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1. 調査団員指名・所属

基本設計現地調査（2008年5月14日～2008年7月4日）

	氏 名	担 当	所 属
1	富谷 喜一	総括	JICA インドネシア事務所次長
2	村山 博司	計画管理	JICA 資金協力支援部 準備室 実施監理 1 課
2	大下 副武	業務主任／橋梁計画／運営 維持管理	(株)片平エンジニアリング インターナショナル
3	五十嵐 功	橋梁設計 I	同上
4	村上 啓一	橋梁設計 II	同上
5	福間 孝雄	環境社会配慮	同上
6	藤原 邦夫	自然条件調査（地質）	同上
7	鈴木 正志	自然条件調査（測量／水 理・水文）	同上
8	平岡 一幸	施工計画／積算）	同上

基本設計概要説明（2008年10月19日～2008年10月29日）

	氏 名	担 当	所 属
1	讃井 一将	総 括	JICA 経済基盤開発部運輸交通・ 情報通信第二課
2	大下 副武	業務主任／橋梁計画／運営 維持管理	(株)片平エンジニアリング インターナショナル
3	五十嵐 功	橋梁設計 I	同上

2. 調査行程

基本設計現地調査（2008年5月14日～2008年7月4日）

	Messrs	a	b	c	d	e	f	g	h	i	Stay at
		Tomiya	Murayama	Oshita	Fukuma	Igarashi	Fujiwara	Suzuki	Murakami	Hiraoka	
1	14-May Wed		Tokyo → Jakarta					Tokyo → Denpasar			JKT, DPS
2	15-May Thu		Courtesy call to JICA, EOJ, MPW, MMT Jakarta → Mataram					Denpasar → Mataram → Maluk			MTM, MLK
3	16-May Fri		Mataram → Sumbawa Besar					Site Survey			S.B., MLK
4	17-May Sat		Site survey, & Sumbawa Besar → Maluk					Site Survey			MLK
5	18-May Sun		Site survey, & Maluk → Mataram			Site survey		Site Survey			MTM, MLK
6	19-May Mon		Courtesy call to BAPPEDA, NTB Gov.			Site survey		Site Survey			MTM, MLK
7	20-May Tue		Mataram → Jakarta Discuss with MPW			Site survey		Site Survey			JKT, MLK
8	21-May Wed		Discuss with MPW, Bappenas, & Sign of M/D			Site survey	TKY → DPS	Site Survey			JKT, MLK
9	22-May Thu		Report to EOJ, JICA			Site survey	DPS → MTM → MLK	Site Survey			JKT, MLK
10	23-May Fri		Jakarta → → Tokyo	Data Correct.			Site survey				JKT, MLK
11	24-May Sat			Data Correct.	JKT-MTM		Site survey			TKO-DPS	MTM,DPS,MLK
12	25-May Sun			MTM-MLK	MTM-MLK		Site survey			DPS-MLK	MLK
13	26-May Mon			MTM-MLK			Site survey				MLK
14	27-May Tue					Site survey				Site survey	MLK
15	28-May Wed					Site survey			MLK-DPS- → Tokyo	Site survey	MLK
16	29-May Thu					Site survey				Site survey	MLK
17	30-May Fri					Site survey				Site survey	MLK
18	31-May Sat					Site survey				Site survey	MLK
19	1-Jun Sun					Site survey				Site survey	MLK
20	2-Jun Mon					Site survey				Site survey	MLK
21	3-Jun Tue			MRK-Sumbawa Besar			Site Survey			Site survey	MLK
22	4-Jun Wed			Sumbawa Besar - MTM			Site Survey			MLK-MTM	MLK
23	5-Jun Thu			Meeting with NTB			Site Survey			NTB	MLK
24	6-Jun Fri			NTB MTM-MLK NTB			Site Survey			NTB	MLK
25	7-Jun Sat			Reporting Site survey Reporting			Site Survey			Reporting	MLK
26	8-Jun Sun			MTM-JKT Site survey MTM-JKT			Site Survey			MTM-JKT	JKT, MLK
27	9-Jun Mon			MPW MLK-MTM MPW			Site Survey			MPW	JKT, MLK
28	10-Jun Tue			MPW MTM-JKT MPW			Site Survey			MPW	JKT, MLK
29	11-Jun Wed			Meeting with MPW, Report to EOJ, JICA, Jakarta →			Site Survey			Jakarta →	MLK
30	12-Jun Thu			→ Tokyo			Site Survey			→ Tokyo	MLK
31	13-Jun Fri						Site Survey				MLK
32	14-Jun Sat						Site Survey				MLK
33	15-Jun Sun						Site Survey				MLK
34	16-Jun Mon						Site Survey				MLK
35	17-Jun Tue						Site Survey				MLK
36	18-Jun Wed						Site Survey				MLK
37	19-Jun Thu						Site Survey				MLK
38	20-Jun Fri						Site Survey				MLK
39	21-Jun Sat						Site Survey				MLK
40	22-Jun Sun						Site Survey				MLK
41	23-Jun Mon						Site Survey				MLK
42	24-Jun Tue						Site Survey				MLK
43	25-Jun Wed						Site Survey				MLK
44	26-Jun Thu						Site survey	MLK → DPS →			MLK
45	27-Jun Fri						Site survey	→ Tokyo			MLK
46	28-Jun Sat						Site survey				MLK
47	29-Jun Sun						Site survey				MLK
48	30-Jun Mon						Site survey				MLK
49	1-Jul Tue						Site survey				MLK
50	2-Jul Wed						Site survey				MLK
51	3-Jul Thu						MLK → DPS →				
52	4-Jul Fri						→ Tokyo				

TKO:Tokyo, JKT:Jakarta, DPS:Denpasar, MTM:Mataram, MLK:Maluk, S.B.:Sumbawa Besar

EOJ:Embassy of Japan, MPW:Ministry of Public Works, MMT:Ministry of Manpower and Transmigration

基本設計概要説明（2008 年 10 月 19 日～2008 年 10 月 29 日）

			Leader	ChiefConsultant / Bridge Planner / Management & Maintenance	Bridge Design Engineer I
	Date		Kazumasa SANUI	Soemu OSHITA	Isao IGARASHI
1	19-Oct	Sun	Tokyo → Jakarta		
2	20-Oct	Mon	Courtesy call to JICA, EOJ, DGH		
3	21-Oct	Tue	Meeting with DGH (Explanation of B/D, Discuss on M/D)		
4	22-Oct	Wed	Interim report to JICA, Meeting with JICA Expert		
5	23-Oct	Thu	Meeting with DGH (discussiong on M/D draft)		JKT→MTM
6	24-Oct	Fri	Preparation ofMeeting Material		Meeting with NTB MTM→JKT
7	25-Oct	Sat	Preparation ofMeeting Material, Meeting within study team		
8	26-Oct	Sun	Preparation ofMeeting Material, Meeting within study team		
9	27-Oct	Mon	Meeting with DGH Technical Affairs, Finalize M/D draft		
10	28-Oct	Tue	Report to EOJ, JICA JKT→		
11	29-Oct	Wed	→Tko		
			TKO:Tokyo, JKT:Jakarta, MTM:Mataram		
			EOJ: Embassy of Japan, DGH: Directorate General of Highway		
			NTB: Nusa Tenggara Barat Provincial Government		

3. 関係者（面会者）リスト

公共事業道路省道路総局(Bina Marga)	
Mr. Hermanto Dardak	Director General (道路総局長)
Mr. Mohamad Irian	Secretary General (道路総局次官)
Mr. Taufik Widjojono	Director, Directorate of Planning (計画局長)
Mr. Max Antameng	Chief of sub-Directorate of General Planning
Mr. Fajar Eko Antono, ST	Sub-Directorate of General Planning
Mr. Rindy Farrah	Sub-Directorate of General Planning
Mr. Danis Sumadilaga	Director, Directorate of Technical Affairs
Mr. Herry Basa	Head of Sub-Directorate of Bridge
Mr. Monan Reynold	Sub-Directorate of Bridge
Ibu Jany Agustin	Sub-Directorate of Environment
Mr. Subagyo	Directorate of Eastern Road and Bridges
Mr. Nobuyuki Tsuneoka	JICA Expert on Road Policy
労働移住省(MMT)	
Mr. Djoko Sidik Pramono	Directorate of Community Development and Transmigration Area
Mr. Yultido Ichwan	Chief of sub-Directorate of PSPK
Mr. Eddy Supriadi	Chief of Transmigration Agency-NTB
Mr. John Tolla	Chief of Area Development (PK) Division
西ヌサトゥンガラ州政府	
Mr. Zainul Majdi	Governor (州知事)
Mr. H. L. Srinata	Governor (前州知事)
Mr. Chaerul Taher	Directorate of Public Works
Mr. Djajadi Sofyan	Chief of Public Works
Mr. Made Dresta	Public Works
Mr. Susakit Alius	Chief of Center of Roads and Bridges
Mr. Azhar	Chief of Road Infrastructure Division- Regional Settlements and Infrastructure
Mr. Daramawan	Chief of Working Unit (Kasatker)-Development Division
Mr. Ibnu Salim	Chief of Community Relations
Mr. Sukawadjia	Chief of Transportation
西ヌサトゥンガラ開発庁(BAPPEDA)	
Mr. H. Lalu Fathurrachman	Representative
Mr. Moch Machfuds	Chief of Division
Mr. Azhar	Chief of Regional Settlement and Infrastructure
Mr. Otto Andamulia	Project of Road and Bridge Construction
Mr. I. Gede rai	Chief of Division
スンバワ県	
Mr. Jamaluddin Malik	Mayor (県知事)
Mr. Anasy Muhkar	Assistant Major
Mr. Suparna Jufry	Assistant Major
Mr. Muhammadin	Chief of Bappeda
Mr. Mokhlis	Chief of Environmental Management
Mr. M. Guntur	Chief of Devision of Public Workss
西スンバワ県	
Mr. Zulkifli Muhdli	Mayor (県知事)
Mr. Djoko AT	Public Works
Mr. Nurmala	Sub-Directorate of Environment
Mr. Armen Ade Kristi	Sub-Directorate of Bridge
在インドネシア日本国大使館	
室永 武司	二等書記官
JICA インドネシア事務所	
富谷 喜一	次長
永見 光三	所員
山田 智之	所員

4. 討議議事録 (M/D) 基本設計現地調査

**Minutes of Discussions
on the Basic Design Study
on the Project for Construction of Bridges
in the Province of Nusa Tenggara Barat, Phase 2
in the Republic of Indonesia**

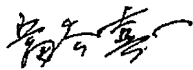
Based on the results of the Preliminary Study, the Government of Japan decided to conduct a Basic Design Study on the Project for Construction of Bridges in the Province of Nusa Tenggara Barat, Phase 2 in the Republic of Indonesia (hereinafter referred to as "the Project") and entrusted the study to the Japan International Cooperation Agency (hereinafter referred to as "JICA").

JICA sent to Indonesia the Basic Design Study Team (hereinafter referred to as "the Team"), which is headed by Mr. Kiichi Tomiya, Deputy Resident Representative, JICA Indonesia Office, and is scheduled to stay in the country from 14th May to 4th July, 2008.

The Team held discussions with the concerned officials of the Government of Indonesia and conducted a field survey at the study area.

In the course of discussions and field survey, both sides have confirmed the main items described in the attached sheets. The Team will proceed to further works and prepare the Basic Design Study Report.

Jakarta, 23rd May, 2008



Mr. Kiichi Tomiya
Leader
Basic Design Study Team
Japan International Cooperation Agency



Dr. Hermanto Dardak
Director General of Highways
Ministry of Public Works
Republic of Indonesia



ATTACHMENT

1. Objective

The objective of the Project is to construct bridges from the end point of the Phase I project (Tongoloka River) to Lunyuk section in Sumbawa Island in the West Nusa Tenggara Province (NTB).

2. Project Site

The site of the Project is shown in Annex-1.

3. Responsible and Implementing Organizations

- (1) The Responsible Ministry is the Ministry of Public Works (MPW).
- (2) The Implementing Agency is the Directorate General of Highways (DGH) and responsible for the facilitation with the Indonesian organizations concerned.
- (3) The organization chart of Implementing Agency is shown in Annex-2.

4. Items Requested by the Government of Indonesia

- 4.1 After discussions with the Team, the Indonesian side finally requested 21 candidate bridges described in Annex 3. Those candidate bridges will be covered in further study. JICA will assess the appropriateness of the request and will report the findings to the Government of Japan.
- 4.2 JICA will examine carefully and may reduce the number of bridges by the criteria below during the basic design study and inform the result not later than October 2008.
 - (1) Bridges less than 15m length are in principle excluded from the Grant Aid component.
 - (2) Bridges included in the construction plan by Indonesian budget are excluded from the Grant Aid component.
 - (3) Road access to the bridge construction site is secured in a timely manner by Indonesian side to propose the consistent construction plan for the Grant Aid project.

5. Japan's Grant Aid Scheme

The Indonesian side has shown a full understanding of the Japan's Grant Aid scheme and the necessary measures to be taken by the Indonesian side as explained by the Preliminary Study Team and described in the Annex-4, 5 and 6 of the Minutes of Discussions signed by both sides on 19th December, 2007.

6. Schedule of the Study

- 6.1 JICA will prepare the draft report and dispatch a mission to Indonesia in order to explain its contents around the middle of October 2008.
- 6.2 When the contents of the report are accepted in principle by the Government of Indonesia, JICA will complete the final report and send it to the Government of Indonesia by December 2008.

7. Environmental and Social Considerations

- 7.1 The Indonesian side shall complete the necessary procedures concerning the Environmental and Social Considerations including the acquisition of land and involuntary relocations in accordance with the laws and regulations of the Indonesia.
- 7.2 The Indonesian side shall obtain basic agreement for the Project and the relocation from the Project Affected Persons (PAPs) by means of stakeholder meetings.
- 7.3 The Indonesian side shall obtain Environmental Compliance Certificate and report the result to the Japanese side before the dispatch of the next mission scheduled in October 2008.
- 7.4 The Indonesian side shall arrange the budget allocation for resettlement and compensation for PAPs as the condition for the commencement of construction.

8. Other Relevant Issues

8.1 The Indonesian side shall provide necessary numbers of counterpart personnel to the Team during the period of their studies in Indonesia

8.2 The Indonesian side shall submit answers in English to the Questionnaire with relevant documents, which the Team handed to the Indonesian side, by the end of May, 2007.

8.3 The Indonesian side confirmed that the following undertakings should be taken by Indonesian expenses.

- (1) Relocation and/or removal of existing utilities (power lines, water lines, etc.) from the Project site, if necessary.
- (2) Securing and clearance of the temporary work yard,
- (3) Necessary arrangement for the tax exemption of imported equipment and materials.
- (4) Budget allocation for the commissions for the banking services based upon banking arrangement (B/A).

8.4 The Indonesian side reported the progress of construction work implemented by the Indonesian side and the road construction of 17km length from Tongoloka to Tatar section has already started. The team requested to continue the construction of roads, small bridges (less than 15m length) and culverts in the remaining 43km section from Tatar to Lunyuk enough to secure the access to the bridge construction site for the smooth implementation of the Grant Aid project. The Indonesian side agreed to this point and promised to complete the work before the commencement of the construction work.

8.5 The Team requested the Indonesian side to provide detailed information regarding the construction and maintenance schedule as attached before 10th June 2008. The Team will monitor the progress and will decide the implementation plan of the Grant Aid Project accordingly.

Annex-1 Project Site Map

Annex-2 Organization Chart

Annex-3 Requested Items

Annex-4 Japan's Grant Aid Scheme

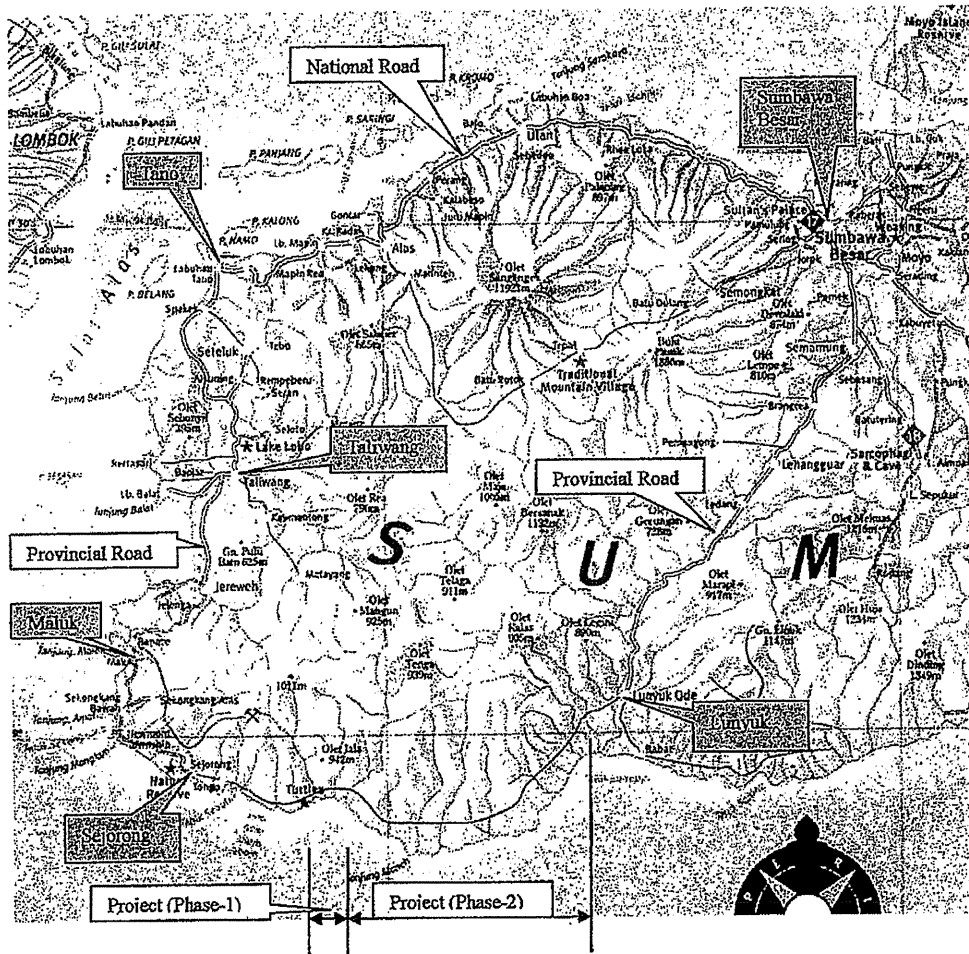
Annex-5 Major Undertakings to be taken by Each Government

Annex-6 Flow Chart of Japan's Grant Aid Procedures

Annex-7 Schedule of Road Construction by Central and Local Budget

The Project Site

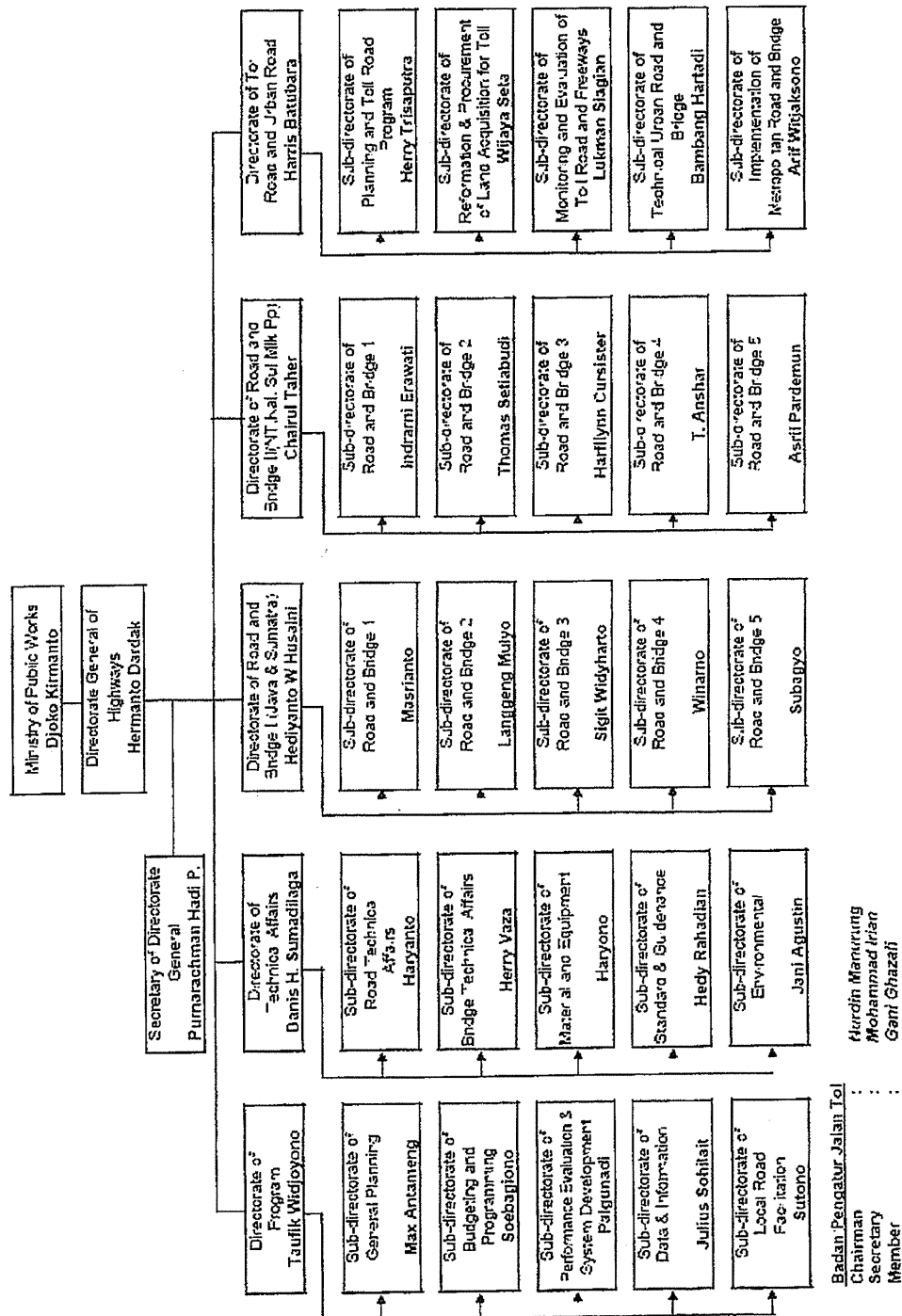
Annex-1



Location of Project Site

Organization Chart

ORGANIZATION FOR DIRECTORATE GENERAL OF HIGHWAY (BINA MARGA)



Requested Items

Annex-3

Bridge List in the Request Form			Result of Reconnaissance by JICA Preliminary Study Team			Covered in BD Study	Remarks
Bridge No.	Bridge Name	Estimated Length of Bridge (m)	Existing Structure	Recommendation Structure Type	Bridge Length (m)	Source Expected * Fund	
BR-1	Air Keruh I	30	Gabion	Bridge	30	G	
BR-2	Air Keruh II	30	Gabion	Bridge	30	G	
BR-3	Negenel	25	Gabion (Damaged)	Bridge	30	G	
BR-4	Negenel II		Gabion	Box Culvert	-	I	
BR-5	Tatar I	100	-	-	0	I	Alignment Improvement of Cut Stretch
BR-6	Tatar II	-	-	(missing)	0	-	Small water stream exists
BR-7	Tatar III		Rock Placing	Box Culvert	-	I	
BR-8	Tatar Loka	60	Gabion	Bridge	50	G	
BR-9	Tatar Bodo	25	Gabion	Bridge	25	G	
BR-10	Labihe I	20	Gabion	Box Culvert	-	G	
BR-11	Labihe II	20	Gabion (Damaged)	Bridge	20	G	
BR-12	Labihe III	20	Gabion	Bridge	25	G	
BR-13	Mone I	20	-	(Missing)	0	-	Water stream exists
BR-14	Mone II	-	-	(Missing)	0	-	Gabion (Damaged)
BR-15	Mone III	-	-	(Missing)	0	-	Box Culvert completed
BR-16	Telonang I	30	Concrete Cause Way	Bridge	30	G	
BR-17	Telonang II		Wooden Bridge (Damaged)	Bridge	10	I	Remaining of Both Abutments
BR-18	Telonang III		Wooden Bridge (Damaged)	Bridge	10	I	Decay of Wooden Parts
BR-19	Sepang	40	Concrete Cause Way	Bridge	35	G	
BR-20	Bontong	20	Wooden Bridge (Damaged)	Bridge	20	G	Collapse of Old Bridge
BR-21	Bon Jati		Wooden Bridge (Damaged)	Bridge	10	I	Collapse of Old Bridge
BR-22	Blengkon	20	-	(missing)	0	-	Water stream exists
BR-23	Tebil	20	-	Bridge	20	G	Crossing at Shallow Water Stream
BR-24	Momil I		-	Box Culvert	-	I	Box Culvert exists
BR-25	Momil II	30	RC Bridge (New)	-	-	-	Bridge Construction Completed
BR-26	Krikrit		Under Construction	-	-	I	Small water stream exists
BR-27	Lamar	40	Concrete Cause Way	Bridge	40	G	
BR-28	Aikmad		-	Box Culvert	-	I	Box Culvert completed
BR-29	Liang Bagik	20	Concrete Cause Way	Bridge	20	G	
BR-30	Petain I		Concrete Cause Way	Bridge	20	G	
BR-31	Petain II		Concrete Cause Way	Bridge	15	I	Box Culvert completed
BR-32	Petain III	20	-	(Missing)	0	-	Water stream exists
BR-33	Molong		-	(Missing)	0	-	Water stream exists
BR-34	Emang	30	Concrete Cause Way	Bridge	30	G	
BR-35	Kalbir	20	Concrete Cause Way	Bridge	20	G	
Nos. of Bridge : 35							
Nos. of Bridge (≥ 20m) : 21							
Nos. of Bridge (≥ 20m) : 16 (+1 culvert)							

6 * "G"; Requested to be covered by Grant Aid.
"I"; To be maintained by Indonesian Side

Japan's Grant Aid Scheme for General Project

The Grant Aid scheme provides a recipient country with non-reimbursable funds to procure the facilities, equipment and services (engineering services and transportation of the products, etc.) for economic and social development of the country under principles in accordance with the relevant laws and regulations of Japan. The Grant Aid is not supplied through the donation of materials as such.

1. Grant Aid Procedures

Japan's Grant Aid Scheme is executed through the following procedures.

Application	(Request made by a recipient country)
Study	(Basic Design Study conducted by JICA)
Appraisal & Approval	(Appraisal by the Government of Japan and Approval by Cabinet)
Determination of	(The Notes exchanged between the Governments of Japan
Implementation	and the recipient country)

Firstly, the application or request for a Grant Aid project submitted by a recipient country is examined by the Government of Japan (the Ministry of Foreign Affairs) to determine whether or not it is eligible for Grant Aid. If the request is deemed appropriate, the Government of Japan assigns JICA (Japan International Cooperation Agency) to conduct a study on the request.

Secondly, JICA conducts the study (Basic Design Study), using Japanese consulting firms.

Thirdly, the Government of Japan appraises the project to see whether or not it is suitable for Japan's Grant Aid Scheme, based on the Basic Design Study report prepared by JICA, and the results are then submitted to the Cabinet for approval.

Fourthly, the project, once approved by the Cabinet, becomes official with the Exchange of Notes (E/N) signed by the Governments of Japan and the recipient country.

Finally, for the smooth implementation of the project, JICA assists the recipient country in such matters as preparing tenders, contracts and so on.

2. Basic Design Study

1) Contents of the Study

The aim of the Basic Design Study (hereinafter referred to as "the Study"), conducted by JICA on a requested project (hereinafter referred to as "the Project"), is to provide a basic document necessary for the appraisal of the Project by the Government of Japan. The contents of the Study are as follows:

- Confirmation of the background, objectives, and benefits of the Project and also institutional capacity of agencies concerned of the recipient country necessary for the Project's implementation.
- Evaluation of the appropriateness of the Project to be implemented under the Grant Aid Scheme from a technical, social and economic point of view;
- Confirmation of items agreed upon by both parties concerning the basic concept of the Project.
- Preparation of a basic design of the Project.
- Estimation of cost of the Project.

The contents of the original request are not necessarily approved in their initial form as the contents of the Grant Aid project. The Basic Design of the Project is confirmed considering the guidelines of Japan's Grant Aid scheme.

The Government of Japan requests the Government of the recipient country to take whatever measures are necessary to ensure its self-reliance in the implementation of the Project. Such measures must be guaranteed even though they may fall outside of the jurisdiction of the organization in the recipient country actually implementing the Project.

Therefore, the implementation of the Project is confirmed by all relevant organizations of the recipient country through the Minutes of Discussions.

2) Selection of Consultants

For smooth implementation of the Study, JICA uses registered consulting firms. JICA selects firms based on proposals submitted by interested firms. The firms selected carry out a Basic Design Study and write a report, based upon terms of reference set by JICA.

The consulting firms used for the Study are recommended by JICA to the recipient country to also work on the Project's implementation after the Exchange of Notes, in order to maintain technical consistency.

3. Japan's Grant Aid Scheme

1) Exchange of Notes (E/N)

Japan's Grant Aid is extended in accordance with the Notes exchanged by the two Governments concerned, in which the objectives of the project, period of execution, conditions and amount of the Grant Aid, etc., are confirmed.

2) "The period of the Grant Aid" means the one fiscal year which the Cabinet approves the project for. Within the fiscal year, all procedure such as exchanging of the Notes, concluding contracts with consulting firms and contractors and final payment to them must be completed.

However, in case of delays in delivery, installation or construction due to unforeseen factors such as natural disaster, the period of the Grant Aid can be further extended for a maximum of one fiscal year at most by mutual agreement between the two Governments.

3) Under the Grant Aid, in principle, Japanese products and services including transport or those of the recipient country are to be purchased.

When the two Governments deem it necessary, the Grant Aid may be used for the purchase of the products or services of a third country.

However, the prime contractors, namely consulting, contracting and procurement firms, are limited to "Japanese nationals". (The term "Japanese nationals" means persons of Japanese nationality or Japanese corporations controlled by persons of Japanese nationality.)

4) Necessity of "Verification"

The Government of the recipient country or its designated authority will conclude contracts denominated in Japanese yen with Japanese nationals. Those contracts shall be verified by the Government of Japan. This "Verification" is deemed necessary to secure accountability of Japanese taxpayers.

5) Undertakings required to the Government of the recipient country

In the implementation of the Grant Aid Project, the recipient country is required to undertake such necessary measures as the following:

- a) To secure land necessary for the sites of the Project and to clear, level and reclaim the land prior to commencement of the Project,
- b) To provide facilities for the distribution of electricity, water supply and drainage and other incidental facilities in and around the sites,
- c) To secure buildings prior to the procurement in case the installation of the equipment,

- d) To ensure all the expense and prompt execution for unloading, customs clearance at the port of disembarkation and internal transportation of the products purchased under the Grant Aid,
- e) To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which will be imposed in the recipient country with respect to the supply of the products and services under the verified contracts,
- f) To accord Japanese nationals, whose services may be required in connection with supply of the products and services under the Verified contracts, such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work.

6) "Proper Use"

The recipient country is required to operate and maintain the facilities constructed and equipment purchased under the Grant Aid properly and effectively and to assign staff necessary for this operation and maintenance as well as to bear all the expenses other than those covered by the Grant Aid.

7) "Re-export"

The products purchased under the Grant Aid should not be re-exported from the recipient country.

8) Banking Arrangement (B/A)

- a) The Government of the recipient country or its designated authority should open an account in the name of the Government of the recipient country in a bank in Japan (hereinafter referred to as "the Bank"). The Government of Japan will execute the Grant Aid by making payments in Japanese yen to cover the obligations incurred by the Government of the recipient country or its designated authority under the verified contracts.
- b) The payments will be made when payment requests are presented by the Bank to the Government of Japan under an Authorization to Pay (A/P) issued by the Government of recipient country or its designated authority.

9) Authorization to pay (A/P)

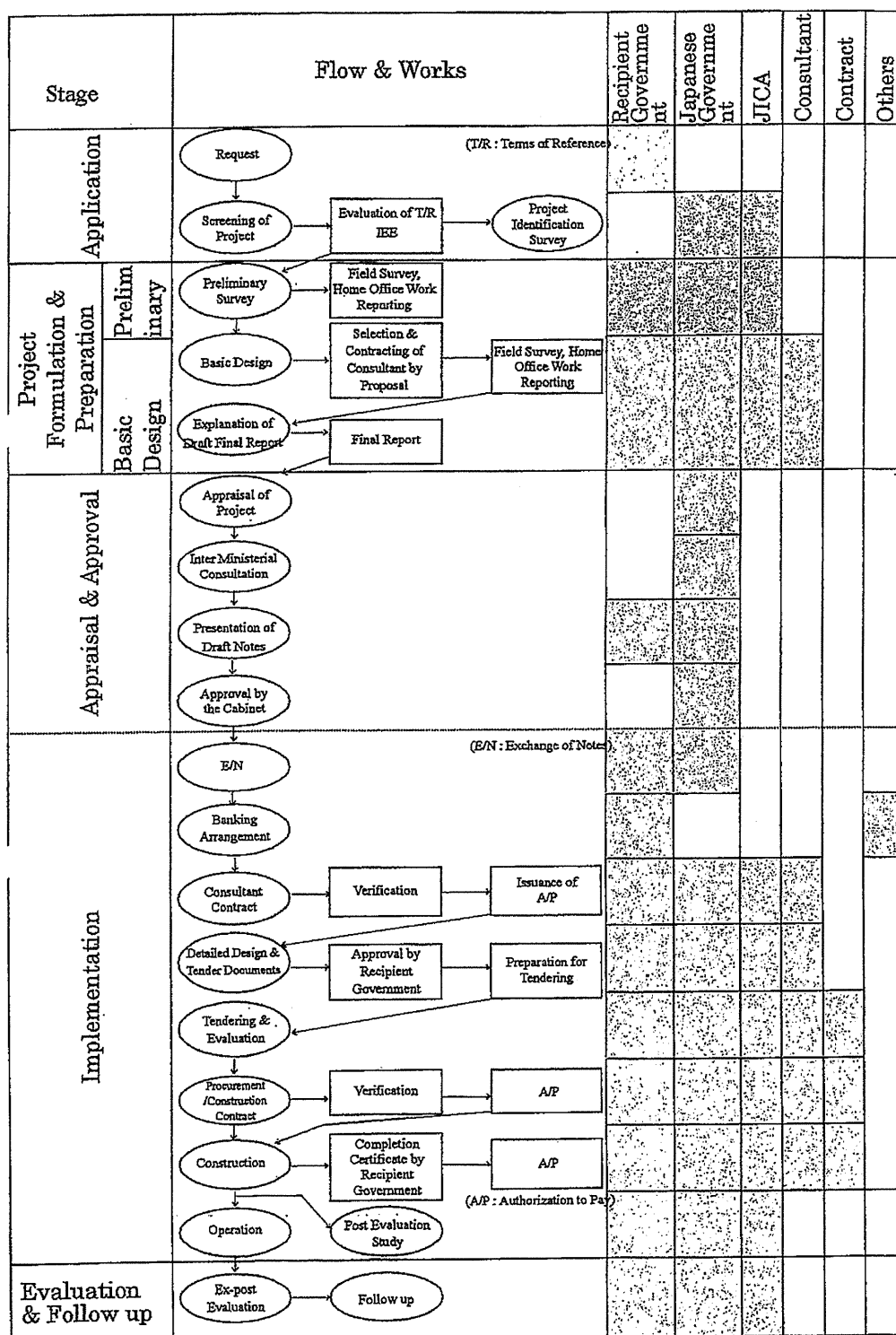
The Government of the recipient country should bear an advising commission of an Authorization to Pay and payment commissions to the Bank.

Major Undertakings to be taken by Each Government

No.	Items	To be covered by Grant Aid	To be covered by Recipient Party
1	To secure land		•
2	To clear, level and reclaim the site when needed		•
3	To construct gates and fences in and around the site	(•)	(•)
4	To construct roads		
	1) Within the site	•	
	2) Outside the site when needed		•
5	To bear the following commission to the Japanese bank for the banking services based upon the B/A		
	1) Advising commission of A/P		•
	2) Payment commission		•
6	To ensure prompt unloading and customs clearance at port of disembarkation in recipient country		
	1) Marine (Air) transportation of the products from Japan to the recipient country	•	
	2) Tax exemption and custom clearance of the products at the port of disembarkation		•
	3) Internal transportation from the port of disembarkation to the project site	•	
7	To accord Japanese nationals, whose services may be required in connection with the supply of the products and the services under the verified contract, such facilities as may be necessary for their entry into Indonesia and stay therein for the performance of their works		•
8	To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which may be imposed in Indonesia with respect to the supply of the products and services under the verified contracts		•
9	To maintain and use properly and effectively the facilities constructed and equipment provided under the Japan's Grant		•
10	To bear all the expenses, other than those to be borne by the Japan's Grant, necessary for construction of the facilities		•

(B/A: Banking Arrangement, A/P: Authorization to Pay)

Flow Chart of Japan's Grant Aid Procedures



Schedule of Road Construction by Central and Local Government Budget

Road Section	Length (km)	Road Development Work	Work Stage	Work Schedule																								Estimated Cost	Budget Allocation (Fiscal Year)	Responsible Organization			
				2009												2010																	
				1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12						
Longoka - Sta 17	17.0	Improvement	Construction																											Rp 24.2	2009	MPW	
Sta 17 - Sta 22	5.0	Improvement	Design & Cost Estimate																														
			Budget Allocation																														
			Tender																														
			Construction																														
Sta 22 - Lunyuk	35.0	Repair & Maintenance	Design & Cost Estimate																														
			Budget Allocation																														
			Tender																														
			Construction																														

討議議事録 (M/D) 基本設計概要説明

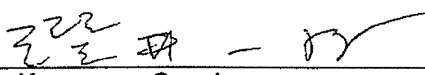
MINUTES OF DISCUSSIONS
ON THE BASIC DESIGN STUDY
ON
THE PROJECT FOR CONSTRUCTION OF BRIDGES
IN THE PROVINCE OF NUSA TENGGARA BARAT, PHASE 2
IN THE REPUBLIC OF INDONESIA
(EXPLANATION ON DRAFT REPORT)

In May 2008, the Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched the Basic Design Study Team on "The Project for Construction of Bridges in the Province of Nusa Tenggara Barat, Phase-2" (hereinafter referred to as "the Project") to the Republic of Indonesia, and through discussions with Indonesian side, field survey, and technical examination of the results in Japan, JICA prepared the draft report of the study.

In order to explain and to consult with the officials concerned of the Government of Indonesia on the components of the draft report, JICA sent to Indonesia the Basic Design Explanation Team (hereinafter referred to as "the Team"), which was headed by Kazumasa Sanui, Assistant Director of Economic Infrastructure Department, JICA, from October 19 to 28, 2008.

As a result of discussions, both sides confirmed the main items described in the attached sheets.

Jakarta, 7 November , 2008


Mr. Kazumasa Sanui
Leader
Basic Design Explanation Team
Japan International Cooperation Agency
Japan


Dr. Hermanto Dardak
Director General of Highways
Ministry of Public Works
Republic of Indonesia

ATTACHMENT

1. Components of the Draft Report

- 1.1. Both Indonesian side and Japanese side agreed and accepted in principle the contents of the draft report of the Basic Design Study explained by the Team. As the result of the Study, 15 bridges shown in Annex-1 are covered for the Project.
- 1.2. While the width of traffic lane of the Provincial Road is 6.00 meter according to Indonesian Standards, both sides agreed that 4.50 meter lane is applicable only for the bridges in mountainous section (BR-1, 2, 3, 8, 13, 16, 19, 20 and 22). To accommodate the possibilities of widening, the Japanese side is to construct foundations corresponding to 6.00m wide lane in case of necessity. Indonesian side shall construct the rest of widening structures at its own expense.

2. Japan's Grant Aid Scheme

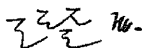
Indonesian side understood the Japan's Grant Aid scheme and the necessary measures to be taken by the Government of Indonesia as described in Minutes of Discussions signed on May 23, 2008.

3. Schedule of the Study

JICA will complete the Final Report in accordance with the confirmed items and send it to the Government of Indonesia by December, 2008.

4. Other Relevant Issues

- 4.1. The Project Cost Estimation, as attached in Annex-2, is confidential and should never be duplicated or disclosed to any outside parties before the signing of all the contracts for the Project.
- 4.2. Directorate General of Highways (hereinafter referred to as "DGH"), Ministry of Public Works (hereinafter referred to as "MPW") shall obtain Environmental Compliance Certificate for implementation of the Project and submit to JICA Indonesia Office by the end of November, 2008
- 4.3. The Sumbawa Regency Government shall hold stakeholder meetings in connection with land acquisition at each construction site of BR-29(Liang Bagik), BR-32(Petain III), BR-33(Molong), BR-34(Emang) and BR-35(Kalbir) and submit to JICA Indonesia Office by the end of November the result of the meetings including the agreement of stakeholders on land acquisition for both of permanent use of the bridges and temporary use during the construction. MPW shall monitor the progress of the procedures as the Responsible Ministry. Indonesian side shall complete the land acquisition and involuntary relocations before the commencement of the construction work.
- 4.4. The following undertakings should be taken by Indonesian side at its own expenses.



- (1) Indonesian side shall complete the construction of the road including the structures as shown in Annex-3 according to the schedule as shown in Annex-4.
- (2) Indonesian side shall bear the banking commissions as a condition for the Japan's Grant Aid to be implemented. MPW and Ministry of Finance should secure the sufficient budget to cover the following cost.
 - 1) The commissions for the banking services based upon Banking Arrangement (B/A)
 - 2) The advising commission of the Authorization to Pay (A/P).

4.5. Indonesian side shall secure enough budget and personnel necessary for maintenance of the bridges constructed by the Project.

Annex-1: Covered Bridges for the Project

Annex-2: Project Cost to be borne by Japan's Grant Aid

Annex-3: List of Structures to be constructed by Indonesian Side

Annex-4: Schedule of Construction by Indonesian Side

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END

Covered Bridges for the Project

Bridge No.	Bridge Name	Existing Structure	Proposed Bridge Length (m)	Remarks
BR-1	Air Keruh I	Gabion	20	
BR-2	Air Keruh II	Gabion	20	
BR-3	Negen I	Gabion (Damaged)	35	
BR-8	Tatar Loka	Gabion	55	
BR-13	Mone I	-	20	Water stream exists
BR-16	Telonang I	Concrete Cause Way	50	
BR-19	Sepang	Concrete Cause Way	40	
BR-20	Bontong	Wooden Bridge (Damaged)	20	Collapse of Old Bridge
BR-22	Blengkong	-	20	Water stream exists
BR-27	Lamar	Concrete Cause Way	55	
BR-29	Liang Bagik	Concrete Cause Way	20	
BR-32	Petain III	-	20	Water stream exists
BR-33	Molong	-	20	Water stream exists
BR-34	Emang	Concrete Cause Way	45	
BR-35	Kalbir	Concrete Cause Way	25	
No. of Bridge : 15				

322 m.

List of Structures to be constructed by Indonesian Side

(Budget Resources Local Government - NTB)

No.	Bridge No.	Bridge Name	Bridge Length (m)	Structure Type	Year 2008	Year 2009	Year 2010
1	BR-4	Negene II	10.0	Box Culvert			o
2	BR-5	Tatar I		Pipe Cuvert			
3	BR-6	Tatar II		Pipe Cuvert			
4	BR-7	Tatar III	10.0	Box Culvert			o
5	BR-9	Tatar Bodo	12.0	Bridge			o
6	BR-10	Labihe I	15.0	Bridge			o
7	BR-11	Labihe II	10.0	Bridge			o
8	BR-12	Labihe III	10.0	Bridge			o
9	BR-14	Mone II	10.0	Bridge			o
10	BR-15	Mone III	10.0	Bridge			o
11	BR-17	Telonang II	8.4	Bridge		o	
12	BR-18	Telonang III	7.0	Bridge		o	
13	BR-21	Bon Jati	8.6	Bridge		o	
14	BR-23	Tebil	15.0	Bridge		o	
15	BR-24	Momil I	10.0	Box Culvert		o	
16	BR-25	Momil II		Pipe Cuvert			
17	BR-26	Krikrit		Pipe Cuvert			
18	BR-28	Aikmad	15.0	Box Culvert		o	
19	BR-30	Petain I	8.0	Bridge	o		
20	BR-31	Petain II	10.0	Bridge		o	

Source: Nusa Tenggara Barat Provincial Government

Schedule of Construction by Indonesian Side

Annex-4

Implementation Schedule of Improvement and Repair & Maintenance of the Project Road (Tongoloka - Lunyuk)
Prepared by Directorate General of Highways and Nusa Tenggara Barat Provincial Government

Road Section	Length (km)	Road Development Work	Work Stage	Work Schedule																																																Estimated Cost																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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Note: MPW = Ministry of Public Works, NTB = Provincial Government of Nusa Tenggara Barat

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5. 事業事前計画表

1. 案件名

インドネシア共和国西ヌサトゥンガラ州橋梁建設計画

2. 要請の背景（協力の必要性・位置付け）

インドネシア国西ヌサトゥンガラ州はジャワ島の東部に浮かぶロンボク島、スンバワ島その他、いくつかの島から構成されている。人口は400万人強、州都はロンボク島のマタラムである。同州は「イ」国の経済的発展から取り残され、一人当たりGDPは全26州の中で4番目に低く、他地域との経済格差是正が課題となっている。スンバワ島は人口が約120万人で、同島の南部地域は農業、鉱業、水産業や観光の開発ポテンシャルが高いことから、周辺の島からの移住政策が「イ」国政府により推し進められている。

島内の道路インフラはTano港から北部の海岸線に沿って走り同島最大の、Sumbawa Besarを経由して島東部へと至る国道が唯一の幹線道路であり、島内の物流を担っている。その他の道路は整備が十分ではなく、同島の経済的発展の妨げになっている。南部地域へのアクセス道路としてTanoとSumbawa Besarを東西の起点として南部地域を環状に結ぶ州道の南リング道路がある。しかし、最南端部は急峻な山岳地帯であるため、2002年には一旦全線開通されたものの、渡河施設がスピルウエー仮橋であったため、越流水深が大きい増水時期には渡河できず、また、簡易な蛇籠スピルウエーであった場所は短期間の後に破壊・流失して渡河できない状態となっている。現在、ルニユック側の平地区間以外は、一般車両の通行は困難な状態である。このため、スンバワ島南部地域の東西方向の住民移動および物流はほとんどできない現状である。また、対象道路沿道は肥沃な丘陵地であるため、入植移住が推進されているが、道路事情が改善されない場合は入植移住政策が頓挫することになる可能性がある。

このような条件下、公共事業道路省および西ヌサトゥンガラ州政府は、南リング道路の整備を進めており、西側に隣接する第1次事業区間（我が国はこの区間に位置する8橋の整備について無償資金協力を現在実施している。）および対象道路の起点から17km区間については、現在、道路部分の整備が進行中である。今後、対象道路全線に亘り道路部分の整備が実施される予定である。加えて、本プロジェクトにより対象橋梁が建設された場合、南リング道路が恒久的水準で開通することになる。

3. プロジェクト全体計画概要

(1) プロジェクト全体計画の目標

スンバワ島南リング道路の通行困難な区間（トンゴロカ〜ルニユク約 60km）の橋梁および道路を改修することにより、恒久的に通行可能な道路が提供される。

直接裨益対象の範囲及び規模：南リング道路沿線住民約 12 万人

間接裨益対象の範囲及び規模：スンバワ島住民約 120 万人

(2) プロジェクト全体計画の成果

ア 南リング道路（トンゴロカ〜ルニユク間）橋梁が建設され、道路が整備される。

(3) プロジェクト全体計画の主要活動

ア 比較的大きな 15 橋を建設する。（我が国の協力による）

イ 比較的小さな橋梁およびカルバートを建設する。（「イ」側による）

ウ 道路を改修する。（約 60km）（「イ」側による）

(4) 投入

第 2 次：

ア 日本側： 無償資金協力 5.5 億円

イ 「イ」国側：391 億ルピア（5.0 億円）

（ア）必要な人員：道路・橋梁工事管理約 10 名、維持管理要員：約 4 名

（イ）施設の運営・維持管理に係る経費：53 百万ルピア

第 3 次：

ア 日本側： 無償資金協力 10.8 億円

イ 「イ」国側：406 億ルピア（5.1 億円）

（ア）必要な人員：道路・橋梁工事管理約 20 名、維持管理要員：約 6 名

（イ）施設の運営・維持管理に係る経費：126 百万ルピア

(5) 実施体制

・主管官庁：公共事業省

・実施機関：公共事業省道路総局、西ヌサトゥンガラ州政府、スンバワ県、
西スンバワ県

4. 無償資金協力案件の内容

(1) サイト

「イ」国西ヌサトゥンガラ州スンバワ島南リング道路トンゴロカ〜ルニユク区間

(2) 概要

第2次：4橋の建設 橋長合計 130.0m、取付道路延長合計 449.4m

第3次：11橋の建設 橋長合計 335.0m、取付道路延長合計 1329.9m

(3) 相手国負担事項

- ① 道路改修
- ② 小橋およびカルバートの建設
- ③ プロジェクト用地確保
- ④ 工事用地借地
- ⑤ 電柱の移設

(4) 概算事業費

第2次：概算事業費 10.5 億円（日本側負担 5.5 億円、「イ」国側負担 5.0 億円）

第3次：概算事業費 15.9 億円（日本側負担 10.8 億円、「イ」国側負担 5.1 億円）

(5) 工期

第2次：詳細設計・入札期間を含め約 21 ヶ月（予定）

第3次：詳細設計・入札期間を含め約 24.5 ヶ月（予定）

(6) 貧困、ジェンダー、環境および社会面の配慮

特になし。

5. 外部要因リスク（プロジェクト全体計画の目標達成に関して）

なし。

6. 過去の類似案件からの教訓の活用

なし。

7. プロジェクト全体計画の事後評価に係る提案

(1) プロジェクト全体計画の目標達成を示す成果指標

成果指標	現状の数値 (2008 年)	計画値 (2013 年)
一般車両 (2 輪駆動車) 通行不能期間 (月/年)	12 ヶ月	0 ヶ月
トンゴロカ〜ルニユック (60km) 4 輪駆動車による所要時間	約 4 時間 30 分 (通行可能時)	約 3 時間 (常時)

(2) その他の成果指標

特になし。

(3) 評価のタイミング

2013 年度以降 (施設供用開始後)

6. 入手資料リスト

番号	名 称	形態 図書・ビデオ 地図・写真等	オリジナル・ コピー	発行機関	発行年
1	ATLAS Indonesia Dan Dunia	図書	コピー	Pustaka Sandro Jakarta	
2	Kecamatan Lunyuk Dalam Angka Lunyuk District in Figures	PDF	コピー	Dappeda Kabupaten Sumbawa	2006
3	Kecamatan Sekongkang Dalam Angka Sekongkang District in Figures	PDF	コピー	Dappeda Kabupaten Sumbawa	2006
4	Sekilas Tentang Penyelenggaraan Transmigrasi Di Provinsi NTB	図書	コピー	Dinas Transmigrasi Provinsi NTB	2008
5	Indikator Ekonomi	図書	コピー	Badan Pusat Statistik	2007
6	Indeks Harga Perdagangan Besar Indonesia	図書	コピー	Badan Pusat Statistik	2007
7	Indeks Harga Perdagangan Besar Indonesia	図書	コピー	Badan Pusat Statistik	2006
8	Tata Cara Perencanaan Geometrik Jalan Antar Kota	図書	コピー	Directorat Jenderal Bana Marga	1997

7. 追加された対象橋梁の IEE 調査結果

① BR-13 Mone 1

想定される影響の有無		
社会環境（移転、土地収用、文化財等）	自然環境（保護区域、貴重種等）	公害（水質、大気質等）
架橋地点に付近に家屋はなく、悪影響は想定されない。 架橋地点は公有地であり、土地収用は発生しない。	沿線は準生産林の指定を受けており、森林局省への申請と許可が必要である。 貴重種等の保護区域とは離れている。	悪影響は想定されない。



② BR-22 Blengkon

想定される影響の有無		
社会環境（移転、土地収用、文化財等）	自然環境（保護区域、貴重種等）	公害（水質、大気質等）
架橋地点に付近に家屋はなく、悪影響は想定されない。 架橋地点は官地であり、土地収用は発生しない。	指定を受けた区域には該当しない。 貴重種等も確認されない。	悪影響は想定されない。



③ BR-32 Petain 3

想定される影響の有無		
社会環境（移転、土地収用、文化財等）	自然環境（保護区域、貴重種等）	公害（水質、大気質等）
架橋地点に付近に家屋はなく、悪影響は想定されない。 架橋地点には灌木の茂る私有地があり、土地収用が発生する。	海岸までの距離は数百メートルで汽水域である。 指定を受けた区域には該当しない。 貴重種等は確認されない。	工事中に発生する濁水が汽水域に影響を及ぼす恐れがあるが、対策を施すことによって影響の低減は可能である。



④ BR-33 Molong

想定される影響の有無		
社会環境（移転、土地収用、文化財等）	自然環境（保護区域、貴重種等）	公害（水質、大気質等）
架橋地点に付近に家屋はなく、悪影響は想定されない。 架橋地点には灌木の茂る私有地があり、土地収用が発生する。	海岸までの距離は数百メートルで汽水域である。 指定を受けた区域には該当しない。 貴重種等は確認されない。	工事中に発生する濁水が汽水域に影響を及ぼす恐れがあるが、対策を施すことによって影響の低減は可能である。





**PEMERINTAH PROVINSI NUSA TENGGARA BARAT
BADAN LINGKUNGAN HIDUP DAN PENELITIAN
(BLHP)**

Jalan Majapahit No. 56 Telp. (0370) 644782-621784-632572, Fax. (0370) 644782
MATARAM

83/15

**REKOMENDASI
NOMOR 660/266 II/ BLHP/ 2008**

TENTANG

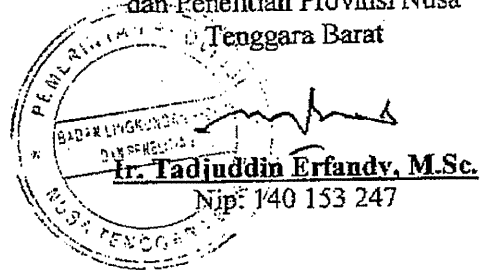
**UPAYA PENGELOLAAN LINGKUNGAN HIDUP DAN UPAYA PEMANTAUAN
LINGKUNGAN HIDUP KEGIATAN PEMBANGUNAN JEMBATAN TAHAP 2
PADA RUAS JALAN TATAR – LUNYUK DI KABUPATEN SUMBAWA BARAT
DAN SUMBAWA
PROVINSI NUSA TENGGARA BARAT**

Berdasarkan hasil pemeriksaan bersama antara Badan Lingkungan Hidup dan Penelitian Provinsi Nusa Tenggara Barat dengan Dinas Pekerjaan Umum Provinsi Nusa Tenggara Barat, Kantor Lingkungan Hidup Kabupaten Sumbawa Barat, Dinas Pekerjaan Umum Kabupaten Sumbawa Barat, Badan Penanaman Modal dan Pengelolaan Lingkungan Hidup Kabupaten Sumbawa, dan Dinas Pekerjaan Umum Kabupaten Sumbawa terhadap dokumen Formulir Isian Upaya Pengelolaan Lingkungan Hidup (UKL) dan Upaya Pemantauan Lingkungan Hidup (UPL) kegiatan Pembangunan Jembatan Tahap 2 Ruas Jalan Tatar – Lunyuk pada tanggal 28 Oktober 2008, dan hasil perbaikan formulir yang disampaikan pada tanggal 5 November 2008 merekomendasikan sebagai berikut:

- a. bahwa dokumen formulir isian sesuai Keputusan Menteri Negara Lingkungan Hidup Nomor 86 tahun 2002 tentang Pedoman Pelaksanaan Upaya Pengelolaan Lingkungan Hidup dan Upaya Pemantauan Lingkungan Hidup, yang telah disepakati sebagaimana terlampir akan dilaksanakan oleh Pemrakarsa yaitu Direktorat Bina Teknik, Direktorat Jenderal Bina Marga Departemen Pekerjaan Umum atau Satuan Kerja yang ditunjuk, sebagai upaya mengendalikan dampak lingkungan akibat kegiatan Pembangunan Jembatan tersebut;
- b. bahwa dalam rangka pengelolaan lingkungan hidup, Pemrakarsa akan melakukan pengelolaan lingkungan untuk mencegah dan/atau mengendalikan terhadap adanya dampak:
 - Perubahan status penguasaan lahan kehutanan;
 - Tuntutan ganti rugi tanah untuk keperluan tapak jembatan;
 - Penurunan kualitas air sungai akibat kegiatan pembangunan jembatan;
 - Mencegah timbulnya kerusakan hutan;
 - Kerusakan jalan;
 - Mencegah terjadinya kelongsoran tebing sungai akibat kegiatan disekitar jembatan.
- c. bahwa dalam rangka pemantauan lingkungan, Pemrakarsa akan melakukan pemantauan lingkungan terhadap perubahan kualitas dan kuantitas air sungai disetiap lokasi jembatan pada setiap musim penghujan/banjir, kestabilan lahan serta dampak sosial disekitar lokasi kegiatan.

Demikian rekomendasi ini dibuat untuk dapat dilaksanakan dan dipergunakan sebagaimana mestinya.

Mataram, 11 November 2008
Kepala Badan Lingkungan Hidup
dan Penelitian Provinsi Nusa
Tenggara Barat



Tembusan:

1. Gubernur Nusa Tenggara Barat di Mataram;
2. Bupati Sumbawa Barat di Taliwang;
3. Bupati Sumbawa di Sumbawa Besar.

RECOMMENDATION
No: 660/266/II/BLHP/2008
CONCERNING
ENVIRONMENTAL MANAGEMENT MEASURES AND ENVIRONMENTAL MONITORING
MEASURES (UKL & UPL)
THE PROJECT FOR CONSTRUCTION OF BRIDGES
IN THE PROVINCE OF NUSA TENGGARA BARAT, PHASE 2
ON ROAD SECTION OF TATAR – LUNYUK
IN SUMBAWA BARAT REGENCY AND SUMBAWA REGENCY

According to the result of joint examination among the Environmental and Research Agency (BLHP) of Nusa Tenggara Barat Province and Public Works Agency of Sumbawa Barat Regency, Environmental Office (KLH) of Sumbawa Barat Regency, Investment and Environmental Agency (BPMLH) of Sumbawa Regency and Public Works Agency of Sumbawa Regency concerning UKL & UPL Document on the Project for Construction of Bridges in Province of Nusa Tenggara Barat, Phase 2 on Road Section of Tatar to Lunyuk on October 28, 2008, and the improvement result of the document that submitted on November 5, 2008 recommends the following matters:

- a. That the document of UKL & UPL conforms to the State Ministerial Decree of Environment No. 86/2002 concerning the Guideline of Implementation for Environmental Management Measures and Environmental Monitoring Measures that has been approved as attached and will be implemented by the Proponent is Directorate of Technical Affairs, Directorate General of Highways, Ministry of Public Works or appointed Work Unit as the measures to manage the environmental impact caused by the Project for Construction of Bridges;
- b. That in the framework of environmental management, the Proponent will undertake the environmental management to prevent and/or mitigate the environmental impacts:
 - Alteration of the status for forestry land authority;
 - Claim for land compensation of the requirement of the bridge site;
 - Deterioration of river water quality caused by the bridge construction work;
 - Prevent the damage of the forest;
 - Prevent the damage of the road;
 - Prevent the landslide on steeply sloping riverbank caused by the activity around the bridge site.
- c. That in the framework of environmental monitoring, the Proponent will undertake the environmental monitoring for the quantity and quality of river water in

respective bridge locations on every rainy/flood season, land stability and the impact to social environment surrounding the bridge location.

This recommendation is prepared to be implemented and used for whatever extent necessary.

Mataram, November 11, 2008

Head of Environmental and Research
Agency of Nusa Tenggara Barat
Province

Ir. Tadjuddin Erfandy, M.Sc.

Nip. 140 153 247

C.c.

1. Governor of Nusa Tenggara Barat in Mataram;
2. Regent of Sumbawa Barat in Taliwang;
3. Regent of Sumbawa in Sumbawa Besar.

9. 公聴会・ステークホルダーミーティング議事録



lahan untuk lokasi proyek jembatan ini,
Land for location of this SECTION bridge
adalah tanah negara (Kawasan Project
is state Land (Forestry Area/
Hutan (HPT). Limited Production Forest)
Konservasi

Konfirmation

Ward: Ward

nama: Wasioli

DABayan: Kogi Prudyard San Rabelahan
Position: SECTION HEAD OF CULTIVATION AND
DIVERS RESEARCH, PESTICIDE & FERTILIZER RESEARCH
STEL. Embury Base.

POSITION: Lect. of History
 1901-1902: Lect. of History
 1902-1903: Lect. of History

Pinus Khasiana, Puteblina & Puteblina Puteblina
Hal. Embura Basal.

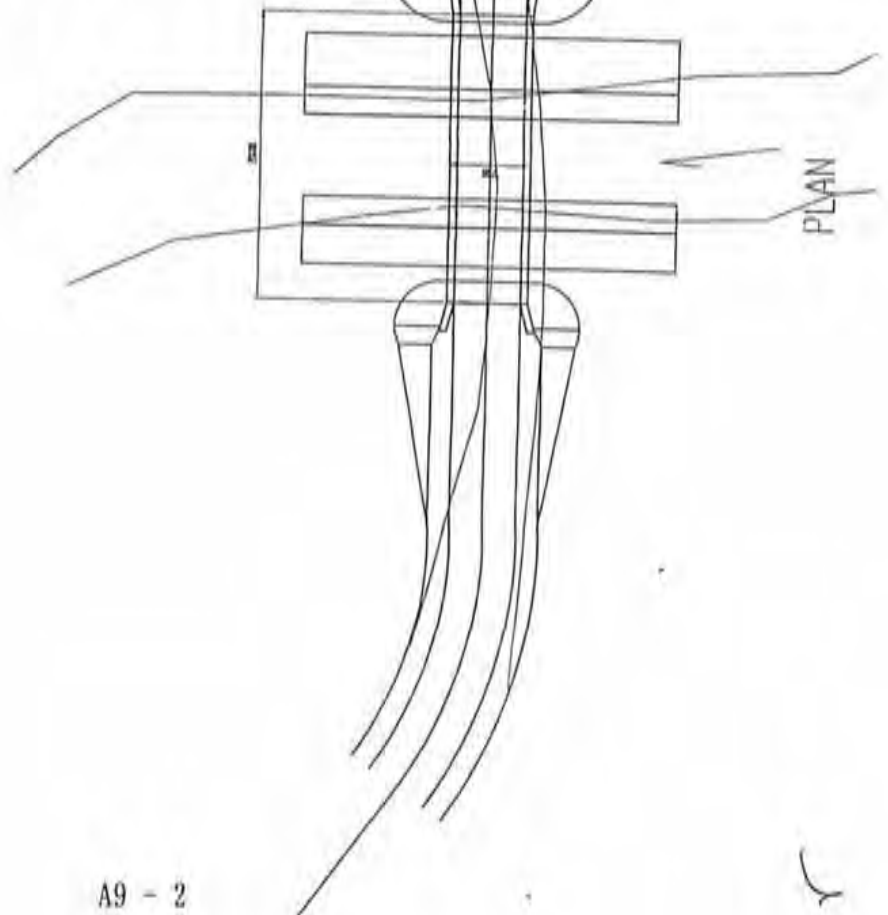
Forestry, Estates and

Agriculture Agency

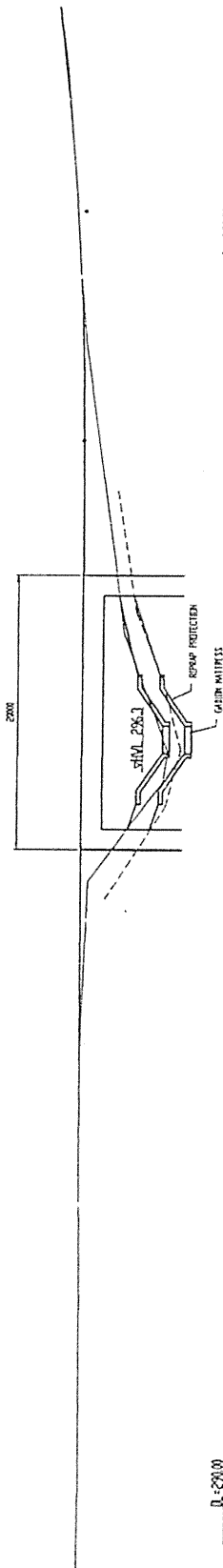
West Sumbawa Regency

Tagezahl: 6 Juni 2008

Date : 6-June-2008



BR-1 AIR KERUHI BRIDGE



SECTION

DL-2000

DL-2000

ELEVATION

lokasi untuk lokasi proyek jembatan ini;
adalah tanah negara (kawasan
hutun (HPT)).

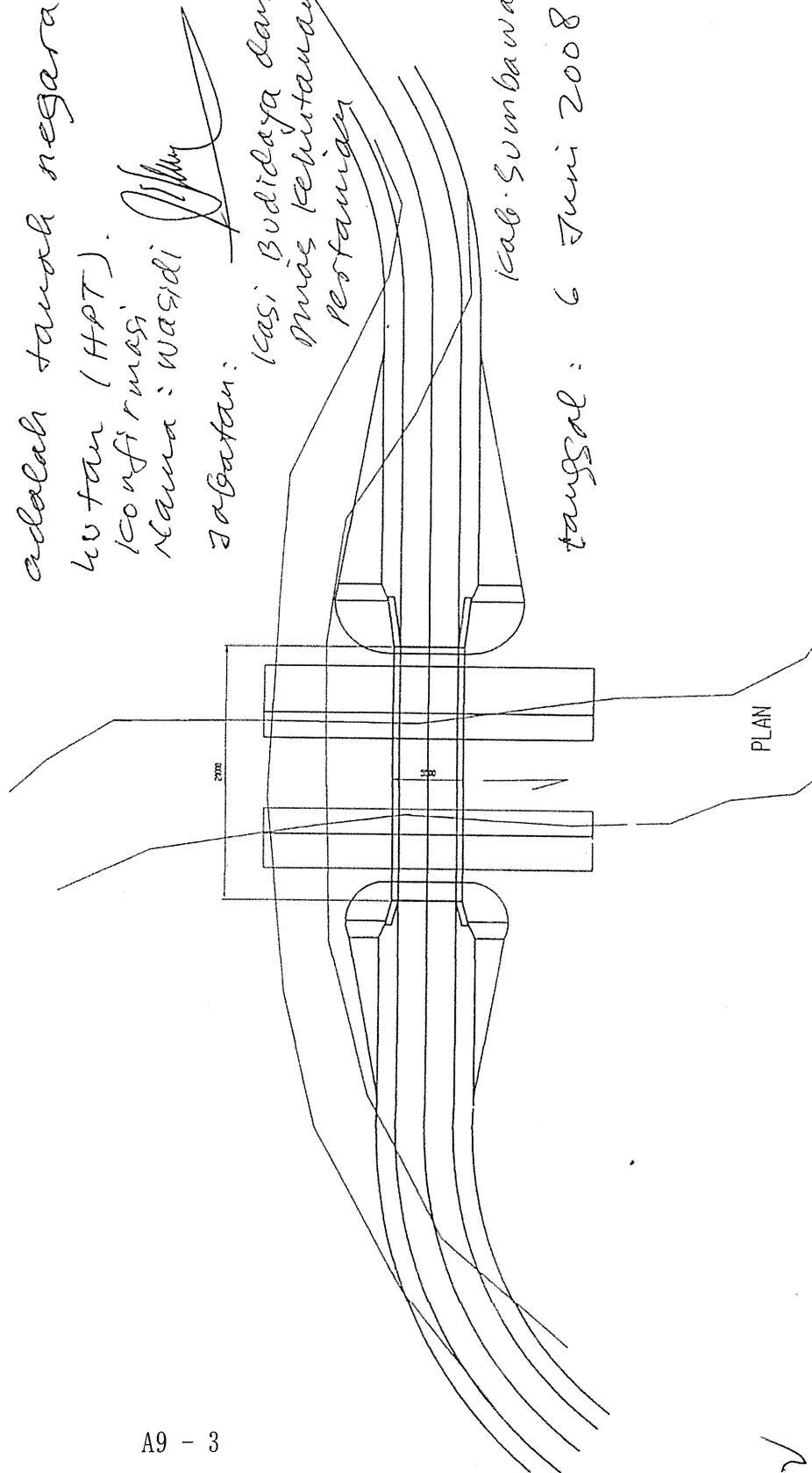
konfirmasi
nama: Wasidi

Tabatan:

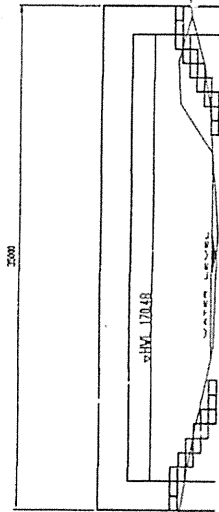
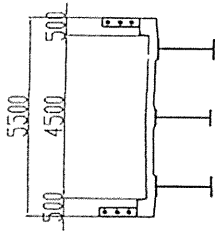
Kasi. Budaya dan Rehabilitasi;
Mas. Kehutanan, Perkebunan dan
Pertanian

Kab. Sumbawa Barat

tanggal: 6 Juni 2008



PLAN



SECTION

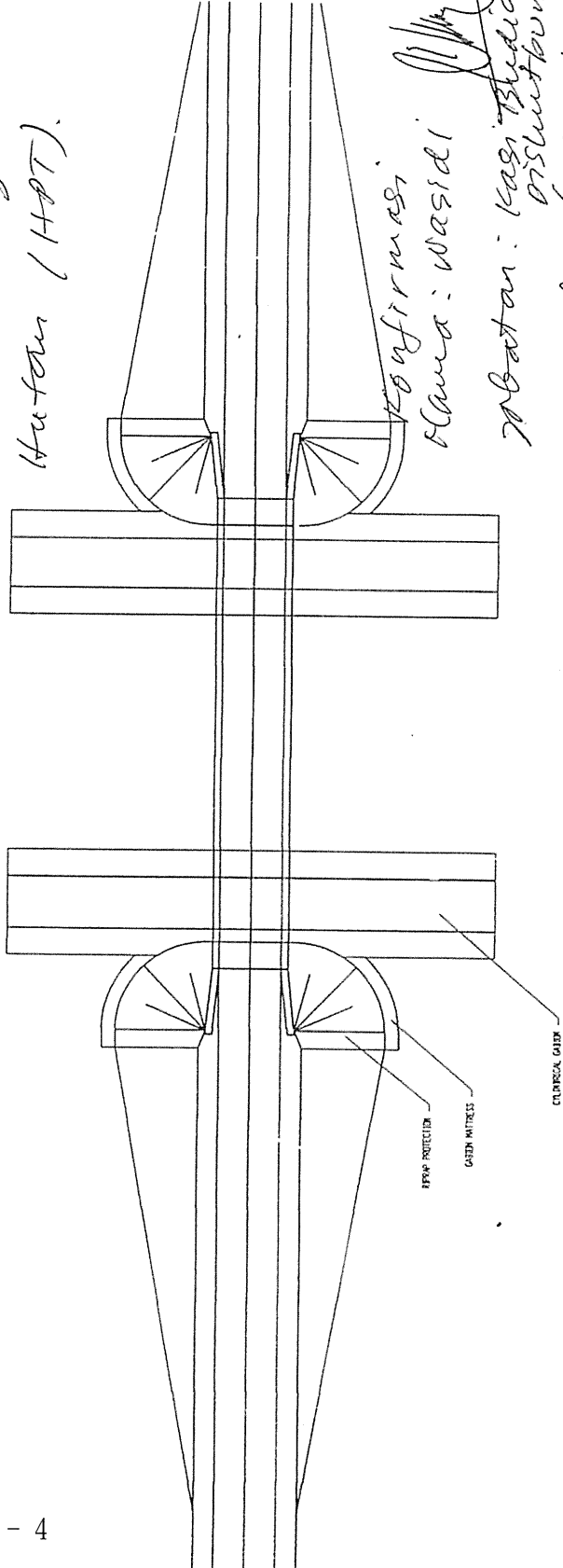
IL-16000

ELEVATION

IL-16000

lahan untuk lokasi proyek jembatan ini adalah tanah Negara (Kawasan Hutan / HPT).

A9 - 4



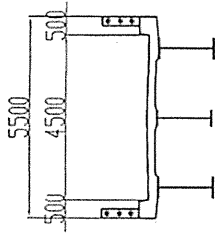
konfirmasi
Nama: Wasidi

Mbatan: Kasi Budidaya dan Kelola Mng.
Disusun oleh: KSB
Tanggal: 6 Juni 2008

PLAN

BR-3 NEGENE BRIDGE

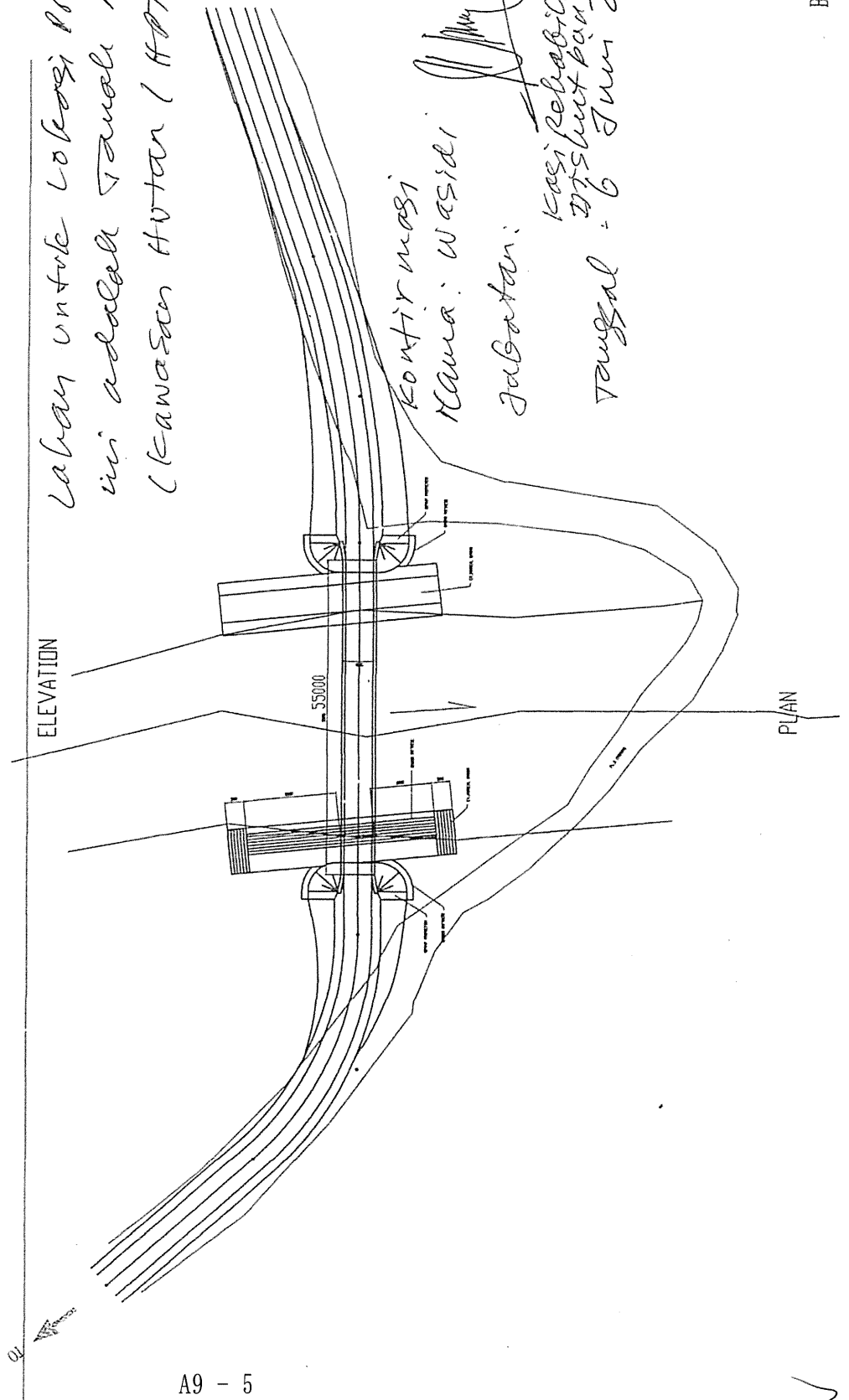
2



SECTION

labay untuk lokasi proyek jembatan
ini adalah tanah negara
(Kawasan Hutan (KHT)).

ELEVATION



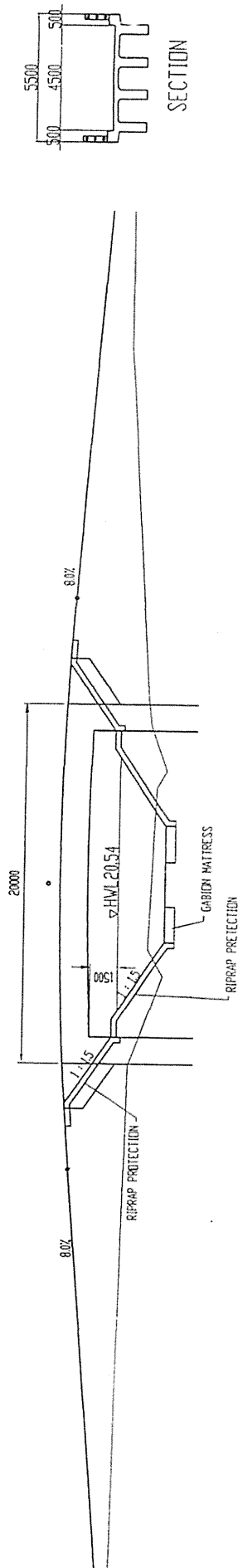
PLAN

Kontinuitas

Nama: Wasidi

Jabatan:

Kasi Rehabilitasi dan Suidaga
Disputasi dan Tangkasa
Tanggal: 6 Juni 2008



DL=10.00

ELEVATION

DL=10.00

Lahan untuk lokasi proyek jembatan ini adalah tanah Negara. (Kawasan Hutan/APL).

Konfirmasi

Nama: Wasidi

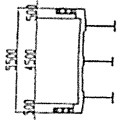
Jabatan: Kas, Budidaya & Rehab.

Dishutbun dan KSB

Tanggal: 6 Juni 2008

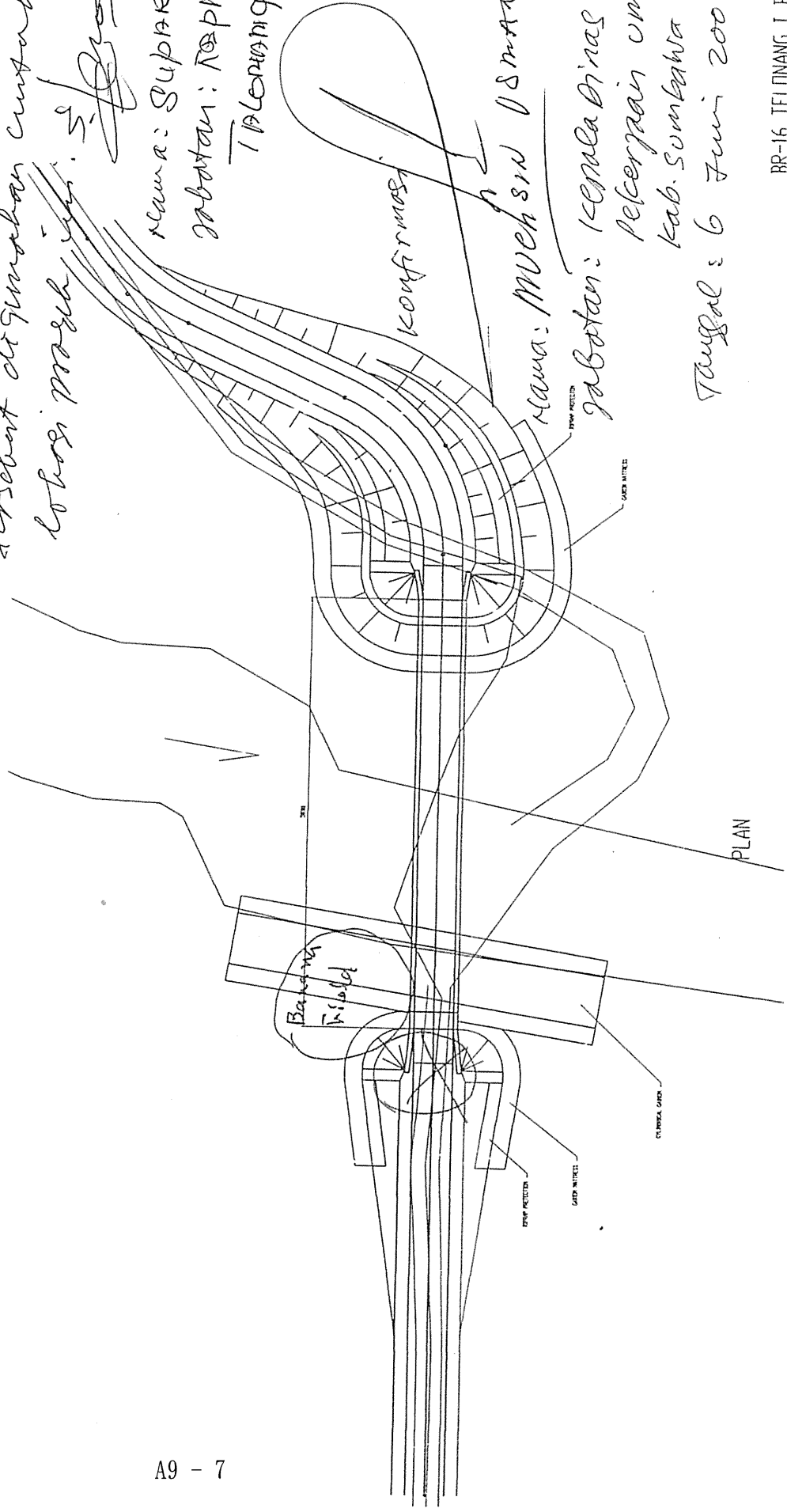
BR-13 MONE I BRIDGE

PLAN

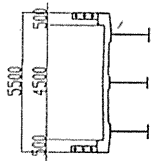


ELEVATION

nama: Supriyo
jabatan: Roblu DED
11/10/2019

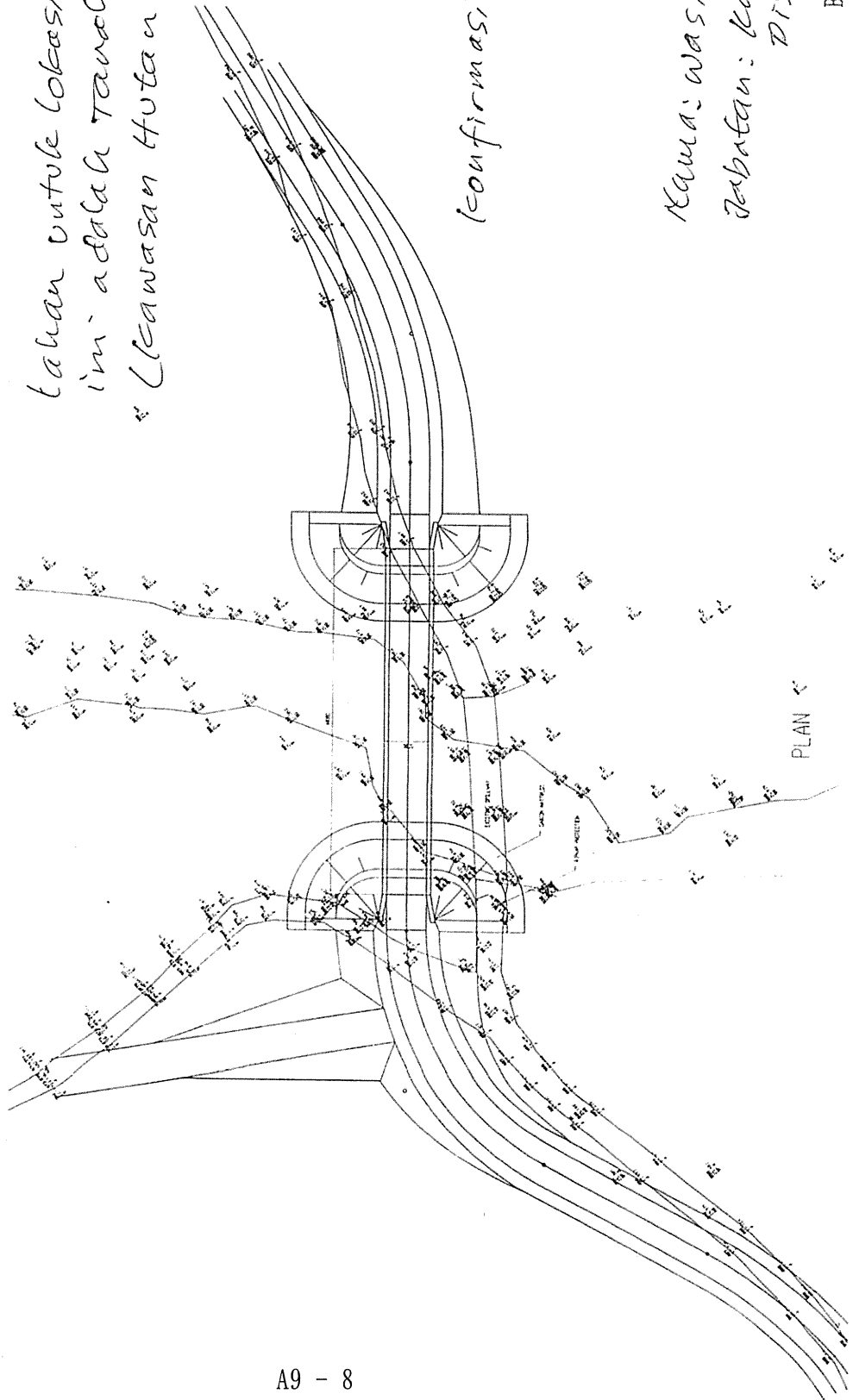


Jabatan: Kepala Dinas
 Pekerjaan umum
 kab. Sumbawa Besar.
 Tanggal: 6 Juni 2008



SECTION

ELEVATION



PLAN

lahan untuk lokasi proyek jembatan ini adalah tanah negara (Kawasan hutan/APL)

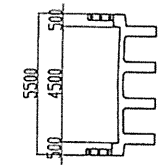
konfirmasi

Kamu: was, di

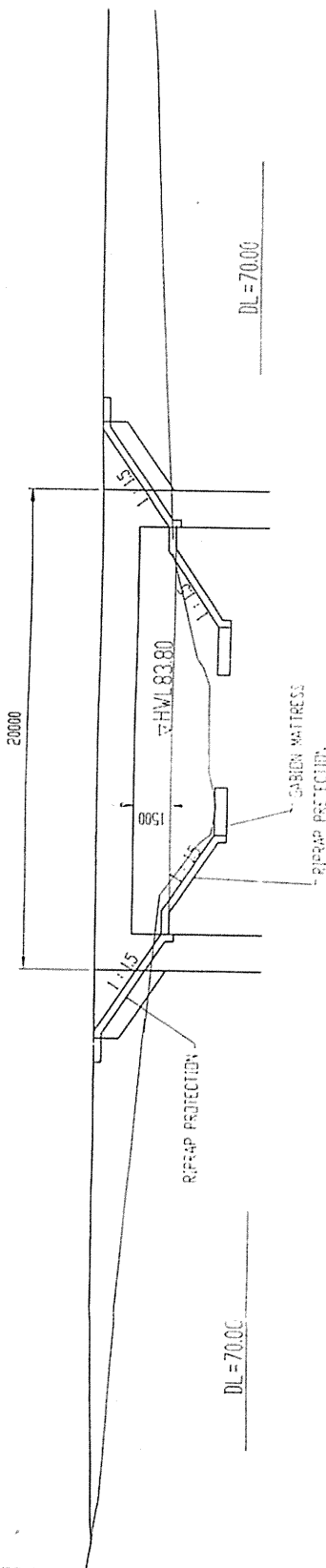
Jembatan: Kasi Budaya & Rehab.
Dishut bontan (CSB)

BR-19 SEPANG BRIDGE

Tanggal: 6 Juni 2008.

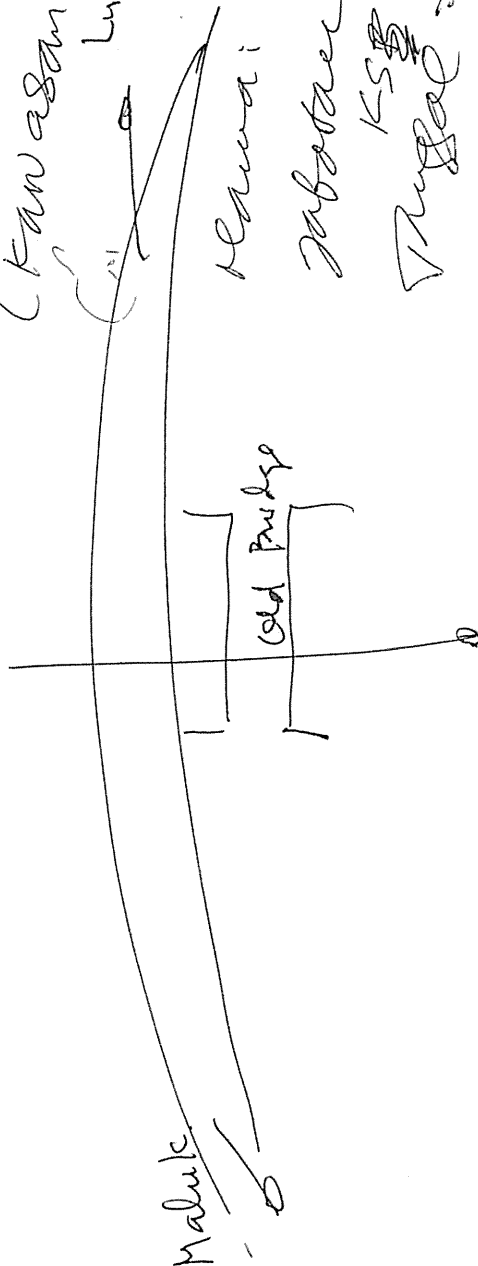


SECTION



ELEVATION

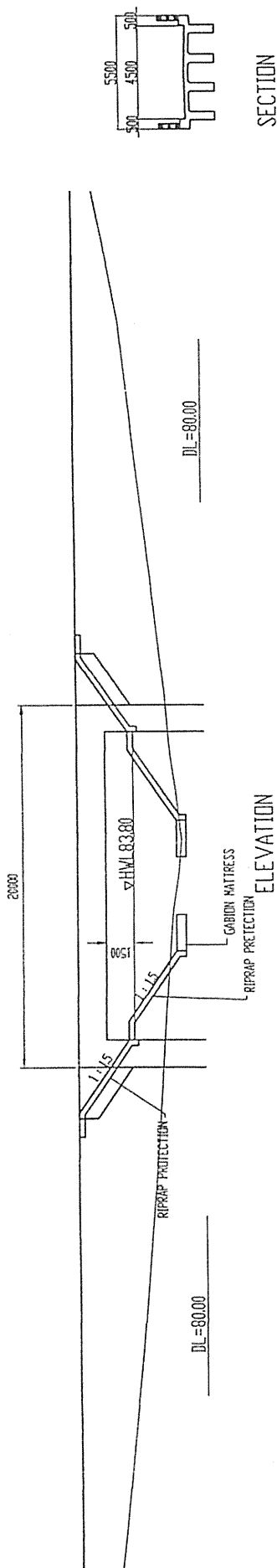
labuan inside Cobeas -
 Proyek Jembatan ini
 adalah Tawak Algora
 (Kawasan hutan
 lindung APZ)



Jembatan Kali Lina Uluh & Kela
 KSD
 Dnnis Kelantan
 Agan 2006
 17 JUN 2007

PLAN

BR-20 BONTONG BRIDGE



Iskhan untuk lokasi proyek jembatan ini adalah proyek Negara

Cekungan Putan (APL)

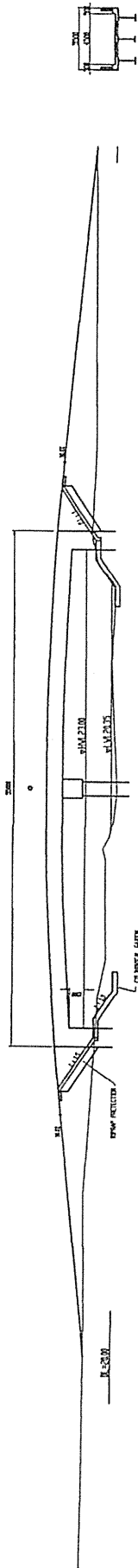
Konfirmasi *[Signature]*

Nama : Munir. Fumansyah. SP.

Jabatan: Kasir Bina Mula dan Kelenjangan
Ditunjuk Kab. Sumbar

Tanggal : 7 Juni 2008

lahan untuk lokasi proyek jembatan ini
 adalah tanah milik Negara (Kantor Hutan / APV)



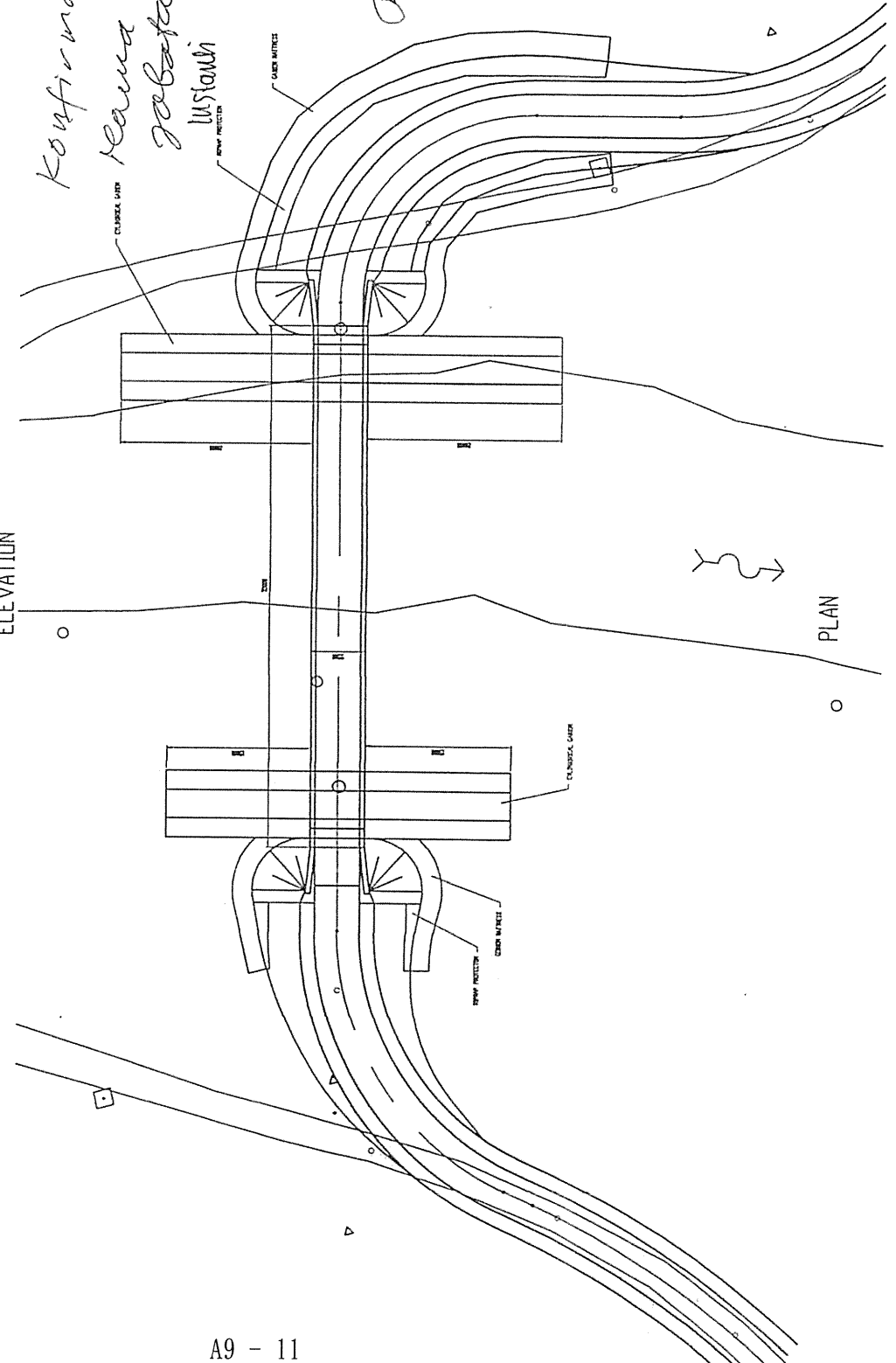
ELEVATION

Konfirmasi

Nama : Murni Firmansyah
 jabatan : Kasir Bina Usaha & Kelenyangan
 instansi : Dinas Kehutanan & Perkebunan
 Kab. Sumbar.

A9 - 11

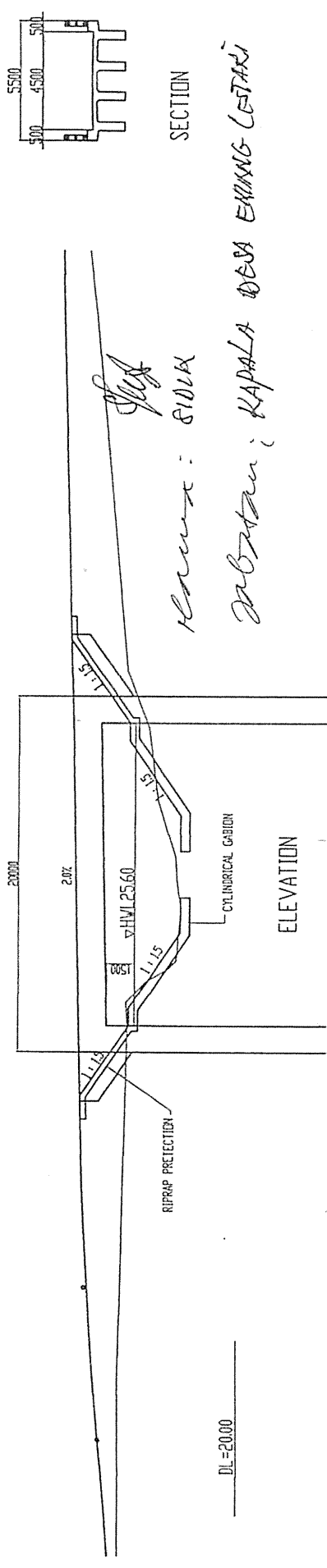
SECTION



Anggal: 7 Juni 2008

BR-27 LAMAR BRIDGE

bahan untuk cobai pakek jembatan ini adalah untuk penduduk.
 mereka tidak boleh bekerja bahan tersebut digunakan untuk
 cobai pakek jembatan ini



Nama: SIDA
 Jabatan: KAPALA DESA EKING-CESTARI

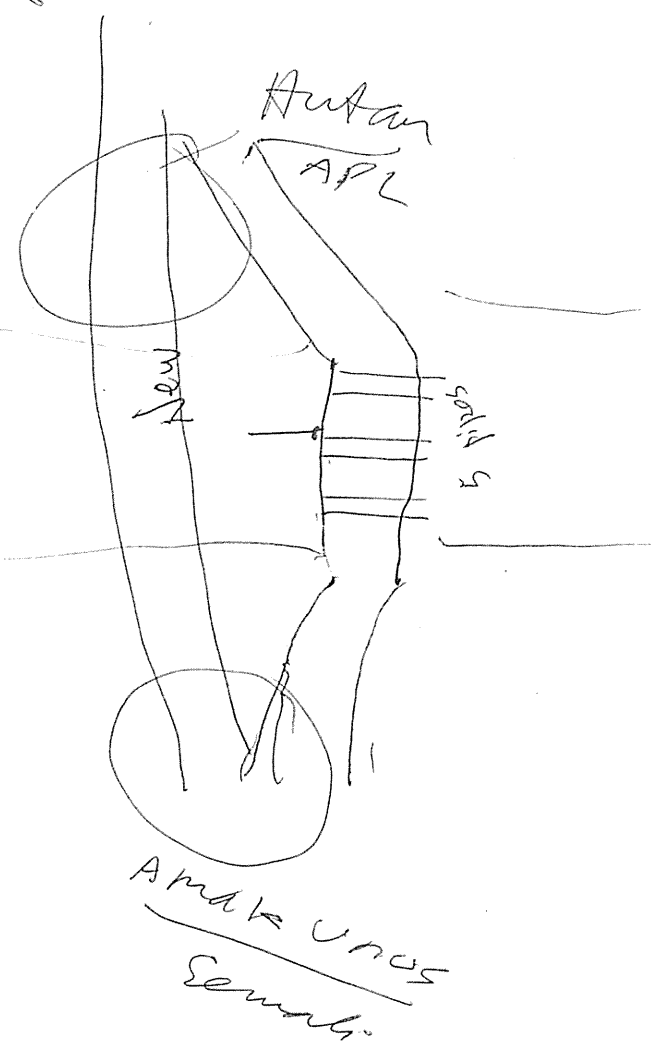
Kepala Desa

Nama: HIMPATI

Jabatan: GTT DINAS PU. BBW

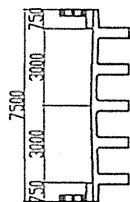
Tempat

Tanggal 17 Januari 2008



PLAN

mereka telah bekerjasama dalam tersebut di kemudian
untuk lokasi proyek pembangunan.



SECTION

Классификация: ШДК

Johnston KADES EINHUND LESTER

Kaafing.

Valentines party.

Кавказ:

~~Poster: Kasubi Tumale~~

283

27 June 2008

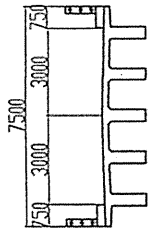
Wasserdampf
Siedepunkt
Erweichung

$\frac{\text{miles}}{\text{hour}}$
 $\frac{\text{hours}}{\text{miles}}$
 $\frac{\text{seconds}}{\text{miles}}$

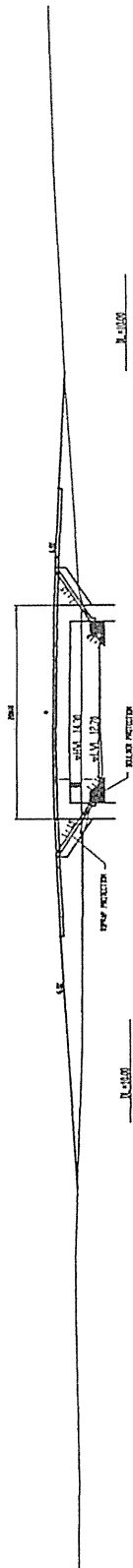
ELEVATION

PLAN

lahan untuk akses masuk jembatan ini, sayap kanan sebelah utara dan sayap kanan dan kiri sebelah utara adalah milik penduduk



SECTION



Mercha tidak berkeperatan lagan tersebut digunakan untuk logas, proyek pembangunan ini. Kawan: SUDIK

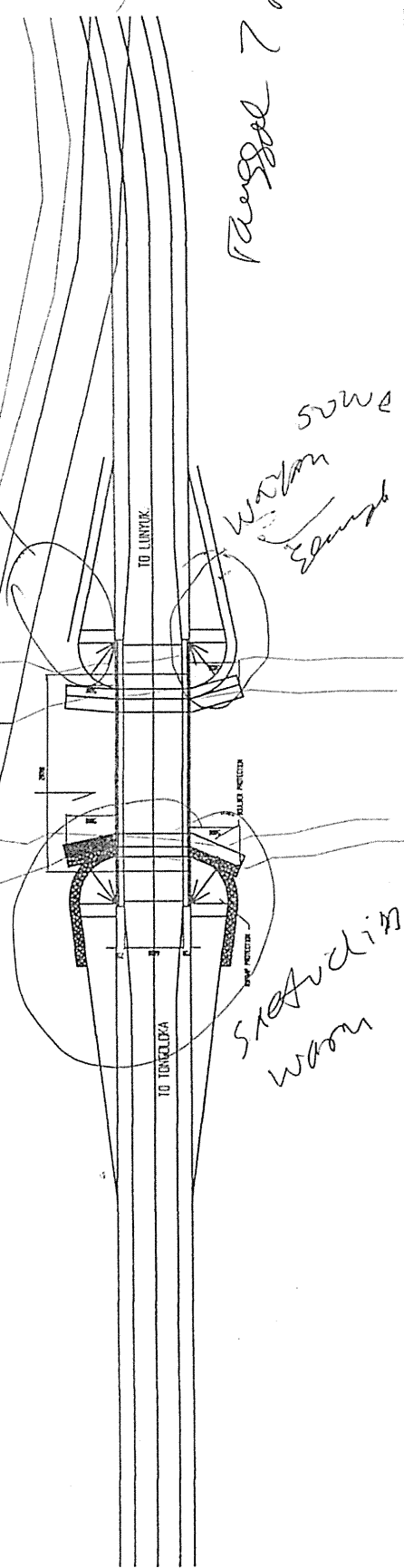
MERCHA KEPALA DESA ENANG LESTARI

APR

konstruksi, Kawan: HIRVATI, jabatan: STAF PI.

Temp.

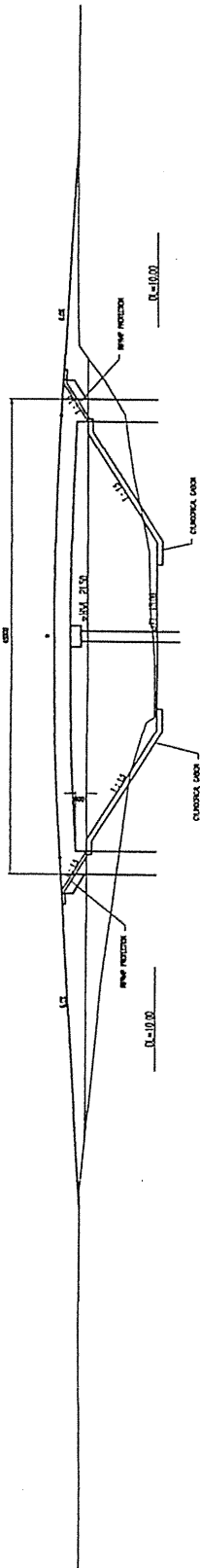
ELEVATION



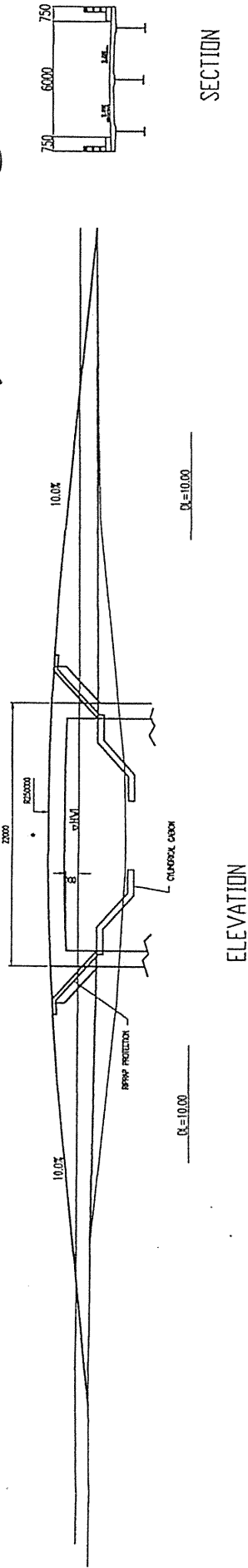
PLAN

Tanggal 7 Juni 2008

Salan untuk lokasi proyek jembatan ini, sayap kanan kiri sebelah selatan dan sayap kanan kiri sebelah utara adalah uluk penduduk.



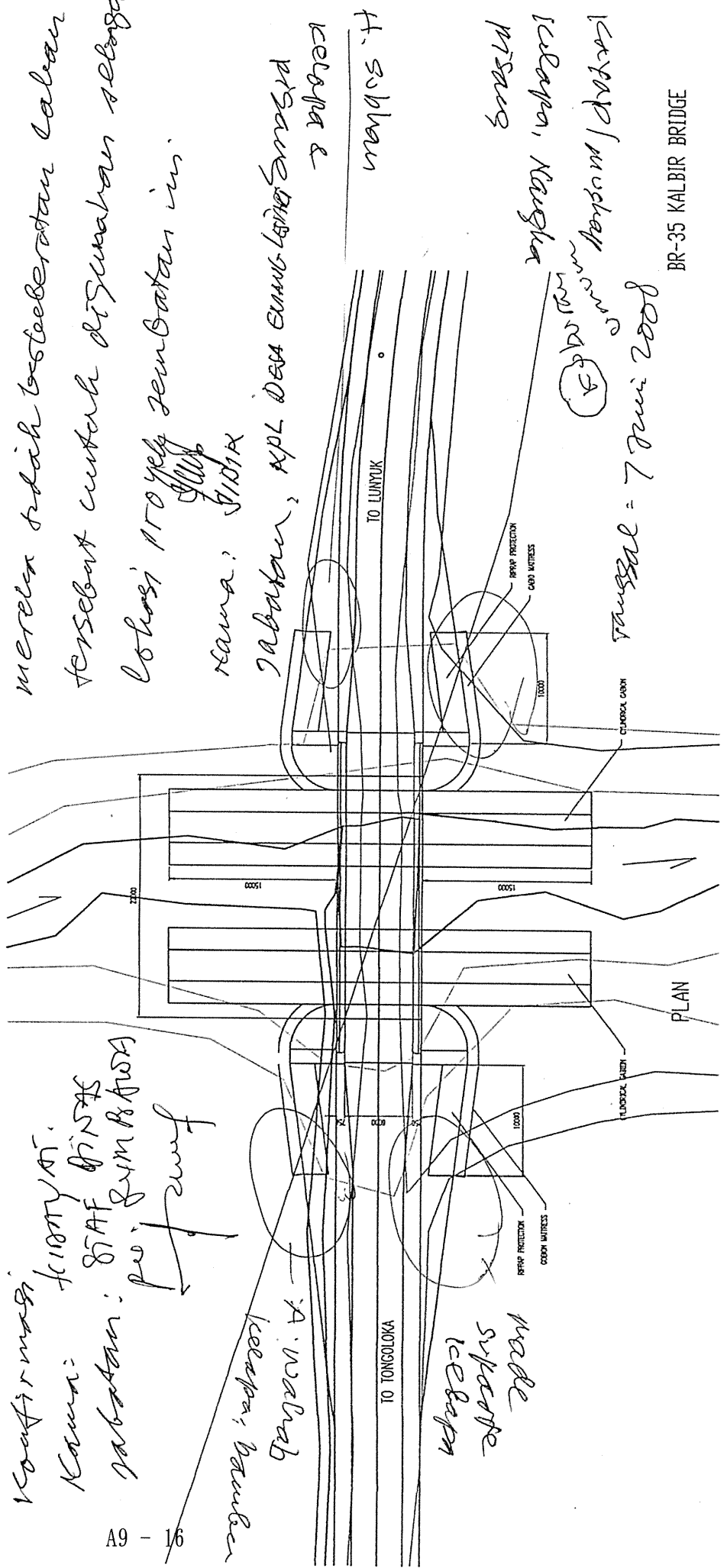
cahan untuk lokasi proyek pembangunan ini, saya kaman kini sebelum selatan dan saya kaman kini sebelum utara adalah milik penduduk.



Koufir magi
Kouma:
Kakaban: 8AF
Kouf & mnd
Kouf & mnd
Kouf & mnd

A9 - 16

merencanakan kegiatan belajar
 tersebut untuk dilaksanakan sebagai
 solusi proyek pembuatan ini.
 Nama: Nidha



total = 7 uni 2008
K

BR-35 KALBIR BRIDGE

(A Sample of English Translation)

**MINUTES OF PRELIMINARY SOCIALIZATION
ON THE PROJECT FOR CONSTRUCTION OF BRIDGES
IN THE PROVINCE OF NUSA TENGGARA BARAT, PHASE 2**

On this day, Sunday, October 26, 2008, time 09:00 WITA to 14:00 WITA has been undertaken the Preliminary Socialization with the local community around the bridge site who affected by the project for Construction of Bridges in The Province of Nusa Tenggara Barat, Phase 2 in Sumbawa Regency located in **Liang Bagik Bridge (BR-29)** site. This Preliminary Socialization is required in connection with preparation for implementation of JICA Grant Aid project with title: **The Project for Construction of Bridges in the Province of Nusa Tenggara Barat, Phase 2**, which the Government of Indonesia and JICA has signed the Minutes of Discussion (MOD) concerning Basic Design Study of the project mentioned above in Jakarta. The MOD has been described that some of activities will be the responsibility of the Government of Indonesia including responsibility of the Local Government.

According to the result of the Preliminary Socialization, in general the local community around the bridge site who affected by the construction of bridges (*Project Affected Persons*) are informed the information concerning the construction plan of bridges in The Province of Nusa Tenggara Barat, Phase 2 in Lunyuk District area and their impacts to the environments. The land owners expressed no objection to land acquisition for private land that will be used for location of new bridge project site.

This minute is prepared to be used for whatever extent necessary.

Lunyuk, October 26, 2008

Agreed by:
The land owner

1. L. Mahsun	1.signed.....
2.....	2.....
3.....	3.....
4.....	4.....
5.....	5.....
6.....	6.....

Confirmed by:
Head of Emang Lestari Village:

Known by:
Lunyuk District
Sumbawa Regency

Sidik

Ir. Armawan Jaya

**BERITA ACARA SOSIALISASI AWAL
PROYEK PEMBANGUNAN JEMBATAN
PROVINSI NUSA TENGGARA BARAT, TAHAP 2
KABUPATEN SUMBAWA**

Pada hari ini, MINGGU tanggal 26-10 2008, pukul 09:00 WITA sampai 14:00 WITA telah diselenggarakan kegiatan Sosialisasi Awal dengan masyarakat sekitar lokasi yang diperkirakan akan terkena Proyek Pembangunan Jembatan, Tahap 2 di Kabupaten Sumbawa, Provinsi Nusa Tenggara Barat, bertempat di lokasi jembatan: Liang Bagik (BR-29). Sosialisasi ini diperlukan sehubungan dengan persiapan pelaksanaan proyek Grant Aid JICA dengan nama *The Project for Construction of Bridges in the Province of Nusa Tenggara Barat in the Republic of Indonesia*, yang mana Pemerintah Indonesia dan pihak JICA telah menandatangani *Minutes of Discussion (MOD)* mengenai *Basic Design Study* proyek tersebut di atas di Jakarta. Dalam MOD tersebut telah disepakati beberapa komponen kegiatan yang akan menjadi tanggung jawab Pemerintah Indonesia termasuk diantaranya tanggung jawab Pemerintah Daerah.

Menurut hasil Sosialisasi Awal tersebut, umumnya masyarakat sekitar lokasi jembatan yang akan terkena proyek (*Project Affected Persons*) telah mendapat informasi mengenai rencana Proyek Pembangunan Jembatan, Tahap 2 di wilayah Kecamatan Lunyuk, beserta dampak lingkungan yang akan ditimbulkannya dan pemilik lahan menyatakan tidak berkeberatan terhadap pengadaan lahan/tanah milik penduduk yang akan digunakan untuk lokasi proyek jembatan baru tersebut.

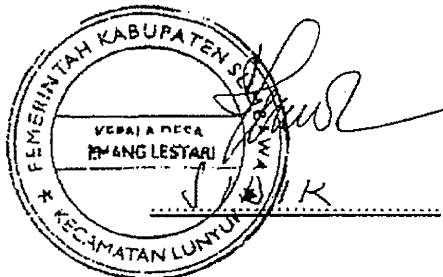
Demikian berita acara ini dibuat untuk dipergunakan sebagaimana mestinya.

Lunyuk, 26-10 2008

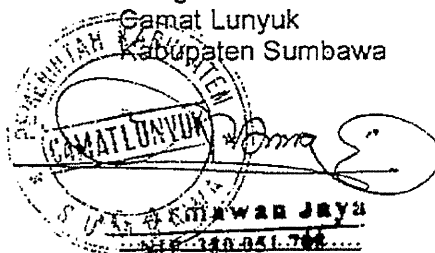
Menyetujui:
Pemilik Lahan

1. <u>L. Matsun</u>	1. <u>[Signature]</u>
2. <u>-</u>	2. <u>-</u>
3. <u>-</u>	3. <u>-</u>
4. <u>-</u>	4. <u>-</u>
5. <u>-</u>	5. <u>-</u>
6. <u>-</u>	6. <u>-</u>

Konfirmasi:
Kepala Desa Emang Lestari:



Mengetahui:
Camat Lunyuk
Kabupaten Sumbawa



**BERITA ACARA SOSIALISASI AWAL
PROYEK PEMBANGUNAN JEMBATAN
PROVINSI NUSA TENGGARA BARAT, TAHAP 2
KABUPATEN SUMBAWA**

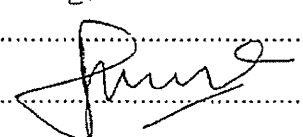
Pada hari ini, LUNYUK, tanggal 26-10, 2008, pukul 09:00 WITA sampai 14:00 WITA telah diselenggarakan kegiatan Sosialisasi Awal dengan masyarakat sekitar lokasi yang diperkirakan akan terkena Proyek Pembangunan Jembatan, Tahap 2 di Kabupaten Sumbawa, Provinsi Nusa Tenggara Barat, bertempat di lokasi jembatan: Petain III (BR-32). Sosialisasi ini diperlukan sehubungan dengan persiapan pelaksanaan proyek Grant Aid JICA dengan nama *The Project for Construction of Bridges in the Province of Nusa Tenggara Barat in the Republic of Indonesia*, yang mana Pemerintah Indonesia dan pihak JICA telah menandatangani *Minutes of Discussion (MOD)* mengenai *Basic Design Study* proyek tersebut di atas di Jakarta. Dalam MOD tersebut telah disepakati beberapa komponen kegiatan yang akan menjadi tanggung jawab Pemerintah Indonesia termasuk diantaranya tanggung jawab Pemerintah Daerah.

Menurut hasil Sosialisasi Awal tersebut, umumnya masyarakat sekitar lokasi jembatan yang akan terkena proyek (*Project Affected Persons*) telah mendapat informasi mengenai rencana Proyek Pembangunan Jembatan, Tahap 2 di wilayah Kecamatan Lunyuk, beserta dampak lingkungan yang akan ditimbulkannya dan pemilik lahan menyatakan tidak keberatan terhadap pengadaan lahan/tanah milik penduduk yang akan digunakan untuk lokasi proyek jembatan baru tersebut.

Demikian berita acara ini dibuat untuk dipergunakan sebagaimana mestinya.

Lunyuk, 26-10 2008

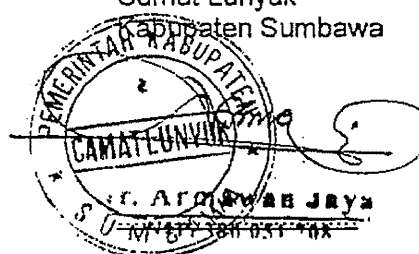
Menyetujui:
Pemilik Lahan

1. <u>Badrohen</u>	1	 
2. <u>MASBURI</u>	2	
3. <u>-</u>	3	
4. <u>-</u>	4	
5. <u>-</u>	5	
6. <u>-</u>	6	

Konfirmasi:
Kepala Desa Emang Lestari:



Mengetahui:
Camat Lunyuk
Kabupaten Sumbawa



**BERITA ACARA SOSIALISASI AWAL
PROYEK PEMBANGUNAN JEMBATAN
PROVINSI NUSA TENGGARA BARAT, TAHAP 2
KABUPATEN SUMBAWA**

Pada hari ini, Molung, tanggal 26-10, 2008, pukul 09:00 WITA sampai 19:00 WITA telah diselenggarakan kegiatan Sosialisasi Awal dengan masyarakat sekitar lokasi yang diperkirakan akan terkena Proyek Pembangunan Jembatan, Tahap 2 di Kabupaten Sumbawa, Provinsi Nusa Tenggara Barat, bertempat di lokasi jembatan: Molong (BR-33). Sosialisasi ini diperlukan sehubungan dengan persiapan pelaksanaan proyek Grant Aid JICA dengan nama *The Project for Construction of Bridges in the Province of Nusa Tenggara Barat in the Republic of Indonesia*, yang mana Pemerintah Indonesia dan pihak JICA telah menandatangani *Minutes of Discussion (MOD)* mengenai *Basic Design Study* proyek tersebut di atas di Jakarta. Dalam MOD tersebut telah disepakati beberapa komponen kegiatan yang akan menjadi tanggung jawab Pemerintah Indonesia termasuk diantaranya tanggung jawab Pemerintah Daerah.

Menurut hasil Sosialisasi Awal tersebut, umumnya masyarakat sekitar lokasi jembatan yang akan terkena proyek (*Project Affected Persons*) telah mendapat informasi mengenai rencana Proyek Pembangunan Jembatan, Tahap 2 di wilayah Kecamatan Lunyuk, beserta dampak lingkungan yang akan ditimbulkannya dan pemilik lahan menyatakan tidak berkeberatan terhadap pengadaan lahan/tanah milik penduduk yang akan digunakan untuk lokasi proyek jembatan baru tersebut.

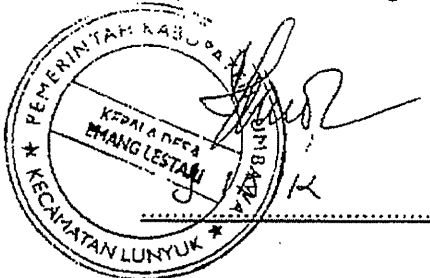
Demikian berita acara ini dibuat untuk dipergunakan sebagaimana mestinya.

Lunyuk, 26-10..... 2008

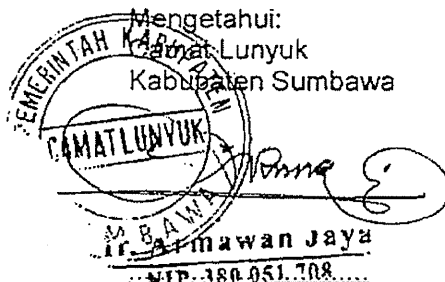
Menyetujui:
Pemilik Lahan

1. <u>Sarafuddin</u>	1. <u>[Signature]</u>
2. <u>W. Sowa</u>	2. <u>[Signature]</u>
3. <u>-</u>	3. <u>-</u>
4. <u>-</u>	4. <u>-</u>
5. <u>-</u>	5. <u>-</u>
6. <u>-</u>	6. <u>-</u>

Konfirmasi:
Kepala Desa Emang Lestari:



Mengetahui:
Camat Lunyuk
Kabupaten Sumbawa



**BERITA ACARA SOSIALISASI AWAL
PROYEK PEMBANGUNAN JEMBATAN
PROVINSI NUSA TENGGARA BARAT, TAHAP 2
KABUPATEN SUMBAWA**

Pada hari ini, ~~MINYAK~~ tanggal ~~26-10~~ 2008, pukul 09:00 WITA sampai ~~14:00~~ WITA telah diselenggarakan kegiatan Sosialisasi Awal dengan masyarakat sekitar lokasi yang diperkirakan akan terkena Proyek Pembangunan Jembatan, Tahap 2 di Kabupaten Sumbawa, Provinsi Nusa Tenggara Barat, bertempat di lokasi jembatan: Emang (BR-34). Sosialisasi ini diperlukan sehubungan dengan persiapan pelaksanaan proyek *Grant Aid JICA* dengan nama *The Project for Construction of Bridges in the Province of Nusa Tenggara Barat in the Republic of Indonesia*, yang mana Pemerintah Indonesia dan pihak JICA telah menandatangani *Minutes of Discussion (MOD)* mengenai *Basic Design Study* proyek tersebut di atas di Jakarta. Dalam MOD tersebut telah disepakati beberapa komponen kegiatan yang akan menjadi tanggung jawab Pemerintah Indonesia termasuk diantaranya tanggung jawab Pemerintah Daerah.

Menurut hasil Sosialisasi Awal tersebut, umumnya masyarakat sekitar lokasi jembatan yang akan terkena proyek (*Project Affected Persons*) telah mendapat informasi mengenai rencana Proyek Pembangunan Jembatan, Tahap 2 di wilayah Kecamatan Lunyuk, beserta dampak lingkungan yang akan ditimbulkannya dan pemilik lahan menyatakan tidak berkeberatan terhadap pengadaan lahan/tanah milik penduduk yang akan digunakan untuk lokasi proyek jembatan baru tersebut.

Demikian berita acara ini dibuat untuk dipergunakan sebagaimana mestinya.

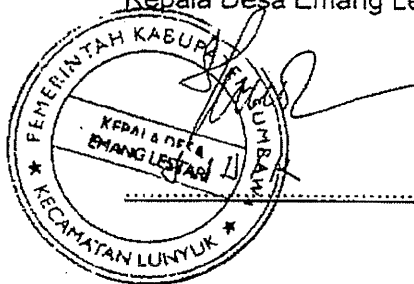
Lunyuk, ~~26-10~~ 2008

Menyetujui:
Pemilik Lahan

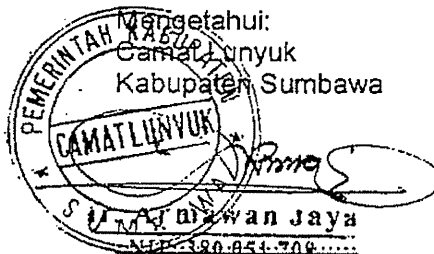


1. <u>RAHMA</u>	1.
2. <u>P. SAMILIN</u>	2. <u>[Signature]</u>
3. <u>DANHUJI</u>	3. <u>[Signature]</u>
4. <u>SIRAT</u>	4. <u>[Signature]</u>
5. <u>BADRUHIN</u>	5. <u>[Signature]</u>
6.	6.
7.	7.

Konfirmasi:
Kepala Desa Emang Lestari:



Mengetahui:
Camat Lunyuk
Kabupaten Sumbawa



**BERITA ACARA SOSIALISASI AWAL
PROYEK PEMBANGUNAN JEMBATAN
PROVINSI NUSA TENGGARA BARAT, TAHAP 2
KABUPATEN SUMBAWA**

Pada hari ini, MINGGU, tanggal 26-10, 2008, pukul 09:00 WITA sampai 14:00 WITA telah diselenggarakan kegiatan Sosialisasi Awal dengan masyarakat sekitar lokasi yang diperkirakan akan terkena Proyek Pembangunan Jembatan, Tahap 2 di Kabupaten Sumbawa, Provinsi Nusa Tenggara Barat, bertempat di lokasi jembatan: Kalbir (BR-35). Sosialisasi ini diperlukan sehubungan dengan persiapan pelaksanaan proyek *Grant Aid JICA* dengan nama *The Project for Construction of Bridges in the Province of Nusa Tenggara Barat in the Republic of Indonesia*, yang mana Pemerintah Indonesia dan pihak JICA telah menandatangani *Minutes of Discussion (MOD)* mengenai *Basic Design Study* proyek tersebut di atas di Jakarta. Dalam MOD tersebut telah disepakati beberapa komponen kegiatan yang akan menjadi tanggung jawab Pemerintah Indonesia termasuk diantaranya tanggung jawab Pemerintah Daerah.

Menurut hasil Sosialisasi Awal tersebut, umumnya masyarakat sekitar lokasi jembatan yang akan terkena proyek (*Project Affected Persons*) telah mendapat informasi mengenai rencana Proyek Pembangunan Jembatan, Tahap 2 di wilayah Kecamatan Lunyuk, beserta dampak lingkungan yang akan ditimbulkannya dan pemilik lahan menyatakan tidak berkeberatan terhadap pengadaan lahan/tanah milik penduduk yang akan digunakan untuk lokasi proyek jembatan baru tersebut.

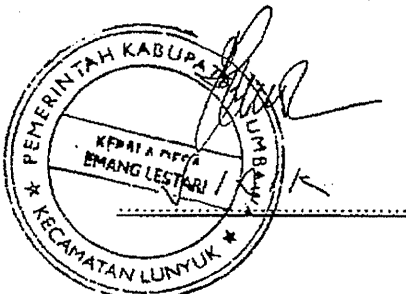
Demikian berita acara ini dibuat untuk dipergunakan sebagaimana mestinya.

Lunyuk, 26-10..... 2008

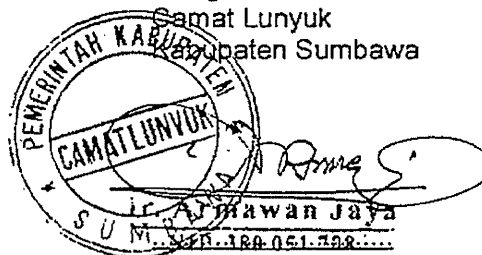
Menyetujui:
Pemilik Lahan

1. <u>H. SUBHAN</u>	1. <u>[Signature]</u>
2. <u>MASHAP</u>	2. <u>[Signature]</u>
3. <u>RID. RA BERT</u>	3. <u>[Signature]</u>
4. <u>A. WAHAB</u>	4. <u>[Signature]</u>
5. <u>-</u>	5. <u>-</u>
6. <u>-</u>	6. <u>-</u>

Konfirmasi:
Kepala Desa Emang Lestari:



Mengetahui:
Camat Lunyuk
Kabupaten Sumbawa



10. 交通量調査結果および交通量予測データ

TRAFFIC COUNT SURVEY RESULT

Survey Station: ① Jerewan (8km from Maluk)

Direction: From Maluk to Taliwan

Date: 30-May-08

Time	Pedestrian	Bycycle	Animal	Motor-Bike	Becha	Sedan/Pickup	Mini Bus	Bus	Truck (10 ton)	Others	PCU
6:00-7:00	0	0	0	49	0	5	3	0	0	0	23
7:00-8:00	0	0	0	70	0	9	9	1	11	0	51
8:00-9:00	0	0	0	50	0	11	6	2	10	0	44
9:00-10:00	0	0	0	75	0	28	13	3	6	0	73
10:00-11:00	0	0	0	26	0	5	8	1	5	0	27
11:00-12:00	0	0	0	35	0	4	6	3	2	0	26
12:00-13:00	2	0	0	28	0	11	2	3	2	0	26
13:00-14:00	0	0	0	43	0	10	3	5	7	0	38
14:00-15:00	0	0	0	40	0	13	5	1	5	0	36
15:00-16:00	0	0	0	58	0	18	4	1	3	0	43
16:00-17:00	0	0	0	65	0	16	0	2	5	0	43
17:00-18:00	0	0	0	80	0	12	3	1	6	0	46
Total (12 hr.)	2	0	0	619	0	142	62	23	62	0	475
										Total 24 hr.=	570

Motor-Bike's PCU conversion rate is 0.3

TRAFFIC COUNT SURVEY RESULT

Survey Station: ① Jerewan (8km from Maluk)

Direction: From Taliwan to Maluk

Date: 30-May-08

Time	Pedestrian	Bycycle	Animal	Motor-Bike	Becha	Sedan/Pickup	Mini Bus	Bus	Truck (10 ton)	Others	PCU
6:00-7:00	0	2	0	71	0	8	5	0	3	0	37
7:00-8:00	0	0	0	40	0	7	6	1	6	0	32
8:00-9:00	0	0	0	45	0	21	7	4	8	0	54
9:00-10:00	0	0	0	45	0	23	20	1	9	0	67
10:00-11:00	0	0	0	20	0	6	14	2	10	0	38
11:00-12:00	0	0	0	18	0	5	8	2	3	0	23
12:00-13:00	2	0	0	16	0	15	3	1	3	0	27
13:00-14:00	0	0	0	12	0	14	1	7	3	0	29
14:00-15:00	0	0	0	30	0	14	2	1	12	0	38
15:00-16:00	0	0	0	29	0	7	6	3	8	0	33
16:00-17:00	0	0	0	64	0	13	3	6	8	0	49
17:00-18:00	0	0	0	30	0	12	9	0	7	0	37
Total (12 hr.)	2	2	0	420	0	145	84	28	80	0	463
										Total 24 hr.=	556

TRAFFIC COUNT SURVEY RESULT

Survey Station: ② Tongo

Direction: From Maluk to Lunyk

Date: 29-May-08

Time	Pedestrian	Bycycle	Animal	Motor-Bike	Becha	Sedan/Pickup	Mini Bus	Bus	Truck (10 ton)	Others	PCU
5:00-6:00	8	0	0	6	0	2	0	1	2	0	7
6:00-7:00	3	0	0	19	0	0	0	0	0	0	6
7:00-8:00	0	0	0	1	0	1	1	0	0	0	2
8:00-9:00	5	0	0	8	0	5	0	0	2	0	9
9:00-10:00	0	0	0	10	1	1	0	0	2	0	6
10:00-11:00	0	0	0	16	0	3	0	0	0	0	8
11:00-12:00	1	0	0	15	1	1	0	0	4	0	10
12:00-13:00	0	0	0	9	1	3	1	0	1	0	8
13:00-14:00	0	0	10	9	0	2	0	0	0	0	5
14:00-15:00	7	0	0	8	0	2	0	0	0	0	4
15:00-16:00	9	0	0	31	1	9	0	1	0	0	20
16:00-17:00	1	2	11	22	0	3	0	1	0	0	11
17:00-18:00	7	0	35	30	0	2	0	0	1	0	12
18:00-19:00	0	0	3	30	0	0	0	0	0	0	9
19:00-20:00	3	0	0	9	0	1	0	0	0	0	4
20:00-21:00	7	0	0	3	0	0	0	0	0	0	1
Total (12 hr)	51	2	59	226	4	35	2	3	12	0	121
Total (24 hr)	33	2	56	178	4	32	2	2	10	0	101
										Total (24hr/12hr)=	1.20

Motor-Bike's PCU conversion rate is 0.3

TRAFFIC COUNT SURVEY RESULT

Survey Station: ② Tongo

Direction: From Lunyk to Maluk

Date: 29-May-08

Time	Pedestrian	Bycycle	Animal Drawn	Motor-Bike	Becha	Sedan/Pickup	Mini Bus	Bus	Truck (10 ton)	Others	PCU
5:00-6:00	10	1	0	20	0	0	1	0	0	0	7
6:00-7:00	15	1	15	37	1	4	3	0	0	0	18
7:00-8:00	0	0	0	20	0	1	1	1	3	0	12
8:00-9:00	0	0	25	24	0	3	1	0	3	0	14
9:00-10:00	0	0	1	18	1	2	1	0	1	0	10
10:00-11:00	0	0	0	13	0	2	0	0	1	0	7
11:00-12:00	0	0	0	5	0	4	1	0	1	0	8
12:00-13:00	2	0	0	13	0	2	0	0	1	0	7
13:00-14:00	0	0	0	6	1	4	1	0	1	0	8
14:00-15:00	3	0	0	15	0	5	0	0	2	0	12
15:00-16:00	1	0	0	17	0	2	0	0	1	0	8
16:00-17:00	7	0	0	20	0	2	1	0	1	0	10
17:00-18:00	12	0	1	25	1	4	0	0	0	0	12
18:00-19:00	6	0	10	19	0	1	1	0	1	0	9
19:00-20:00	4	0	0	10	0	1	0	0	0	0	4
20:00-21:00	5	0	0	10	0	1	0	0	0	0	4
Total (12 hr)	65	2	52	272	4	38	11	1	16	0	149
Total (24 hr)	40	1	42	213	4	35	9	1	15	0	125
Total (24hr/12hr)=											1.19

Motor-Bike's PCU conversion rate is 0.3

TRAFFIC COUNT SURVEY RESULT

Survey Station: ③ Phase-1 Section

Direction: From Maluk to Lunyk

Date: 28-May-08

Time	Pedestrian	Bycycle	Animal Drawn	Motor-Bike	Becha	Sedan/Pickup	Mini Bus	Bus	Truck (10 ton)	Others	PCU
6:00-7:00	0	0	0	2	0	0	0	0	0	0	1
7:00-8:00	0	0	0	1	0	0	0	0	0	0	0
8:00-9:00	0	0	0	0	0	0	0	0	0	0	0
9:00-10:00	0	0	0	1	0	0	0	0	0	0	0
10:00-11:00	0	0	0	0	0	0	0	0	0	0	0
11:00-12:00	0	0	0	0	0	0	0	0	0	0	0
12:00-13:00	0	0	0	2	0	0	0	0	0	0	1
13:00-14:00	0	0	0	0	0	0	0	0	0	0	0
14:00-15:00	0	0	0	0	0	0	0	0	0	0	0
15:00-16:00	0	0	0	0	0	0	0	0	0	0	0
16:00-17:00	0	0	0	0	0	0	0	0	0	0	0
17:00-18:00	0	0	0	1	0	0	0	0	0	0	0
Total (12 hr.)	0	0	0	7	0	0	0	0	0	0	2
Total 24 hr. =										3	

Motor-Bike's PCU conversion rate is 0.3

TRAFFIC COUNT SURVEY RESULT

Survey Station: ③ Phase-1 Section

Direction: From Lunyk to Maluk

Date: 28-May-08

Time	Pedestrian	Bycycle	Animal Drawn	Motor-Bike	Becha	Sedan/Pickup	Mini Bus	Bus	Truck (10 ton)	Others	PCU
6:00-7:00	0	0	0	0	0	0	0	0	0	0	0
7:00-8:00	0	0	0	0	0	0	0	0	0	0	0
8:00-9:00	0	0	0	2	0	0	0	0	0	0	1
9:00-10:00	0	0	0	2	0	0	0	0	0	0	1
10:00-11:00	0	0	0	0	0	0	0	0	0	0	0
11:00-12:00	0	0	0	1	0	0	0	0	0	0	0
12:00-13:00	3	0	0	1	0	0	0	0	0	0	0
13:00-14:00	0	0	0	1	0	0	0	0	0	0	0
14:00-15:00	0	0	0	0	0	0	0	0	1	0	1
15:00-16:00	0	0	0	1	0	0	0	0	0	0	0
16:00-17:00	3	0	0	0	0	0	0	0	0	0	0
17:00-18:00	0	0	0	0	0	0	0	0	1	0	1
Total (12 hr.)	6	0	0	8	0	0	0	0	2	0	4
Total 24 hr. =										5	

Motor-Bike's PCU conversion rate is 0.3

TRAFFIC COUNT SURVEY RESULT

Survey Station: ④ BR-13 Mone Bridge Site

Direction: From Maluk to Lunyk

Date: 2-Jun-08

Time	Pedestrian	Bycycle	Animal Drawn	Motor-Bike	Becha	Sedan/Pickup	Mini Bus	Bus	Truck (10 ton)	Others	PCU
6:00-7:00	0	0	0	0	0	0	0	0	0	0	0
7:00-8:00	0	0	0	0	0	0	0	0	0	0	0
8:00-9:00	0	0	0	0	0	0	0	0	0	0	0
9:00-10:00	0	0	0	0	0	0	0	0	0	0	0
10:00-11:00	5	0	1	1	0	0	0	0	0	0	0
11:00-12:00	0	0	0	0	0	0	0	0	0	0	0
12:00-13:00	0	0	0	0	0	0	0	0	0	0	0
13:00-14:00	0	0	0	0	0	0	0	0	0	0	0
14:00-15:00	0	0	0	2	0	0	0	0	0	0	1
15:00-16:00	0	0	0	1	0	0	0	0	0	0	0
16:00-17:00	0	0	0	0	0	0	0	0	0	0	0
17:00-18:00	0	0	0	0	0	0	0	0	0	0	0
Total (12 hr.)	5	0	1	4	0	0	0	0	0	0	1
										Total 24 hr.=	1

Motor-Bike's PCU conversion rate is 0.3

TRAFFIC COUNT SURVEY RESULT

Survey Station: ④ BR-13 Mone Bridge Site

Direction: From Lunyk to Maluk

Date: 2-Jun-08

Time	Pedestrian	Bycycle	Animal Drawn	Motor-Bike	Becha	Sedan/Pickup	Mini Bus	Bus	Truck (10 ton)	Others	PCU
6:00-7:00	5	0	1	0	0	0	0	0	0	0	0
7:00-8:00	4	0	0	4	0	0	0	0	0	0	1
8:00-9:00	0	0	0	0	0	0	0	0	0	0	0
9:00-10:00	0	0	0	0	0	0	0	0	0	0	0
10:00-11:00	0	0	0	0	0	0	0	0	0	0	0
11:00-12:00	0	0	0	0	0	0	0	0	0	0	0
12:00-13:00	0	0	0	0	0	0	0	0	0	0	0
13:00-14:00	0	0	0	0	0	0	0	0	0	0	0
14:00-15:00	0	0	0	2	0	0	0	0	0	0	1
15:00-16:00	0	0	0	0	0	0	0	0	0	0	0
16:00-17:00	0	0	0	0	0	0	0	0	0	0	0
17:00-18:00	0	0	0	0	0	0	0	0	0	0	0
Total (12 hr.)	9	0	1	6	0	0	0	0	0	0	2
										Total 24 hr.=	2

Motor-Bike's PCU conversion rate is 0.3

TRAFFIC COUNT SURVEY RESULT

Survey Station: ⑤ BR-27 Lamar Bridge Site

Direction: From Maluk to Lunyk

Date: 3-Jun-08

Time	Pedestrian	Bycycle	Animal Drawn	Motor-Bike	Becha	Sedan/Pickup	Mini Bus	Bus	Truck (10 ton)	Others	PCU
6:00-7:00	5	0	4	7	0	0	0	0	1	0	3
7:00-8:00	7	0	0	2	0	0	0	0	0	0	1
8:00-9:00	3	0	0	4	0	1	0	0	0	0	2
9:00-10:00	0	0	3	0	0	0	0	0	0	0	0
10:00-11:00	3	0	0	6	0	1	0	0	0	0	3
11:00-12:00	0	0	0	2	0	0	0	0	0	0	1
12:00-13:00	2	0	0	3	0	0	0	0	0	0	1
13:00-14:00	0	0	2	2	0	0	0	0	0	0	1
14:00-15:00	2	0	0	5	0	0	0	0	0	0	2
15:00-16:00	0	0	0	2	0	0	0	0	0	0	1
16:00-17:00	0	0	0	2	0	0	0	0	0	0	1
17:00-18:00	0	0	0	4	0	0	0	0	0	0	1
Total (12 hr.)	22	0	9	39	0	2	0	0	1	0	15
										Total 24 hr.=	18

Motor-Bike's PCU conversion rate is 0.3

TRAFFIC COUNT SURVEY RESULT

Survey Station: ⑤ BR-27 Lamar Bridge Site

Direction: From Lunyk to Maluk

Date: 3-Jun-08

Time	Pedestrian	Bycycle	Animal Drawn	Motor-Bike	Becha	Sedan/Pickup	Mini Bus	Bus	Truck (10 ton)	Others	PCU
6:00-7:00	8	0	0	2	0	0	0	0	0	0	1
7:00-8:00	2	0	3	5	0	2	0	0	0	0	4
8:00-9:00	0	0	0	3	0	0	0	0	0	0	1
9:00-10:00	5	0	2	12	0	0	0	0	2	0	6
10:00-11:00	3	0	0	3	0	0	0	0	0	0	1
11:00-12:00	0	0	0	6	0	0	0	0	1	0	3
12:00-13:00	2	0	0	4	0	0	0	0	0	0	1
13:00-14:00	0	0	0	2	0	0	0	0	1	0	2
14:00-15:00	3	0	0	4	0	1	0	0	0	0	2
15:00-16:00	0	0	2	1	0	0	0	0	0	0	0
16:00-17:00	0	0	0	4	0	0	0	0	1	0	2
17:00-18:00	0	0	0	3	0	0	0	0	0	0	1
Total (12 hr.)	23	0	7	49	0	3	0	0	5	0	23
										Total 24 hr.=	27

Motor-Bike's PCU conversion rate is 0.3

TRAFFIC COUNT SURVEY RESULT

Survey Station: ⑥ BR-34 Emang Bridge Site

Direction: From Maluk to Lunyk

Date: 4-Jun-08

Time	Pedestrian	Bycycle	Animal Drawn	Motor-Bike	Becha	Sedan/Pickup	Mini Bus	Bus	Truck (10 ton)	Others	PCU
6:00-7:00	18	7	16	22	2	0	0	0	2	2	9
7:00-8:00	5	2	3	15	3	0	0	0	1	0	6
8:00-9:00	1	0	0	7	0	0	0	0	2	0	4
9:00-10:00	0	0	0	5	1	0	0	0	3	0	5
10:00-11:00	0	2	0	4	0	2	0	0	0	0	3
11:00-12:00	2	0	0	9	2	0	0	0	1	0	4
12:00-13:00	1	0	0	20	0	0	0	0	0	0	6
13:00-14:00	0	0	0	11	2	0	0	0	0	0	4
14:00-15:00	1	1	0	3	0	0	0	0	1	1	2
15:00-16:00	5	5	5	13	3	4	0	0	0	0	9
16:00-17:00	26	2	0	0	0	1	0	0	2	1	3
17:00-18:00	12	0	0	0	5	0	0	0	0	0	2
Total (12 hr.)	71	19	24	109	18	7	0	0	12	4	57
										Total 24 hr.=	69

Motor-Bike's PCU conversion rate is 0.3

TRAFFIC COUNT SURVEY RESULT

Survey Station: ⑥ BR-34 Emang Bridge Site

Direction: From Lunyk to Maluk

Date: 4-Jun-08

Time	Pedestrian	Bycycle	Animal Drawn	Motor-Bike	Becha	Sedan/Pickup	Mini Bus	Bus	Truck (10 ton)	Others	PCU
6:00-7:00	2	0	0	2	0	0	0	0	0	0	1
7:00-8:00	0	0	0	5	0	3	0	0	1	0	6
8:00-9:00	1	0	0	2	0	0	0	0	0	0	1
9:00-10:00	5	0	0	8	0	2	0	0	0	0	4
10:00-11:00	8	2	0	3	0	0	0	0	2	1	3
11:00-12:00	14	5	0	10	0	1	0	0	0	0	4
12:00-13:00	7	3	3	17	0	0	0	0	0	0	5
13:00-14:00	13	3	5	11	2	0	0	0	0	1	4
14:00-15:00	2	0	0	7	0	3	0	0	1	0	6
15:00-16:00	0	0	0	5	0	0	0	0	0	0	2
16:00-17:00	0	0	0	3	1	0	0	0	2	1	3
17:00-18:00	0	0	0	6	0	0	0	0	0	0	2
Total (12 hr.)	52	13	8	79	3	9	0	0	6	3	40
										Total 24 hr.=	48

Motor-Bike's PCU conversion rate is 0.3

TRAFFIC COUNT SURVEY RESULT

Survey Station: ⑦ Lunyuk (6 km from Lunyk to S. Besar)

Direction: From Lunyk to S. Besar

Date: 5-Jun-08

Time	Pedestrian	Bycycle	Animal Drawn	Motor-Bike	Becha	Sedan/Pickup	Mini Bus	Bus	Truck (10 ton)	Others	PCU
6:00-7:00	2	0	0	8	0	2	0	0	0	0	4
7:00-8:00	0	2	7	6	0	3	0	0	2	0	7
8:00-9:00	1	0	0	12	0	1	0	1	0	0	6
9:00-10:00	0	0	0	10	0	0	1	0	3	1	7
10:00-11:00	0	0	0	9	0	5	0	0	0	0	8
11:00-12:00	0	0	0	6	0	2	0	0	1	0	5
12:00-13:00	0	0	0	5	0	2	0	0	1	0	5
13:00-14:00	0	0	0	3	0	5	0	0	0	0	6
14:00-15:00	0	0	0	3	0	1	0	0	3	0	5
15:00-16:00	0	0	0	12	0	11	0	0	0	1	15
16:00-17:00	3	0	0	8	0	2	0	0	1	0	5
17:00-18:00	1	0	0	10	0	3	0	0	1	0	7
Total (12 hr.)	7	2	7	92	0	37	1	1	12	2	79
										Total 24 hr.=	94

Motor-Bike's PCU conversion rate is 0.3

TRAFFIC COUNT SURVEY RESULT

Survey Station: ⑦ Lunyuk (6 km from Lunyk to S. Besar)

Direction: From S. Besar to Lunyk

Date: 5-Jun-08

Time	Pedestrian	Bycycle	Animal Drawn	Motor-Bike	Becha	Sedan/Pickup	Mini Bus	Bus	Truck (10 ton)	Others	PCU
6:00-7:00	2	0	1	10	0	5	0	0	2	0	10
7:00-8:00	5	0	0	12	0	2	0	0	1	0	7
8:00-9:00	0	0	0	6	0	1	0	0	0	0	3
9:00-10:00	0	0	0	3	0	2	0	0	1	0	4
10:00-11:00	0	0	0	3	0	1	1	0	0	0	3
11:00-12:00	0	0	0	5	0	4	0	0	0	0	6
12:00-13:00	0	0	0	5	0	3	0	0	0	0	5
13:00-14:00	0	0	0	21	0	0	0	0	2	0	8
14:00-15:00	0	0	0	23	0	0	0	1	1	0	9
15:00-16:00	0	0	0	7	0	5	0	0	0	0	7
16:00-17:00	3	0	3	5	0	0	0	0	1	0	3
17:00-18:00	0	0	0	9	0	7	0	0	2	0	12
Total (12 hr.)	10	0	4	109	0	30	1	1	10	0	75
										Total 24 hr.=	90

Motor-Bike's PCU conversion rate is 0.3

Population and Farm Area by Community

		Population (x100)			Farm Area (km2)		
		2008	2013	2033	2008	2013	2033
a	Tongo	21.17	39.80	55.72	20.0	20.0	22.0
b	Telonang	13.92	26.17	36.64	12.0	12.0	20.0
c	Tong II SP2	0.00	14.92	20.89	0.0	6.0	10.0
d	Bontong	8.29	15.59	21.82	10.0	10.0	15.0
e	Batu Nampar	0.00	8.00	11.20	0.0	3.0	9.0
f	Sampargoal	8.60	16.17	22.64	10.0	10.0	20.0
g	Lamar	0.00	8.40	11.76	0.0	4.0	8.0
h	Liang Bagik	2.30	4.32	6.05	6.0	6.0	7.0
i	Emang	7.49	14.08	19.71	9.0	9.0	10.0
j	Kalbir	9.36	17.60	24.64	8.0	8.0	10.0
k	Lunyul	141.20	265.46	371.64	100.0	100.0	120.0

Note 1. Population 2008 was estimated from Statistic 2006 and hearing survey at Kechamatan Officers.

2. Population 2013 and 2033 were focasted with growth rate of 1.7%.

3. Farm areas were assumed on the map.

Population and Farm Area which Generate Taffic at Section BR-1 to BR-13

		Population (x100)		Farm Area (km2)		Relation Coefficient		Population (x100)				Farm Area (km2)			
								2013		2033		2013		2033	
		2013	2033	2013	2033	w/o	w/	w/o	w/	w/o	w/	w/o	w/	w/o	w/
a	Tongo	39.80	55.72	20.0	22.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0
b	Telonang	26.17	36.64	12.0	20.0	0.4	0.4	10.47	10.47	14.65	14.65	4.8	4.8	8.0	8.0
c	Tong II SP2	14.92	20.89	6.0	10.0	0.0	0.4	0.00	5.97	0.00	8.36	0.0	2.4	0.0	4.0
d	Bontong	15.59	21.82	10.0	15.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0
e	Batu Nampar	8.00	11.20	3.0	9.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0
f	Sampargoal	16.17	22.64	10.0	20.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0
g	Lamar	8.40	11.76	4.0	8.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0
h	Liang Bagik	4.32	6.05	6.0	7.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0
i	Emang	14.08	19.71	9.0	10.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0
j	Kalbir	17.60	24.64	8.0	10.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0
k	Lunyul	265.46	371.64	100.0	120.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0
								10.47	16.44	14.65	23.01	4.8	7.2	8.0	12.0

w/o: In case no additional transmigran will be realized.
w/ : In case transmigran will be realized as planned.

Population and Farm Area wich Generate Taffic at Section BR-16 to BR-19

		Population (x100)		Farm Area (km2)		Relation Coefficient		Population (x100)				Farm Area (km2)			
								2013		2033		2013		2033	
		2013	2033	2013	2033	w/o	w/	w/o	w/	w/o	w/	w/o	w/	w/o	w/
a	Tongo	39.80	55.72	20.0	22.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0
b	Telonang	26.17	36.64	12.0	20.0	0.6	0.6	15.70	15.70	21.98	21.98	7.2	7.2	12.0	12.0
c	Tong II SP2	14.92	20.89	6.0	10.0	0.0	0.6	0.00	8.95	0.00	12.53	0.0	3.6	0.0	6.0
d	Bontong	15.59	21.82	10.0	15.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0
e	Batu Nampar	8.00	11.20	3.0	9.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0
f	Sampargoal	16.17	22.64	10.0	20.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0
g	Lamar	8.40	11.76	4.0	8.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0
h	Liang Bagik	4.32	6.05	6.0	7.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0
i	Emang	14.08	19.71	9.0	10.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0
j	Kalbir	17.60	24.64	8.0	10.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0
k	Lunyul	265.46	371.64	100.0	120.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0
								15.70	24.65	21.98	34.52	7.2	10.8	12.0	18.0

w/o: In case no additional transmigran will be realized.
w/ : In case transmigran will be realized as planned.

Population and Farm Area which Generate Traffic at Section BR-20 to BR-23

	Population (x100)		Farm Area (km2)		Relation Coefficient		Population (x100)				Farm Area (km2)			
							2013		2033		2013		2033	
	2013	2033	2013	2033	w/o	w/	w/o	w/	w/o	w/	w/o	w/	w/o	w/
a Tongo	39.80	55.72	20.0	22.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0
b Telonang	26.17	36.64	12.0	20.0	0.6	0.6	15.70	15.70	21.98	21.98	7.2	7.2	12.0	12.0
c Tong II SP2	14.92	20.89	6.0	10.0	0.0	0.6	0.00	8.95	0.00	12.53	0.0	3.6	0.0	6.0
d Bontong	15.59	21.82	10.0	15.0	1.0	1.0	15.59	15.59	21.82	21.82	10.0	10.0	15.0	15.0
e Batu Nampar	8.00	11.20	3.0	9.0	0.0	1.0	0.00	8.00	0.00	11.20	0.0	3.0	0.0	9.0
f Sampargol	16.17	22.64	10.0	20.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0
g Lamar	8.40	11.76	4.0	8.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0
h Liang Bagik	4.32	6.05	6.0	7.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0
i Emang	14.08	19.71	9.0	10.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0
j Kalbir	17.60	24.64	8.0	10.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0
k Lunyul	265.46	371.64	100.0	120.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0
							31.29	48.24	43.80	67.53	17.2	23.8	27.0	42.0

w/o: In case no additional transmigrasi will be realized.

w/ : In case transmigrasi will be realized as planned.

Population and Farm Area which Generate Traffic at Section BR-27to BR-33

	Population (x100)		Farm Area (km2)		Relation Coefficient		Population (x100)				Farm Area (km2)			
							2013		2033		2013		2033	
	2013	2033	2013	2033	w/o	w/	w/o	w/	w/o	w/	w/o	w/	w/o	w/
a Tongo	39.80	55.72	20.0	22.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0
b Telonang	26.17	36.64	12.0	20.0	0.6	0.6	15.70	15.70	21.98	21.98	7.2	7.2	12.0	12.0
c Tong II SP2	14.92	20.89	6.0	10.0	0.0	0.6	0.00	8.95	0.00	12.53	0.0	3.6	0.0	6.0
d Bontong	15.59	21.82	10.0	15.0	1.0	1.0	15.59	15.59	21.82	21.82	10.0	10.0	15.0	15.0
e Batu Nampar	8.00	11.20	3.0	9.0	0.0	1.0	0.00	8.00	0.00	11.20	0.0	3.0	0.0	9.0
f Sampargol	16.17	22.64	10.0	20.0	1.0	1.0	16.17	16.17	22.64	22.64	10.0	10.0	20.0	20.0
g Lamar	8.40	11.76	4.0	8.0	0.0	1.0	0.00	8.40	0.00	11.76	0.0	4.0	0.0	8.0
h Liang Bagik	4.32	6.05	6.0	7.0	1.0	1.0	4.32	4.32	6.05	6.05	6.0	6.0	7.0	7.0
i Emang	14.08	19.71	9.0	10.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0
j Kalbir	17.60	24.64	8.0	10.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0
k Lunyul	265.46	371.64	100.0	120.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0
							51.78	77.13	72.49	107.98	33.2	43.8	54.0	77.0

w/o: In case no additional transmigrasi will be realized.

w/ : In case transmigrasi will be realized as planned.

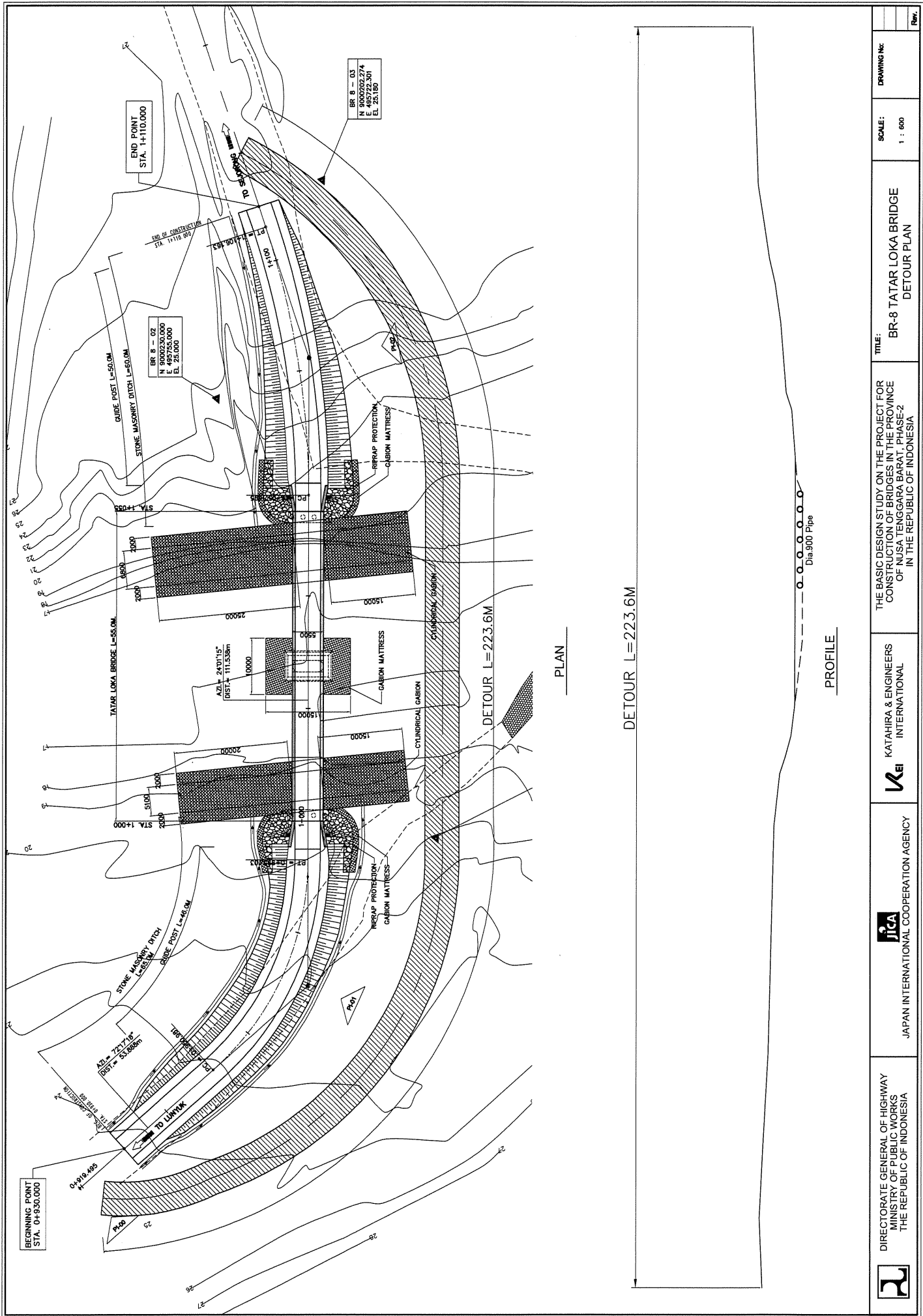
Population and Farm Area which Generate Traffic at Section BR-34 to BR-35

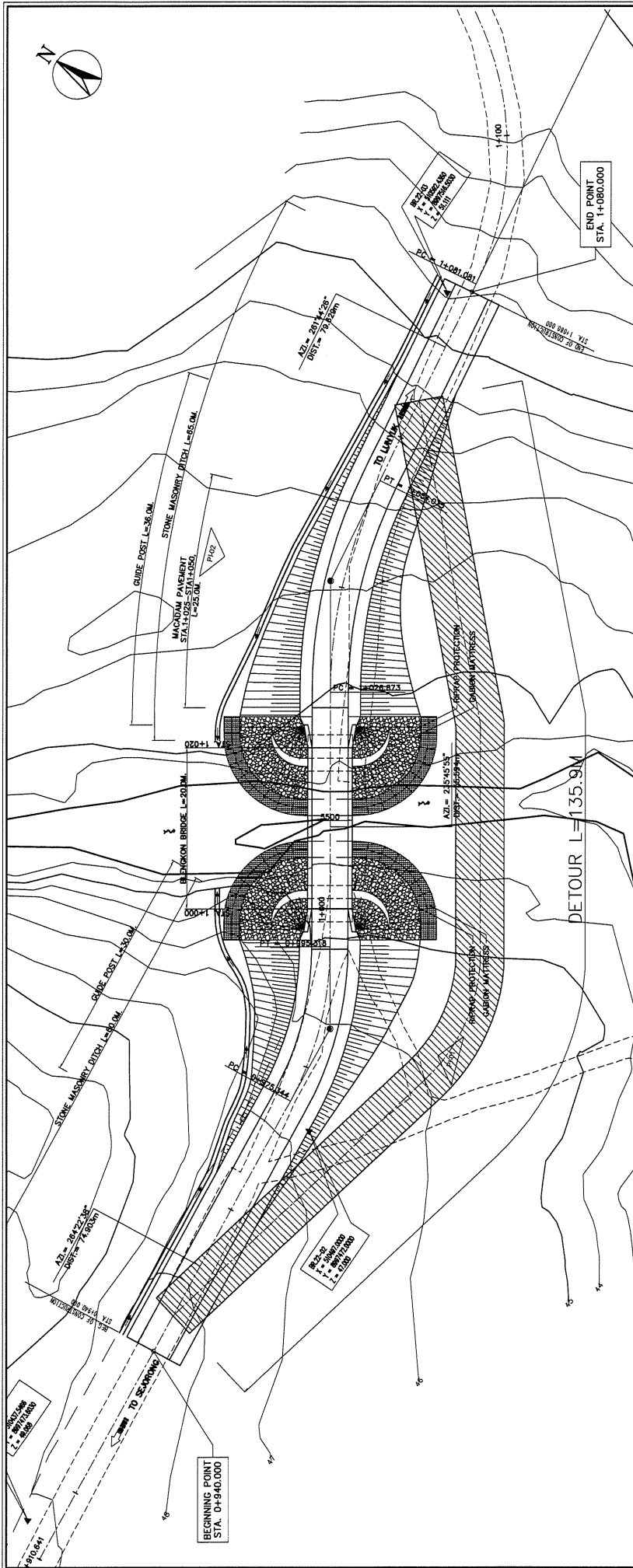
	Population (x100)		Farm Area (km2)		Relation Coefficient		Population (x100)				Farm Area (km2)			
							2013		2033		2013		2033	
	2013	2033	2013	2033	w/o	w/	w/o	w/	w/o	w/	w/o	w/	w/o	w/
a Tongo	39.80	55.72	20.0	22.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0
b Telonang	26.17	36.64	12.0	20.0	0.6	0.6	15.70	15.70	21.98	21.98	7.2	7.2	12.0	12.0
c Tong II SP2	14.92	20.89	6.0	10.0	0.0	0.6	0.00	8.95	0.00	12.53	0.0	3.6	0.0	6.0
d Bontong	15.59	21.82	10.0	15.0	1.0	1.0	15.59	15.59	21.82	21.82	10.0	10.0	15.0	15.0
e Batu Nampar	8.00	11.20	3.0	9.0	0.0	1.0	0.00	8.00	0.00	11.20	0.0	3.0	0.0	9.0
f Sampargol	16.17	22.64	10.0	20.0	1.0	1.0	16.17	16.17	22.64	22.64	10.0	10.0	20.0	20.0
g Lamar	8.40	11.76	4.0	8.0	0.0	1.0	0.00	8.40	0.00	11.76	0.0	4.0	0.0	8.0
h Liang Bagik	4.32	6.05	6.0	7.0	1.0	1.0	4.32	4.32	6.05	6.05	6.0	6.0	7.0	7.0
i Emang	14.08	19.71	9.0	10.0	1.0	1.0	14.08	14.08	19.71	19.71	9.0	9.0	10.0	10.0
j Kalbir	17.60	24.64	8.0	10.0	0.5	0.5	8.80	8.80	12.32	12.32	4.0	4.0	5.0	5.0
k Lunyul	265.46	371.64	100.0	120.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0
							74.66	100.01	104.52	140.01	46.2	56.8	69.0	92.0

w/o: In case no additional transmigrasi will be realized.

w/ : In case transmigrasi will be realized as planned.

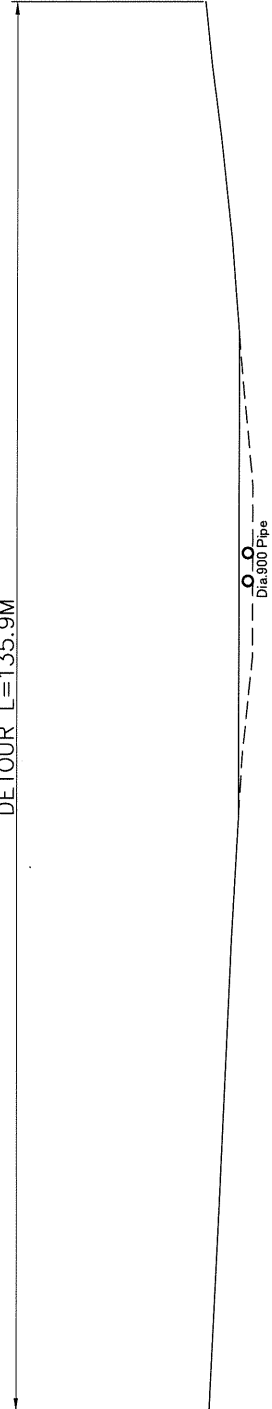
11. 仮設迂回路計画





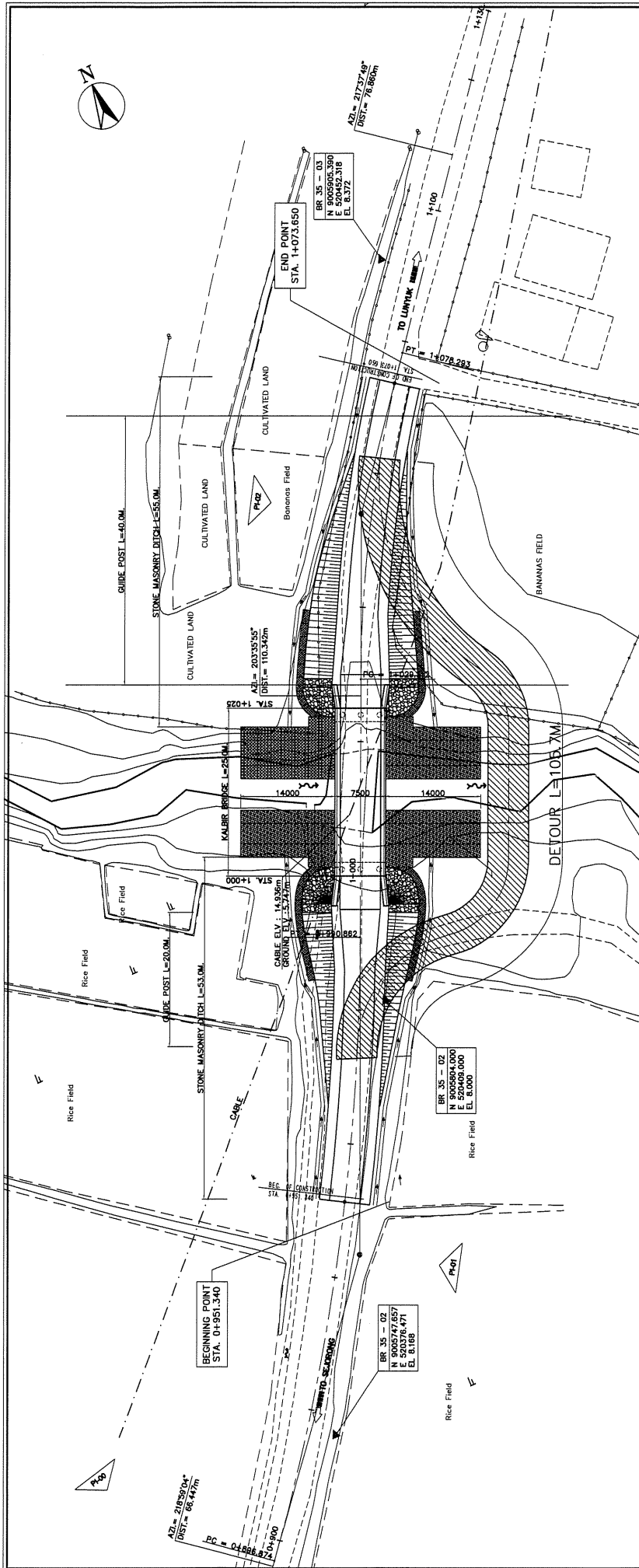
PLAN

DETOUR L=135.9M



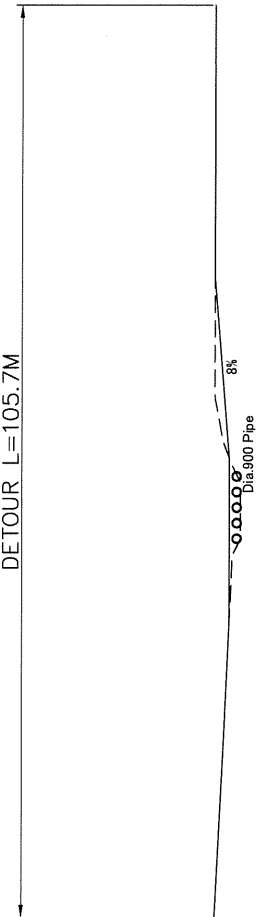
PROFILE

 DIRECTORATE GENERAL OF HIGHWAY MINISTRY OF PUBLIC WORKS THE REPUBLIC OF INDONESIA	 JICA JAPAN INTERNATIONAL COOPERATION AGENCY	 KATAHIRA & ENGINEERS INTERNATIONAL	THE BASIC DESIGN STUDY ON THE PROJECT FOR CONSTRUCTION OF BRIDGES IN THE PROVINCE OF NUSA TENGGARA BARAT, PHASE-2 IN THE REPUBLIC OF INDONESIA	TITLE: BR. -22 BLENGKON BRIDGE DETOUR PLAN SCALE: 1 : 500 DRAWING No.: Rev.
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PLAN

DETOUR L=105.7M



PROFILE

DIRECTORATE GENERAL OF HIGHWAY MINISTRY OF PUBLIC WORKS THE REPUBLIC OF INDONESIA JICA JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL THE BASIC DESIGN STUDY ON THE PROJECT FOR CONSTRUCTION OF BRIDGES IN THE PROVINCE OF NUSA TENGGARA BARAT, PHASE-2 IN THE REPUBLIC OF INDONESIA TITLE: BR-35 KALBIR BRIDGE DETOUR PLAN SCALE: 1:500 DRAWING NO.:	Rev.
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