

資 料

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1. 調査団員・氏名

1.1 現地調査（平成22年7月27日～8月25日）

	氏名	担当	所属
1	瀧澤 征彦	総括	JICA ラオス事務所次長
2	小野 智広	計画管理	JICA 経済基盤開発部運輸交通・情報通信第一課
3	戸田 利則	業務主任／公共交通計画	片平エンジニアリング・インターナショナル
4	木村 俊夫	運営計画／財務分析	片平エンジニアリング・インターナショナル
5	村上 忠昭	路線計画／運行計画	片平エンジニアリング・インターナショナル（補強）
6	小林 聖仁	機材計画	片平エンジニアリング・インターナショナル
7	村田 稔	調達計画／積算	片平エンジニアリング・インターナショナル（補強）
8	矢代 修一	業務調整／公共交通計画補助	片平エンジニアリング・インターナショナル

1.2 概略設計概要説明調査（平成 22 年 12 月 5 日～12 月 12 日）

	氏 名	担 当	所 属
1	瀧澤 征彦	総 括	JICA ラオス事務所次長
2	小野 智広	計画管理	JICA 経済基盤開発部運輸交通・情報通信第一課
3	戸田 利則	業務主任／公共交通計画	片平エンジニアリング・ インターナショナル
4	村上 忠昭	路線計画／運行計画	片平エンジニアリング・ インターナショナル（補強）
5	小林 聖仁	機材計画	片平エンジニアリング・ インターナショナル

2. 調査行程

2.1 現地調査時

日程	1	2	3	4	5	6	7	8
	総括	計画管理	業務主任/公共交通計画	運営計画/財務分析	路線計画/運行計画	機材計画	調達計画/積算	業務調整/公共交通計画補助
	滝沢 征彦	小野 智広	戸田 利則	木村 俊夫	村上 忠昭	小林 聖仁	村田 稔	矢代 修一
1 7/27 火		成田 → ビエンチャン	成田 (11:00) → JL717 → (15:35) バンコク (19:50) → TG574 → (21:00) ビエンチャン (*)	JICA Laos 乗取訪問 / 村岡 JICA 専門家 面談 (*)	データ収集 (*)	VCSEB 乗取訪問		
2 7/28 水		JICA Laos 打合せ DOT (MPWT) 協議 DOT, DPWT, VSBC キックオフ協議	JICA Laos 打合せ DOT, DPWT, VSBC キックオフ協議	JICA Laos 打合せ DOT, DPWT, VSBC キックオフ協議				
3 7/29 木		ADB 協議 現地視察	ADB 協議	VCSEB 打合せ、資料整理	資料整理			
4 7/30 金		DOT 協議 現地視察	DOT 協議	VCSEB 打合せ、資料整理	資料整理			
5 7/31 土		MPWT 協議 現地視察	MPWT 協議	VCSEB 打合せ、資料整理	資料整理			
6 8/1 日		MPWT 協議	世銀協議 (交通)	資料整理	資料整理			
7 8/2 月	JICA Laos 打合せ DOT, DPWT, VSBC キックオフ協議	JICA Laos 打合せ DOT (MPWT) 協議 DOT, DPWT, VSBC キックオフ協議	JICA Laos 打合せ DOT, DPWT, VSBC キックオフ協議	JICA Laos 打合せ DOT, DPWT, VSBC キックオフ協議	JICA Laos 打合せ DOT, DPWT, VSBC キックオフ協議			JICA Laos 打合せ DOT, DPWT, VSBC キックオフ 協議
8 8/3 火		DOT 協議 現地視察	DOT 協議	VCSEB 打合せ、資料整理	資料整理			交通調査 監理
9 8/4 水		MPWT 協議 現地視察	MPWT 協議	VCSEB 打合せ、資料整理	資料整理			交通調査 監理
10 8/5 木		MPWT 協議	世銀協議 (交通)	資料整理	資料整理			交通調査 監理
11 8/6 金	ミニッツ署名 報告会 JICA Laos 日本大使館報告	ミニッツ署名 報告会 JICA Laos 日本大使館報告	ミニッツ署名 報告会 JICA Laos 日本大使館報告	ミニッツ署名 報告会 JICA Laos 日本大使館報告	ミニッツ署名 報告会 JICA Laos 日本大使館報告		成田 → ビエンチャン	ミニッツ署名 資料整理
12 8/7 土		ビエンチャン → バンコク → 成田						
13 8/8 日	成田着	成田着	現地調査 (道路・交通現況視察)	現地調査 (道路・交通現況視察)	現地調査 (道路・交通現況視察)			
14 8/9 月		他 JICA 調査コンサル協議 VCSEB 打合せ	他 JICA 調査コンサル協議 VCSEB 打合せ	他 JICA 調査コンサル協議 VCSEB 打合せ	他 JICA 調査コンサル協議 VCSEB 打合せ			他 JICA 調査コンサル協議
15 8/10 火		現地調査	現地調査	バス路線状況視察	バス路線状況視察			交通調査 監理
16 8/11 水		PDM 作成	PDM 作成	バス路線状況視察	バス路線状況視察			交通調査 監理
17 8/12 木		PCA/Pプロジェクト協議	PCA/Pプロジェクト協議	報告書作成	報告書作成			交通調査 監理
18 8/13 金		現地調査	現地調査	報告書作成	報告書作成			交通調査 監理
19 8/14 土			副市長表敬/現地調査	副市長表敬/現地調査	副市長表敬/現地調査			交通調査 監理
20 8/15 日			現地調査 (道路・交通現況視察)	現地調査 (道路・交通現況視察)	現地調査 (道路・交通現況視察)			
21 8/16 月		JICA 協議/世銀協議	JICA 協議/世銀協議	JICA 協議/世銀協議	JICA 協議/世銀協議			JICA 協議/世銀協議
22 8/17 火		PDM 協議	PDM 協議	JICA 協議 仕様書案の作成	JICA 協議 仕様書案の作成			交通調査データ整理
23 8/18 水		JICA 説明/TN 説明	JICA 説明/TN 説明	報告書作成	報告書作成			交通調査データ整理
24 8/19 木		JICA 説明/TN 説明	JICA 説明/TN 説明	報告書作成	報告書作成			交通調査データ整理
25 8/20 金			副市長表敬/TN 署名、報告書作成	副市長表敬/TN 署名、報告書作成	副市長表敬/TN 署名、報告書作成			報告書作成
26 8/21 土			報告書作成	報告書作成	報告書作成			報告書作成
27 8/22 日			バンコク市内バス状況調査	バンコク市内バス状況調査	バンコク市内バス状況調査			報告書作成
28 8/23 月			報告書作成	報告書作成	報告書作成			報告書作成
29 8/24 火			TN 確認署名 (MPWT) JICA 説明 ビエンチャン → バンコク (*)	TN 確認署名 (MPWT) JICA 説明 ビエンチャン → バンコク (*)	TN 確認署名 (MPWT) JICA 説明 ビエンチャン → バンコク (*)			(*)
30 8/25 水							成田着 (07:10)	

EOJ Embassy of Japan

MPWT: Ministry of Public Works and Transportation

DPWT: Dept. of Public Works and Transport (Vientiane State)

VCSEB: Vientiane Capital State Bus Company

2.2 概略設計概要説明調査時

日程			JICA		コンサルタント		
			総括	計画管理	業務主任 ／公共交通計画	路線計画 ／運行計画	機材計画
			瀧澤 征彦	小野 智広	戸田 利則	村上 忠昭	小林 聖仁
1	12/5	日		—	成田→バンコク→ビエンチャン		
2	12/6	月	(*)	—	09:00: JICA Laos 打合せ 10:30-16:00: MPWT 概略設計概要書の説明・協議(*)		
3	12/7	火	(*)	成田 → バンコク → ビエンチャン	09:00-16:00 MPWT・VCSBE 概略設計概要書の説明・協議		
4	12/8	水	09:30: MPWT・VCSBE ミニッツ署名				
5	12/9	木	-	09:00-16:00 技術協力プロジェクトに関する協議			
6	12/10	金	-	09:00-16:00 技術協力プロジェクトに関する協議			
7	12/11	土	—	ビエンチャン → バンコク →			
8	12/12	日	—	→ 成田			

3. 面会者リスト

(1) 公共事業運輸省 (Ministry of Public Works and Transport :MPWT)

Mr. Sommad PHOLSENA, Minister

Mr. Viengsavath SIPHANDONE, Director General (Department of Transport)

Mr. Vilayphanh SAYAVONG, Deputy Director, (Department of Transport)

Dr. Bounta ONNAVONG, (Department of Transport)

(2) ビエンチャン市公共事業運輸局 (Department of Public Works and Transport of Vientiane Capital: DPWT)

Mr. Chanxay VINAVONG, Deputy Director

Mr. Khambay SITTISAY, Officer

(3) ビエンチャン市バス公社 (Vientiane Capital State Bus Enterprise: バス公社)

Mr. Khamphoune TEMELATH, Director

Mr. Bounpone PHONGMANY, Deputy Director

Mr. Ngonbkeo, Deputy Director

Mr. Bouapha PHONGMANY, Chief of Planning and Transport Division

Mr. Bouanma, Chief of Administration Division

Mr. Bounsouk, Head of Technical Management

Mr. Somlit, Vice of Workshop Division

(3) ビエンチャン市庁舎 (Vientiane Government Office)

Mr. Bounchanh SINTHAVONG, Vice Governor of Vientiane Capital

Mr. Vixai SAVANNA, Director Division of Planning and Investment

Mr. Khamphan MALABANDITH, Director Division of Financial Division

Ms. Syphone SOUKHAPHON, Director Division of International Cooperation

Mr. Kethkeo SIHALATH, Vice president of VUDAA

(4) 世界銀行 (World Bank :WB)

Mr. Sombath SOUTHIVONG, Sr. Infrastructure Specialist

Mr. Sengxay Phousinghoa, Sr. Private Sector Development Specialist

(5) アジア開発銀行 (Asian Development Bank :ADB)

Mr. Phomma Chanthirath, Project Implementation Officer (Infrastructure)

Mr. Stefan Ekelund, Senior Portfolio Management Specialist Deputy Country Director

Mr. Robert M. Anderson, Team Leader, Vientiane Sustainable Urban Transport Project

Mr. Sudhi Manibhandu, Transport Economist/Financial Specialist, -ditto-

(6) タイ車体架装メーカー (Thonburi Bus Body Co., LTD)

Mr. Arun LEEDHANACHOKE, Factory Manager

(7) 在ラオス日本大使館 (Embassy of Japan)

宮下 正明 特命全権大使
光本 政彦 一等書記官
山本 貴則 二等書記官

(8) 在ラオス JICA 専門家

村岡 和満 専門家 (公共事業運輸省 : アドバイザー)

(9) JICA ラオス事務所

戸川 正人 所長
米山 芳春 次長
瀧澤 征彦 次長
服部 容子 所員
田中 有紀 所員

(10) JICA首都ビエンチャン都市開発マスタープラン策定プロジェクト調査団

山田 耕治 総括 (コンサルタント)
斉藤 淳 団員 (コンサルタント)
石谷 昌之 団員 (コンサルタント)

4. 討議議事録 (M/D)

4.1 現地調査時

**Minutes of Discussions
on
the Preparatory Survey
on the Project for Improvement of Transportation Capacity of Public Bus
in Vientiane Capital**

Referring to the results of Basic Survey conducted in July 2009, the Government of Japan decided to conduct a Preparatory Survey for Outline Design on the Project for Improvement of Transportation Capacity of Public Bus in Vientiane Capital (hereinafter referred to as "the Project") and entrusted the study to Japan International Cooperation Agency (hereinafter referred to as "JICA").

JICA sent to Lao People's Democratic Republic (hereinafter referred to as "Lao P.D.R.") the Preparatory Survey team for Outline Design (hereinafter referred to as "the Team") which is headed by Mr. Masahiko TAKIZAWA, Senior Representative of JICA Laos Office, and is scheduled to stay in the country from July 27 to August 25, 2010.

The Team held discussions with the concerned officials of the Government of Lao P.D.R.. In the course of the discussions, both sides have confirmed the main items described in the attached sheets. The Team will proceed to further works and prepare the Preparatory Survey Report.

Vientiane, August 6, 2010



Mr. Masahiko TAKIZAWA
Senior Representative
JICA Laos Office
Japan



Mr. Viengsavath SIPHANDONE
Director General of Department of Transport
Ministry of Public Works and Transport
Lao People's Democratic Republic



Mr. Champboune TEMERATH
Director
Vientiane Capital State Bus Enterprise
Lao People's Democratic Republic

ATTACHMENT

1. Name and Objective of the Project

Different from the original request, JICA explained that the Objective of the Project will be to procure necessary buses to substitute the existing ones from the safety point of view.

Lao side understood this matter and both sides agreed to change the name of the Project to "Project for Improvement of Transportation Capacity of Public Bus in Vientiane Capital" in accordance with the above objective.

2. Project Site

The Project site is Vientiane Capital as shown in Annex 1.

3. Responsible and Implementing Organizations

3-1. The responsible organization is Ministry of Public Works and Transport (MPWT).

3-2. The implementing organization is Vientiane Capital State Bus Enterprise (VCSBE).

Lao side informed the Team that the name of Vientiane State Bus Company had been changed to VCSBE.

3-3. The organization charts of MPWT and VCSBE are as shown in Annex 2.

4. Items Requested by the Government of Lao P.D.R.

After discussions with the Team, the items described below were requested by Lao side.

- The number and specifications of the bus and equipment with priority will be determined according to the number and condition of the buses owned by VCSBE, its route plan, etc.

JICA will assess the appropriateness of the request and will report its findings to the Government of Japan. Decision will be made by the Government of Japan.

5. Spare Parts and Workshop Equipment

Lists of main spare parts and workshop equipment will be confirmed by both sides in the "Technical Note" to be signed by the chief consultant of the Team and Lao side.

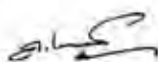
However, final draft of the list will be shown at the stage of the draft final report.

6. Japan's Grant Aid Scheme

6-1. Lao side understands Japan's Grant Aid scheme (for General Project) explained by the Team, as described in Annex 3.

6-2. Lao side will take the necessary measures, as described in Annex 4, for smooth

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implementation of the Project, as a condition for the Japanese Grant Aid to be implemented.

7. Schedule of the Study

- 7-1. The consultants will proceed to further study in Laos until August 25, 2010.
- 7-2. JICA will prepare the draft final report in English and dispatch a mission to Laos in order to explain its contents around December, 2010.
- 7-3. In case that the contents of the draft final report is accepted in principle by the Government of Lao P.D.R., JICA will complete the final report in English and send it to the Government of Lao P.D.R. by February, 2011.

8. Other Relevant Issues

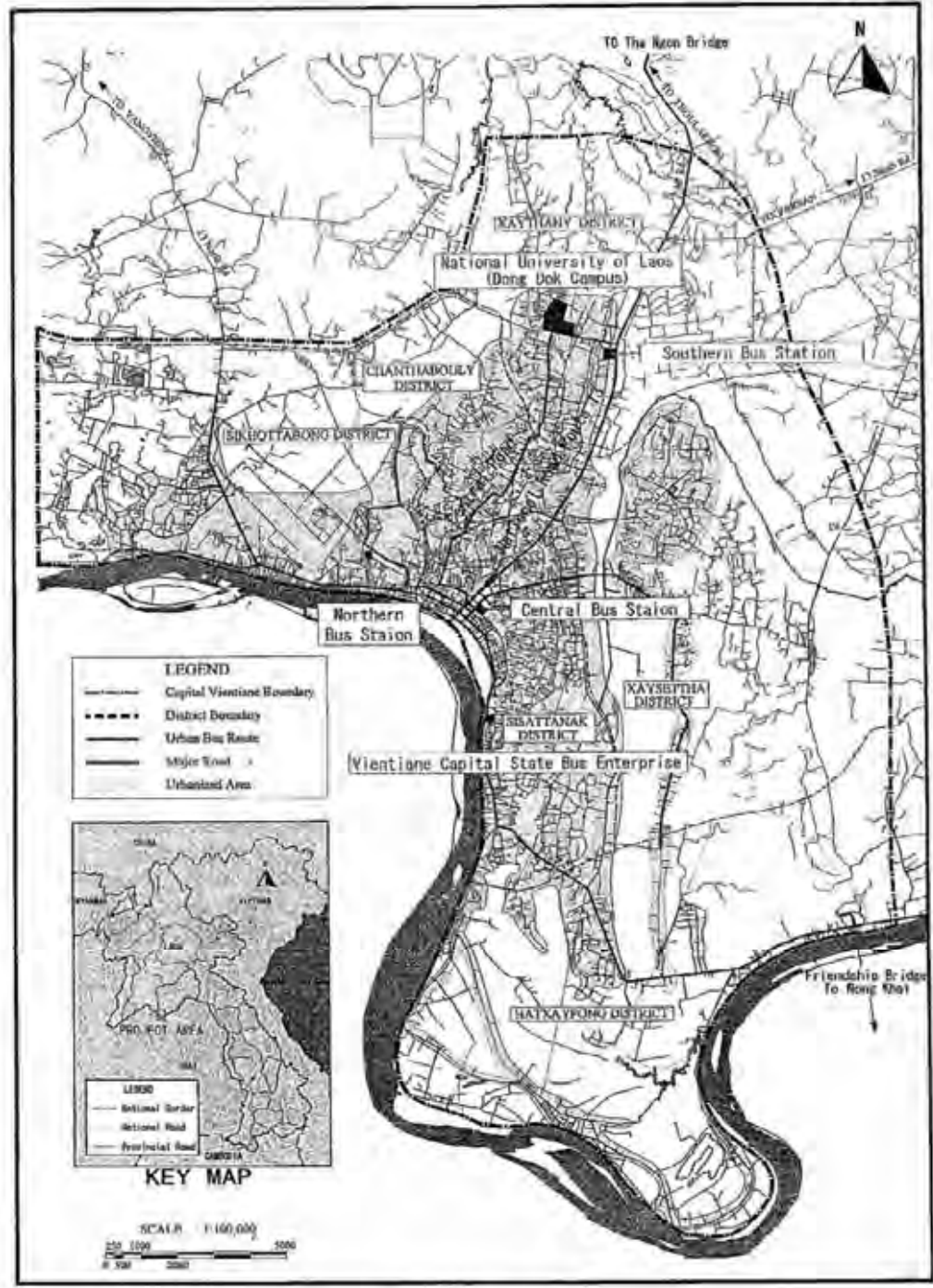
- 8-1. Lao side shall provide necessary number(s) of counterpart personnel to the Team during the period of the survey in Lao P.D.R..
- 8-2. Lao side will submit the first draft of answers to the Questionnaire, which the Team handed to the Lao side, by August 13, 2010.
- 8-3. Lao side confirmed that the following undertakings should be taken by Lao side at the Lao expenses.
 - To ensure tax exemption and custom clearance of the products at the port of disembarkation. Also the other items shown in Annex 4.
- 8-4. Lao side shall secure enough budget and personnel necessary for the operation and maintenance of the Project.
- 8-5. Lao side requested to start the Technical Cooperation Project (TCP), which has been already approved by the Government of Japan, 3 to 6 months earlier than the arrival of the buses. The team will convey this request to JICA HDQ.
- 8-6. Lao side requested that the TCP should not target VCSBE alone, but also include MPWT and Vientiane Capital to cope with the policy and plan of public bus transport system covering fare, route plan, time schedule, etc. Adding to this, Lao side requested to consider introduction of efficient bus operation, for example using GPS, common ticketing system, etc. to realize a better and sustainable bus management. The team will convey this request to JICA HDQ.

- Annex 1: Project site
- Annex 2: Organization charts of MPWT and VCSBE
- Annex 3: Japan's Grant Aid Scheme
- Annex 4: Necessary measures taken by Each Government

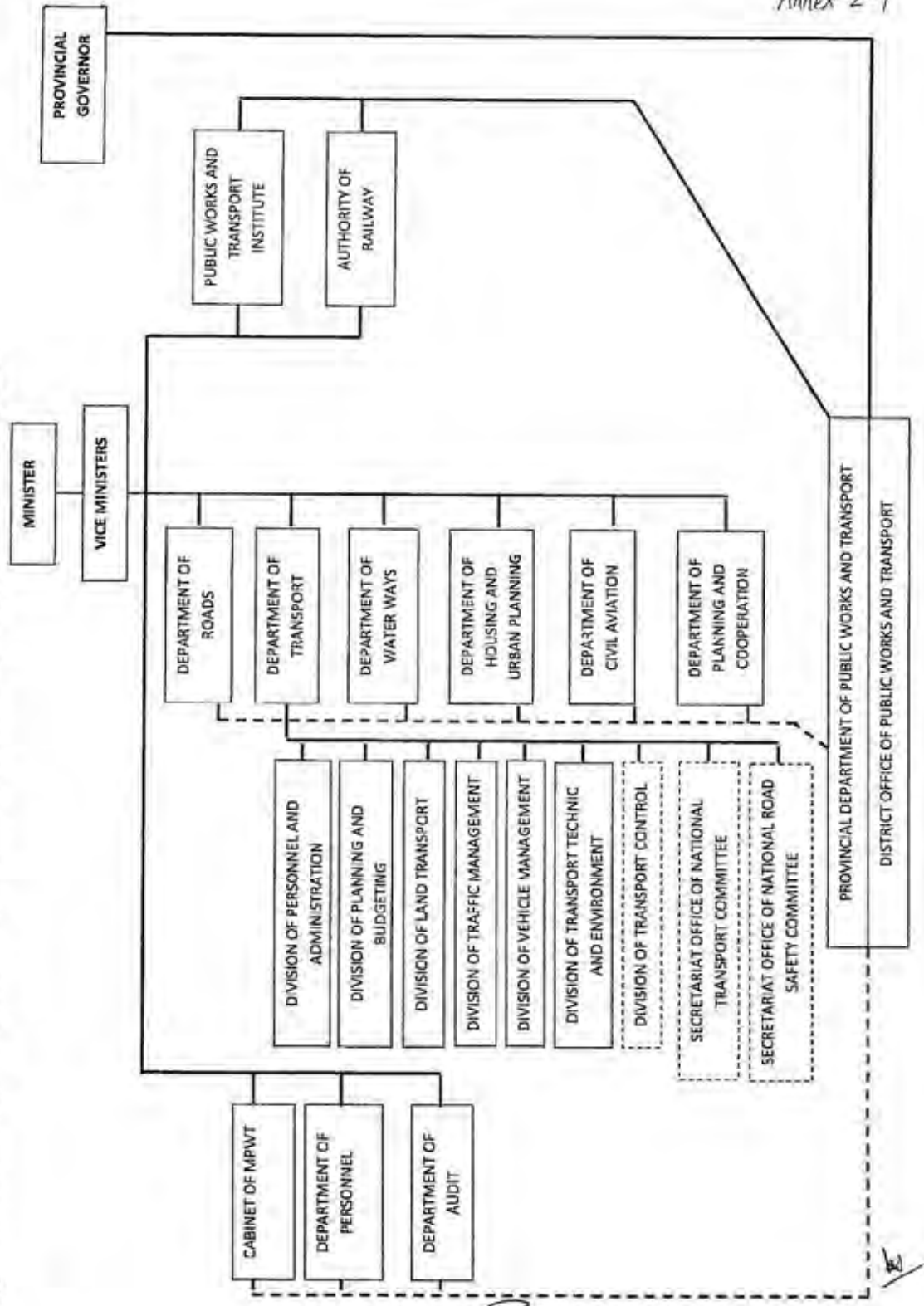
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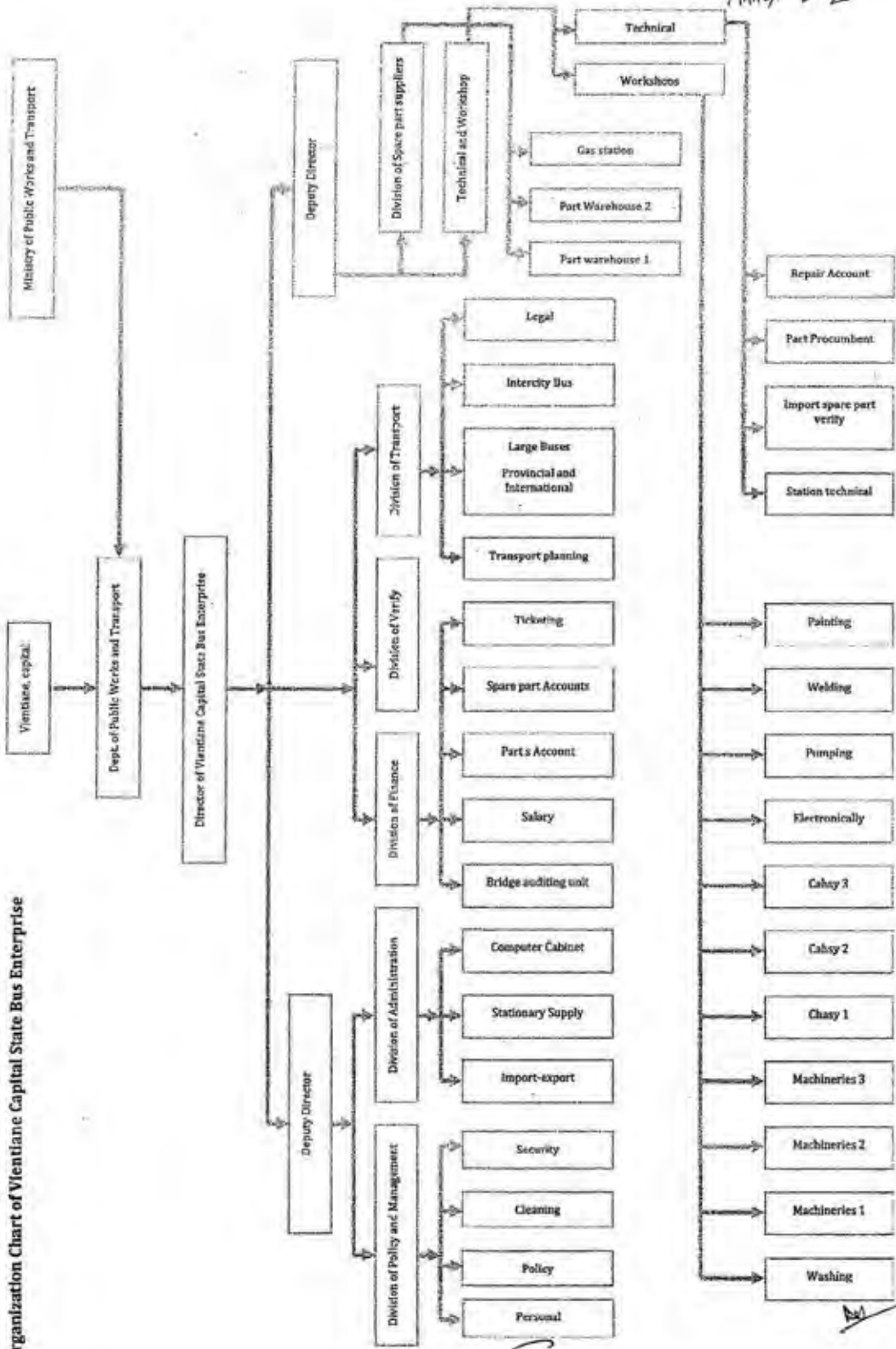
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ORGANIZATION CHART OF DEPARTMENT OF TRANSPORT, MINISTRY OF PUBLIC WORKS AND TRANSPORT



Organization Chart of Vientiane Capital State Bus Enterprise



Annex 2-2

JAPAN'S GRANT AID

The Government of Japan (hereinafter referred to as "the GOJ") is implementing the organizational reforms to improve the quality of ODA operations, and as a part of this realignment, a new JICA law was entered into effect on October 1, 2008. Based on this law and the decision of the GOJ, JICA has become the executing agency of the Grant Aid for General Projects, for Fisheries and for Cultural Cooperation, etc.

The Grant Aid is non-reimbursable fund provided to a recipient country to procure the facilities, equipment and services (engineering services and transportation of the products, etc.) for its economic and social development 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

The Japanese Grant Aid is supplied through following procedures:

- Preparatory Survey
 - The Survey conducted by JICA
- Appraisal & Approval
 - Appraisal by the GOJ and JICA, and Approval by the Japanese Cabinet
- Authority for Determining Implementation
 - The Notes exchanged between the GOJ and a recipient country
- Grant Agreement (hereinafter referred to as "the G/A")
 - Agreement concluded between JICA and a recipient country
- Implementation
 - Implementation of the Project on the basis of the G/A

2. Preparatory Survey

(1) Contents of the Survey

The aim of the Preparatory Survey is to provide a basic document necessary for the appraisal of the Project made by the GOJ and JICA. The contents of the Survey are as follows:



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- Confirmation of the background, objectives, and benefits of the Project and also institutional capacity of relevant agencies of the recipient country necessary for the implementation of the Project.
- Evaluation of the appropriateness of the Project to be implemented under the Grant Aid Scheme from a technical, financial, social and economic point of view.
- Confirmation of items agreed between both parties concerning the basic concept of the Project.
- Preparation of an outline design of the Project.
- Estimation of costs of the Project.

The contents of the original request by the recipient country are not necessarily approved in their initial form as the contents of the Grant Aid project. The Outline Design of the Project is confirmed based on the guidelines of the Japan's Grant Aid scheme.

JICA requests the Government of the recipient country to take whatever measures necessary to achieve 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 of the recipient country which actually implements the Project. Therefore, the implementation of the Project is confirmed by all relevant organizations of the recipient country based on the Minutes of Discussions.

(2) Selection of Consultants

For smooth implementation of the Survey, JICA employs (a) registered consulting firm(s). JICA selects (a) firm(s) based on proposals submitted by interested firms.

(3) Result of the Survey

JICA reviews the Report on the results of the Survey and recommends the GOJ to appraise the implementation of the Project after confirming the appropriateness of the Project.

3. Japan's Grant Aid Scheme

(1) The E/N and the G/A

After the Project is approved by the Cabinet of Japan, the Exchange of Notes (hereinafter referred to as "the E/N") will be signed between the GOJ and the

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Government of the recipient country to make a pledge for assistance, which is followed by the conclusion of the G/A between JICA and the Government of the recipient country to define the necessary articles to implement the Project, such as payment conditions, responsibilities of the Government of the recipient country, and procurement conditions.

(2) Selection of Consultants

In order to maintain technical consistency, the consulting firm(s) which conducted the Survey will be recommended by JICA to the recipient country to continue to work on the Project's implementation after the E/N and G/A.

(3) Eligible source country

Under the Japanese Grant Aid, in principle, Japanese products and services including transport or those of the recipient country are to be purchased. When JICA and the Government of the recipient country or its designated authority 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, constructing and procurement firms, and the prime consulting firm are limited to "Japanese nationals".

(4) Necessity of "Verification"

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

(5) Major undertakings to be taken by 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 Annex.

(6) "Proper Use"

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

(7) "Export and Re-export"

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The products purchased under the Grant Aid should not be exported or 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 under the name of the Government of the recipient country in a bank in Japan (hereinafter referred to as "the Bank"). JICA 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 JICA 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 paid to the Bank.

(10) Social and Environmental Considerations

A recipient country must carefully consider social and environmental impacts by the Project and must comply with the environmental regulations of the recipient country and JICA socio-environmental guidelines.

(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 ensure prompt customs clearance of the products and to assist internal transportation of the products in the 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	(●)	(●)
2	To ensure that customs duties, internal taxes and other fiscal levies which may be imposed in the recipient country with respect to the purchase of the products and the services be exempted		●
3	To accord Japanese nationals whose services may be required in connection with the supply of the products and the services such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work		●
4	To ensure that [the Facilities and the products]/[the Facilities]/ [the products] be maintained and used properly and effectively for the implementation of the Project		●
5	To bear all the expenses, other than those covered by the Grant, necessary for the implementation of the Project		●
6	To bear the following commissions paid to the Japanese bank for banking services based upon the B/A		
	1) Advising commission of A/P		●
	2) Payment commission		●

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

4.2 概略設計概要説明調査時

**Minutes of Discussions
on the Preparatory Survey
on the Project for Improvement of Transportation Capacity of Public Bus
in Vientiane Capital
(Explanation on Draft Report)**

In August 2010, Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched a Preparatory Survey Team for Outline Design on the Project for Improvement of Transportation Capacity of Public Bus in Vientiane Capital (hereinafter referred to as "the Project") to Lao People's Democratic Republic (hereinafter referred to as "Lao P.D.R."), and through discussion, and field survey as well as after technical examination of the results in Japan, JICA prepared a draft final report of the survey.

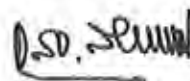
In order to explain and to consult with concerning authorities of Lao P.D.R. on the components of the draft report, JICA sent to Lao P.D.R. the Draft Explanation Team (hereinafter referred to as "the Team") which is headed by Mr. Masahiko TAKIZAWA, Senior Representative of JICA Laos Office, from December 5 to December 12, 2010.

As a result of discussion, both parties confirmed the main items described on the attached sheets hereto.

Vientiane, December 8, 2010



Mr. Masahiko TAKIZAWA
Senior Representative
JICA Laos Office
Japan



Mr. Viengsavath SIPHANDONE
Director General of Department of Transport
Ministry of Public Works and Transport
Lao P.D.R.



Mr. Khamphoune TEMERATH
Director
Vientiane Capital State Bus Enterprise
Lao P.D.R.

ATTACHMENT

1. Contents of the Draft Report

The Lao side agreed and fully accepted the contents of the draft final report explained by the Team.

2. Japans' Grant Aid Scheme

The Lao side understood the Japan's Grant Aid Scheme and the necessary measures to be taken by the Government of Lao P.D.R. as explained by the Team and described in Annex-4 of the Minutes of Discussion signed by both parties on August 6, 2010.

3. Schedule of the Survey

JICA will complete the final report in accordance with the confirmed item and send it to the Government of Lao P.D.R. by March, 2011.

4. Other Relevant Issues

4-1. Concerning above item 2, the Lao side should undertake necessary measures, such as tax exemption and customs clearance, securement of parking place, preparation of operation and maintenance of new buses, etc., before the delivery of the buses and equipment.

At the same time, banking arrangement fees, fuel and oil cost, cost for maintenance and repair should be borne by the Lao side.

4-2. The project cost estimation, as attached in Annex-1, is confidential and should never be duplicated or disclosed to any outside parties before the signing of all the contracts for the Project.

4-3. Lao side committed to take full responsibility for the management and operations of the new buses, and maintenance equipment to be supplied by the grant aid.

Annex 1: Project Cost Estimation

Annex 2: List of Equipment

Project Cost Estimation

1. Cost borne by the Government of Japan

Item:	Approximate cost: (unit: million yen)	
Equipment:		
42 buses	402	
Spare parts, Maintenance equipment, etc.	81	
Detail design, Procurement supervision:	17	
Approximate total cost:	500	

2. Cost borne by the Government of Lao P.D.R.

Item:	Approximate cost:	
	USD or Kip	JPY (million yen)
Banking Arrangement fees	10,898 US\$	1.0
Operation and maintenance cost	35,716 mil Kip/ year	

3. Parameters of Cost Estimation

- (1) Time of cost estimate: July 2010
 (2) Exchange rate: 1 USD = 91.76 JPY
 1 Kip = 0.0106 JPY

AP

USD.


List of Equipment

1. Quantity of bus 42 buses

2. Necessary Maintenance Equipment

Item	Q'ty	Purpose
1.Maintenance and Repair Equipment		
Lifting jack Movable type Lifting capacity: 10 ton	4	A kind of jack, 4 jacks can jack up 2 buses to carry out the maintenance for axle
Transmission jack Lifting capacity: 800 kg	1	Specialized jack for taking out a transmission
Wheel dolly Applicable tire: 509 - 1,160mm dia with lift jack	1	Specialized tool for taking out a tire with break drum
Drum pump Operation: hand operated	1	Hand pump for pumping out the oil from a drum
Mechanic tool set for large vehicle Total 100 items of hand tools	7	General hand tool set (for renewal of existing tool sets)
Air Hydraulic Jack 15 ton	3	Garage jack by air driving
Service Creeper	4	Working board with caster
Differential Gear Jack	1	Jack for taking out differential gear
Brake Fluid Bleeder	1	Tool for outgas air from brake oil after maintenance of brake
Diesel Compressor Gauge Set	1	Pressure gauge for engine compressive pressure
2.Wheel / Tire & Brake Service		
Automatic tire inflator Stand type Capacity: 0.7MPa	2	Stand type inflator nozzle with pressure gauge and adjusting valve
3.Engine & Transmission Service		
Air valve lapper Air pressure: 0.6 - 0.8 Mpa	1	Air tool for facing up a valve of engine cylinder head
Engine /unit repair stand Service capacity: 1,000 kg	2	Engine stand for overhaul without putting on the floor
4.Vehicle Washing Equipment		
Hot water high pressure washer	2	High pressure washer with hot water

AP

DSD.
C. S. S.

Item	Q'ty	Purpose
5.Power Tool Group		
Air impact wrench Drive: 1/2" sq. drive	1	Air impact wrench (small size)
Air impact wrench Drive: 3/4" sq. drive	1	Air impact wrench (middle size)
Air impact wrench Drive: 1"sq. drive	1	Air impact wrench (large size)
Socket for impact wrench, (1/2"sq.) 8, 10, 13, 17, 19, 21, 22, 24, 27, 30, 32mm	1	Socket set for small impact wrench
Socket for impact wrench, (3/4"sq.) 19, 22, 24, 27, 30, 32, 36, 41mm	1	Socket set for middle impact wrench
Socket for impact wrench, (1"sq.) 32, 36, 41, 46, 50mm	1	Socket set for large impact wrench
Torque Multiplier	1	Tool for fastening large size bolt or high torque bolt
Ram and Pump Set	1	Tool set of hydraulic pump and cylinder for plate working
6.Hand Tool Group		
Socket wrench set, 3/8" sq. drive Socket: 6 - 21mm, with accessories	1	Socket wrench for general tool
Socket wrench set, 1/2"sq. drive Socket: 10 - 32mm, with accessories	1	Socket wrench for general tool
Socket wrench set, 1"sq. drive Socket: 32 - 80mm, with accessories	1	Socket wrench for general tool
Lever block Capacity: 1.5 ton	1	Lever block for plate working and repair chassis
7.Measuring Tool Group		
Torque wrench (3/8"sq.) Range: 10-45 N.m Type: torque pre-set type	1	Torque wrench for the bolt on engine or transmission
Torque wrench (1/2"sq.) Range: 40-180 N.m Type: torque pre-set type	1	Torque wrench for the bolt on engine or transmission
Torque wrench (3/4"sq.) Range: 100-700 N.m Type: torque pre-set type	1	Torque wrench for the bolt on engine or transmission
Torque wrench (1"sq.) Range: 100-1,000 N.m Type: torque pre-set type	1	Large size torque wrench for the bolt on tie rod, hub bolt, spring U-bolt
Digital multi tester AC/DC ampere, AC/DC voltage resistance	1	Digital multi tester for electrical component

10

QSD.
Fisher
200

Item	Q'ty	Purpose
Combination Socket Impact	2	Impact wrench socket for hub bolt on the tire
8. Battery Service		
Quick battery charger Output: 12-24V/140A	1	Large capacity battery charger to be able to start engine until 140A
9. Air Compressor		
Air compressor Motor: 15kW Max. working pressure: 0.93MPa Receiver tank: 340 liters	1	Supply air to air tools in the workshop
10. Fabrication, Welding and Painting		
Semi Automatic Co2 Welding 200A	1	Semi automatic Co2 welding machine for body plate and floor palate
Plasma Cutter	1	Plasma Cutter for cutting steel sheet
Spot Welder (Single 1.8, Double 7.0mm)	1	Spot welding machine for body plate and floor palate
11. Electric Service		
Circuit Tester	1	Analog electric tester for electrical component
Clamp Tester	1	Current tester for electrical component
12. Lifting Equipment		
Sling Chain 2ton Single	2	Chain type lifting sling with single hook
Sling Chain 2ton Double Hook	8	Chain type lifting sling with double hook
Mobile Floor Crane Capacity 2ton	2	Floor Crane for lifting and moving of engine or heavy parts

14

P.S.D.


5. テクニカル・ノート

The Preparatory Survey on the Project for Improvement of Transportation Capacity of Public Bus in Vientiane Capital

Records of Technical Meeting

The JICA Study Team (the Team) explained the contents of Technical Notes to Vientiane Capital State Bus Enterprise (VCSBE) and Department of Transport (DoT), Ministry of Public Works and Transport (MPWT). Technical Notes will be signed by the Team and DoT of MPWT on August 24, 2010. Both parties confirmed as follows.

1. Confirmation of Technical Notes

Following the Minutes of Discussion (M/D) signed on August 6, 2010, the Team proceeded the survey in Vientiane until August 24, 2010. The Lao side arranged the counterparts and office spaces to the Team, and submitted and/or provided the answers in English to the Questionnaires with relevant documents in writing and/or during the meetings.

Following the field survey, the Team with DOT of MPWT and VCSBE discussed technical issues for preparation of an Outline Design and confirmed results in Technical Notes (see Attached Document).

The Technical Notes includes the specifications of bus requested and a list of spare parts and workshop equipment.

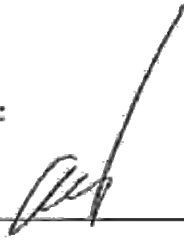
2. Other Schedules of the Survey after the Field Survey


The schedules of the Survey after the field survey were discussed and confirmed by both parties based on the M/D.

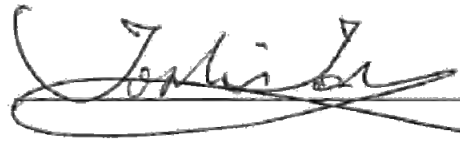
- (1) MPWT with VCSBE will prepare a garage and/of securing space for parking new buses, when and after both governments agree the grant aid but before bus delivery.
- (2) VCSBE will provide competent drivers and mechanics for new bus operation and maintenance, when and after both governments agree the grant aid but before bus delivery.

Vientiane, August 24, 2010

Noted by:



 Mr. Viengsavath SIPHANDONE
Director General
Department of Transport (DOT),
Ministry of Public Works and Transport
(MPWT), Lao PDR



Mr. Toshinori TODA
Chief Consultant
JICA Preparatory Survey Team

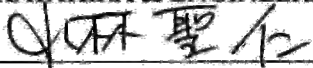
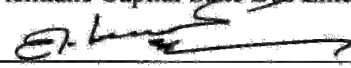
Technical Note

1. Lao side requested that the Technical Cooperation Project (TCP) will be started before bus delivery. In addition, Lao side requested JICA to consider providing training to not only VCSBE but also Vientiane DPWT and DOT, MPWT. The Team will convey the request to JICA in Tokyo.
2. Both parties confirmed an attached request of specification of bus, spare parts, maintenance tools and machineries (see Form 1). At the explanation of draft report in December 2010, the Team will present study results based on further analysis of the request by the Government of Lao PDR.

Form-1


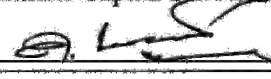
SPECIFICATIONS

Item No. 1	Name of Equipment : BUS (Large and Medium)	Q'ty : **units
Manufacturer :		Model :
Main Use Intended : Public transportation in Vientiane Capital		
Required Specifications		
<p>1. General</p> <p>(1)No. of seat : 42-47 seats (Large), 32-37 seats (Medium)</p> <p>(2)Driving Position : Left-hand drive</p> <p>2. Engine</p> <p>(1)Type : Water Cooled Diesel</p> <p>(2)Output : ---kW or more</p> <p>(3)Displacement : ---cc or more</p> <p>(4)Cooling System : Forced circulation</p> <p>(5)Electric System : 24 Volt heavy duty batteries</p> <p>(6)No of Cylinders : 6</p> <p>(7)Emission Regulations : Euro 1-4 equivalent Manufacturer's recommendation adapted for fuel quality and technical capabilities in Lao PDR.</p> <p>3. Chassis Part</p> <p>(1)Chassis Frame : Ladder type</p> <p>(2)Engine Location : Rear position of shassis</p> <p>(3)Transmission : Mechanical type manual transmission Fored 5 or 6 speed and 1 reverse</p> <p>4. Tire</p> <p>(1)Type : Radial Tire</p> <p>(2)Size : Mnufacturer's recommendation</p> <p>5. Body Part</p> <p>(1)Body Construction : Skeleton Construction</p> <p>6. Door</p> <p>(1)Position : Front side and Rear side</p> <p>(2)Type : Inward opening type (Front) Slide opening type (Rear)</p> <p>7. Emergency Exit : 1pc. Emergency exit on rear side</p> <p>8. Windows</p> <p>(1)Windshield : 1 or 2 piece fixed type</p> <p>(2)Side Window : Sliding type (both way slide)</p> <p>(3)Rear Window : 1 pc. fixed type</p> <p>(4)Glass : All heat-absorbing tempered safety glass blue tinted</p> <p>(5)Destination Sign Board : Electronic Display System</p>		

9. Floor	: Non-slip type Checked steel sheets or latest material available	
10. Seat		
(1) Passenger Seat	: Comfortable seat, Front seat for disabled person and pregnant women	
(2) Driver Seat	: Comfortable seat with 3-point seat belt	
(3) Padding	: Urethane form for backrest and cushion	
(4) Upholstery	: PVC sheet or Manufacturer's recommendation	
11. Air Conditioner	: Equipped	
12. Ventilation	: Number of ventilation should be Manufacturer's recommendation	
13. Painting		
(1) Exterior Color	: VCSBE's color scheme (approved by MPWT)	
(2) Interior Color	: Manufacturer's standard	
14. Other Items and Detail	: These should be decided after analysis in Japan and shown in the Draft Technical Specifications on December, 2010.	
Spare Parts		
To supply spare parts more than 5-10% of CIP price of the equipment, and to be selected by following conditions.		
* Parts for periodic inspection for 30,000km running distance or 3years in standard use.		
Attached list of spare parts should be include in spare parts		
Project: The Project for Improvement of Transportation Capacity of Public Bus in Vientiane Capital		
Mr. Kiyohito KOBAYASHI Equipment Planner KATAHIRA & ENGINEERS INTERNATIONAL	Mr. Khamphoune TEMERATH Director Vientiane Capital State Bus Enterprise	
 Date: Aug. 19. 2010	 Date: 20/8/2010	

Form-1

SPECIFICATIONS

Item No. 2	Name of Equipment : WORKSHOP EQUIPMENT	Q'ty : unit
Manufacturer :		Model :
Main Use Intended : Maintenance work in the workshops		
Required Specifications		
<p>1. Workshop Equipment</p> <p>Refer to attached list of Maintenance and Repair Equipments</p> <p>Survey team will consider the necessity and appropriateness of above items in detail on the analysis in Japan. After that, the detail of items and Quantities will be decided. It shown in the Draft Technical Specifications on December. 2010.</p>		
Project: The Project for Improvement of Transportation Capacity of Public Bus in Vientiane Capital		
Mr. Kiyohito KOBAYASHI Equipment Planner KATAHIRA & ENGINEERS INTERNATIONAL 		Mr. Khamphoune TEMERATH Director Vientiane Capital State Bus Enterprise 
Date: Aug. 19. 2010		Date: 20/8/2010

Form-1

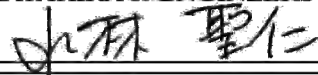
SPECIFICATIONS


Item No. 3	Name of Equipment : SMALL SIZE BUS	Q'ty : **units
Manufacturer :		Model :
Main Use Intended : Public transportation in Vientiane Capital		
Required Specifications		
<p>1. General</p> <p>(1)No. of seat : 25 seats</p> <p>(2)Driving Position : Left-hand drive</p> <p>2. Engine</p> <p>(1)Type : Water Cooled Diesel</p> <p>(2)Output : ---kW or more</p> <p>(3)Displacement : ---cc or more</p> <p>(4)Cooling System : Forced circulation</p> <p>(5)Electric System : 24 Volt heavy duty batteries</p> <p>(6)No of Cylinders : 4</p> <p>(7)Emission Regulations : Euro 1-4 equivalent Manufacturer's recommendation adapted for fuel quality and technical capabilities in Laos</p> <p>3. Chassis Part</p> <p>(1)Chassis Frame : Ladder type</p> <p>(2)Transmission : Mechanical type manual transmission Fored 5 speed and 1 reverse</p> <p>4. Tire</p> <p>(1)Type : Radial Tire</p> <p>(2)Size : Manufacturer's recommendation</p> <p>5. Door</p> <p>(1)No. of Door : 1 or 2pcs.</p> <p>(2)Type : Inward opening type (Front)</p> <p>6. Emergency Exit : 1pc.</p> <p>7. Windows</p> <p>(1)Windshield : 1Pc. fixed type</p> <p>(2)Side Window : Sliding type (both way slide)</p> <p>(3)Rear Window : 1 pc. fixed type</p> <p>(4)Glass : All heat-absorbing tempered safety glass blue tinted</p> <p>8. Floor : Non-slip type Checked steel sheets or latest material available</p> <p>9. Seat</p> <p>(1)Passenger Seat : Comfortable seat, Front seat for disabled person and pregnant women</p>		

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(2)Driver Seat	: Comfortable seat with 3-point seat belt	
(3)Padding	: Urethane form for backrest and cushion	
(4)Upholstery	: PVC sheet or Manufacturer's recommendation	
10. Air Conditioner	: Equipped	
11. Ventilation	: Number of ventilation should be Manufacturer's recommendation	
12. Other Items and Detail	: These should be decided after analysis in Japan and shown in the Draft Technical Specifications on December. 2010.	

Project:
The Project for Improvement of Transportation Capacity of Public Bus in Vientiane Capital

Mr. Kiyohito KOBAYASHI
Equipment Planner
KATAHIRA & ENGINEERS INTERNATIONAL
 Date: Aug. 19. 2010

Mr. Khamphoune TEMERATH
Director
Vientiane Capital State Bus Enterprise
 Date: 20/8/2010

LAO PEOPLE DEMOCRATIC REPUBLIC
PEACE INDEPENDENCE DEMOCRACY UNITY PROSPERITY

ITEM

MAINTENANCE AND REPAIR EQUIPMENTS

No.	Item	Most Required	Required	Omit
1	Head light tester Type: manual operation	①		
2	Lifting jack Movable type Lifting capacity: 10 ton	①		
3	Transmission jack Lifting capacity 800kg	①		
4	Wheel dolly Applicable tire: 509 – 1,160mm dia. With lift jack	①		
5	Drum pump Operation: hand operated	①		
6	Portable lubricator for grease Operation: Air Delivery: 350 g/min. With hose and gun		O	
7	Mechanic tool set for large vehicle Total 100 items of hands tools	①		
8	Air Hydraulic Jack 15 ton	①		
9	Service Creeper	①		
10	Differential Gear Jack	①		
11	Brake Fluid Bleeder	①		
12	Diesel Decomposer Gauge Set	① Nissan & New Bus		
13	Tire pressure gauge with inflator Capacity: 1.1MPa			X
14	Automatic tire inflator Stand type Capacity: 0.7 MPa	①		
15	Air valve lapper Air pressure: 0.6 – 0.8 MPa	①		
16	Mechanic tool set for large vehicle Total 100 items of hand tools	①		

①

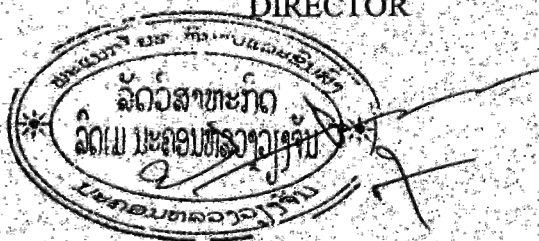
17	Engine / unit repair stand Service capacity: 1,000kg	⊙		
18	Hot water high pressure washer	⊙		
19	Air impact wrench Drive: ½" sq. drive	⊙		
20	Air impact wrench Drive: ¾" sq. drive	⊙		
21	Air impact wrench Drive: 1" sq. drive	⊙		
22	Socket for impact wrench. (1/2" sq.) 8, 10, 13, 17, 19, 21, 22, 24, 27, 30, 32 mm	⊙		
23	Socket for impact wrench. (3/4" sq.) 19, 22, 24, 27, 30, 32, 36, 41 mm	⊙		
24	Socket for impact wrench. (1" sq.) 32, 36, 41, 46, 50mm	⊙		
25	Torque Multiplier	⊙		
26	Ram and Pump set	⊙		
27	Socket wrench set ¼" sq. drive Socket: 5 – 12mm, with accessories			X
28	Socket wrench set 3/8" sq. drive Socket: 6 – 21mm, with accessories	⊙		
29	Socket wrench set 1/2" sq. drive Socket: 10 – 32mm, with accessories	⊙		
30	Socket wrench set 1" sq. drive Socket: 32 – 80mm, with accessories	⊙		
31	Lever block	⊙		
32	Torque wrench (3/8" sq.) Range: 10-45 N.m Type: torque pre-set type	⊙		
33	Torque wrench (1/2" sq.) Range: 40-180 N.m Type: torque pre-set type	⊙		
34	Torque wrench (3/4" sq.) Range: 100-700 N.m Type: torque pre-set type	⊙		

Ⓚ

35	Torque wrench (1" sq.) Range: 100-1,000 N.m Type: torque pre-set type	⊙		
36	Digital multi tester AC/DC ampere, AC/DC voltage resistance	⊙		
37	Combination Socket Impact			
38	Battery tester Application: 18 -200AH		○	
39	Normal battery charger Output: 12 -24V/10A		○	
40	Quick battery charger Output: 12-24V/140A	⊙		
41	Air compressor Motor: 15kW Max. working pressure: 0.93MPa Receiver tank: 340 litters	⊙		
42	Body & fender tool set Pad, spoon, flangr tool, hammer, tongr			X
43	Air sander Disc: 180mm dia.		○	
44	Orbital sander Pad size: 100 x 175mm		○	
45	Polisher Pad size: 150mm dia.		○	
46	Semi Automatic Co2 200A	⊙		
47	Plasma cutter	⊙		
48	Spot welder (Single 1.8, Double 7.0mm)	⊙		
49	Starting Generator Test Bench 11Kw	⊙		
50	Solderless Terminal Kit			X
51	Circuit tester	⊙		
52	Clamp Tester	⊙		
53	Sling Chain 2ton single		○	
54	Sling Chain 2ton Double Hook		○	
55	Mobile Floor Crane 2ton	⊙		

DIRECTOR

HEAD OF TECHNICAL



ບຸນປອນ ຟອງມະນີ

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Aug. 19. 2010

THE REQUIREMENT OF SPARE PART

N.	LIST OF SPAREPARTS	
01	ປອກສູບຈັກ	LINNER , CYLINDER , SIS
02	ລູກສູບຈັກ	PISTON , SIS
03	ແຫວນລູກສູບ	RING SET, PISTON , STD
04	ວາວອາຍດີ	VALVE , INTAKE , STD
05	ວາວອາຍເສຍ	VALVE , EXH , STD
06	ບຸດຂາວາວອາຍດີ	BUSHING , VALVE GUIDE INTAKE , REPAIR STD
07	ບຸດຂາວາວອາຍເສຍ	BUSHING , VALVE GUIDE , EXH REPAIR STD
08	ຢາງໝວກວາວ	SEAL , VALVE STEM OIL
09	ຊວງຊຸດໃຫຍ່	GASKET OVERH
010	ຊວງຝາສູບ	GASKET , CYL HEAD
11	ໃສ້ກອງນໍ້າມັນເຄື່ອງ	ELEMENT SET , OIL FILTER
12	ໃສ້ກອງນໍ້າມັນກາຊວນ	ELEMENT SET , FUEL FILTER
13	ຈານຄາດ	DISC ASSY CLUTCH
14	ຕີນຕີຄາດ	COVER ASSY CLUTCH
15	ຢາງເບກໜ້າ	CUP , WHEEL CYL PISTON FR
16	ຢາງເບກຫລັງ	CUP , WHEEL CYL PISTON RR
17	ຢາງແມ່ປັ່ເບກ	CUP , CYLINDER
18	ຢາງຄາດນອ້ຍ	CUP , PISTON
19	ໃສ້ກອງອາກາດ	ELEMENT SUB ASSY , A / C FILTER
20	ຊາບອິກ STD	BEARING SET , CRANK SHAFT STD
21	ຊາບກ້ານ STD	BEARING SET , CONROD , STD
22	ຊາບກັນລຸນ STD	WASHER SET , CRANKSHEFT THRUST , STD
23	ກະບອກຄາດລຸ່ມ	CYLINDER ASSY , CLUTCH RELEASE
24	ລູກປີນຄາດ	BEARING , CLUTCH THROW OUT
25	ແມ່ປັ່ຄາດ	CYLINDER ASSY , MASTER
26	ຊຸດສອ້ມແມ່ປັ່ຄາດ	PISTON SUB ASSY , MASTER CYLINDER
27	ປັ່ແຍກ	PUMP ASSY , FUEL FEER
28	ຟອຍປັ່ແຍກ	COVER , PRIMING PUMP
29	ໃບພັດ	FAN SUB ASSY , COOLING

30	ປານ໌	PUMP ASSY, COOLANT
31	ຊິນປານ໌	SEAL SUB ASSY , COOLANT PUMP
32	ປາ໌ລິມ	COMPRESSOR ASSY , AIR
33	ລູກສູບປາ໌ລິມ	PISTON
34	ແຫວນສູບປາ໌ລິມ	PISTON RING SET
35	ໃດສາກ	ALTERNATOR ASSY
36	ໃດສະຕັດ	STARTER ASSY
37	ທ່ານ໌ເທິງ	HOSE RAD
38	ທ່ານ໌ລຸ່ມ	MOSE RAD
39	ຄັ້ນກົດໄຟລົງ	SWITCH ASSY , TURN SIGNAL
40	ສະວິກໄຟເບກ	SWITCH ASSY
41	ສະວິກໄຟຖອຍ	SWITCH ASSY , BACK UP LAMP
42	ແມ່ປາ໌ເບກ	CYLINDER , BREAK MAIN
43	ຊິກອັບໜ້າ	SHOCKABSORBER ASSY , FRONT
44	ຊິກອັບຫລັງ	SHOCKABSORBER ASSY , RR
45	ລູກປິນລີ້ໜ້ານອກ	BEARING , TAPERED ROLLER OUT
46	ລູກປິນລີ້ໜ້າໃນ	BEARING , TAPERED ROLLER IN
47	ຊິນລີ້ໜ້າ	SEAL , OIL
48	ລູກປິນລີ້ຫລັງນອກ	BEARING , TAPERED ROLLER OUT
49	ລູກປິນລີ້ຫລັງໃນ	BEARING , TAPERED ROLLER IN
50	ຊິນລີ້ຫລັງໃນ	SEAL , OIL IN
51	ຊິນລີ້ຫລັງນອກ	SEAL , OIL OUT
52	ລູກໝາກແຂນສົ່ງຊ້າຍ	END ASSY , TIE ROD , LH
53	ລູກໝາກແຂນສົ່ງຂວາ	END ASSY , TIE ROD , RH
54	ປາ໌ລິມ	PUMP ASSY OIL
55	ຄອມແອ	AIR COMPRASSOR
56	ນອ້ດຕັກເກ ໜ້າ. ຫລັງ	HUBBOLT (FRONT. REAR)
57	ຜ້າເບກ. ໜ້າ. ຫລັງ	BRAKE LINING (FRONT. REAR)
58	ກະບອກເບກ ໜ້າ	HYDRAULIC BRAKE CYLINDER (L. R) FRONT ASSY
59	ກະບອກເບກຫລັງ	HYDRAULIC BRAKE CYLINDER (L. R) REAR (UP. DOWN) ASSY
60	ຊຸດສະລັກຄານ	KINGPIN SET

61	ຊີກອັບໜ້າ	SHOCK ABSORBER (FRONT)
62	ຊີກອັບຫລັງ	SHOCK ABSORBER (REAR)
63	ໃດປັດນໍ້າຝົນ	MOTOR WIPER
64	ເຕົ້າໄຮໂຕວັກຄາດ	CLUTCH BOOSTER
65	ເກນ້ຳມັນເຄື່ອງ	OIL PRESSURE
66	ເກຄວາມຮ້ອນ	WATER TEMPERATUR
67	ປຸ່ມຊີຍານ	FLASHER
68	ສະວິກປັດນໍ້າຝົນ	SWITCH ASSY WIPER SET
069	ປໍ້າກາຊວມ	PUMP ASSY INJ PUMP
70	ຫົວສິດ	NOZZLE AND HOLDER SET

DIRECTOR

HEAD OF TECHNICAL



ບຸນປອນ ຟອງມະນີ

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KEI

KEI 聖仁 Aug. 19. 2010

6. 参考資料／収集資料リスト

6.1 PDM案

プロジェクトデザインマトリックス (PDM)
 プロジェクトタイトル:ピエンチャンバス公社運営能力改善プロジェクト
 期間: 2012年 6月/2015年 5月 (3 years)
 プロジェクト対象地域:ピエンチャン首都圏
 ターゲットグループ: ピエンチャン首都圏国営バス会社(VCSBE)、公共事業・運輸省運輸局(MPWT/ DOT)、ピエンチャン市公共事業運輸局(VC/DPWT)

作成年月日 No.2 12/Aug/2010

	目標	入手手段	外部条件
スーパージョー 対象地域で「環境持続的」交通(EST)が実現する 交通事故が減少する 交通渋滞が減少する 上位計画 - 会社バスによる事故が減少する。 - バス利用者が増加する - バスサービスエリア増加する	<ul style="list-style-type: none"> - 大気汚染・CO₂ 排出量の減少 - 交通事故データ - 交通渋滞データ 	<ul style="list-style-type: none"> - 大気データ・モーターソフト量 - 交通統計・交通警察 - 交通調査 	
プロジェクト目標 効果的なバスサービスが確立する	<ul style="list-style-type: none"> - バス事故数 - バス利用者数の増加 - 路線・エリアの増加 	<ul style="list-style-type: none"> - バス会社・交通警察 - バス料金・利用者 - 路線とカバー人口 - モニタリング調査 	<ul style="list-style-type: none"> - 他セクターの大気汚染ガス・CO₂ 排出量が増加しない - モーターソフトの政策が実行される - 交通管理が実行される
成果 1. バス公社は会社経営を改善した。	<ul style="list-style-type: none"> - バスサービス指標 (LOS) - バス会社の収支の改善 	<ul style="list-style-type: none"> - バス運行記録 - 料金収入記録 - モニタリング調査 	
2. バス利用者の要望によりサービスが改善される	<ol style="list-style-type: none"> 1.1 収入の増加 1.2 企業会計管理の確立 - 財務諸表の作成 - 内部留保金 1.3 人材育成・教育記録 1.4 バス車両台数の増加 2.1 交通委員会の設置 2.2 バスサービス水準の判定 - サービス標準の決定 - 運行回数と時間の遵守 - バス停の設置基準 3.1 公共交通政策の確立 - バス料金制度 - 補助金制度 - 優遇税 3.2 バス公共交通中期計画 - バススケジュール - 新路線計画 - バスステーション計画 	<ul style="list-style-type: none"> - 財務諸表 - 教育記録 - バス車両記録 - 委員会記録 - サービス水準記録 - バス運行記録 - バス利用者調査 - 公共交通基本政策の作成記録 - バス公共交通中期計画の作成記録 	<ul style="list-style-type: none"> - バス車両・燃料・部品代等の価格が安定する。
3. バス公共交通によって有利な公共交通政策と計画が設定される			

<p>活動</p> <ol style="list-style-type: none"> 1. バス会社の経営を改善する <ol style="list-style-type: none"> 1.1 財務状況を改善する <ol style="list-style-type: none"> 1-1-1 財務分析と試算を作成する (PL & BS、路線ごとの PL) 1-1-2 中期経営・投資計画を作成する 1-1-3 料金徴収システムを MPWT と改善する (ex. チケット・定期券・料金箱・往復チケット) 1-1-4 乗客・料金記録システムを改善する 1-1-5 バス会社の料金以外の収入源を確立する 1-1-6 バス利用者拡大策をとる (ex. 広告・キャンペーン・バス路線図配布) 1-1-7 大学・専門学校バスサービスを試行する 1-2. カウンターパートの能力向上を図る <ol style="list-style-type: none"> 1-2-1 会計・運営・車両維持管理・指導能力を向上させる 1-2-2 バスの日常運行規則を改善する 1-3 車両運営・管理機材と施設を改善する <ol style="list-style-type: none"> 1-1 GPS 等の車両管理機器を設置する 1-2 計画・管理のためのコンピュータシステムの導入により各バスの運行・維持管理記録方式を改善する 1-3 中央バスステーションやバス停の改善を行う 2. バスサービスを改善する <ol style="list-style-type: none"> 2-1 バスサービスのベースライン(弱況)調査を実施する 2-2 効果的なバス利用のために交通委員会を設立する 2-3 バスサービス向上の方法を実施する (ex. バスサービス標準、運行改善、路線改善など) 2-4 コミュニティ要望によりバス路線とバス位置を計画・見直しをする 2-5 バスサービスエリアの改善をする (ex. サービス路線率、現状計画) 3. 公共バス政策と計画を改善する <ol style="list-style-type: none"> 3-1 バス料金構造を見直し、適正料金を確立する 3-2 バス公共交通への補助金政策をみなおす 3.3 バス会社への税金制度をみなおす 3-4 パラトランジットと協同する 3-5 バス交通を阻害する不法駐車を排除する 3-6 他の交通計画と協同する (ADB、WB etc) 3-7 公共交通施策・計画策定の見直しと指導を行う (JICA マスタープランの見直し) 	<p>投入</p> <p><日本側></p> <ul style="list-style-type: none"> - 専門家 - 公共交通 - 会社経営・財務 - 運営・運行 - バスサービス - 車両管理・維持修繕 - 交通計画・交通調査 <p>資機材</p> <ul style="list-style-type: none"> - GPS (バス運行記録計) - コンピュータ - 交通解析ソフト (STRADA 等) <p><ラオス側></p> <ul style="list-style-type: none"> - カウンターパート - バス駐機場 - 事務所 	<p>前提条件</p>
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6.2 収集資料リスト

収集資料リスト (Data collection)

番号	名称	形態	オリジナル ・コピー	発行機関	発行年
1	National Socio-Economic Development Plan (2006-2010)	図書	コピー (抜粋)	Committee for Planning and Investment	2006年10月
2	Statistical Year Book 2009	図書	コピー	Ministry of Planning and Investment	2010年6月
3	Statistical Year Book 2008	図書	コピー	Ministry of Planning and Investment	2009年6月
4	Statistical Year Book 2007	図書	コピー	Ministry of Planning and Investment	2008年6月
5	The Comprehensive Study on Logistics System in Lao PDR Interim Report	図書	コピー	Japan International Cooperation Agency	2010年1月
6	Preparing the Implementation of Asian City Transport – Promoting Sustainable Urban Transport in Asia Project	図書	コピー	Asian Development Bank	2009年1月
7	Interim Report, Vientiane Sustainable Urban Transport Project	図書	コピー	Asian Development Bank	2010年11月