

Appendices

Appendix-1: Member List of the Study Team

(1) First Field Survey (October 9 to October 27, 2008,

November 1 to November 12, 2008 for Mr. Takatsugu Shimada)

Mr. Toshiyuki IWAMA	Team Leader	Director for Transportation and ICT Division 3 Economic Infrastructure Department Grant Aid Management Department Japan International Cooperation Agency
Mr. Masahiko KOSHIMIZU	Chief Consultant/ Maintenance, Operation and Management (MO&M) Specialist	Oriental Consultants Co., Ltd.
Mr. Mitsumasa NOGUCHI	Equipment Planning Specialist 1	Japan Aids to Navigation Association
Mr. Kazuma INOUE	Equipment Planning Specialist 2	Oriental Consultants Co., Ltd.
Mr. Jun YAMAUCHI	Transmission Facilities Specialist	Oriental Consultants Co., Ltd.
Mr. Takatsugu SHIMADA	Building Planning Specialist	Oriental Consultants Co., Ltd.
Mr. Sumio MORITA	Procurement and Estimation Engineer	Oriental Consultants Co., Ltd.

(2) Second Field Survey (November 30 to December 24, 2008)

Mr. Toshiyuki IWAMA	Team Leader	Director for Transportation and ICT Division 3 Economic Infrastructure Department Grant Aid Management Department Japan International Cooperation Agency
Ms. Kyoko OKAMURA	Project Coordinator	Transportation and ICT Division 3 Economic Infrastructure Department Grant Aid Management Department Japan International Cooperation Agency
Mr. Masahiko KOSHIMIZU	Chief Consultant/ MO&M Specialist	Oriental Consultants Co., Ltd.
Mr. Jun YAMAUCHI	Transmission Facilities Specialist	Oriental Consultants Co., Ltd.
Mr. Takatsugu SHIMADA	Building Planning Specialist	Oriental Consultants Co., Ltd.
Mr. Sumio MORITA	Procurement and Estimation Engineer	Oriental Consultants Co., Ltd.
Mr. Keiji YAMAZAKI	Electrical Engineer	Oriental Consultants Co., Ltd.

(3) Third Field Survey (March 15 to March 27, 2009)

Mr. Toshiyuki IWAMA	Team Leader	Director for Transportation and ICT Division 3 Economic Infrastructure Department Grant Aid Management Department Japan International Cooperation Agency
Ms. Kyoko OKAMURA	Project Coordinator	Transportation and ICT Division 3 Economic Infrastructure Department Grant Aid Management Department Japan International Cooperation Agency
Mr. Masahiko KOSHIMIZU	Chief Consultant/ MO&M Specialist	Oriental Consultants Co., Ltd.
Mr. Takatsugu SHIMADA	Building Planning Specialist	Oriental Consultants Co., Ltd.
Mr. Sumio MORITA	Procurement and Estimation Engineer	Oriental Consultants Co., Ltd.

(4) Draft Report Explanation for Stage-2 Project (May 24 to May 30, 2009)

Mr. Hiroyuki Kawanishi	Team Leader	Senior Representative JICA Indonesia Office Japan International Cooperation Agency
Ms. Kyoko OKAMURA	Project Coordinator	Transportation and ICT Division 3 Economic Infrastructure Department Grant Aid Management Department Japan International Cooperation Agency
Mr. Masahiko KOSHIMIZU	Chief Consultant/ Maintenance, Operation and Management (MO&M) Specialist	Oriental Consultants Co., Ltd.
Mr. Mitsumasa NOGUCHI	Equipment Planning Specialist 1	Japan Aids to Navigation Association
Mr. Kazuma INOUE	Equipment Planning Specialist 2	Oriental Consultants Co., Ltd.

Appendix-2: Study Schedule

(1) First Field Survey (February 12 to March 11)

No.	Date	Leader	Chief Consultant/ Maintenance, Operation and Management Specialist	Equipment Planning Specialist 1	Equipment Planning Specialist 2	Transmission Facilities Specialist	Procurement and Estimation Engineer	Building Planning Specialist	
									Toshiyuki Iwama
1	10/9	Thu	Narita, Tokyo → Jakarta						
2	10/10	Fri	Courtesy Call to / Explanation to Embassy of Japan & JICA Jakarta Office, Discussions with DGST						
3	10/11	Sat	Move to Bengkulu						
4	10/12	Sun	Survey at Tanjung Pagar, Move to Jakarta			Narita, Tokyo → Jakarta		Narita → Jakarta	
5	10/13	Mon	Discussion with DGST						Unit Price and Equipment Survey
6	10/14	Tue	Signing of M/D, Report to EOJ, JICA office, Jakarta →			Discussion with DGST		Idto	
7	10/15	Wed	→ Narita, Tokyo	Discussion with DGST			Narita → Jakarta	Idto	
8	10/16	Thu	Preparation for Field Survey						Idto
9	10/17	Fri	Jakarta → Dumai Visit to Dumai Coastal Radio Station	Jakarta → Batam, Nings, Tg. Pinang Coastal Radio Station	Jakarta → Dumai Visit to Dumai Coastal Radio Station	Jakarta → Batam, Nings, Tg. Pinang Coastal Radio Station	Idto		
10	10/18	Sat	Site Survey of Tg. Medang, Moring	Site survey of Tg. Berakit	Site Survey of Tg. Medang, Moring	Site survey of Tg. Berakit	Idto		
11	10/19	Sun	Site survey of Silgong and proposed repeater station	Site survey of Hiyu Kecil and Takong Kecil	Site survey of Silgong and proposed repeater station	Site survey of Hiyu Kecil and Takong Kecil	Idto		
12	10/20	Mon	Site survey of Bengkulu, Tg. Parit	Move to Dumai, Survey of Selecing and Sepahar	Site survey of Bengkulu, Tg. Parit	Batu Ampar Coastal Radio Station, Batam → Jakarta	Idto		
13	10/21	Tue	Return to Jakarta	Dumai → Jakarta	Return to Jakarta	Documentation	Idto		
14	10/22	Wed	Internal Discussion and Summarization of the Survey Results						Idto
15	10/23	Thu	Discussion with DGST						Sub-Contracting (Communication Link Survey)
16	10/24	Fri	Discussion with DGST		Discussion with DGST	Sub-Contracting (Communication Link Survey)	Discussion with DGST, Leave from Jakarta		
17	10/25	Sat	Internal Meeting and Documentation						Arrival at Narita
18	10/26	Sun	Internal Meeting	Internal Meeting, Leave from Jakarta			Internal Meeting		
19	10/27	Mon	Report to EOJ, JICA, Leave from Jakarta	→ Narita			Report to EOJ, JICA, Leave from Jakarta		
20	10/28	Tue	Arrival at Narita			Arrival at Narita			
21	10/29	Wed							
22	10/30	Thu							
23	10/31	Fri							
24	11/1	Sat							
25	11/2	Sun					Narita → Jakarta		
26	11/3	Mon					Discussion with DGST		
27	11/4	Tue					Data collection, preparation for site survey		
28	11/5	Wed					Jakarta → Batam		
29	11/6	Thu					Survey of Tg. Berakit		
30	11/7	Fri					Survey of Batu Ampar		
31	11/8	Sat					Batam → Jakarta		
32	11/9	Sun					Documentation		
33	11/10	Mon					Unit Price and Equipment Survey for Building Works		
34	11/11	Tue					Idto		
35	11/12	Wed					Idto, Leave from Jakarta		
36	11/13	Thu					Arrival at Narita		

(2) Second Field Survey (November 30 to December 24)

No.	Date		Leader/ Project Coordinator	Chief Consultant/ Maintenance, Operation and Management Specialist	Transmission Facilities Specialist	Procurement and Estimation Engineer	Building Planning Specialist	Electrical Engineer
			Toshiyuki Iwama/ Kyoko Okamura	Masahiko Koshimizu	Jun Yamauchi	Sumio Morita	Takatsugu Shimada	Keiji Yamazaki
1	11/30	Sun			Narita → Jakarta			
2	12/1	Mon			Discussion with DGST			
3	12/2	Tue			Move to Dumai, Dumai Coastal Radio Station			
4	12/3	Wed			Survey of Tg. Sair and Tg. Medang			
5	12/4	Thu			Survey of Selincing and Sepahat			
6	12/5	Fri			Survey of Tg. Sair			
7	12/6	Sat			Survey of Tg. Parit and Bengkalis			
8	12/7	Sun			Move to Jakarta			
9	12/8	Mon		Narita → Jakarta	Discussion with DGST	Narita → Jakarta		
10	12/9	Tue		Courtesy Call to EOJ, JICA JKT Office, DGST	Courtesy Call to / Explanation to Embassy of Japan, JICA Jakarta Office & DGST, Internal Meeting			
11	12/10	Wed		Discussion with DGST, GMDSS Consultants	Data Collection, Discussion with GMDSS Consultants, Preparation for Site Visit			
12	12/11	Thu		Survey for Communication, Discussion with DGST	Discussion with DGST	Jakarta → Dumai, Visit to Dumai Coastal Radio Station		
13	12/12	Fri		Ditto	Ditto, Leave from Jakarta	Survey of Tg. Medang and Tg. Sair		
14	12/13	Sat		Documentation	Narita	Survey of Selincing and Sepahat		
15	12/14	Sun		Documentation		Survey of Bengkalis and Tg. Parit		
16	12/15	Mon		Discussion with DGST		Move to Jakarta, Internal Meeting		
17	12/16	Tue		Ditto		Discussion with DGST, Data Collection for Cost Estimation		
18	12/17	Wed		Ditto		Internal Discussions, Discussion for Design Conditions of Stage-2 Project		
19	12/18	Thu		Discussion with DGST, Consultants of Microwave Communication Unit, Surabaya		Discussion with DGST, Data Collection for Cost Estimation	Arrival at Narita	
20	12/19	Fri		Discussion with DGST		Ditto		
21	12/20	Sat		Internal Meeting, Documentation		Internal Discussion, Documentation, Leave from Jakarta		
22	12/21	Sun		Narita → Jakarta	Documentation	Arrival at Narita		
23	12/22	Mon		JICA Indonesia Office, MM Sign, Move to Surabaya, Discussion with Mr. Alamsyah				
24	12/23	Tue	Surabaya → Jakarta, EOJ, Leave from Jakarta	Surabaya → Jakarta, EOJ, Discussion with DGST				
25	12/24	Wed	Arrival at Narita	Discussion with DGST, Natural Gas Survey Contract Sign, Leave from Jakarta				
26	12/25	Thu		Arrival at Narita				

(3) Third Field Survey (March 15 to March 27)

No.	Date		Leader	Project Coordinator	Chief Consultant/ Maintenance, Operation and Management Specialist	Building Planning Specialist	Procurement and Estimation Engineer
			Toshiyuki Iwama	Kyoko Okamura	Masahiko Koshimizu	Takatsugu Shimada	Sumio Morita
1	3/15	Sun.			Narita, Tokyo --> Jakarta		
2	3/16	Mon.			Embassy of Japan & JICA Jakarta Office, DGST		
3	3/17	Tue.			Discussion with DGST, Preparation for Site Visit		Narita --> Jakarta
4	3/18	Wed.			Jakarta --> Pekanbaru --> Bengkalis		
5	3/19	Thu.			Survey for Site A		
6	3/20	Fri.			Survey for Site A		
7	3/21	Sat.			Bengkalis --> Pekanbaru --> Jakarta		
8	3/22	Sun.	Narita, Tokyo --> Jakarta		Documentation		Discussion, Leave from Jakarta
9	3/23	Mon.	Meeting with JICA, Discussions with DGST(Mr Alamsyah)				Arrive at Narita
10	3/24	Tue.	Discussion with DGST			DGST, Leave from Jakarta	
11	3/25	Wed.	Report to EOJ, JICA office Meeting with BAKOR/KAMLA		Report to EOJ, Discussion with DGST	Arrive at Narita	
12	3/26	Thu.	--> Malaysia/ Meeting with MMEA		Documentation		
13	3/27	Fri.	Meeting with MMEA		Discussion with DGST(Sub- Contracting for Natural Conditions Survey)		
14	3/28	Sat.	--> Narita		Documentation		
15	3/29	Sun.			Documentation		
16	3/30	Mon.			Discussion with DGST		
17	3/31	Tue.			Ditto		
18	4/1	Wed.			Ditto		
19	4/2	Thu.			Contract Signing (Stage-1)		
20	4/3	Fri.			Report to JICA Office, EOJ, Leave from Jakarta		
21	4/4	Sat.			Arrive at Narita		

March 28 to April 4 for Mr. M. Koshimizu is for preparation for Stage-1 Project.

(4) Third Field Survey (March 15 to March 27)

No.	Date		Leader	Chief Consultant/ Maintenance, Operation and Management Specialist	Equipment Planning Specialist 1	Equipment Planning Specialist 2
			Kyoko Okamura	Masahiko Koshimizu	Mitsumasa Noguchi	Kazuma Inoue
1	5/24	Sun.	Narita, Tokyo --> Jakarta			
2	5/25	Mon.	9:00 Explanation of the Draft Implementation Review Report (Stage-2) to DGST			
3	5/26	Tue.	10:00 Discussion with DGST for Stage-2 Project			
4	5/27	Wed.	7:30 Signing of M/D, Internal Meeting		--> Narita	Same as Chief Consultants
5	5/28	Thu.	9:30 EOJapan, JICA Office	9:30 EOJ, DGST		Ditto
6	5/29	Fri.	--> Narita, Tokyo	9:00 DGST		Ditto
7	5/30	Sat.		--> Narita		--> Narita

Appendix-3: List of Parties Concerned in the Recipient Country

Directorate General of Sea Transportation (DGST)

Mr. Boedhi Setiajid. SH.MM	Director of Navigation, (After April 1, 2009)
Mr. Yuri Gunadi	Director of Navigation, (Before March 31, 2009)
Mr. M. Ali Malawat	Head of Sub-Directorate of Marine Telecommunication (From April 1, 2009)
Mr. Alamsyah Sasmito, MM	Head of Section of Equipment and Maintenance, Sub-Directorate of Marine Telecommunication
Drs. Tofan Rindoyo	Head of Section Operation, Sub-Directorate of Marine Telecommunication
Mr. Laymond Ivan H.A.S.	Head of Equipment & Maintenance Section, Sub-Directorate of Aids to Navigation
Mr. Kardiawan S.	Staff of Sub-Directorate of Maritime Telecommunication
Mr. Tony Rafiq	Ditto
Mr. Ketut Aries	Ditto
Mr. Heri Supryadi	Ditto
Mr. Andi Aswad	Staff of Sub-Directorate of Aids Navigation
Mr. Leonard S.	Ditto
Mr. Rudi H. Irwansyah	Ditto
Ir. A. Tonny Budiono, MM	Head of Sub-Directorate of General Administration
Mr. Darmansyah	Staff of Sub-Directorate of General Administration
Mr. Eko Hadirumekso,	Sub-Division of Program, Div. of Planning
Mr. Kazuyuki Tanaka	JICA Expert on Safety Navigation, Preventing Marine Disaster and SAR

Embassy of Japan

Mr. Ichitaro Ehara	First Secretary
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JICA Indonesia Office

Mr. Kiichi Tomiya	Deputy Resident Representative (First Field Survey)
Mr. Hiroyuki Kawanishi	Senior Representative
Mr. Naoki Kakioka	Assistant Resident Representative
Ms. Sulisty Wardani	Program Officer for Infrastructure

Appendix-4 Minutes of Discussions
Appendix 4-1 M/D on First Field Survey

Minutes of Discussions
on the Implementation Review Study
on the Project for Enhancement of Vessel Traffic System in Malacca and Singapore Straits
in Indonesia

The Government of Japan decided to conduct the Implementation Review Study Team on the Project for Enhancement of Vessel Traffic System in Malacca and Singapore Straits (hereinafter referred to as "the Project") to Indonesia and entrusted the study to Japan International Cooperation Agency (hereinafter referred to as "JICA").

JICA sent to Indonesia the Implementation Review Study Team (hereinafter referred to as "the Team"), which is headed by Mr. Toshiyuki Iwama, Director, Transportation and ICT Division 3, Economic Infrastructure Department, JICA, and is scheduled to stay in the country from October 9th to November 12th, 2008.

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

In the course of discussions, both sides confirmed the main items described in the attached sheet.

Jakarta, October 13th, 2008



Toshiyuki IWAMA
Leader
Implementation Review Study Team
Japan International Cooperation Agency



Yuri GUNADI
Director of Navigation
Directorate General of Sea Transportation
Ministry of Transportation

ATTACHMENT

1. Components of the Project

Components of the Stage-1 that has been already approved by the Government of Japan and awaiting the Exchange of Notes between Indonesia and Japan will not be changed in principle. In case the necessary situation arises such as cost overrun, quantity and/or specification of the component might be adjusted or modified.

For Stage-2 Tanjung Parit will be AIS Station. The reason is explained in Section 4.1. AIS data from Tanjung Parit will be sent to Dumai VTS Sub-Center, thus Bengkalis VTS Sub-Center will be removed, however, repeater station may be included if necessary and after further analysis on AIS data transmission. Indonesian side agrees on this approach.

Indonesian side requests to remove FM Transmitting Devices (On-time Broadcasting System) from the Project. Component of the Project is show below, and the list of equipment and facilities are in Annex-1.

	Component/Site
Stage-1	VTS Sensor Site : Hiyu Kecil, Takong Kecil, Tanjung Berakit VTS Center : Batu Ampar (including VTS Sensor)
Stage-2	VTS Sensor Site : Tanjung Medang AIS Site : Tanjung Parit VTS Sub-Center : Dumai

2. Japan's Grant Aid Scheme

2-1. The Indonesian side reconfirmed the Japan's Grant Aid scheme explained by the Team, as described in Annex-2.

2-2. The Indonesian side will take the necessary measures, as described in Annex-3, in a timely manner.

3. Schedule of the Study

3-1 The Team will visit Indonesia again around the middle of December, 2008 for the site surveys of the newly planned repeater stations under Stage-2.

3-2 The Team will prepare the draft report on Stage-1 of the Project in English, and if necessary, dispatch a mission to Indonesia in order to explain its contents around February 2009. In case the contents of the report are accepted in principle by the Government of Indonesia and JICA confirms the result of the study as appropriate, JICA will recommend the Government of Indonesia as appropriate consultant for the implementation of the Project.

3-3 The Team will prepare the draft report on Stage-2 of the Project in English and dispatch a mission to Indonesia in order to explain its contents around March 2009. In case the contents of the report are accepted in principle by the Government of Indonesia, JICA will complete the final report and send it to both Government of Japan and Government of Indonesia by May, 2009

4. Other Relevant Issues Discussed

4-1 Feasibility on Radar Sensor Station at Tg. Parit

The Team visited Tg. Parit to find more reasons for justification. The only justification has been that this location has been selected by the Indonesia side because it is between Tg. Medang and Hiyu Kecil, and there is a lighthouse, and the site is already owned by DGST. The coast along Tg. Parit is covered by mangrove and palm trees, and there are a few small bay formed by river that flows into the sea. Small number of wooden boats can be seen in the bay and on the sea close to the coast. TSS of the Malacca Strait is far away from the coast, so the large vessels passing TSS do not interfere with the small boats.

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This observation matches the result of the vessel count survey conducted at this site during the Basic Design Study.

Based on these facts the Team Leader pointed out that although the importance of the vessel monitoring on the Malacca Strait is well understood, the benefit of establishing a VTS radar sensor at Tg. Parit is almost nil compared to the high investment cost. The VTS monitor would display large vessels with AIS on TSS only under the present situation. If DGST wants to monitor the movement of the large vessels on the Malacca Strait, AIS will be more suitable solution, and its cost/benefit can also be justified.

The Team Leader recommended that AIS will be set up at Tg. Parit at the Stage-2 of the Project. The AIS information will be sent to Dumai VTS Sub-Center so that DGST can monitor the movement of large vessels along the Malacca Strait for the first time. The current study will also explore the best possibility of the continuous vessel monitoring along the Malacca Strait, like the one that will be developed for the Singapore Strait under the Stage-1 of the Project. Possibilities of data transmission along the coast line from Bengkalis to Dumai will also be studied. Priority of the sites will be put based on the monitoring needs. The result with the estimated cost and any alternative options will be presented to the Indonesia side at the end of the Study on Stage-2 so that the Indonesia side can make appropriate decisions for the future.

The coverage area by Stage-1 and Stage-2 of the Project is shown in Annex-4.

4-2 Transmitting System

Indonesian side explained that use of the satellite link is very limited due to the high operation cost. At this moment, only Pulau Jemul (Jemul Island) in North Sumatra is planned by a satellite link. Therefore the Project shall cover microwave link between the VTS Sensor Station and VTS Center or Sub-Center. The Team will continue technical analysis of transmitting link.

4-3 Land acquisition for the future repeater station

The Indonesian side has already secured Selincing and budgeted to acquire Sepahat as the candidate locations of the future repeater stations.

4-4 Major undertakings to be taken by the Indonesian side

The Team requested the Indonesian side to carry out following undertakings particularly necessary to implement the Project;

<Common for Stage-1 and 2>

- Entry permit to the construction area and execution permit for the construction
- Acquisition of radio frequency and permission to use the radar, the multiplex radio for data communication, VHF radio for vessels and internet connection between Dumai and Batu Ampar

<For Stage-1>

- Permission to use the existing jetty at Hiyu Kecil and Takong Kecil for material transportation, and permission to reclaim to provide a temporary yard for material stocking.
- Tapping of commercial power supply for the VTS center in Batu Ampar and the VTS sub-center in Dumai
- Demolition and removal of the existing fence in Takong Kecil
- Demolition and relocation of the road in the yard in Tanjung Berakit
- Proclamation and remedial measures to be undertaken during the relocation work and re-installation of the existing lantern in Tanjung Berakit.

<For Stage-2>

- Permission to construct a temporary jetty which is required for material handling in Tanjung

Medang.

- Demolition and removal of the existing warehouse in Tanjung Medang
- Relocation of the volley ball court in Dumai
- Provision of openings for the connection of the existing office building with the new building
- Provision of internet connection between Dumai and Batu Ampar

4-5 Operation and Maintenance

The Indonesian side reconfirms allocation of necessary staff and budget as agreed at the Basic Design Study.

4-6 Technical Training and/or Soft Component

The Indonesian side explained that some DGST staff are sent to Australia for the training on VTS operation. Any further training will be discussed with the Team.

4-7 Coordination with MEH Project

Indonesia side requested to make use of the VTS Center at Batu Ampar for the MEH data center as well. The Team replied to consider the request by minor modification of the basic design.

4-8 Confidentiality of the specifications and the Project Cost Estimate

Both sides confirmed again that draft detailed specifications and the project cost estimate are confidential and shall neither be duplicated nor released to any outside party in order to secure the fairness of the tender of the Project. And the Indonesian side agreed.

END

Annex-1. Component of the Project at the Basic Design

Annex-2. Japan's Grant Aid Scheme

Annex-3. Major undertakings by each Government

Annex-4. Coverage Area under Stage-1 and Stage-2 of the Project

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Outline of Equipment to be Procured by the Project

Equipment	Unit	Quantity	Stage-1					Stage-2	
			1	2	3	4	5	6	7
			Hiyu Kecil	Takong Kecil	Batu Ampar	Tanjung Berakit	Tanjung Medang	Tanjung Parit *	Dumai
Radar System	Set	5	1	1	1	1	1		
VHF Marine Radio System	Set	5	1		1	1	1	1	
AIS Base Station System (AIS System)	Set	5	1		1	1	1	1	
CCTV Camera Equipment (CCTV System)	Set	2		1			1		
Meteorological Sensor Unit with Data Logger	Set	3	1			1	1		
Tracking System	Set	2			1				1
Multi-function Console with VHF Radio Communication Unit	Set	8			6				2
Printer System (Monochrome and Color)	Set	2			1				1
Data Base for Vessel Information	Set	2			1				1
AIS Server System (AIS System)	Set	2			1				1
CCTV Video Display Equipment (CCTV System)	Set	2			1				1
Meteorological Monitor Console	Set	2			1				1
Record and Playback System for Vessel Traffic	Set	2			1				1
Resource Management System	Set	2			1				1
Multiplex Radio Equipment (Data Communication System)	Set	9	1	2	2	1	1	1	1
Web Server System	Set	1			1				
Connecting Devices for Internet Communication for Dumai-Batu Ampar	Set	2			1				1
Equipment Desk and Others	Set	6	1	1	1	1	1		1
Takong Kecil Light House	Set	1		1					
Tanjung Berakit Light House	Set	1				1			
Air Conditioner for Radar Sensor Station	Set	10	2	2		2	2	2	
Diesel Engine Generator	Set	5	1	1		1	1	1	
	Kva & Unit		15 KVA x 4	15 KVA x 4		15 KVA x 4	15 KVA x 4	15 KVA x 4	

* For Tanjung Parit to be studied further.

Outline of Facilities to be Constructed by the Project

Facilities	Unit	Quantity	Stage-1				Stage-2		
			1	2	3	4	5	6	7
			Hiyu Kecil	Takong Kecil	Batu Ampar	Tanjung Berakit	Tanjung Medang	Tanjung Parit	Dumai
VTS Center	Unit	1			1				
	m ²	414			414.00				
VTS Sub-Center	Unit	1							1
	m ²	207.4							207.36
Equipment Building	Unit	5	1	1		1	1		
	m ²	211.3	42.25	42.25		42.25	42.25	42.25	
Generator Building	Unit	6	1	1		1	1		1
	m ²	320	55.00	55.00		55.00	55.00	55.00	45.00
Air Conditioners (for VTS Center and Sub-Center)	Unit	2			1				1
Diesel Engine Generator (Emergency Backup)	Unit	2			1				1
	Kva, Units				60 KVA x 1				45 KVA x 1
Fuel Tank (Outdoor)	Unit	7	1	1	1	1	1	1	1
	m ³		6.0	6.0	2.0	6.0	6.0	6.0	2.0
Fuel Supply System	Unit	2	1	1					
	m ³		1.0	1.0					
Water Reservoir	Set	2			1				1
	m ³				1.5				1.0
Septic Tank	Set	2			1				1
	m ³				8.0				4.0
Steel Tower for Radar and Communications	Unit	7	1	1	1	1	1	1	1
	m		38.00	49.00	30.00	73.00	106.00	78.00	106.00

* For Tanjung Parit to be studied further.

JAPAN'S GRANT AID

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

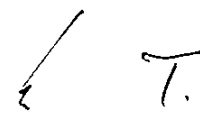
Firstly, the application or request for a Grant Aid project submitted by a recipient country is examined by the Government of Japan (the Ministry of Foreign Affairs) to determine whether or not it is eligible for Grant Aid. If the request is deemed appropriate, the Government of Japan assigns JICA (Japan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

Secondly, JICA conducts the study (Basic Design Study) using (a) Japanese consulting firm(s).

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 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 (hereafter referred to as "the Study") conducted by JICA on a requested project (hereafter 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:

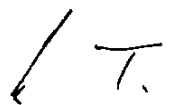
- Confirmation of the background, objectives, and benefits of the Project and also institutional capacity of agencies concerned of the recipient country necessary for the Project's implementation.
- Evaluation of the appropriateness of the Project to be implemented under the Grant Aid Scheme from a technical, social and economic point of view.
- Confirmation of items agreed on by both parties concerning the basic concept of the Project.
- Preparation of a basic design of the Project.
- Estimation of costs 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 the 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 (a) registered consulting firm(s). JICA selects (a) firm(s) based on proposals submitted by interested firms. The firm(s) selected carry(ies) out a Basic Design Study and write(s) a report, based upon terms of reference set by JICA. The consultant firm(s) used for the Study is (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 procedures such as exchanging of the Notes, concluding contracts with (a) consultant firm(s) and (a) contractor(s) and final payment to them must be completed. However, in case of delays in delivery, installation or construction due to unforeseen factors such as national 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, constructing 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 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 to Japanese taxpayers.

(5) Undertakings required of 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 construction,
- 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 expenses and prompt excursion 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 the 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 maintain and use the facilities constructed and the 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.

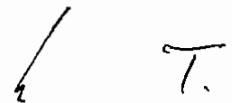
(8) Banking Arrangements (B/A)

- 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 the 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.

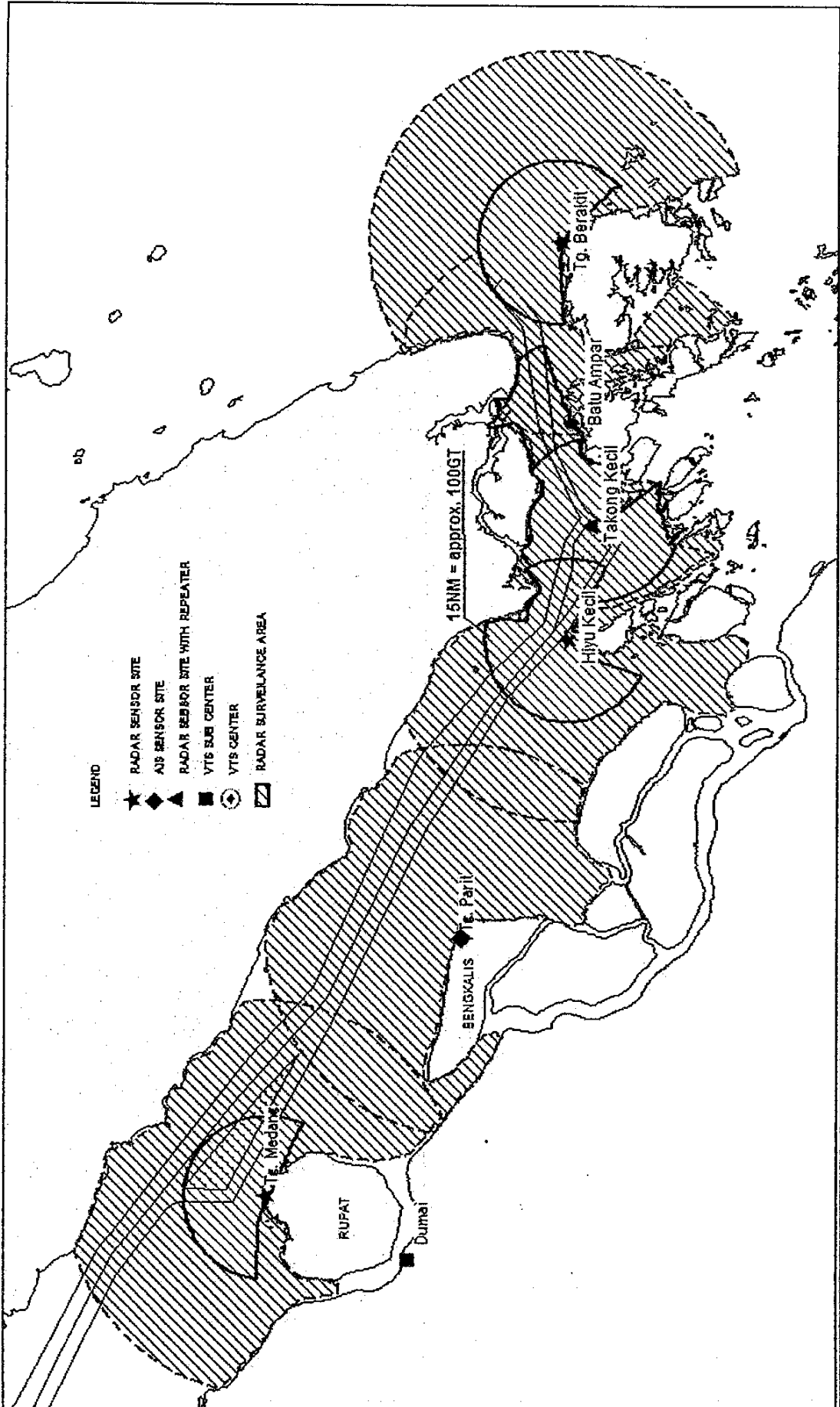
(End)



Major undertakings to be taken by each Government

No.	Items	To be covered by Grant Aid	To be covered by Recipient Side
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 the parking lot	•	
5.	To construct roads		
	1) Within the site	•	
	2) Outside the site		•
6.	To construct the buildings (and/or tower)	•	
7.	To provide facilities for the distribution of electricity, water supply, drainage and other incidental facilities		
	1) Electricity		
	a. The distributing line to the site		•
	b. The drop wiring and internal wiring within the site	•	
	c. The main circuit breaker and transformer	•	
	2) Water Supply		
	a. The city water distribution main to the site		•
	b. The supply system within the site (receiving and elevated tanks)	•	
	3) Drainage		
	a. The city drainage main (for storm, sewer and others) to the site		•
	b. The drainage system (for toilet sewer, ordinary waste, storm drainage and others) within the site	•	
	4) Gas Supply		
	a. The city gas main to the site		•
	b. The gas supply system within the site	•	
	5) Telephone System		
	a. The telephone trunk line to the main distribution frame/panel (MDF) of the building		•
	b. The MDF and the extension after the frame/panel	•	
	6) Furniture and Equipment		
	a. General furniture		•
	b. Project equipment	•	
8.	To bear the following commissions to the Japanese foreign exchange bank for the banking services based upon the B/A		
	1) Advising commission of A/P		•
	2) Payment commission		•
9.	To ensure 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	•	
10.	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 the recipient country and stay therein for the performance of their work.		•
11.	To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which may be imposed in the recipient country with respect to the supply of the products and services under the verified contracts.		•
12.	To maintain and use properly and effectively the facilities constructed and equipment provided under the Grant.		•
13.	To bear all the expenses, other than those to be borne by the Grant, necessary for construction of the facilities as well as for the transportation and installation of the equipment.		•

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



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Appendix 4-2 M/D on Second Field Survey

**Minutes of Discussions
on the Second Implementation Review Study
on the Project for Enhancement of Vessel Traffic System
in Malacca and Singapore Straits
in Indonesia**

Japan International Cooperation Agency (hereinafter referred to as "JICA") sent to Indonesia the Second Implementation Review Study Team (hereinafter referred to as "the Team"), which is headed by Mr. Toshiyuki Iwama, Director, Transportation and ICT Division 3, Economic Infrastructure Department, JICA, and is scheduled to stay in the country from November 30 to December 24, 2008.

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

In the course of discussions, both sides confirmed the main items described in the attached sheet.

Jakarta, December 23, 2008



Toshiyuki IWAMA
Leader
Implementation Review Study Team
Japan International Cooperation Agency



Yuni GUNADI
Director of Navigation
Directorate General of Sea Transportation
Ministry of Transportation

ATTACHMENT

1. Components of the Project

Exchange of Notes for the Components of the Stage-1 (hereinafter referred to as "E/N") has been already signed by two Governments. The Team explained that some spare parts and equipment for maintenance for Stage-1 needs to be moved to Stage-2 in order to keep the estimated cost within the cost limit specified in the E/N.

The Team proposed the Indonesian side to acquire a site at Tg.Sair to be an additional repeater station for Stage-2 in order to ensure the quality of the transmitted radar image from Tg. Medang. The Team also recommends coordinate with GMDSS project because transmitting tower at Dumai and Selincing can be jointly used. In this case the specification of the towers at Dumai and Selincing by the GMDSS project needs to be changed. The Team will provide necessary information by January 2009. The final decision must be made and agreed by March 2009, when the Draft Explanation Team arrives in Jakarta.

2. Schedule of the Study

2-1 Schedule of Stage-1

The Team will prepare the draft report on Stage-1 of the Project in English and send it by February 2009. In case the contents of the report are accepted in principle by the Government of Indonesia and JICA confirms the result of the study as appropriate, JICA will recommend the Government of Indonesia as appropriate consultant for the implementation of the Project.

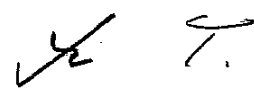
2-2 Schedule of Stage-2

The Team will prepare the draft report on Stage-2 of the Project in English and dispatch a mission to Indonesia in order to explain its contents around March 2009. In case the contents of the report are accepted in principle by the Government of Indonesia, JICA will complete the final report and send it to both Government of Japan and Government of Indonesia by May, 2009

3. Other Relevant Issues Discussed

3-1 Land acquisition for the future repeater station

The Indonesian side commits the budgeting process for obtaining the site at Sepahat and Tg.Sair as the candidate locations of the future repeater stations. The Indonesian side has already obtained agreement from the landowners to sell the land. The Team again explained that the land must be available for construction of the repeater tower by March 2010.



END

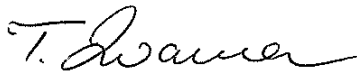
Appendix 4-3 M/D on Third Field Survey

**Report on Discussions
on the Third Visit of the Implementation Review Study Team
on the Project for Enhancement of Vessel Traffic System
in Malacca and Singapore Straits
in Indonesia**

Japan International Cooperation Agency (hereinafter referred to as "JICA") sent to Indonesia the Implementation Review Study Team (hereinafter referred to as "the Team"), which is headed by Mr. Toshiyuki Iwama, and is scheduled to stay in the country from March 15 to March 25, 2009.

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

In the course of discussions, the Team summarized the main items described in the attached sheets and asks for clearance by the Indonesian side and a written confirmation.



Prepared by:
Toshiyuki IWAMA
Leader
Implementation Review Study Team
Japan International Cooperation Agency



Received by:
Mr. Yuri GUNADI
Director of Navigation
Directorate General of Sea Transportation
Ministry of Transportation

Date: March 25, 2009

Handwritten note: 25/3-09

ATTACHMENT

1. Background and Objective of the Mission

At the previous visit in November the Team pointed out that the transmitting towers at Dumai and Selincing to be elected by the GMDSS project could be jointly used. Since the specification of the towers at Dumai and Selincing by the GMDSS project needs to be changed, a teleconference was held on 16 February 2009 to explain the necessary items for modifications. In response DGST sent a letter to the Team as attached as Annex 1.

2. Result of the Site Survey

The Team conducted the necessary site surveys around the new site (Site A) and other technical surveys in order to assess the appropriateness of using a new site.

The preliminarily result of the site and technical survey is attached as Annex 2 and 3.

The team explained the major findings as follows;

- (1) Site A cannot be reached because there is no access road.
- (2) The Team used a different site called C1 located nearby the Site A for the link budget analysis and found out that the tower height will be more than 100m if the height of the tower at Selincing remains at 50m, because there is a ridge nearby Selincing. The Team pointed out that a tower height of more than 100m is not recommendable because the quality of data transmission will decrease. Instead, if the tower height at Selincing can be increased the tower height of the new site can be decreased and the transmission quality will be improved.
- (3) Among the 10 sites visited by the Team, Site No.2, 3a, 3b, 3c, 3d and 6 will be possible to use as a repeater station. The tower height of No.2 will be the lowest among these candidate sites.

The Team proposed the following:

- a. To increase the Tower height of Selincing by GMDSS project, or
- b. To cancel the tower at Selincing by GMDSS and construct the tower by the Stage-2 of the Grant Aid project, or
- c. To use the satellite communication link between Dumai and Tg.Parit, or
- d. To cancel VHF system at Tg. Parit so that AIS data can be transmitted by a GPRS.

DGST replied to consider the possibility of the option a. above and requested the Team to issue a letter. The Team Leader prepared a letter as attached as Annex 4. On the other hand DGST also requested exploring the possibility of re-considering the Benkalis Sub-Center, if the option a. cannot be realized.

3. Schedule of the Study

The Team explained that because of the additional surveys and analysis, the draft report on Stage-2 of the Project will be available in May. JICA will dispatch a mission to Indonesia in order to explain its contents around May 2009. In case the contents of the report are accepted in principle by the Government of Indonesia, JICA will complete the final report and send it to both Government of Japan and Government of Indonesia by July, 2009

4. Other Relevant Issues Discussed

4-1 Land acquisition for the future repeater station

The Indonesian side commits the budgeting process for obtaining a new site including the temporary access during the construction of the tower as the candidate location of the future repeater station (instead of Sepahat) in addition to Tg. Sair, according to the final result of the implementation study. The Indonesian side has already obtained verbal consent from the landowners to sell the land. The Team again explained that the land must be available for construction of the repeater tower by March 2010.

END

7

DGST Response after teleconference last week,

Concerning the Tanjung Parit – Dumai Rx Microwave Link Case in Malacca Strait VTS Project (Grant)

Principles

1. Existing and/or on-going project equipment and/or facilities which to be used by other projects come after shall be understood as an input and/or constrain of any design in such new come after projects.
2. The designers or engineers of the new come after projects shall endeavor their best effort and engineering resources to overcome and find solutions to any technical or natural or environment barriers in engineering manner without requires any conditions or requirements or causing any interruption to the existing and/or on-going project. Such condition or requirement may necessary a complicated modification and arrangement not only relating to technical and engineering matters but also non technical, such as contract amendment, project's audit, etc.
3. However, if the design is related to the project which has not signed its contract yet, the coordination between the related projects is highly appreciated in order to share the common equipment and/or facilities, where the earlier project shall take the responsibility of such shared equipment and/or facilities.

Maximization of Design

The design and survey particularly site or field survey shall be maximized in such that the existing and/or on-going contracted project shall not be interrupted and shall not be required by the new conditions or requirements from other new come after project. In regard to the maximization of design for microwave link between Tanjung Parit and Dumai Rx, DGST suggests alternative designs, instead of requires on-going project to adopt new conditions which requires contract amendment. The final design shall be selected from the optimal of the following alternatives:

1. Alternative design – 1: To construct higher tower in the proposed Sepahat site without requiring any tower modification in Selincing,
2. Alternative design – 2: To shorten the distance from Selincing to the next repeater on the direction to Tanjung Parit by means to cancel Sepahat site,
3. Alternative design – 3: To rearrangement link to the north side of Bengkalis.

Alternative Design – 3

Relating to the alternative design – 3, DGST suggests the microwave link to be routed from Selincing to point A in the following drawing and to Tanjung Parit from point A. The following conditions or requirements may be applied:

1. Point A shall be a non-attendance microwave repeater powered by Solar cell/panel with maintenance-free Battery for 5 days operation (around 1500AH).

A T.

2. Solar panel may be mounted in the roof of battery house with double fences.
3. Highest tower needed for point A (depend on the final location selected) will be 60m SST (self supported tower).
4. Security device may be provided for intruder detection and send the signal to Supervisor in Tanjung Parit or Dumai Rx.

Under this alternative, one repeater station will be reduced including land, building, Radio equipment, tower and emergency E/G.

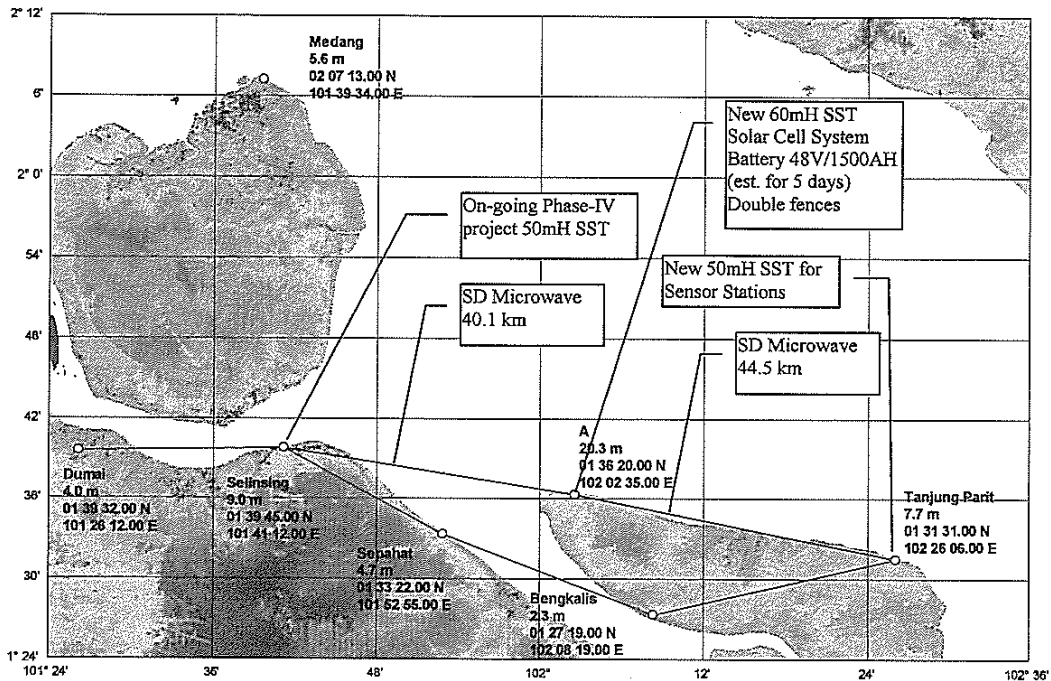


Figure 1
Site Plan for Alternative Design -3

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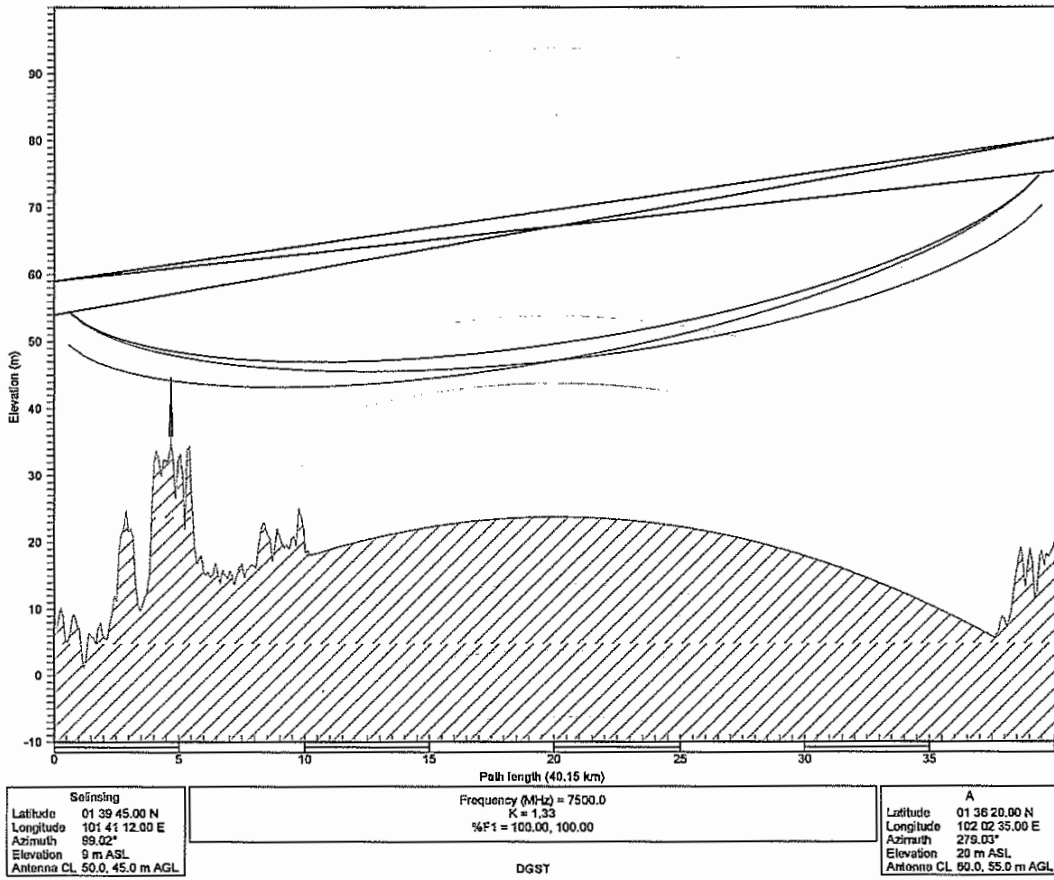


Figure 2
Path profile between Selinsing to Point A

7.

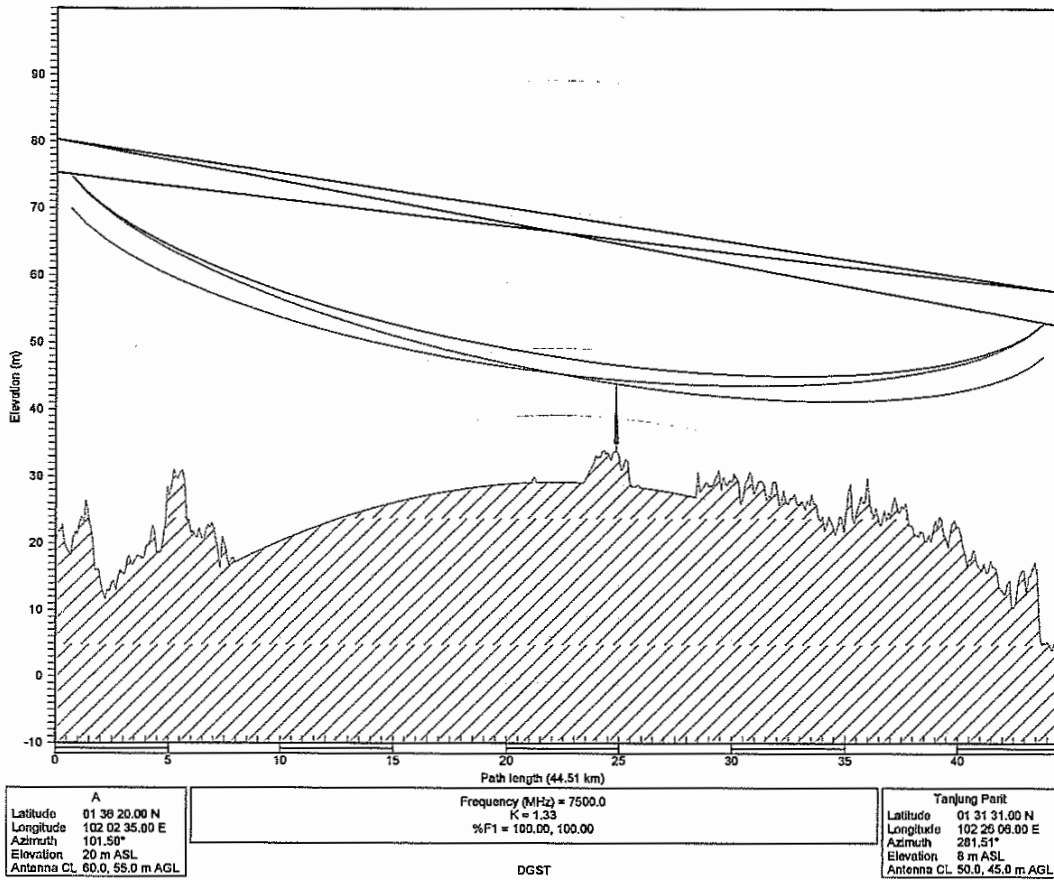
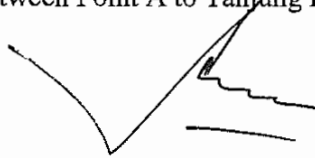


Figure 3
Path profile between Point A to Tanjung Parit



February 24, 2009

Ir. ALAMSYA SASMITO
Section head of Equipment and Maintenance
Sub-Director of Marine telecommunication,
Directorate of Navigation

T.

Table 1 Study on New Repeater Station "Site A"

1. Preliminary Study

ID	Lat.	Long.	EL(m) (GPS)	Required antenna height			Data Source	Considerations	Remarks		
				Est	Sealincing Site	Tg. Part					
Site A	1 36 20.0 N	102 2 35.0 E		Pre	50	60	50	OK	It is considered that the SRTM data is included in the tree	Can not reached to Site A, since there is no access.	
C1	1 35 43.4 N	102 2 53.5 E		Pre	50	110	80	70	NG	Grant Aid Project	Land elevation shall be confirmed by the site survey
C1	1 35 43.3 N	102 2 53.5 E		Pre	50	50	60	60	OK	DGST/GMDSS	It is considered that the SRTM data is included in the tree

2. Surveyed Sites

ID	Lat.	Long.	EL(m) (GPS)	Required antenna height			Access to site	Site Conditions	Security	Environment			Land	Remarks
				Est	Sealincing Site	Tg. Part				Natural	Social	Ownership		
No.1	1 35 41 N	102 2 54 E	15	Pre	50	110	80	70	NG	NG	NC	NG	Access is difficult. No residential area.	
No.2	1 35 1.7 N	102 2 52 E	9	Pre	50	120	90	70	NG	OK	OK	OK	OK	
				Post	50	100	72	70	OK	OK	OK	OK	OK	
No.3a	1 34 24 N	102 0 45 E	12	Pre	50	130	110	70	NG	OK	OK	OK	OK	
				Post	50	130	110	70	NG	OK	OK	OK	OK	
No.3b	1 34 26 N	102 0 47 E	9	Pre	50	130	110	70	NG	OK	OK	OK	OK	
				Post	50	130	110	70	NG	OK	OK	OK	OK	
No.3c	1 34 25 N	102 0 45 E	10	Pre	50	130	110	70	NG	OK	OK	OK	OK	
				Post	50	130	110	70	NG	OK	OK	OK	OK	
No.3d	1 34 37 N	102 0 47 E	13	Pre	50	130	110	70	NG	OK	OK	OK	OK	
				Post	50	130	110	70	NG	OK	OK	OK	OK	
No.4	1 36 0.9 N	102 0 22 E	5	Pre	50	90	110	70	NG	NG	NC	NG	Heavy coastal erosion. Access is difficult.	
				Post	50	90	110	70	NG	OK	OK	NC	Private company area.	
No.5a	1 36 8.7 N	102 3 29 E	12	Pre	50	50	50	50	OK	OK	OK	OK	Secure the land may be difficult.	
				Post	50	50	50	50	OK	OK	OK	OK	OK	
No.5b	1 36 0.9 N	102 3 29 E	10	Pre	50	50	50	50	OK	OK	OK	OK	OK	
				Post	50	50	50	50	OK	OK	OK	OK	OK	
No.6	1 33 50 N	102 11 11 E	7	Pre	50	50	50	50	OK	OK	OK	OK	Site may not suitable since the distance from Sealincing is too far.	
				Post	50	50	50	50	OK	OK	OK	OK	OK	

A.T.

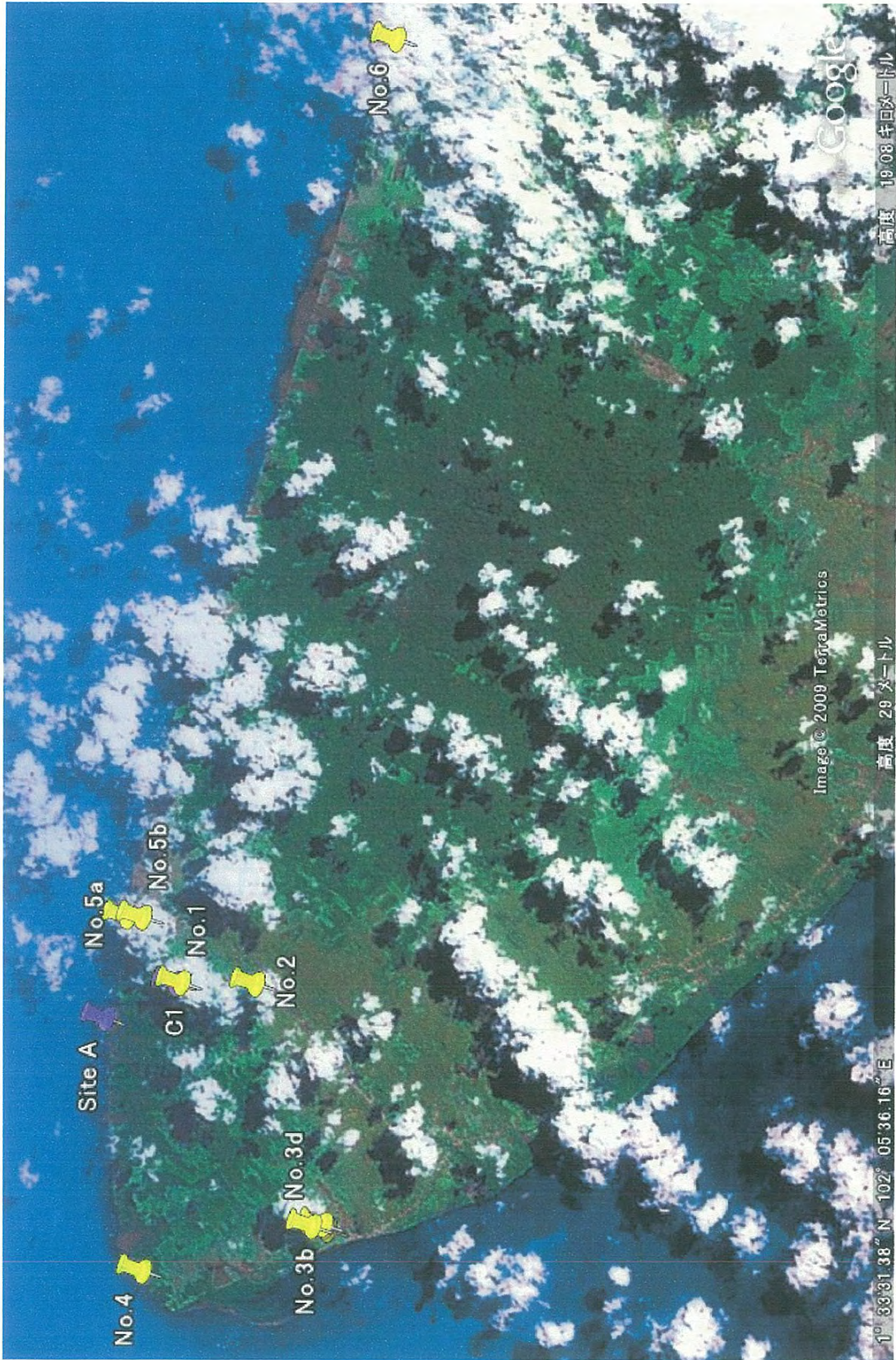


Fig. 1 Surveyed Sites

T. A

Jakarta, March 24, 2009

Ir. ALAMSYA SASMITO
Section Head of Equipment and Maintenance
Sub-Director of Marine Telecommunication,
Directorate of Navigation
Ministry of Transport

Dear Sir,

I am writing to request your consideration of facilitating the installation of necessary antennae planned under the Grant Aid project for "Enhancement of Vessel Traffic System in Malacca and Singapore Straits" to the GMDSS towers at Selincing and Dumai for following reasons.

Under Implementation Review Study of the Grant Aid project for "Enhancement of Vessel Traffic System in Malacca and Singapore Straits" a link budget analysis was made between Selincing and a site on Benkalis Island. The result shows that the height of the tower at Selincing needs to be increased by about 5m in order to overcome a ridge located near Selincing.

For Dumai, the tower height does not need to be changed, but the tower needs to be designed and constructed to carry the additional weight of the antennae.

Kindly consult this matter with relevant parties and reply the result within 10 days, so that we can adjust the contents of the implementation review accordingly.

Your kind understanding and cooperation will be highly appreciated.

Sincerely,



Toshiyuki IWAMA
Leader
Implementation Review Study Team
Japan International Cooperation Agency

T. I

Appendix 4-4 M/D on Draft Report Explanation

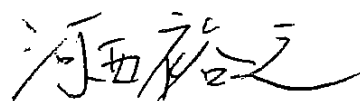
Minutes of Discussions on the Implementation Review Study on the Project for Enhancement of Vessel Traffic System in Malacca and Singapore Straits in Indonesia (Explanation of Draft Report)

In October, December 2008, and March 2009, the Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched the Implementation Review Study Team on the Project for Development of Vessel Traffic System in Malacca and Singapore Straits (hereinafter referred to as "the Project") to Indonesia, and through discussions, field survey, and technical examination of the results in Japan, JICA prepared a draft report of the study.

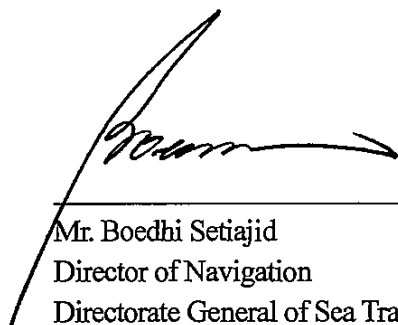
In order to explain and to consult with concerned officials of the Government of Indonesia on the components of the draft report for Stage-2 of the Project, JICA sent to Indonesia the Draft Report Explanation Team (hereinafter referred to as "the Team"), which is headed by Mr. Hiroyuki KAWANISHI, Senior Representative, JICA Indonesia Office, from May 25 to 29, 2009.

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

Jakarta, May 27, 2009



Hiroyuki KAWANISHI,
Leader
Implementation Review Study Team
Japan International Cooperation Agency



Mr. Boedhi Setiajid
Director of Navigation
Directorate General of Sea Transportation
Ministry of Transportation

ATTACHMENT

1. Components of the Draft Final Report

The Indonesian side agreed and accepted the components of the draft report explained by the Team.

2. Cost Estimation

Both sides agreed that the Project Cost Estimation as attached in Annex-1 should never be disclosed to any third parties before the signing of all the contract(s) for the Project.

3. Japan's Grant Aid Scheme

The Indonesian side understood the Japan's Grant Aid scheme and the necessary undertakings to be taken by the Government of Indonesia as explained by the Team and described in the Report of Discussions signed by both sides on October 13th, 2008.

4. Schedule of the Study

JICA will complete the final report in accordance with the confirmed items and send it to the Government of the Indonesia by August, 2009.

5. Other Relevant Issues

5-1. Coordination with Maritime Telecommunication System Development Project Phase IV (hereinafter called "MTSDP Phase IV"¹)

The Team explained that the tower height and strength mentioned in 5-1-2 and the schedule for tower construction mentioned in 5-1-3 are necessary conditions to ensure the implementation of the Project. The Indonesian side and the Team confirmed and agreed the followings.

5-1-1. Scope

The Scope of the construction of the facilities, procurement and installation of the equipment by the MTSDP Phase IV and the Project are as follows:

- The facilities including steel towers at Selincing and Dumai will be constructed by MTSDP Phase IV which will be commonly used to maintain the communication between Selincing and Dumai for both projects.
- Equipment which is required to maintain data communication link between Dumai and Selincing will be commonly used equipment provided by the MTSDP Phase IV. However, the Project shall provide E1-RJ45 interface for both ends at Dumai and Selincing.

¹ MTSDP Phase IV: In the Minutes of Discussion of 13th October and 23rd December, 2008 "Maritime Telecommunication System Development Project Phase IV" is described as "the GMDSS project". But the Indonesian side requested to describe as "MTSDP Phase IV" during this discussion,

5-1-2. The height and the strength of the towers at Selincing and Dumai

The Project will install the antennae to the towers at Selincing and Dumai. To maintain the data communication links between Tanjung Parit and Dumai, the Team requested the followings.

- The Indonesian side shall assure the necessary strength of the towers at Selincing and Dumai so that the antennae for the Project can be accommodated to the towers.
- The tower height at Dumai and Selincing is 50m above the ground elevation.

5-1-3. Schedule of the installation

The Team requested the Indonesian side to complete tower construction by MTSDP Phase IV before October 2010, because the antenna installation to the towers at Selincing and Dumai are planned to start on November, 2010. The Indonesian side agreed.

5-2. Major undertakings to be taken by the Indonesian side

5-2-1 Land acquisition for the future repeater stations

The Team explained that the land for Tg. Sair and Simpang Ayam must be ready for construction of a repeater station by March 2010 or earlier. The Indonesian side already proposed to Ministry of Finance additional budget for purchasing the land for Tg. Sair and Simpang Ayam.

The Indonesian side has already obtained agreement from the landowners to sell the land. The Indonesian side explained the budgeting is in process.

5-2-2 Obligations of Indonesian side

The Team requested the Indonesian side to carry out the following undertakings particularly necessary to implement the Project;

- Entry permit to the construction area and execution permit for the construction immediately after the contract signing with the Contractor.
- Acquisition of radio frequency and permission to use the radar, the multiplex radio for data communication, VHF radio communication for vessels from Ministry of Communications and information immediately after the contract signing with the Contractor.
- Permission to construct a temporary jetty which is required for material handling in Tanjung Medang and Tanjung Parit immediately after the contract signing with the Contractor.
- Relocation of the volley ball court in Dumai before starting the execution of building.
- Provision of openings for the connection of the existing office building with the new VTS Sub-Center building in Dumai prior to commencement of building work.
- Provision of access to high speed circuit (internet connections) between Dumai and Batu Ampar immediately after the contract signing with the Contractor.
- Provide furniture and fixtures in the Buildings after handover.

5-3. Staffing for Operation and Maintenance of the VTS System

The Team requested the Indonesian side to assign the appropriate number of staff with appropriate level of skill for operation and maintenance of VTS system as discussed between both sides. The Indonesian side agreed and will assign the necessary staff before the installation of VTS.

5-4. Technical Training

The Indonesian side requested the training should comply with IALA recommendation V-103 which consists of;

1. VTS Basic Training which will be carried out at the accredited training institute as enacted by IALA.
2. On-the-job-training which will be carried out at the appropriate VTS center.

These training shall be accommodated in the Project to ensure the VTS System compliance with IMO, once the system is ready for operation.

The Team explained that there is no accredited training institute as enacted by IALA in Japan. However, the Project contains the initial guidance of maintenance and operation by the Contractor, and the technical training through the soft component. The soft component is planned in accordance with the Japan's Grant Aid scheme during the implementation of Stage-2 by using the VTS equipment at Batu Ampar which will be provided by the Stage-1 Project. This training course is designed for VTS operator of the Project after IALA Model Course V-103/1, but is a part of the whole model course. The Japanese expert may assist to development of necessary knowledge about IALA.

The Team explained that the Indonesian side shall prepare travel expenses and accommodation for the trainees and space for training according to the Grant Aid scheme. The Indonesian side will try to propose the additional budget for the expenses.

5-5. Confidentiality of the specifications

The Team handed two copies of the draft detailed specifications of the equipment and the facilities to the Indonesian side, the components of which are as attached in Annex-2, and stated that these draft detailed specifications are confidential and shall neither be duplicated nor released to any outside party in order to secure the fairness of the tender of the Project. And the Indonesian side agreed.

Annex-1: Project Cost Estimate

Annex-2: Components of the Project

CONFIDENTIAL

(HIDDEN)

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ANNEX-2 Components of the Project

Table 1 Outline of Equipment to be Procured by the Project

Equipment	1	2	3	4	5	6
	Tanjung Medang	Tanjung Sair	Dumai	Selincing	Simpang Ayam	Tanjung Parit
Equipment for VTS Sensor and Repeater Stations						
Radar System	○					
VHF Marine Radio System	○					○
AIS Base Station System (AIS System)	○					○
CCTV Camera Equipment (CCTV System)	○					
Area Surveillance Camera		○			○	
Meteorological Sensor Unit with Data Logger	○					
Air Conditioner for Radar Sensor Station	○					
Diesel Engine Generator	○					
Solar Power Generator		○			○	○
Housing Unit (with accessories)		○			○	○
Equipment for VTS Sub-Center						
Tracking System			○			
Multi-function Console with VHF Radio Communication Unit			○ ¹⁾			
Data Base for Vessel Information			○			
Record and Playback System for Vessel Traffic			○			
AIS Server System (AIS System)			○			
CCTV Video Display Equipment (CCTV System)			○			
Meteorological Monitor Console			○			
Resource Management System			○			
Printer System (Monochrome and Color)			○			
Connecting Devices for Internet Communication between Dumai and Batu			○ ²⁾			
Equipment for VTS Sub-Center, Sensor and Repeater Stations						
Equipment Desk and Others			○			
Multiplex Radio Equipment (Data Communication System)	○	○	○ ³⁾	○ ³⁾	○	○

1) 2) One another unit will be installed at Batu Ampar VTS Center

3) Equipment installed by MTSD Project IV will be used for data Transmission between Dumai and Selincing.

Table 2 Outline of the Facilities to be Constructed by the Project

Facilities	Unit	Quantity	1	2	3	4	5	6
			Tanjung Medang	Tanjung Sair	Dumai	Selincing	Simpang Ayam	Tanjung Panit
VTS Sub-Center	Unit	1			1			
	m ²	207.4			207.36			
Equipment Building	Unit	1	1					
	m ²	42.25	42.25					
Generator Building	Unit	2	1		1			
	m ²	100	55.00		45.00			
Air Conditioners (for VTS Sub-Center)	Unit	1			1			
Diesel Engine Generator (Emergency Backup)	Unit	1			1			
	Nos.				1			
Fuel Tank (Outdoor)	Unit	2	1		1			
	m ³		6.0		2.0			
Water Reservoir	Set	1			1			
	m ³				1.0			
Septic Tank	Set	1			1			
	m ³				4.0			
Steel Tower for Radar and Communications	Unit	3	1	1			1	1
	m		72.50	84.50	-	-	84.00	86.50

Appendix 4-5 Report of WG/D on First Field Survey

Report of Working Group Discussions on the Implementation Review Study on the Project for Enhancement of Vessel Traffic System in Malacca and Singapore Straits

DGST and the JICA Study Team have discussed from October 14 to October 24, 2008 and agreed as follows:

1 Review of the Stage-1 Project

(1) Hiyu Kecil Lighthouse

The JICA Study Team pointed out that the black sector of the existing light house is not same as the indication of sea chart. Existing light house provides a 360-degree service. The JICA Study Team requested DGST to clarify the reason why the discrepancy was caused, DGST explained that light have been changed from simplex to revolving since Feb. 4, 1974, however, regardless the situation and reason of the discrepancy, JICA Study Team explained that the steel tower will be designed to minimize the obstruction.

(2) Tg. Berakit Lighthouse

DSGT requested the JICA Study Team to modify from a partially complemented lantern to a fully complemented one. The DGST required that the tower design will be suitable to fit lantern.

(3) Building layout plan of Takong Kecil

DGST requested the JICA Study Team to modify the building layout of Takong Kecil according to the coordination with Navigation District. Requested plan is shown in Attachment-1.

(4) DGST confirmed to conduct the lantern performance test from sea side after completion of the installation.

2 Relevant Issues to be Clarified for Stage-2 Project

(1) Rationality for the establishment of VTS-Sensor Station at Tg. Parit

The issues are agreed as stated as the Minutes of Discussions on the Implementation Review Study on the Project for Enhancement of Vessel Traffic System in Malacca and Singapore Straits in Indonesia on October 13, 2008 (hereinafter called "the Minutes of Discussions").

(2) Proposed future repeater stations

DGST explained that the Indonesian side has already secured Selincing in GMDSS IV project and budgeted to acquire Sepahat as the candidate locations of the future repeater station.

DGST explained that the GMDSS IV project plans to construct communication links between Selincing and Dumai coastal radio station. JICA Study Team pointed out if the communication facilities between these two sites can be shared by both Projects, it will be high cost benefit. In this point of view, the JICA Study Team asked DGST availability of relay station such as Morong. DGST stated that utilize of the land of pilot station in Morong is not agreeable due to view point of fuel supply and maintenance. However, from the above mentioned point of view, DGST agreed to consider an additional repeater station between Tg. Medang and Dumai.

DGST and the JICA Study Team confirmed the proposed repeater station positions as shown in Attachment-2. The site conditions identified at the site are as follows and shown in the sketch drawings in Attachment-3.

1) Selincing

Presently there are no facilities inside of the land. Electrical power and water supply is not available.

2) Sepahat

There are no facilities at the site. Electrical power by PLN is available from 17:00 to 7:00.

3) Morong

The site is used for pilot station and land is owned by PT. PELINDO I.

(3) Land Acquisition for Stage-2 project

DGST has already secured the lands of Tg. Medang, Dumai, Bengkalis, Tg. Parit, Selincing and ready to use of this Project. For Sepahat, only after the JICA Study Team confirm, DGST will arrange the land.

3 Obligations of the Recipient Country

The followings are the mutual understandings in the Report of Discussions on December 2007. DGST agreed to arrange and to conduct the followings in the implementation stage.

3.1 Common for Stage-1 and Stage-2

- (1) To support to issue the entry permit to the construction area and execution permit for construction
- (2) To arrange and to obtain the following licenses:
 - 1) Transmission frequency of Radar Transmitter (9GHz Band)
 - 2) Radio frequency for multiplex radio link (7.5GHz band, 5GHz band is not possible)
 - 3) VHF marine radio communication channels for Hiyu Kecil, Batu Ampar and Tanjung Berakit sensor sites. Assigned channel will be directed by DGST in beginning of implementation stage.

3.2 For Stage-1

- (1) Permissions to use the existing jetty at Hiyu Kecil and Takong Kecil for material transportation, and permission to reclaim to provide a temporary yard for material stocking,
- (2) Tapping of commercial power supply for the VTS center in Batu Ampar,
- (3) Demolition and removal of the existing fence in Takong Kecil,
- (4) Demolition and relocation of the road in the yard in Tanjung Berakit,
- (5) Land acquisition for Stage-1

Lands of Hiyu Kecil, Takong Kecil, Batu Ampar, and Tg. Berakit are secured and owned by DGST and ready to use of the Project.

3.3 For Statge-2

- (1) Permission to construct a temporary jetty which is required for material handling in Tanjung Medang and Tanjung Parit,
- (2) Demolition and removal of the existing warehouse in Tanjung Medang,
- (3) Relocation of the volley ball court in Dumai,
- (4) Provision of openings for the connection of the existing office building with the new building,
- (5) Internet Connections between Dumai and Batu Ampar

4 Implementation

4.1 Schedule

The JICA Study Team explained the expected implementation schedule of Stage-1 and Stage-2 and Japan's Grant Aid Scheme.

4.2 Budget

The JICA Study Team explained the necessary amount to be prepared by DGST for the implementation of the Project.

4.3 Responsible Persons for the Project

DGST explained the JICA Study Team that DGST will establish "Satuan Kerja" (working unit) for the project implementation. Satan Keja consisted of (i) KPA (authority of budgeting user), (ii) PPK (project manager, contract signer), (iii) BENDAHRA (treasurer), (iv) SPM (in charge of treasury) and (v) staff.

5 Others

(1) Operation and Maintenance Structure

Staffing schedule for operation and maintenance is still under consideration.

(2) Technical Training and/or Soft Component

DGST requested, (i) training for technicians to build skills of fixing any trouble and maintain of hardware and software by themselves, (ii) training for VTS operators to improve their skills on operation.

(3) MEH Demonstration Project

1) Progress of the Project

The Project is stacked due to some reasons in procurement system.

2) AIS

AIS installation to Hiyu Kecil and Tg. Medang is still in the scope of the MEH Project.

3) MEH Data Center

DGST requested to make use of the VTS Center at Batu Ampar for the MEH data center as follows:

a. Data center which is currently provided in the existing office building at Batu Ampar Coastal Radio Station, will be moved to VTS Center when the building facility will ready for use.

b. DGST has plan re-locate of existing coastal radio station to the VTS Center building.

The JICA Study Team will consider the floor plan by minor modification of the basic design.

(4) Others

1) The JICA Study Team requested DGST the followings:

a. Arranging to permits to conduct radio communication links survey at all the candidate sites and natural conditions survey (topographic survey and soil investigations) at Selincing and Sepahat by Indonesian engineering firms on behalf of the JICA Study Team,

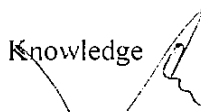
b. DGST cooperation for the study, including site visit to Batu Ampar and Tg. Berakit, conducted by Mr. Toshitsugu Shimada, Building Planning Specialist, who will be dispatched from November 3 to 12, 2008.

2) Components of the Stage-2 Project

Equipment and facilities to be composed at for Tg. Medang, Tg. Parit and necessary repeater stations for Stage-2 will be recommended by the JICA Study Team after conducting further studies and discussions in Japan.

October 24, 2008

Knowledge



Ir. Alamsyah Sasmito, MM
Section head of Equipment and Maintenance
Sub-Directorate of Marine Telecommunication
Directorate of Navigation, DGST



Mr. Masahiko Koshimizu
Chief Consultant
On behalf of
The JICA Study Team

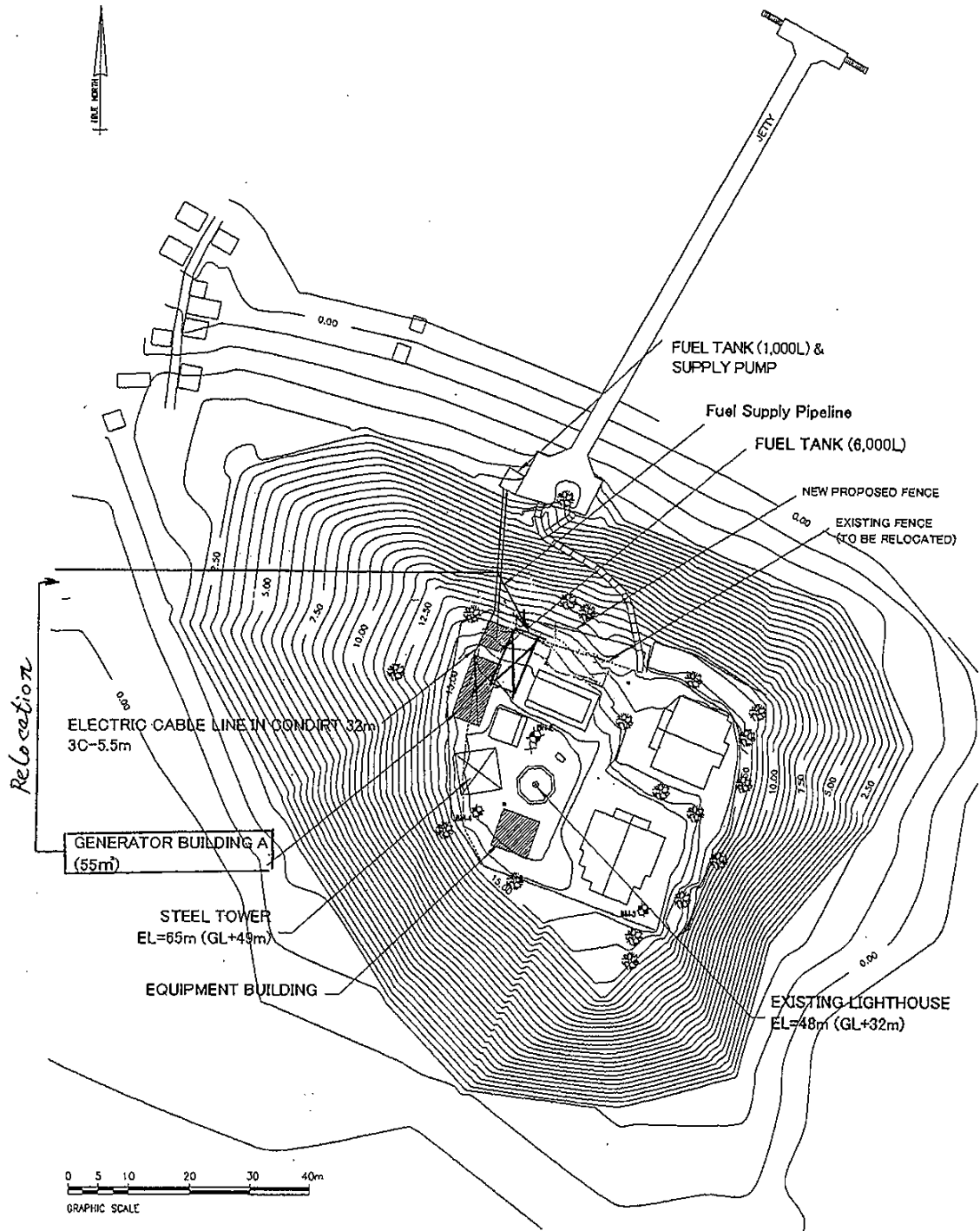
List of Attendance

Directorate General of Transportation (DGST)

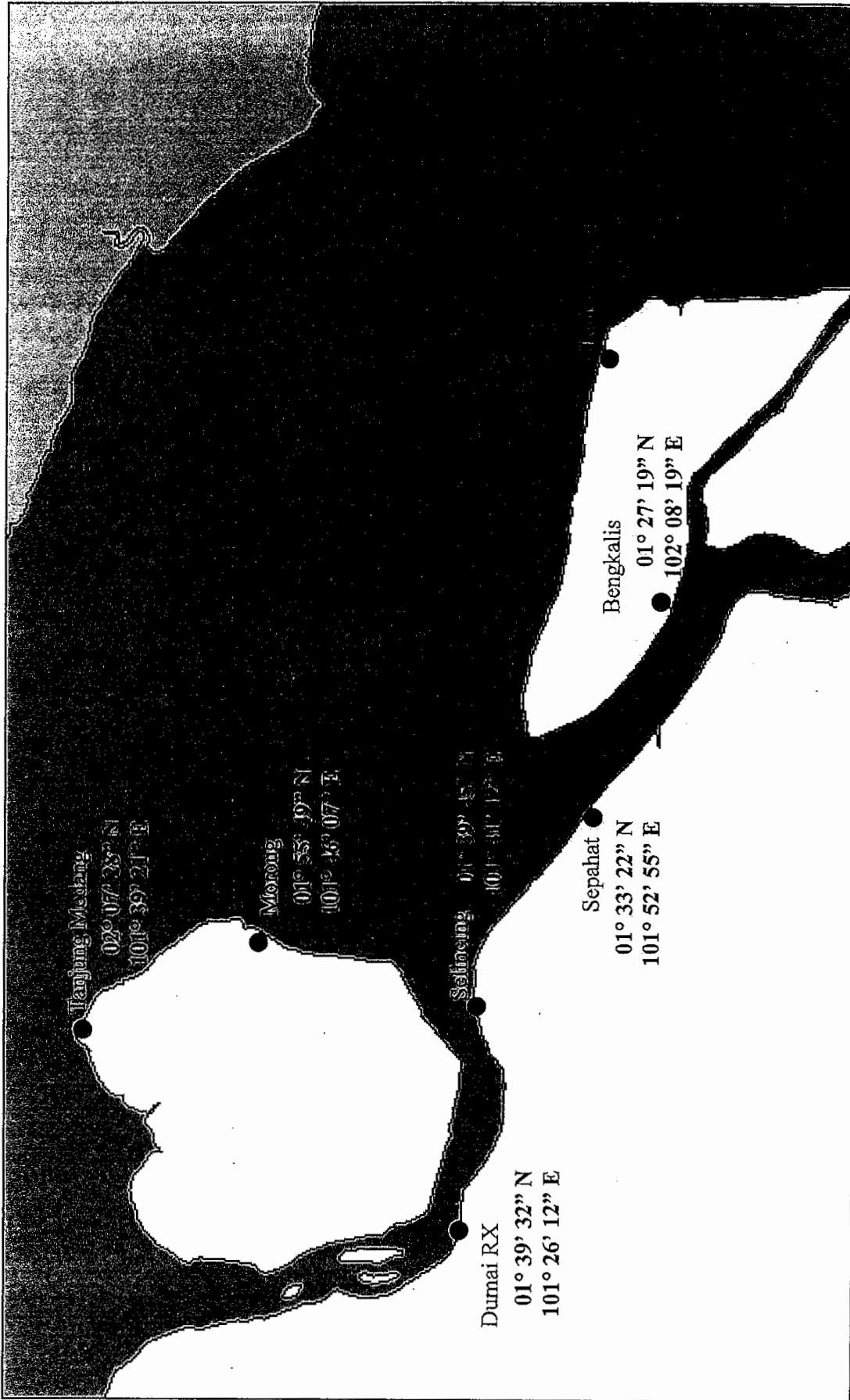
Ir. Alamsyah Sasmito,	Head of Section Equipment and Maintenance Sub-Directorate of Maritime Telecommunication Directorate of Navigation
Mr. Tofan Rindoyo	Head of Section Operation Sub-Directorate of Maritime Telecommunication Directorate of Navigation
Mr. Raymond Ivan H.A.S	Head of Equipment & Maintenance Section Sub-Directorate of Aids to Navigation Directorate of Navigation
Mr. Ketut Aries,	Staff of Sub-directorate of Maritime Telecommunication
Mr. Tony Rafiq,	Staff of Sub-directorate of Maritime Telecommunication
Mr. Andi Aswad	Staff of Sub-directorate of Aids to Navigation
Mr. Leonard S.	Staff of Sub-directorate of Aids to Navigation
Mr. Kazuyuki Tanaka	JICA Expert
The JICA Study Team	
Mr. Masahiko Koshimizu,	Chief Consultant, Maintenance, Operation and Management Specialist
Mr. Mitsumasa Noguchi,	Equipment Planning Specialist I
Mr. Kazuma Inoue,	Equipment Planning Specialist II
Mr. Jun Yamauchi,	Transmission Facilities Specialist
Mr. Satrio Steyawan.	Engineer

Attachments

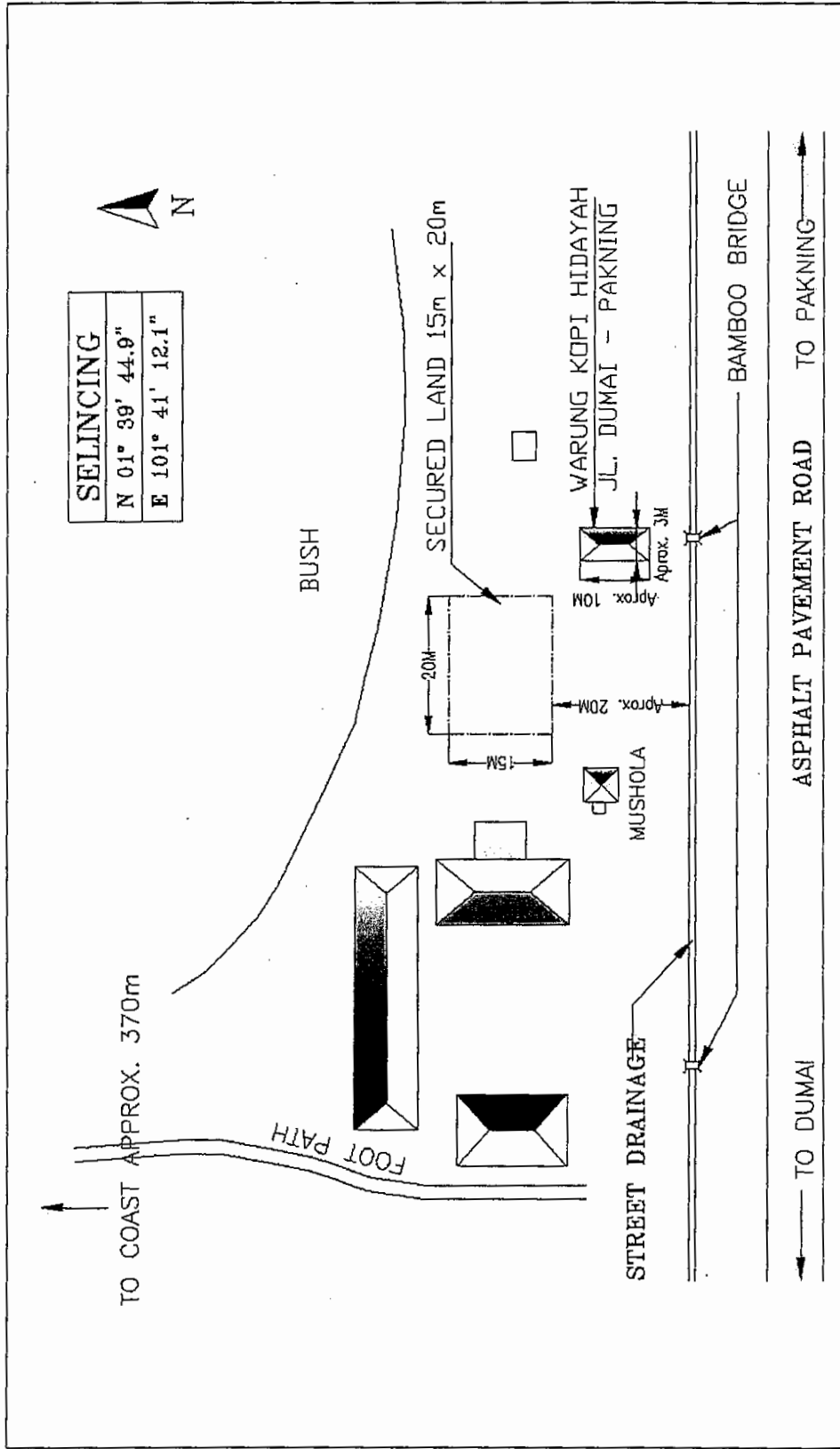
- Attachment-1 DGST request for generator building relocation at Takong Kecil
- Attachment-2 Locations of Proposed Repeater Station
- Attachment-3 Sketch Drawings of Site Conditions (Selincing, Sepahat and Morong)
- Attachment-4 Site Visit Schedule



Drawing 7 Plot Plan of Facilities (2) Takong Kecil

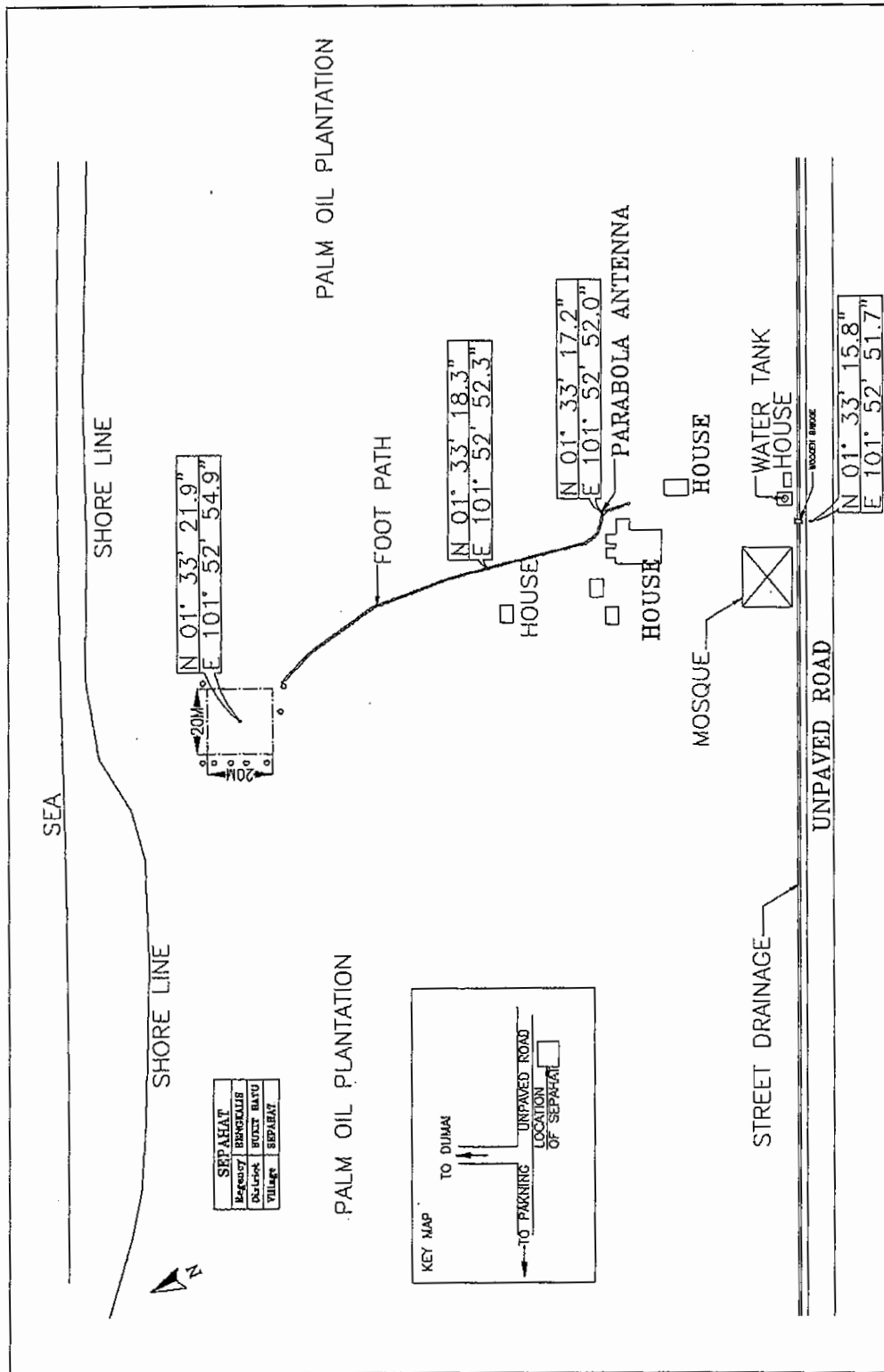


Locations of Proposed Repeater Stations

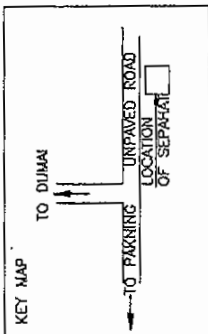


Site Conditions of Selincing

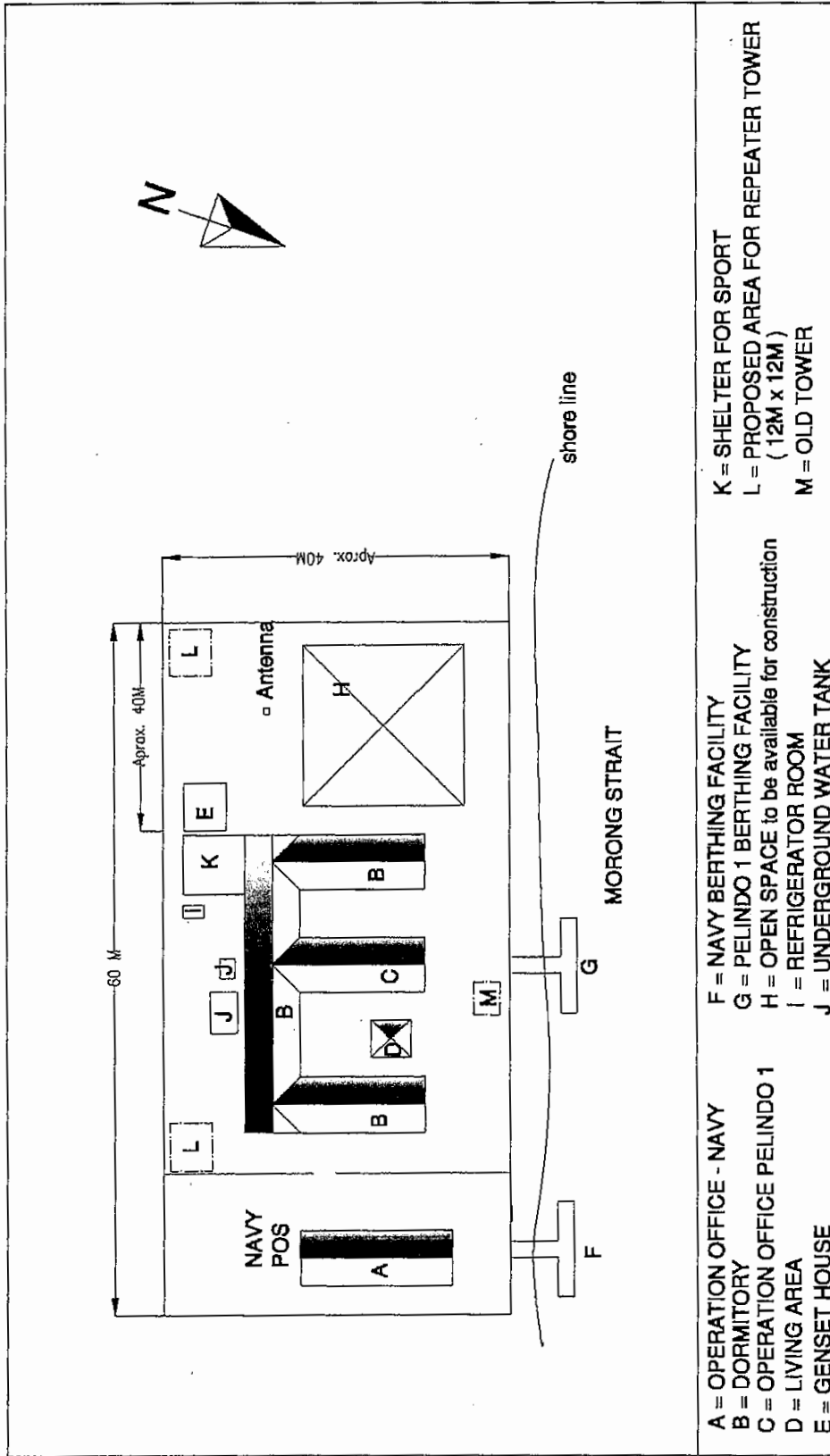




SEPAHAT
KEKANTONAN BENGKALIS
DISTRIK BUNTAU BATU
VILLAGES SEPAHAT



Site Conditions of Sepahat



- A = OPERATION OFFICE - NAVY
- B = DORMITORY
- C = OPERATION OFFICE PELINDO 1
- D = LIVING AREA
- E = GENSET HOUSE
- F = NAVY BERTHING FACILITY
- G = PELINDO 1 BERTHING FACILITY
- H = OPEN SPACE to be available for construction
- I = REFRIGERATOR ROOM
- J = UNDERGROUND WATER TANK
- K = SHELTER FOR SPORT
- L = PROPOSED AREA FOR REPEATER TOWER (12M x 12M)
- M = OLD TOWER

Site Conditions of Morong



Site Visit Schedule
for
Implementation Review Study on the Project for Enhancement of Vessel Traffic System
in
Malacca and Singapore Straits

1 Schedule

(1) Team I, for Phase II sites

Mr. Masahiko Koshimizu, Mr. Kazuma Inoue (JICA Study Team)

Mr. I.Ketut Aries Nakula, Mr. Leonard.S (DGST)

Ms. Piping Nurhandayani (JICA Study Team)

Date and time	Activities	Remarks	Sites
Oct. 17, 2008	<u>Travel to Dumai</u>		
5:00	Leave from Hotel		
7:00	Travel from Jakarta to Pekanbaru by Air GA 170 (07:00 – 08:35) Mr. Leonard S Mandala RI 072 14.40 – 16.15	Air Ticket	
9:30	Move to Dumai by car (Arrival at Dumai 14:00)	Rental Car	
14:30	Lunch		
15:00	Vist to Dumai Coastal Radio Station		
16:00	Site Survey for Site of VTS Sub-center (Dumai RX) Stay at Dumai, Grand Zuri Dumai (0765-31999)		District Navigation Office
Oct. 18, 2008	<u>Survey of Tg. Medang and Teluk Klecah (Morong) Pilot Station</u>		
8:15	Move from Dumai to Tg. Medang by Boat (Arrival at Tg. Medang 10:30)	Rental boat	Tg. Medang
10:30	Site survey in Tg. Medang and surrounding area		Morong Pilot station (PELINDO I)
12:00	Move from Tg. Medang to Morong Pilot station by boat, Lunch on the boat (Arrival on Morong at 14:00)		
14:00	Site survey in Morong Pilot station		
15:00	Move to Dumai by boat (Arrival on Dumai at 16:30) Stay at Dumai, Grand Zuri (0765-31999)		
Oct. 19, 2008	<u>Survey of Seilincing and Sepahat Proposed Repeater Station and Dumai Coastal Radio Station</u>		
8:00	Move to Selincing by Car	Rental Car	Seilincing (proposed repeater station)
9:30	Site survey of proposed repeater station of Selincing		
10:30	Move from Selincing to Sepahat by Car	Rental Car	Sepahat village (Proposed repeater station)
11:00	Survey of propose repeater station of Sepahat Village		
12:00	Move to Dumai by car		
15:00	Arrival at Dumai Stay at Dumai, Grand Zuri (0765-31999)		

Date and time	Activities	Remarks	Sites
Oct. 20, 2008 7:00 9:30 11:00 12:30 14:00 15:30 16:00 17:00	Visit to Survey of Bengkalis and Tg. Parit Move from Dumai to Bengkalis by regular boat (arrival at Bengkalis at 8:50) Move from Bengkalis to Tg. Parit by Car Site Survey in Tg. Parit Move from Tg. Parit to Bengkalis by car Vist and Survey of Bengkalis Coastal Radio Station Lunch Move from Bengkalis to Sungai Pakning by regular boat (Arrival at S. Pakning 16:50) Move from Sungai Pakning to Pekanbaru by car (Arrival at Pekanbaru 21:30) Stay at Hotel Grand Zuri Pekanbaru (0761)860988	Regular Boat Rental Car	Coastal Radio Station at Bengkalis Tg. Parit Proposed VTS sensor station
Oct. 21, 2008 14:30	Return Back to Jakarta Move from hotel to Pekanbaru Travel from Pekanbaru to Jakarta by Air GA 175 14:30-16:00 Mr. Leonard travel Pekanbaru - Jakarta Mandala RI 073 16.45 – 18.20	Regular Boat Air Ticket	

(2) Team IIA for Phase I sites

Mr. Mitsumasa Noguchi, Mr. Jun Yamauchi (JICA Study Team)

Mr. Kazuyuki Tanaka (DGST JICA Expert), Mr. Andi Aswad (DGST)

Mr. Satrio Setyawan (JICA Study Team)

Date and time	Activities	Remarks	Sites
Oct. 17, 2008	<u>Travel to Batam and Visit Navigation District 1 Office Tanjung Pinang</u>		
8:30	Leave from Hotel Jakarta to Batam by Air,	Air Ticket	
11:05	GA 152 11:05 – 12:35 Mr. Andi Aswad Mandala airlines RI 140 - 9.30 – 11.00		
12:40	Move from Airport to Telaga Punggur	Taxi	
13.00	Move from Telaga Punggur to Tg. Pinang by Regular Boat (1 hour). Informal meet with Mr. Benny T in the same boat		
14.00-15.30	Navigation District for meeting at Kijang (1.5 hour)		Navigation Distrikt at Kijang
15.30	Move from District Navigation Office to Tanjung pinang		
16:00	Stay at Tanjung Pinang Hotel Comfort (0771-41234)		
Oct. 18, 2008	<u>Survey of Tg. Berakit</u>		
8:00	Leave from Hotel Tanjung Pinang to Tg. Berakit by Car accompany by 1 staf of District Navigation 1- Kijang – Mr Sumbar Jati (2 hours)	Rental Car	
10.00	Site survey at Tg. Berakit (1-2 hours)		
12.00	Move from Tg Berakit to Tg Uban Move from Tg Uban to Telaga Punggur By Regular boat (1 hour)		
13.00	Move from Telaga Punggur to Hotel		
16:30	Stay at Batam (Hotel Novotel) (0778)425555 Preparation for site survey Hiyu Kecil and Takong Kecil (find rental boat) Contact Mr. Sudiantoro Head of Batu Ampar Coastal radio Station by phone and Refereed to Mr. Mulyanto		

Date and time	Activities	Remarks	Sites
Oct. 19, 2008	<p><u>Survey of Takong Kecil & Hiyu Kecil</u> <u>(Mr. Noguchi, Mr. Yamauchi, Mr. Tanaka, Mr. Satrio, Mr Andi Aswad and Mr. Sumbar Jati)</u></p> <p>7:00 Move from Hotel to Sekupang</p> <p>8:00 Move from Sekupang to Takong Kecil by Rental Boat (2 hours)</p> <p>9:00 Site survey of Takong Kecil (1-2 hours) and lunch on boat(One staff accompany from Kijang)</p> <p>11:00 Move from Takong Kecil to Hiyu Kecil rental boat (2 hours)</p> <p>13.00 Site survey of Hiyu Kecil (1-2 hours)</p> <p>15.00 Mr. Sumbar Jati move to Tanjung Pinang by rental boat.</p> <p>Move from Hiyu Kecil to Sekupang by Rental Boat (2-3 hours)</p> <p>18:00 Move from Sekupang to Hotel by car Stay at Batam (Hotel Novotel) (0778)425555</p>	<p>Taxi Rental Boat</p> <p>Rental Car</p> <p>Rental Boat</p>	<p>Takong Kecil</p> <p>Hiyu Kecil</p>
Oct. 20, 2008	<p><u>Mr. Yamauchi, Mr. Tanaka and Mr. Andi Aswad</u></p> <p>8:00 Move from Hotel to Batu Ampar Coastal Radio Station by Car</p> <p>8:30 Survey of Batu Ampar Coastal Radio Station (1 hour)</p> <p>12:30 Move from Hotel to Air Port Move from Batam to Jakarta by GA 153 (13:10-14:45)</p> <p><u>Mr. Andi Aswad move from Batam to Jakarta</u> Mandala RI 175 14.40 – 16.10</p>	<p>Taxi</p>	<p>Batu Ampar Coastal radio Station</p>

Date and time	Activities	Remarks	Sites
Oct 20, 2008	Mr. Noguchi and Mr. Satrio, Move to Dumai	Taxi	
5.00	Move from Hotel to Sekupang by car (30 min.)		
7.45	Move from Sekupang to Dumai by regular boat (7 hours)		
14.45	Move from Dumai Port Terminal to District Navigation Office – Dumai Visit to Navigation Office Dumai, meeting with Mr. Sugito (acting Head of navigation Office), Mr. Purwadi , mr. Subroto (acting Chief of Dumai Coastal Radio Station).		
15.00 – 16.30	Move from District Navigation Office Dumai to Selincing by rental car, accompany by Mr. Subroto. Survey Selincing site.		Seilincing (Propose repeater station)
17.00 – 17.45	Move from Selincing to Sepahat Survey Sepahat site		Sepahat (Propose repeater station)
18.15	Move from Sepahat to Dumai Visit Mr. Sugito Dinner with officer Mr. Sugito, Mr. Purwadi and Mr. Subroto		
	Move to / Hotel Grand Zuri(0761)860999 Documentation Stay in Dumai		
Oct. 21, 2008	Return Back to Jakarta		
10.00	Move from Hotel to Pekanbaru -Airport by rental car.	Rental Car Air Ticket	
17:55	Travel to Jakarta by Air GA 177 17.55-19.25		

2 Team Members

(1) Team I for Phase II sites

1) JICA Study Team

Mr. Masahiko Koshimizu

Mr. Kazuma Inoue

2) DGST

Mr. I.Ketut Aries Nakula , Mr. Leonard S

- 3) JICA Study Team Local Staff Assistant (Translator/Engineer)
Mr. Piping Nurhandayani
- (2) Team II for Phase I sites
 - 1) JICA Study Team
Mr. Mitsumasa Noguchi
Mr. Jun Yamauchi
Mr. Kazuyuki Tanaka (JICA Expert)
 - 2) DGST Team
Mr. Andi Aswad
 - 3) JICA Study Team Local Staff Assistant (Translator/Engineer)
Mr. Satrio Setyawan



**Record of Working Group Discussions
on
the Implementation Review Study
on
the Project for Enhancement of Vessel Traffic System
in Malacca and Singapore Straits**

DGST and the JICA Study Team have discussed from December 9 to December 19, 2008 and agreed as follows:

1 Stage-1 Project

1.1 Scope of the Project

The project cost outlook which is currently under review after the basic design study is estimated about 1.5% exceeded the amount of Exchange of Notes for the Components of the Stage-1 (hereinafter referred to as "E/N"). Main component of the Stage-1 Project is to proceed as per the original scope of works except the minor modifications listed in the next paragraph 1.2 which have been confirmed on the discussions and agreements of Report of Working Group Discussions on the Implementation Review Study on the Project for Enhancement of Vessel Traffic System in Malacca and Singapore Straits signed on October 24, 2008 (hereinafter called as "the Report on December 24"). However, some spare parts and measuring equipment for maintenance for Stage-1 are necessary to be moved into Stage-2, since the estimated cost shall be in the cost limit specified in the E/N.

1.2 Items to be confirmed and/or modified of the Basic Design

1.2.1 Relations with the lighthouse functions

Following matters are confirmed

(1) Hiyu Kecil Lighthouse (Attachment-1)

Radar's tower is to be located within the black sector based on the stipulations indicated on the relevant sea charts. DGST agreed the position of the plan.

(2) Takong Kecil (Attachment-2)

According to the DGST request, the compensation light design shall be modified as follows instead of the current design conducted by the JICA Study Team.

- 1) Red color sector of the existing light house shall be closed as black sector.
- 2) The existing red sector of the light shall be maintained by installing a sector light at the radar tower. The light currently designed as the compensation light is used as the sector light.
- 3) In this regard, synchronizations of compensation light with the existing light is not

required.

- 4) Red color sector shall be maintained the same angle as indicated on the relevant sea charts and the Indonesian List of Light (Daftar Suar).
 - 5) Lighting character and specification shall be in accordance with the specifications indicated on the relevant sea charts and the Indonesian List of Lights (Daftar Suar Indonesia).
 - 6) LED lantern type is accepted. However, luminous range shall be maintained minimum 18 nautical miles.
 - 7) It will be assigned as two aids to navigation on Takong Kecil Island, the notice to mariners and the modification of the sea charts as well as the Indonesian List of Lights will be responsible by DGST.
- (3) Tg. Berakit Lighthouse (Attachment-3)

- 1) Considering the technical aspect in respect with the effectiveness of the Aids to Navigations, it is prioritized (as option no.1) to establish the new radar's tower within the black sector of the existing lighthouse. Should the radar's tower established at this position, additional lantern is not necessary to be installed on the new radar tower.

For this purpose, in accordance with the Japan's Grant Guideline, site clearance including replacement of the existing generator house and warehouse shall be done by Indonesia before starting the construction works of radar tower and the necessary expenses in regards shall be borne by Indonesia.

DGST will make discussion and coordination internally regarding to the above availability, when available DGST may request to modification of the radar tower position in D/D stage. However, Review Basic Design Study will be conducted based on the option 2 stated in below to avoid the delay of the basic design works.

- 2) Alternatively, as the 2nd option, should the 1st option above could not be fulfilled; since the radar tower will obstruct the existing light, a rotating (revolving) lantern shall be installed on the radar tower. The lantern shall be designed in accordance with the specification indicated in the relevant sea charts and Indonesian List of Lights (Daftar Suar Indonesia), to maintain same angle, range, elevation and light character. Particular platform (balcony) shall be installed at the required level of the new radar tower. The platform (balcony) shall be designed appropriately to guarantee ease of access, security and personnel safety. Further consultation will be carried out during the design.

- (4) Tg. Medang (Attachment-4)

Radar tower position shall be modified south side of existing generator house.

- (5) Tg. Parit

Radar tower position shall be considered to avoid obstructions of existing light house. Planned location is no problem.

1.2.2 Buildings

- (1) Site layout plans of Takong Kecil and Tg. Berakit

- 1) Takong Kecil

Building construction location of Takong Kecil is modified as shown in Attachment-2 according to the DGST request.

2) Tg. Berakit

Based on the discussions at site on November 6, building construction location of Tg. Berakit is modified as shown in Attachment-3.

(2) Floor layout plan of Batu Ampar VTS Center

The floor layout plan is modified as shown in Attachment-5 according to the DGST's request to accommodate office staff for MEH project in the building,

1.2.3 Equipment

(1) FM radio broadcasting system

The equipment is deleted from the scope of work according to the DGST's request.

(2) Multifunction console

A multi-function console to extend Dumai VTS Sub-Center information to Batu Ampar VTS Center and to be installed in Batu Ampar is moved into Stage-2 Project from Stage-1 Project.

1.3 Task team for the Project implementation

(1) Signer of the Contract

It is expected that the signer of the Documents in the Implementation Stage will be Director General of Sea Transportation or Director of Navigation.

(2) Working Unit

DGST explained the JICA Study Team that DGST would establish "Satuan Kerja" (working unit) for the project implementation. Satuan Kerja is usually consisted of (i) KPA (authority of budgeting user), (ii) PPK (project manager, contract signer), (iii) BENDAHARA (treasurer), (iv) SPM (in charge of treasury) and (v) staff.

The working unit arrangement is ready for proceed. Further administrative process will be conducted after signing of the Contract.

1.4 Expected Schedule

1.4.1 Stage-1 Project

The draft report on Stage-1 of the Project in English and send it by February 2009. In case the contents of the report are accepted in principle by the Government of Indonesia and JICA confirms the result of the study as appropriate, JICA will recommend the Government of Indonesia as appropriate consultant for the implementation of the Project. After issue the JICA recommendation, the Project is ready to start for implementation stage.

1.4.2 Stage-2 Project

The draft report on Stage-2 of the Project in English and dispatch a mission to Indonesia in order to explain its contents around March 2009. In case the contents of the report are accepted in principle by the Government of Indonesia, JICA will complete the final report and send it to both Government of Japan and Government of Indonesia by May, 2009

2 Stage-2 Project

2.1 Tg. Sair Repeater Station

According to the survey conducted jointly by DGST and the JICA Consultant Team, the Team has confirmed that Tg. Sair (Lat. 1°54' 30" N, Long.101°22' 59" E, Site-A in Attachment-6) is recommendable for relay station site for data transmission between Tg. Medang and Dumai.

2.2 Land Preparation for Tg. Sair

DGST will arrange the land by the budget for fiscal year 2010. It is expected that the land will be ready to use before the construction work.

3 Obligations of the Recipient Country

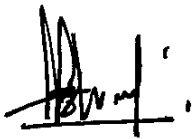
(1) Obligations

DGST and the JICA Study Team have confirmed again the details of Obligations of the Recipient Country which are described in "the Report on December 24". .

(2) Land Acquisition for Stage-2 Project

DGST has already secured the lands of Tg. Medang, Dumai, Bengkalis, Tg. Parit, Selincing and ready to use of this Project. The JICA Study Team has received copies of the registration documents for Batu Ampar, Tg. Berakit, and Selincing. DGST is requested to prepare the copies of the certificates at the remaining sites.

December 19, 2008



Mr. Raymond Ivan H.A.S.
Head of Equipment and
Maintenance of Section
Sub-Directorate of
Aids to Navigation
Directorate of Navigation,
DGST



Ir. Alamsyah Sasmito, M.M.
Section Head of Equipment
and Maintenance
Sub-Directorate of Marine
Telecommunication
Directorate of Navigation,
DGST



Mr. Masahiko Koshimizu
Chief Consultant
on behalf of
The JICA Study Team

List of Attendance

Directorate General of Transportation (DGST)

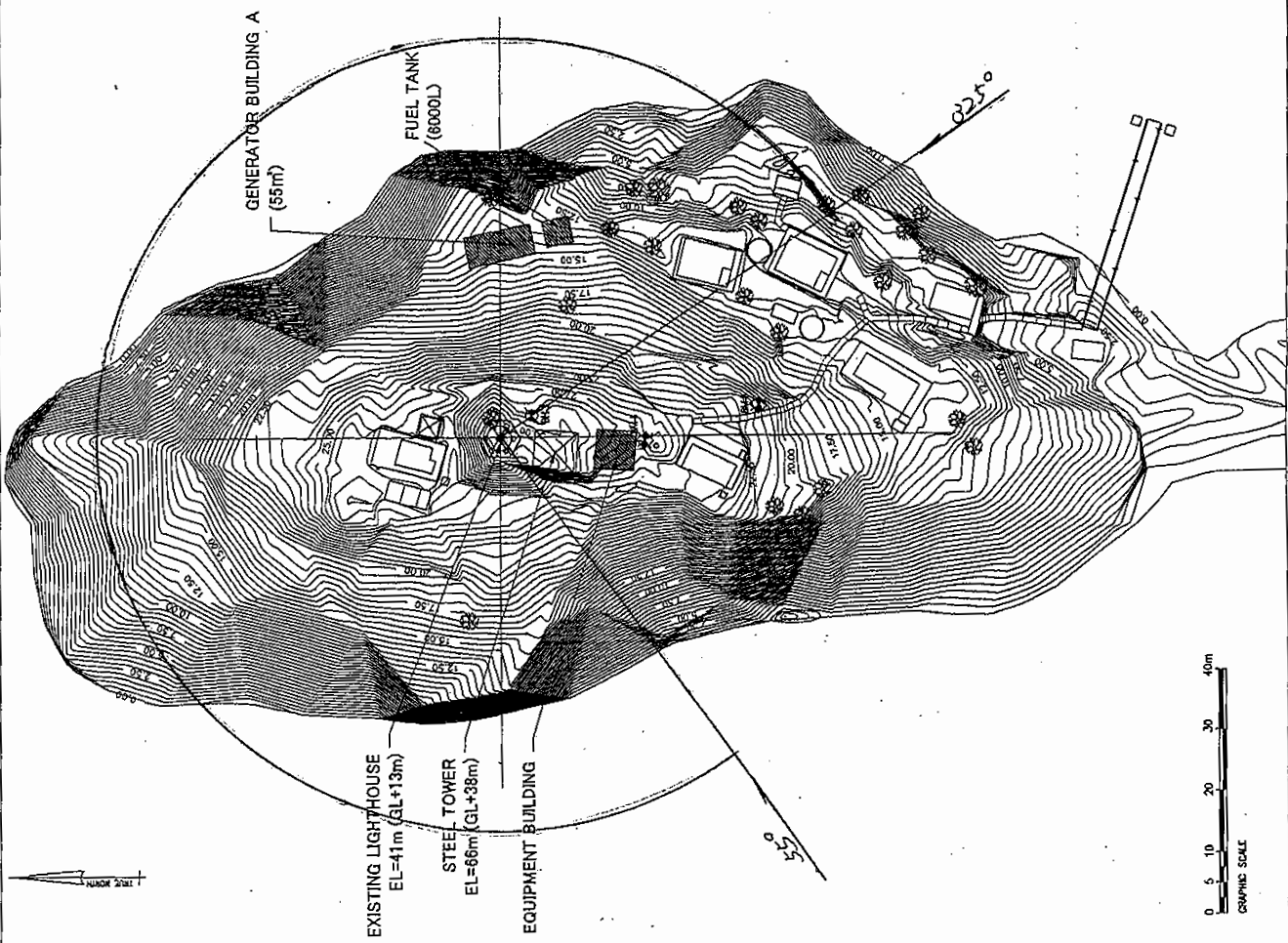
Ir. Alamsyah Sasmito,M.M	Head of Section Equipment and Maintenance Sub-Directorate of Maritime Telecommunication Directorate of Navigation
Drs. Tofan Rindoyo	Head of Section Operation Sub-Directorate of Maritime Telecommunication Directorate of Navigation
Mr. Raymond Ivan H.A.S	Head of Equipment & Maintenance Section Sub-Directorate of Aids to Navigation Directorate of Navigation
Mr. Ketut Aries S.T.,	Staff of Sub-directorate of Maritime Telecommunication
Mr. Tony Rafiq S.T.,	Staff of Sub-directorate of Maritime Telecommunication
Mr. Andi Aswad	Staff of Sub-directorate of Aids to Navigation
Mr. Leonard S.	Staff of Sub-directorate of Aids to Navigation
Mr. Rudi H. Irwansyah	Staff of Sub-directorate of Aids to Navigation
Mr. Kazuyuki Tanaka	JICA Expert
The JICA Study Team	
Mr. Masahiko Koshimizu,	Chief Consultant, Maintenance, Operation and Management Specialist
Mr. Jun Yamauchi,	Transmission Facilities Specialist
Mr. Sumio Morita,	Procurement and Estimation Engineer
Mr. Takatsugu Shimada,	Building Planning Specialist
Mr. Keiji Yamazaki,	Electrical Engineer
Mr. Satrio Steyawan.	Engineer

Attachments

- Attachment-1 Site Plan of Hiyu Kecil
- Attachment-2 Site Plan of Takong Kecil
- Attachment-3 Site Plan of Tg. Berakit
- Attachment-4 Site Plan of Tg. Medang
- Attachment-5 Floor Plan of Batu Ampar VTS Center
- Attachment-6 Proposed Repeater Site at Tg. Sair and Photographs
- Attachment-7 Site Visit Schedule from Dec. 2 to Dec.7
- Attachment-8 Site Visit Schedule from Dec. 11 to Dec. 15

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ATTACHMENT - 1



GENERATOR BUILDING A
(65m²)

FUEL TANK
(6000L)

EXISTING LIGHTHOUSE
EL=41m (GL+13m)

STEEL TOWER
EL=66m (GL+38m)

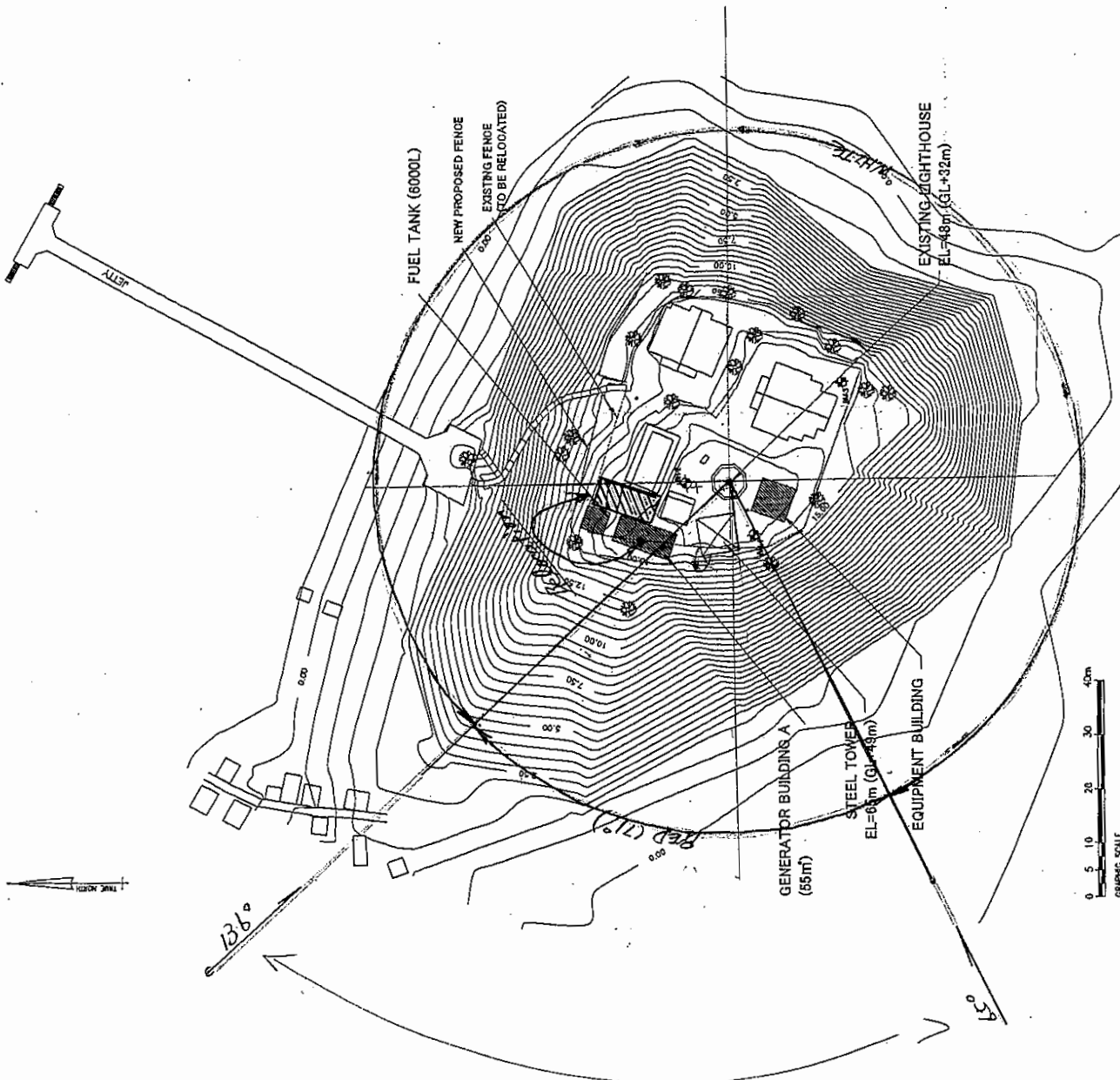
EQUIPMENT BUILDING



PROJECT TITLE	Implementation/Review Study on the Project for Enhancement of Vessel Traffic System in Malacca and Singapore Straits in Indonesia	GENERAL NOTE	
DWG TITLE	HIYU KECIL SITE PLAN	DWG NO	A-5
SCALE	1/800	DESIGNED BY	ORIENTAL CONSULTANTS CO. Ltd
DATE	2008/11	CHECKED BY	JAPAN AIDS TO NAVIGATION ASSOCIATION
DRAWING BY			
CHECKED BY			

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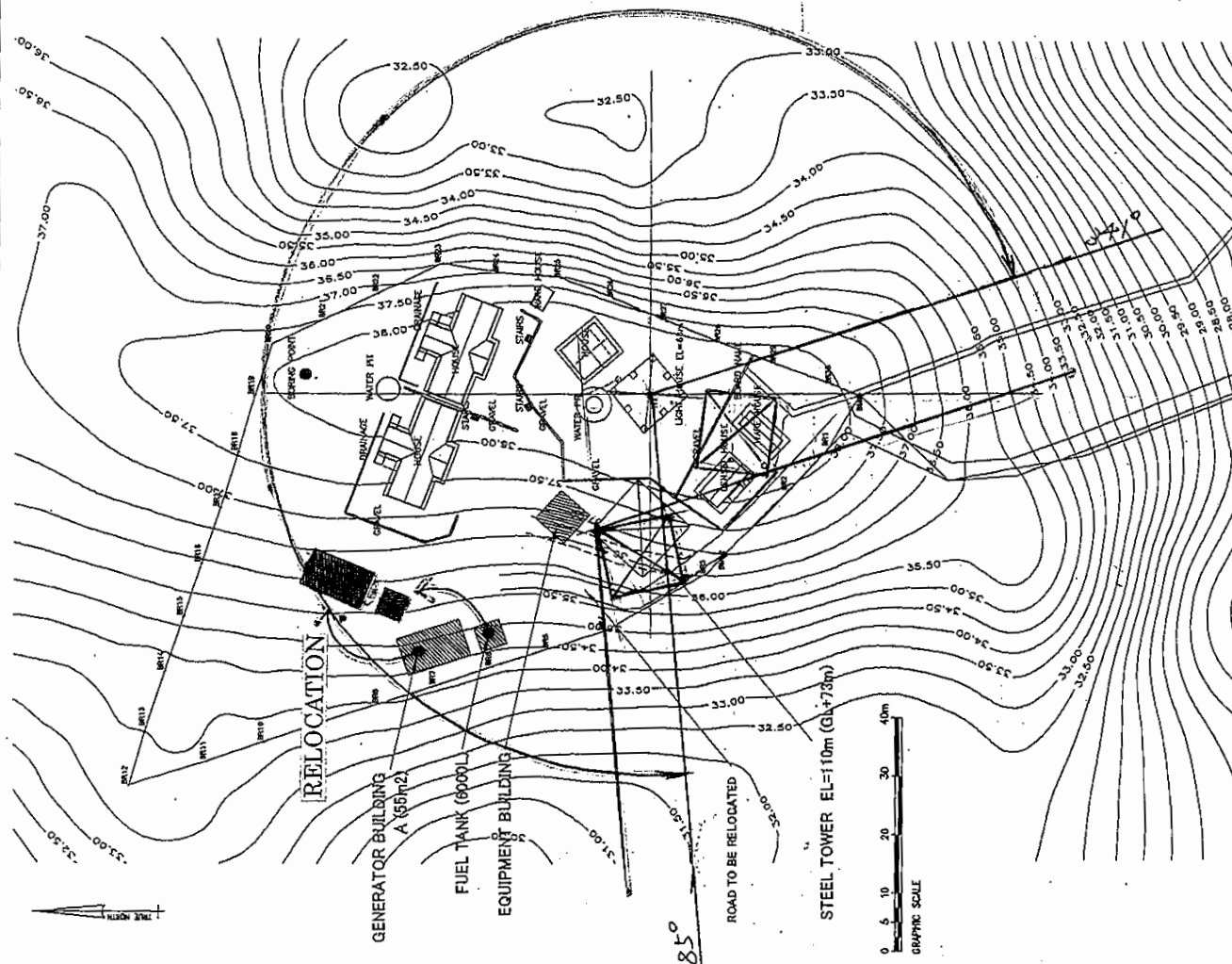
ATTACHMENT-2



PROJECT TITLE	Implementation/Review Study on the Project for Enhancement of Vessel Traffic System in Malacca and Singapore Straits in Indonesia
GENERAL NOTE	
SCALE	1/800
DATE	2008/11
DRAWING BY	
CHECKED BY	
DWG TITLE	TAKONG KECEL SITE PLAN
DWG NO	A-6
DESIGNED BY	ORIENTAL CONSULTANTS CO., Ltd
CHECKED BY	JAPAN AIDS TO NAVIGATION ASSOCIATION

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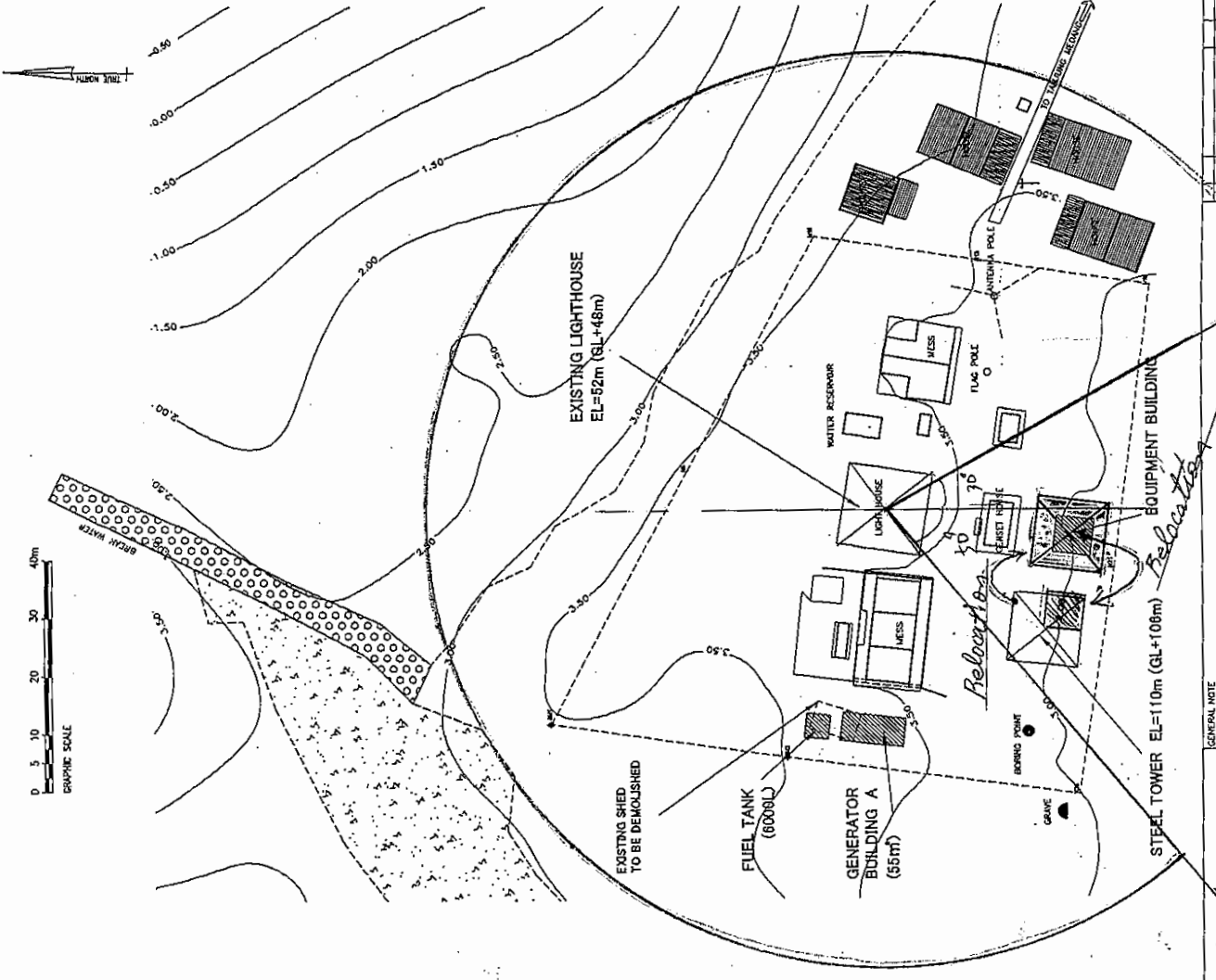
ATTACHMENT - 3



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GENERAL NOTE	
SCALE	1/800
DATE	2008/11
DRAWING BY	
CHECKED BY	
DESIGNED BY	
APPROVED BY	
DWG TITLE	TANJUNG BRAKIT SITE PLAN
DWG NO	A-8
DESIGNED BY	ORIENTAL CONSULTANTS CO., Ltd.
APPROVED BY	JAPAN AIDS TO NAVIGATION ASSOCIATION

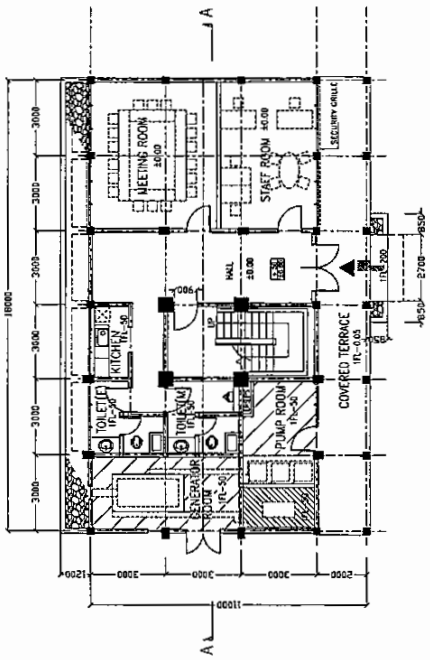
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ATTACHMENT - 7

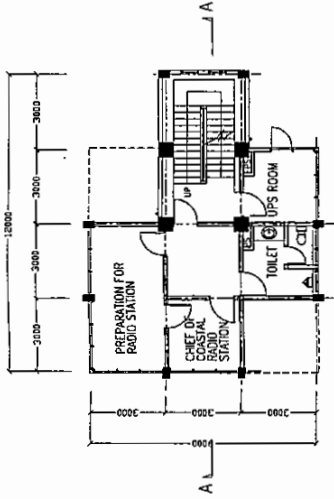


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PRODUCT TITLE	TANJUNG MEDAN SITE PLAN		
SCALE	1/800	DATE	2008/11
DRAWING BY		CHECKED BY	
DESIGNED BY	ORIENTAL CONSULTANTS CO. LTD.		
APPROVED BY		DATE	
REVISIONS			
NO.		DATE	
DESCRIPTION			
BY		CHECKED BY	
DATE			
DESIGNED BY	ORIENTAL CONSULTANTS CO. LTD.		
APPROVED BY	JAPAN AIDS TO NAVIGATION ASSOCIATION		
DWG NO	A-9		

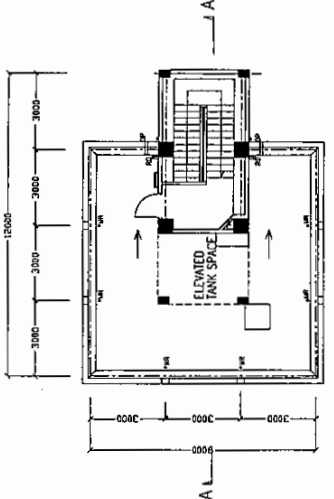
ATTACHMENT - 5



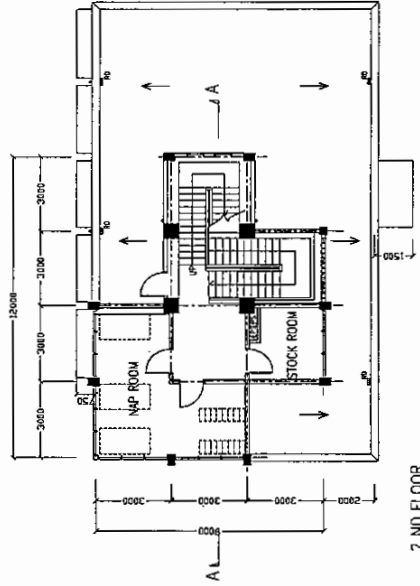
1 ST FLOOR



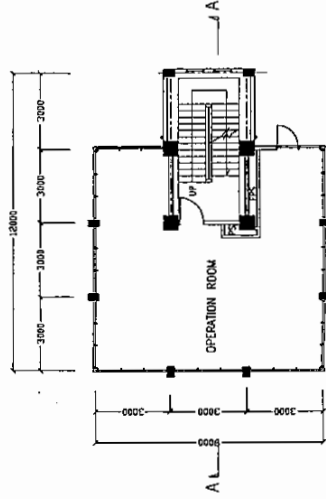
3 RD FLOOR



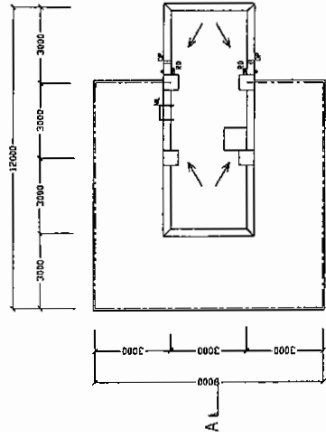
PENTHOUSE FLOOR



2 ND FLOOR



4 TH FLOOR



ROOF FLOOR

LEGEND

- RD : ROOF DRAIN
- OP : OVER-FLOW PIPE
- MR : MAINTENANCE RING
- ML : MAINTENANCE LADDER

PROJECT TITLE	Implementation/Review Study on the Project for Enhancement of Vessel Traffic System in Malacca and Singapore Straits in Indonesia
GENERAL NOTE	
SCALE	
DATE	2008/11
DRAWING BY	
CHECKED BY	
NO. DATE	
DESCRIPTION	
BY	
DWG TITLE	BATU AMPAR CENTER-1
DWG NO	A-1
DESIGNED BY	ORIENTAL CONSULTANTS CO. LTD
JAPAN AIDS TO NAVIGATION ASSOCIATION	

ATTACHMENT-6

Table. Location and Coordinates

Point	N	E	Condition	Utilization	Remarks
A	N 1 54 30.0	E 101 22 59.4	Wodden Jetty	—	
B	N 1 54 30.9	E 101 23 2.8	Chinese Temple	—	
C	N 1 54 30.8	E 101 23 24.0	Road Crossing	—	
L	N 1 54 38.6	E 101 23 25.9	Road Crossing	—	
M	N 1 54 42.6	E 101 23 19.7	Palm Field	L~M.	Proposed-A
N	N 1 54 44.1	E 101 23 19.7	Personal Yard	Middle	Proposed-B
O	N 1 54 45.2	E 101 23 20.3	Back Yard	Low	
P	N 1 54 40.7	E 101 23 22.9	Personal Yard	M~H.	
Q	N 1 54 31.9	E 101 23 23.1	Badminton Court	Middle	Proposed-C
③	N 1 54 49.5	E 101 23 14.5	Mathey Corps	Middle	
④	N 1 54 44.4	E 101 23 10.2	Rangeland	Low	
⑤	N 1 54 30.8	E 101 23 24.2	Coordinates Origin	—	

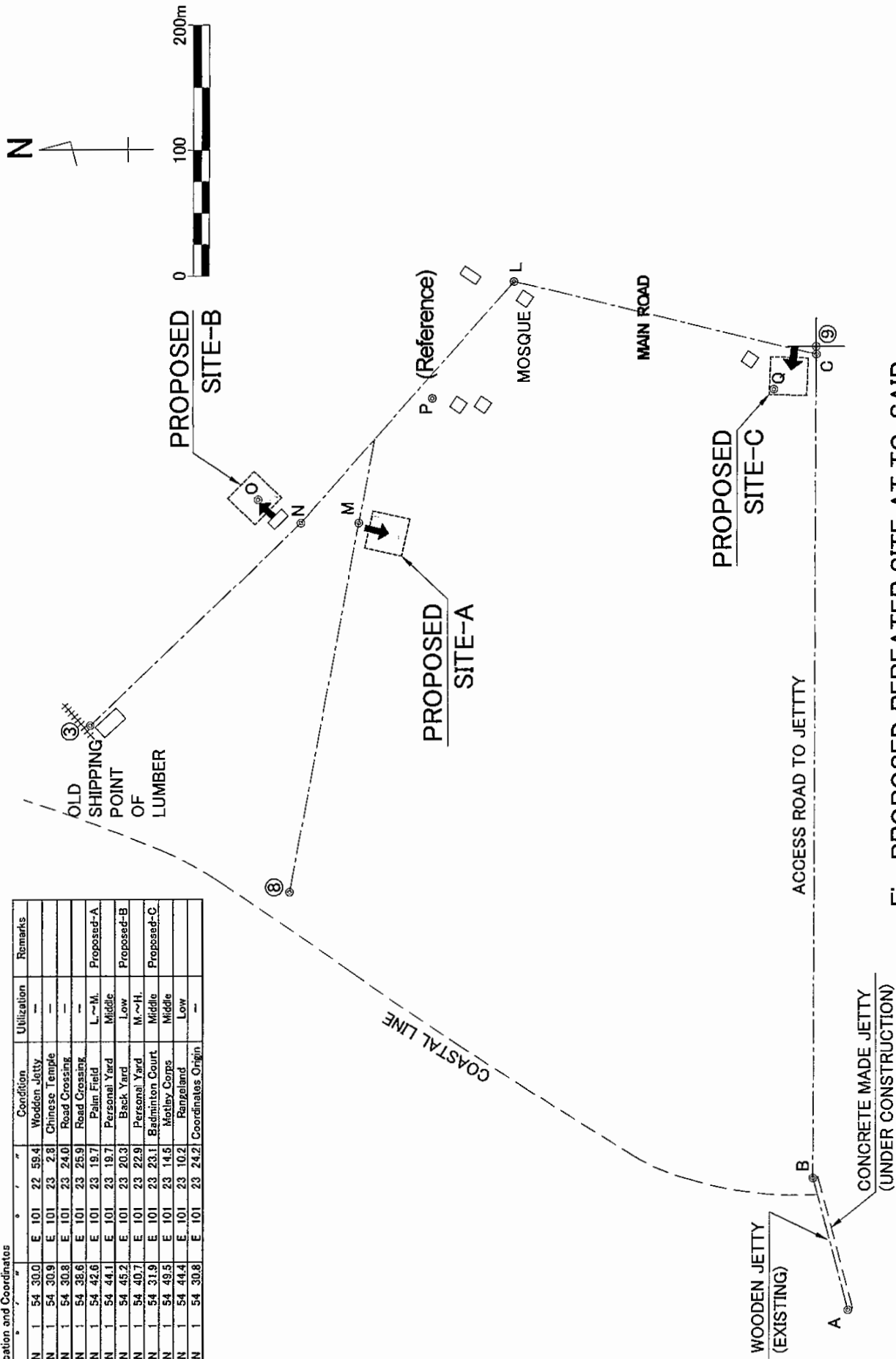


Fig. PROPOSED REPEATER SITE AT TG. SAIR

Scale = 1:4,000

N. L. S.

Tg. Sair Site Photograph



M: SITE-A



N: SITE B (FRONT)



O: SITE-B (BACK)



Q: SITE-C

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P: REFERENCE

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Site Visit Schedule (Actual) for

Implementation Review Study on the Project for Enhancement of Vessel Traffic System
in Malacca and Singapore Straits

For Mr. Jun Yamauchi

1 Schedule

Date and time	Activities	Remarks	Sites
Dec. 2, 2008	<u>Travel to Dumai</u>		
5:00	<u>Mr. Jun Yamauchi, Mr. Kardiawan S & Mr.Satrio S</u> Leave from Hotel	Air Ticket	
7:00	Travel from Jakarta to Pekanbaru by Air GA 170 (07:00 – 08:35)		
9:30	Move to Dumai by car (Arrival at Dumai 14:00) Lunch		
14:30	District Navigation Office		District Navigation Office
15:00	Vist to Dumai Coastal Radio Station	Rental Car	
16:00	Site Survey for Site of VTS Sub-center (Dumai RX) Stay at Dumai, Grand Zuri Dumai (0765-31999)		
Dec. 3, 2008	<u>Survey of Tg. Sair/Tg Medang</u>		
7:30	Leave from Hotel to Dumai port		
8:00	Move from Dumai to Tg. Medang by Boat (Arrival at Tg. Medang 9:30)	Rental boat	Tg. Sair
9:30	Site survey of Tg. Medang and surrounding area		
12:00	Lunch		
13:00	Move to Tg Sair Site survey of Tg. Sair and its surrounding area.		
16:00	Move to Dumai by boat (Arrival on Dumai at 16:30) Stay at Dumai, Grand Zuri (0765-31999)		

Attachment-7

Date and time	Activities	Remarks	Sites
<p>Dec. 4, 2008</p> <p>8:00</p> <p>9:30</p> <p>10:30</p> <p>11:00</p> <p>12:00</p> <p>13:00</p> <p>13.30</p>	<p><u>Mr. Kardiawan leave from Pekanbaru to Jakarta</u></p> <p><u>Mr. Jun Yamauchi & Mr. satrio.S</u></p> <p><u>Survey of Seilincing and Sepahat Proposed Repeater Station</u></p> <p>Leave from Hotel and move to Selincing by Car</p> <p>Site survey of proposed repeater station of Selincing</p> <p>Move from Selincing to Sepahat by Car</p> <p>Survey of propose repeater station of Sepahat Village</p> <p>Lunch</p> <p>Move to Dumai by car (Arrival at Dumai at 15:00)</p> <p>Stay at Dumai, Grand Zuri (0765-31999)</p>	<p>Rental Car</p> <p>Rental Car</p>	<p>Seilincing (proposed repeater station)</p> <p>Sepahat village (Proposed repeater station)</p>
<p>Dec. 5, 2008</p> <p>8.00</p> <p>15.00</p>	<p><u>Survey of Tg Sair</u></p> <p>Leave from Hotel to Dumai port</p> <p>Move from Dumai to Tg. Sair by Boat</p> <p>Site survey of Tg. Sair and its surrounding area.</p> <p>Move to Dumai by boat (Arrival on Dumai at 16:30)</p> <p>Stay at Dumai, Grand Zuri (0765-31999)</p>		
<p>Dec. 6, 2008</p> <p>6:15</p> <p>7:00</p> <p>9:30</p> <p>11:00</p> <p>12:00</p>	<p><u>Visit to Survey of Bengkalis and Tg. Parit</u></p> <p>Leave from Hotel to Dumai Ferry Terminal</p> <p>Move from Dumai to Bengkalis by regular boat (arrival at Bengkalis at 8:50)</p> <p>Move from Bengkalis to Tg. Parit by Car</p> <p>Site Survey in Tg. Parit</p> <p>Visit and Survey of Bengkalis Coastal Radio Station</p> <p>Move to PekanBaru by Regular boat (4 hours)</p>	<p>Regular Boat</p> <p>Rental Car</p>	<p>Tg. Parit Proposed VTS sensor station</p>

Attachment-7

16:00	<u>Return Back to Jakarta</u> Move from Pekanbaru port to Airport by taxi Travel from Pekanbaru to Jakarta by Air GA 177 16:35- 18:15		
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2 Team Members

1) JICA Study Team

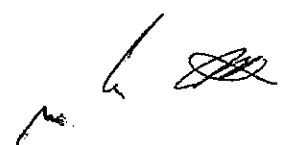
Mr. Jun Yamauchi

2) DGST

Mr. Kardiawan S

3) JICA Study Team Local Staff Assistant (Translator/Engineer)

Mr. Satrio Setyawan



Site Visit Schedule for

Implementation Review Study on the Project for Enhancement of Vessel Traffic System
in Malacca and Singapore Straits

For : Mr. Takatsgu Shimada, Mr. Sumio Morita, Mr. Keij Yamasaki

1 Actual

Date and time	Activities	Remarks	Sites
Dec. 11, 2008 5:00	<u>Travel to Dumai</u> Leave from Hotel		
7:00	<u>Mr. Morita/S, Shimada/T, Yamasaki/K , Mr. Satrio S.</u>	Air Ticket	
9:30	Travel from Jakarta to Pekanbaru by Air GA 170 (07:00 – 08:35)		
14:30	Move to Dumai by car (Arrival at Dumai 14:00)		
15:00	Lunch		
16:00	Vist to Dumai Coastal Radio Station Site Survey for Site of VTS Sub-center (Dumai RX) Stay at Dumai, Grand Zuri Dumai (0765-31999)	Rental Car	District Navigation Office
Dec. 12, 2008 7:30	<u>Survey of Tg Medang , Tg Sair</u> Leave from Hotel to Dumai port		Tg Medang
8:00	Move from Dumai to Tg. Medang by Boat (Arrival at Tg. Medang 9:30)	Rental boat	Tg. Sair
9:30	Move to Tg Sair		
12:00	Site survey of Tg. Sair and surrounding area		
13:00	Lunch (Lunch box to be prepared at Dumai) Site survey of Tg. Sair and its surrounding area.		
15:00	Move to Dumai by boat (Arrival on Dumai at 16:30) Grand Zuri (0765-31999)		

Attachment-8

Date and time	Activities	Remarks	Sites
<p>Dec. 13, 2008</p> <p>7.30</p> <p>8:00</p> <p>10:30</p> <p>12:00</p> <p>14:00</p>	<p><u>Survey of Selincing and Sepahat Proposed Repeater Station</u></p> <p>Leave from Hotel and move to Selincing by Car</p> <p>Site survey of proposed repeater station of Selincing</p> <p>Move from Selincing to Sepahat by Car</p> <p>Survey of propose repeater station of Sepahat Village</p> <p>Lunch (Lunch box to be prepared at Dumai)</p> <p>Move to Dumai by car (Arrival at Dumai at 15:00)</p> <p>Stay at Dumai, Grand Zuri (0765-31999)</p>		<p>Selincing</p> <p>(proposed repeater station)</p> <p>Sepahat village</p> <p>(Proposed repeater station)</p>
<p>Dec. 14, 2008</p> <p>7.00</p> <p>8:00</p> <p>9:30</p> <p>10:30</p> <p>11:00</p> <p>12:00</p> <p>15:00</p>	<p><u>Visit to Survey of Bengkalis and Tg. Parit</u></p> <p>Leave from Hotel to Dumai Ferry Terminal</p> <p>Move from Dumai to Bengkalis by regular boat (arrival at Bengkalis at 8:50)</p> <p>Move from Bengkalis to Tg. Parit by Car</p> <p>Site Survey in Tg. Parit</p> <p>Move from Tg. Parit to Bengkalis by car (Lunch on the way)</p> <p>Visit and Survey of Bengkalis Coastal Radio Station</p> <p>Move to Hotel</p> <p>Stay at Bengkalis (Wisma Mahendra) Jl. HOS Cokroaminoto. (0766)7007120 – Mr. Azimuddin HP : 0812-6895196</p>	<p>Taxi (Becha)</p> <p>Regular Boat</p> <p>Rental Car</p>	<p>Tg. Parit</p> <p>Proposed VTS sensor station</p> <p>Coastal Radio Station at Bengkalis</p>
<p>Dec. 15, 2008</p> <p>6:15</p> <p>7:00</p> <p>12.00</p>	<p><u>Return Back to Jakarta</u></p> <p>Leave from Hotel to Bengkalis port</p> <p>Travel from Bengkalis to Pekanbaru by boat (4-5 hours)</p> <p>Move from Pekanbaru port to Airport by taxi</p> <p>Travel from Pekanbaru to Jakarta by Air GA 175 14.30 – 16.10</p>	<p>Regular Boat</p> <p>Taxi</p> <p>Air Ticket</p>	

2 Team Members

1) JICA Study Team

Mr. Takatsugu Shimada

Mr. Sumio Morita

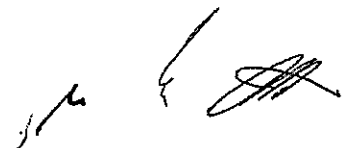
Mr. Keij Yamasaki

2) DGST

Mr. Suyono (District Navigation 1 – Dumai)

3) JICA Study Team Local Staff Assistant (Translator/Engineer)

Mr. Satrio Setyawan

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Appendix 4-7 Report of WG/D on Third Field Survey

**Record of Working Group Discussions
on
the Implementation Review Study
on
the Project for Enhancement of Vessel Traffic System
in Malacca and Singapore Straits**

DGST and the JICA Study Team have discussed and agreed as follows:

(1) Repeater Station Sites and Route for Data Transmission:

The sites of the repeater stations and the route for the data communication links shall be as follows:

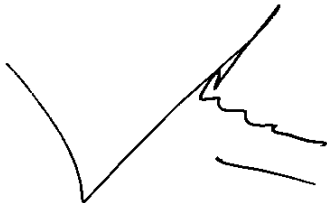
- 1) Tg. Parit – Simpang Ayam (New Repeater Station No.2)– Selincing – Dumai
- 2) Tg. Medang – Tg. Sair – Dumai

(2) Coordination with Maritime Telecommunication System Development Project / IV

- 1) Antennae for data communication link of the Grant Aid Project at Dumai and Selincing can be installed at the tower constructed by the Maritime Telecommunication System Development Project / IV.
- 2) The height of the towers do not need to be changed, however, DGST will discuss with the Consultants and the Contractor of Maritime Telecommunication System Development Project Phase IV to assure the necessary strength of the towers so that the antennae for the VTS Project can be accommodated to the towers.

(3) Equipment at the Repeater Stations

- 1) DGST requested the study team as follows:
 - a. To consider the power source by solar cell system,
 - b. To consider the CCTV cameras (web cameras) can be controlled from Dumai or Tg. Parit for security purpose of the repeater stations. Because DGST has plan to establish as unmanned repeater stations,
- 2) The equipment necessary for the repeater stations, the Study Team will select, design and will report on the draft explanation.



Ir. Alamsyah Sasmito, MM
Section Head of Equipment and Maintenance
Sub-Directorate of Marine Telecommunication
Directorate of Navigation, DGST

April 8, 2009



Mr. Masahiko Koshimizu
Chief Consultant
on behalf of
The JICA Study Team

Attachment: Information for No.2 Repeater Stations (Table 1 and Fig. 1 to 3)

Table 1 Study on New Repeater Station "Site A"

1. Surveyed Sites

ID	Lat.	Long.	EL(m) (gfs)	Required antenna height		Site	Tg. Part	Evaluation	Access		Site Conditions	Security	Environment		Land		Remarks
				Est. Seilincing	Site				to site	for construction			Natural	Social	Ownership	Secure	
No.1	35 40.7 N	102 2 54.1 E	15	Pre	50	110	80	70	NG	NG	OK	NG	NG	NG	NG	NG	Access is difficult. No residential area.
No.2	35 1.7 N	102 2 53.6 E	9	Pre	50	120	90	70	NG	OK	OK	OK	OK	OK	OK	OK	
No.3a	34 24.2 N	102 0 44.5 E	12	Post	55	100	72	70	NG	OK	OK	OK	OK	OK	OK	OK	
No.3b	34 26.4 N	102 0 47.2 E	9	Pre	50	130	110	70	NG	OK	OK	OK	OK	OK	OK	OK	
No.3c	34 25 N	102 0 45.4 E	10	Post	50	130	110	70	NG	OK	OK	OK	OK	OK	OK	OK	
No.3d	34 36.6 N	102 0 46.9 E	13	Pre	50	130	110	70	NG	OK	OK	OK	OK	OK	OK	OK	
No.4	36 0.9 N	102 0 22.4 E	5	Pre	50	90	110	70	NG	NG	NG	NG	NG	NG	NG	NG	Heavy coastal erosion. Access is difficult.
No.5a	36 8.7 N	102 3 28.8 E	12	Pre	50	120	90	70	NG	OK	OK	OK	OK	OK	OK	OK	Private company area. Secure the land may be difficult.
No.5b	36 0.9 N	102 3 28.5 E	10	Pre	50	120	90	70	NG	OK	OK	OK	OK	OK	OK	OK	
No.6	33 49.6 N	102 11 10.5 E	7	Pre	50	90	110	70	NG	OK	OK	OK	OK	OK	OK	OK	Site may not suitable since the distance from Simpang is too far.

Simpang Ayam

2. Preliminary Evaluated Sites

ID	Lat.	Long.	EL(m) (gfs)	Required antenna height		Site	Tg. Part	Evaluation	Estimated by	Data Source	Considerations	Remarks
				Est. Seilincing	Site							
C1	35 43.3 N	102 2 53.5 E		Pre	50	110	80	70	Grant Aid Project	SRTM	+15 free height is considered.	
C2	34 47.0 N	102 2 35.7 E		Pre	50	120	90	70	Grant Aid Project	SRTM	+15 free height is considered.	
C3	34 15.4 N	102 0 45.4 E		Pre	50	130	110	70	Grant Aid Project	SRTM	+15 free height is considered.	
C4	36 48.6 N	101 59 48.6 E		Pre	50	90	110	70	Grant Aid Project	SRTM	+15 free height is considered.	

3. Reference

ID	Lat.	Long.	EL(m) (gfs)	Required antenna height		Site	Tg. Part	Evaluation	Estimated by	Data Source	Considerations	Remarks
				Est. Seilincing	Site							
Site A	36 20.0 N	102 2 35.0 E		Pre	50	60	60	50	DGST/GMDSS	SRTM	It is considered that the SRTM data is included in the tree height.	Can not reached to Site A, since there is no access.
C1	35 43.4 N	102 2 53.5 E		Pre	50	110	80	70	Grant Aid Project	SRTM	+15 free height is considered.	Land elevation shall be confirmed by site survey
C1	35 43.3 N	102 2 53.5 E		Pre	50	50	60	60	DGST/GMDSS	SRTM	It is considered that the SRTM data is included in the tree height.	



Fig. 1 Surveyed Sites (1)

Handwritten signature or initials.

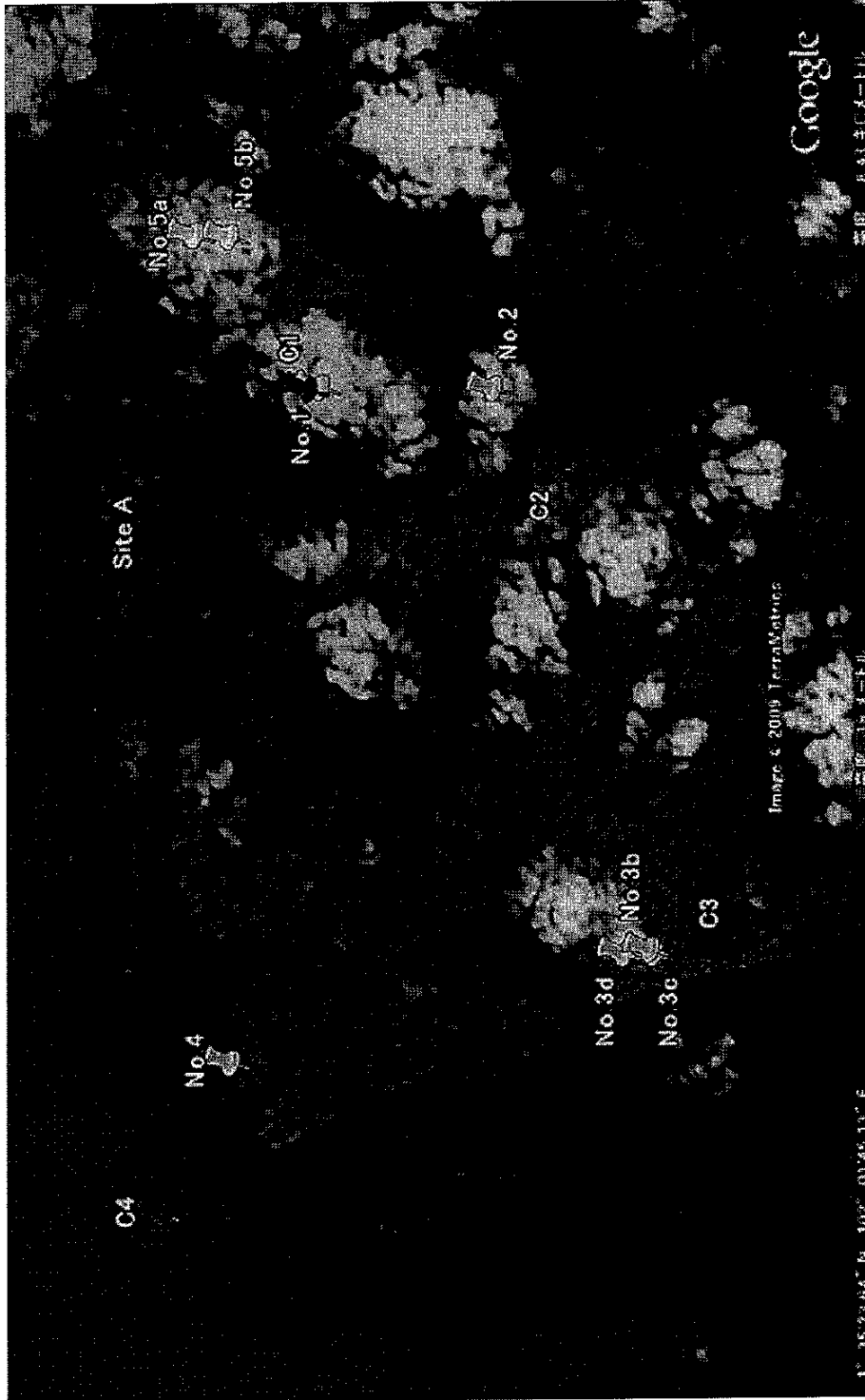


Fig. 2 Surveyed Sites (2)

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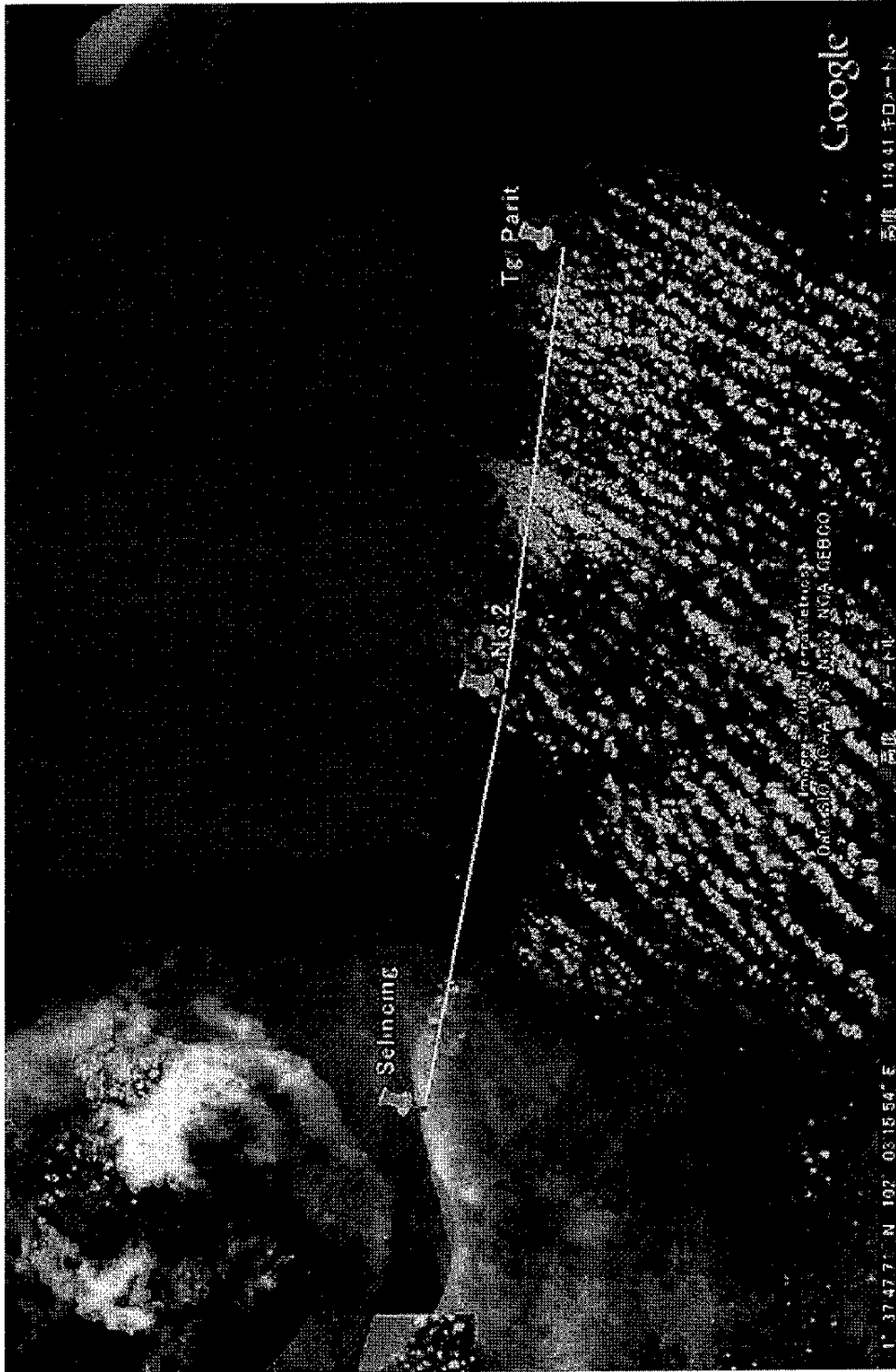


Fig. 3 Available Route for Communication Link

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Appendix 4-8 Letter from JICA to DGST on Third Field Survey

Jakarta, March 24, 2009

Ir. ALAMSYA SASMITO
Section Head of Equipment and Maintenance
Sub-Director of Marine Telecommunication,
Directorate of Navigation
Ministry of Transport

Dear Sir,

I am writing to request your consideration of facilitating the installation of necessary antennae planned under the Grant Aid project for "Enhancement of Vessel Traffic System in Malacca and Singapore Straits" to the GMDSS towers at Selincing and Dumai for following reasons.

Under Implementation Review Study of the Grant Aid project for "Enhancement of Vessel Traffic System in Malacca and Singapore Straits" a link budget analysis was made between Selincing and a site on Benkalis Island. The result shows that the height of the tower at Selincing needs to be increased by about 5m in order to overcome a ridge located near Selincing.

For Dumai, the tower height does not need to be changed, but the tower needs to be designed and constructed to carry the additional weight of the antennae.

Kindly consult this matter with relevant parties and reply the result within 10 days, so that we can adjust the contents of the implementation review accordingly.

Your kind understanding and cooperation will be highly appreciated.

Sincerely,



Toshiyuki IWAMA
Leader
Implementation Review Study Team
Japan International Cooperation Agency

T. J.

Appendix 4-9 Letter from the Consultants to DGST on Third Field Survey

JICA Study Team for the Project for Enhancement of Vessel Traffic System in Malacca and Singapore Straits in Indonesia



ORICONSUL - JANA JV



ORICONSUL

12-1, HONMACHI 3-CHOME, SHIBUYA-KU, TOKYO, 151-0071, JAPAN
Tel: +81-3-6311-7889 Fax: +81-3-6311-8043 e-mail: intl@oriconsul.co.jp

Jakarta, April 2, 2009

Mr. Alamsyah Sasmito,
Section Head of Equipment and Maintenance
Sub-Director of Marine Telecommunication,
Directorate of Navigation
Directorate General of Sea Transportation
Ministry of Transport

Sub: Tower at Dumai and Selincing for Repeater Stations in Stage-2 Project
Re : Implementation Review Study on the Project for Enhancement of
Vessel Traffic System in Malacca and Singapore Straits
in the Republic of Indonesia

Dear Sir,

In relation to the letter on March 24, 2009 issued by Mr. Toshiyuki Iwama, Leader of the Implementation Review Study Team, Japan International Cooperation Agency, we, Consultants, conducted further detailed studies for the data communication link between Selincing – New Repeater Station (No.2 Simpang Ayam) – Tg. Parit.

Considering to our study, we would like to inform you our requirements, and we would politely request for your considerations to construct the towers at Dumai and Selincing by the GMDSS Project as follows.

(1) Tower strength

Please consider that the towers shall have the sufficient strength against the additional loads of the antennae will be installed by the Grant Aid Project.

(2) Dimensions, weight and necessary installation height of antennae by the Grant Aid Project

The requirements for estimation of the additional loads by the antennae of the Grant Aid Project are as follows.

Received
3/4/09

JICA Study Team for the Project for Enhancement of Vessel Traffic System in Malacca and Singapore Straits in Indonesia



ORICONsul - JANA JV



ORICONsul

12-1, HONMACHI 3-CHOME, SHIBUYA-KU, TOKYO, 151-0071, JAPAN
Tel: +81-3-6311-7889 Fax: +81-3-6311-8043 e-mail: intl@oriconsul.co.jp

Site	Antennae	Diameter (m)	Weight (kg)	Install height(m)	unit
Dumai	Main	1.8 m	Approx. 110	50	1
	SD	1.2 m	Approx. 110	40	1
Selincing	Main	1.8 m	Approx. 110	50	1
	SD	1.2 m	Approx. 110	40	1

Note: Antennae dimensions and weights stated in the above table are approximate. Exact value can be known after clarified the supplied products by tender of the Project.

(3) Tower height at Selincing

According to our further detailed studies, it can be concluded that required antennae installation heights of the Grant Aid Project are possible to cover the 50m tower height. Therefore, the tower height planned by the GMDSS project is not requested to change.

If the tower at Dumai and Selincing are not sufficiently strong, we can not recommend to install the antennae on these towers from the technical point of view.

Therefore, we would like to request you

- 1) to provide the tower with sufficient strength to satisfy the above mentioned requirements, and
- 2) to guarantee the tower strength by DGST.

We wait your considerations after your discussions in the relevant stakeholders of the GMDSS project.

Your kind understanding and cooperation will be highly appreciated.

Yours Faithfully,

Masahiko Koshimizu
Chief Consultant
on behalf of
The JICA Study Team

CC:

1. Leader, Implementation Review Study Team, JICA Tokyo Office
2. Mr. Naoki Kakioka, JICA Indonesia Office



DEPARTEMEN PERHUBUNGAN
DIREKTORAT JENDERAL PERHUBUNGAN LAUT
SATUAN KERJA MARITIME TELECOMMUNICATION SYSTEM
DEVELOPMENT PROJECT
GEDUNG KARYA LANTAI 13

Jl. Merdeka Barat No. 8 Tel. 3507201, 3505550, Pst. 4062/4068 Fax. 3506534, 3507201
Jakarta 10110

Jakarta, April 8, 2009

Ref. No: 34/UM/MTSDP/W/09

Mr. Toshiyuki IWAMA
Leader
Implementation Review Study Team
Japan International Cooperation Agency

Dear Sir,

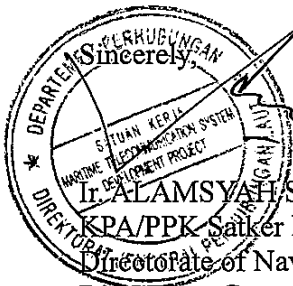
I would like to reply for your request letter on March 24, 2009, for facilitating the installation of necessary antenna planned under the Grant Aid Project for "Enhancement of Vessel Traffic System in Malacca and Singapore Straits" (hereinafter called "VTS Project") to the towers constructed by Maritime Telecommunication System Development Project Phase IV (GMDSS Project Phase IV) at Selincing and Dumai.

Based on the detailed technical analysis made by the Consultants working for the Implementation Review Study, and their letter on April 2, 2009, the height of the towers at Selincing and Dumai do not need to be changed.

We, DGST are under process for discussion with the Consultants and the Contractor of Maritime Telecommunication System Development Project Phase IV to assure the necessary strength of the towers so that the antennae for the VTS Project can be accommodated to the towers.

If we reached our final conclusion of this matter, we will inform you soon.
Please kindly understand our situations.

Your kind understanding and cooperation will be highly appreciated.



Sincerely,
Ir. ALAMSYAH SASMITO, MM
KPA/PPK Saiker Maritime Telecommunication System Development Project (IV)
Directorate of Navigation
Directorate General of Sea Transportation
Ministry of Transportation

CC :

1. Director of Navigation
2. Head of Sub-Director of Marine Telecommunication, Directorate of Navigation

Jakarta, March 24, 2009

Ir. ALAMSYA SASMITO
Section Head of Equipment and Maintenance
Sub-Director of Marine Telecommunication,
Directorate of Navigation
Ministry of Transport

Dear Sir,

I am writing to request your consideration of facilitating the installation of necessary antennae planned under the Grant Aid project for "Enhancement of Vessel Traffic System in Malacca and Singapore Straits" to the GMDSS towers at Selincing and Dumai for following reasons.


Under Implementation Review Study of the Grant Aid project for "Enhancement of Vessel Traffic System in Malacca and Singapore Straits" a link budget analysis was made between Selincing and a site on Benkalis Island. The result shows that the height of the tower at Selincing needs to be increased by about 5m in order to overcome a ridge located near Selincing.

For Dumai, the tower height does not need to be changed, but the tower needs to be designed and constructed to carry the additional weight of the antennae.

Kindly consult this matter with relevant parties and reply the result within 10 days, so that we can adjust the contents of the implementation review accordingly.

Your kind understanding and cooperation will be highly appreciated.

Sincerely,



Toshiyuki IWAMA
Leader
Implementation Review Study Team
Japan International Cooperation Agency

T. J.