPHALT )	SHOULDER	CONCRETE
TYPES OF TESTS	NO OF TESTS	THIS MONTH	THIS MONTH	THIS MONTH	THIS MONTH	THIS MONTH	THIS MONTH	THIS MONTH	THIS MONTH	THIS MONTH
Liquid limit					4					
Plastic limit					4					
Linear shrinkage										
Particle - size analysis fine				1	6		27			24
Analysis of mat. C. AGG.										
Specific gravity fine			1							
Bulk density of aggregate										
Abration by loss angles										
Abration by sodium / mag.										
Agg. least dimension										
Agg. crushing value										
Clay lump										
Compaction proctor standard				1						
Compaction proctor mod										
Compaction C.B.R. standard										
Compaction C.B.R. mod										
Sand equivalent test					6					
% Air void of compacted stone base										
Field C.B.R.										
Field moisture content		5	1	6	16					
Field density		5	1	6	16					
Asphalt content										
Thickness determination										
Surface finish										
Slump test										10
Cement test										
Concrete test by comp.										40
Concrete switch hammer										
Auger hand boring										
Special test										
Organic Impurities test										
Total no. of tests		10	2	15	52		27			74

ACEH ROAD BETTERMENT PROJECT  
MONTHLY PROGRESS REPORT  
NOVEMBER 1979

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PART III

PROGRESS CHARTS

AND

COST ESTIMATE

ACEH ROAD BETTERMENT PROJECT  
MONTHLY PROGRESS REPORT  
NOVEMBER 1979

PROGRESS CHARTS

Following are three progress charts :

- Section II : Sidikalang - Kruengluas
- Section III : Kutacane - Blangkajeren
- Entire Project

Three curves are shown on each :

1. Original work schedule based on Contractor proposal
2. Curve of actual progress payments ( This has been previously referred to as an "S" curve).
3. Curve of actual physical progress. This has been derived by deducting payments made for " Item 1- General" and " Materials on hand". The remaining total is divided by the original contract value minus the original figure for "Item 1".

PERCENT PHYSICAL PROGRESS

	'77	'78	1979										
	DEC	DEC	J	F	M	A	M	J	J	A	S	O	N
SECTION II.	3.1	9.7	11.6	14.2	16.3	18.0	20.0	22.1	24.0	25.0	25.9	26.7	27.35
SECTION III.	2.8	6.2	6.7	7.4	8.5	9.8	10.3	10.8	11.9	12.1	12.6	14.2	15.18
SCHED. TOTAL	23.5	52.2	54.5	56.3	58.5	60.7	63.0	65.7	68.4	71.0	73.0	75.0	77.25
ACTUAL TOTAL	25	6.8	7.8	9.2	10.1	11.1	12.9	14.0	15.1	15.6	16.2	17.1	17.39

PERCENT BASED ON BILLINGS

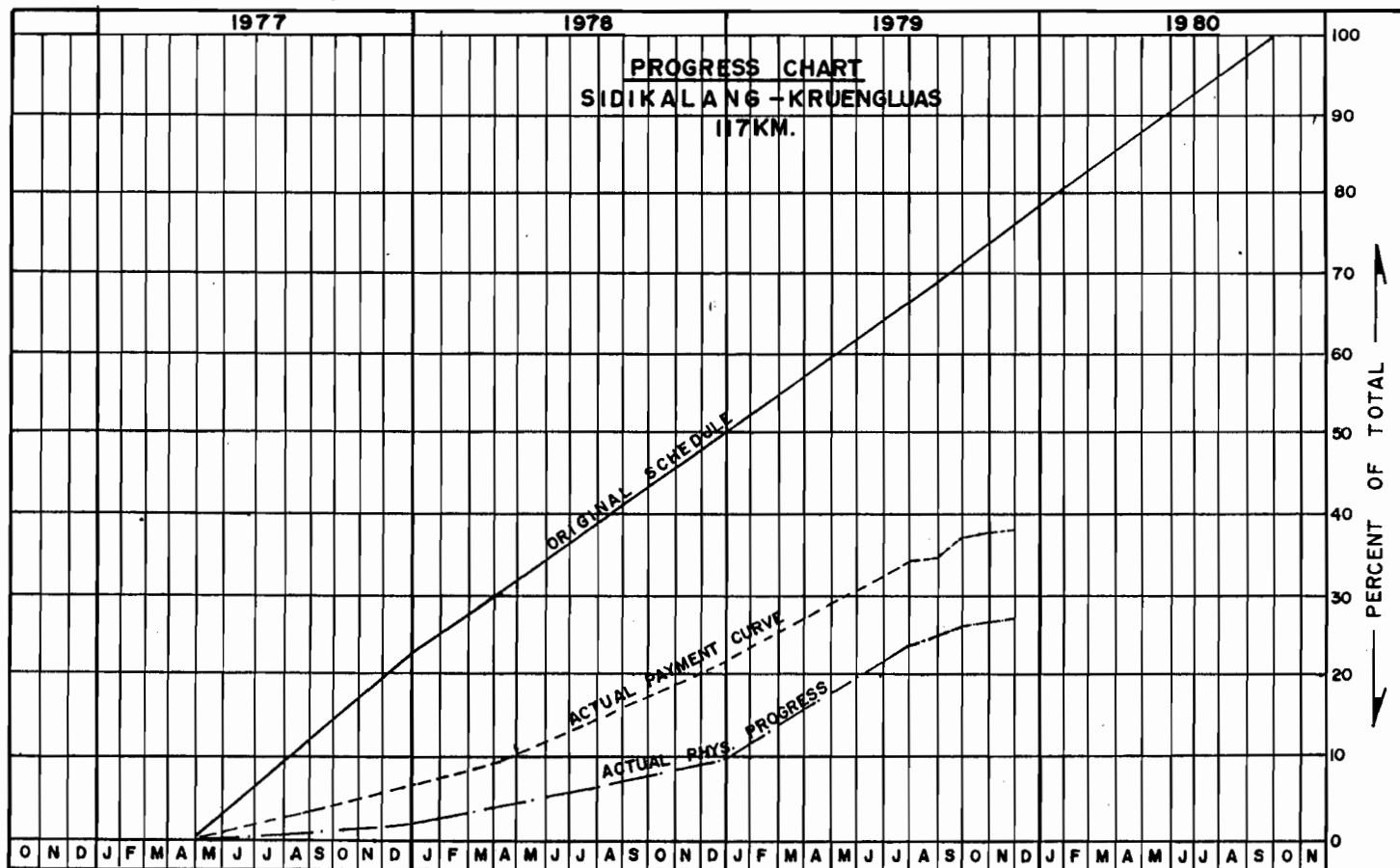
SECTION II. - SCHED.	23.0	49.6	57.9	53.5	56.6	59.7	62.1	64.6	67.1	69.4	71.0	73.4	75.9
——"—— ACTUAL	6.7	22.2	23.8	26.1	28.1	30.0	31.9	34.3	35.9	36.4	37.3	37.8	38.13
SECTION III. - SCHED	14.1	41.8	43.1	44.6	46.5	48.6	51.4	54.2	57.0	59.8	62.6	65.3	68.1
——"—— ACTUAL	7.0	20.9	21.7	22.5	23.0	24.0	24.5	25.3	26.2	26.6	27.4	27.82	28.83

ESTIMATE OF TOTAL COST - MILLION RUPIAHS

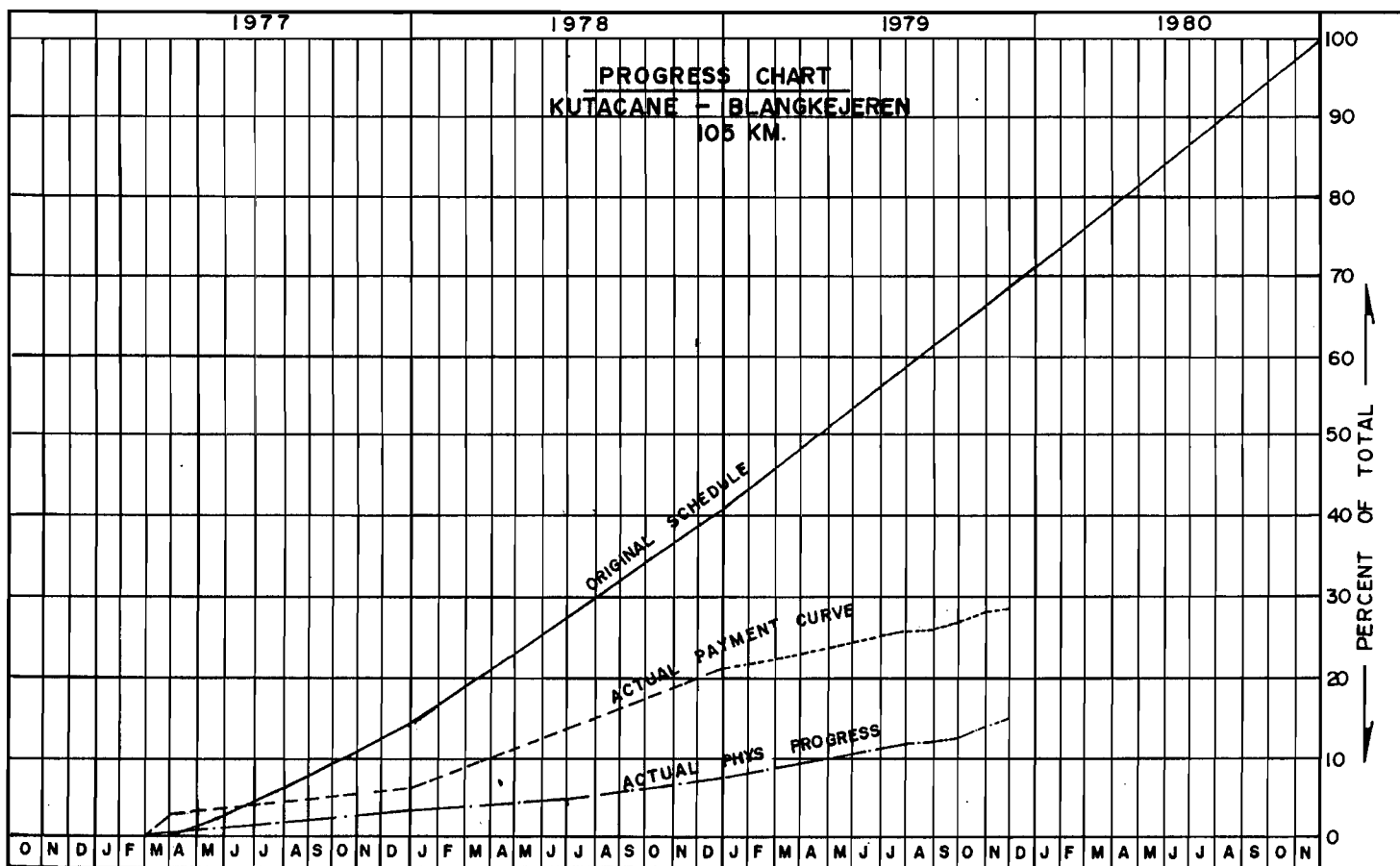
	SECTION II	SECTION III	
Original Contract Price	5.783	4.739	
Modified Contract Amount	6.456	5.451	(1)
Invoiced Thru Sept.1979	2.022	1.255	(2)
Estimate to Complete	4.434	4.196	(3)
Escal. thru July 1979	955	344	(4)
Est.Escalation after July 1979	4.684	5.355	(5)
Estim. Total Final Cost	12.095	11.150	(6)

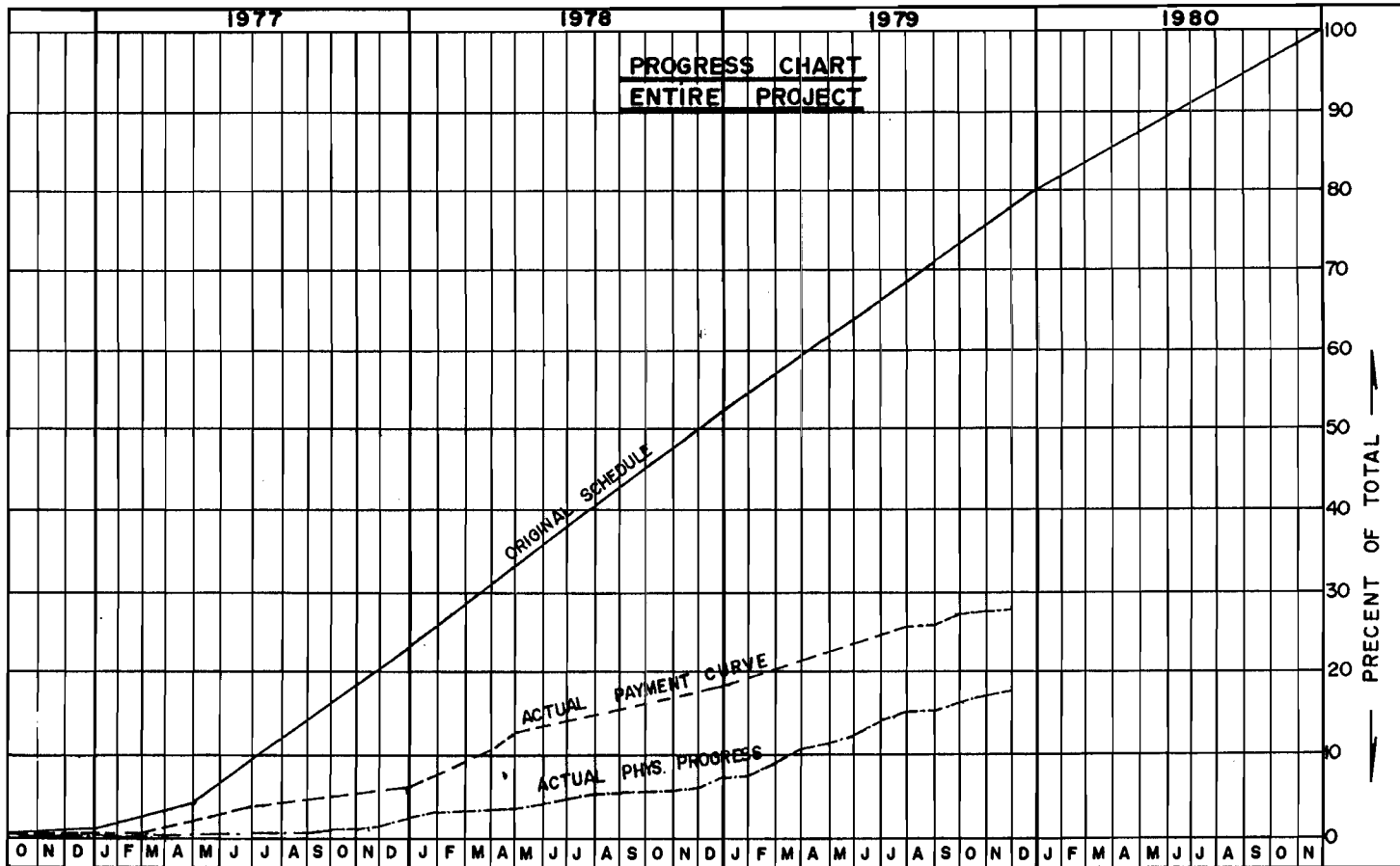
NOTES

- (1) Includes Change Orders, Extra Work Orders and Modified Contract Quantities based on estimate of balance of work to be done.
- (3) = (1) - (2)
- (5) Based on Estimate to Complete after July x average escalation percentage of July 1979 invoice.
- (6) = (2) + (3) + (4) + (5)









APPENDICES

CONTRACT FINANCIAL DATA  
CONTRACTOR'S WORK FORCE,  
AND  
DETAILED EQUIPMENT LIST

A - SIDIKALANG - KRUENGLUAS  
B - KUTACANE - BLANGKAJEREN

APPENDIX A

SIDIKALANG - KRUENGLUAS

APPENDIX - A

ACEH ROAD BETTERMENT PROJECT  
MONTHLY FINANCIAL SUMMARY

Section Sidikalang-Kruengluas Period NO. 32

Contractor PT Nindya Karya Contract No. 05/CTR/LN/BM/77

Original Contract Price Rp 5.783.029.512

Period Ending Date November 1979

Contract Price Beginning of Period, Including C.O. No. <u>6</u>	Rp 6.007.620.490
Contract Price Changes Accepted during Period, Including C.O. Nos. <u>-</u>	-
Contract Price at end of Period No. <u>32</u>	6.007.620.490
Total Contract Payments for Work Completed at Beginning of Period	2.402.067.948
Contract Payment for Period No. <u>32</u> Invoiced	20.581.551
Total Contract Payments Due at End of Period No. <u>32</u> Including Retention and Repayments	2.422.649.499
Total Contract Price Remaining to Pay at End of Period No. <u>32</u> Including Retentions and Repayments	3.584.970.989
Total Retention to End of Period No. <u>31</u>	173.625.070
Retention Period No. <u>32</u>	2.058.155
Total Retention at End of Period No. <u>32</u>	175.683.225
Advance Payment Period No. <u>32</u>	4.116.310
Total Repayment of Advance Payment to End Period No. <u>32</u>	209.800.612
Advance Repayment Remaining at End Period No. <u>32</u>	657.653.815

## ESCALATION RECORD SUMMARY

CONTRACTOR : PT Nindya Karya \_\_\_\_\_

CONTRACT : 05/CTR/LN/BM/77 \_\_\_\_\_

MONTH ENDING : November 1979

Period	Ave Esc. %	Plus Escalation Payment	Negative Escalation Record	Total Escalation Record	Esc. Invoice No.
April-May 77	11.23	1.697.837		1.697.837	2E
June 77	12.11	1.213.223		2.911.060	3E
July 77	14.15	1.379.946		4.291.006	4E
August 77	14.46	1.007.133		5.298.139	5E
September 77	13.55	181.351		5.479.490	6E
October 77	13.55	4.992.682		10.472.172	7E
November 77	13.86	4.964.411		15.436.583	8E
December 77	47.06	13.385.392		28.821.975	9E
January 78	46.15	14.419.340		43.241.315	10E
February 78	46.50	13.375.078		56.616.393	11E
March 78	46.48	3.394.690		59.011.083	12E
April 78	49.89	8.215.242		67.226.325	13E
May 78	48.12	11.561.638		78.787.963	14E
June 78	48.05	7.833.367		86.621.330	15E
July 78	49.18	16.766.338		103.387.668	16E
August 78	50.19	15.482.413		118.870.081	17E
September 78	50.14	1.769.347		120.639.428	18E
October 78	59.90	22.461.006		143.100.434	19E
November 78	63.18	10.415.342		153.515.776	20E
December 78	74.85	37.260.436		190.776.212	21E
January 79	97.34	88.735.078		279.511.290	22E
February 79	102.40	131.875.666		411.386.956	23E
March 79	108.57	105.432.656		516.819.612	24E
April 79	116.89	93.172.725		609.992.337	25E
May 79	125.42	125.025.958		735.018.295	26E
June 79	122.92*	110.497.007*		845.515.302	27E
July 79	129.10*	109.281.518*		954.796.820	28E
August 79	135.29*	52.127.030*		1.006.923.850	29E
Sept. 79	129.10*	47.827.895*		1.054.751.745	30E
Oct. 79	135.29*	53.000.713*		1.107.752.458	31E

\*) Amount and % shown is provisional using factors of 2 month backwards.

## MATERIAL ON SITE SUMMARY

SECTION : Sidikalang-Kruengluas

MONTH ENDING : November 1979

ITEM	UNIT	Begin Period		End Period	
		Quan.	Price in Rp.	Quan.	Price in Rp.
Coarse aggregate	m3	0	0	0	0
601(2) Aggregate sub-base	m3	2.722	14.343.851	2.722	14.343.851
Rebars	kg	1008.062	19.052.372	981.476	18.549.896
Rebars (Cont. Furn)	kg	550.000	12.750.000	550.000	12.750.000
Rebar (trans. cost) to site	kg	550.000	10.395.000	550.000	10.395.000
RCP Ø 60 cm	m	796	9.402.193	787	9.295.887
RCP Ø 80 cm	m	780	13.816.530	780	13.816.530
RCP Ø 100 cm	m	384	9.393.754	211	5.161.672
Asphalt AC85-100	ton	42	3.719.864	42	3.719.864
Base Material "mod"	cu m	23.446	123.551.042	23.446	123.551.042
Bearing Pad	dm3	537	11.414.579	513	10.904.431
Asphalt RC-2	ton	0	0	0	0
Precast Concr. bridges beams	m3	172	8.607.516	63	3.152.753

## CHANGE ORDER SUMMARY

CONTRACTOR : P.T. NINDYA KARYA

Sheet 1 No. 3

CONTRACT No: 05/CTR/LN/BM/77

Month Ending November 1979

C.O. No.	C.O. Content + Description	Price Change	Date Submitted	Date Appd. Bina Marga	Date Accepted by Contr.
1	C.O. No. 1	48.562.642	May 21, '77	June 30, '77	Aug. 9, '77
	a) N.O.C. 1 reduce barracks quantity				
	b) N.O.C. No. 2 define base and subbase				
	c) N.O.C. No. 3 add base camp roads				
2	C.O. No. 2	+182.589.549	July 30, '77	Aug. 20, '77	Aug. 9, '77
	a) NOC No. 4 - Install roads and utilities base camp				
	b) NOC No. 5 - include Add No. 3 in contract				
3	C.O. No. 3	-76.131.049	Mar. 19, '77	Apr. 18, '78	Sept. 30, '78
	a) NOC No. 6 - correct contract quantities to agree with pricing				
	b) NOC No. 7 - change specification for asphalt.				
	c) NOC No. 8 - change design of Reinf. Contr. bridge to culvert at sta 38 + 632				



## CHANGE ORDER SUMMARY

CONTRACTOR : P.T. NINDYA KARYA

Sheet 2 No. 3

CONTRACT No: 05/CTR/LN/BM/77

Month Ending November 1979

C.O. No.	C.O. Content + Description	Price Change	Date Submitted	Date Appd. Bina Marga	Date Accepted by Confr.
	d) NOC No.9-change design of Reinf.concr. bridge to culvert Sta 38 + 179				
	e) NOC No.10-change design of reinf.concr. bridge to culvert. Sta 46 + 837				
4	C.O. No. 4	+18.288.436	June 28, 78	July 11, 78	Sept. 30, 78
	a) NOC No.12 change of bridge to RCP Ø 100 cm				
	b) NOC NO. 13 change of bridge to RCP Ø 100 cm				
	c) NOC No.15 change of mobilization payment of 80% on completion of mobilization.				
	d) NOC No. 17 Extension services of contractor Expat. Advisor				
	c) NOC No.18-Add. pine culverts install.				

## CHANGE ORDER SUMMARY

CONTRACTOR : P.T. Nindya Karya

Sheet 3 No 3

CONTRACT No: 05/CTR/LN/BM/77

Month Ending November 1979

C.O. No.	C.O. Content + Description	Price Change	Date Submitted	Date Appd. Bina Marga	Date Accepted by Contr.
5	C.O. No. 5 a. N.O.C. No. 14- Construct Guesthouse & additional consul- tant office rooms.  b. N.O.C. No. 16- furnished reinf.- steel.	+137486594	Sept. 29 '78	Oct. 11, 78	March 3, 79
6	C.O. No. 6 a. NOC. No. 19 Change of Base Course from Crushed Quarry stone to modified base course from Crushed Quarry  b. NOC No. 20 Adjustment in contract Bid schedule new Pay Item No. 8.06 Precast Concrete Beams  c. NOC No. 24 Furniture for Guest House & additional construction + electricity installation.  d. EWO No. 01 Pumping out Pool water at culvert No. 4 & cost of labor wages.	+10921090	April 10 79	Sept. 8, '79	Sept. 29, '79

## CONTRACTOR FORCE REPORT

CONTRACTOR : PT Nindya Karya

MONTH ENDING : November 1979

Classification	Beginning of Period	End of Period	Variation + or -	Remarks
Civ. Engineer (Sup)	4	4	-	
Eng. Consultant	1	1	-	
Bach. Civ. Eng.	4	4	-	
Mech. Engineer	1	1	-	
Bach. Mech. Eng.	2	2	-	
Surveyors	4	4	-	
Surveyor help.	13	14	+1	
Forman	12	15	+3	
Ass. Forman	7	7	-	
Chief Adm.	1	1	-	
Adm Personnel	15	15	-	
Clerk	1	1	-	
Lab. Crew	2	2	-	
Draftsman	3	3	-	
Quantity crew	1	1	-	
Heavy Eq. Op.	25	25	-	
Heavy Eq. Op. help.	6	7	+1	
Chief Mechanic	1	1	-	
Mech. helper	21	21	-	
Welder	1	1	-	
Elect. foreman	1	1	-	
Electrician	1	1	-	
Mechanic	12	12	-	
Carpenters	1	1	-	
Dispatcher	1	1	-	
Carpenters help.	17	17	-	
Masons	2	2	-	
Masons Helper	3	3	-	
Steelman	7	7	-	
Steelman helper	3	3	-	
Dump truck drivers	35	41	+6	
Vehicle driver	8	8	-	



## EQUIPMENT LIST

CONTRACTOR: PT NINDYA KARYA

MONTH ENDING : November 1979

ITEM No.	DESCRIPTION	CONDITION	LOCATION				TOTAL REQD.	% MOBIL	COMMENT
			ONSITE	MEDAN	OTHER	ON ORDER			
<b>I. Earth Mover :</b>									
1.	Bulldozers 180 HP	new	1	-	-	-	1	100	*Cat D7G, BM Equip.
2.	Bulldozer 140 HP	new	1	-	-	-	1	100	Case 1150 B.
3.	Bulldozer D 60 E	new	3	-	-	-	3	100	1 for D7G, 1 for 1150B
4.	Motor grader		3	-	-	-	4	75	1. 120G, 2 KOM GD37
5.	Ripper	new	2	-	-	-	2	100	
<b>II. Loading Equipment:</b>									
1.	W. Loader 1,30-1,50 M3	new	3	-	-	-	3	100	Cat 920-BM Equip.
2.	Track Loader up to 1,50 M3	used	1	-	-	-	1	100	KOM D57-BM Equip.
3.	Exc. Shovel 0.67 M3	new	1	-	-	-	1	100	Drott 40YR-BM Equip.
4.	Backhoe Loader hoe 17m3, shovel 0.75 m3	-	-	-	-	-	2	-	
5.	Claimshell	-	-	-	-	-	1	-	
<b>III. Compaction Equip.:</b>									
1.	Vibro comp. self propelled w/t smooth drum.	new	1	-	-	-	1	100	SP54-BM Equipment
2.	Vibro compactor self propelled w/t sheep foot	new	1	-	-	-	1	100	SPF 54, subs. for sheep foot roller.

## EQUIPMENT LIST

CONTRACTOR: PT NINDYA KARYA

MONTH ENDING : November 1979

ITEM No.	DESCRIPTION	CONDITION	LOCATION				TOTAL REQD.	% MOBIL	COMMENT
			ONSITE	MEDAN	OTHER	ON ORDER			
3.	Pneumatic Tired Roller	new	2	-	-	-	2	100	PSR-C-25 BM Equip.
4.	Tandem roller 8-12t	new	1	-	-	-	2	50	Bina Marga Equip.
5.	Three wheel roller 12 - 15t	new	2	-	-	-	3	66.66	Bina Marga Equip.
6.	Tamping Rammer	new	5	-	-	-	5	100	
IV.	<u>Material Process &amp; Plant:</u>								
1.	Stone crusher 70 Tph	new	1	-	-	-	1	100	Lippman
2.	Crusher stone up to 30 Tph	used	1	-	-	-	1	100	IR 600
3.	Air compressor 175 Cfm	New	1	-	-	-	2	50	Airman
4.	Air compressor IR600	new	1	-	-	-	1	100	
5.	Concr. mixer 0,250m <sup>3</sup>	new	2	-	-	-	2	100	
6.	Concr. mixer 0,50-1,00 M3	*new, **used	**3+*2=5	-	-	-	5	100	*Plymouth **Lester Engine
7.	Concr. vibr W3t head diam. 36 m/m	new	6	-	-	-	6	100	
8.	Water pump 2"-4" Ø	new	16	-	-	-	-	-	

## EQUIPMENT LIST

CONTRACTOR: PT NINDYA KARYA

MONTH ENDING: November 1979

ITEM No.	DESCRIPTION	CONDITION	LOCATION				TOTAL REQD.	% MOBIL	COMMENT
			ONSITE	MEDAN	OTHER	ON ORDER			
9	Oil pump 2" Ø	new	1	-	-	-	1	100	
10	Jack hammer/Rockdrill	new	7	-	-	-	7	100	IRJ40=4, Atlas copco=3
11	Paving breaker	new	2	-	-	-	2	100	
12	Belt conveyor	new	3	-	-	-	3	100	
V Bridge Equipment									
1.	Pile driving lead								
	for 20MP length	new	1	-	-	-	1	100	Koech.HKO 80-331 Eq.
2.	Diesel Pile Hammer								
	5 tons capacity	new	1	-	-	-	1	100	
3.	Three foot	used	1	-	-	-	1	100	
4.	Carry Deck Crane	-	1	-	-	-	1	100	
5.	Crane Cole		1	-	-	-	1	100	
6.	Buggy	new	12	-	-	-	0	0	
VI Surface Equipment									
1.	Chip spreader 3M	new	1	-	-	-	1	100	Etnyre
2.	Asp.Distrib.4000Lt	new	2	-	-	-	1	100	
3.	Asp.sprayer 600 Lt	new	1	-	-	-	1	100	
4.	Mech.Sweeper Broom	new	1	-	-	-	1	100	
5.	Asphalt Tank Burner								
	15 tons	new	1	-	-	-	-	0	







APPENDIX B

KOTACANE - BLANGKAJEREN SECTION

APPENDIX - B

ACEH ROAD BETTERMENT PROJECT  
MONTHLY FINANCIAL SUMMARY

Section Kotacane-Blangkajeren Period NO. 32

Contractor PT Hutama Karya Contract No. 04/CTR/LN/BM/77

Original Contract Price Rp 4.739.536.738.-

Period Ending Date November 1979

Contract Price Beginning of Period, Including C.O. No. <u>6</u>	<u>Rp 5.215.184.595</u>
Contract Price Changes Accepted during Period, Including C.O. Nos. <u>-</u>	<u>-</u>
Contract Price at end of Period No. <u>32</u>	<u>5.215.184.595.-</u>
Total Contract Payments for Work Completed at Beginning of Period	<u>1.495.913.059</u>
Contract Payment for Period No. <u>32</u> Invoiced	<u>16.704.706</u>
Total Contract Payments Due at End of Period No. <u>32</u> Including Retention and Repayments	<u>1.512.617.765</u>
Total Contract Price Remaining to Pay at End of Period No. <u>32</u> Including Retentions and Repayments	<u>3.719.271.538</u>
Total Retention to End of Period No. <u>31</u>	<u>124.956.279</u>
Retention Period No. <u>32</u>	<u>-</u>
Total Retention at End of Period No. <u>32</u>	<u>124.956.279</u>
Advance Payment Period No. <u>32</u>	<u>3.340.941</u>
Total Repayment of Advance Payment to End Period No. <u>32</u>	<u>89.799.459</u>
Advance Repayment Remaining at End Period No. <u>32</u>	<u>621.131.052</u>

MATERIAL ON SITE  
SUMMARY

SECTION : Kotacane-Blangkajeren

MONTH ENDING : November 1979

ITEM	UNIT	Begin Period		End Period	
		Quan.	Price in Rp.	Quan.	Price in Rp.
2.04(3)a :					
Reinf. Concr. Pipe					
∅ 60 cm	m	299	2.387.066	31	247.488
2.04(3)b :					
Reinf. Concr. Pipe					
∅ 80 cm	m	142	1.923.106	89	1.205.327
2.04(3)c :					
Reinf. concr. pipe					
∅ 100 cm	m	0	0	9	166.527
2.04(3)f :					
Reinf. concr. box					
50 x 100 cm	m	19	399.000	19	399.000
Mac. aggregate	Loose cu m	2.171	7.275.021	1.527	5.116.977
Asphalt Cement					
Penet. Macadam	kg	1.442.809	151.494.945	1.218.782	127.972.110
8.03 :					
Reinf. steel	kg	216.663	7.149.879	204.996	6.764.868
9.11(1)					
Right of Way Mon.	each	281	1.218.135	218	1.218.135
9.11(4) :					
Hectometer post	each	792	3.433.320	792	3.433.320
6.02(3) :					
Base course Cl A mod" cum		34	160.650	0	0

## CHANGE ORDER SUMMARY

CONTRACTOR : P.T. HUTAMA KARYA

Sheet 1 No. \_\_\_\_\_

CONTRACT No: 04/CTR/LN/BM/77

Month Ending November '79

C.O. No.	C.O. Content + Description	Price Change	Date Submitted	Date Appd. Bina Marga	Date Accepted by Contr.
1	C.O., NO.1	-359.823	Dec. 10 1977	Dec. 21, '77	
	a) EWO No.1-Removal slide Nr.kn 80				
	b) EWO No.2-Repair landslide Km 66				
	c) NOC No.1-change specification for asphalt				
	d) NOC No.4-include Add.No.3 in contract				
2	C.O. No. 2	+136.073.112	Mar. 28 '78	Apr. 6 '78	7 OCT 78
	a) EWO No.3-repair bridges between Kotacanc-Blangkajeren				
	b) EWO No.4-clearance				
	c) NOC No.3-change in quantity of clearing & Grubbing in sparse vegetation.				
3	CO No. 3	+111.476.356	Jun. 19, 1978	Jun. 27, '78	7 OCT 78
	a) NOC No.4-Addition of roads, drainage water truck recr. area, landscaping in Bina Marga compound.				

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## CHANGE ORDER SUMMARY

CONTRACTOR : P.T. HUTAMA KARYA

Sheet 2 No. \_\_\_\_\_

CONTRACT No: 04/CTR/LN/BM/77

Month Ending November '79

C.O. No.	C.O. Content + Description	Price Change	Date Submitted	Date Appd. Bina Marga	Date Accepted by Contr.
	b) NOC No.6-Improving and maintaining all existing bridges.				
	c) NOC No.7-Payment of 80% on completion of mobilization.				
	d) NOC No.8-Increasing of embankment, common or borrow due to raising road level.				
	e) NOC No.9-Manufacture & Install 80x100 cm Precast box culverts.				
	f). NOC No.10-Excavation of roadway on ground slip & around broken bridge.				
4.	C O No.4	-60.095.912	Oct.10,'78	Nov.8,78	Dec.21,78
	a. NOC No.12-Manufacture and Install 50 cm x 100 cm box culvert				
	b. NOC No.13-Extension of services of Expert Advisor to Contractor				

## CHANGE ORDER SUMMARY

CONTRACTOR : PT Hutama Karya

Sheet 3 No. \_\_\_\_\_

CONTRACT No: 04/CTR/LN/BM/77

Month Ending : November '79

C.O. No.	C.O.Content + Description	Price Change	Date Submitted	Date Appd. Bina Marga	Date Accepted by Contr.
	c. NOC No14-Construction of reinforced concrete and stone masonry retaining all				
5.	CO No. 5	+168.362.320	Feb.2,79	Feb.12,79	Feb.23, 79
	a. NOC No.15-Decrease of est. quantity for pay item 6.01(2)- sub-base cl."B" by 8.085 m <sup>3</sup> Add new pay item 6.01(3)				
	Sub-base cl"C" est. quantity 50.000m <sup>3</sup> w/unit price Rp 3.000.-				
	b. NOC No. 17-Chance of Base course cl"A" modified				
	c. NOC No. 18 - Priority I in Cost Program of A.L.S.				
6.	CO no.6	0	May 1979	May 16,'79	May 30,'79
	a. Deletion of NOC no.18 from CO no.5 covering added maintenance of roadway under ALS priority I				
	b. Add EWO no.5 covering some added maintenance of roadway under ALS, priority I, to isolate funding of this work.				

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ESCALATION RECORD  
SUMMARY

CONTRACTOR : PT Hutama Karya

CONTRACT : 04/CTR/LN/BM/77

MONTH ENDING November 1979

Period	Ave Esc. %	Plus Escalation Payment	Negative Escalation Record	Total Escalation Record	Esc. Invoice No.
April-May 1977	11.23	5.151.192		1.151.192	1E
May-June 1977	11.23	274.000		5.425.192	3E
June-July 1977	11.23	127.205		5.552.397	4E
July-Aug. 1977	14.46	619.667		6.172.064	5E
Sept. 1977	13.55	650.776		6.822.840	6E
October 1977	13.55	0		6.822.840	7E
November 1977	13.86	1.550.181		8.373.021	8E
December 1977	47.06	18.108.306		26.481.327	9E
January 1978	46.15	5.199.513		31.680.840	10E
February 1978	46.50	0		31.680.840	11E
March 1978	46.48	0		31.680.840	12E
April 1978	47.89	1.548.553		33.229.393	13E
May 1978	48.12	14.309.181		47.538.574	14E
June 1978	48.05	9.976.578		57.515.152	15E
July 1978	49.18	4.302.782		61.817.934	16E
August 1978	50.19	5.505.384		67.323.318	17E
September 1978	50.14	0		67.323.318	18E
October 1978	59.90	6.567.856		73.891.174	19E
November 1978	63.18	10.430.611		84.321.785	20E
December 1978	74.85	16.387.031		100.708.816	21E
January 1979	97.34	17.645.532		118.354.348	22E
February 1979	102.40	31.683.633		150.037.981	23E
March 1979	108.57	44.980.597		195.018.578	24E
April 1979	116.89	61.773.065		256.791.643	25E
May 1979	125.42	22.267.716		279.059.359	26E
June 1979	122.92*	18.674.816*		297.734.175	27E
July 1979	129.10*	46.285.182*		344.019.357	28E
August 1979	135.29*	9.676.469*		353.695.826	29E
September 1979	129.10*	23.239.307*		376.930.533	30E
October 1979	135.29*	85.897.382*		462.827.915	31E

\*) Amount and % shown is provisional using factors of 2 month backwards.



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## CONTRACTOR FORCE REPORT

CONTRACTOR : PT Hutama Karya

MONTH ENDING : November 1979

Classification	Beginning of Period	End of Period	Variation + or -	Remarks
<b>Staff :</b>				
Project Mgr	1	1	0	
Cont. Superintendent	0	1	+1	
Dep. Proj. Manager	1	1	0	
Bridge Sup	1	1	0	
Road Sup.	1	1	0	
<b>Field:</b>				
Ass. Sup.	5	5	0	
Mech. Gen. Foremen	5	5	0	
Estimator	1	1	0	
Surveyor	4	4	0	
Draftsman	5	6	+1	
Laboratory	1	1	0	
Foremen	10	9	-1	
Warehousemen	1	1	0	
Ass. Warehousemen	7	5	-2	
Operators	25	24	-1	
Mechanics	20	20	0	
Riggers	2	2	0	
Sk Aggregate	1	1	0	
Drivers	30	27	-3	
Guards	23	23	0	
Electrician	6	6	0	
Road workers	4	4	0	
Bridge workers	8	7	-1	
Welders	3	3	0	
Oilers	2	2	0	



## EQUIPMENT LIST

CONTRACTOR: PT HUTAMA KARYA

MONTH ENDING: November 1979

ITEM No.	DESCRIPTION	CONDITION	LOCATION				TOTAL REQD.	% MOBIL	COMMENT
			ONSITE	MEDAN	OTHER	ON ORDER			
I.	<u>Automobiles</u>								
1.	Jeep	new	6	1	-	-	5	100	
2.	Mini Bus	new	1	-	-	-	1	100	
3.	Station Wagon	-	1	-	-	-	1	100	
II.	<u>Batchers</u>								
1.	Conc. Mini Winslow	new	1	-	-	-	1	100	Bina Marga Equipment
III.	<u>Bulldozers</u>								
1.	Dozer CAT D7G	new	1	-	-	-	1	100	Bina Marga Equipment
2.	Dozer CAT D6G		1	-	-	-	1	100	Bina Marga Equip.
3.	Dozer KOM D60E		-	-	-	-	3	-	
4.	Komatzu (Swamp Dozer)	new	1	-	-	-	1	100	
5.	John Deere JD550		1	-	-	-	1	100	
6.	Komatzu D80A	new	2	-	-	-	2	100	Bina Marga Equip.
7.	Shovel JD 555	new	1	-	-	-	1	100	
IV	<u>Compactor</u>								
1.	Vibro roller IR/SP54	new	1	-	-	-	1	100	Bina Marga Equip.
2.	VR with sheep foot ass. IR/SP54	new	1	-	-	-	1	100	Bina Marga Equip.
3.	Tow sheep foot roller drum		2	-	-	-	2	100	
4.	Mini Vibro roller dinovac		2	-	-	-	2	100	

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## EQUIPMENT LIST

CONTRACTOR: PT HUTAMA KARYA (cont)

MONTH ENDING : November 1979

ITEM No.	DESCRIPTION	CONDITION	LOCATION				TOTAL REQD.	% MOBIL	COMMENT
			ONSITE	MEDAN	OTHER	ON ORDER			
5.	Wellers 651-S	new	1	-	-	-	1	100	Bina Marga Equip.
6.	Hand compactor	new	2	-	-	-	2	100	
V.	<u>Conveyors</u>								
1.	Portable Belt Lippman	new	3	-	-	1	4	75	Bina Marga Equip.
2.	Portable Belt Hewitt Robin	new	2	-	-	-	2	100	Bina Marga Equip.
VI	<u>Cranes</u>								
1.	Hydrolic wheel Drott 40	new	1	-	-	-	1	100	Bina Marga Equip.
2.	Broom P&H 550	new	-	-	-	1	1	0	Bina Marga Equip.
VII	<u>Compressor</u>								
1.	Portable IR 600	new	1	-	-	-	1	100	
2.	Portable 300	new	2	-	-	-	2	100	
VIII	<u>Crushers</u>								
1.	Portable, HewittRobins	new	1	-	-	-	1	100	Bina Marga Equip.
2.	Port. COBHAPCO PC&CF		1	-	-	-	1	100	
IX	<u>Distributors</u>								
1.	Asphalt	new	1	-	-	-	1	100	Bina Marga Equip.
2.	Hanta		1	-	-	-	1	100	"
X	<u>Drills</u>								
	Hand		1	-	-	5	6	16,6	Bina Marga Equip.

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## EQUIPMENT LIST

CONTRACTOR: PT HUTAMA KARYA (cont)

MONTH ENDING : November 1979

ITEM No.	DESCRIPTION	CONDITION	LOCATION				TOTAL REQD.	% MOBIL	COMMENT
			ONSITE	MEDAN	OTHER	ON ORDER			
2.	Crawler		1	-	-	1	1	0	
<u>XI Generators</u>									
1.	Electric 100 KVA		1	-	-	3	1	100	Bina Marga Equip.
2.	Detroit 300 KVA		1	-	-	-	1	100	
3.	Kubota 10 KVA		1	-	-	-	1	100	
4.	Deutz 30 KVA		1	-	-	-	1	100	
<u>XII Graders</u>									
1.	Motor Cat. 120C	new	1	-	-	1	2	50	Bina Marga Equip.
2.	Motor Komatsu GP37/PU	new	1	-	-	-	1	100	Bina Marga Eq.
3.	Motor komatzu	new	2	-	-	-	2	100	"
<u>XIII Hammer</u>									
1.	Jack IR/J40	new	2	-	-	-	2	100	
2.	Pile Driving MKT/ DT 305	new	1	-	-	-	1	100	
<u>XIV Leads</u>									
1.	Pile Driving MK/180	new	1	1	-	-	2	50	Waiting for req.
<u>XV Lifts</u>									
1.	Fork case 58-L	new	-	-	-	2	2	-	
<u>XVI Loaders</u>									
1.	Wheel Cat 920	new	2	-	-	-	4	50	Bina Marga Equip.
2.	John Deere Crawler	new	-	-	-	-	1	-	

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## EQUIPMENT LIST

CONTRACTOR: PT HUTAMA KARYA (cont.)

MONTH ENDING: November 1979

ITEM No.	DESCRIPTION	CONDITION	LOCATION				TOTAL REQD.	% MOBIL	COMMENT
			ONSITE	MEDAN	OTHER	ON ORDER			
3.	Kimco	new	1	-	-	-	1	100	
4.	M.F.	new	1	-	-	-	1	100	Bina Marga Equip.
<b>XVII Mixers</b>									
1.	Concr. Plymouth 165	new	2	1	-	-	3	33,33	Bina Marga Equip.
2.	Soil Mixer	new	1	-	-	-	1	100	
3.	Concrete Goliath350	new	4	-	-	-	4	100	
	Conc. KYC Mixer	new	1	-	-	-	1	100	
<b>XVIII Plants</b>									
1.	Saw Mill	new	-	-	-	1	1	-	Pend. Cont. need
2.	Preservation		-	-	-	1	1	-	Pend. Cont. need
3.	Dedrumming		2	-	-	-	1	-	
4.	Concrete Batching		-	-	-	1	1	-	
5.	Aggregate		1	-	-	-	1	-	
<b>XIX Pumps</b>									
1.	Water Ø" - 4"	new	3	-	-	2	5	60	
2.	Water 4" Alcon	new	1	-	-	-	1	-	
3.	Water 4" Janmar	new	2	-	-	-	2	-	
4.	Water Tank		-	-	-	1	1	0	
<b>XX Rollers</b>									
1.	Steel wheel 3 Koech	new	2	-	-	-	2	100	Bina Marga Equip.
2.	Tandem Galion	new	1	-	-	-	1	100	Bina Marga Equip.
3.	Tire Pneumatic	new	1	-	-	-	1	100	Bina Marga Equip.

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## EQUIPMENT LIST

CONTRACTOR: PT HUTAMA KARYA

MONTH ENDING: November 1979

ITEM No.	DESCRIPTION	CONDITION	LOCATION				TOTAL REQD.	% MOBIL	COMMENT
			ONSITE	MEDAN	OTHER	ON ORDER			
4.	Three wheel Roller	new	2	-	-	-	-	Bina Marga Equip.	
XXI	<u>Spreader:</u>								
1.	Chip Etnyre 4-53	new	2	-	-	-	2	100	attached to an hydro-
2.	Handy Walles G-5	new	1	-	-	-	1	100	100 Tractor
XXII	<u>Traxcavator:</u>								
1.	Shovel Cat 977 L	new	-	-	-	2	2	-	
XXIII	<u>Trucks:</u>								
1.	Dump loadstar	new	20	-	-	-	20	100	B M Equipment
2.	Dump IM KL 321	new	3	5	-	-	10		
3.	Dump IM KR 300	new	2	-	-	-	6	33,33	
4.	Flatbed IH.1850	new	1	-	-	-	1	100	B M Equipment
5.	Fuel tank IH 1850	new	1	-	-	-	1	100	B M Equipment
6.	Water tank 5000 lt	new	1	-	-	-	1	100	B M Equipment
7.	Daihatsu Diesel SV								
	26T	new	1	-	-	-	-	-	
8.	Dump Isuzu		10	-	-	-	10	100	
XIV	<u>Welding Unit:</u>								
1.	Acetylene, Lincoln		1	-	-	1	2	50	
2.	Arch. Hobart		1	-	-	1	2	50	
3.	Arch. trvo las OTC								
	250 Amp	new	1	-	-	-	1	100	

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## EQUIPMENT LIST

CONTRACTOR: PT HUTAMA KARYA

MONTH ENDING: November 1979

ITEM No.	DESCRIPTION	CONDITION	LOCATION				TOTAL REQD.	% MOBIL	COMMENT
			ONSITE	MEDAN	OTHER	ON ORDER			
4.	Arch. trvo las OTC 400 Amp	new	1	-	-	-	1	100	
XXV	Vibrators:								
1.	Concr. Robin, Elect. Case and Honda	new	6	-	-	-	6	100	
XXVI	Motorcycles:								
1.	Honda CB 100		6	-	-	-	-	-	
2.	Yamaha L2S - 10		6	-	-	-	-	-	
XXVII	Excavator:								
1.	Back Hoe	new	1	-	-	-	1	100	B M Equipment
2.	Back Hoe Loader Sakai		1	-	-	-	1	100	
XXVIII	Hand compactor:								
1.	Tokuden Temper	new	2	-	-	-	2	100	
XXIX	S a w s:								
1.	Chainsaw	new	5	-	-	2	7	71.43	
2.	Cross cut	new	-	-	-	4	4	0	
XXX	Low Boy Trailers		1	-	-	-	1	100	Bina Marga Equip.

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