

REPUBLIC OF INDONESIA

**REPUBLIC OF INDONESIA
PREPARATORY SURVEY
FOR
LEBAK BULUS STATION AREA DEVELOPMENT
PROJECT
IN
INDONESIA**

Final Report

June 2015

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

**Nippon Koei Co., Ltd.
Tokyu Land Corporation**

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REPUBLIC OF INDONESIA

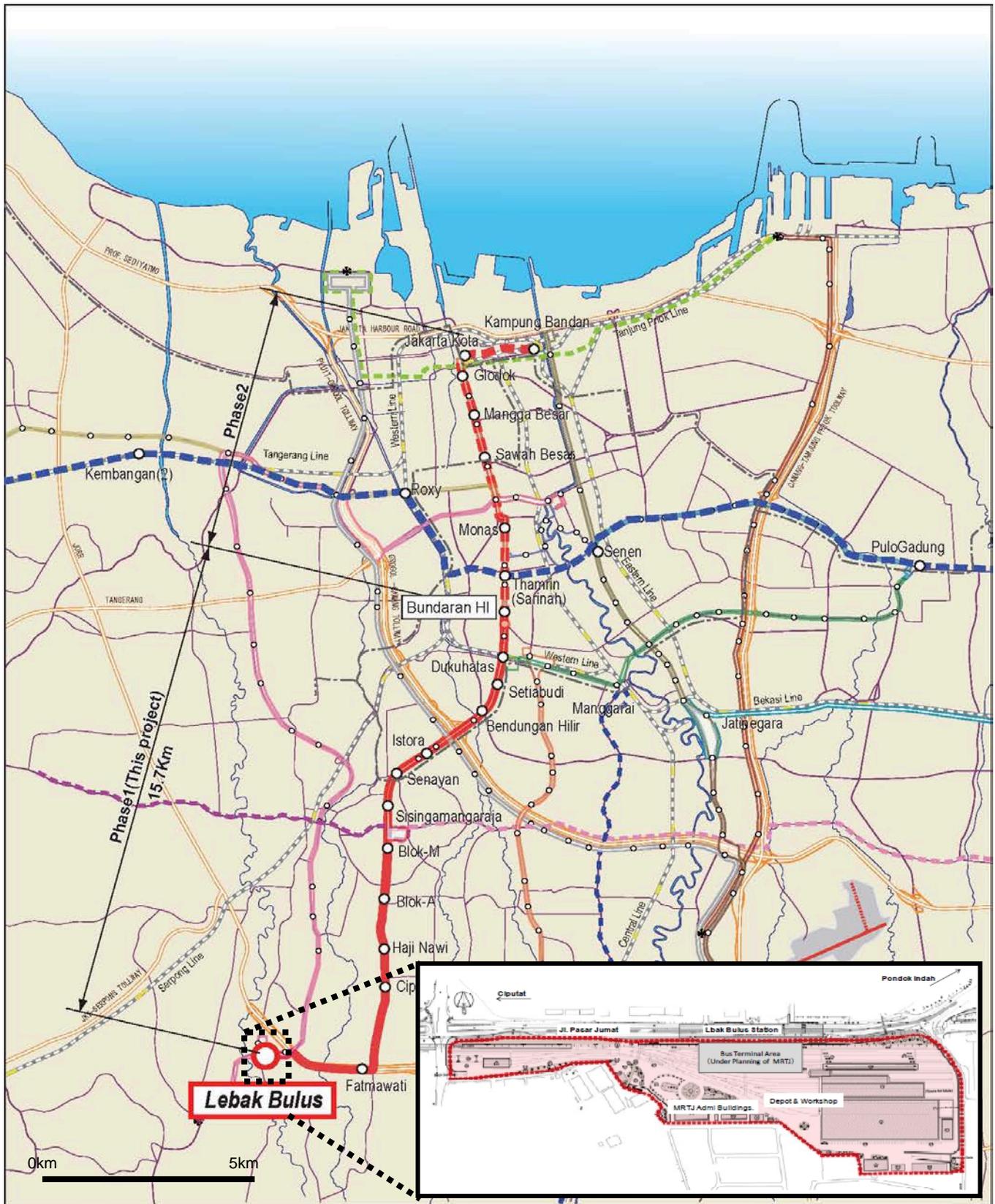
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|--|----------------------------------|--|----------------------------|--|--|--|--|-----------------------|
| | JAKARTA MRT Phase1(This project) | | Jabodabek Railway (PT.KAI) | | | | | } Busway Route (Plan) |
| | JAKARTA MRT Phase2 | | | | | | | |
| | JAKARTA E-W line | | | | | | | |

Location Map

Preparatory Survey for Lebak Bulus Station Area Development Project

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Abbreviation List

AoA	The Articles of Association
APBD	Local Budget (Anggaran Pendapatan dan Belanja Daerah)
ARSDS	Arterial Roads Development Study in Jakarta Metropolitan Area
B to B	Business to Business
BAL	Basic Agrarian Law
BAPPEDA	Badan Perencanaan Pembangunan Daerah (Regional Development Planning Board)
BKPM	The Investment Coordinating Board of the Republic of Indonesia
BoC	The Board of Commissioners
BoD	The Board of Directors
BPN	Badan Pertanahan Nasional (National Land Board)
BTO	Build Transfer Operate
BTS	Bangkok Mass Transit System
BUMD	Regional-Owned Enterprises (Badan Usaha Milik Daerah)
CBD	Central Business District
DKI Jakarta	Special Capital City Jakarta (Daerah Khusus Ibukota Jakarta)
DPPB	Dinas Pengawasan Penertiban Bangunan
FIRR	Financial Internal Rate of Return
GDP	Gross Domestic Product
GMS	The General Meeting of Shareholders
GNI	The Gross National Income
GOI	The Government of Indonesia
GR	Government Regulation
GRDP	Gross Regional Domestic Product
HGB	Hak Guna Bangunan (Right of building)

HP	Right of use (Right of use)
IIGF	Indonesian Infrastructure Guarantee Fund
IMB	Izin Mendirikan Bangunan (Construction Permits)
IPB	Ijin Penggunaan Bangunan (Building Utilization Permit)
JICA	Japan International Cooperation Agency
JKT	Jakarta
JORR	Jakarta Outer Ring Road
JUTPI	JABOTABEK Urban Transportation Policy Integration
JV Corp.	Joint Venture corporation
K&R	Kiss-and-Ride
KDB	Koefisien Dasar Bangunan (Building Coverage Ratio)
KLB	Koefisien Lantai Bangunan (Floor Plan Coverage Ratio)
KMB	Feasibility of Building Utilization
KRK	Ketetapan Rencana Kota (City Plan Determination)
METI	Ministry of Economy, Trade and Industry
MICE	Meetings, Incentives, Conventions, and Exhibitions
MoLHR	the Ministry of Law and Human Rights
MP3EI	the Master plan for the Acceleration and Expansion of Indonesia's Economic Development
MRT	Mass Rapid Transit
NFPA	National Fire Protection Association
NPWP	Nomor Pokok Wajib Pajak (Tax Registration Number)
O&M	Operation and Maintenance
ODA	Official Development Assistance
P&R	Park and Ride
PALYJA	PAM Lyonnaise Jaya
PBB	Real-estate Tax (Pajak Bumi dan Bangunan)

PIMB	IMB Application
PIP	Pusat Investasi Pemerintah (Government Investment Center)
PLN	Perusahaan Listrik Negara (National Electricity Company)
PPP	Public Private Partnership
PR	Presidential Regulation
PSIF	Private Sector Investment Finance
ROW	Right of Way
RTLB	Rencana Tata Letak Bangunan (Building Layout Plan)
RTRW	Rencana Tata Ruang Wilayah (Spatial Plan DKI Jakarta, 2011-2030)
S&T	Soemadipradja & Taher
SIBP	Sertifikat Izin Bekerja Perencanaan (Work Permits for Construction Works)
SIPPT	Surat Izin Penunjukan Penggunaan Tanah (A License of Appointment and Utilization)
SIPTB	Surat Izin Pelaku Teknis Bangunan (A Licensed Structure Designer)
SPC	Special Purpose Company
SPT	Standard Penetration Test
STS	Surat Tanda Setoran (Payment Receipt)
TPAK	Urban Architectural Advisor Team
TPIB	Installation Advisory Team
TPKB	Building Construction Advisory Team

Chapter 1 Project Overview

1.1 Project Background

1.1.1 State and Issues of Urban Transport Sector in Jakarta Metropolitan Area

The population of Jakarta Metropolitan Area has increased 1.3 times in the decade ending in 2010 (2.8% annual growth), reaching a population of 28 million people. The population growth is especially remarkable in the suburbs of Jakarta (Bogor, Depok, Tangerang, and Bekasi). The number of commuters travelling from the suburbs into Jakarta city center has also increased 1.5 times in eight years, from 743,000 people (2002) to 1,105,000 people (2010). Transportation in Jakarta Metropolitan Area has been relying heavily on road traffic (98%), and with the robust economic growth of Indonesia, the number of registered automobiles jumped to 96.3 million in 2010 (an increase of 3.6 times in one decade), which has been causing serious traffic congestion in the area.

In order to alleviate the heavy traffic congestion by enhancing the transportation capacity, a project funded by Japanese ODA Loan is underway, i.e., Jakarta Mass Rapid Transit (hereinafter referred to as “MRT”) North-South Line Phase I (Lebak Bulus–Bundaran HI, total length of 15.7 km). In addition to the MRT North-South Line Project, a variety of other transportation projects are ongoing in the said area such as MRT East-West Line Project, which will cover three provinces, namely: DKI Jakarta, West Java, and Banten; Circularization of JABODETABEK Railway Project; and Airport Line to the Soekarno-Hatta Airport. As these projects are making progress independently, it has become more important to develop transport hubs through station area development, which stimulates people to use public transportation mode more and contributes to enhancing the impact the railway project has in reducing traffic congestion.



Source : JICA Study Team

Figure 1.1-1 Location Map of Jakarta MRT and Lebak Bulus Station

1.1.2 Position of Development Plan in Urban Transport Sector and this Project in the Area

One of the most important economic activities is the development of the Jakarta Metropolitan Area under the “Master Plan for the Acceleration and Expansion of Indonesia's Economic Development (MP3EI)” and “Rencana Pembangunan Jangka Menengah (hereinafter referred to as RPJM:2010-2014)”, which aim to improve urban transport systems in megacities including Jakarta Metropolitan Area as a development policy in the urban transport sector. Moreover, station area development is one of the prioritized projects under the “Master Plan of Metropolitan Priority Area (MPA) in Jakarta”, and this project has a high priority. “National Mid-term Development Plan (2015-2019)” announced officially on January, 2015, describes the development of mass transit system as one of the important goals and it also indicates specific targets for modal shift and implementation of mass transit system project.

The Development of Lebak Bulus Station Area Project (hereinafter referred to as “the Project”) focuses on the southernmost station of the MRT North-South Line which is already funded by Japanese ODA Loan. It aims to develop the transportation hub in the said station area, which will drastically improve the development impact of the MRT North-South Line. All the goals of the Project meet the development policies of the Indonesian government. Besides, DKI Jakarta has established the Urban Design Guidelines (UDGL) in 2011 for setting up the basic policies of land use, urban design, and station area development, which aims at the revitalization of the station areas of the MRT Line. The development of the Lebak Bulus Station area as a transportation hub is one of the goals to be achieved under this framework.

1.1.3 State and Policy of Aid of Japan and JICA to Urban Transport Sector

The JICA Country Assistance Strategy for Indonesia determined the need for “assistance for additional economic growth” in important sectors, and mentioned the “development of infrastructures in metropolitan area” as one of the development subjects. Moreover, JICA Analytical Work for Indonesia also analysed the “development of infrastructure in metropolitan area” as an important subject. This Project corresponds to these strategy and analysis in order to contribute to improving convenience and profitability of MRT projects in Jakarta.

(Main Result)

Japanese ODA Loan	<ul style="list-style-type: none"> - Construction of Jakarta Mass Rapid Transit System Project (I) - Construction of Jakarta Mass Rapid Transit System Project (E/S) - The Detailed Design Study of Railway Electrification and Double-Double Tracking of Java Main Line Project in Indonesia - Jabodetabek Railway Capacity Enhancement Phase-1
Development Planning	<ul style="list-style-type: none"> - Metropolitan Priority Area for Investment and Industry (MPA)
Technical Cooperation Project	<ul style="list-style-type: none"> - The Project for PPP Network Enhancement - JABODETABEK Urban Transportation Policy Integration - JABODETABEK Urban Transportation Policy Integration(Phase2) - Project for the Study on JABODETABEK Public Transportation Strategy
JICA PPP Investigation	<ul style="list-style-type: none"> - Development of Urban Transport and Central District in Greater Jakarta (Model Case of Dukuh Atas Station Area)

1.1.4 Necessity of the Project

(1) Necessity of Schemes to Develop Public Infrastructure of MRT and to Reduce Fiscal Burden of DKI

In October 2012, Joko Widodo (current President of Indonesia) started working as DKI's new governor, and Jakarta MRT North-South Line Phase 1 Project was reviewed by the new government. At first, the discussion was concentrated on the validity of the construction cost and now it has extended to the discussion of the cost-sharing agreement between the central government and local government, where before it was agreed that the central government would bear 42% of the cost and 58% would come from the local government. Now, it was finally changed to 49% for the central government and 51% for the local government. The re-examination comes from the high risk that DKI is demanded to subsidize in the future since PT MRT Jakarta's income was compressed in order to keep the public fare at a low level resulting in a higher investment cost. Against this circumstance, it is necessary to conduct development of public infrastructure for transportation node at lower public cost.

(2) Transit Oriented Development (TOD) is Highly-Publicized within DKI Jakarta.

DKI decided to conduct TOD along with the MRT project and formulated UDGL, which induces the development of Lebak Bulus Station as a regional urban core. Lebak Bulus Station, which is a starting station, is a south gate for users of buses, cars, and motorcycles to transit to MRT heading for the urban center. It will also determine the success of the Jakarta MRT North-South Line Project's function as a transport node.

(3) High Potential and Degree of Development of The Project

It is necessary to create functions such as transit and cores along the MRT line. The following Table 1.1-1 indicates the major stations' functionality which can have an expected project effect on the MRT North-South Line (Phase-1).

Table 1.1-1 Functionalities which can Affect the Project

Station	Potentiality	Necessary function	Urgency
Bundaran HI	Existing high-class hotel and shopping center	Commercial center	High
Dukuh Atas	Connection to JABODETABEK railway (west line)	Transit among rail and rail	High
Blok M	Connection to city bus terminal	Transit among bus and rail	High
Fatmawati	Cross section of major roads	Park & Ride	High
Lebak Bulus	Existing bus terminal of DKI south part	Complex cores	Very High

Source : JICA Study Team

Lebak Bulus Station is a starting station of Jakarta MRT North-South Line. The surrounding area of the station is an important urban core where people gather and serves as a transport terminal for the DKI south area having Jakarta Outer Ring Road, bus terminal, and large commercial facilities such as Carrefour and Point Square. Therefore, Lebak Bulus Station is required to function as a transport node connecting railways and buses, which means it has a high potential for promoting high density urban functions. It is expected that the station will develop as a growth core for DKI south area. Also, the area in front of the station was already acquired by DKI for development of a vehicle depot and is now under new ownership. In the development area, right of use for all the land is owned by DKI. So, the area is the most suitable location for the implementation of the Project and has a high potential for development. It is a concern, however, that the development vision is not shared by the provincial government and the future of MRT is very uncertain. The existing plan of Lebak Bulus Station is designed such that the front space of the station is occupied by a rail yard facility and bus

terminal to promote transit to MRT and that core facility such as a community center for the south part of DKI is not included.

The railway alignment of the depot area (especially stabling lines) is designed to pass within the space between the columns of the bus terminal deck. The stabling lines are spaced 5 m for every two stabling lines considering the width of the columns. Unfortunately, these columns cannot be constructed after the start of MRT operations because it is very difficult to construct foundations, underground beams, and footings once the MRT is in operation.

1.1.5 Budget Allocation

The cost of the bus terminal deck was not originally included in the allocated amount for eligible items in the MRT loan amount. Thus, the budget allocation of the deck needs to be ensured. It is considered for the special purpose company (SPC) to secure the budget after the participants of SPC agreed the project scheme at the initial stage. It is necessary to decide the direction of the Project and prepare the required documents.

1.1.6 Setting of HPL to BUMD

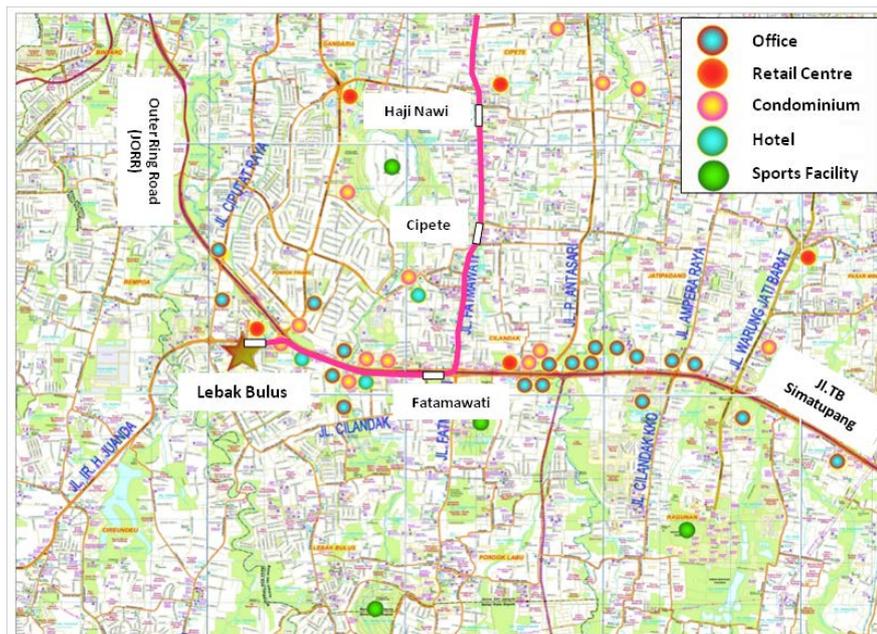
The Project area is already owned by DKI, which is called *Hak Pakai*. It is necessary to set up the handover of concession from the provincial government to BUMD at the start of the construction since area development, including deck, will be conducted by SPC which consists of BUMD and investors.

1.2 Objectives of Survey

The purpose of the survey is to carry out and obtain the demand forecast, project scope, project cost estimation, fund-raising, implementation schedule, construction method, project implementation structure, operation and management structure, environmental and social impact, and project effect.

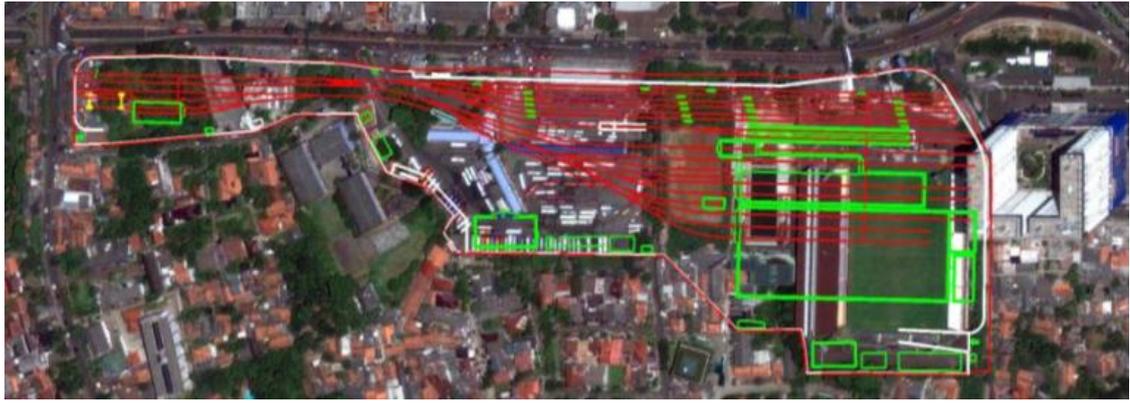
1.3 Survey Area

The survey areas are shown in the following figures:



Source : JICA Study Team

Figure 1.3-1 Location of Survey Areas (Surrounding Areas of Lebak Bulus Station)



Source : JICA Study Team

Figure 1.3-2 Location of Project Area (Lebak Bulus Station)

Chapter 2 Basic Survey

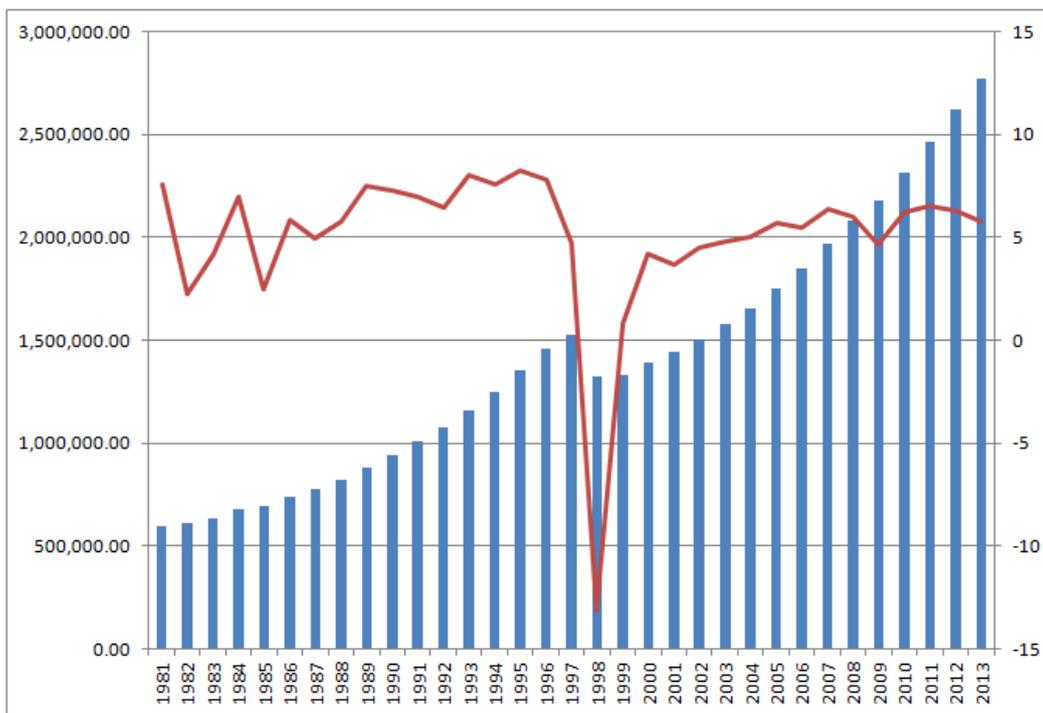
2.1 Current Status and Challenges of Urban Transportation Sector in Jakarta Metropolitan Area, and Necessity of the Project

2.1.1 Social Economic Status of the Country and the Government

(1) Economy of Country

Today, Indonesia is classified as a middle income country. In 2013, the gross domestic product (GDP) value of Indonesia reached up to US\$236 billion and the gross national income (GNI) per capita reached US\$2,940.

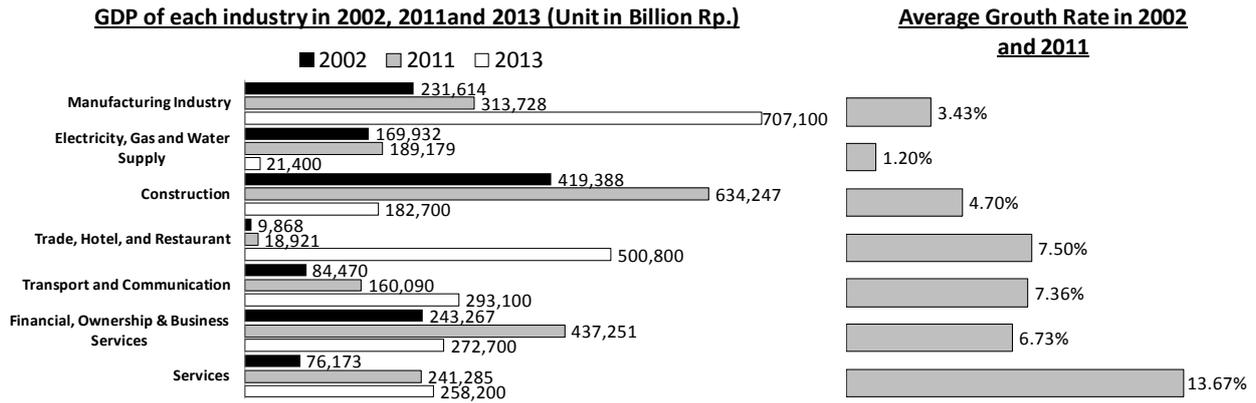
The average growth rate of GDP from the late 1980s to 1997 was kept high, recording at 6.0%/year. Although it dropped by more than 13% after the Asian financial crisis in 1997, it gradually recovered due to the stimulation of the economy through monetary easing and large economic aid from Japan. In 2008, the growth rate of GDP temporarily became low because of the economic downturn precipitated by the bankruptcy of Lehman Brothers. However, in Indonesia, as the degree of dependence on foreign trade is low and level of domestic demand is high, the economy recovered and its GDP growth rate became 6.2% in 2011. The relation between GDP and its growth rate from 1981 to 2011 is shown in Figure 2.1-1.



Source : IMF- World Economic Databases (October 2013)

Figure 2.1-1 Transition of GDP and its Growth Rate

One of the biggest industries which has driven the high GDP and growth rate recently is the construction industry. The ratio of the construction industry in GDP is almost 26% and its growth rate is 4.7%/year. Recently, the transportation and communication industry has also shown strong growth rate at nearly 7.0%/year (See Figure 2.1-2).



Source : International Financial Statistics Yearbook 2012

Figure 2.1-2 GDP of Each Industry and Average Growth Rate

In 2011, the gross regional domestic product (GRDP) of DKI Jakarta was Rp450 trillion (¥3.8 trillion). In the last five years, the average growth rate of GRDP was 6.0% as shown in Figure 2.1-3.

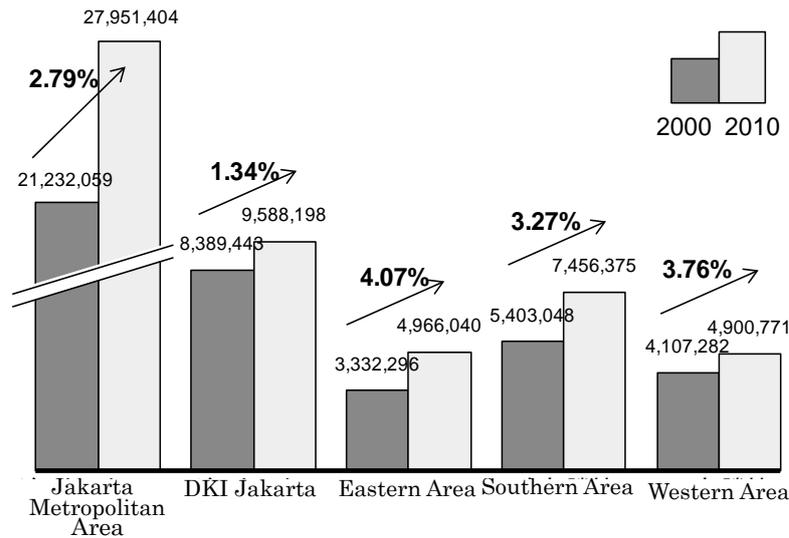


Source : Badan Pusat Statistik

Figure 2.1-3 GRDP in Each Region from 2006 to 2010

(2) Socio Economic Trend

In 2010, the total population of JABODETABEK area was 28 million and 34% lived in DKI Jakarta. Figure 2.1-4 shows the population and average growth rate of DKI Jakarta, and the eastern, southern, and western adjacent areas from 2000 to 2010. In all cases, the growth rate in the adjacent areas is higher than that of DKI Jakarta, which is the center of Jakarta Metropolitan Area.

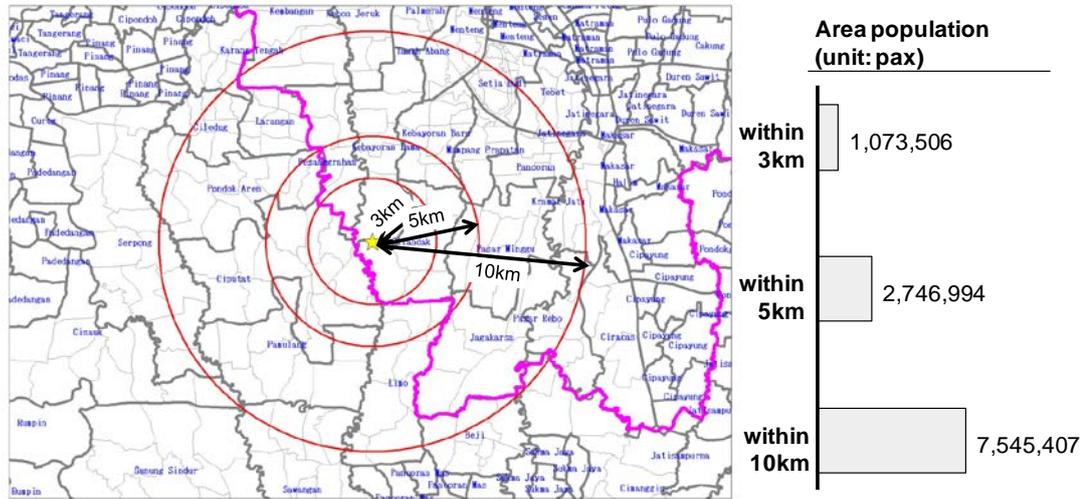


Note: Eastern adjacent area: Kota Bekasi, Kabupaten Bekasi
 Southern adjacent area: Kota Depok, Kota Bogor, Kabupaten Bogor
 Western adjacent area: Kota Tangerang, Kota Tangerang Selatan, Kabupaten Tangerang

Source : METI Study Report

Figure 2.1-4 Population of Jakarta Metropolitan Area

Lebak Bulus area is located in the southern part of Jakarta City which is near the border of DKI Jakarta Province and Banten Province. There are 1.07 million people living in the area even up to 3 km from the Lebak Bulus Station. From these facts, it can be said that the Lebak Bulus area has high potential to be the center of commerce and transportation in the southern area.



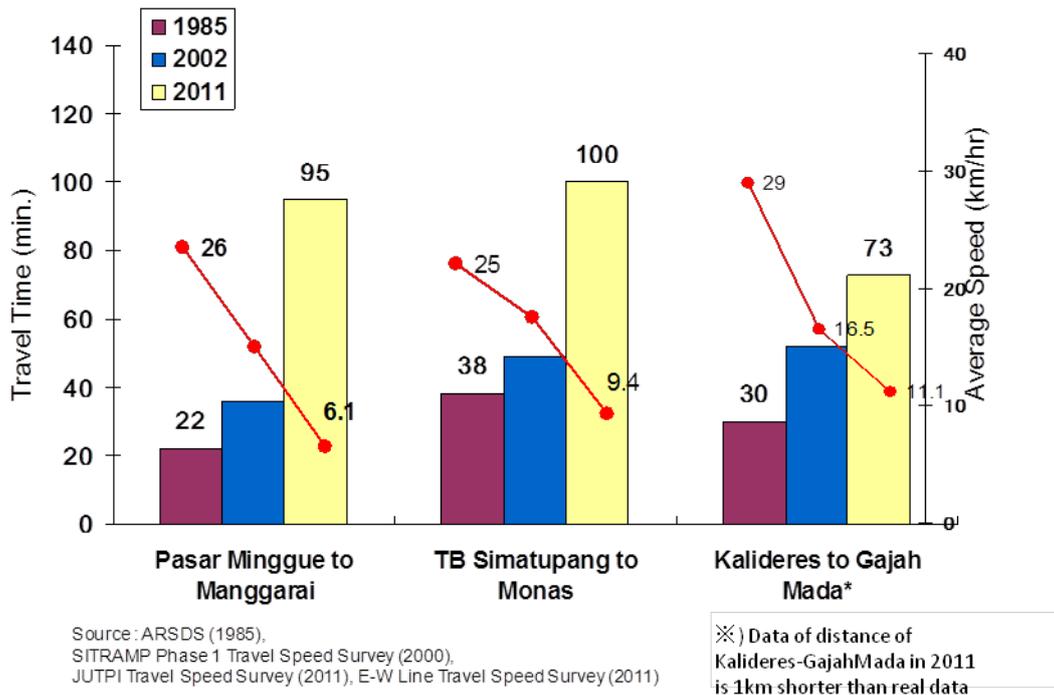
Source : METI Study Report

Figure 2.1-5 Population of the Areas Around Lebak Bulus Station

2.1.2 Current Status and Challenges of Urban Transportation Sector in Jakarta Metropolitan Area, and Relevant Policies, Development Plans, Budget and Financial Resource of Indonesian Government

(1) Issues of Urban Transportation in Jakarta Metropolitan Area

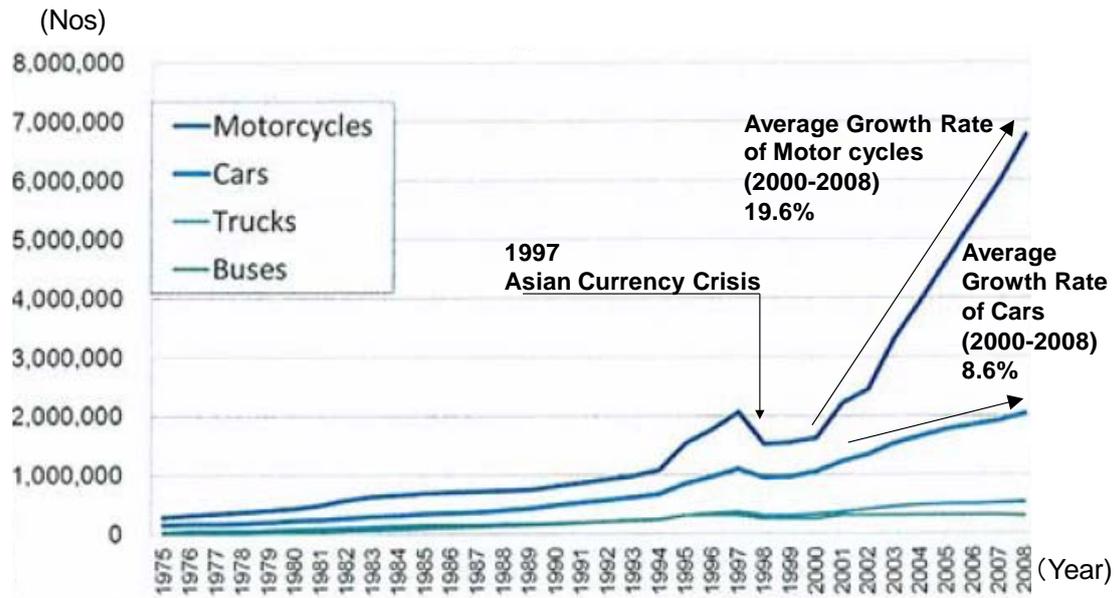
Lately, the urban transportation in Jakarta Metropolitan Area has faced severe problems. In particular, road traffic problem is one of the worst problems among them. Traffic jam frequently happens around the city that makes the average travel speed lower and travel time longer as shown in Figure 2.1-6.



Source : METI Study Report

Figure 2.1-6 Transition of Average Travel Speed and Travel Time in the Main City of Jakarta Metropolitan Area (1985, 2002, 2011)

In addition, the number of people who used motorcycle to save time and avoid traffic jams caused by cars are increasing every year. This becomes another cause of traffic congestion and makes the situation worse. According to the survey which was conducted recently, the number of motorcycle increased dramatically from 1.62 million in 2000 to 7.51 million in 2008. It is also reported that the average rate of increase of motorcycle in the last ten years is about 19.6% (as shown in Figure 2.1-7).



Source : METI Study Report

Figure 2.1-7 Transition of Average Travel Speed and Travel Time in the Main City of Jakarta Metropolitan Area (1985, 2002, 2011)

The rapid increase in population and economic growth also make the road traffic situation worse. According to the quarterly report made by the World Bank(WB), people in the middle income class, whose expenditure is US\$2-20 (¥170-1,650), remarkably increased and reached 131 million, which is more than half of the population of Indonesia in 2010. Since they are expected to buy cars or motorcycles, they are regarded as good consumers in terms of economics. However, in urban transportation, the shift from public to private mode of transportation makes the road traffic situation worse. Therefore, appropriate countermeasures are urgently needed to improve the situation.

(2) Basic Policy for Urban Transport

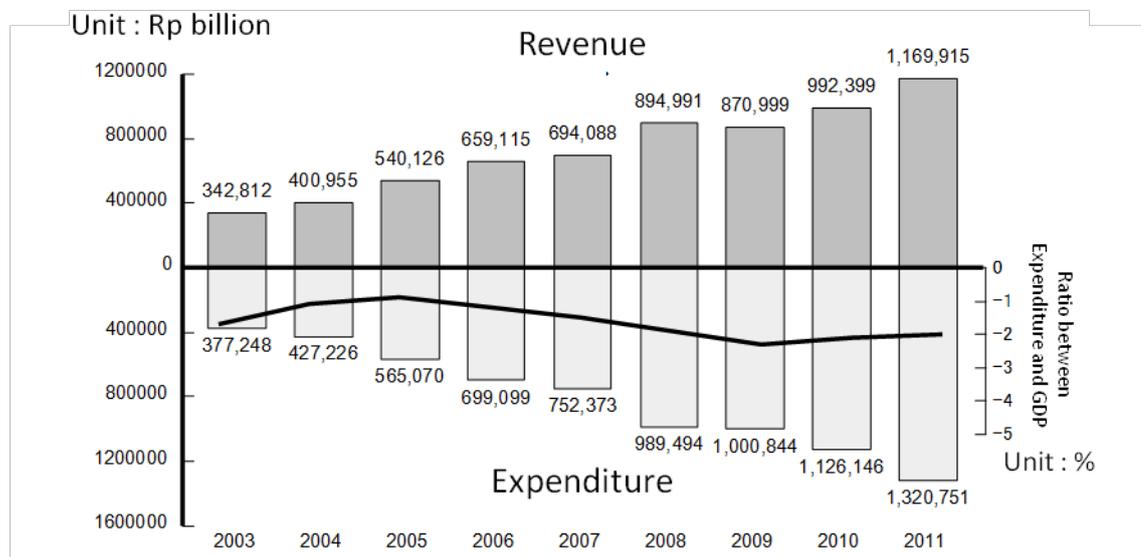
The increasing number of cars and motorcycles on the road has caused various kinds of problems in the society. These are not only problems on transportation but also on environment. Consequently, a policy considering both transportation and land use is especially required. Specifically, an urban transportation policy which considers Transit Oriented Development (TOD) and Transport Demand Management (TDM) is required in Jakarta Metropolitan Area as a basic policy.

In 2011, the Government of DKI Jakarta made a guideline for the development around the station area called Urban Design Guidelines (UDGL) which is included in the Jakarta Mass Rapid Transit (MRT) North - South Line Project Phase-1. The said guidelines state that city planning should adopt public transportation and make the MRT station areas compact. Currently, UDGL is under the process of getting approval from the Governor of DKI Jakarta.

DKI Jakarta has already started the implementation of a policy called “3 in 1” as one of the TDM strategies. This policy prohibits the use of private vehicles with less than three people during the rush hours in the morning and evening. However, it has not worked well as a good solution and the introduction of road pricing is required. In addition, the station plaza development is required to catch up with the needs of the park-and-ride (P&R) and kiss-and-ride (K&R), which are introduced as new systems of urban public transport usage. Preparation of parking areas for motorcycles and intercity buses is also a problem in the station plazas. Accordingly, planning and redevelopment which can solve all these problems are urgently required.

(3) Socio Economic Situation

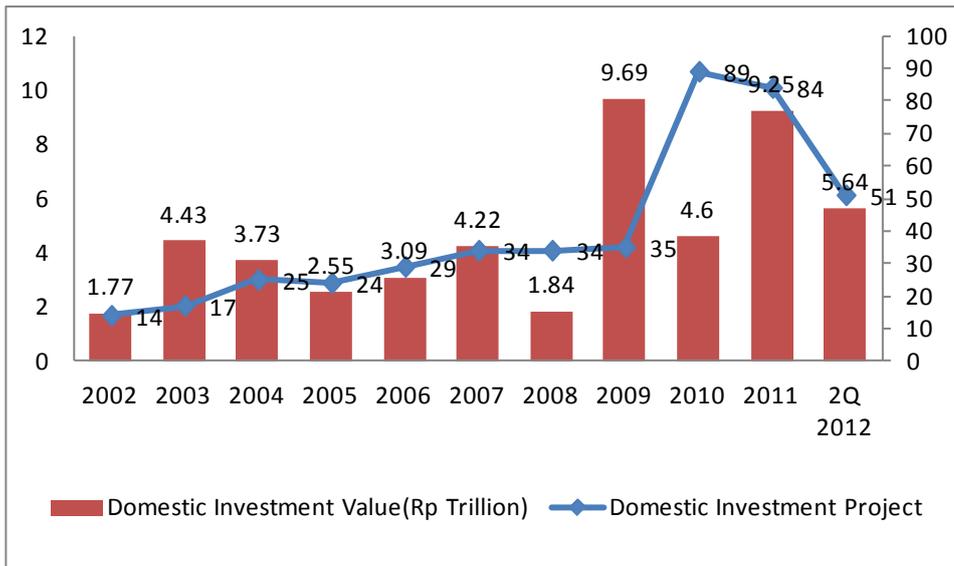
In 2011, the fiscal spending was Rp1,320,751 billion (¥11 trillion) and the fiscal revenue was Rp1,169,915 billion (¥10 trillion) reaching 15% of GDP as shown in Figure 2.1-8. Therefore, recorded deficit was Rp150,836 billion (¥1.3 trillion). Recently, the ratio of fiscal balance to GDP financial condition has been kept around -1 to -2%.



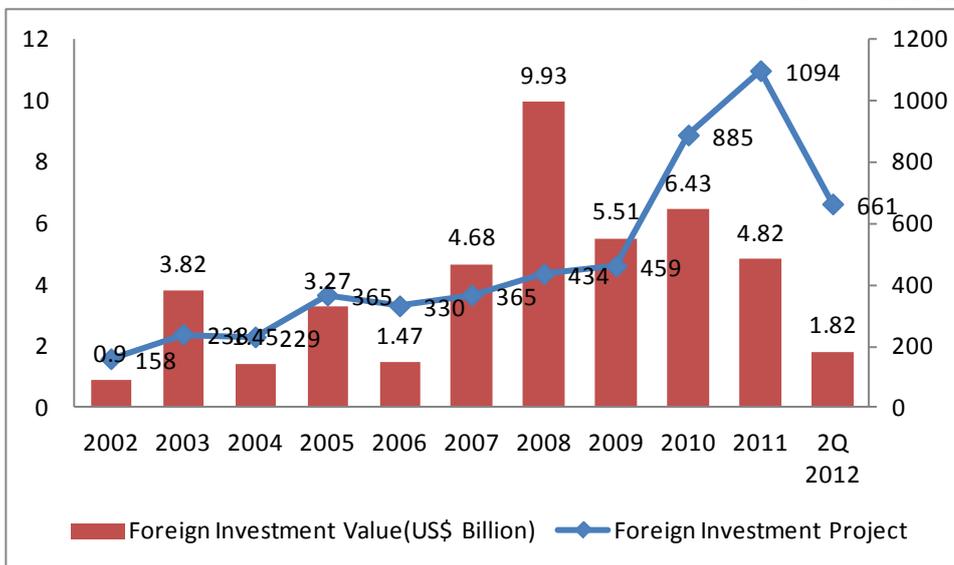
Source : METI Study Report

Figure 2.1-8 Fiscal Balance of the Indonesian Government

In Jakarta, Rp5,640 billion (¥48 billion) of domestic investment (51 projects) and US\$18.2 billion (¥150 billion) of foreign investment (661 projects) were made in the first half of 2012. Assuming that this situation will continue, it can be expected that the amount of domestic investment at the end of 2012 will become larger than that in the first half of 2012.



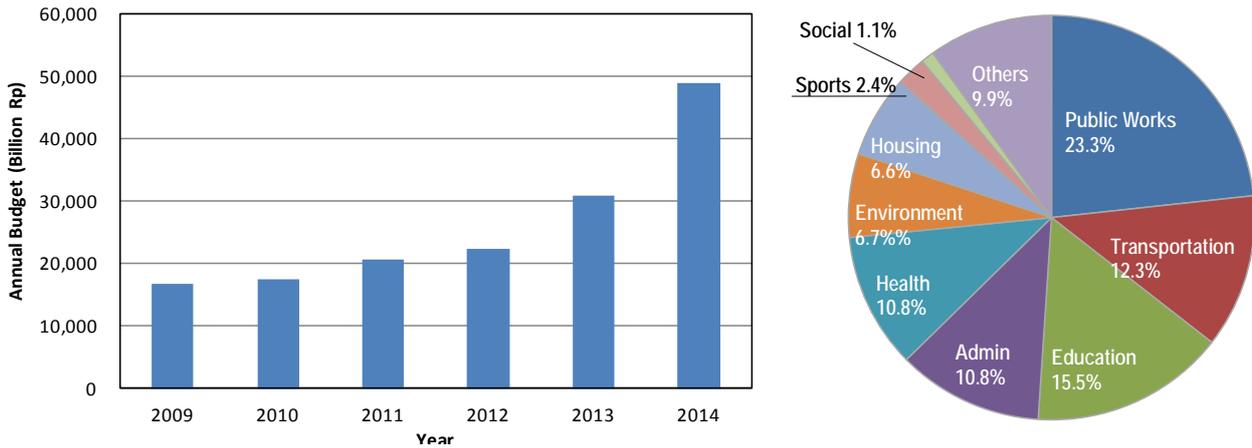
Source : Colliers International Report



Source : Colliers International Report

Figure 2.1-9 Investment Situation in Jakarta

The scale of DKI Jakarta’s annual budget is around 49 trillion Rupiah (approximately 4 billion USD) and it has been increasing every year. According to the breakdown of fiscal year 2014’s budget of DKI Jakarta, 11.5 trillion Rupiah is allocated for public works and its share in the total budget is 23%. This figure fluctuates every year but it fits within the range of 20~30%. In addition, 6 trillion Rupiah is allocated for transportation sector. These two figures, if summed up, turn out to be around 17.5 trillion Rupiah, covering 35% of the total budget of DKI Jakarta. Construction cost of deck, which DKI Jakarta is supposed to cover, is estimated around 368 billion rupiah. This figure shows merely 2% of budget for public works and transportation sector.



Source : Survey Team prepared based on the data in website; <http://www.jakarta.go.id/>

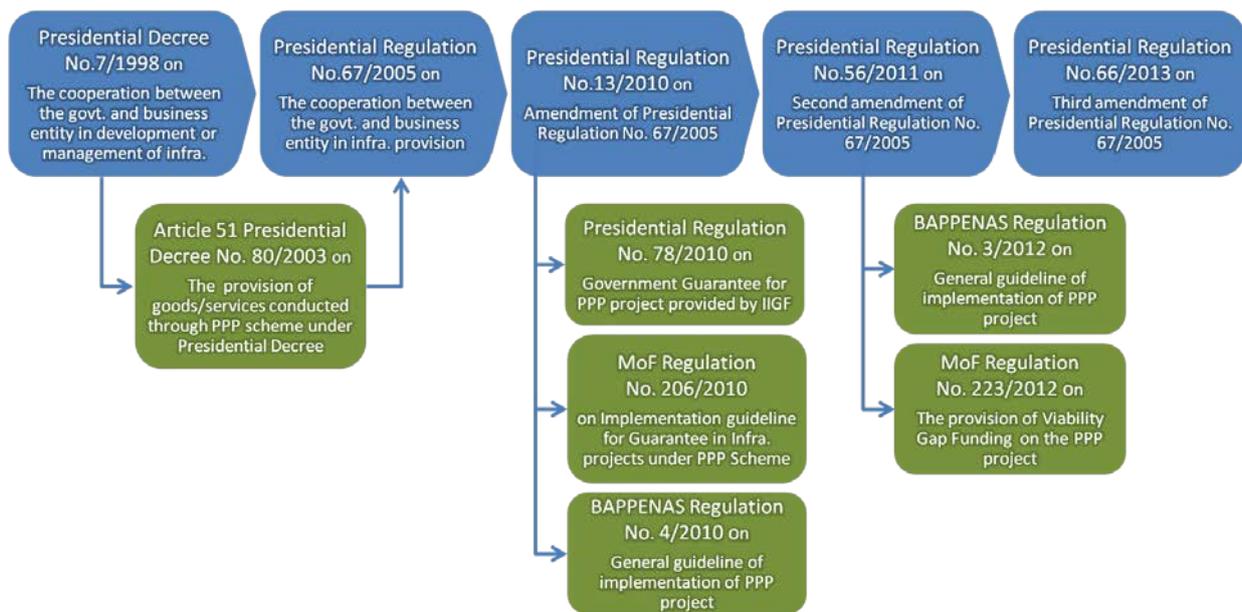
Figure 2.1-10 Recent Trend of DKI Jakarta’s Annual Budget and its breakdown (fiscal year 2014)

2.1.3 Public Private Partnership (PPP) Projects in Indonesia

(1) PPP Projects Based on Presidential Regulation on PPP

The Government of Indonesia (GOI) has been working to improve the investment climate for introducing private finance for infrastructure project in the country. The PPP projects have become increasingly important since the formulation of the Master Plan for the Acceleration and Expansion of Indonesia’s Economic Development (MP3EI) in 2011. This long-term program envisages a high degree of cooperation between the central/local governments, state owned enterprises and the private sector. The PPP projects are expected to play a vital role in MP3EI, and the private sector is expected to contribute the bulk of financing.

The GOI has taken a series of major steps to refine the PPP policy and regulatory frameworks in order to improve the attractiveness and competitiveness of PPP projects in Indonesia. Particularly, in the past decade, PPP regulatory frameworks in the country have been improved rapidly.



Reference : PPP Infrastructure Projects Plan in Indonesia 2013, BAPPENAS

Figure 2.1-11 Evolving PPP Regulatory Frameworks in Indonesia

As a first step, the government established the regulatory framework for PPPs, comprising Presidential Regulation (hereafter mentioned as PR) No. 67/2005 on Cooperation between Government and Business Entities in Infrastructure Provision and its subsequent amendments PR No. 13/2010, PR No. 56/2011, and PR No. 66/2013. Then, the government prepared supporting regulations to address major issues affecting the implementation of PPP projects, e.g., Law No. 2/2012 on land acquisition for public infrastructure projects and Ministry of Finance Regulation No. 11/2012 and No. 223/2013 on the Viability Gap Fund.

Bappenas has also established Ministerial Regulation on PPP Operational Guidelines No. 4/2010 and No. 3/2012 to reflect the evolution of the legal framework and to improve the PPP preparation process. The new regulation synchronizes the processes in the PPP project cycle with the requirements of environmental assessment, land acquisition, resettlement plan, government support, and government guarantee.

PR No. 66 of 2013, an Amendment to PR No. 67 of 2005, governs PPP for specified infrastructure projects. These include airports, ports, railways, roads, untreated water supply/irrigation systems, drinking water, wastewater, solid waste, information and communications technology, electricity, and oil and gas. However, the regulation does not specify station area development project and/or real estate development project. Also, while PR No. 13/2010 allows the Indonesian Infrastructure Guarantee Fund (IIGF) to cover project risks from only the above mentioned sectors, station area development project, bus-terminal and/or real estate development project are not covered as well.

However, PPP project could be implemented without applying the above-mentioned regulations.

(2) **PPP Projects Based on Regulations Other Than Presidential Regulations on PPP**

In Indonesia, only the projects implemented under PR No. 67/2005 and its amendments are defined as PPP projects. However, a number of PPP based infrastructure projects have been implemented under sector specific laws and regulations and/or Government Regulation (hereafter GR) No. 27/2014 on management of state assets¹.

Such non-PPP projects include independent power plant (IPP) projects implemented under Law No. 30/2009 and GR No. 3/2005, an amendment of GR No. 10/1989, water supply project implemented under Law No. 7/2004 and GR No. 16/2005, and toll road projects implemented under Law No. 22/2009, No. 38/2004 and GR No. 44/2009.

The projects implemented under sector specific laws and regulations do not necessarily require competitive tender in selecting private players. These projects basically could not receive fiscal and non-fiscal support from the central government (such as government guarantee and viability gap funding (VGF))².

(3) **Regulatory Bases Suitable for the Project**

As mentioned above, PPP projects in Indonesia can be broadly divided into PPP projects implemented based on PR and non-PPP projects executed based on sector specific laws and regulations.

While the PR on PPP specifies 11 infrastructure sectors as target sector, the regulation does not cover real estate and station area development projects. For this reason, the Project could not be implemented based on the regulation, thereby the Project is not eligible for government guarantee and fiscal support from the central government (incl. VGF). Lack of government guarantee and VGF would be quite severe for the projects, which need to collect revenue from

¹ GR No.6/2006 regarding the management of state/regional assets as amended by GR No.38/2008 was recently replaced by this regulation.

² Previously government guarantee has been given to non-PPP project, which includes IPP projects executed under the Crush Program I and II.

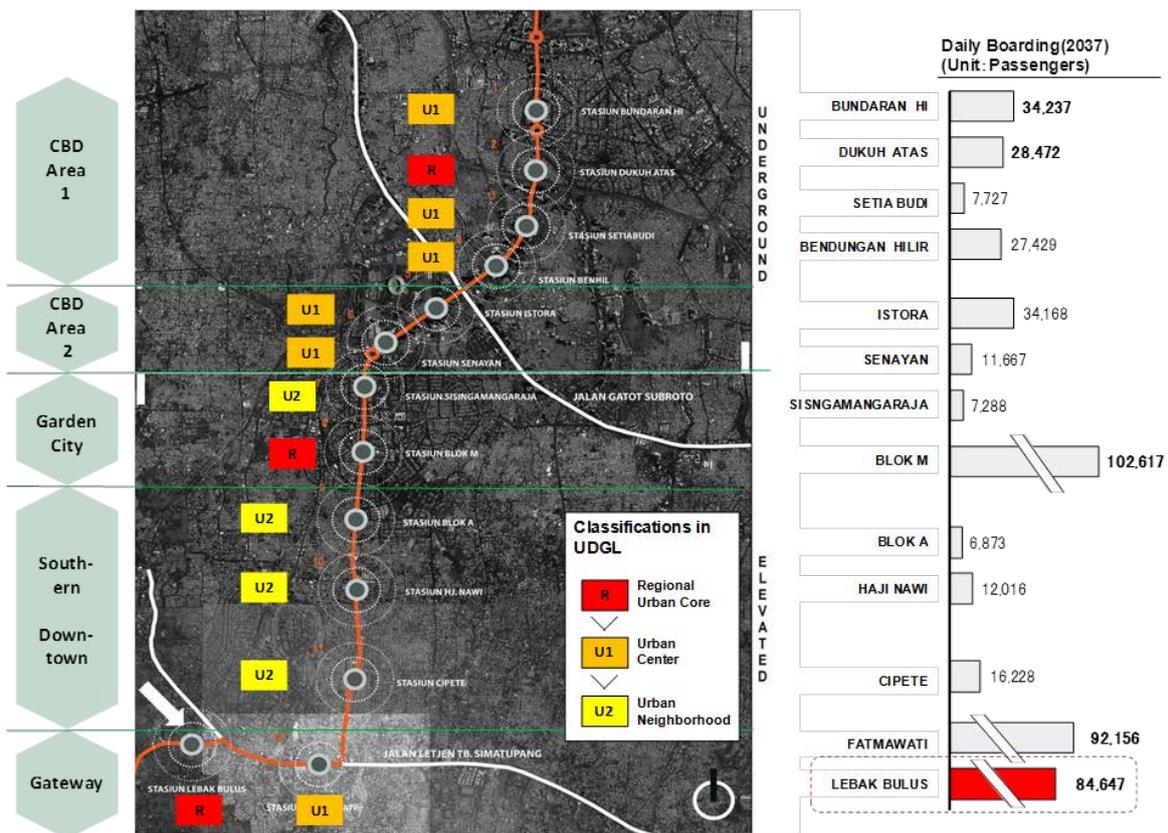
the public sector and are not financially independent projects (revenue is not enough to cover capital investment and O&M cost).

On the other hand, lack of government guarantee and VGF would not jeopardize the feasibility of the Lebak Bulus Station Area Development Project. The revenue for the Project is mainly generated based on business to business (B to B) contract³. Therefore, payment guarantee from the public sector is less important for the Project. Also, the Project is expected to be financially feasible without VGF.

The Project shall be implemented under the sector-specific laws and regulations and/or GR No.29/2014 on management of state assets. Detailed analysis on applicable laws and regulation and optimum implementation scheme for the Project will be mentioned in the latter part of this report.

2.1.4 Position of the Project in Jakarta Metropolitan Area (in terms of Demand Trend and Development Plans)

The Lebak Bulus Station is the starting station and functions as a hub for buses, cars, and motorcycles, which come from the southern areas, to travel to the downtown area. The success of the Project depends on whether this function of Lebak Bulus Station as a hub would be effective or not. In addition, the Government of DKI Jakarta declared to promote not only the MRT project but also TOD. Today, DKI Jakarta plans to develop the Lebak Bulus Station as a regional urban core based on the UDGL, as shown in Figure 2.1-12.

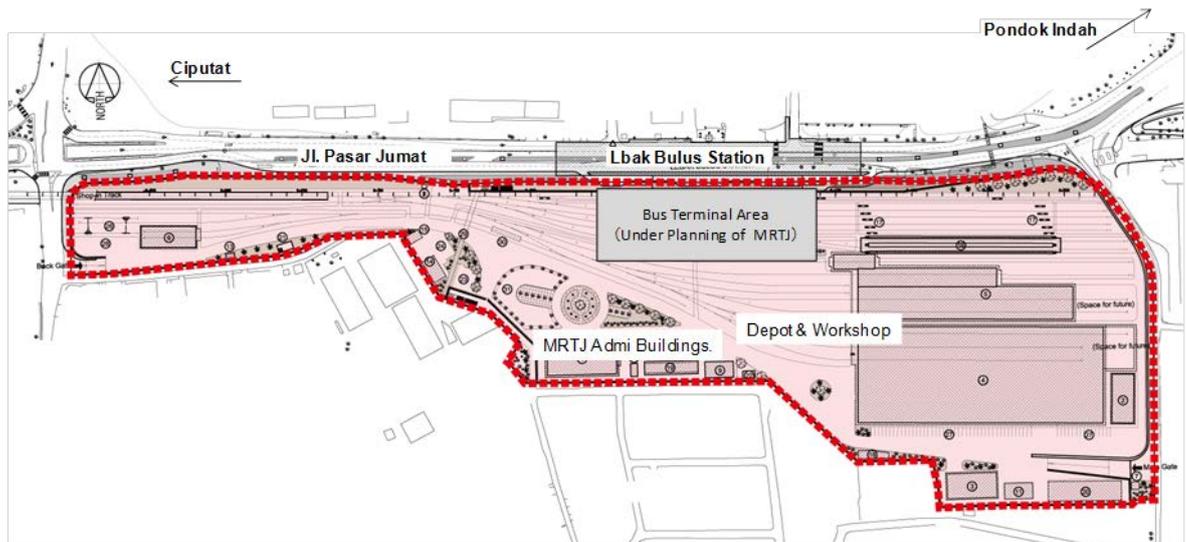


Source : UDGL and METI Study Report

Figure 2.1-12 Classification of the Stations Depending on Urban Design Guidelines and Expected Demands of Each Station

³ When BTO (build transfer operate) scheme is adopted in developing public infrastructure (such as bus terminal, pedestrian bridge and parking building), some of revenue needs to be collected from public sector, while such revenue occupy merely small percentage of whole revenue.

However, the depot which was designed in Jakarta's MRT project needs a large space in front of the Lebak Bulus Station to ensure it functions as a hub for traffic and center of community in the southern area. A bus terminal operated by DKI Jakarta exists in the depot. PT MRT Jakarta, a public train operating company, has already started planning to utilize the space above the depot by relocating the existing bus terminal. At present, the concrete plans have not yet been made (See Figure 2.1-13).



Source : Google Earth and METI Study Report

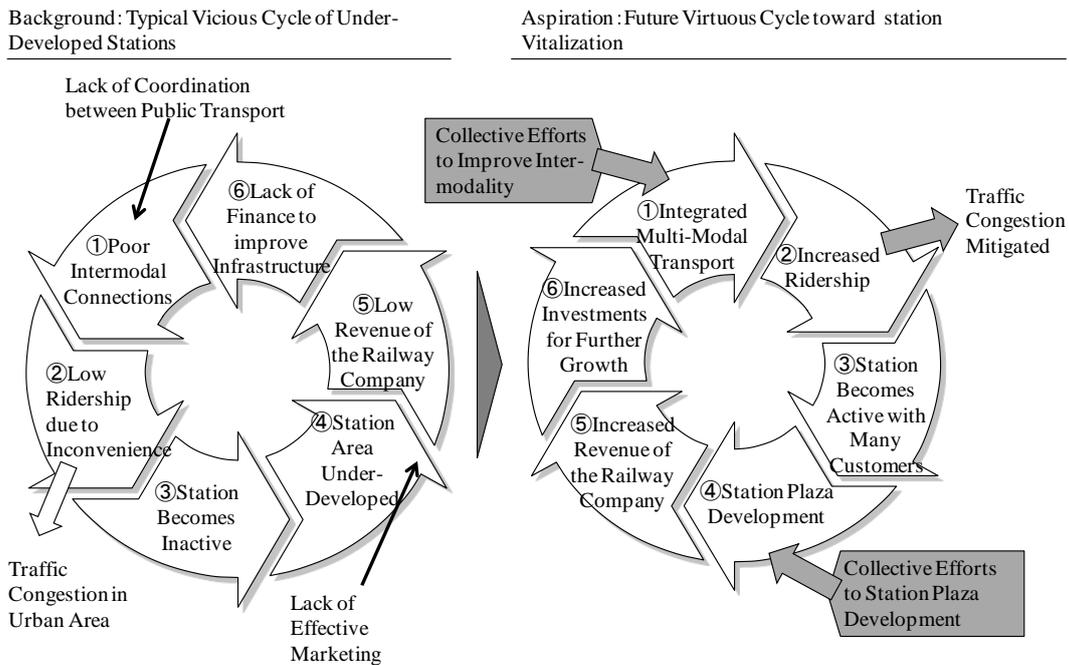
Figure 2.1-13 Status of the Area in front of the Station and Plan on the MRT Depot

Lately, the growth rate of the population around DKI Jakarta has been much higher than that of DKI Jakarta itself. Therefore, it can be estimated that the population of these suburb areas will continue to increase. Consequently, the Lebak Bulus Station is expected to become a hub station that is capable of transporting people living in the suburbs to central DKI Jakarta through promoting the use of Jakarta's MRT.

Considering these information, the Project aims to improve passengers' accessibility, increase the number of passengers of the MRT, stabilize the operation of the train operating company and create a regional urban core station for the southern areas.

2.1.5 Necessity and Importance of this Project

The space in front of the Lebak Bulus Station is occupied by the depot and its function as a transportation hub is not considered. As a result, there is a high possibility that the following problems may happen. Firstly, the accessibility from the southern part of DKI Jakarta to the downtown area will decrease. Naturally, the number of passengers who use the Lebak Bulus Station will also decrease. Then, the development around the station becomes stagnant. Finally, it becomes difficult to take measures for improving the situation because the operation of trains will worsen due to the lack of sufficient profit.



Source : METI Study Report

Figure 2.1-14 Vicious Circle and Virtuous Circle for the Development Around the Station

The Project is expected to change the stations from the vicious circle to the virtuous circle as shown in Figure 2.1-14. Moreover, the following effects are expected.

- Increase in passengers of the MRT because of the improvement in its function as a transportation hub.
- Increase in passengers of the MRT because of the development of commercial facilities as a regional urban core station.
- Reinvigoration of the area around the Lebak Bulus Station.
- Increase in profit of the train operating company.
- Increase in land prices.
- Increase in tax income of DKI Jakarta Province due to the increase in land price, economic activities of the companies, and buying and selling of real estate.

2.1.6 Modal Shift Effect to Public Transport by the Project

In this project, complex facilities such as bus terminal deck, Park & Ride facility, commercial facility, office tenant, residential space, hotel facilities and public facilities are proposed over Depot of MRT Jakarta North-South Line.

And virtuous cycle towards railway station vitalization as well as railway transportation shall be expected such as the enhancing serviceability for public transportation users and the development of some facilities, the increasing ridership of MRT Jakarta North-South Line, the

ensuring operation & maintenance cost of MRTJ, the upgrading facilities related railway and so on.

In this project, the bus terminal is proposed to be located in front of the station. According to the demand forecast, if the bus terminal is located far from the station, the expected passengers for MRT would be 9,300 less due to inconvenient access from MRT to the bust terminal.

Table 2.1-1 The Number of Modal Shift Passengers caused by Development of Transportation Facility
(unit Pax/ Day)

Transportation Facility	Bus	Cars/ Motor Bike	Walk	Total
With	23,100	33,900	20,000	77,000
Without	20,300	29,800	17,600	67,700
Difference	+2,800	+4,100	+2,400	+9,300
Note	Development effect of Bus Terminal Facility	Development Effect of P&P Facility		

Source : METI Study Report

2.2 Analysis of Market Demand and Competitors

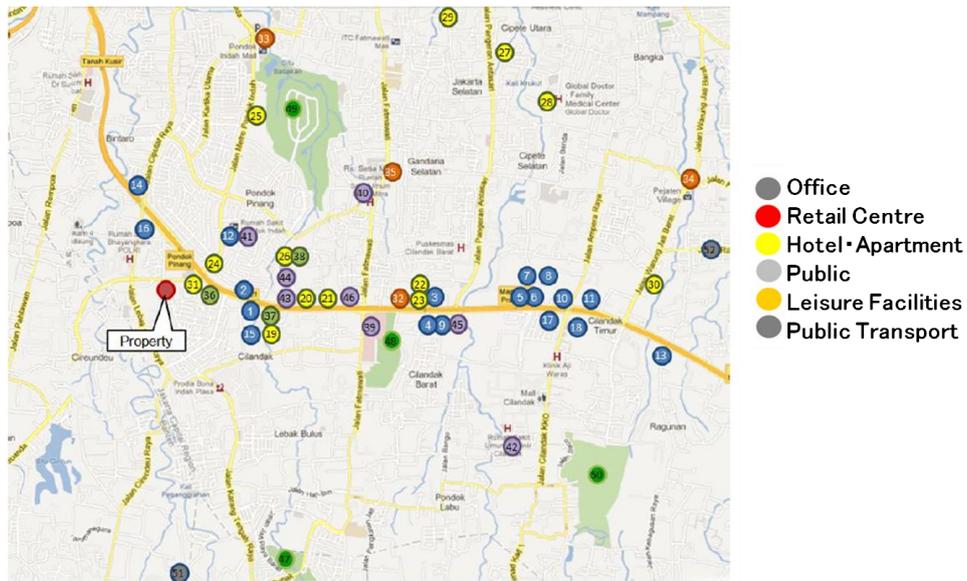
In order to assess specific real estate development trend around the project area, market survey was carried out. Facility plan which is described under chapter 3 is based on the analysis of this survey. In addition to this, various indices used for economic and financial analysis in this study are obtained from this real estate market survey. This section describes the summary of the investigative report by Colliers International Co., Ltd commissioned for this research.

2.2.1 Housing Market, Hotel, Office, Demand Survey of Commercial Facilities

(1) Analysis of Macro Economic Market

Determining the scale of real estate development and the target class of consumers, this analysis reviews the current status of real estate development in Propinsi Daerah Khusus Ibukota Jakarta.

South Jakarta is developing as a service-based region. Commercial area in South Jakarta is mostly focused along Jalan TB Simatupang and Pondok Indah. With a rapid growth of commercial developments along Jalan TB Simatupang, this road is known as the second Jakarta central business district (CBD). The property is located less than a kilometer from Jalan TB Simatupang. Pondok Indah, on the other side, is growing from only a high-class residential community to become a “new city” in South Jakarta where all premium class commercial developments and living facilities (hospital, international and private schools, etc) could be found. The property is located 500 m from Pondok Indah.



Source : Colliers International Indonesia – Research and Advisory

Figure 2.2-1 Investment Situation in Jakarta

Table 2.2-1 List of the Strata-Title Apartment Projects

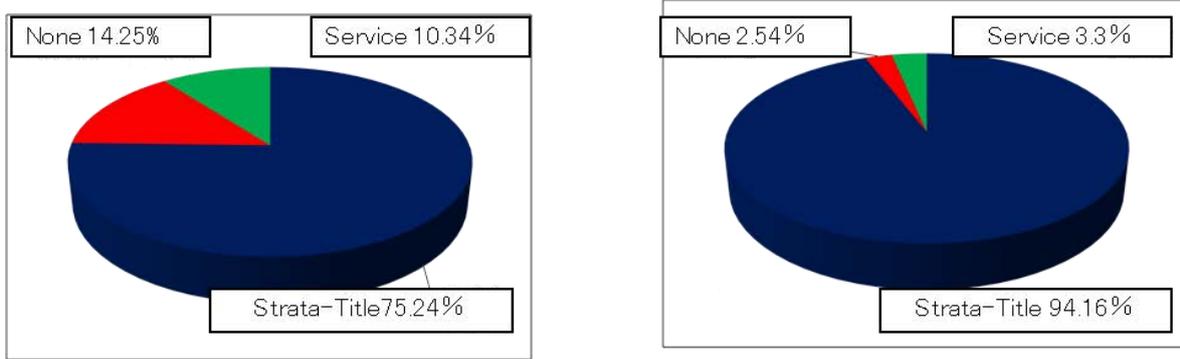
No.	Development	Description	Distance (meter) and Direction		Route from Property
Apartments					
19	Bona Vista	Apartment & office	1,500	East	Pasar Jumat - TB Simatupang
20	Beverly Tower	Apartment	1,300	North	Pasar Jumat - TB Simatupang
21	Parama Apartment	Apartment	1,400	West	Pasar Jumat - TB Simatupang
22	CITOS Apartment	Apartment	3,000	South	Pasar Jumat - TB Simatupang
23	Emerald	Apartment	3,000	South	Pasar Jumat - TB Simatupang
24	Menara Pondok Indah	Apartment	500	South	Pasar Jumat- Metro Pondok Indah
25	Pondok Indah Golf Apartments	Apartment	2,100	East	Pasar Jumat - Metro Pondok Indah
26	Hamptons Park Apartment	Apartment	1,800	East	Pasar Jumat - Metro Pondok indah - Terogong Raya
27	Kemang Village	Apartment	5,300	West	Pasar Jumat - TB Simatupang - P. Antasari
28	Nirvana Apartment	Apartment	5,400	West	Pasar Jumat - TB Simatupang -P. Antasari-Kemang Raya
29	Dharmawangsa Essence	Apartment	5,100	Southwest	Pasar Jumat - TB Simatupang - P. Antasari - Dharmawangsa
30	Gardenia Boulevard Apartment	Apartment	5,800	East	Pasar Jumat - TB Simatupang - Pejaten
31	POINS Square	Apartment + Retail Center	100	West	Pasar Jumat - TB Simatupang
No.	Development	Description	Distance (meter) and Direction		Route from Property
Office building					
1	Menara FIF	Private office building	1,000	East	Pasar Jumat - TB Simatupang
2	Plaza Aminta	Private office building	1,000	North	Pasar Jumat - TB Simatupang
3	Talavera	Private office building	2,800	East	Pasar Jumat - TB Simatupang
4	JGC	Private office building	2,800	East	Pasar Jumat - TB Simatupang
5	Ratu Prabu	Private office building	3,300	East	Pasar Jumat - TB Simatupang
6	Menara 165	Private office building	3,300	East	Pasar Jumat - TB Simatupang
7	Graha Elnusa	Private office building	3,300	East	Pasar Jumat - TB Simatupang
8	The Manhattan Square	Private office building	3,500	East	Pasar Jumat - TB Simatupang
9	Sovereign Plaza	Private office building	3,000	East	Pasar Jumat - TB Simatupang
10	Alamanda Tower	Private office building	3,000	East	Pasar Jumat - TB Simatupang
11	Beltway Office Park	Private office building	4,600	East	Pasar Jumat - TB Simatupang
12	Pondok Indah Plaza Office	Private office building	900	North	Pasar Jumat- Metro Pondok Indah
13	Arcadia Office Park	Private office building	6,500	East	Pasar Jumat - TB Simatupang
14	Menara FedEx	Private office building	1,100	West	Pasar Jumat - TB Simatupang - RA Kartini
15	South Quarter	Private office building + apartments	1,300	East	Pasar Jumat - TB Simatupang
16	Pusdiklat Kementerian Pekerjaan Umum	Government training center	550	West	Pasar Jumat - TB Simatupang - RA Kartini
17	Departemen Pertanian	Government office	5,400	East	Pasar Jumat - TB Simatupang
18	Cilandak Commercial Estate	Commercial estate	4,000	East	Pasar Jumat - TB Simatupang

Source : Colliers International Indonesia – Research and Advisory

A. Apartment and Condominium

As of 4Q 2013, there were 358 projects of 140,550 apartments, comprising 270 projects for strata-title sale (132,344 apartments), 51 projects for lease with no service (3,565 apartments) and 37 projects for lease with service (4,641 apartments).

In 2013, market received 21 new projects of 15,068 units, which increased the total stock to 132,344 apartment units. In general, apartments for strata-title sale have been growing by 17.6 % per annum since 2005. The apartment market is projected to grow further in the future. By 2017, there will be a total additional supply of 59,337 units, and stock will grow by 11.4 % per annum from 4Q 2013.

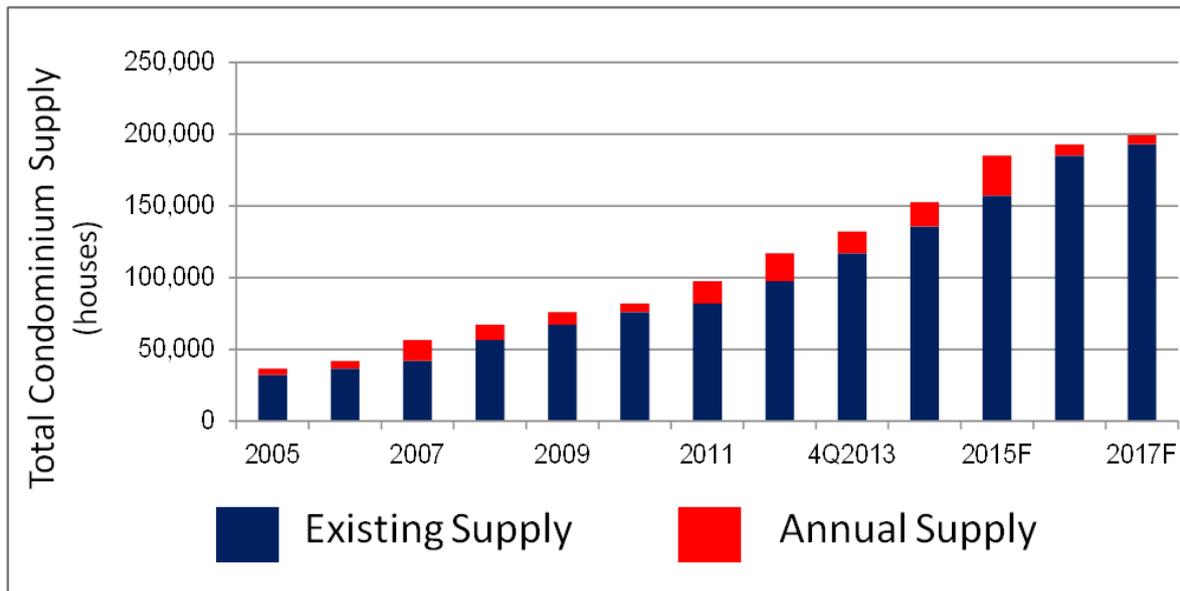


Source : Colliers International Indonesia – Research and Advisory

Figure 2.2-2 Distributions of Apartment in Jakarta Based on Marketing Schemes, as of 4Q 2013

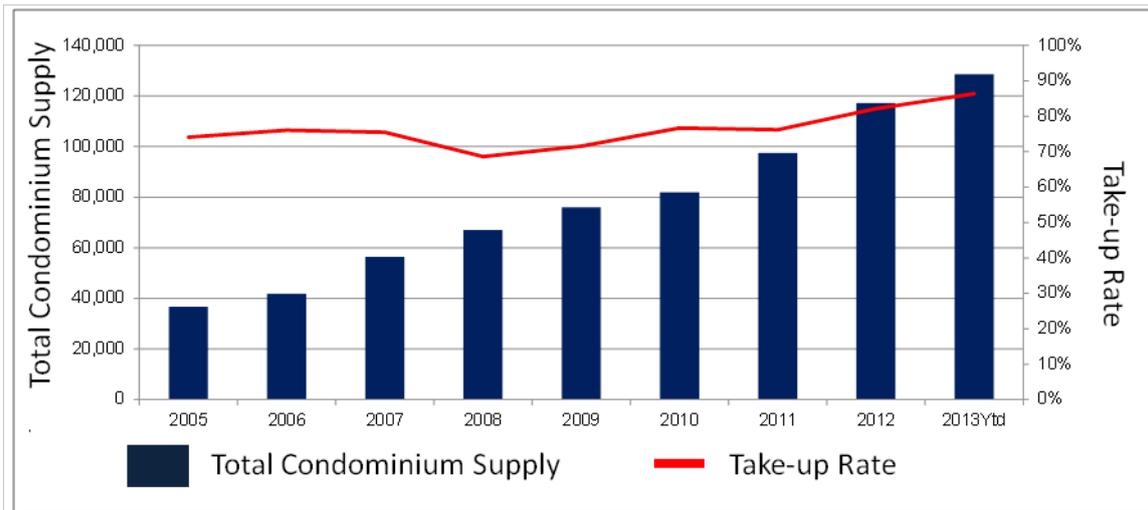
i) Strata-Title Condominium

Take-up rate for Jakarta’s apartments was recorded at 68.65 % in 2008; it was continuously increasing in 2012, i.e.: 79.1 % (1Q 2012), 79.9 % (2Q 2012), 81.3 % (3Q 2012), and 82.17 % (4Q 2012). The increasing trend continued in 2013, i.e.: 83 % (1Q 2013), 82.8 % (2Q 2013), 86.38 % (3Q 2013), and 86.09 % (4Q 2013).



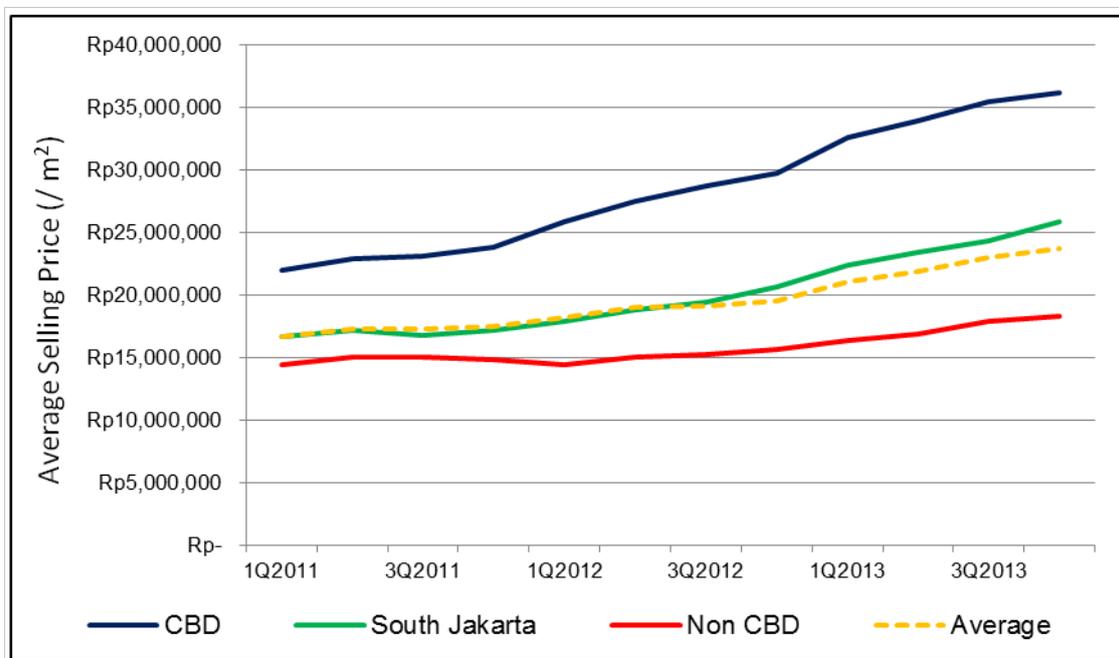
Source : Colliers International Indonesia – Research and Advisory

Figure 2.2-3 Historical Growth of Supply of Apartment for Strata-Title Sale



Source : Colliers International Indonesia – Research and Advisory

Figure 2.2-4 Cumulative Supply and Take-up Rate of Apartments for Strata-Title Sale in Jakarta



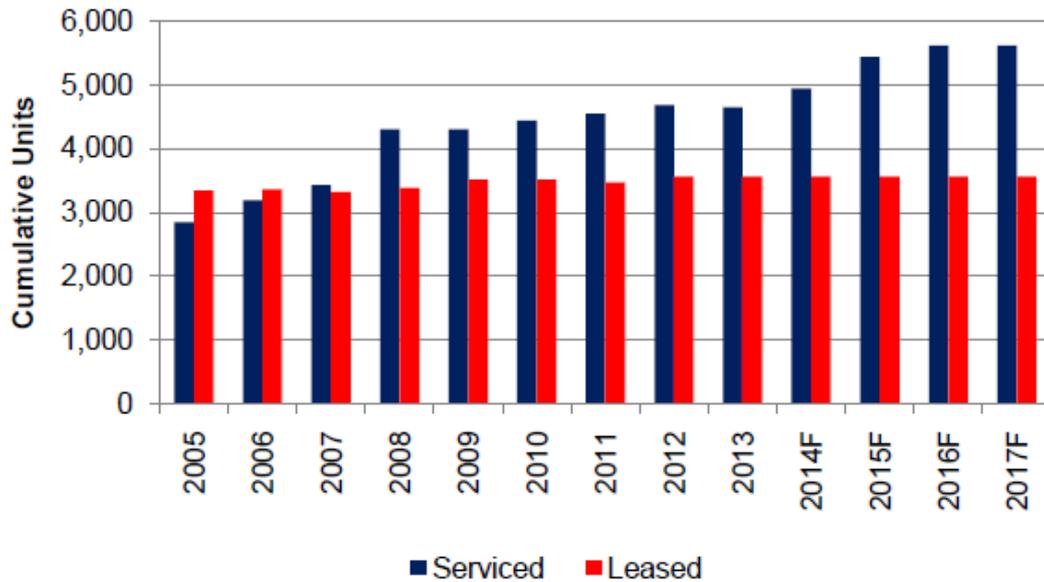
Source : Colliers International Indonesia – Research and Advisory

Figure 2.2-5 Growth of Selling Price of Middle to Luxury Class Apartments for Strata-Title Sale

ii) Apartments for Lease

The number of serviced apartment has been more than that of non-serviced apartment since 2007.

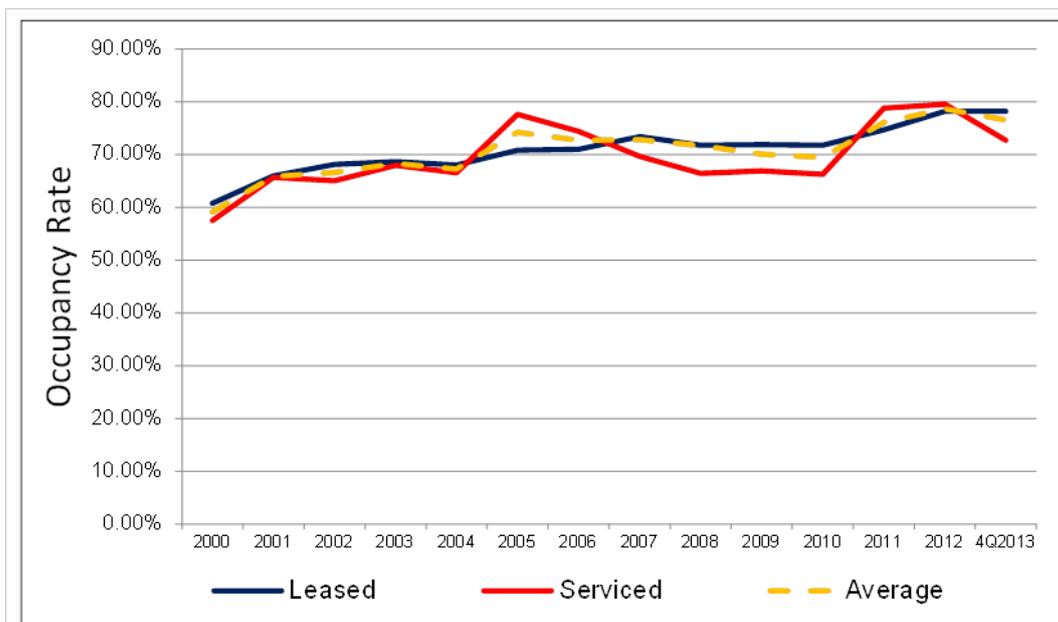
As of 4Q 2013, middle-upper class apartments dominated the apartments for lease by 82.78 % (with service) and 64.38 % (with no service). Meanwhile, upper class apartments for lease are only available as serviced apartments which are mostly located in CBD area.



Source : Colliers International Indonesia – Research and Advisory

Figure 2.2-6 Growth of Supply of Apartments for Lease

Occupancy rates for both apartments for lease with service and no service have been more than 70% after 2011.

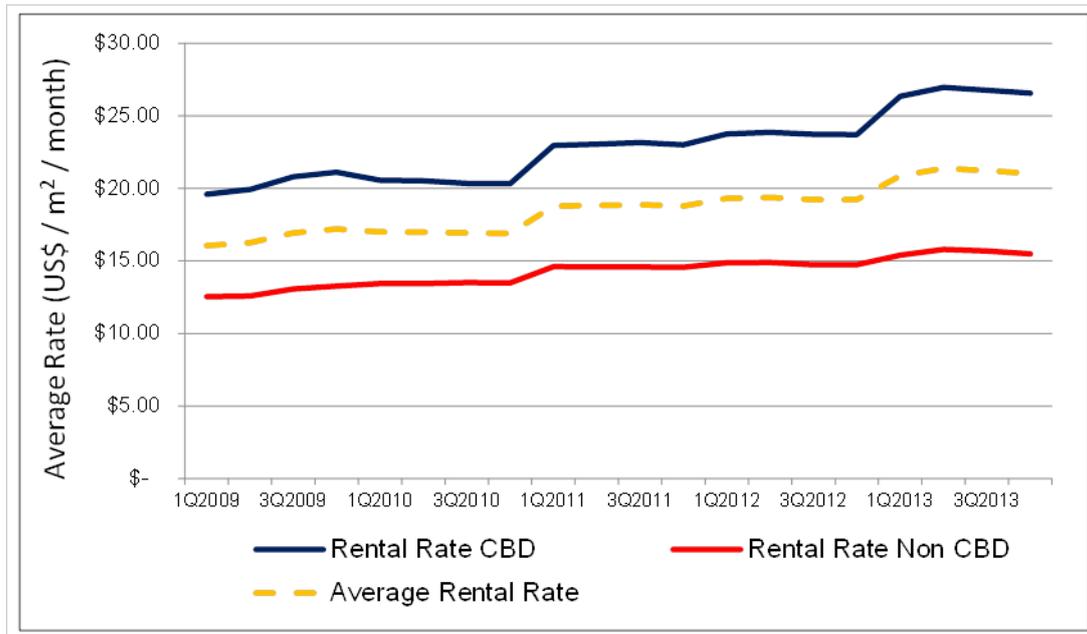


Source : Colliers International Indonesia – Research and Advisory

Figure 2.2-7 Growth of Occupancy Rate of Apartments for Lease

As of 4Q 2013, apartments for lease with no service in CBD were offered at the highest rent of US\$26.56/m²/month since apartment for lease in CBD was dominated by middle-upper and upper class apartments. Meanwhile, apartments in non-CBD area were offered at a rental rate of US\$15.49/m²/month.

Apartments for lease with service in CBD were offered at a rental rate of US\$32.08/m²/month and in non-CBD, they were offered at a rental rate of US\$ 21.86/m²/month.



Source : Colliers International Indonesia – Research and Advisory

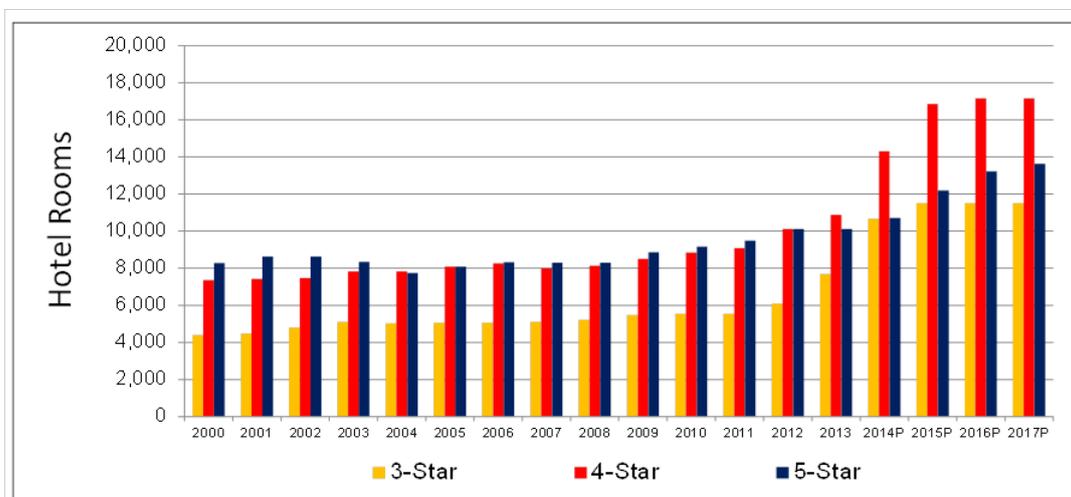
Figure 2.2-8 Growth of Rental Rate of Apartments for Lease (With and With No Service) Per Square Meter

B. Hotel

During 1990-1997, hotel rooms grew by 13.8 % per annum. The Asian financial crisis in 1997 was slowing down the growth of hotel development by 2008. Within the period of 2009-2013, the three- to five-star hotel rooms in Jakarta grew by 5.8 % per annum. In general, hotels in 2000 had occupancy rate of 38 %, which is slightly higher than the 35 % in 1998. Bulk hotel room supply in the market corrected the occupancy to 71.8 % in 2013.

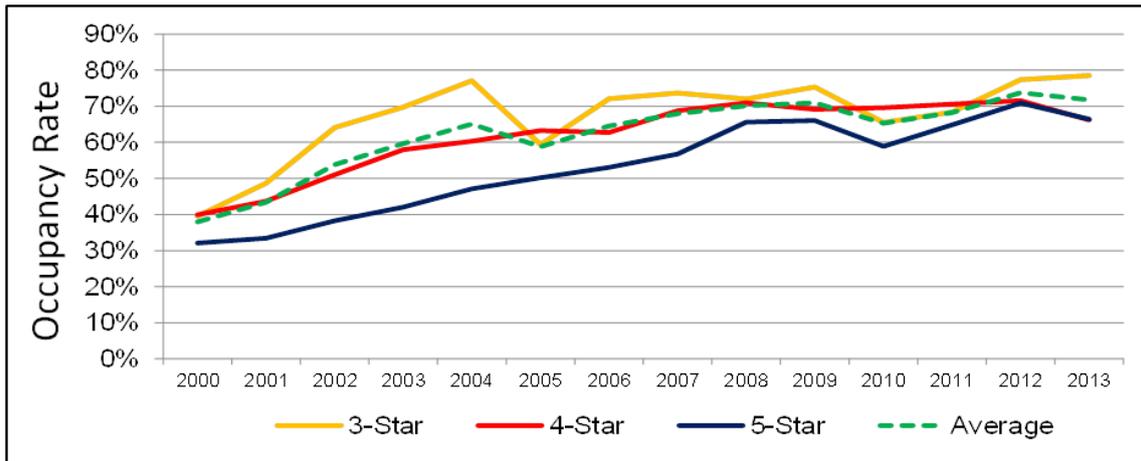
As of 4Q 2013, Jakarta had 129 three- to five-star hotels with a total of 28,685 rooms, of which 79 % were three- and four-star hotels. Hotel rooms, by 2017, are projected to grow by 10.6 % per annum to be 42,284 rooms.

In 2013, a total of 2.24 million foreign visitors were recorded, most of whom came for business activity. Based on the nationality, majority of direct foreign guests to Jakarta were from Asia (including ASEAN). The ratio of domestic guests and foreign guests for hotels in Jakarta was 73:27.



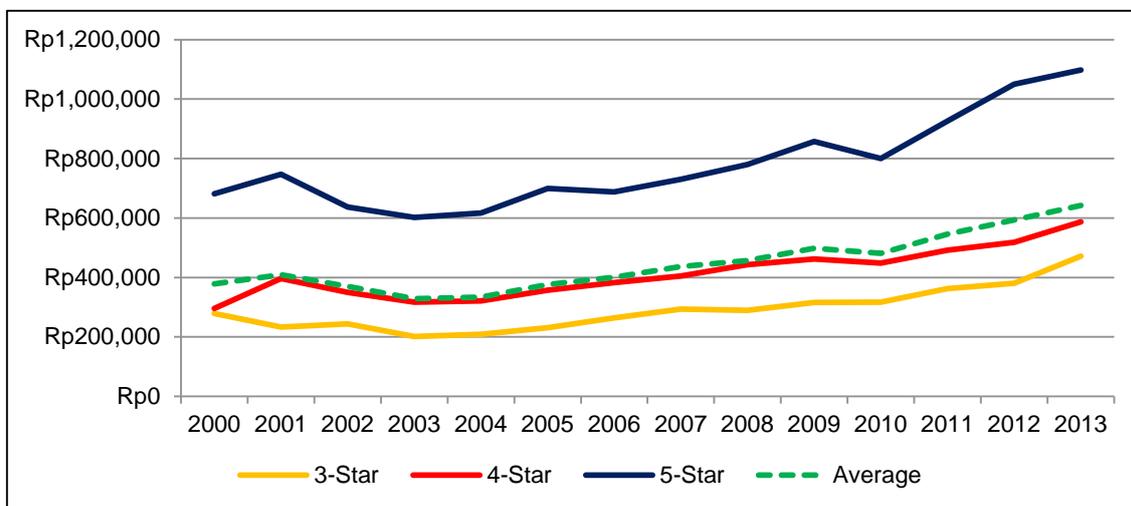
Source : Colliers International Indonesia – Research and Advisory

Figure 2.2-9 Growth of Three- to Five-Star Hotel Rooms in Jakarta



Source : Colliers International Indonesia – Research and Advisory

Figure 2.2-10 Occupancy Rates of Three- to Five-Star Hotels in Jakarta, 2000-2013



Source : Colliers International Indonesia – Research and Advisory

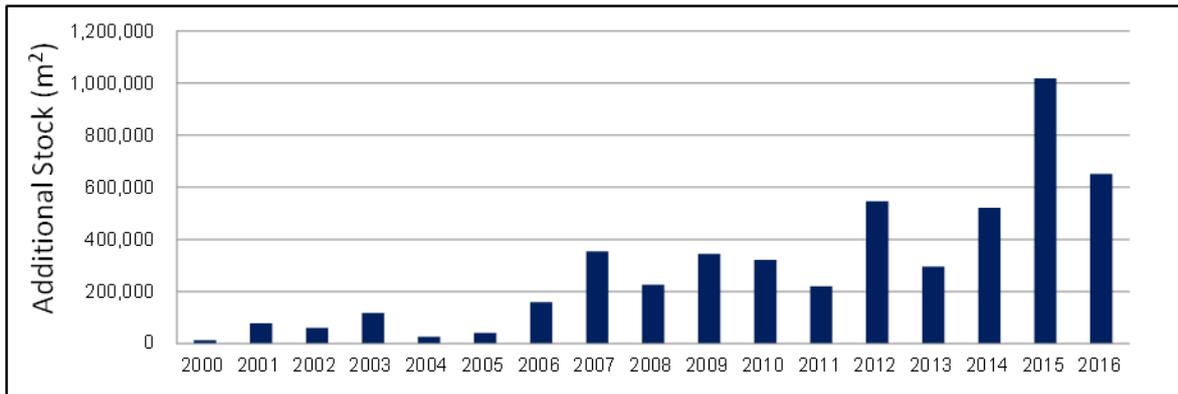
Figure 2.2-11 Average Room Rate (ARR) of Three- to Five-Star Hotels in Jakarta, 2000-2013

RevPAR was recorded at Rp451,534 on average, Rp369,956 (three-star hotels), Rp388,585 (four-star hotels), and Rp729,362 (five-star hotels) in 4Q 2013.

C. Office

As of 4Q 2013, there were 7,046,558 m² of office spaces in Jakarta.

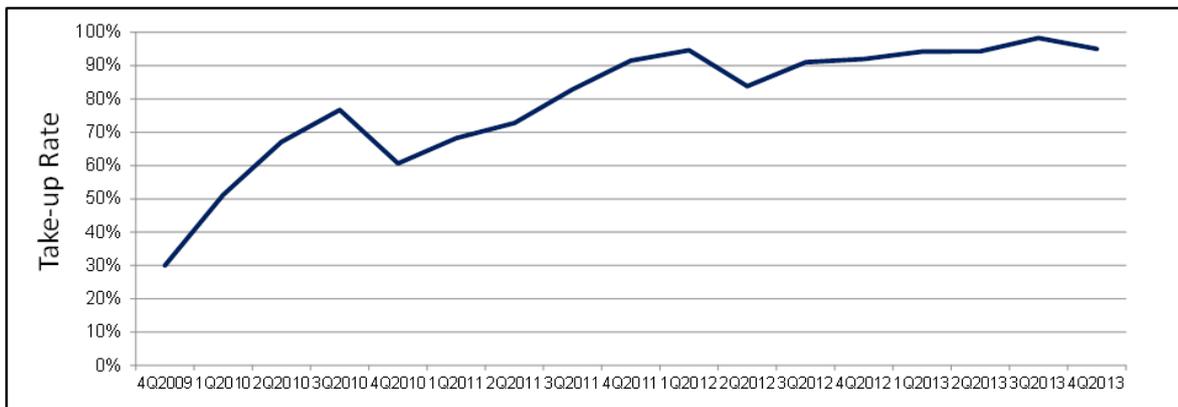
In the future, market is projected to have 2,192,529 m² additional stock by 2016, comprising 522,320 m² in 2014, 1,018,859 m² in 2015, and 651,350 m² in 2016. Should all these plans be materialized, by 2016, market will have a total of 9,239,087 m² office spaces. In 2013, the occupancy was 96.50% in CBD and 95.20% in non-CBD area. In the future, with huge additional supply to enter the market (1,227,147 m²), it is projected that occupancy will be moving down to 90.86% in CBD and about 82% in non-CBD area by 2016. However, this condition will still be perceived as a healthy office market performance.



Source : Colliers International Indonesia – Research and Advisory

Figure 2.2-12 Jakarta Office Annual Supplies

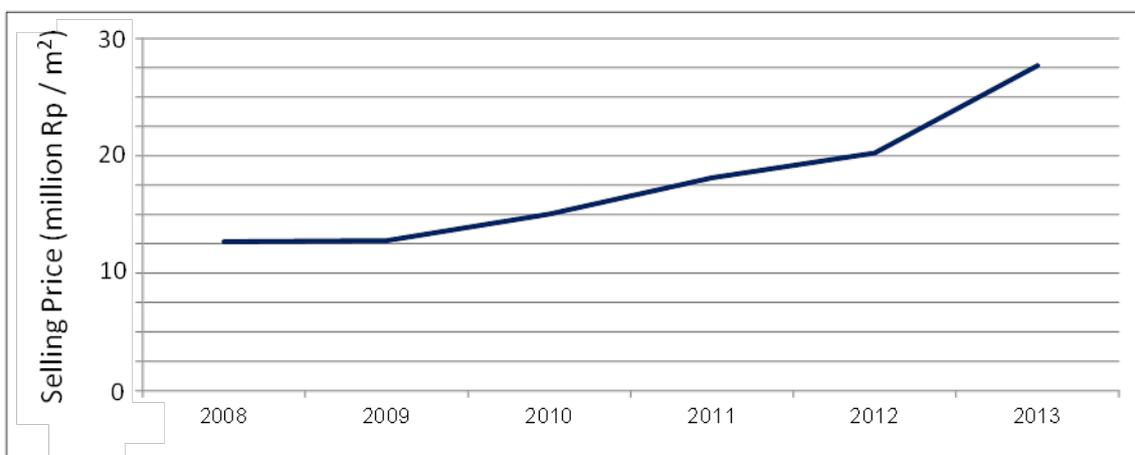
The office market is growing in harmony with economic growth. In terms of performance, occupancy and base rent continue to increase for both CBD and non-CBD markets. The non-CBD office spaces for strata-title sale have take-up rate of 30% with average selling price of Rp12.78 million/m² in 2009. In 2013, they were enjoying a high take-up rate of 95% with average selling price of Rp27.69 million/m².



Source : Colliers International Indonesia – Research and Advisory

Figure 2.2-13 Take-up Rates for the Non-CBD Office Buildings for Strata-Title Sale

In 2013, there were 4,766,306 m² of office spaces in Jakarta-CBD, comprising 81% of office spaces for lease and 19% of office spaces for strata-title sale.



Source : Colliers International Indonesia – Research and Advisory

Figure 2.2-14 Growth of Selling Price of Non-CBD Office Space for Strata-Title Sale

D. Commercial Market

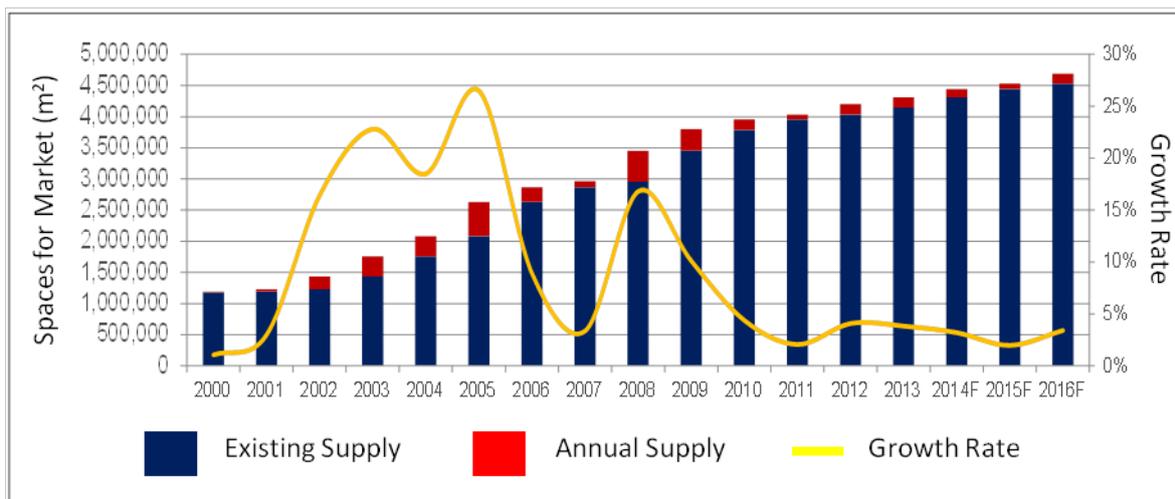
In 2011, due to the abundant supply of retail spaces in Jakarta and in the mall, which has been considered as cause of traffic congestion, the government provides a policy of temporarily not issuing permit for developing a new retail center with leasable space of more than 5,000 m². Currently, the government still enforces this policy to control the development of retail center in Jakarta.

Shopping Mall: Malls typically are enclosed, with climate controlled walkways between two facing strips of stores.

Strip Center: A strip center is an attached row of stores or service outlets managed as a coherent retail entity, with on-site parking usually located in front of the stores. Open canopies may connect the storefronts, but a strip center does not have enclosed walkways linking the stores.

In 2013, there were new four retail centers in Jakarta, namely: Lotte Shopping Avenue, Pondok Indah Street Gallery, Cipinang Indah, and The Baywalk. These four centers added 159,100 m² to the market to become 4,307,609 m².

In the future, Jakarta is projected to still receive new retail centers, i.e., three retail centers with 138,200 m² spaces in 2014, four retail centers with 88,000 m² spaces in 2015, and three retail centers with 155,000 m² spaces in 2016. It is projected that by the end of 2016, there will be a total of 4,688,809 m² retail spaces to operate in Jakarta.



Source : Colliers International Indonesia – Research and Advisory

Figure 2.2-15 Growth of Retail Space in Jakarta, 2000-2016F

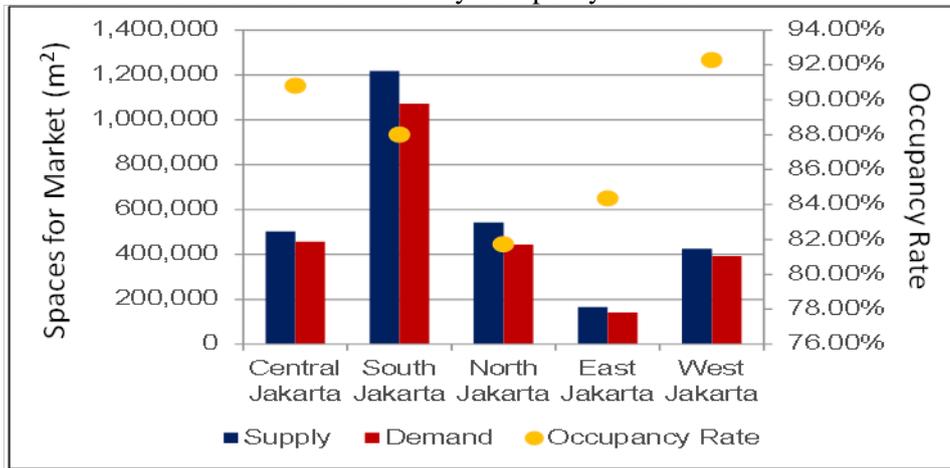
Based on the marketing scheme, most of the retail spaces in Jakarta are retail spaces for lease, i.e., 66.26%.

In terms of location, most retail centers for lease, at 28.83%, were located in CBD, as the center for commercial activities in Jakarta. The second and third contributions come from retail centers in the South and North Jakarta at 26.15% and 19.01%, respectively, due to the availability of middle to upper class residential communities in these two areas.

As of 4Q 2013, retail centers in West Jakarta achieved the highest occupancy of 92.28%, followed by those in Central Jakarta with 90.80%. Generally, retail centers in other areas were also enjoying healthy occupancy of a minimum of 80%, i.e., 88% in South Jakarta, 84.35% in East Jakarta, and 81.72% in North Jakarta. Premium-class retail centers achieved the highest occupancy of 95.7%. With specific products and target markets (higher buying power), premium-class retail centers were able to achieve high occupancy rate. With large market and medium buyer’s propensity, middle-upper class retail centers could also achieve healthy occupancy of 89.9%.

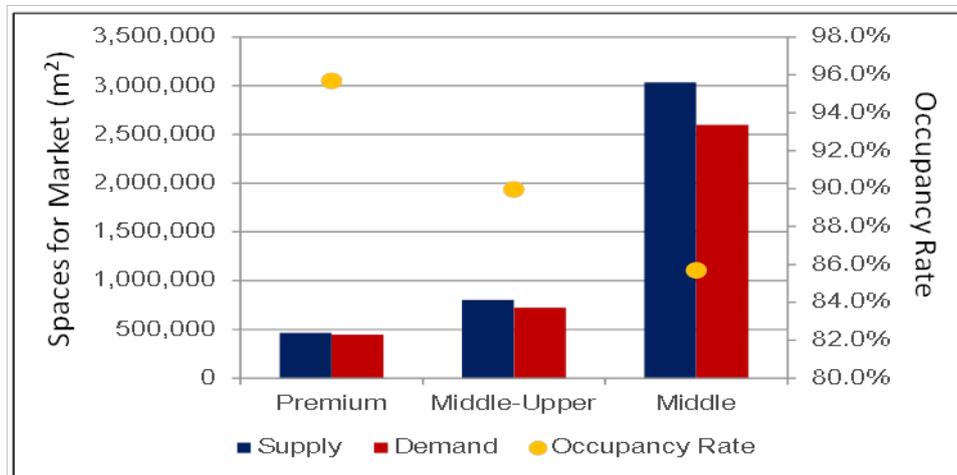
i) Retail Centre for Lease

As of 4Q 2013, retail centers in West Jakarta achieved the highest occupancy of 92.3%, followed by those in Central Jakarta with 90.8%. Generally, retail centers in other areas were also enjoying healthy occupancy of a minimum of 80%, i.e.: 88% in South Jakarta. Premium-class retail centers achieved the highest occupancy of 95.7%. With specific products and target markets (higher buying power), premium-class retail centers were able to achieve high occupancy rate. With large market and medium buyer’s propensity, middle-upper class retail centers could also achieve healthy occupancy of 89.9%.



Source : Colliers International Indonesia – Research and Advisory

Figure 2.2-16 Supply, Demand and Occupancy Rate of Retail Centers in Different Areas in Jakarta, 4Q 2013

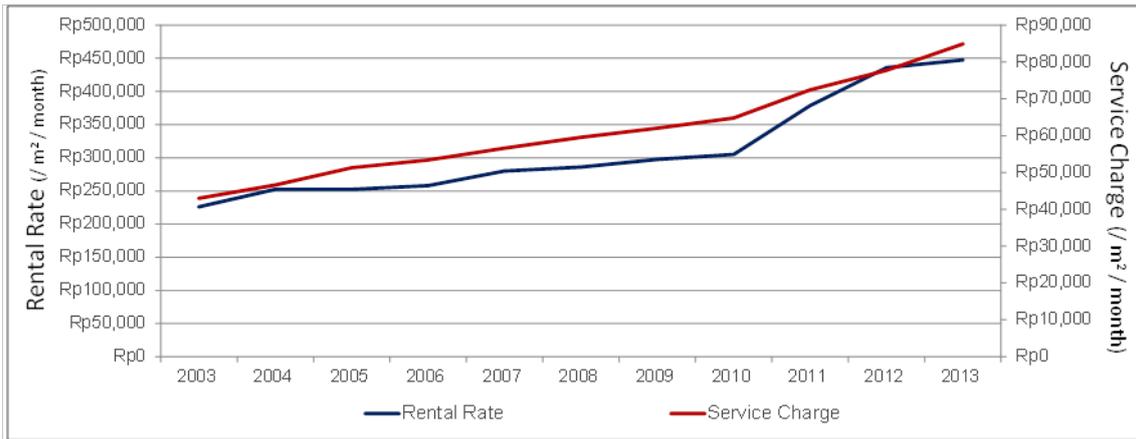


Source : Colliers International Indonesia – Research and Advisory

Figure 2.2-17 Supply, Demand and Occupancy Rate of Retail Centers of Different Market Segments, 4Q 2013

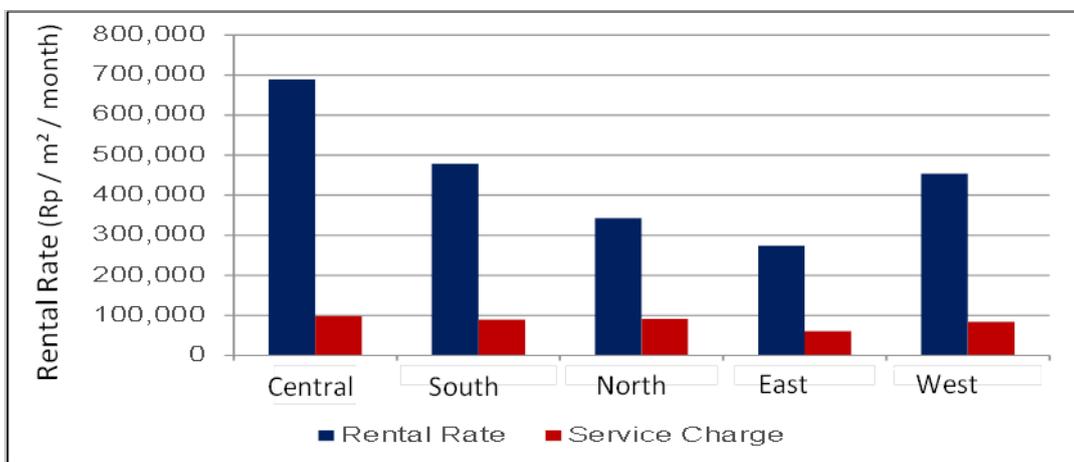
As of 4Q 2013, an average base rent for retail spaces in Jakarta of Rp447,618/m²/month and service charge of Rp84,921/m²/month were recorded.

Rent of premium class retail centers was Rp925,750/m²/month; and service charge was Rp125,550/m²/month.



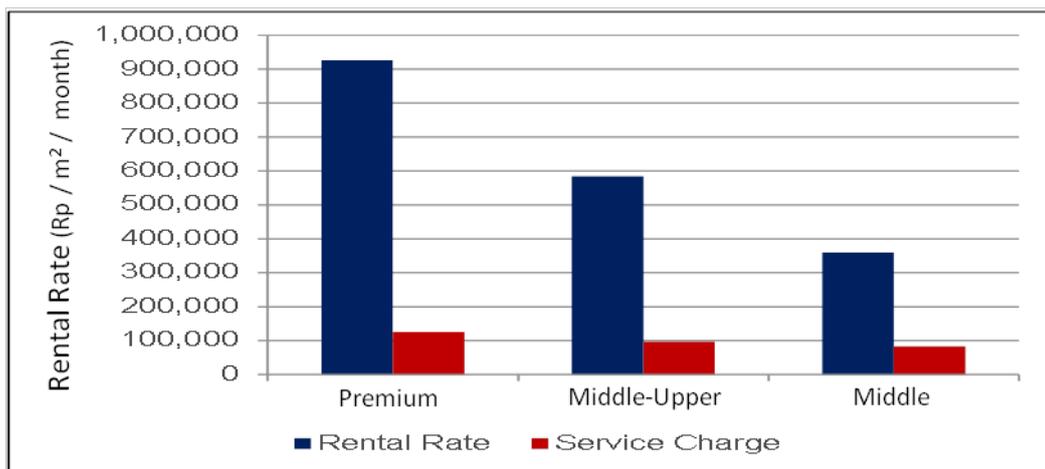
Source : Colliers International Indonesia – Research and Advisory

Figure 2.2-18 Growth of Rental Rate and Service Charge Applied in Retail Centers in Jakarta



Source : Colliers International Indonesia – Research and Advisory

Figure 2.2-19 Average Rental Rate and Service Charge Applied by Retail Centers in Different Locations, 4Q 2013



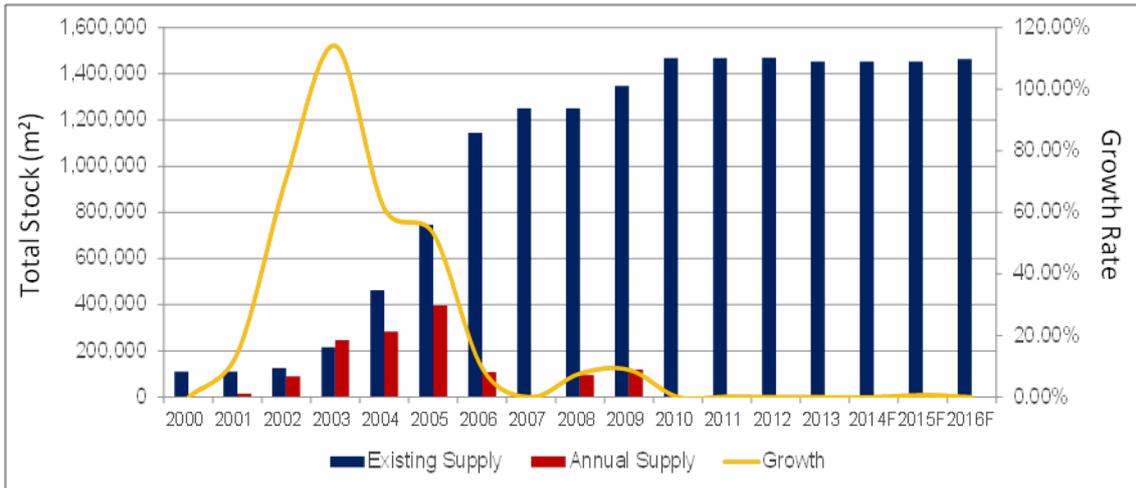
Source : Colliers International Indonesia – Research and Advisory

Figure 2.2-20 Average Rental Rate and Service Charge Applied by Retail Centers in Different Market Segments, 4Q 2013

ii) Retail Center for Strata-Title Sale

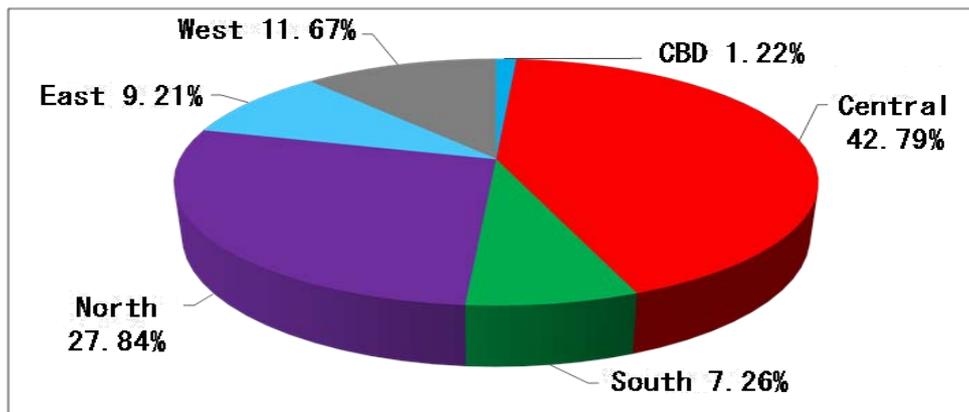
Total stock was recorded at 1,453,566 m² in 4Q 2013. With low performance of retail centers for strata-title sale, there will be limited new supply up to 2016. Only the extension of Pulo Gadung Trade Center (10,000 m²) will enter the market in 2015.

Most of retail centers for strata-title sale are located in Central and North Jakarta at 42.79% and 27.84%, respectively.



Source : Colliers International Indonesia – Research and Advisory

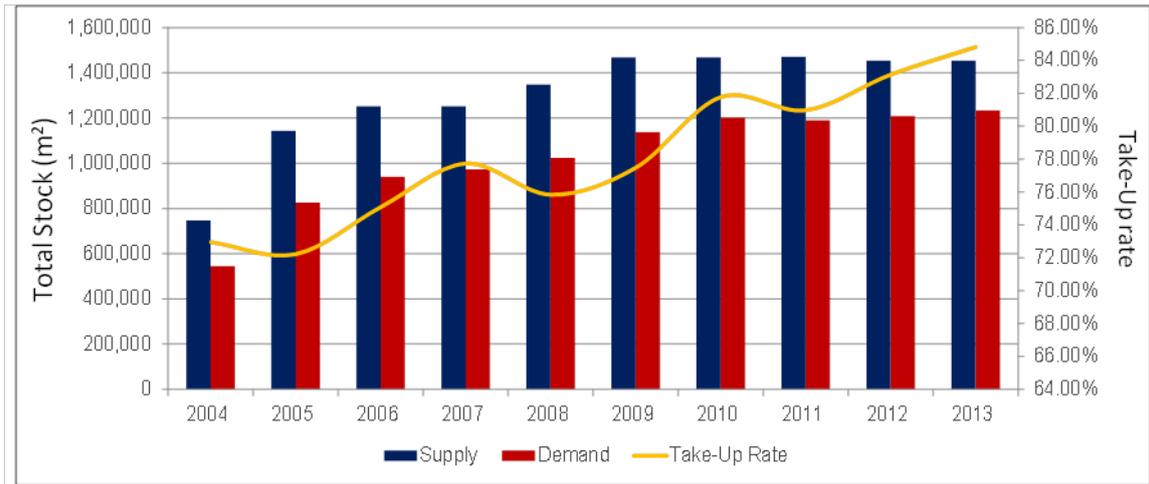
Figure 2.2-21 Growth of Retail Spaces for Strata-Title Sale in Jakarta



Source : Colliers International Indonesia – Research and Advisory

Figure 2.2-22 Distribution of Retail Spaces for Strata-Title Sale Based on Location, 4Q 2013

Relatively low occupancy in retail centers for strata-title sale made purchasing retail space become a less attractive investment tool.

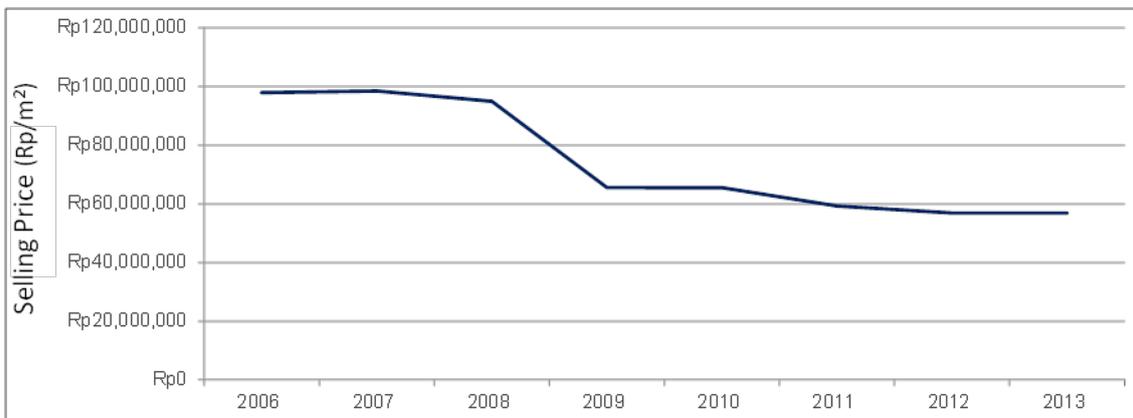


Source : Colliers International Indonesia – Research and Advisory

Figure 2.2-23 Supply, Demand and Take-up Rate of Retail Centers for Strata-Title Sale in Jakarta

Occupancy rate since 2009, on the other hand, has been moving quite steadily at 76-78%, except in 2013, when occupancy dropped to 69.4% since most tenants were closing their operations due to low shopping traffic within the centers. As of 4Q 2013, retail centers in Central, South, and East Jakarta recorded 76% to 82% occupancy.

Between 2006 and 2008, retail spaces for strata-title sale were offered at very high pricing of Rp100 million/m². Since 2008, purchasing retail space, mainly for investment motivation, has become less and less attractive. Pricing has shown a continuous drop. As of 4Q 2013, the average selling price was Rp56.9 million/m².



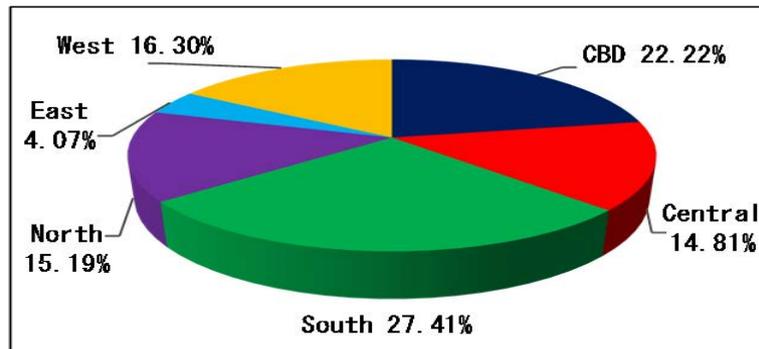
Source : Colliers International Indonesia – Research and Advisory

Figure 2.2-24 Movement of Selling Price of Retail Spaces for Strata-Title Sale

(2) South Jakarta

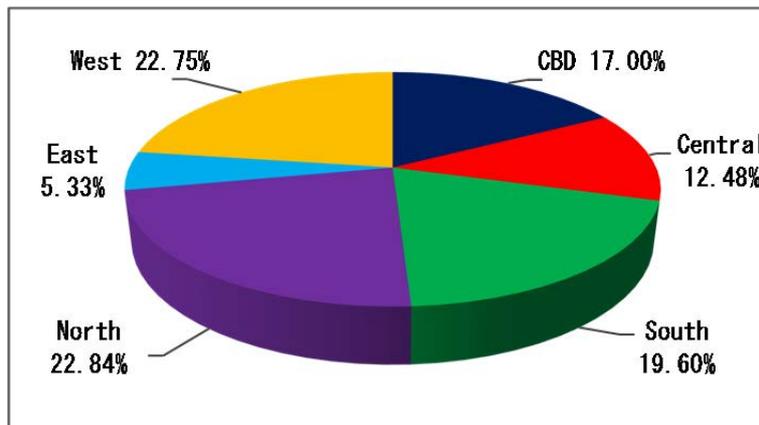
A. Apartment in South Jakarta

Majority of apartment projects for strata-title sale were located in South Jakarta (27.41%). Meanwhile, 19.60% of apartment units for lease were located in South Jakarta, which are less than in West Jakarta (22.75%) and North Jakarta (22.84%). This is because South Jakarta is developed mainly with luxury class apartments. With very comprehensive living supporting facilities, such as upper class retail centers, international schools, and entertainment centers, South Jakarta provided 44.8% of Jakarta’s upper class apartments and 25.5% of Jakarta’s luxury class apartments.



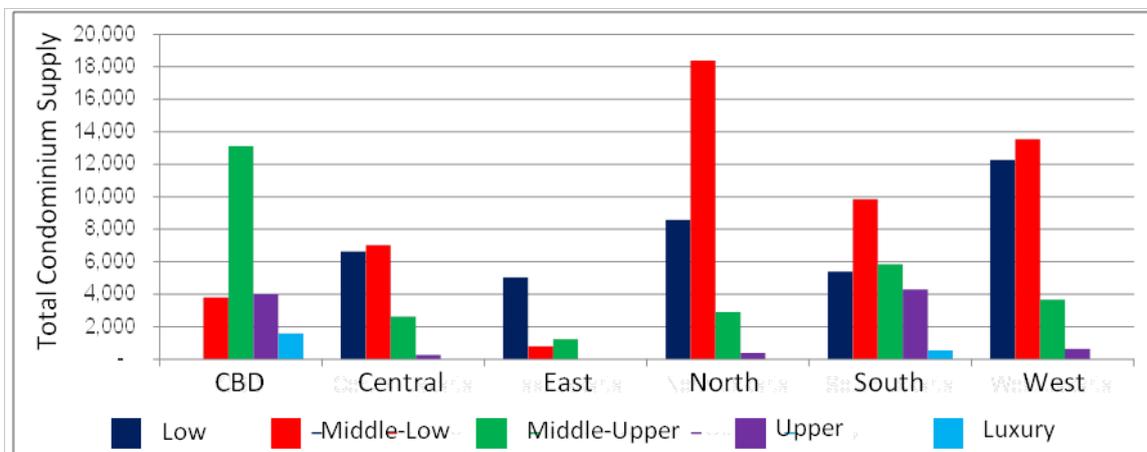
Source : Colliers International Indonesia – Research and Advisory

Figure 2.2-25 Distributions of Apartments for Strata-Title Sale in Jakarta, as of 4Q 2013



Source : Colliers International Indonesia – Research and Advisory

Figure 2.2-26 Distributions of Apartments for Lease in Jakarta



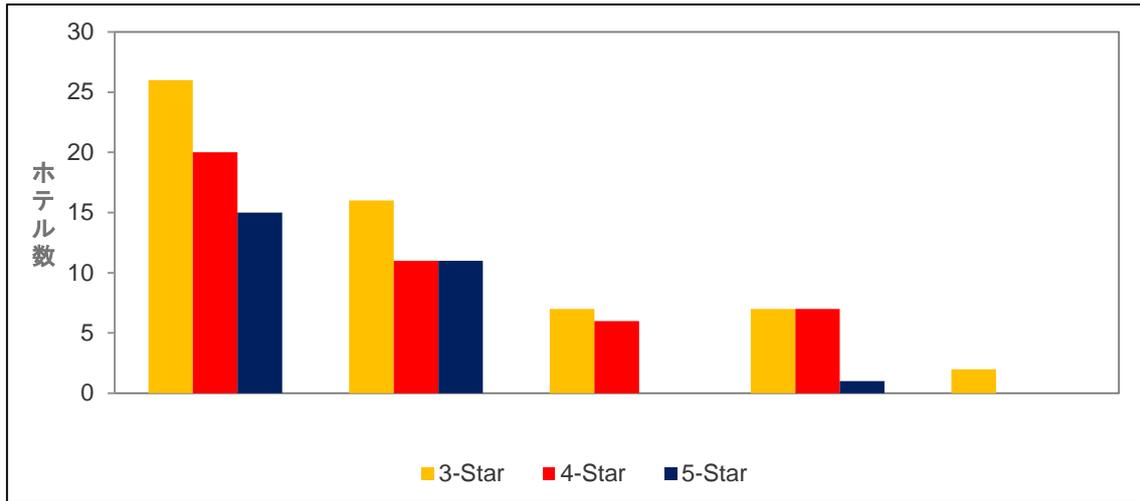
Source : Colliers International Indonesia – Research and Advisory

Figure 2.2-27 Distributions of Number of Apartment Units for Strata-Title Sale Based on Location, 4Q 2013

The selling price of middle to luxury class strata-title apartment in Jakarta has shown upward trend. The selling price of middle to luxury class strata- title apartment in South Jakarta was Rp 25.85 million /m² in 4Q 2013.

B. Hotel in South Jakarta

As of 4Q 2013, Jakarta had 129 three- to five-star hotels with a total of 28,685 rooms, of which 45% were three-star hotels, 34% were four-star hotels, and 21% were five-star hotels. By 2017, hotel rooms are projected to grow by 10.6% per annum to be 42,284 rooms and 194 hotels (three-star: 41%, four-star: 38%, and five-star: 21%).

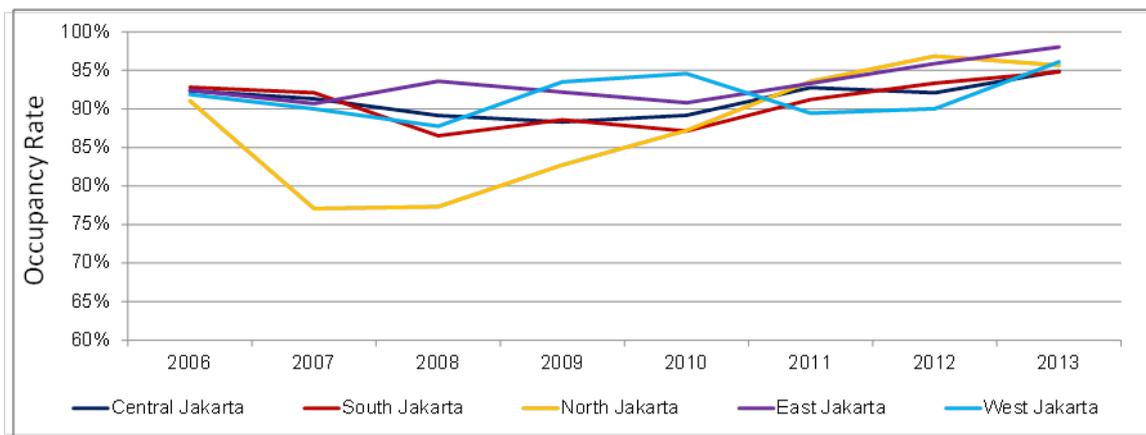


Source : Colliers International Indonesia – Research and Advisory

Figure 2.2-28 Distribution of Three- to Five-Star Hotels by Number of Hotels in Jakarta, as of 4Q 2013

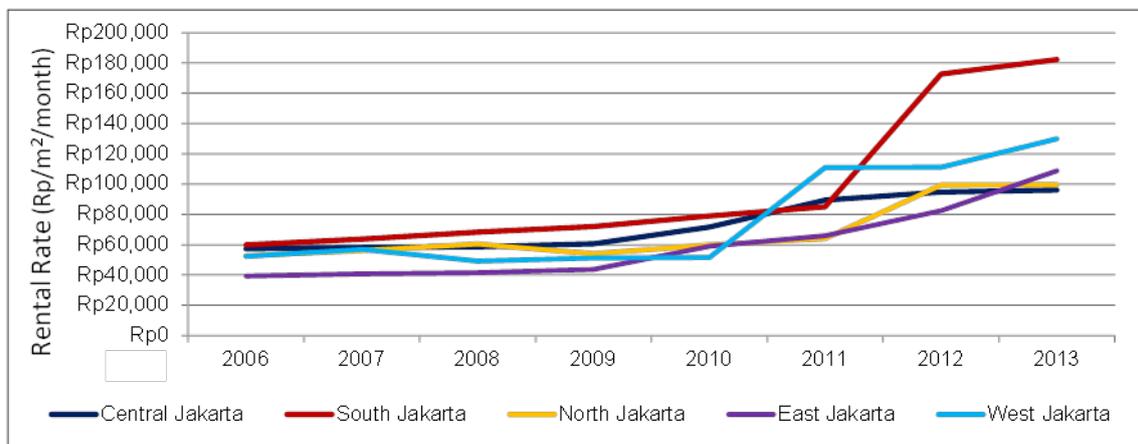
C. Office in South Jakarta

In 4Q 2013, there were 1,061,864 m² of office spaces in South Jakarta, with 7.72% growth per annum since 2008. Rental rate was offered at Rp182,360/m²/month with occupancy rate of 94.8%. Buildings in South Jakarta applied the highest service charge of Rp46,569/m²/month.



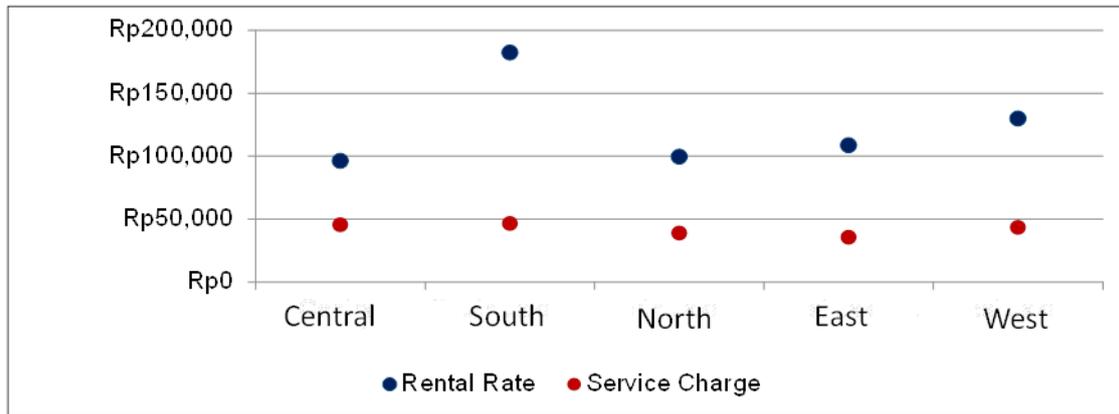
Source : Colliers International Indonesia – Research and Advisory

Figure 2.2-29 Growth of Occupancy Rate of Non-CBD Office Space



Source : Colliers International Indonesia – Research and Advisory

Figure 2.2-30 Growth of Base Rent of Non-CBD Office Buildings

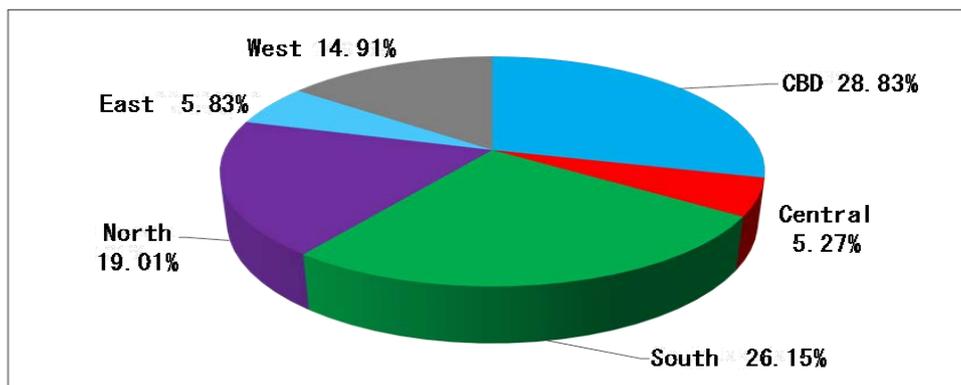


Source : Colliers International Indonesia – Research and Advisory

Figure 2.2-31 Base Rents and Service Charge Applied by Non-CBD Office Building as of 2013

D. Retail Market in South Jakarta

In 2013, there were 4,307,609 m² of retail market in whole Jakarta, with 1,340,738 m² in South Jakarta. Based on the marketing scheme, most of the retail spaces in Jakarta are retail spaces for lease, i.e., 66.26%. Average base rent for retail spaces was Rp480,000/m²/month, and occupancy was 88%.



Source : Colliers International Indonesia – Research and Advisory

Figure 2.2-32 Distributions of Retail Spaces for Lease Based on Location, 4Q 2013

(3) Competitor Analysis

A. Apartment

Based on the above criteria, 18 strata-title projects were selected, comprising nine middle-low class projects, seven middle-upper class projects, and two upper class projects located within 5 km radius from the property. The existing project is the one which has been in operation since 2006. A project has a minimum selling price of Rp11.5 million/m².

i) Strata-Title Apartment

Table 2.2-2 List of Strata-Title Apartment Projects

No	Apartment Name	YOP	Project Status	Address	# of Units
STRATA- TITLE APARTMENT					
Middle Low Class Projects					
1	Bintaro Park View	2014	Under-construction	Jl. Bintaro Permai Raya	1,100
2	City Light Apartment Tower Putri	2014	Under-construction	Jl. Ir. H. Djuanda, Ciputat	720
3	City Light Apartment Tower Intan	2015	Under-construction	Jl. Ir. H. Djuanda, Ciputat	450

4	Green Lake View Ciputat (Tower B)	2015	Under-construction	Jl. Dewi Sartika, Ciputat	656
5	Green Lake View Ciputat (Tower E)	2015	Under-construction	Jl. Dewi Sartika, Ciputat	656
6	Bintaro Plaza Residences	2015	Under-construction	Jl. Bintaro Utama III Sektor 3A	642
7	Cinere Bellevue Suites	2015	Under-construction	Jl. Cinere Raya	1,080
8	Baileys Lagoon Tower A	2016	Under-construction	Jl. Dewi Sartika No. 31, Ciputat	580
9	Cinere Terrace Suites	2017	Under-construction	Jl. Cinere Raya	270
Middle Upper Class Projects					
10	Poins Square Apartment	2006	Existing	Jl. TB Simatupang	271
11	Hampton Park Apartment	2008	Existing	Jl. Tarogong Raya	646
12	The Kencana Residence Pondok Indah	2014	Under-construction	Jl. Sutan Iskandar Muda	178
13	Aspen Admiralty Tower A	2014	Under-construction	Jl. RS. Fatmawati No.1	243
14	Aspen Admiralty Tower B	2014	Under-construction	Jl. RS. Fatmawati No.1	242
15	Aspen Admiralty Tower C	2015	Under-construction	Jl. RS. Fatmawati No.1	378
16	Lexington Residence	2016	Under-construction	Jl. Raya Deplu	275
Upper Class Projects					
17	The Bellevue at Pondok Indah	2014	Under-construction	Jl. H. Nawi No. 1	40
18	Izzara Apartment	2015	Under-construction	Jl. TB. Simatupang Kav. 16-17	447
Total					8,874

Source : Colliers International Indonesia – Research and Advisory

Among the apartments listed above, nine apartments are for middle-low-class and being developed; two middle-upper-class apartments have been completed and five are being development; two luxury class apartments are being developed. Common facilities for resident such as swimming pool and fitness center are incorporated in many residential apartments.

ii) Apartment for Lease

Table 2.2-3 General Characteristics of the Selected Projects

No.	Project's Name	Project status	YOP	Address	# of Units
1	Aditya Mansion	In-operation	1993	Jl. Adityawarman	65
2	Oktroi Plaza	In-operation	2004	Jl. Kemang Raya	11
3	Somerset Berlian	In-operation	2006	Jl. Permata Berlian V, Permata Hijau	210
4	Belleza Suites	In-operation	2008	Jl. Letjen Soepeno, Arteri Permata Hijau	113
5	Somerset Kencana	Under-construction	2014	Jl. Sutan Iskandar Muda	204
Total					603

Source : Colliers International Indonesia – Research and Advisory

Table 2.2-4 Market Mix of the Serviced Apartment Projects

Apartment Type	Market Segment	Common Units and Average Size	Provided Selling Price (Rp million/m ²)	Overall Take-Up Rate	Overall Occupancy Rate	Common Number of Facilities
Strata-Title Apartment	Middle-Low Class Projects	Studio	10-20	40%-95%	-	2-8
		(20-26 m ²)				
		2-BR (34-40 m ²)				
	Middle-Upper Class Projects	2-BR (80-100 m ²)	15-30*	60%-100%	60%	9-10
		3-BR (93-123 m ²)				
		2-BR				
	Upper Class Projects	2-BR	35-40	80%-95%	-	5-7

Apartment Type	Market Segment	(60 and 99 m ²)	Provided Rental Rate (US\$/m ² /month)	Overall Occupancy Rate	Common Number of Facilities	
		3-BR (120 and 180 m ²)				
Serviced Apartment	Middle-Upper Class Project	1-BR (51-64 m ²)	20-35	-	60%-100%	4-10
		2-BR (80-115 m ²)				
		3-BR (120-199 m ²)				

Source : Colliers International Indonesia – Research and Advisory

B. Hotel

Based on the below criteria, as of early 2014, the JICA Study Team identifies 18 operational budget to four-star hotels with 2,152 rooms located within 6 km radius from the project area.

However, the JICA Study Team would also provide, in brief, a list of hotels under construction or under planning.

These 18 hotels are dominated by four-star hotels (45%) or new hotels – operated for less than ten years (67%).

Table 2.2-5 Lists of Existing Hotels Located within 6-km Radius from the Property

No.	Hotel Name	Established Year	Operating	Rooms	Location
Budget Hotels					
1.	Amaris Hotel Panglima Polim	2007	Santika Indonesia	56	Jl. Panglima Polim Raya No. 2
2.	Amaris Hotel Panglima Polim 2	2012	Santika Indonesia	38	Jl. Panglima Polim Raya 91
3.	Favehotel Kemang	2012	Archipelago International	130	Jl. Kemang 1 No. 6
4.	Neo Hotel Melawai	2013	Archipelago International	88	Jl Panglima Polim No.15
Three-Star Hotels					
5.	Hotel Melawai	1973	Hotel Melawai	126	Jl. Melawai Raya No.18-20, Blok M
6.	The Falatehan Hotel ¹	2013	Safin Group Hotels	92	Jl. Falatehan 1 No. 26, Blok M
7.	T Hotel Jakarta	2013	Independent	75	Jl. Ciputat Raya No. 11, Kebayoran Lama
8.	Oak Tree Urban Mahakam	2013	Kagum Hotel Management	65	Jl. Sampit V No.3, Kebayoran Baru
9.	MAVEN Buncit	2013	MAVEN Hotels & Resorts	85	Jl. Kemang Timur V No. 23
10.	Sotis Hotel Jakarta	2013	Independent	70	Jl. Falatehan I No.21 - 22, Blok M
Four-Star Hotels					
11.	Ambhara	1994	Independent	202	Jl. Iskandarsyah Raya No. 1 Kebayoran Baru
12.	Grand Kemang	1995	Mesa Hotels & Resorts	203	Jl. Kemang Raya 2H Kebayoran Baru
13.	Kristal	2003	Independent	328	Jl Tarogong Raya, Cilandak Barat
14.	Golden Boutique Melawai	2006	Golden Boutique Hotel	78	Jl. Melawai VIII No. 6-8, Blok M
15.	Arion Swiss-Belhotel Kemang ²	2011	Swiss-Belhotel International	94	Jl. Kemang Raya No. 7, Kemang
16.	Amos Cozy Hotel & Convention	2011	Independent	92	Jl. Melawai Raya no 83-85 Blok M
17.	Mercure Jakarta Simatupang	2012	Accor Hotel	232	Jl. RA Kartini No 18, Lebak Bulus
18.	Amaroossa Cosmo Jakarta	2013	Kagum Hotel Management	98	Jl. Pangeran Antasari No.9a-b

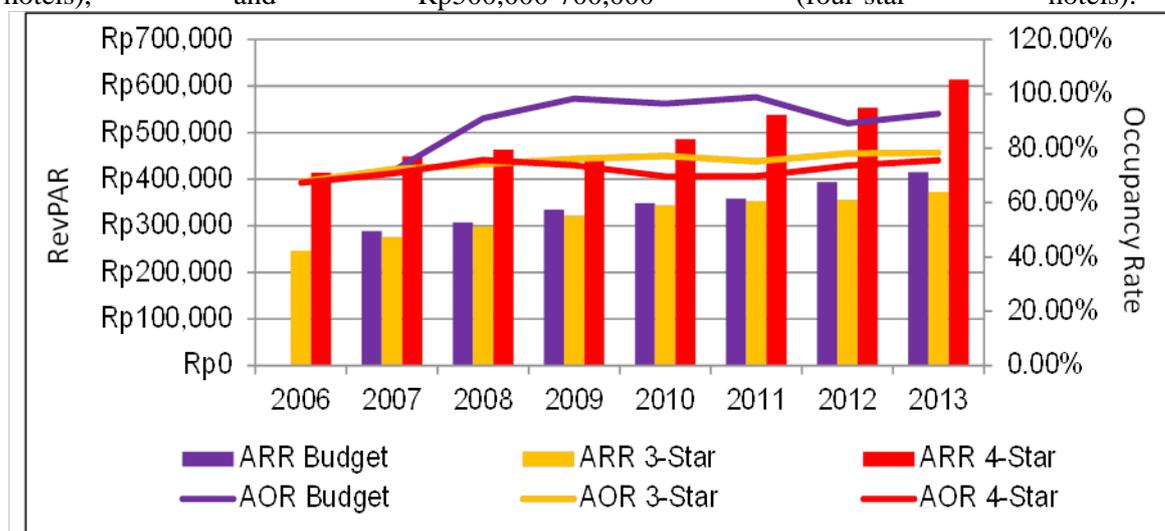
Source : Colliers International Indonesia – Research and Advisory

Looking from the location characteristics, a budget or four-star hotel has more potential to be developed in the project area. Budget hotel fetched the highest average occupancy rate of more than 90%, which is higher than three-star hotels. Meanwhile, four-star hotels still led the market with more than 70 % occupancy, with more rooms, and higher rate of Rp 200,000.

By looking at the trend of the provision of meeting rooms at hotels in the competitive area, average room size is 14-20 m² for budget hotels, 16-36 m² for three-star hotels, and 17-39 m² for four-star hotels. Moreover, it is important to have meeting rooms (including ballroom) in the hotel to attract business and MICE market. The capacity should vary from a small

boardroom that can accommodate ten persons to a grand ballroom that can accommodate at least 500 people.

Each hotel in the competitive area has kept occupancy rate over 70% for the last five years. RevPAR were recorded at Rp410,000-430,000 (budget hotels), Rp320,000-400,000 (three-star hotels), and Rp500,000-700,000 (four-star hotels).



Source : Colliers International Indonesia – Research and Advisory

Figure 2.2-33 Occupancy Ratio of each Hotel Class around the Project Area

C. Office

Based on the criteria that an office building shall have a minimum semi gross area of 15,000 m², the JICA Study Team selected 26 office buildings located within 5 km radius from the property.

These 26 selected buildings comprising 12 existing office buildings and 14 under construction buildings (17 buildings for lease and nine buildings for strata-title).

Table 2.2-6 List of Existing and Under Construction Office Buildings Located Within 5 km Radius

No.	Name of Office Building	Grade	Operation Year	Semi Gross Area	Number of Storey	Base Rent (/m ² /month)	Service Charge (/m ² /month)	Occupancy Rate	Typical Floor Area	Location
Lease										
1	Wisma Pondok Indah	B	1996	16,950	13	Rp130,000	Rp81,730	100.00%	1,304	Pondok Indah
2	Graha Elnusa	B	1997	22,000	16	Rp150,000	Rp48,000	100.00%	1,375	TB Simatupang
3	Ratu Prabu 2	B	2006	36,197	14	\$15.00	\$5.00	100.00%	2,200	TB Simatupang
4	Wisma Pondok Indah 2	B	2007	25,846	17	Rp150,000	Rp83,380	100.00%	1,565	Pondok Indah
5	Menara Talavera	B	2008	26,275	24	\$25.00	Rp57,500	100.00%	1,095	TB Simatupang
6	Arcadia Tower F	B	2009	21,321	18	\$22.00	Rp45,000	100.00%	1,184	TB Simatupang
7	Wisma Pondok Indah 3	B	2012	36,103	21	Rp190,000	Rp83,380	97.80%	1,478	Pondok Indah
8	PHE Tower	B	2012	28,000	21	Rp160,000	Rp70,000	100.00%	1,444	TB Simatupang
9	Talavera Suite	B	2013	17,172	18	\$27.00	Rp57,500	96.30%	954	TB Simatupang
10	Gedung Aneka Tambang 2	B	2014	16,000	19	Rp160,000	Rp45,000	70.00%	1,300	TB Simatupang
11	Palma Tower	B	2014	20,484	20	Rp250,000	Rp50,000	44.70%	1,100	TB Simatupang
12	AD Premiere	B	2015	18,900	17	Rp150,000	Rp45,000	20.00%	1,080	TB Simatupang

No.	Name of Office Building	Grade	Operation Year	Semi Gross Area	Number of Storey	Selling Price (/m ²)	Service Charge (/m ² /month)	Take-up Rate	Typical Floor Area	Location
13	South Quarter Tower 2	B	2015	40,778	20	\$22.00	Rp55,000	20.00%	1,900	TB Simatupang
Strata-title										
14	Menara 165	B	2011	26,864	24	Rp18,000,000	Rp35,000	100.00%	1,238	Jl. Let. Jend. TB Simatupang
15	Sovereign Plaza	B	2012	16,020	20	Rp21,000,000	Rp35,000	100.00%	801	Jl. Let. Jend. TB Simatupang
16	Alamanda Tower	B	2013	33,000	28	\$3,500	Rp45,000	100.00%	1,250	Jl. Let. Jend. TB Simatupang
17	GKM Tower	B	2014	23,000	23	Rp33,900,000	\$6.50	60.00%	1,000	Jl. Let. Jend. TB Simatupang
18	The Manhattan Square	B	2014	39,375	28	Rp2,800,000	Rp45,000	70.00%	1,432	Jl. Let. Jend. TB Simatupang
19	18 Office Park	B	2014	40,000	22	Rp24,000,000	Rp45,000	40.00%	1,800	Jl. Let. Jend. TB Simatupang
20	Plaza Oleos	B	2014	39,778	18	Rp25,000,000	Rp45,000	60.00%	2,209	Jl. Let. Jend. TB Simatupang
21	South Quarter Tower 1	B	2014	40,778	20	Rp30,000,000	Rp55,000	50.00%	1,900	Jl. Let. Jend. TB Simatupang
22	Metropolitan Tower	B	2014	44,000	22	\$1,850	Rp65,000	69.80%	1,000	Jl. Let. Jend. TB Simatupang

Source : Colliers International Indonesia – Research and Advisory

Base rent of office buildings ranges from Rp130,000/m²/month to Rp250,000/m²/month or US\$15.00/m²/month to US\$27.00/m²/month. Service charge ranges between Rp45,000/m²/month and Rp84,000/m²/month or US\$5.00/m²/month.

Asking pricing ranges between Rp18 million/m² and Rp33.9 million/m² or between US\$1,850/m² and US\$3,500/m². Service charge ranges between Rp35,000/m²/month and Rp65,000/m²/month.

D. Retail Market

Based on the criteria that the space of facilities should be 15,000-56,000 m², the JICA Study Team selected ten retail centers located within 5 km radius from the property.

Based on the average base rent applied, the competitive retail centers could be categorized into three groups:

The middle-low and middle class retail centers recorded rent between Rp250,000/m²/month and Rp300,000/m²/month. Occupancy rate was recorded between 70% and 100%.

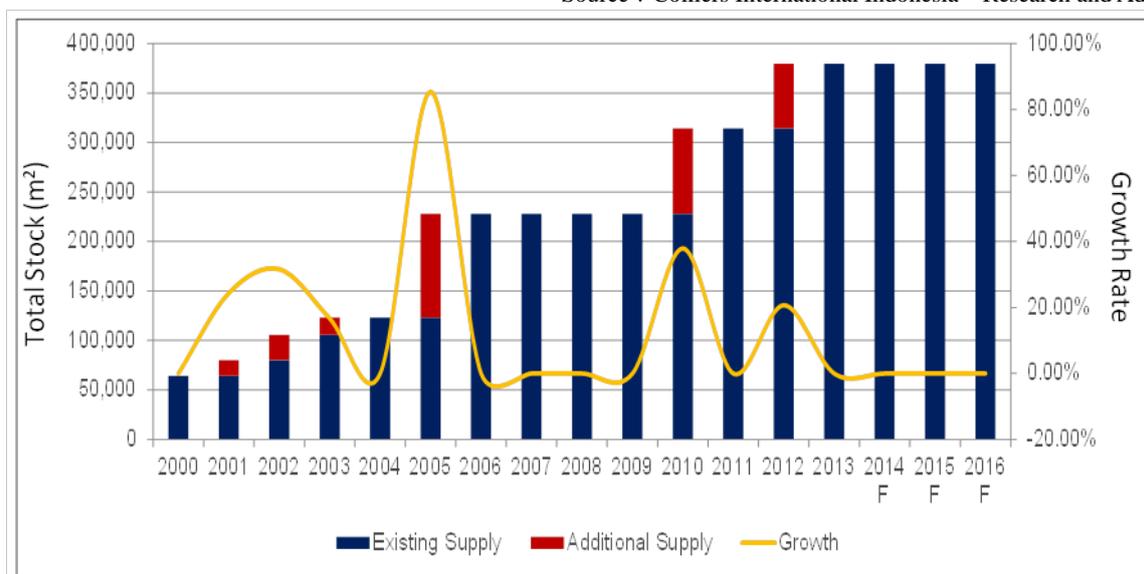
The middle-upper class retail centers recorded rent between Rp225,000/m²/month and Rp300,000/m²/month. Occupancy rate was recorded between 96% and 100%.

The upper class retail centers recorded rent between Rp550,000/m²/month and Rp740,000/m²/month. Occupancy rate was recorded between 96% and 98%.

Table 2.2-7 List of Retail Center

No	Name of Retail Center	YOP	Area (Sq m)	Marketing Scheme	Location
Middle-Low Class					
1	ITC Fatmawati	2001	15,703	Strata	Jl.Raya Fatmawati
Middle Class					
2	Bintaro Plaza	1993	18,820	Lease	Jl. Bintaro Utama
3	Dhamawangsa Square	2003	17,574	Strata	Jl.Dhamawangsa
4	Poins Square	2005	50,000	Strata-Lease	Jl.RA. Kartini - Cilandak
Middle-Upper Class					
5	Cilandak Town Square	2002	25,326	Lease	Jl. B Simatupang
6	Mall Gandaria City	2010	86,382	Lease	Jl.Gandaria
Upper Class					
7	Pondok Indah Mall I	1991	45,621	Lease	Jl.Metro Pondok Indah
8	Pondok Indah Mall II	2005	55,000	Lease	Jl.Metro Pondok Indah
9	Pondok Indah Mall Street Gallery	2012	9,100	Lease	Jl.Metro Pondok Indah
10	Mall Kemang Village	2012	56,052	Lease	Jl.Pangeran Antasari

Source : Colliers International Indonesia – Research and Advisory



Source : Colliers International Indonesia – Research and Advisory

Figure 2.2-34 Cumulative Supply of Competitive Retail Spaces

Table 2.2-8 Characteristics of Retail Centers

Market Segment	Area (m ²)	Occupancy Rate	Average Rental Rate (Rp/m ² /month)	Take-Up Rate	Average Selling Price (/m ²)	Service Charge (/m ² /month)	Major Type of Retail Center
Middle-low class	15,703	70.00%	250,000	87%	Rp45,000,000	Rp65,000	Community Center
Middle class	86,394	79%-100%	225,000-300,000	90.52%	Rp57,500,000	Rp56,250	Regional Center
Middle-upper class	111,708	96%-100%	425,000-525,000	-	-	Rp70,000	Regional Center
Upper class	165,773	96%-98%*	600,000-740,000*	-	-	Rp112,500	Regional Center

Source : Colliers International Indonesia – Research and Advisory

(4) Others**1) Purchaser Groups of Strata-Title Apartment**

As of early 2014, foreigners, including expatriates, are not allowed to purchase a property, including apartment, in Indonesia. A proposal has been submitted to the government to revise this regulation. However, this proposal has not been approved by the Parliament. Therefore, the major target market for apartment for strata-title is an Indonesian.

In Indonesia, data on household income is not transparent. Indonesian statistical data (Central Bureau of Statistics) does not reflect the real market. Hence, to be able to provide information on Indonesian population based on class, Colliers applied information collected, collated, and analyzed by Nielsen. Survey was conducted by personal face-to-face interview with 15,000 respondents in ten big cities. A monthly household expenditure was calculated based on family routine expenses, namely: phone bill, cleaning and washing products, daily meals, children's school fees, electricity, water, cigarette, maid service, transportation, monthly rental, etc., but does not include expenses for installment payments, recreation, social gathering, yearly housing rental, watching movies, clothing, etc.

As part of A class, about 3.88% are having monthly expenditure of a minimum of Rp7 million. Hence, the target market will be 3.88% of the total DKI Jakarta households.

Table 2.2-9 Socioeconomic Status in Jakarta

Classification	Household's Monthly Expenditure	Percentage (%)
A	Rp 7 million and over	3.88%
	Rp 3 million - Rp 7 million	28.74%
B	Rp 2 million - Rp 3 million	32.94%
C1	Rp 1.5 million - Rp 2 million	19.88%
C2	Rp 1 million - Rp 1.5 million	10.01%
D	Rp 700,000 - Rp 1 million	2.96%
E	Rp 700,000 and below	1.57%

Source : Nielsen Consumer Media View, Wave II 2013

2) Superiority of Office

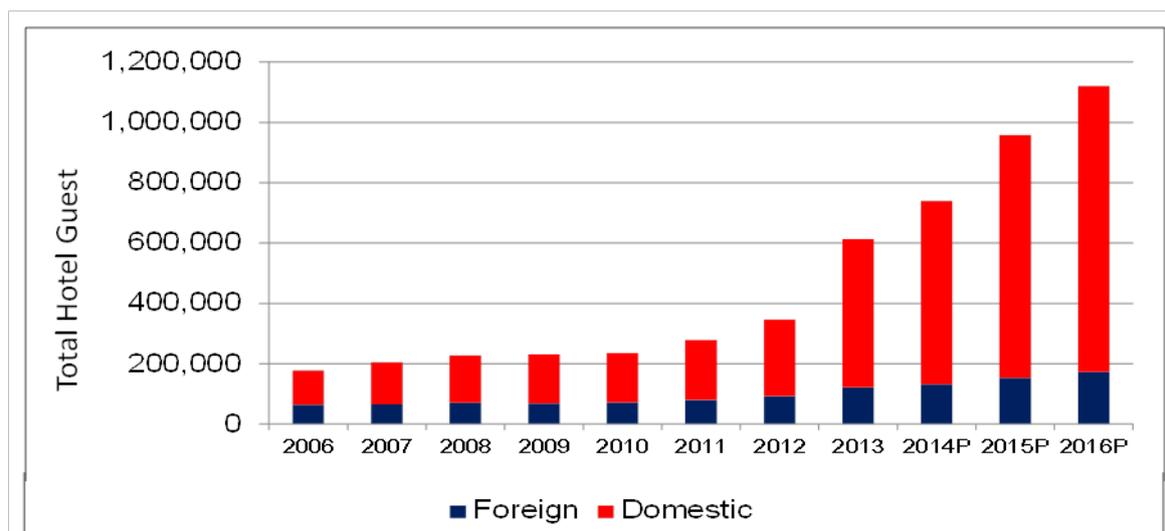
Offices to be built in the project area have the following advantages;

1. To be built just above one of the first-ever MRT stations in Jakarta,
2. Surrounding area is a complex development area including commercial facilities, residential apartments and hotels,
3. Competitive price can be set,
4. They can handle increasing office demand in TB Simatupang and surrounding areas.

3) Target of Hotel User

As of December 2013, there were more than 613,000 visitors staying at hotels, 80% of whom were domestic guests. These guests were about 25% of the total hotel guests in South Jakarta and only contributed 3% of the total visitors to Jakarta.

With the fast growing business and commercial activities around Simatupang and surrounding areas, it is projected that by 2016, the number of foreign and domestic visitors staying within these hotels will continue to grow higher by 12.4% and 24.6% per annum, respectively.



Source : Colliers International Indonesia – Research and Advisory

Figure 2.2-35 Projected Number of Visitors Staying in the Hotels Located Within 6 km Radius from the Property

4) Trading Area

Table 2.2-10 Estimated Target Market for the Proposed Retail Center from Surrounding Area, 2013-2018P

	2013	2014 F	2015 F	2016 F	2017 F	2018 F
Population of District Cilandak	197,307	200,129	202,990	205,893	208,837	211,824
Population of Surrounding Districts:						
a. District Jagakarsa	325,039	329,687	334,401	339,183	344,033	348,953
b. District Pasar Minggu	299,907	304,195	308,545	312,957	317,433	321,972
c. District Mampang Prapatan	147,837	149,951	152,095	154,270	156,476	158,714
d. District Kebayoran Baru	147,994	150,110	152,256	154,434	156,642	158,882
e. District Kebayoran Lama	306,907	311,295	315,747	320,262	324,842	329,487
Total Catchment Area from Surrounding Districts	1,227,682	1,245,238	1,263,045	1,281,107	1,299,427	1,318,008
Total Catchment Area (All)	1,424,989	1,445,367	1,466,036	1,487,000	1,508,264	1,529,832

Source : Colliers International Indonesia – Research and Advisory

Based on the survey conducted by AC Nielsen, majority of the households in Jakarta (65.58%) are having monthly household expenditure of more than Rp2 million, i.e., Class B and A. Hence, the potential target market of proposed retail center could be the middle to upper class segment.

Assuming the same percentage occurs in the area surrounding the proposed retail center, there will be 250,816 Class B and A households as potential target market for the proposed retail center in 2018. With four people per household, the proposed retail center will have a potential target market of 1,003,264 people in 2018.

Table 2.2-11 Configuration of People Living in the Area Surrounding the Property Based on their Income Classification, 2018

	Class and Income Range	Household of Cilandak and Surrounding Area	
		Proportion	No of Households
SES (based on Household Expenditure)	A (Above 3 Million)	32.63%	124,796
	B (2 Million – 3 Million)	32.95%	126,020
	C1 (1.5 Million – 2 Million)	19.88%	76,033
	C2 (1 Million – 1.5 Million)	10.02%	38,322
	D (700 Thousand – 1 Million)	2.96%	11,321
	E (Below 700 Thousand)	1.56%	5,966

Source : Nielsen Consumer Media View, Wave II 2013

2.2.2 Survey Result

In accordance with the analysis of the result of the market survey described above, following components are recommended to be developed in the project area,

- A grade B office building for lease
- An integrated of 4-star hotel and serviced apartment
- A middle-class apartment project for strata-title sale
- A lifestyle retail center for lease

(1) Office Building

Considering the characteristics of the area, Gross floor Area (GFA) of office building shall be classified as B rank having total floor area of 42,500 square meter. Parking lot for users of office building shall be constructed in the parking building, and 555 numbers of parking lots (16,650 square meters) shall be secured.

(2) 4-star Hotel and Serviced Apartment

Considering the similar operation style of hotel and serviced apartment, these two facilities shall be constructed in the same building. Standard room of 4-star hotel shall have the floor area of 26 square meters and it shall occupy about 90% of the hotel room. Junior sweet shall 1.5 times bigger than the standard room and sweet room shall be 2 to 6 times bigger than the standard room. Serviced apartment shall consist of 1-bedroom type, 2-bedroom type and 3-bedroom type. Among them, 50% shall be allocated for 1-bedroom type, 30% for 2-bedroom and remaining 20% for 3-bedroom.

(3) Apartment for Strata-title

Target class of the apartment for strata-title shall be middle-upper class and 3 types of room layout shall be prepared (1-bedroom, 2-bedroom and 3-bedroom). The figure shows the breakdown of the type of room for apartment. Lobby, multi-purpose room, administration office, gym, playing ground and swimming pool shall be built as part of apartment facility. Parking lots for 500 cars shall be prepared.

Table 2.2-12 Breakdown of the Type of Rooms of the Apartment

Type	Function	Unit	Area/ unit (sqm)	Total area (sqm)	Percentage (%)
Apartment	1BR	175	36	6,300	35%
	2BR	300	54	16,200	60%
	3BR	25	90	2,250	5%
Subtotal		500		24,750	100%

Source : JICA Study Team

(4) Shopping Mall

Shopping mall shall be a complex commercial facility consisting of cinema, F&B restaurant, gym, supermarket and a variety of specialty shops. Stores shall be located on the 1st to 5th floor of each complex building. Parking lots for 460 cars shall be prepared.

2.3 Case Study of TOD in Other Countries

Since MRT does not exist currently in Jakarta, it is difficult to reflect advantages of station front development to the real estate price. Therefore, an additional survey to assess real estate development trend in the city where MRT has already been developed was carried out. In this survey, price escalation trend with time and preference on the requirements of development facilities are researched.

Bangkok has been selected as the target city for case study of TOD due to the following reasons:

- MRT was recently developed; thus, there are sufficient numbers of similar and recent development projects.
- As with the case of Jakarta, MRT was not allowed to be connected to commercial facilities when it was just opened since image of railway was negative.
- TOD has been set as a policy for urban development.

The description under this section is a summary of the survey report of Nexus Real Estate Advisory Company Limited, who conducted the case survey under a contract with the JICA Study Team.

2.3.1 Survey Outline

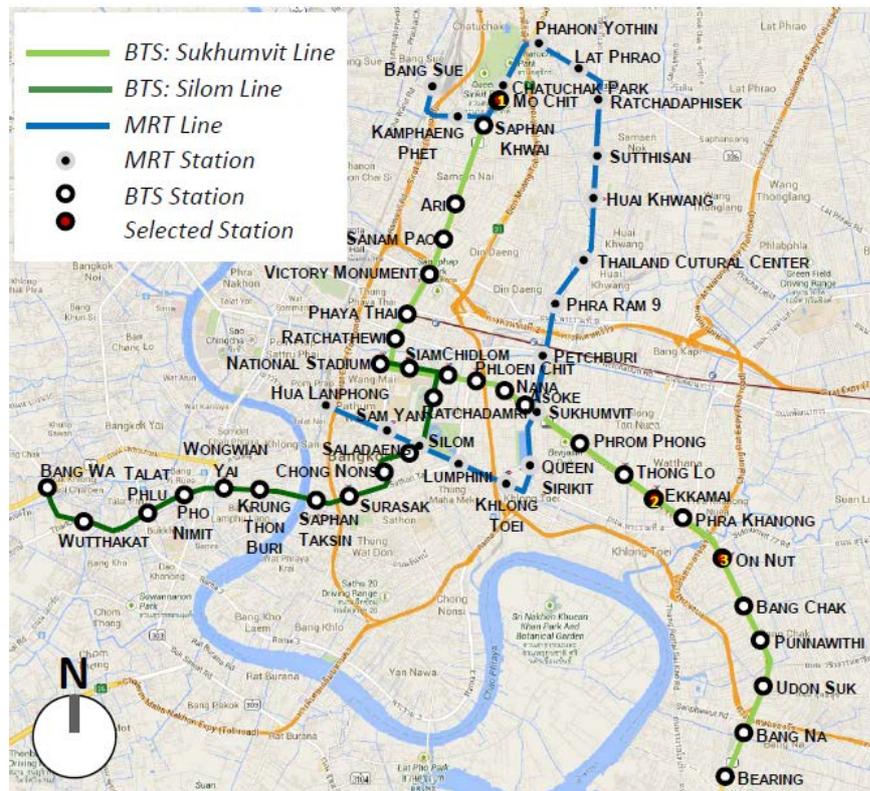
Although Jakarta City is similar to Bangkok City in terms of its characteristics, residences, city development, traffic problems, and transportation, it is difficult to find one project in Bangkok which is comparable to the Lebak Bulus Project. Therefore, there are five selected stations in this study which could be compared with the project in Lebak Bulus in terms of various issues. The five stations selected as the target of the survey are summarized in the following Table 2.3-1:

Table 2.3-1 Summary of the Surveyed Stations in Bangkok

Station	
Mo Chit	- This station has been selected because it was a failed project which is similar to the future project in Lebak Bulus. The study of Mo Chit Station focuses on how the project failed.
Surasak	- This station has been selected because there is a hotel connecting directly to Surasak Station which is similar to the hotel development plan in Lebak Bulus. The study of Surasak Station focuses on the hotel development.
Phrom Phong	- This station has been selected because there are two mixed-use projects of office space for rent and shopping center connecting directly to Phrom Phong Station which is similar to the plaza and office building development plan in Lebak Bulus. The study of Phrom Phong Station focuses on shopping center and office building development.

Ekamai	<ul style="list-style-type: none"> - This station has been selected because there are retail and condominium projects connecting directly to Ekamai Station which is similar to the retail and residential development plan in Lebak Bulus. The study of Ekamai Station focuses on condominium and retail development.
On Nut	<ul style="list-style-type: none"> - This station has been selected because the distance from On Nut Station to Bangkok CBD is similar to the distance from Lebak Bulus Terminal to Jakarta CBD. Moreover, the condominium development in this area is very interesting. Before the commencement of BTS operation, there were only houses and low-rise commercial buildings in this area. After that, many condominium projects have been developed. The study of On Nut Station focuses on condominium development.

Source : JICA Study Team



Source : JICA Study Team

Figure 2.3-1 BTS Network in Bangkok and Target Stations of the Survey

2.3.2 Survey Result

The result of each survey item is described below.

Population and Household

In the residential area, the number of population and households is very high as many residential buildings have been developed. The yearly growth rate of households is approximately 1.3–4.0%. On the other hand, the population density in the office area is higher than in residential area because people usually choose living near their workplaces but most land plots have been developed to office buildings. Therefore, residential projects in the office area are always high-rise buildings with many residences.

Land Price

The yearly growth rate of land price surrounding the BTS stations is very high especially in the residential area. The growth rate of land price is approximately 10-20% per year. The land price in the area within 500 m radius from the BTS stations is usually higher than the land price in the area within 500-1,000 m radius from the BTS stations by 40-60%.

Direct Connection from a Building to a Station

A direct connection from a building to a station should be between a plaza or a lobby of the building and the station.

Hotel

Hotels around the BTS stations are usually business hotels with average room rate of ₱1,500-2,000/room/night and occupancy rate of 75-90%. However, Surasak Station is very close to Bangkok CBD. Therefore, the future hotel project in Lebak Bulus may get lower occupancy rate. While rents of hotels with direct connections to BTS stations are approximately 30% higher than rents of farther hotels, occupancy rates are similar at approximately 70-75%.

Office Building

Because the demand of office space in Bangkok is very high, the rentable area of each office building around Phrom Phong Station is approximately 30,000-50,000 m² with a high rent of ₱700-900/m²/month and very high occupancy rate of 90-100%. Therefore, the occupancy rate of office space for rent in Lebak Bulus depends on the demand of office space in Jakarta. While rents of office buildings nearby BTS stations are approximately 15% higher than rents of farther office buildings, occupancy rates are similar at 90-100%.

Shopping Center

If developers would like to develop malls with higher rental space and floors than those recommended for a community mall, developers should develop a shopping center with complete range of goods and facilities. In addition, a shopping center should consist of department store, shopping plaza, and anchor tenants. While rents of shopping centers nearby BTS stations are 60-70% higher than rents of farther shopping centers, occupancy rates are similar at approximately 90-100%.

Condominium

The number of units of each condominium project around BTS station especially on the main road is always higher than 200 units. The growth rate of condominium units is approximately 39% per year. In addition, condominium nearer the CBD yields higher selling price. The selling price growth rate is approximately 5-10% per year with the selling rate of 30-35 units per month. Before the commencement of the BTS operation, the characteristics of Ekamai and On Nut areas were similar to the Lebak Bulus area. Therefore, the future residential project in Lebak Bulus is expected to be successful. Selling prices of condominium projects with direct connections to BTS stations are usually higher than the selling prices of condominium projects without direct connection by 30-35%. Also, absorption rates of nearer projects are approximately 40% higher.

Community Mall

The successful shops in community malls are always restaurants. Therefore, the proportion of rental space for restaurants should be higher than the rental space for other shops. In addition, the total floors of community malls should not be more than three and there should be anchor tenants in the malls to draw people such as supermarket, theater, fitness, etc. Rents of community malls nearby BTS stations are approximately 45-50% higher than rents of farther community malls.

Chapter 3 Facility Plan

Facility plan described under this section are based on the market analysis of real state survey as stated earlier in Chapter 2 of this report. However, it is envisaged that actual facility plan will be reviewed and re-planned in the way it serves the objectives and interest of the future investor to this project. Therefore, the final facility layout may differ to those described under this chapter. It is important, though, to know that studies on deck are equivalent to the level of basic design since deck should be designed and constructed before the investor is determined.

3.1 Summary of Facility Plan

(1) Site Plan

Basic polity on facility layout plan is based on the result of comparison study made in the previous study (Figure 3.1-1, Table 3.1-1). In accordance with the result of this study, the plan has been slightly modified and finalized.

<p>Plan A</p>		<p>Advantage Station plaza can be a center of people's movement flow and people can directly access to both complex building and bus terminal. Residential building with parking facility can be accessed directly from the public road. Entrance to the parking faces a major road and distance between station and complex building is close.</p> <p>Disadvantage Residential building is far from station.</p>
<p>Plan B</p>		<p>Advantage Station plaza can be a center of people's movement flow and people can directly access to complex building 1, residential building 1 and bus terminal. Entrance to the parking faces a major road and it is close to the complex building.</p> <p>Disadvantage It is difficult to ensure parking space for residential building. It takes more time from parking to station as people have to go through complex building.</p>
<p>Plan C</p>		<p>Advantage One complex building and one residential building are located close to a major road. Direct access to the residential building from public road is possible. Parking space is built.</p> <p>Disadvantage The distance from station plaza and bus terminal is far. Entrance of parking building 1 does not face a major road.</p>

Source : METI Study Report

Figure 3.1-1 Comparison Study of Layout Plan

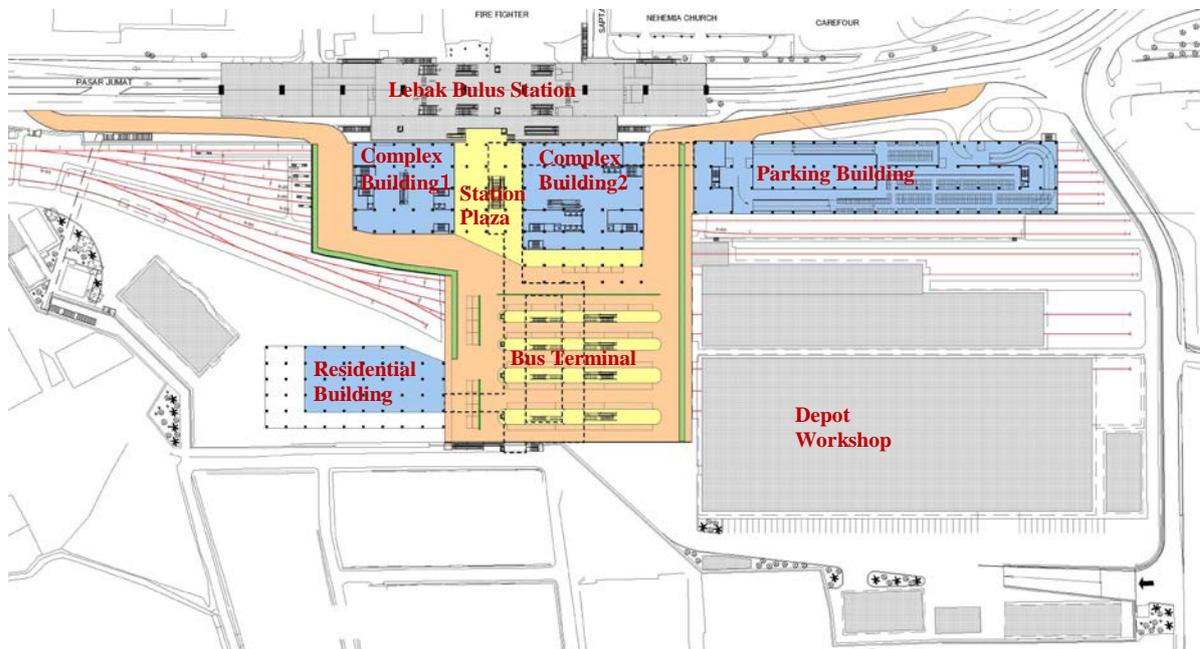
Table 3.1-1 Comparison Study on Basic Layout Plan

	Plan A	Plan B	Plan C
Functionality and user-friendliness of station plaza	○	○	△
Accessibility from station to complex building	○	△	○
Environment around residential facility	○	×	△
Functionality and user-friendliness of parking facility	○	△	×
Accord with surrounding environment	○	○	△
Constructability	○	△	○
Cost	△	△	○

Source : METI Study Report

Even though the Lebak Bulus Station is expected to be a south hub terminal station of Jakarta Mass Rapid Transit (MRT), this elevated station shall be constructed on existing road and its southern part shall be fully occupied by a future depot yard. Therefore, necessary facilities such as transport connection and commercial facilities must be planned above the future depot yard. The planned infrastructure facilities are basically composed of public (bus terminal, station plaza, parking building, pedestrian deck, and access ramp) and commercial (complex buildings 1 and 2, and residential buildings) use. Because most of the facilities shall be located in front of the station, accessibility of the facilities shall be significantly convenient.

The station plaza shall be planned and located between the main complex buildings. It does not only simplify pedestrian circulation between the station and bus terminal, but also connect the north and south parts of the station by the efficiently planned pedestrian bridge.



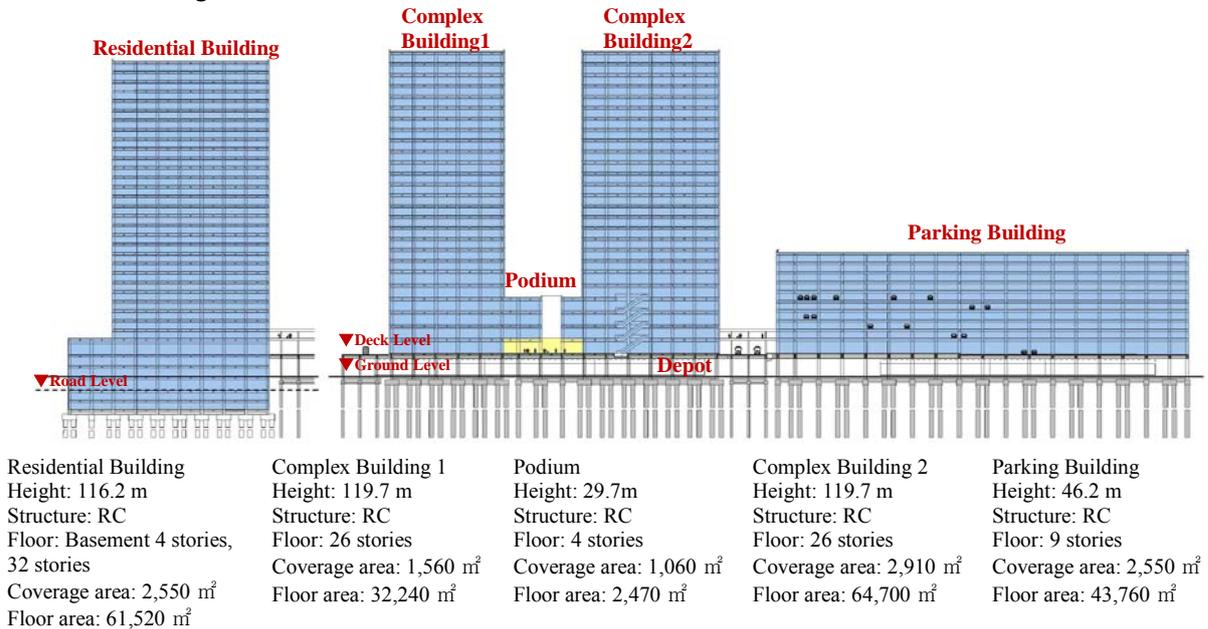
Source: JICA Study Team

Figure 3.1-2 Site Plan

(2) Architectural Outline

All infrastructure facilities shall be designed by rigid frame reinforced concrete structure. The number of stories of the complex buildings 1 and 2, and residential building shall be planned considering the building height limitation as specified by aviation regulations, whereas the number of parking building stories shall be determined considering parking duration on the

building top floor. The floor on deck level shall be counted as the first floor of the buildings above the depot, whereas the floor on the depot ground level shall be counted as the first floor of the residential building. Architectural plan follows Indonesian domestic architectural regulation mentioned later in section 3.2 and 3.3. The height of the building is restricted by aviation regulation



Source : JICA Study Team

Figure 3.1-3 Architectural Outline of Buildings

3.1.1 Public Infrastructure

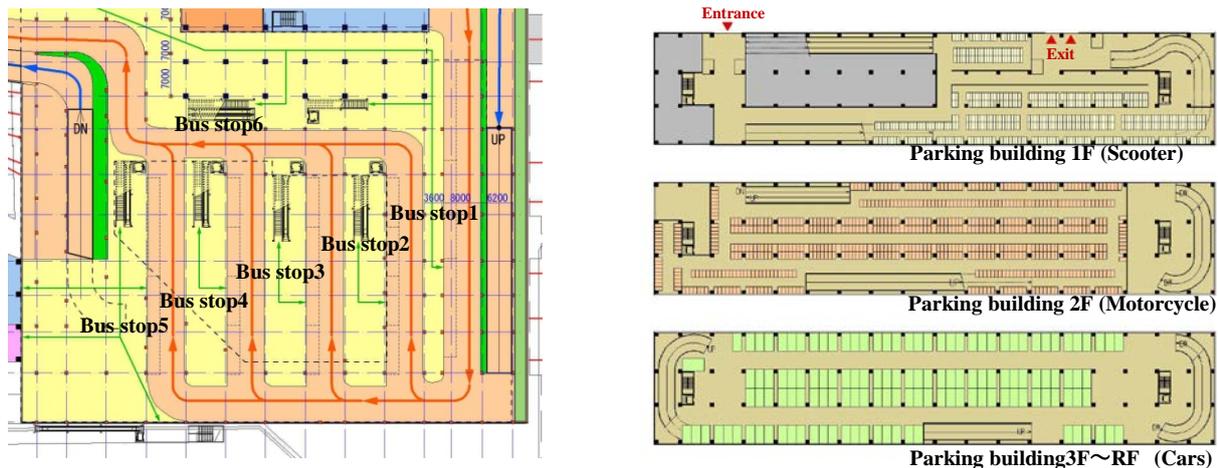
Public infrastructure shall be composed of bus terminal, station plaza, parking building, pedestrian deck, and access ramp. For the bus terminal design, short distance bus stop and taxi stand shall be planned. Moreover, the bus terminal shall be connected with the Lebak Bulus Station via a pedestrian bridge. For parking building design, the parking spaces for cars, motorcycles, and scooters, which are separated by different floors, shall be planned.

Table 3.1-2 Facilities Scale Calculation of a Station Plaza

Items	Quantity			Unit	
	2020	2041	2044		
Future passengers	77,300	96,200	98,000	passenger/day	
Future passengers	100,490	125,060	127,400	passenger/day	
Future peak hour passengers (boarding)	3,870	4,810	4,900	parson/hour	
Future peak hour passengers (alighting)	3,870	4,810	4,900	parson/hour	
Peak hour station plaza users	7,740	9,620	9,800	parson/hour	
Peak hour station plaza users (boarding)	4,640	5,770	5,880	parson/hour	
Peak hour transport mode users (boarding)	Bus	560	690	710	parson/hour
	Minibus	460	580	590	parson/hour
	Taxi	140	170	180	parson/hour
	Shared-Taxi	700	870	880	parson/hour
	Car (K&R)	140	170	180	parson/hour
	Bike	970	1,210	1,230	parson/hour
	Car (P&R)	280	350	350	parson/hour
Peak hour station plaza users (alighting)	4,640	5,770	5,880	parson/hour	
Peak hour transport mode	Bus	560	690	710	parson/hour
	Minibus	460	580	590	parson/hour

users (alighting)	Taxi	140	170	180	parson/hour
	Shared-Taxi	700	870	880	parson/hour
	Car (K&R)	140	170	180	parson/hour
Waiting passenger	Bus	90	120	120	parson
	Minibus	40	50	50	parson
	Taxi	10	10	20	parson
	Shared-Taxi	60	70	70	parson
Peak hour required berth (boarding)	Bus	3	3	3	berth
	Minibus	2	2	2	berth
	Taxi	1	1	1	berth
	Taxi Standby	6	8	8	berth
	Shared-Taxi	2	3	3	berth
	Shared-Taxi Standby	12	15	15	berth
	Short-time Parking	4	4	4	berth
	Parking-Car	760	940	960	berth
Parking-Bike	5,280	6,570	6,690	berth	
Peak hour required berth (alighting)	Bus	1	1	1	berth
	Minibus	1	1	1	berth
	Taxi	2	2	2	berth
	Shared-Taxi	6	8	8	berth

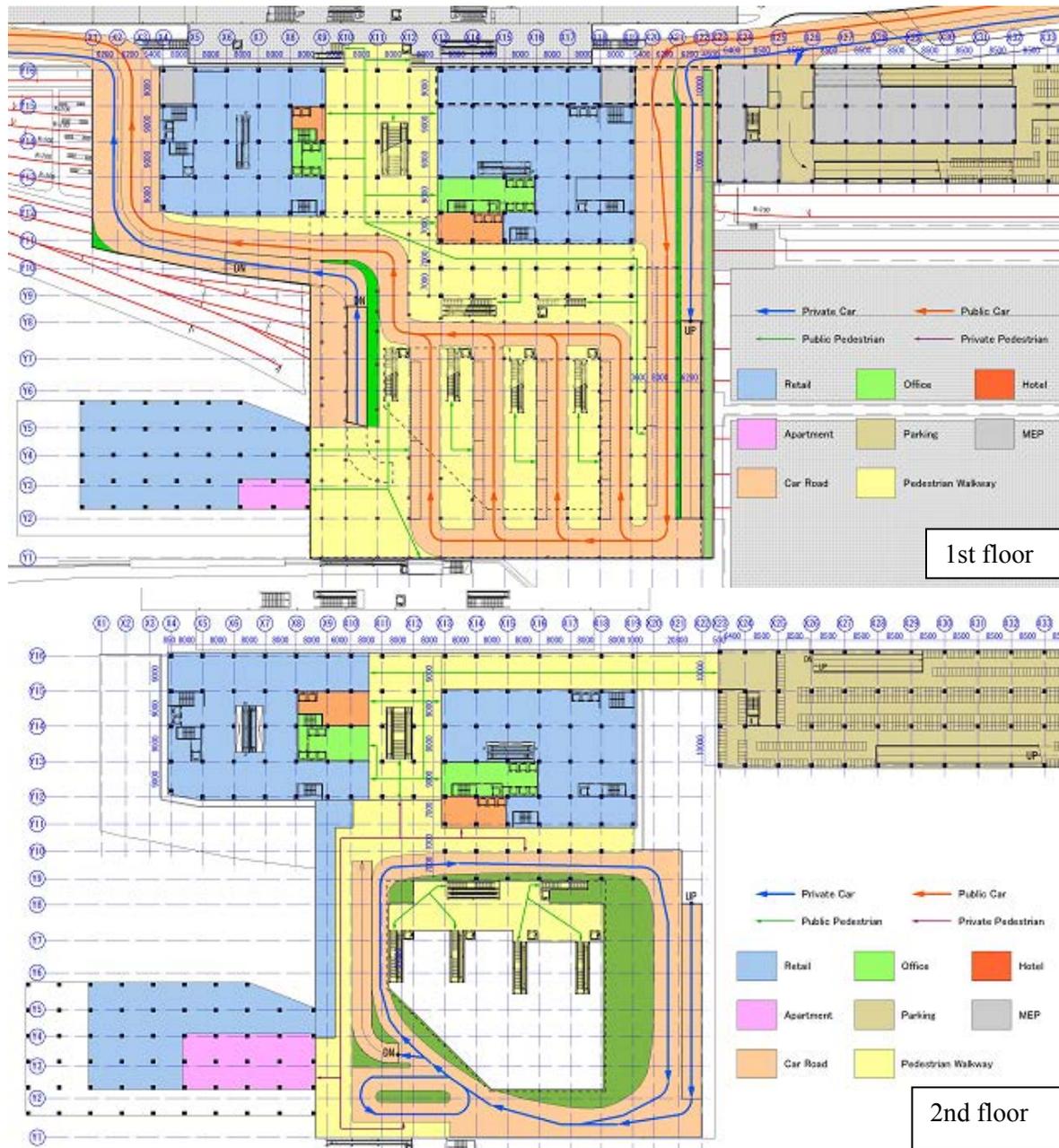
Source : JICA Study Team



Source : JICA Study Team

Figure 3.1-4 Public Infrastructure Plan

Access of private and public cars shall be separated by deck levels. The bus deck (1st level) shall be used for bus access and the green deck (2nd level) shall be used for private cars and taxis where is directly accessible to the drop-off area of the lobby of the buildings (retail, office, hotel, and apartment).



Source: JICA Study Team

Figure 3.1-5 Plan of Clear Delineation Between Public and Private Areas

3.1.2 Private Infrastructure

Private infrastructure shall be composed of the complex buildings 1 and 2, and residential building. Multiple usages of buildings shall be proposed as follows: commercial area, offices, and hotel in the complex buildings, and parking area, commercial area, and apartment rooms in the residential building.

The commercial area shall be allocated to the lower part of the three high-rise buildings which shall be connected with each other. Cinema and gym shall be located at the highest level of the building. Moreover, premium restaurants shall be located near the cinema to draw visitors to the higher floor. Allocation of each facility is based on the market survey described earlier in section 2.2, but has been slightly changed considering the analysis result of the supplemental study (subcontracted to TNS Indonesia).

Even though most of the bus terminal area is covered by the green deck, these areas are illuminated by natural daylight because a void shall be provided on the center of the green deck. The void shall be covered with permeable material roofing so as to allow sunlight into the bus terminal area. A membrane material shall be proposed for the roof because it is superior to have not only permeability of sunlight but also heat reduction and durability.

Table 3.1-5 Roof Material Comparison

Material	Transparent Material		Opaque Material		Permeable Material
	Glass	Polycarbonate	Color Aluminum	Composition Panel	Membrane
Durability	○	△	○	○	◎
Strength	△	◎	○	○	○
Heart Resistance	△	×	△	○	◎
Fire Resistance	○	×	○	○	○
Antifouling Property	△	△	○	○	◎
Aesthetical Image	○	○	△	△	◎

Source: JICA Study Team



Source: JICA Study Team

Figure 3.1-6 Examples of Illumination under Membrane Roofing

3.2 Development Policy

3.2.1 Architectural Regulations

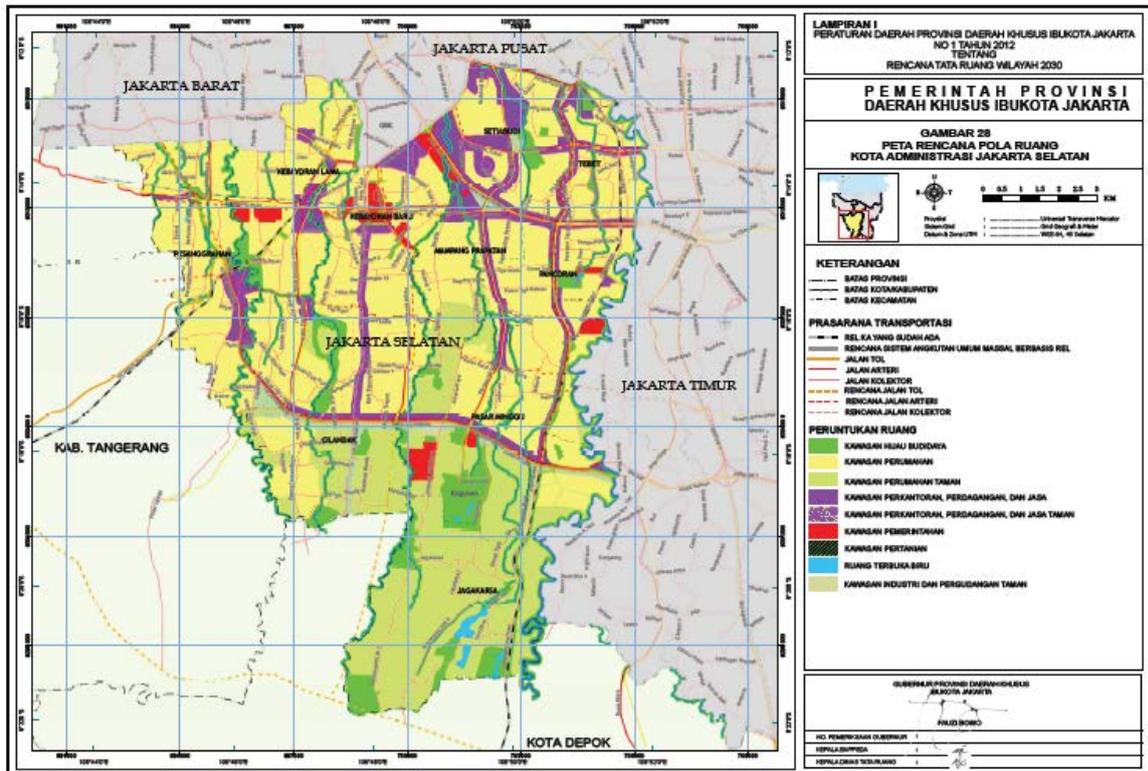
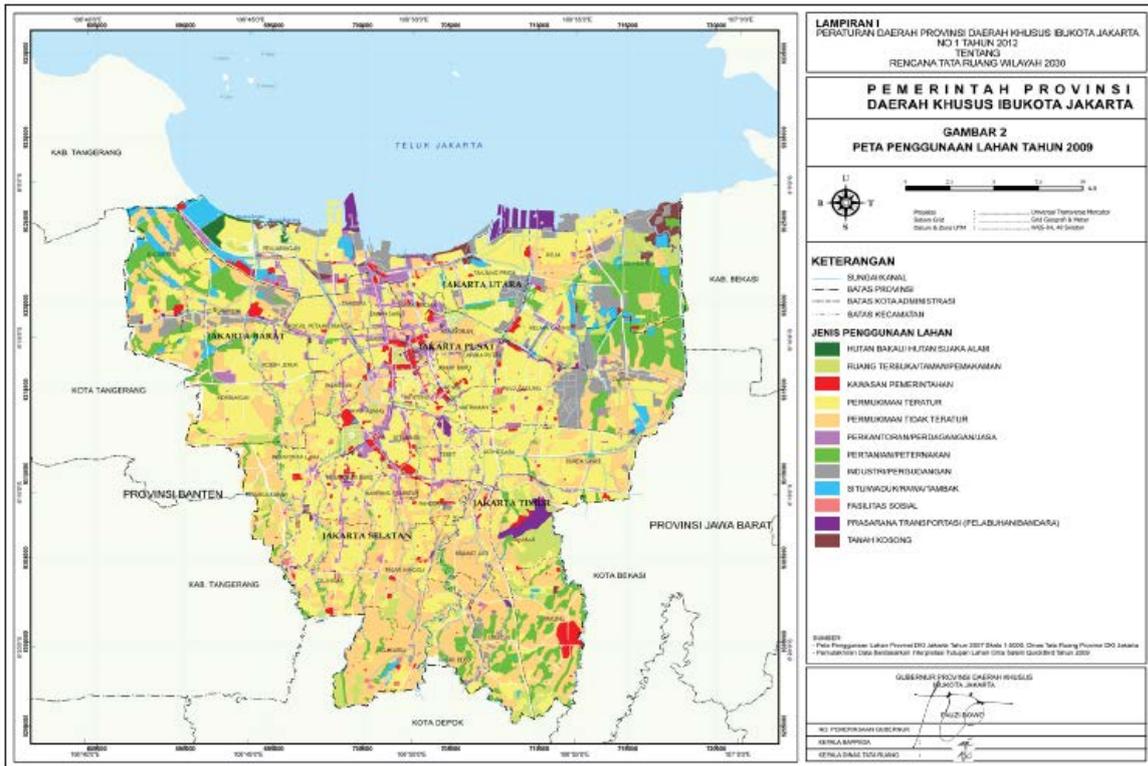
(1) Spatial Plan Standard

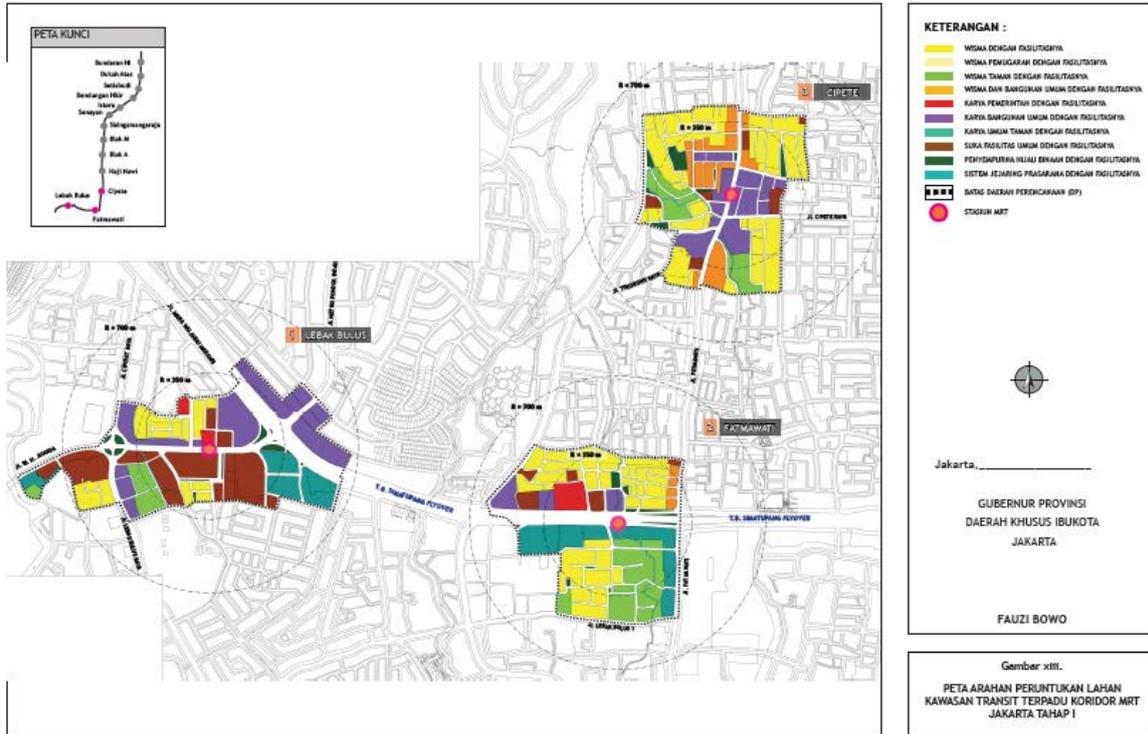
Spatial planning in Jakarta is based on three steps stipulated by Daerah Khusus Ibukota Jakarta (DKI Jakarta). Although the spatial plan of the entire Jakarta area is stipulated by RTRW, detailed spatial plan of station surrounding area of MRT is specified by the Urban Design Guidelines (UDGL). Contents of the UDGL are decided with the Regional Spatial Coordination Team in general. Based on the above spatial plan, usage, total floor area, coverage area, etc., in specific area are issued in LPK.

Table 3.2-1 Spatial Plan

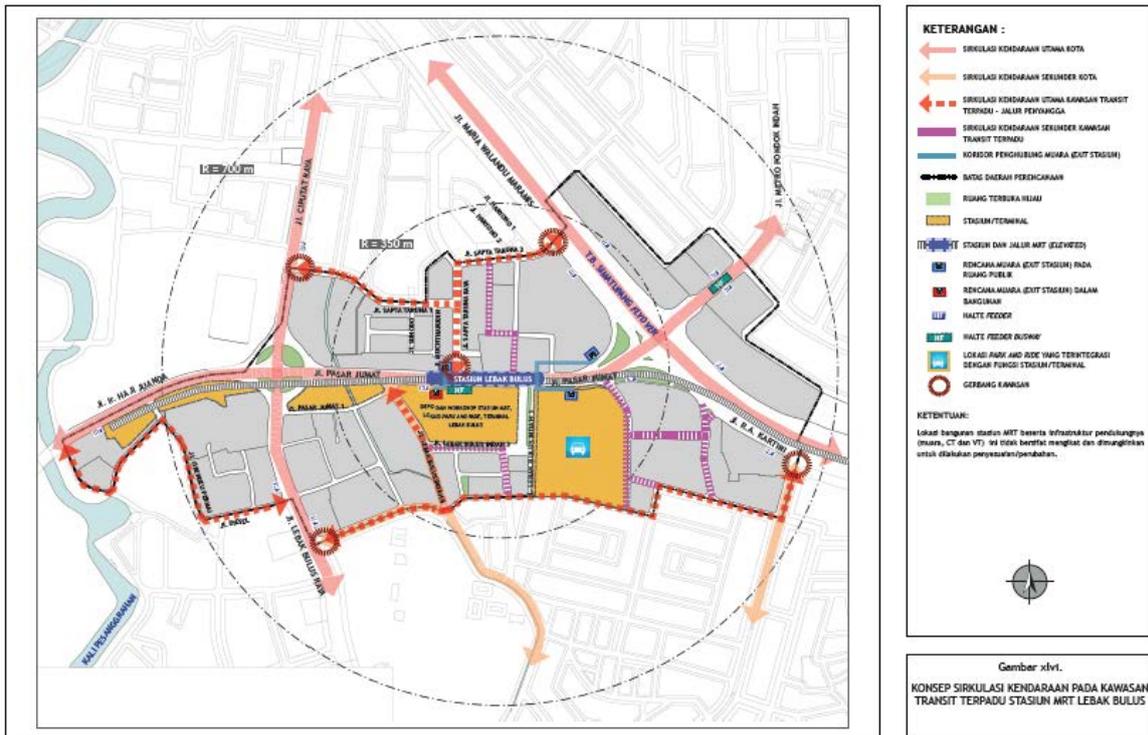
Spatial Plan Standard	RTRW (Spatial Plan DKI Jakarta, 2011-2030) Rencana Tata Ruang Wilayah	UDGL (Urban Design Guideline)	LRK (City Plan Sheet) Lembar Rencana Kota
Area	Entire area of Jakarta for the next 20 years	Large development area	Specific area
Main Contents	Road, railway, traffic, and development plan, etc.	Land usage, surrounding traffic plan, station development plan, etc.	Usage classification, number of floors, coverage area, floor area, road width, setback, etc.
Year of Enactment	Renewed every ten years.	Newest version has been issued in 2012.	Renewed every five years.

Source: JICA Study Team





PANDUAN RANCANG KOTA PENGEMBANGAN KORIDOR MRT JAKARTA TAHAP I



PANDUAN RANCANG KOTA PENGEMBANGAN KORIDOR MRT JAKARTA TAHAP I



Source : UDGL

Figure 3.2-1 Samples of RWTW/ UDGL/ LRK**(2) Architectural Planning Standards**

Relevant regulations on facility planning are separated into architectural, structural, and firefighting equipment regulations. Some parts of these regulations have been reiteratively revised since the 1990s. Some of the regulations are for reference only and inconsistent with others. Therefore, a special engineering expert shall be hired in the process of application of architectural building (IMB). This expert shall negotiate the architectural plan with relevant authorities. The regulations and codes listed in Table 3.2-2 below shall be applied for architectural facility design in this Project.

Table 3.2-2 Architectural Design Standards

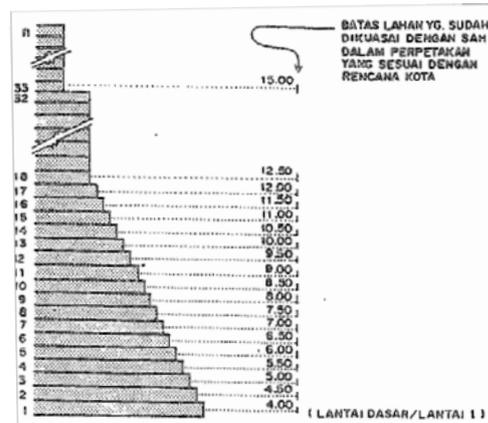
	No.	Year	Title	Page	Reference
1	PERDA No.1	2012	Regional Spatial Plan 2030	243	Spatial Plan 2030
2	PERDA No.7	2010	Regional Regulation on Building in Jakarta Capital Areas	139	Architectural Standard
3	Dinas Tata Kota	1995	Guidelines for Technical Detail of Town Planning for Single Building Type	47	City Plan Standard
4	PROV No.(draft)	XXX	Additional Requirements for Refuge Area of Residents of Fire Hazards in High-rise Building	12	Refuge Area Standard
5	PERGUB No.20	2013	Recharge Well	12	Rainwater Recharge Well
6	PERGUB No.38	2012	Green Building	54	Green Building
7	PERGUB No.68	2012	Making Revise No.115, 2001 on Making Well Recharge	16	Rainwater Recharge Well
8	PERME No.3	2010	Wastewater Quality Standards for Industrial Area	7	Factory Drainage Standard
9	SNI 1726 – 2012	2012	Planning procedures for earthquake resistance to the structure of the building and non-building construction	149	Earthquake Resistance Standard
10	DKI Guideline	-	Building Construction in Jakarta	17	Procedure of Building Permit
11	PERGUB No.129	2012	Procedure for Services in the Field of Building Permit	60	Procedure of Building Permit
12	PERGUB No.130	2012	Expert Team for Building	39	Expert Team for Building

Source : JICA Study Team

1) Technical Detail of Town Planning Guidance for Single Type: 1995

The technical detail of town planning guidance is the basic standard for architectural design which includes required distance between buildings, area calculation method of floors, requirement of parking building, etc.

Offset building distance from the boundary line is determined by the building's number of stories which varies from a minimum distance of 4 m (1 storey) to a maximum distance of 15m (33 stories or more).



Source : Technical Detail of Town Planning Guidance for Single Type: 1995, P19

Figure 3.2-2 Building Offset Requirement

Requirement of parking space in buildings is stipulated by usage, level, and standard floor area per one car. The standard floor area is calculated as using the gross floor area of the buildings.

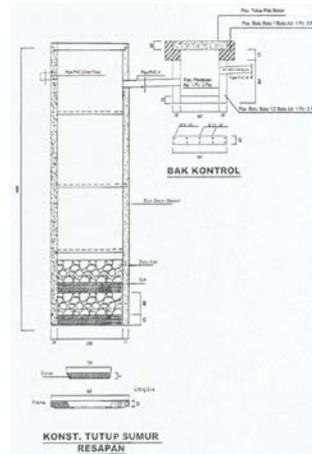
Table 3.2-3 Parking Space Standards

No.	Usage	Level	Parking Standard per one car
1	Office	—	100 m ²
2	Commerce service/shop	—	60 m ²
3	Cinema	Class I Class II Class III	7 chairs 10 chairs 15 chairs
4	Hotel	Class I (4-5 Stars) Class II (2-3 Stars) Class III (1 Star)	5 rooms 7 rooms 10 rooms
5	Restaurant	Class I Class II	10 m ² 20 m ²
6	Market	City level Regional level Neighborhood level	100 m ² 200 m ² 300 m ²
7	Hall/Convention	Concentrated use Not concentrated use	4 m ² 10 m ²

Source : Technical Detail of Town Planning Guidance for Single Type: 1995, P23

2) **Making Revise No.115, 2001 on Rain Water Recharge Guideline, 2005**

The purpose of well charge standard is to mitigate the risk of flood by penetrating or retaining rainwater. Installation criteria on using recharge pit, recharge well, and reservoir are specified. Moreover, the structure of recharge well is indicated. The capacity of rainwater tank shall be decided by using the following formula: total floor area (m²) × 0.05 m.

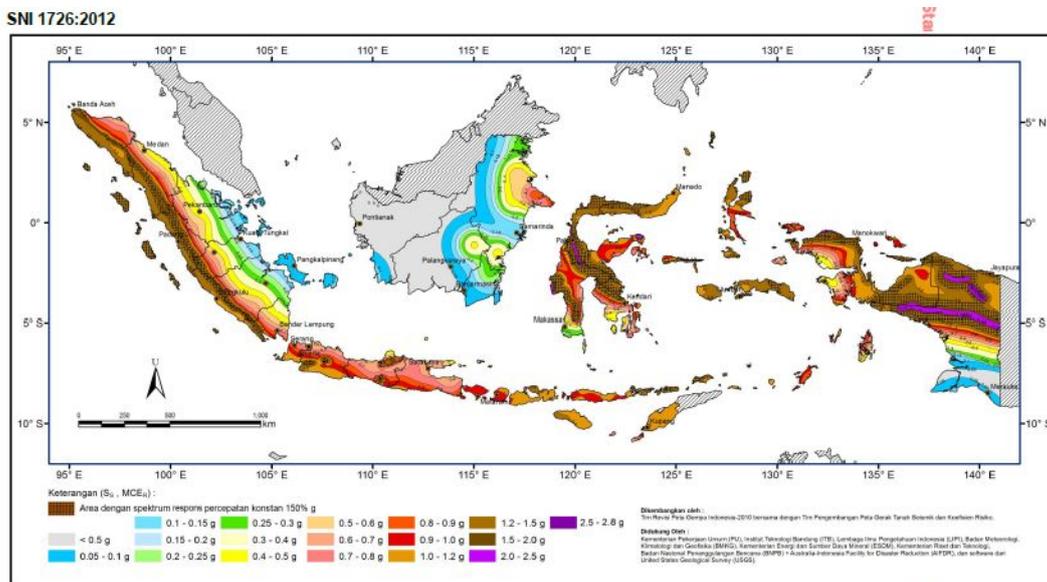


Source : Making Revise No.115, 2001 on Rain Water Recharge Guideline, 2005

Figure 3.2-3 Structure of Recharge Well

3) **SNI-1726-2012: Planning Procedures for Earthquake Resistance of the Structure of the Building and Non-building Construction**

The earthquake resistance design code for building structures contains an earthquake distribution map, as shown in Figure 3.2-4, which classifies the major earthquake risk areas in Jakarta.



Source : SNI-1726-2012

Figure 3.2-4 Earthquake Map in Jakarta

(3) **Firefighting Standards**

Firefighting standards include evacuation and disaster prevention policies relating with the architectural planning and specifications of fire protection facilities related to the M&E plan.

Table 3.2-4 Architectural Design Standards

No.	Year	Title	Page	Reference
1	PERME No. 28 2008	Technical Requirements of Fire Protection System for Building and Surrounding	311	Firefighting Standard
2	PERDA No.8 2008	Technical Requirements for Fire Protection System in Building and Neighborhood	39	Fire Protection System
3	PERDA No.6 2009	Specification Service Unit Implementing (UPTD) Fire Hazard Prevention and Control (PPBK)	11	Firefighting Management
4	SNI 03-1735-2000 2000	Planning procedure for building access and access surroundings for fire protection in the building.	45	Building Access and Fire Protection
5	SNI 03-1745-2000 2000	Procedures for planning and installation of standpipe and hose systems for fire protection of building homes and buildings.	52	Fire Hydrant System
6	SNI 03-3989-2000: 2000	Procedures for planning and installation of automatic sprinkler systems for fire protection in buildings.	83	Sprinkler System
7	SNI 03-6570-2001 2001	Mounted pump installation fixed for fire protection	142	Fire Pump System

Source : JICA Study Team

1) Understanding of Water-Based Fire Extinguishing Installation 2011

National standards (4to7 in Table 3.2-4) and new standards are combined and introduced in one standardized book, i.e., Understanding of Water-Based Fire Extinguishing Installation 2011.

The required number of access points for firefighters in a building depend on the total volume of the building. In general, four access points are required for a high-rise building. However, the number can be reduced to two ways under certain conditions.

Table 3.2-5 Access Point of Building

No	Building Volume	Information
1	<7,000m ³	Min. 1/6 around yard
2	>7,100m ³	Min. 1/6 around building
3	>28,000m ³	Min. 1/4 around building
4	>56,800m ³	Min. 1/2 around building
5	>85,200m ³	Min. 3/4 around building
6	>113,600m ³	Around building

Source: Understanding of Water-Based Fire Extinguishing Installation 2011

2) Technical Requirements for Fire Protection System in Building and Neighborhood: No.26/ PRT/ M/ 2008

The 300 clauses of the technical requirements for the architectural fire protection plan which include technical details on town planning guidance make up the basic standard for architectural design. It includes specifications on the required space for fire engine, firefighting approach, evacuation staircase, etc.

An attached room is required to connect an evacuation staircase and an emergency elevator with an enclosed door. More over the attached room is used for fire fighting and is under applied air pressure together with the evacuation staircase.

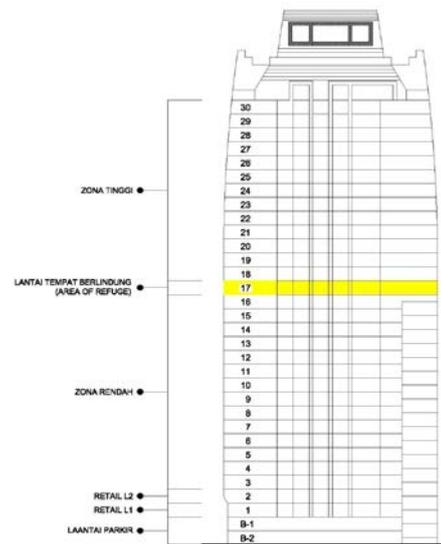


Source : Technical Requirements for Fire Protection System in Building and Neighborhood: No.26/PRT/M/2008

Figure 3.2-5 Evacuation Staircase and Emergency Elevator

3) Additional Requirement for Refuge Area of Residents in Case of Fire Hazard in High-Rise Building,

A residential building of more than 20 stories is required to have a refuge area. The required area of the refuge area is decided by larger area between ① users × 0.3 m², and ② total net floor area × 50%. Rooms such as gym and kid’s room can be used as refuge area, if the area is secured by moving furniture or other obstacles in emergency conditions. Moreover, opening of the ventilation is required on the wall of the window side. An example is shown in Figure 3.2-6 wherein 30-storey building has a refuge area on the 17th floor.



Souse : Additional Requirement for Refuge Area of Residents of Fire Hazards in High-Rise Building, 2013 Draft.

Figure 3.2-6 Refuge Area in the Building

(4) Advisory Teams in Building Permission

Preliminary appraisal of building construction permit (IMB) is discussed among three advisory teams in TPTAPB. In general, a licensed engineer is hired in large-scale project to reduce duration of building permission process.

Table 3.2-6 Advisory Team in TPTAPB

Expert Team	Urban Architecture Advisory Team (TPAK)	Building Construction Advisory Team (TPKB)	Installation advisory Team (TPIB)
Criteria of buildings that need appraisal	Building with floor area of more than 1,500 m ³ Specific buildings including public utilities, urban structure, transportation infrastructure, etc.	Building with more than eight stories Buildings with structure specific including concrete, huge stretched steel, unusual structure, building with basement of more than two stories, etc.	Building with either floor area more than 5,000 m ³ or more than eight stories. Buildings using electric power capacity of more than 200 kVA. Buildings completed with fire detector installation, lift and

		Structure constructed higher than 40 m.	escalator. Buildings with minimum utilization including hospital, hotel, mall, and apartment.
Main requirements	Drawings of building signed by an architect holding SIBP If required, perspective drawings, pictures of location, building scale, model, design report	Architectural design approved by TPAK. Land inspection report. Calculation of underground and overland structures. Report on loading examination and evaluation. Legalized and valid structure planner working permit (SIBP).	Architectural drawings approved by TPAK. Report on mechanical and electrical planning. Mechanical and electrical plan drawings.

Source : JICA Study Team

(5) Procedure of Obtaining Building Permit

The building permits necessary for construction of buildings include building utilization permit (IPB), building construction permit (IMB), and feasibility of building utilization (KMB). The procedure of obtaining building permit is different depending on the usage of building, such as residential, real estate, and non-residential. Architectural, structural, and M&E inspection are carried out during the construction. Moreover, there are other approval procedures in planning, construction, completion, and use of buildings. Table 3.2-7 summarizes sample procedure in case of non-residential usage.

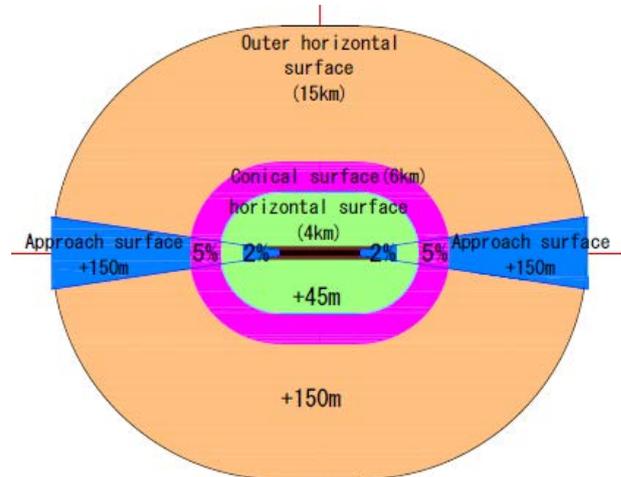
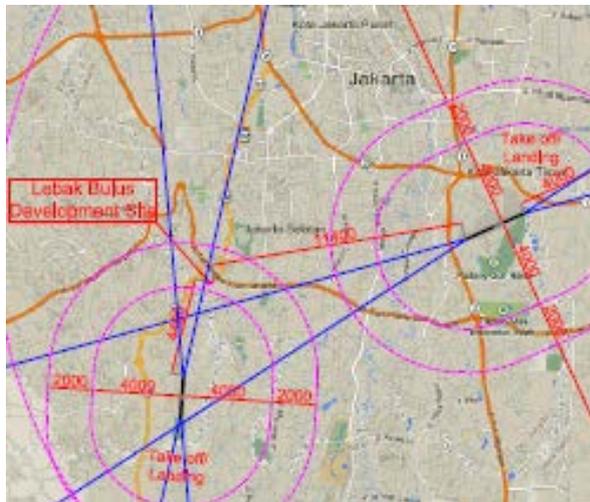
Table 3.2-7 Required Permits for Architectural Works

Building Permit	Building Construction Permit (IMB)	Building Utilization Permit (IPB)	Feasibility of Building Utilization (KMB)
Procedure	Written application is directly addressed to the governor through the head of Dinas for building control and management in the local municipality.	IPB is issued after the building construction has been built and in accordance to IMB. IPB application can be submitted to Dinas PPB in the local district.	The building owner shall submit written application of feasibility appraisal for using the building through Suku Dinas PPB in the local district at least 30 days before IPB/PPB or KMB expiration.
Issuing Agency	7 stories or less: 25 working days 8 stories or more: 40 working days	24 working days Building requiring installation examination: 40 working days	24 working days Building requiring installation examination: 40 working days
Required Documents	Land documents (8 kinds) Decree on utilization rights on land Land Use Appointment Permit (SIPPT) Statement and city plan map Urban plan quotation map Building architecture design drawings with architect working permit Building calculation, building structure design, and land investigation report with structural planner working permit	HPPL Control directors reports Copy of IMB Minutes of building installation examination Report on rainwater absorbing well	Proof of land ownership IMB, IPB/PPB, or valid KMB Building architecture drawings as attached to the IMB Building installation drawings in the form of line diagram in accordance with its condition

Source : JICA Study Team

3.2.2 Aviation Regulation

The nearest airport, Pondok Cabe Airport, is located approximately 4.4 km from the Lebak Bulus site. The second nearest airport, Halim International Airport, is located approximately 11.4 km from the site. Therefore, the site is covered by aviation regulations. Height limitation of buildings in the area is as follows: 150 m if within the outer horizontal surface, 45 m to 150 m if inside the conical surface, and 45 m if within the horizontal surface.



Source: JICA Study Team

Figure 3.2-7 Aviation Regulation

3.3 Architectural Plan

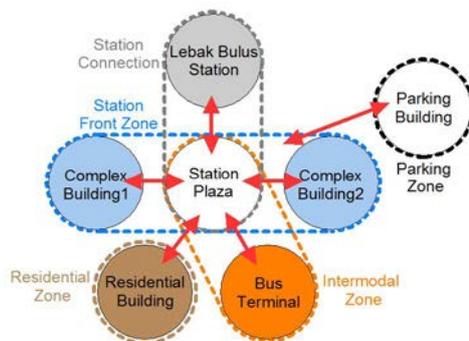
3.3.1 Summary of Plan

(1) Concept of Architectural Plan

The following concept shall be applied to enhance the use of the station front and make the development attractive.

1) Role of Connecting the Station to Other Traffic Points and Facilities

A large open space (station plaza) shall be located at the center of the development area and this will connect the Lebak Bulus Station with other transport modes, including not only public transport such as buses and taxis but also private cars and motorcycles. Moreover, the station plaza shall motivate people to use the surrounding facilities because it shall create enough circulation space and ensure easy navigation to other facilities.

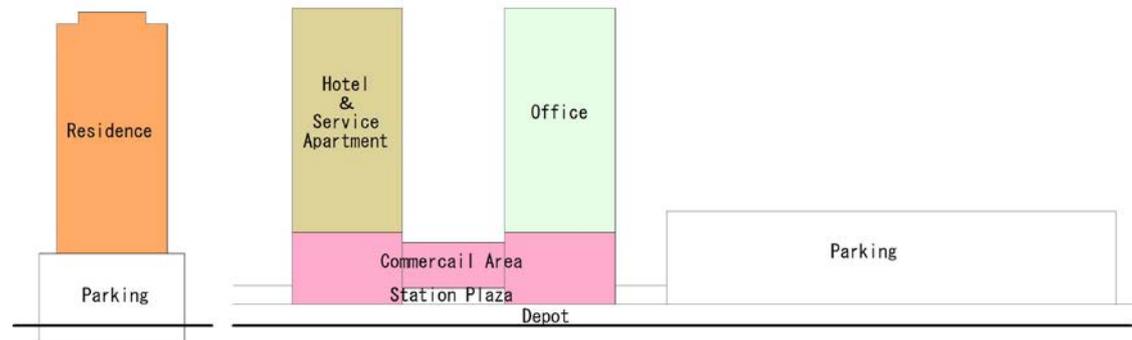


Source: JICA Study Team

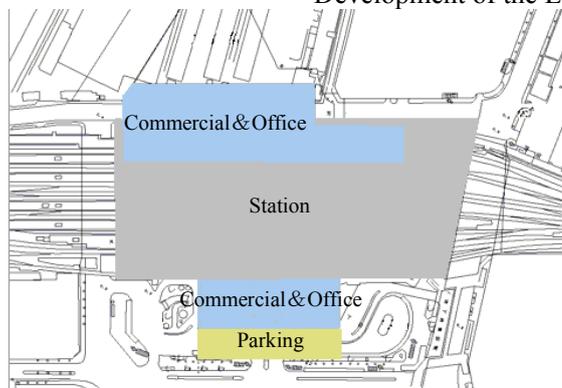
Figure 3.3-1 Image of Station Connection

2) Ability to Attract Customers

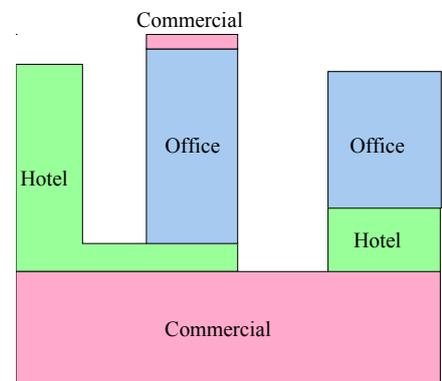
In addition to station front convenience, multiple usages of facilities shall be planned to attract users of various interests. Recent examples such as Nagoya Station and Osaka Station’s redevelopment to have a variety of facilities have attracted more customers.



Development of the Lebak Bulus Station Area



Redevelopment of Osaka Station

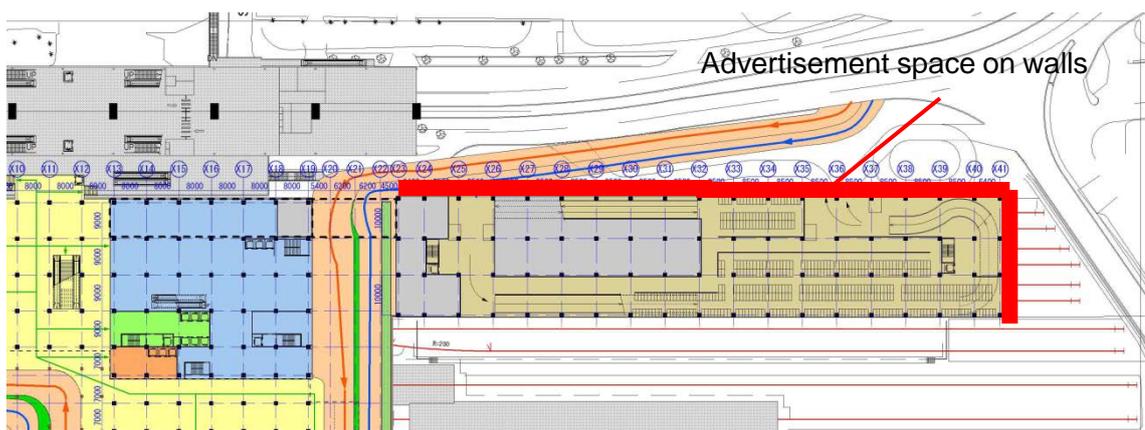


Redevelopment of Osaka Station

Source: JICA Study Team

Figure 3.3-2 Plan of Station Development and Examples

The wall of the parking building can be utilized for advertising place. The secondary facade shall cover two sides of the wall where can be prominently seen by passengers of MRT and vehicles on JORR.



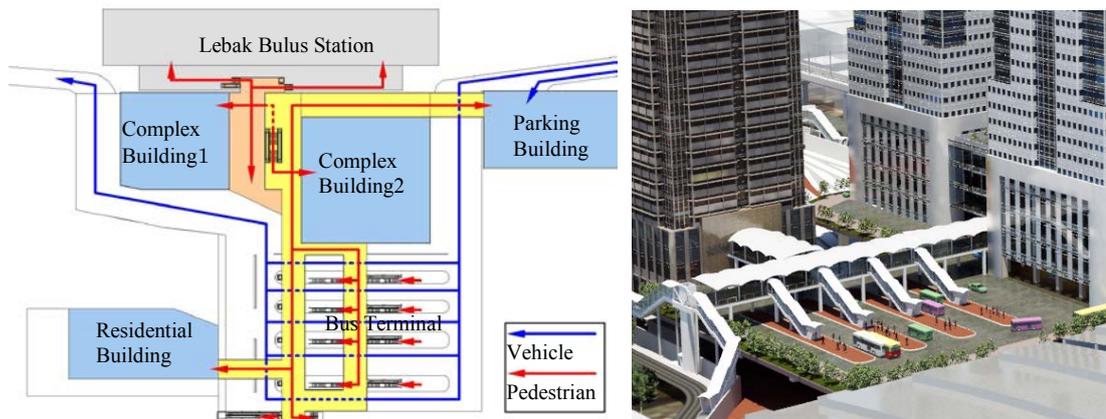


Source: JICA Study Team

Figure 3.3-3 Utilization of Walls for Advertisements

3) Safe and Comfortable Facilities

The station plaza does not provide a traffic connecting point, but it is also a place to easily gather people. In the development area, pedestrian and motorcycle passageway shall be completely separated for safety reasons. Moreover, the passageways between the station and other facilities shall have roofing so as to protect from unpleasant weather.



Source: JICA Study Team

Figure 3.3-4 Plan of Separating Structures between Pedestrians and Vehicles

4) Formation of a Beautiful Scenery

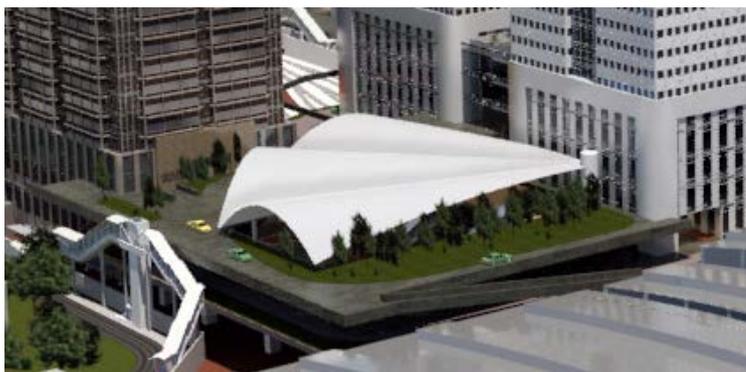
In addition to the symbolic appeal of the station buildings, the deck and parking building shall be planted with greenery in order to create a beautiful scenery. The appearance of the station area can be seen as an excellent representative image of the surrounding area of the Lebak Bulus Station.



Source: JICA Study Team

Figure 3.3-5 Perspective Views of the Station Building

Moreover, the image of the station’s front area is very important for people in the buildings (office, hotel, and apartment). Most of the bus terminal area shall be covered with greenery. Therefore, people in the buildings can enjoy the site of a quiet area (green deck) instead of a busy area (bus terminal).



Source : JICA Study Team

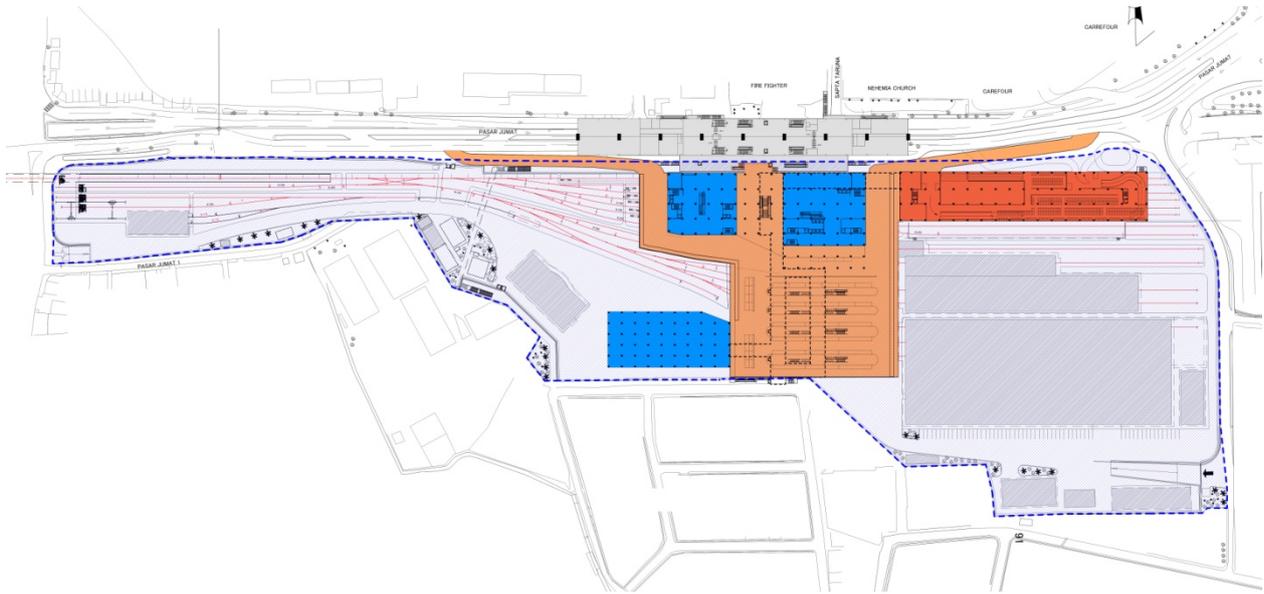
Figure 3.3-6 Perspective View of the Station Front

3.3.2 Consideration of Divisions: Site Division, Property Division

(1) Site Division

The Lebak Bulus development area shall be planned inside the MRT Jakarta depot site. Because the deck and most of the buildings shall be planned above the alignment, the deck

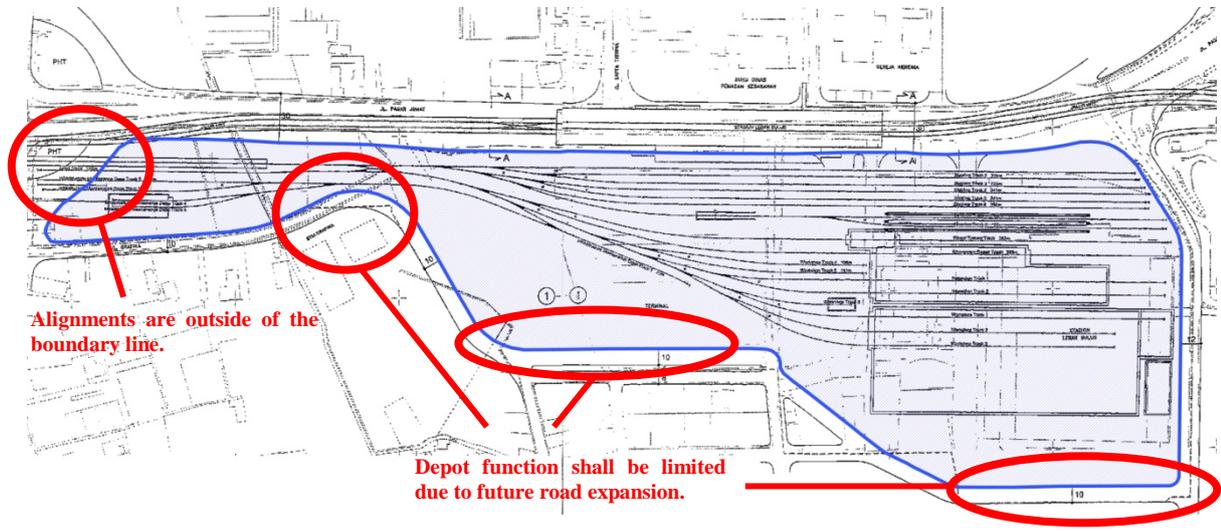
height shall be 8 m from the rail level. To connect the existing road and the deck, an access ramp shall be located on the right-of-way of the MRT line and the depot site. For the residential building, the basement of the depot site shall be used for parking facilities.



Source : JICA Study Team

Figure 3.3-7 Site Use Plan

Even though the site boundary lines are specified on the Trace of the MRT as stipulated by DKI, the location of the boundaries shall be based on the depot site in the basic design of MRT Jakarta. There are several difficulties to satisfy depot function on the boundary lines of the Trace of the MRT.



Source : JICA Study Team

Figure 3.3-8 Site Boundaries

(2) Property Division

The bus deck and other facility buildings shall be separated structurally by expansion joints. Therefore, public and the private infrastructures shall be clearly separated. Moreover, private infrastructure such as hotel, office, and commercial area shall be divided because the area of responsibility of each property needs to be identified. More detailed information on the construction division is explained in the building facility section.

3.3.3 Confirmation of Architectural Regulation

(1) Land Use Regulation

Although a spatial development plan (RTRW) from 2010 to 2030 was already issued by the state government, a spatial development plan only for MRT development, i.e. UDGL, was determined and institutionalized separately by the state government. According to the UDGL issued in 2012, the land use of the site of the Lebak Bulus Station is a public facilities area, consisting of depot, workshop, park and ride facility, and bus terminal.

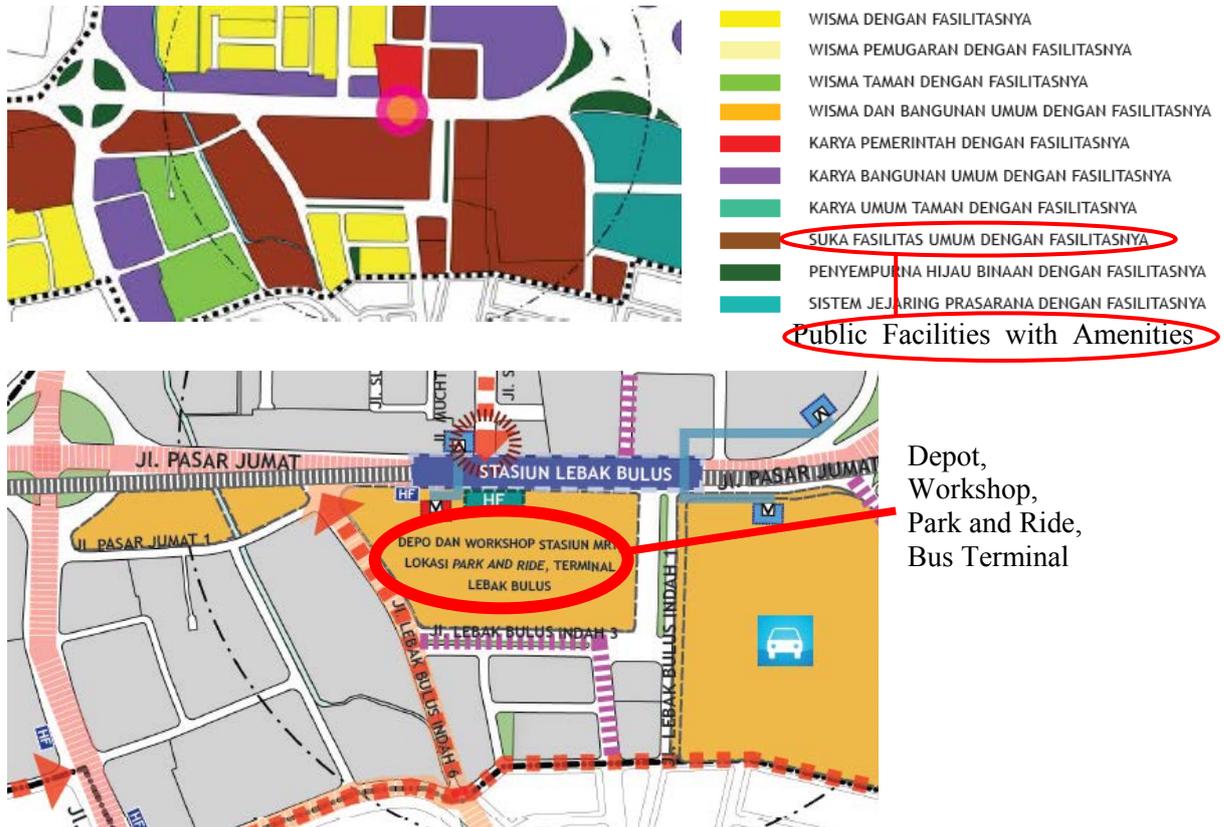
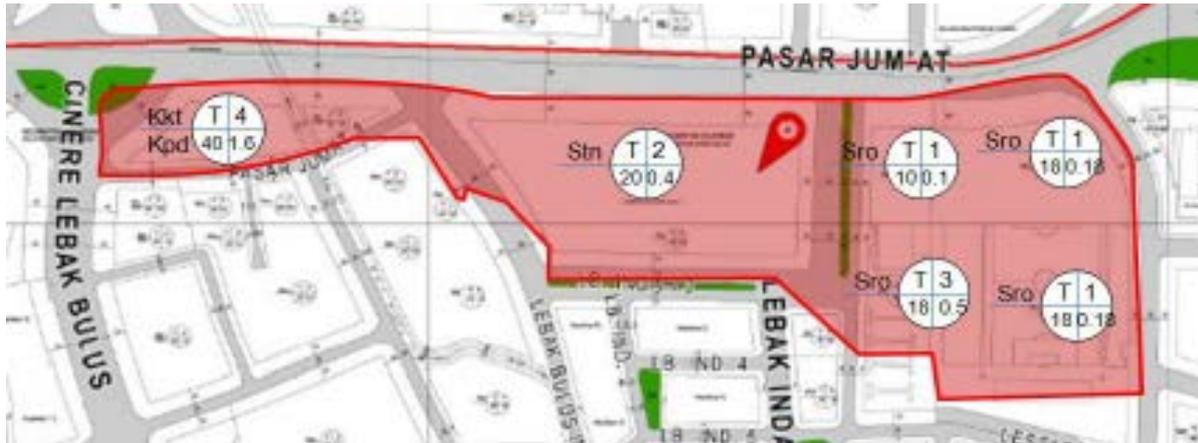


Figure 3.3-9 Land Use Plan in the Project Area

According to the land use plan (LRK) based on the RTRW, the site of the Lebak Bulus Station is an area constrained to low-rise buildings. However, for this constrained area, building coverage ratio, floor area ratio, limitation on the number of stories and height will be amended. This procedure follows the building standards. Application of new use districts has been determined by MRT Jakarta and the spatial planning office of DKI Jakarta. According to the office, the building coverage ratio will be 50% and the floor area ratio will be 500%. Therefore, the building coverage ratio of 50% and the floor area ratio of 500% shall be used as the upper limits respectively, although detailed land use regulations of the area have not been decided yet.



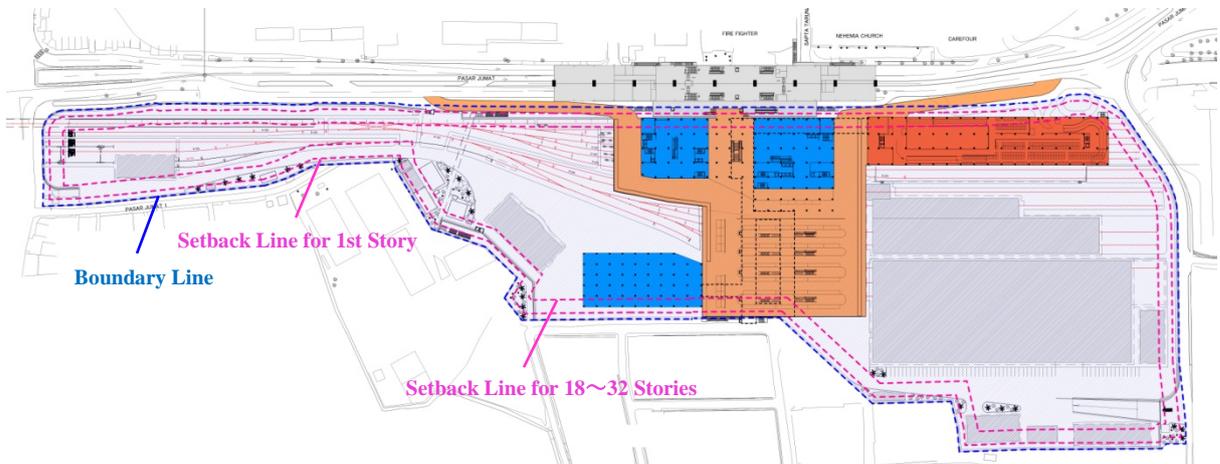
Source : Tata Ruang DKI Jakarta

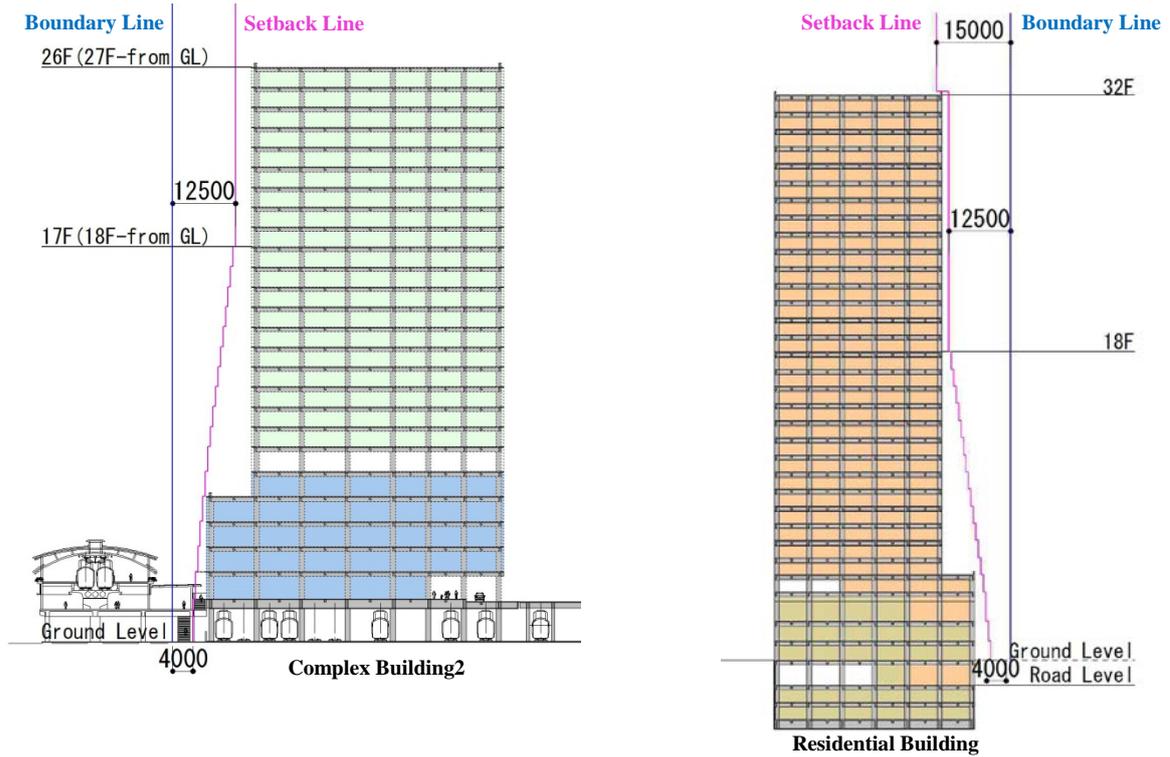
Figure 3.3-10 LRK in the Project Area

The total area of the site of the Lebak Bulus Station is approximately 84,000 m², therefore the proposed maximum building coverage area shall be 42,000 m² and the proposed maximum total floor area of buildings shall be 420,000 m².

(2) Setback Regulation

The setback regulation of buildings is stated in the technical detail of town planning guidance and the LRK. Since the current setback line in the LRK shall be reviewed, the building plan shall be designed in accordance with the setback regulation specified in the technical detail of town planning guidance. The planned buildings shall be setback from the fifth floor to offset the distance of the building from the boundary line.



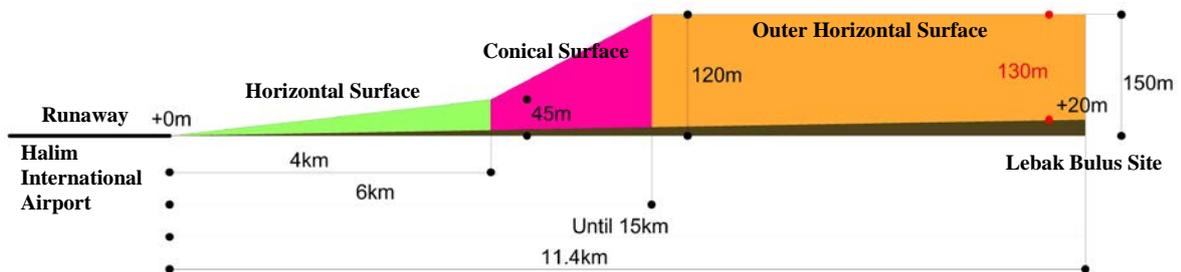


Source : JICA Study Team

Figure 3.3-11 Setback Regulation

(3) Height Limitation

The site is located within the conical surface of obstacle limitation surface from Pondok Cabe Airport, which is subject to height limitation of 63 m (83 m due to ground level difference between the site and the airport). However, the closest high-rise building and other neighboring buildings already exceed the height limitation. Because Pondok Cabe Airport is a private airport, neighboring high-rise buildings were built with prior discussion with the aviation bureau of the government. To obtain permission for exceeding the building height, further negotiations with the government shall be required. Moreover, the site is located within the outer horizontal surface from Halim International Airport, which is subject to height limitation of 150 m. In consideration with the ground level difference between the site and the airport, height limitation of 130 m shall be used for the building plan.



Source : JICA Study Team

Figure 3.3-12 Air Restriction Surface

(4) Parking Capacity

The parking building shall be designed to fulfill the number of cars required in the technical detail of town planning guidance. Because components of the facilities of the hotel and service apartments vary, it is assumed that the ratio of standard floor area per one car shall be 1:50 gross size.

Table 3.3-1 Number of Required Parking Lots

Usage	Level	Standard Floor Area per One Car	Floor Area	Required Number of Parking Spaces
Office	—	100 m ²	49,840 m ²	499 motor vehicles
Commercial (service/shop)	—	60 m ²	22,330 m ²	373 motor vehicles
Hotel and service apartments	Class I (4-5 Stars)	5 rooms	23,870 m ² (240 rooms)	48 motor vehicles
Facilities of hotel and service apartments		50 m ²	4,830 m ²	97 motor vehicles
			Total	1,017 motor vehicles

Floor	Floor Area	Number of Parking Space
1st Floor	4490m ² (MEP 1200 m ²)	454 scooters
2nd Floor	4490m ²	671 motorcycles
3rd Floor	4490m ²	133 motor vehicles
4th Floor	4490m ²	141 motor vehicles
5th Floor	4490m ²	141 motor vehicles
6th Floor	4410m ²	118 motor vehicles
7th Floor	4340m ²	117 motor vehicles
8th Floor	4260m ²	117 motor vehicles
9th Floor	4190m ²	115 motor vehicles
R Floor	4110m ²	138 motor vehicles
	Total	454 scooters , 671 motorcycles, 1020 motor vehicles.

Source : JICA Study Team

(5) Rainwater Recharge

Although rainwater recharge is obligated to be installed to the buildings above a certain scale, it is not required in this project since they are planned and installed in the construction works of depot (CP101). For this reason, studies only for water storage tanks are made in this study.

3.3.4 Evacuation Plan

Because the buildings and the bus terminal shall be planned with an artificial deck above them, it is necessary to have two evacuation plans. Moreover, it is important to clarify enactment of the floor as refuge area. Based on discussions with a high-rise building expert from the Hamonoi Fire Department and a private firefighting facility expert, the following evacuation plan shall be considered:

(1) Securing Space for Evacuation

Space for evacuation in high-rise buildings is important for the safety of evacuees. According to the fire department, the deck level can be used as a refuge area. A signage plan for evacuation from the deck level to the ground level shall be designed during the detailed design of the buildings.

(2) Access for Firefighter

The high-rise buildings shall be planned such that fire engines can directly access the two roads within the premises of the artificial deck. According to the local fire department, it is important to ensure that water can be supplied from the firefighting water car through water stand pipe and firefighters can perform their firefighting activities by utilizing the firefighter lift. These shall be considered in the design.

(3) Evacuation Facilities

Two routes of evacuation passageway shall be provided in the buildings. Evacuation staircases and a firefighter lift with an attachment room shall be installed in the building. These

evacuation facilities shall be secured in case of emergency by way of pressurization, etc. Moreover, the longest distance between the entrance to the nearest evacuation passageway shall be no more than 40 m.

(4) **Refuge Area**

A part of the amenity facilities on the upper level floor of the high-rise residential building shall be used as refuge area in case of evacuation due to fire. For the fire evacuation floor, approximately 50% of the floor area shall be used as refuge area and the rest of the other area shall be used for residential purposes.

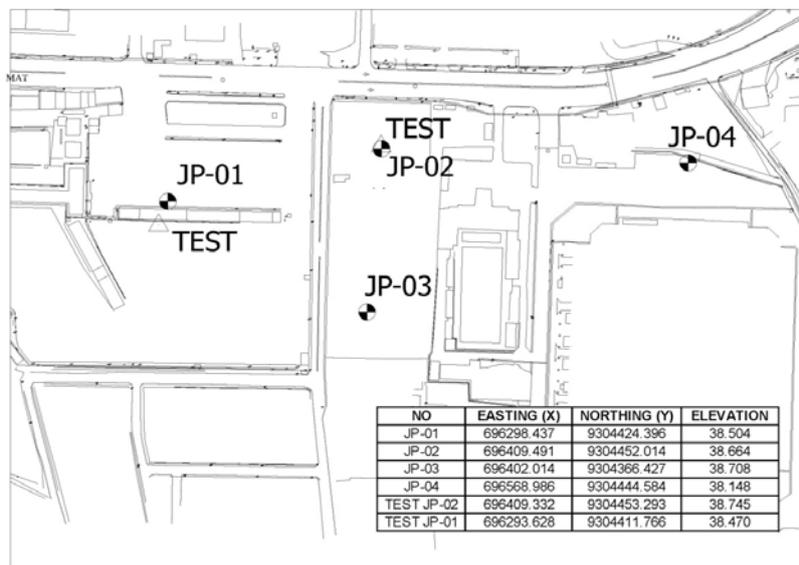
3.4 Structure Plan

3.4.1 Foundation

(1) **Ground Condition:**

Regarding the ground condition of the site, most of the layer is clay or silty clay layer, except at 30m to 50 m level, where sand layer partly exists. Soil investigation was executed at each building location in the site (Figure 3.4-1 & Table 3.4-1) and the foundation design is based on the soil investigation report (Geotechnical investigation for Lebak Bulus development report, February 2014, Prepared by PT.Tigenco graha persada).

The ground water exists at 10m from the ground level. The N value from the standard penetration test was 10 or less within 10m of the ground level, which is not suitable as the support layer for high rise buildings. For this reason, pile foundation was opted. Regarding the ground condition of 20m deep from the ground level, N value is equal or more than 20, however the N value varies from 20 to 50 or more, and they depend on the investigation depths. (Figure 3.4-2)



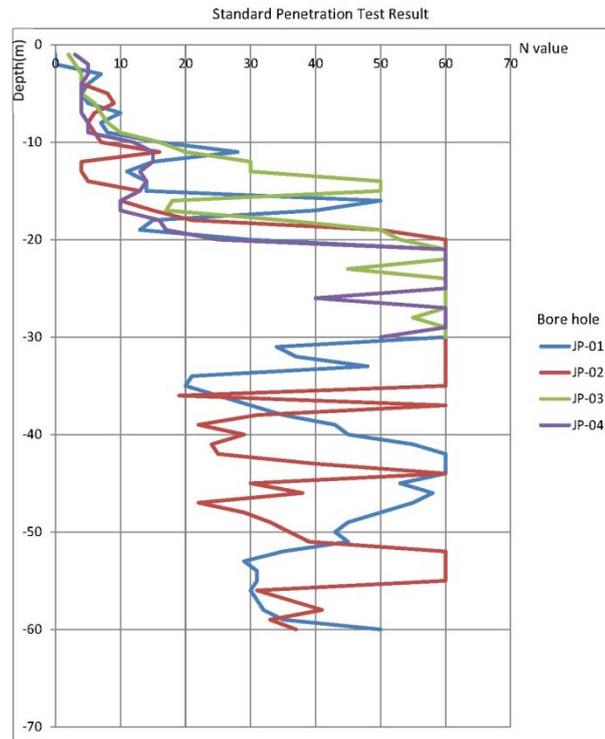
Source : JICA Study Team

Figure 3.4-1 Bore hole locations

Table 3.4-1 Referred boring data of each building

Building	Boring data
Complex building 1	JP-01
Complex building 2	JP-02
Bus terminal deck	JP-03
Car parking building	JP-04

Source : JICA Study Team



Source : JICA Study Team

Figure 3.4-2 N values from SPT

(2) Pile type

According to the local design consultant, in-situ concrete pile was chosen for the design. The reason for this choice is that 600mm or larger diameters of piles are required in this project and, for such large diameters, in-situ piling is better than pre-cast piling in terms of previous records, cost and construction period.

(3) Pile design capacity

As indicated in Figure 3.4-2, it was confirmed that there was no continuous support layer which had N values 50 or more, and an enough bearing capacity was not expected. Therefore, it was necessary to use the friction strength for pile support capacity as much as possible. Table 3.4-2 indicates the allowable pile capacity in long term.

Table 3.4-2 Allowable pile strength against permanent load

Pile diameter (mm)	Pile length (mm)	Allowable pile capacity in long term (kN)
800	26,400	2,652
1,000	24,000	3,021
1,200	44,600	7,740

Source : JICA Study Team

The assumed pile diameters and pile lengths are indicated below for the high rise and low rise buildings.

- 1- High rise buildings (26 stories: Complex buildings-1 & 2)
 Pile diameter is 1200mm and pile length is 50m. Bearing and friction strengths are considered for the pile capacities. 400 to 500kN/m² for the unit building footprint area is required in long term. Because the typical column span is around 8m, 3 to 4 piles are located at each column location. The maximum demand to capacity ratio is about 95 percent.
- 2- Low rise buildings (1 to 8 stories: podiums, Bus terminal deck and Car parking building)

Pile diameter is 800mm to 1000mm and pile length is 27m. Bearing and friction strengths are considered for the pile capacities. 100 to 200kN/m² for the unit building footprint area is required in long term. For Bus terminal deck, 1 to 2 piles are located at each column position and for Car parking building, because the typical column span is 9 m, 2 to 3 piles are located at each column location. The maximum demand to capacity ratio is about 95 percent.

(4) **Foundation design**

All the buildings are structurally separated by expansion joints in order to avoid differential settlement. Pile caps are located not to affect railway alignment, and foundation beams connect all the piles in X and Y directions in order to transfer the bending moment of the pile caps to the foundation beams and minimize the size of the pile caps. Table 3.4-3 indicates the total settlement of and the allowable settlement for each building. It is confirmed that the settlements are within the limit (150mm in this case), which is based on Canadian Foundation Engineering Manual 4th Edition.

Table 3.4-3 Total settlement of buildings

Building	Total settlement (mm)	Allowable settlement(mm)
Complex building 1	59	150
Complex building 2	86	
Car parking building	35	
Bus terminal deck	33	

Source : JICA Study Team

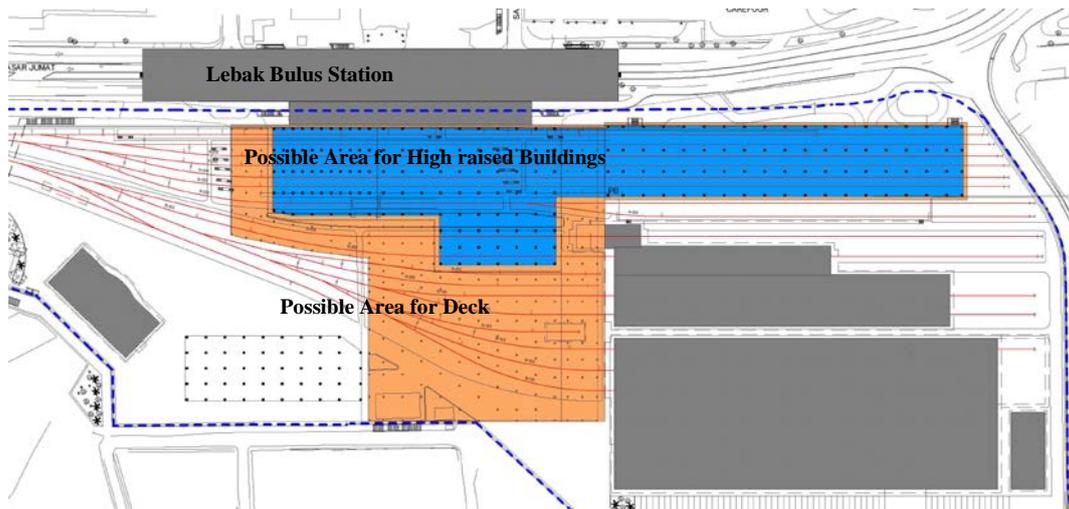
In terms of differential settlement, total settlement at the center of Complex building 2 was 85.5mm, and at the border between Complex building 2 and Bus terminal deck was 60.8mm. As the distance between these two locations are 40,000mm, the deflection angle will be $(85.5-60.8)/40,000 = 1/1619$. According to Canadian Foundation Engineering Manual 4th Edition, the allowable angle is 1/250. Therefore, the design report concludes that the differential settlement will not affect the serviceability of the buildings. According to Recommendations for design of building foundations by Architectural institute of Japan, the allowable deflection angle is 1/1000 for immediate settlement, which is dominant for this project. Therefore, the foundation is considered to be structurally sound.

(5) **Load combinations**

The section design is following the allowable stress design method specified in SNI (Indonesian design standard).

(6) **Position of Columns**

One of the most important constraints in the design is that the development site shall be located above the depot of MRT Jakarta. Structures of new facilities are required to be planned at places where they may not disturb the designated alignment. Even though the foundations are constructed under the alignments, the columns are constructed between the alignments. Columns of 1 m width are possible to construct at the north-south direction. Moreover, high-rise buildings are required to be planned above the straight alignment of the stabling yards, whereas the bus terminal shall be planned above irregular alignment. Therefore, even though the buildings are planned to be concentrated at the north side of the site, the bus terminal is possible to be planned in the large area of the site.



Source : JICA Study Team

Figure 3.4-3 Alignment Restriction in the Depot

3.4.2 Superstructure

(1) Design conditions

The brief explanation of superstructure design criteria is shown below.

- Structural system

Ductile moment frame in the longitudinal and transverse directions

- Ultimate Strength Design

The member sections of the columns and beams are designed against the load cases specified by SNI by ultimate strength design. The stiffness reduction of concrete members by crack is following the SNI.

- Design Loads

Aluminum-glass curtain wall is assumed for cladding, which is 1.0KPa. For partition walls, 1.0KPa is considered for office and 2.5KPa is considered for Hotel and Residential area. Raised floor load 2.2KPa is considered in the dead load for office. The live load is following SNI which is equivalent to or larger than those stipulated in the building standard law in Japan, and so it is considered to be appropriate. The wind loads are confirmed to be smaller than the seismic loads and no further design study against wind load is performed in the report. Dynamic response analysis is operated to calculate the seismic load. According to SNI, the design seismic load must be equal or more that 85 percent of the static storey shear forces which are derived per the code. As the seismic loads derived from dynamic response analysis are less than this limit, amplified seismic loads are used in design.

- Materials

The concrete strength is 40 to 50 MPa for the columns and 30 to 40 MPa for the beams. It is common in Indonesia to use different concrete strengths for columns and beams although the higher concrete strength should not be higher than 2.5 times as the lower concrete strength. The yield strength of the steel reinforcement is 400MPa. These material strengths all satisfies SNI.

- Vertical and horizontal deflection

Deflection criteria is based on SNI. While the allowable storey drift angle in the ultimate limit state for the soil type SE is 1/65, those of Complex building1, Complex building 2 and Parking building are less than 1/100, according to the design calculation by the local consultant. Table 4 indicates the maximum deflections and the movement tolerance of the expansion joints at 1st floor level slab.

Table 3.4-4 Maximum displacement and expansion joint tolerance at 1st floor level

Expansion joint location	Maximum displacement (mm)	Expansion joint tolerance (mm)
Complex building 1- Complex building 2	37.5	± 250
Complex building 2-Car parking building	94.8	± 150

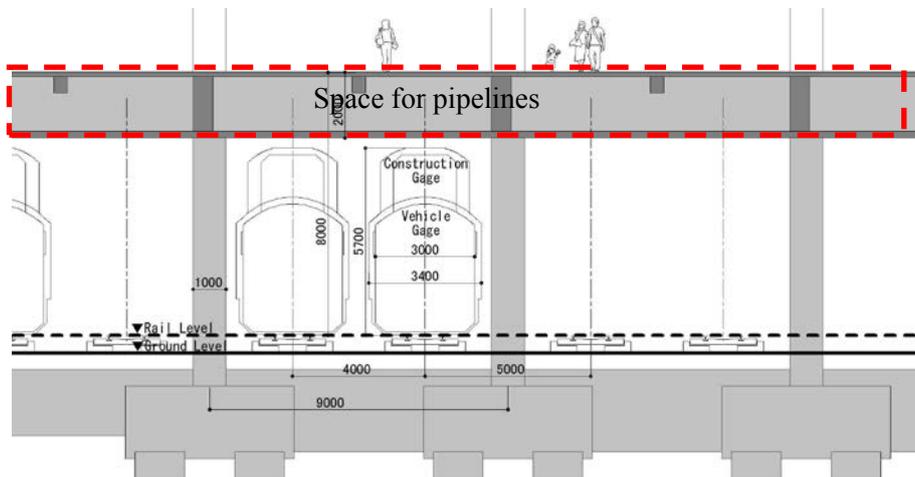
Source : JICA Study Team

● Construction Gage

The structures of the deck and the first floor of the buildings shall be designed in consideration of the construction gage of the railway vehicle.

● Route of Piping Equipment

Because most of the facilities shall be built after the deck construction, the route of piping equipment for the facilities shall not be allowed to use the ground or underground level. Therefore, it shall be designed that the facility piping works be accommodated underneath the deck structure.



Source : JICA Study Team

Figure 3.4-4 Height Restrictions of the Structure Gauge

(2) **Section size**

Column, beam and slab section size at the 1st Floor are shown in Table5, 6, and 7.

Table 3.4-5 1st floor column section

Building	Column section (B × D) (mm)
Complex building 1, 2	1000 × 1300*
Car parking building	1000 × 1000
Bus terminal deck	800 × 800

* The longer width is along the track direction.

Source : JICA Study Team

Table 3.4-6 1st floor beam Section

Building	Beam section (B × D) (mm)
Complex building1, 2	900 × 2000
Car parking building	500 × 1000
Bus terminal deck	750 × 1500

Source : JICA Study Team

Table 3.4-7 1st floor level slab

Building	Slab thickness (mm)
Complex building1,2	150
Car parking building	150
Bus terminal deck	150

Source : JICA Study Team

3.5 Facility Plan

3.5.1 Outline

This Project consists of a public infrastructure section including deck, and a commercial infrastructure section comprising multiple facilities such as hotel, office space, commercial facilities, and residential buildings. Since each facility, under the project scheme will be operated by different operation companies, it is very important that property demarcation shall be clearly specified so that the facility system can be appropriately maintained and operated. This section summarizes the important points, and such points are characterized as basic policies.

3.5.2 Points for Facility Planning

(1) Policies for Property Demarcation

As previously mentioned, this Project consists of a public infrastructure section including deck, and a commercial infrastructure section comprising multiple facilities such as hotel, office space, commercial facilities, and residential buildings. Each facility will be operated and maintained by different operation companies and it is favorable that each facility completes its own operation and maintenance works. Since the maintenance cost will be borne by each facility operator, specific and on-target facility zoning is necessary. In contrast, it is important that this be evaluated considering conditions and difference in construction period which may be caused by building characteristics and facility layout. Table 3.5-1 summarizes the zoning plan for each facility. It is necessary that the maintenance and operation costs of power stations, fire prevention facilities, and drainage treatment facilities are collectively borne since these will be shared by all operators.

Table 3.5-1 Facility Zoning Plan

Building	Floor	GFA (m2)	Power station	Sub-electric room	Power generatr	Telephone, Telecom	Air conditioning	Water receiving tank	Fire prevention facility	Water source for fire	Drainage facility
Complex Building1	0/26F	32,340	Common	-	-	-	-	-	Common	common	common
Commercial/MEP	1 ~ 6F	8,470		Exclusive	Exclusive	Exclusive	Exclusive	Exclusive			
Hotel	7 ~ 26F	23,870		Exclusive	Exclusive	Exclusive	Exclusive	Exclusive			
Complex Building2	0/26F	64,720		-	-	-	-	-	Common		
Commercial/MEP	1 ~ 6F	15,100		Exclusive	Exclusive	Exclusive	Exclusive	Exclusive			
Office	7 ~ 26F	49,620		Exclusive	Exclusive	Exclusive	Exclusive	Exclusive			
Parking Building	0/9F	35,460		Exclusive	Exclusive	Exclusive	Exclusive	Exclusive			
Residential Building	0/32F	50,800	Common	-	-	-	-	Common	Common	Common	
Residence	6/32F	40,150		Common	Common	Common	Exclusive				Common
Parking/MEP	B2, 1/3F	10,650					Exclusive				

Source : JICA study team

(2) Policies for Measuring Demarcation

Since each facility will be operated by its own operation company, it is preferable that utility costs are charged by facility. This means that each facility operator should make a contract with the utility supplier separately so that they deal with those utility suppliers directly. Collection of utility costs from tenants should be conducted under the responsibility of each facility operator. In the same way, collection of the same from its residents should be conducted by the residence operator.

(3) Policies on Operation and Surveillance

Following the previously-mentioned policies, operation and surveillance should be conducted by each facility operator. However, in case that comprehensive surveillance is needed, additional surveillance system should be established.

(4) Relevance of CP101 (Depot Construction)

Considering differences in construction timing between this Project and CP101, facility planning shall be based on the conditions that construction activities for deck will be basically performed on the deck. However, power stations and drainage treatment plant are inevitably constructed on the ground level, which is the same level as where the depot for the MRT will be constructed. In order to avoid interference with functions of the depot, early integration is essential.

(5) Policies on Space Requirements

Although specific architectural planning will be settled in the next stage, early integration of facility-occupied areas is important since it has certain impacts on project evaluation.

Table 3.5-2 Spaces Occupied by Each Facility

Building	Floor	GFA (m2)	Spaces for main machinery												Subtotal			
			Air conditioning		Enviroment and fire prevention		Source for fire extinction		Electricity room		Generator room		Telecom		OCC		ratio	area
			ratio	area	ratio	area	ratio	area	ratio	area	ratio	area	ratio	area	ratio	area		
Complex Building1	0/26F	32,340																
Commercial/MEP	1 ~ 6F	8,470	5.2	440	0.8	68			1.3	110	1.2	102	0.5	42	0.4	34	9.4	796
Hotel	7 ~ 26F	23,870	2.8	668	0.5	119			1.1	263	0.5	119	0.5	119	0.2	48	5.6	1,336
Complex Building2	0/26F	64,720																
Commercial/MEP	1 ~ 6F	15,100	5.2	785	0.8	121			1.3	196	1.2	181	0.5	76	0.4	60	9.4	1,419
Office	7 ~ 26F	49,620	2.8	1,389	0.3	149			0.9	447	0.5	248	0.5	248	0.2	99	5.2	2,580
Parking Building	0/9F	35,460			0.3	106		95	0.4	142	0.5	177					1.2	520
Residential Building	0/32F	50,800																
Residence	6/32F	40,150			0.8	321			0.4	161					0.2	80	1.4	562
Parking/MEP	B2,1/3F	10,650			0.3	32		95	0.4	43	0.5	53					1.2	223

Building	Floor	GFA (m2)	Spaces for machinery on each floor (total)								Subtotal		Grand total					
			Machinery room		Plumbing and duct room		Wiring room		Elevator room		ratio	area	ratio	area				
			ratio	area	ratio	area	ratio	area	ratio	area								
Complex Building1	0/26F	32,340																
Commercial/MEP	1 ~ 6F	8,470	2.0	169	1.6	136	0.8	64	0.4	34			4.8	403	14.2	1,199		
Hotel	7 ~ 26F	23,870	2.9	692	1.6	382	0.6	143	0.4	95			5.5	1,312	11.1	2,648		
Complex Building2	0/26F	64,720											0.0					
Commercial/MEP	1 ~ 6F	15,100	2.0	302	1.6	242	0.8	113	0.4	60			4.8	717	14.2	2,136		
Office	7 ~ 26F	49,620	2.9	1,439	1.6	794	0.6	298	0.4	198			5.5	2,729	10.7	5,309		
Parking Building	0/9F	35,460	0.8	284									0.8	284	2.0	804		
Residential Building	0/32F	50,800											0.0					
Residence	6/32F	40,150							0.4	161			0.4	161	1.8	723		
Parking/MEP	B2,1/3F	10,650	0.8	85									0.8	85	2.0	308		

Source : JICA Study Team

(6) Construction Demarcation and Cost Burden

The construction demarcation should be defined as follows:

- Construction work A: main structure to be constructed by the operator in the construction stage;
- Construction work B: construction activities to be conducted by tenants for changing existing structure already built under the demarcation of “construction work A”; and
- Construction work C: construction activities to be conducted by tenants after occupancy by tenants.

The construction demarcation plan, which need further discussion, is summarized in Table 3.5-3.

Table 3.5-3 Construction Demarcation Plan

Facility use and facility item	Construction work A	Construction work B	Construction work C
Commercial Facility			
General Policy	-Tenant section to be defined in advance. -Skelton handover. -Including activities for adjustment and acquisition of standard facility capacity	-Changes in tenant section -Increase of facility capacity -Activity caused by changes in partition plan	-Except the work mentioned as construction work A & B
Partition	-Main partition such as fireproof compartment and tenant section wall	-Changes of tenant partition	-Except the work mentioned as construction work A & B
Interiour	-	-	all
Signboar (outside)	-	-Sources of neon power supply	all
Signboar (inside)	-	-	all
Power capacity	-Standard power capacity	-Changes accompanied by increasing standard power supply	-
Main wiring line, lights, plugs	-Main line connection with tenant distribution board	-Additional installation of substation and main line facility accompanied by increasing capacity	-All the secondaries including tenant distribution board
Phone, telecom, security facilities	-Plumbing	-	all
Air conditioning	-General air conditioning upto standard capacity	-Changes accompanied by increasing capacity	-All the air conditioning facilities installed by tenant
Ventilation facilities	-General ventilation upto standard capacity	-Changes accompanied by increasing capacity	-All the ventilation facilities installed by tenant
Smoke ventilation facilities	-Smoke ventilation systems suitable for laws and regulations	-Changes accompanied by increasing capacity	-Changes accompanied by increasing partition of tenant
Water suuply and drainage facilities	-Stoppage valve in tenant section	-Changes accompanied by increasing capacity	-All the secondaries after valve works
Fire prevention facilities	-A set of fire prevention facilities suitable for laws and regulations	-Changes accompanied by increasing capacity	-Changes accompanied by increasing tenant partitions
ELV/ESC	-Standard numbers and specication	-Increase of quantity and changes of specification	-
Office			
General Policy	-Tenant section to be defined in advance. -Skelton handover. -Including activities for adjustment and acquisition of standard facility capacity	-Changes in tenant section -Increase of facility capacity -Activity caused by changes in partition plan	-Except works mentioned as constrction works A & B
Partition	-Main partition such as fireproof compartment and tenant section wall	-Changes of tenant partition	-Except the work mentioned as construction work A & B
Interiour	-Common Interior	-	-Except construction work A
Power capacity	-Standard power capacity	-Changes in increasing standard power capacity.	-
Main wiring line, lights, plugs	-Standard facilities	-Additional installation of substation and main line facility accompanied by increasing capacity	-Except the work mentioned as construction work A & B
Phone, telecom, security facilities	-Plumbing	-	all
Air conditioning	-General air conditioning upto standard capacity	-Changes accompanied by increasing capacity	-All the air conditioning facilities installed by tenant
Ventilation facilities	-General ventilation upto standard capacity	-Changes accompanied by increasing capacity	-All the ventilation facilities installed by tenant
Smoke ventilation facilities	-Smoke ventilation systems suitable for laws and regulations	-Changes accompanied by increasing capacity	-Changes accompanied by increasing partition of tenant
Water suuply and drainage facilities	-Standard	-Changes accompanied by increasing capacity	-Except the work mentioned as construction work A & B
Fire prevention facilities	-A set of fire prevention facilities suitable for laws and regulations	-Changes accompanied by increasing capacity	-Changes accompanied by increasing partition of tenant
Hotel			
Bacic policy	- All covered by standard specification	-Changes of standard specification	-Except the work mentioned as construction work A & B

Source : JICA study team

3.5.3 General Description of Electric Facilities

(1) Substation

An electric power substation which carries all electricity demand of the entire area will be constructed within the site. Although the receiving voltage will be determined through discussion with the power supplier (PLN), earliest possible coordination with CP101 on where the substation will be located. In planning the receiving electricity, a distribution system for public and commercial infrastructure (hotel, office, commercial, and parking) and a distribution system for residential infrastructure shall be separately planned. Moreover, the distribution system for residential infrastructure shall be constructed by the power supplier at its own cost in a leased room.

Table 3.5-4 Estimated Electricity Volume of Each Facility

Building	Floor	GFA (m ²)	No. Rooms	Electric Equipment Capacity (kVA)						Total of Buildings	
				Light		Engine		Total		Unit Capacity	Load Capacity
				Unit Capacity	Load Capacity	Unit Capacity	Load Capacity	Unit Capacity	Load Capacity		
Complex Building 1	0/26F	32,340									
Commercial/ME	1-6F	8,470		0.04	339	0.1	847	0.14	1,186	15,865	
Hotel	7-26F	23,870	192	0.07	1,671	0.1	2,387	0.17	4,058		
Complex Building 2	0/26F	64,720									
Commercial/ME	1-6F	15,100		0.04	604	0.1	1,510	0.14	2,114		
Office	7-26F	49,620		0.05	2,481	0.1	4,962	0.15	7,443		
Parking Building	0/9F	35,460		0.02	709	0.01	355	0.03	1,064		
Residential Building	0/32F	50,800									
Residence	6/32F	40,150	624	0.065	2,610	0.005	201	0.07	2,811	3,130	
Parking/MEP	B2, 1/3F	10,650		0.02	213	0.01	107	0.03	320		
SUM										18,995	

Source : JICA Study Team

(2) Electricity Distribution Facility

An electricity room shall be constructed for each facility. The distribution voltage shall be 20kV. Power distribution shall be installed in the space planned in the deck of public infrastructure (public utility conduit or double slab). Considering flexibility of building layout including bus terminal, public utility conduit

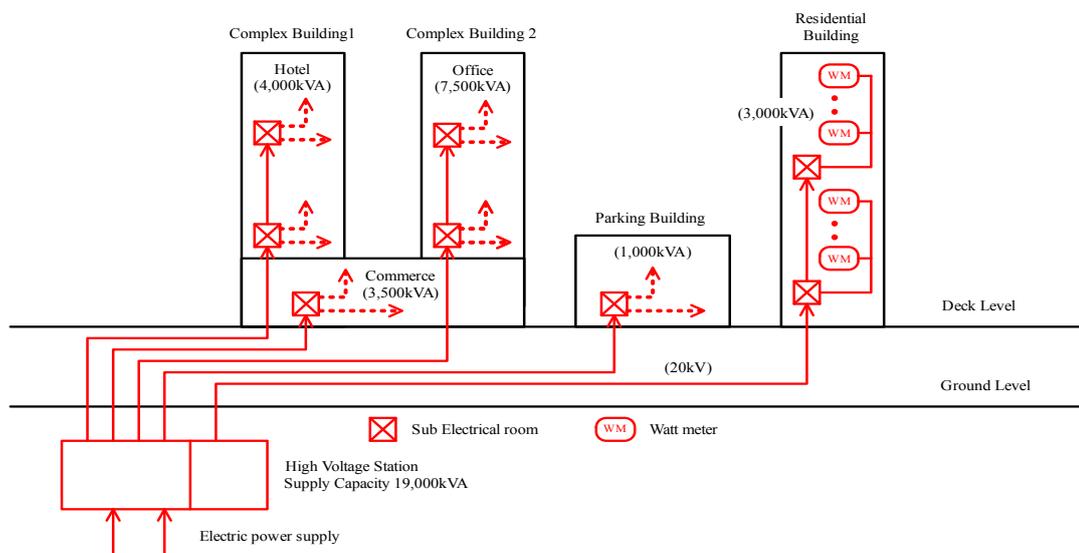


Figure 3.5-1 Flow Chart of the Power Distribution Equipment

(3) **Non-utility Generator Facility**

In order to accommodate future project development (change of use, floor increase, capacity change, and sellout of facilities), non-utility generator shall be installed in each building. By doing this, demarcation of operation and management for each operator will become clear. The capacity requirements will be studied and determined following architectural planning.

(4) **Telephone and Telecommunication**

A system that completes within itself will be developed. A rental room will be prepared for telecommunications company so that the facility operator can make direct contract with the former.

3.5.4 Outline of Air Conditioning Facility

(1) **Air Conditioning Facility**

A system that completes within itself shall be developed considering maintainability, operability, management demarcation, facility operation pattern, operation time range, and property demarcation. The main thermal source is expected to be electrical heat source. Central-controlled air-conditioning system will be introduced in the facilities such as hotels, offices, and commercial buildings. Basically, equipment room for air-conditioning facility shall be constructed in each facility; however, constructing it in a public space is also envisaged. It shall be constructed in each room in the residential building.

(2) **Ventilation Facility**

As is the case with air-conditioning, ventilation facility shall complete its system within itself. It is important to maintain air balance especially in the restaurant area of commercial buildings. In case that air balance cannot be maintained, it may cause negative impacts to other facilities. Thus air balance shall be maintained within each facility.

(3) **Smoke Extraction**

Natural smoke extraction shall basically be applied; however, smoke extraction facilities will be designed if necessary. It is favorable for each facility to have its own smoke extraction function. There may be cases where consolidated smoke extraction facilities are economically advantageous. Since there may also be cases where duct has to be installed in other facilities, it is important to study on smoke extraction facilities at the early stages of the Project.

(4) **Automated Control, Surveillance Facility**

A central surveillance facility shall be constructed, and surveillance and operation shall complete its functions within each facility. Depending on the demand, a higher level network shall be introduced, and disaster information shall be shared among the facilities.

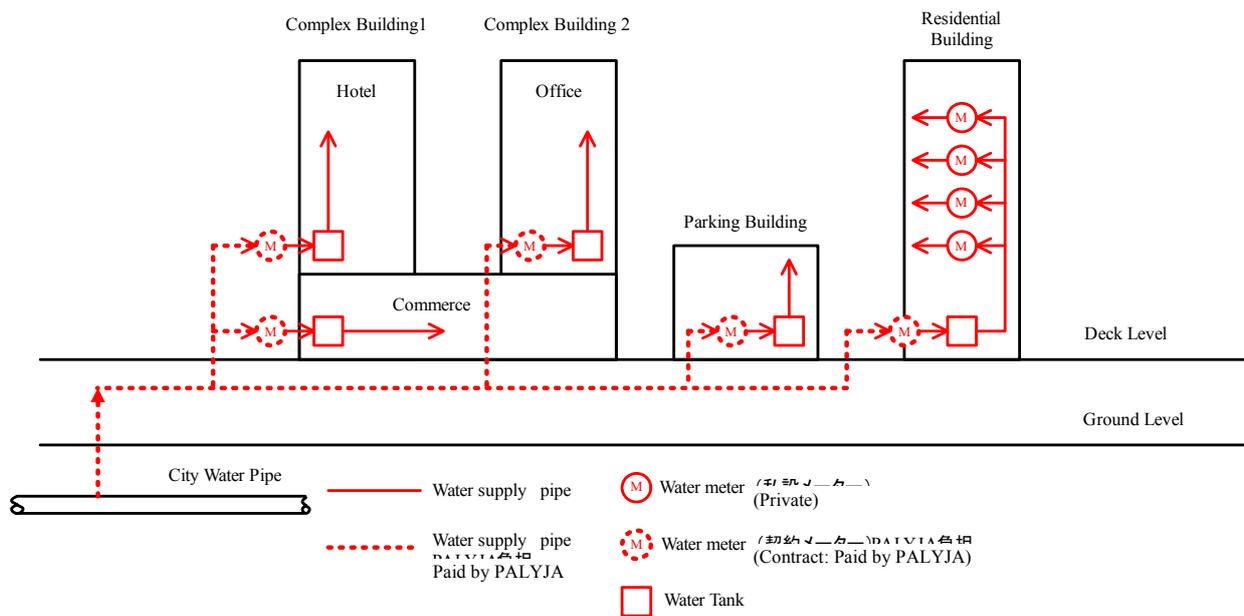
3.5.5 Outline of Water Supply and Drain Equipment

(1) **Water Supply Equipment**

Water is supplied from the northern road of the site. Each facility has a water tank, overhead tank, and contracted meter. The drawing water pipe including contracted meter is charged by PALYJA, while the water supply equipment excluding contracted meter is charged by this Project. Each operating company is responsible for collecting the fees of each tenant who is a resident in the facility. Unit owner of residence is the same as well.

Table 3.5-5 Assumed Water Supply Quantities at Each Facility

Building	Floor	GFA (m2)	Room	Capacity of Water Supply Equipment (m3)					Water Tank Effective Capacity※ (m3)	Description
				Capacity		Amount of Water Supply				
				Unit	Number	Unit	Amount (m3/day)	Average (liter/min)		
Complex Building1	0/26F	32,340								
Commercial/MEP	1 ~ 6F	8,470		1.00	8,470	15	127	212	127	15L/seats(restaurant), 5L/m2(retail)
Hotel	7 ~ 26F	23,870	192			800	154	256	154	12rooms/floor, 800/room(4star hotel)
Complex Building2	0/26F	64,720								
Commercial/MEP	1 ~ 6F	15,100		1.00	15,100	15	227	378	227	15L/seats(restaurant), 5L/m2(retail)
Office	7 ~ 26F	49,620		0.11	5,335	50	267	445	267	0.11person/m2
Parking Building	0/9F	35,460			1,182	5	6	10	6	5L/car
Residential Building	0/32F	50,800								
Residence	6/32F	40,150	624	4.00	2,496	250	624	1,040	624	24rooms/floor, 3.5person/room, 250L/person
Parking/MEP	B2,1/3F	10,650			915	5	5	8	5	5L/car
				total		1,408	2,349		1,408	
						※Water Tank Capacity			1 day	



Source : JICA Study Team

Figure 3.5-2 Flow Chart of Water Supply Equipment

(2) Household Wastewater and Effluent Treatment Equipment

This planned site needs placement of effluent treatment equipment, however the setting method is divided into the following contents, considering securing necessary space for the CP101 construction, location of facilities, phasing of construction, and property maintenance:

- Complex Building 1, Complex Building 2, Parking Building; and
- Residential Building.

(3) Rainwater Drain Equipment

Rainwater drain equipment comprises the following:

- Soakaway absorption well;
- Rainwater Pond; and
- Rainwater Collective Tank.

The CP101 construction area (terminal of MRT) will apply rainwater tanks because the capability of rainwater treatment can fulfill the permissible level of this Project site.

The capacity of the rainwater tank is calculated as 0.05 (m) x GF floor space (m²). This is available for reuse of wastewater and water for fire extinguishing.

Table 3.5-6 Assumed Capacity of Rainwater Tank

Building	Floor	Coverage Area (m ²)	Unit (m)	Amount of rain water (m ³)	Capacity of rain water storage tank(m ³)
Complex Building1	0/26F	1,240	0.05	62	62
Complex Building2	0/26F	2,520	0.05	126	126
Parking Building	0/9F	4,800	0.05	240	240
Residential Building	0/32F	4,810	0.05	241	241
Deck	1F	10,000	0.05	500	500

Source : JICA Study Team

3.5.6 Outline of Disaster Prevention Equipment

Planning is based on Indonesian standards and NFPA. Considering safety, equipment are decided in per unit building (not per unit facility). As necessary, it is important to include plans to enable mutual signal transfer output by constructing host side monitoring system.

(1) Water Source for Firefighting

It is possible that some buildings are covered with the same water source and pump for firefighting. Location is determined to be divided into the following, considering facility location and difference of construction period:

- Complex Building 1, Complex Building 2, Parking Building; and
- Residential Building.

The requirement of water source is calculated as follows:

$$Q = (500 \text{ GPM} + 250 \text{ GPM} \times L) \times 3.78 \ell / \text{min} \times T$$

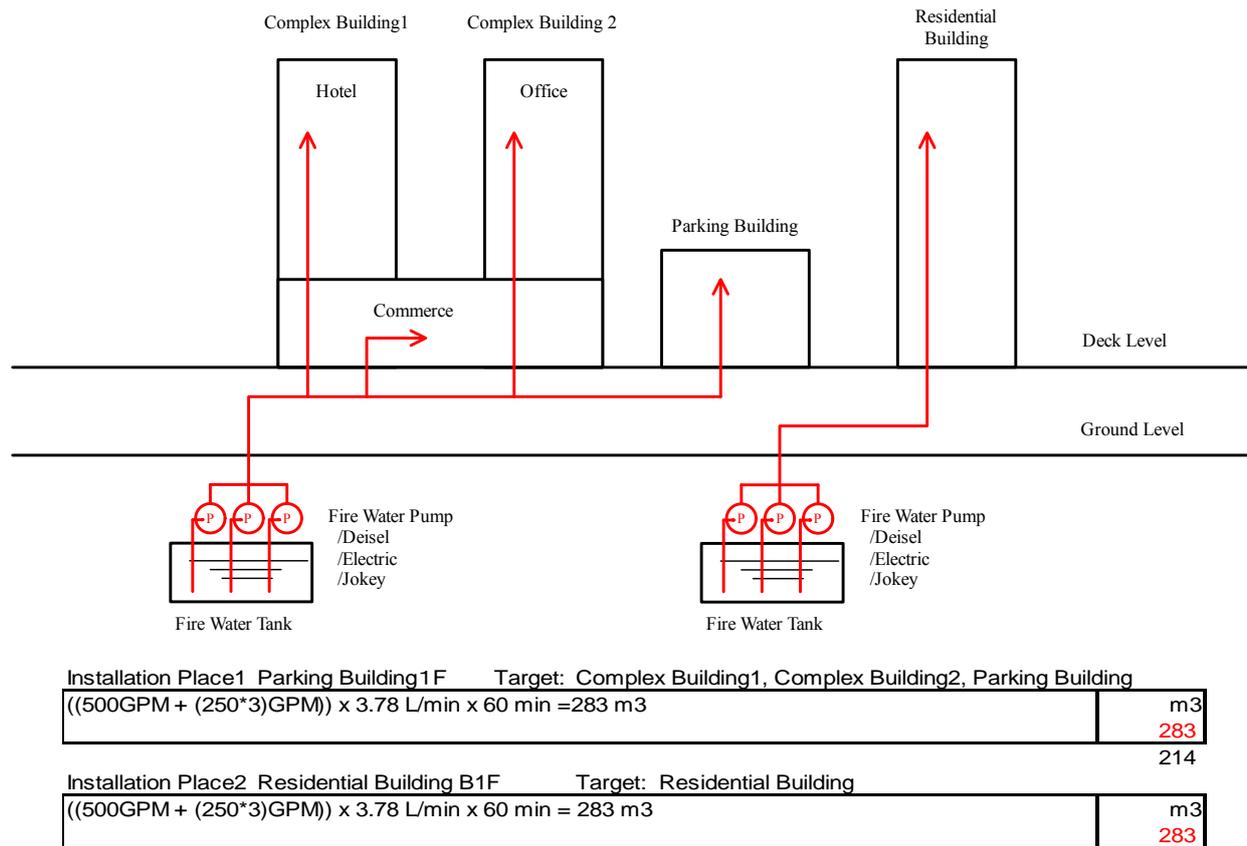
And some appear in the text as:

Q: amount of water source for firefighting (m³)

L: number of risers (one riser per 900 m² construction space, up to three risers)

T: duration of operation (60 min)

GPM: (3.78 ℓ / GPM)



Source : JICA Study Team

Figure 3.5-3 Flow Chart of Disaster Prevention Equipment

3.6 Technical Issues in the Facility Plan

3.6.1 Architectural Considerations

(1) Structure Type

Even though a simple reinforced concrete moment structure shall be applied to the high-rise buildings, a span of building columns can be flexible in design if the transfer beam that separates the structure above and below the beam shall be installed. However, the location of the beam and construction cost shall be carefully considered.

	A	B	C	D
Structure	Pure Moment Frame	Moment Frame + Core Wall	Core Wall	Core Wall + Core Wall
Type	No transfer beam in deck level		Transfer beam in deck level	
Pros	Building layout has flexibility to change it such as usage, positions of core, water circulated area, and etc.	Upper complex (hotel) layout can be designed without consideration of structure type under deck.	Upper complex (hotel) layout can be designed without consideration of structure type under deck.	Both lower complex (commercial space) and upper complex (hotel) layout can be designed without consideration of structure type under deck.
	Construction cost is relatively low and simple construction method can be applied because of simple structure.	Choices of structure types are not limited. Size of column and beam can be reduced.	Choices of structure types are not limited. Size of column and beam can be reduced.	Choices of structure types are not limited. Size of column and beam can be reduced.
	Position of core can be decided after construction of deck.		Position of core can be decided after construction of deck.	
Cons	Upper complex (hotel) layout design is affected with consideration of big Colum size.	Construction cost is relatively high because of transfer beam installation.	Construction cost is relatively high because of transfer beam installation.	Construction cost is high because of transfer beam installation in two spaces.
		Height of transfer beam affects floor level of lower complex (commercial space). Location of core should be decided before designing deck.		Height of transfer beam affects floor level of lower complex (commercial space). Location of core should be decided before designing deck.
		Core wall is placed in lower complex (commercial space) and upper complex (hotel) in the same position.		

Source : JICA Study Team

Figure 3.6-1 Comparison of Facility Structure Type

(2) Limitation of Construction Period

Construction works have already stated in depot area (CP101). The bus terminal deck is planned over this depot, and works for deck need to be carried out in between works of CP101 and CP107 (refer to Chapter 4. “Construction Method”).

(3) Access Limitation

This rail yard is planned reasonably along the planned road line of Lebak Bulus Raya Street. Accordingly, access to the bus terminal deck is limited between the sidewalk section and the Lebak Bulus Station in order to avoid the rail line of the rail yard. Utilizing this open lot, this plan will set the road leading to the deck for buses only, road leading to the car parking for general vehicles, access for motorcycles and access to the commercial facility. In fact, it is necessary to adequately consider the access to enable work in each progress of construction,

because the ramp to the parking lot and for access to the complex building is very likely constructed in a different period except for the ramp for bus.

(4) **Limitation of Residential Building**

The residential building is located in the south area of the Project site, and planned away from the terminal deck. Depending on the implementation plan, the residential building is constructed after completion of the deck in some cases. In such a case, it should be assured that public roads in the south area of the Project site can be used for transport of construction materials during the construction period and for smooth access of residents after completion of the building.

(5) **Assurance of car park and motorcycle parking lot**

According to duty of attachment installation, the parking lot needs to assure enough car parking (760 vehicles), residential car parking, and motorcycle parking (6,300 vehicles). In addition, it is necessary to consider the approach ramp from the public road and at a dispersed position of method of custody (self-propelled type, mechanical driven type).

3.6.2 Consideration for Utilities

(1) **Connection of Utilities**

Utilities shall be transferred from the front road where the main utilities are located and then connected. Power receiving station, water receiving tank, and firefighting water tank shall be installed on the lower floor of the building. Since timing of utility connection is dependent on the building, a detailed plan that meets the actual programme will be required.

(2) **Sewage Facilities**

It is necessary to install wastewater disposal facilities since there is no public sewerage system. The location of such facilities shall be in the southern area where no rail is installed. Since the timing of installation is dependent on the building, a detailed plan will be required.

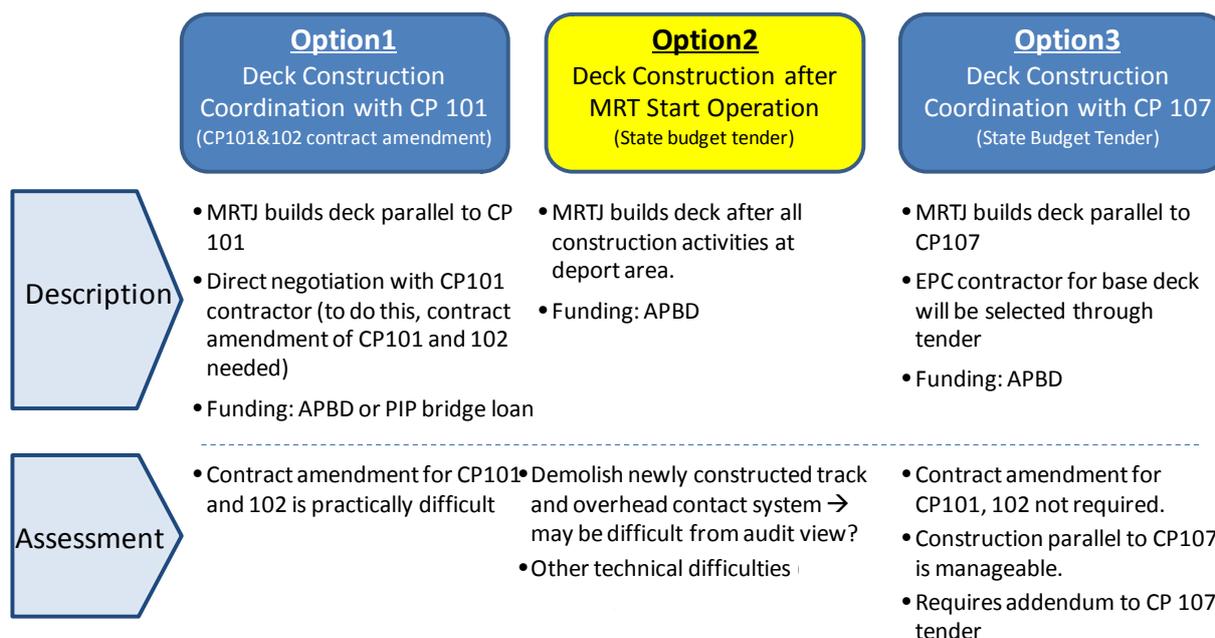
Chapter 4 Construction Method and Cost Estimate

4.1 Construction Method

4.1.1 Conditions of Basic Plan

(1) Option Study for Construction Timing

This Project is very complex, with multiple facilities such as skyscrapers for commercial and residential use, a bus terminal, and parking spaces that are supposed to be developed above the depot area. Unlike common development projects, there will be two different operators for the ground layer and above-ground layer, namely: MRT operator and complex facility operators. Currently, depot construction works are about to start as part of the scope of the CP101 Contractor. MRT construction works is implemented as a design-build scheme, and during the basic design stage, the distance between tracks has been set wider in consideration of the columns that will support future structural loads for the Project. However, it is not known if those structures and foundations for the future project will still be constructed after completion of the depot. This means it is very difficult to construct these two facilities, a depot and a complex facility, at different times. At the minimum, underground structures that support future structural loads of higher levels and the first floor slab (hereinafter referred to as “deck”) shall be constructed in synchronization with the ongoing MRT construction project⁴. Figure 4.1-1 below shows three options to construct the deck in coordination with the MRT construction.



Source : JICA Study Team

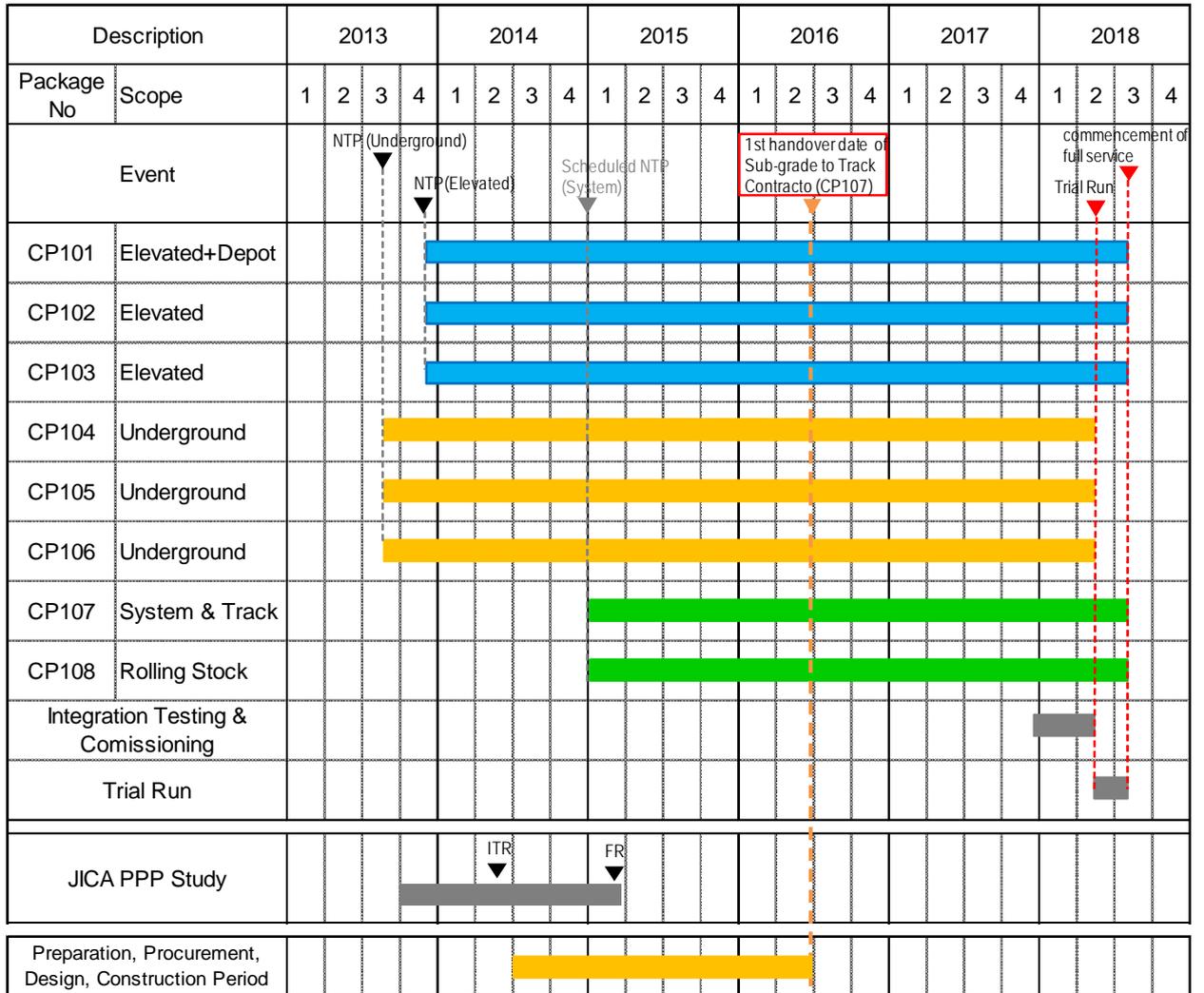
Figure 4.1-1 Options for Deck Construction

Option 1 : Deck Construction in Coordination with CP101

When this study has just begun, it was considered to be most appropriate to synchronize the deck construction with the civil works of CP101. However, as of June 2014, the Project is yet to be officially approved by DKI Jakarta. This means all the procedures for procurement works cannot even be started. In case the deck is constructed in coordination with CP101, the first depot site will be handed over in the middle of 2016, and there will only be only one year left to complete the deck construction(as of June, 2015). In the situation where there are no

⁴ It is technically favorable to construct the deck before depot construction. However, considering the current situation where depot construction has been contracted and works are about to start, this option is no longer realistic. Thus, it is excluded from this comparison study.

indications yet on whether deck construction will be realized or not, it is unrealistic to say that all the preliminary works for the deck construction, such as DKI’s approval, procurement of design contractor, design works, procurement of construction contractor, and construction works, can be completed within a year. In order to solve this problem, an option of “direct negotiation with CP101 contractor” was considered but later revealed to be unrealistic since Indonesian regulations specify that only 10% of the original contract price is adjustable, which is not enough to cover the deck construction cost (approximately JPY 2.7 billion for deck, JPY 14.0 billion for CP101). As a result of said studies, it was concluded that the deck construction in coordination with CP101 is not realistic for further studies.



Source : JICA Study Team

Figure 4.1-2 Schedule of This Study and MRT Construction

Option2: Deck Construction After Commencement of MRT Operation

The first alternative to Option 1 is “deck construction to be completed after commencement of MRT operation”. As MRTJ insists, it is an absolute must to avoid any delay of commencement of MRT operation by any means. From this point of view, it is fairly reasonable to clear off any possible risks to delay MRT commencement by starting deck construction after MRT successfully starts operation even though construction requires a much longer time. However, if the deck is constructed after MRT operation, it will be necessary to divert part of the depot function one after another within the depot area to construct the deck. It will also be required to demolish newly installed facilities. This leads to a variety of problems as summarized in Figure 4.1-2 below.

Construction	<ol style="list-style-type: none"> 1. "band-new" Tracks, Overhead Contact, Signaling System should be demolished and additional cost for reinstallation again after deck completion. 2. Some of the factory lines (i.e. wheel turning, emergency & inspection track) needs to be signalized because of shifting of three trains from stabling tracks. 3. Risks for adjacent construction to the operated railway.
Operation	<p><u>(Usual)</u></p> <ol style="list-style-type: none"> 4. the stable lines for 6 trains are out of service for 3years. 5. Five trains should be on main track during night time. Administration of train drivers will be complex. <p><u>(Abnormal)</u></p> <ol style="list-style-type: none"> 6. Lower flexibility use of emergency & inspection track in case of the emergency
Maintenance	<ol style="list-style-type: none"> 7. For Phase 2, cleaning track is out of service and train should be manually cleaned for 1.5 years.

Source : JICA Study Team

Figure 4.1-3 Variety of Problems in Case the Deck will be Constructed After Commencement of MRT Operation

It should be noted that this option may require consent from Japanese government since brand new facilities funded by yen loan scheme would be demolished. It is also likely that the double-construction cycle of "demolition" and "reconstruction" may not be acceptable in terms of account audit even in Indonesia.

Option 3 : Deck Construction In Coordination with CP107

The MRT construction work is divided into two contract packages in the Lebak Bulus depot where this development project is planned. The scope of CP101 covers civil works (embankment, subgrade, and buildings), and after completion of subgrade, CP101 will hand over the site to CP107 whose scope covers track works. The original contract envisages that site handover will be made en bloc excluding the building site. However, since it is not practical to suppose that CP107 will start construction work at the same time in all the available-to-work sites where total area exceeds more than eight hectares, it is not a prerequisite. Therefore, there may be some time between the end of CP101 and commencement of CP107 when partial handover is taken into account. As will be described later, as a result of studies on the work period of the deck construction and its impact to CP107 works, it has been established that it is technically possible and does not require special consideration to construct the deck during the time interval between CP101 and CP107.

By comparing the three options above, there is only one option to realize the deck construction which seems realistic, which is the option wherein "the deck will be constructed during the period between CP101 and CP107.

(2) Schedule Coordination with MRT Project

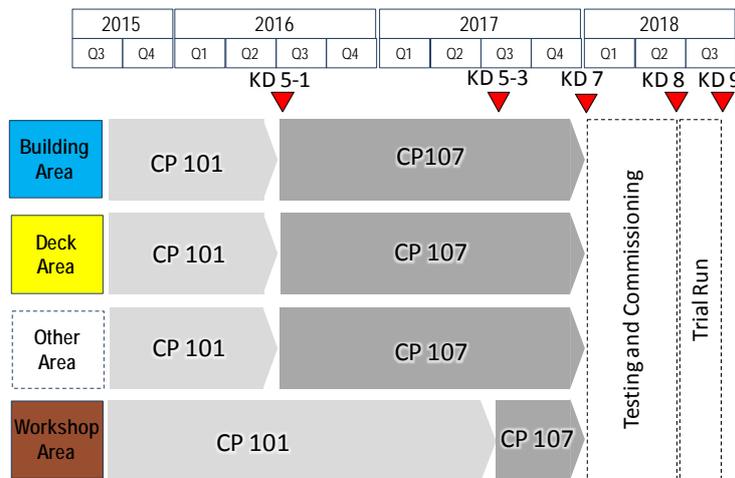
The biggest challenge of the Project is to realize deck construction without causing any delay to the MRT project which has already began.

The depot construction consists of two contract packages, namely: CP101 - mainly civil works package, and CP107 - mainly track and system works package. Under the scope of each contract package, the subgrade will be constructed by the CP101 contractor while the CP107 contractor will install the tracks and various system devices and facilities on the subgrade. There are some key dates set in the CP101 contract, which specifies the dates of the handover

of the use of the sites to CP107. Figure 4.1-4 shows the graphically-illustrated key dates under the original CP101 contract. The area classification shown in Figure 4.1-5 corresponds to the same colored area in Figure 4.1-4. There are two key dates from CP101 to CP107 that relate with the deck construction schedule as shown below:

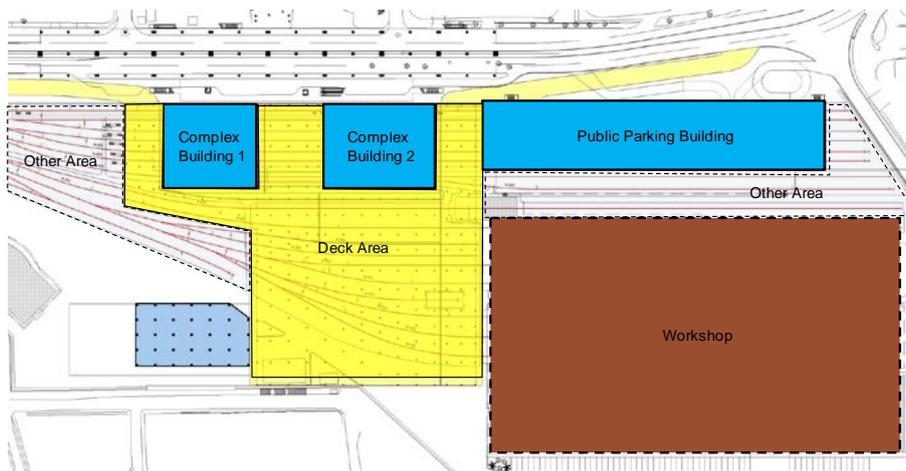
- KD 5-1 :Track subgrade handover of non-workshop area.
- KD 5-3 :Track subgrade handover of workshop area.

Under the current conditions of contract, track subgrade is expected to be handed over to CP107 en bloc, excluding the workshop area where buildings will be developed. The total length of track work is more than 6,000 m, and it is not practically realistic to hand over the entire site, which is more than eight hectares, all at once. Provided that the entire site is handed over at once, track will be installed partially at different times in the entire depot site. Therefore, by adding partial handover to CP107 in the current conditions of contract, time period can be created between CP101 and CP107.



Source : JICA Study Team

Figure 4.1-4 Key Dates Under the Original CP101 Contract

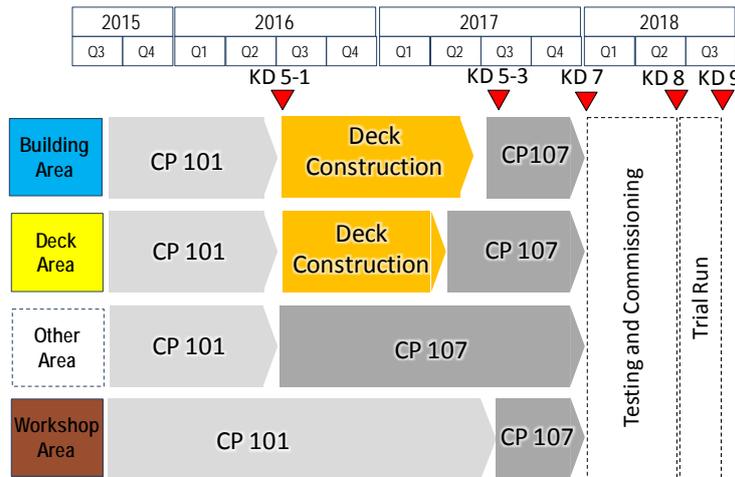


Source : JICA Study Team

Figure 4.1-5 Area Classification

The work which requires the longest period of time among the deck construction works is piling works. The specification for piles will be higher in the area where high-rise buildings will be developed in the future, since heavier loads shall be supported in these areas. Such areas require longer working time than the area where only the deck will be constructed. Based on the estimated construction schedule for piling works in each area, six months will be required in the deck area and eight months for the high-rise building area. Considering these periods in

between CP 101 and CP107, three months and five months can be secured for high-rise area and deck area, respectively.



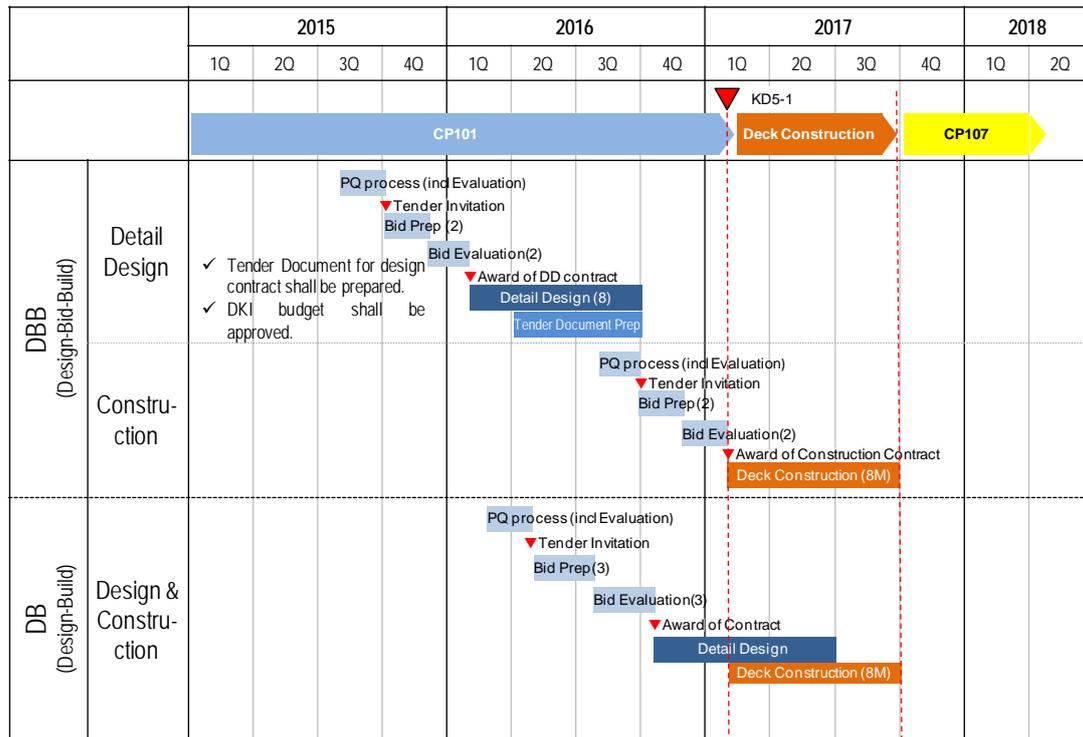
Source : JICA Study Team

Figure 4.1-6 Implementation Schedule of the Depot Including Deck Construction Process

(3) Studies on Procurement and Construction Schedule

The original schedule in each Contract Package is as shown in the figures as indicated above, however, the actual progress of the construction works is behind the original schedule. In the project area, a soccer stadium, which was scheduled to be demolished, removed and handed over to CP101 contractor much earlier, still remains untouched as of June, 2016. Considering current situation, delay of entire construction works is inevitable. Therefore, in order to assess realistic procurement and construction schedule, it is assumed that a half year delay is considered and possibilities of application of abovementioned scheme are studied.

Figure 4.1-7 shows comparison between the schedule of “Design-Build” scheme and “Detail-Bid-Build” scheme. In either case, basic design service stage is excluded since it is completed within the scope of this study. According to this comparison figure, “Detail-Bid-Build” scheme requires roughly one and a half year to procure two firms; design consultants and contractors for construction works. Although PQ (Pre-Qualification) process has to be commenced as soon as possible in this scheme as of June, 2015, it is unrealistic to apply this scheme to this project in the situation where an approval for this project has not yet issued. Meanwhile, one firm carries out detailed design and construction works in “Design-Built” scheme, making the entire process much faster. This can save the time up to commencement of deck construction works. In this regard, it is proposed to apply “Design-Built” scheme in this project (actual schedule is base on the actual delay of MRT construction works).



Source : JICA Study Team

Figure 4.1-7 Comparison of Procurement Schedule

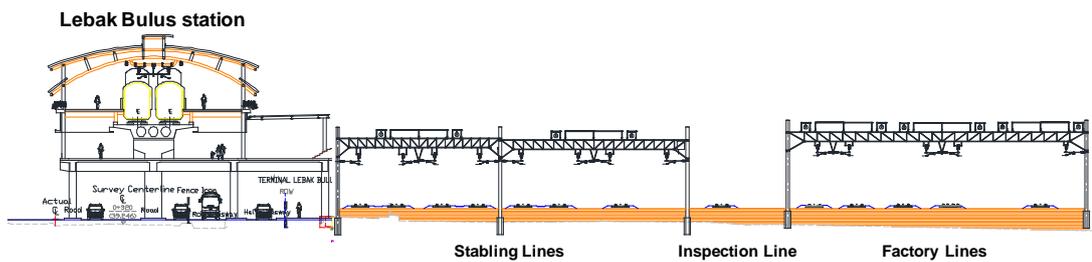
4.1.2 Studies on Construction Method and Construction Plan

(1) Construction Method for First Deck

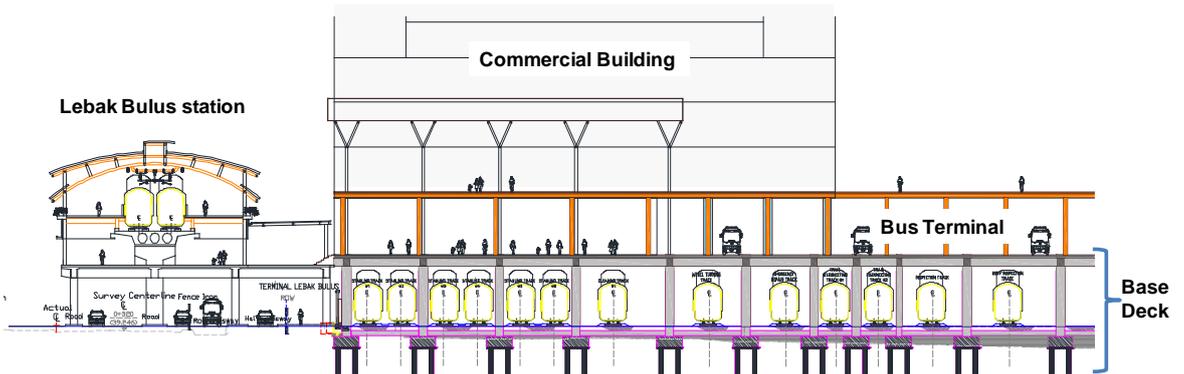
Since the deck construction area will be completely handed over from the CP101 contractor, basically there will be no restrictions for the deck contractor on site use conditions, such as sharing the same site with the CP101 contractor. Although CP101 contractor has to do the embankment works up to the subbase top level, the deck contractor will have to excavate the embankment that the CP101 contractor constructed and do piling works and fill the space again. In order to avoid rework, it is favorable that the deck construction site should be handed over from the CP101 contractor to the deck contractor without embankment works.

Figure 4.1-8 shows the sectional image after the completion of the Project. The deck section, which will be constructed in the early stage of the Project, is indicated in the figure by red line. The deck works include piling works, footing foundation, column, and first slab.

CURRENT DESIGN (WITHOUT THIS PROJECT)



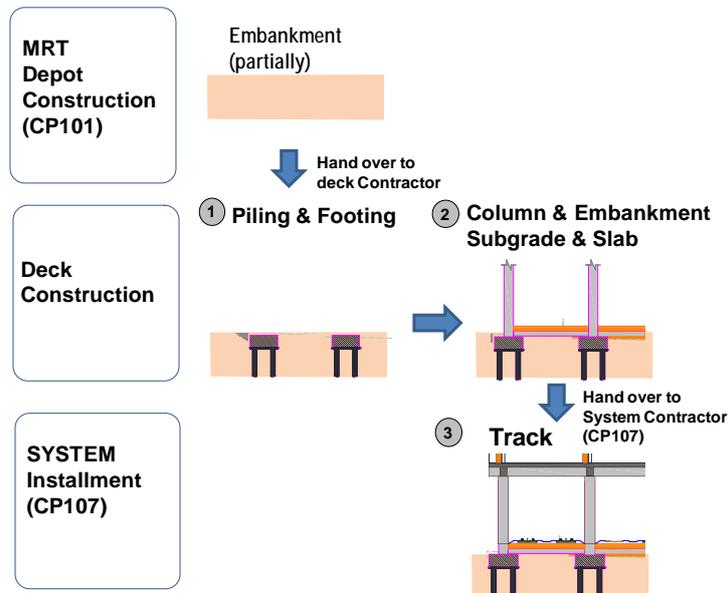
(WITH THIS PROJECT)



Source : JICA Study Team

Figure 4.1-8 Sectional Image of the Development Area, With and Without the Project

The deck contractor will partially construct the embankment where height of original ground is not sufficient for the piling machine to be installed, and then hand over the site to CP107. Deck contractor will complete the works from piling to first slab and subgrade and then hand over the site to the CP101 contractor who will cover track works. Figure 4.1-9 shows the series of construction methodology and demarcation of each contractor.



Source : JICA Study Team

Figure 4.1-9 Construction Demarcation Between Each Contract Package

4.2 Project Cost Estimate

4.2.1 Conditions of Estimate

(1) Construction Cost

Deck Section (including Foundations)

When this study had just begun in September, 2013, it was envisaged that the deck construction works should be carried out in parallel with CP 101 works. With this background, since first deck construction should be commenced as soon as possible in order not cause any delay to the MRT construction schedule, the structure design which is nearly equivalent to the quality of basic design was conducted to accelerate the studies/ design works followed by this feasibility study such as detail design etc. Therefore, firstly bill of quantity was prepared based on the design works, and then build-up cost estimate was applied to the Deck Construction cost.

Unit costs of labour, materials and equipment/ machinery are calculated on the basis of unit costs published in 2010 and modified by considering escalation ratio accordingly. Indirect cost are calculated in accordance with the guide line “Standard for estimation of common expense of public building works, 2014” published by Ministry of Land, Infrastructure, Transport and Tourism (MLIT) of Japan.

Complex Building

Unit cost for building works are based on the information collected through the subcontracted market survey⁵. In the subcontracted survey, hearings from developers, real estate companies and construction contractors are carried and then the unit costs per square meter for building works are set by facility.

Facilities for cost estimation are summarized below;

Table 4.2-1 Target Facility for Cost Estimate

Public Infrastructure	Scale	Usage
Parking Building	9-floor building	Park & Ride, Users of the complex facilities
	Building Area 4,490m ²	
	Floor Area 43,760m ²	
Station front square (bus terminal)	Building Area 10,400m ²	Wide-area bus/ inner-city bus /Mini bus/ Share-ride taxi/ Taxi /TransJakarta(Corridor9)
Station front square (station front space)	Building Area 1,440m ²	Park (Atrium)
Pedestrian Deck	Building Area 2,150m ²	
Others (Entrance and exit ramp etc.)		
Commercial Facility		
Complex Facility 1	26-floor	1F-5F : Commercial Facility
	Building Area 1,190m ²	
	Floor Area 32,240m ²	
Complex Facility 2	26-floor	1F-5F : Commercial Facility
	Building Area 2,910m ²	
	Floor Area 64,700m ²	
Residential Building	32-floor	
	Building Area 1,530m ²	
	Floor Area 61,520m ²	

Source : JICA Study Team

⁵ Colliers International, 2014, Final Report: Highest and Best Use Study for 8.4 Hectare Land in Lebak Bulus, South Jakarta

(2) Consulting Service Fee

8% of construction cost is considered as consulting service cost. Scope of works of the consulting services shall include Design, Preparation of Bidding Documents, Tender Assistance and Construction Supervision.

(3) Other Conditions

Interest during the construction period: 10%

Other conditions are set based on the sub-contracted market survey (referred to Section 6.2).

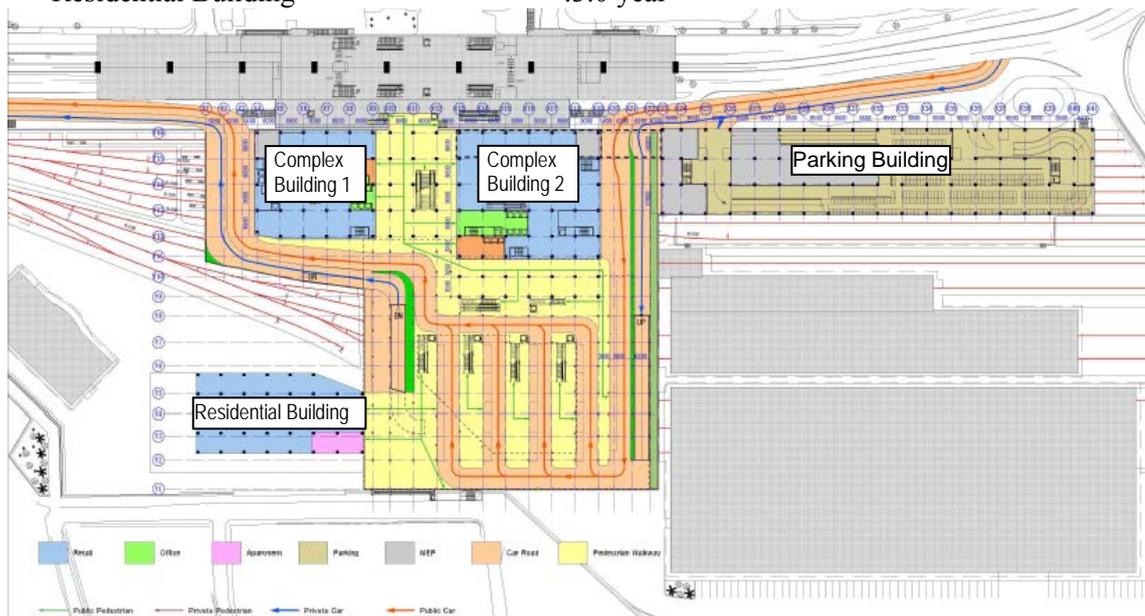
(4) Project Implementation Schedule

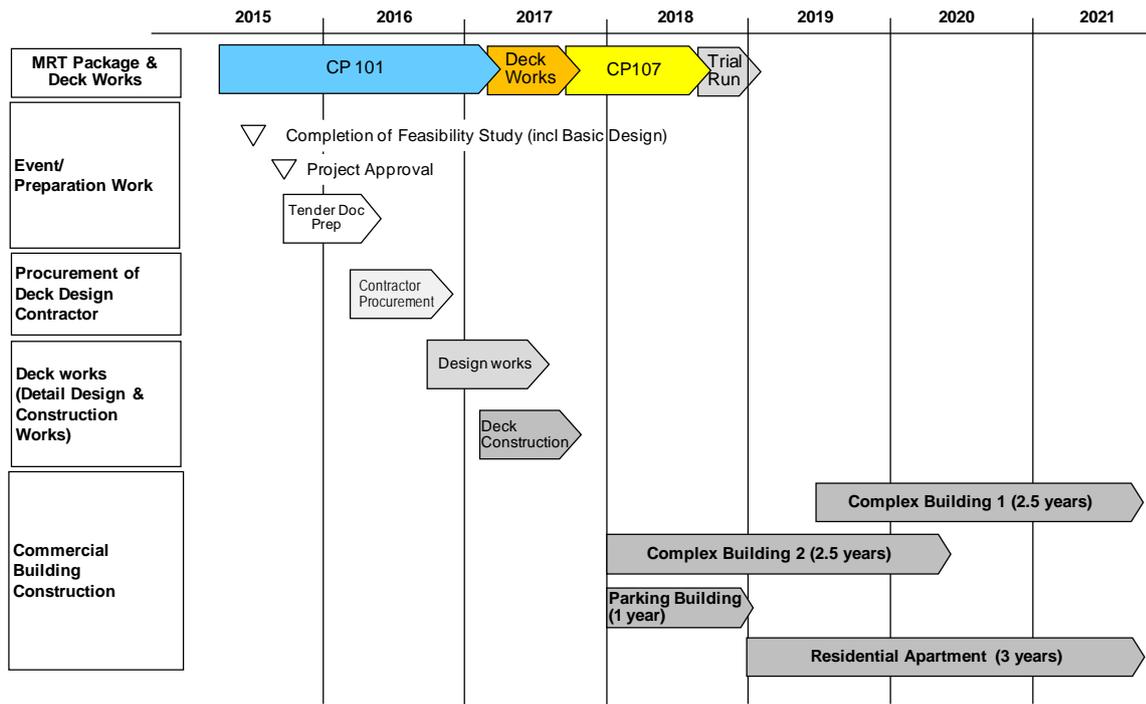
In order to implement the project, the first thing to do is that DKI Jakarta gives approval to this project. Subsequently, the budget for the deck construction is to be acquired and project implementation body is determined. In parallel to part of this process, tender document is to be prepared. It is envisaged that tender document preparation can be completed in short time as deck construction will be ordered by DKI Jakarta, and local consultants can manage it with reference to the basic design prepared in this study. After this, tender process begins.

Since the first deck shall be constructed in the very short period in between the works of CP107 and CP108, construction schedule of first deck shall be in synchronization with CP107 and CP108 schedule. For these reasons, the first deck construction schedule is planned in consideration with on-going MRT construction schedule.

Since it is difficult in this stage to identify the specific construction timing of each building, the basic policy for setting the implementation schedule is set that priority shall be put on more highly public structure. It is assumed that all the buildings cannot be constructed at the same time considering the safety of passenger who walk through the project area at the time of construction and it is also difficult to prepare construction yard if the construction of all the buildings are conducted at the same time. It is envisaged that all the building works shall be completed in four years since the day when construction will be able to be commenced. Although the period required to complete each building varies depending on the scale, the numbers of floors and usage, it is proposed that the following period be required for each buildings,

- Parking Building : 1.0 year
- Commercial Complex 1&2 (26 floor) : 2.5 year
- Residential Building : 3.0 year





Source : JICA Study Team

Figure 4.2-1 Implementation Schedule

4.2.2 Result of Project Cost Estimate

Estimation result is shown in the following figure,

Table 4.2-2 Project Cost Estimate

Item	Total	Total
	Equivalent Total (Mil JPY)	Equivalent Total (Mil Rp)
A. ELIGIBLE PORTION		
I) Procurement / Construction		
Base Deck	0	0
Complex Building 1	2,122	219,647
Complex Building 2	3,989	412,985
Parking Building	1,286	133,124
Apartment Building	3,080	318,820
Subtotal of Construction/ Procurement	10,477	1,084,576
Price escalation	3,850	398,564
Total of Construction/ Procurement	14,327	1,483,140
II) Consulting services		
Base cost	1,482	153,392
Price escalation	528	54,695
Physical contingency	0	0
Total of Consulting Service Fee	2,010	208,086
Total (I + II)	16,337	1,691,226
B. NON ELIGIBLE PORTION		
a Procurement / Construction		
Base Deck	3,555	368,000
Complex Building 1	909	94,134
Complex Building 2	1,710	176,994
Parking Building	551	57,053
Apartment Building	1,320	136,637
Subtotal of Construction/ Procurement	8,045	832,818
Price escalation	2,329	241,107
Total of Construction/ Procurement	10,374	1,073,925
b VAT	2,671	276,515
Total (a+b)	13,045	1,350,440
TOTAL (A+B)	29,383	0
C. Interest during Construction		
	4,264	441,458
GRAND TOTAL (A+B+C)	29,383	3,041,667

Source : JICA Study Team

Chapter 5 Laws and Regulations

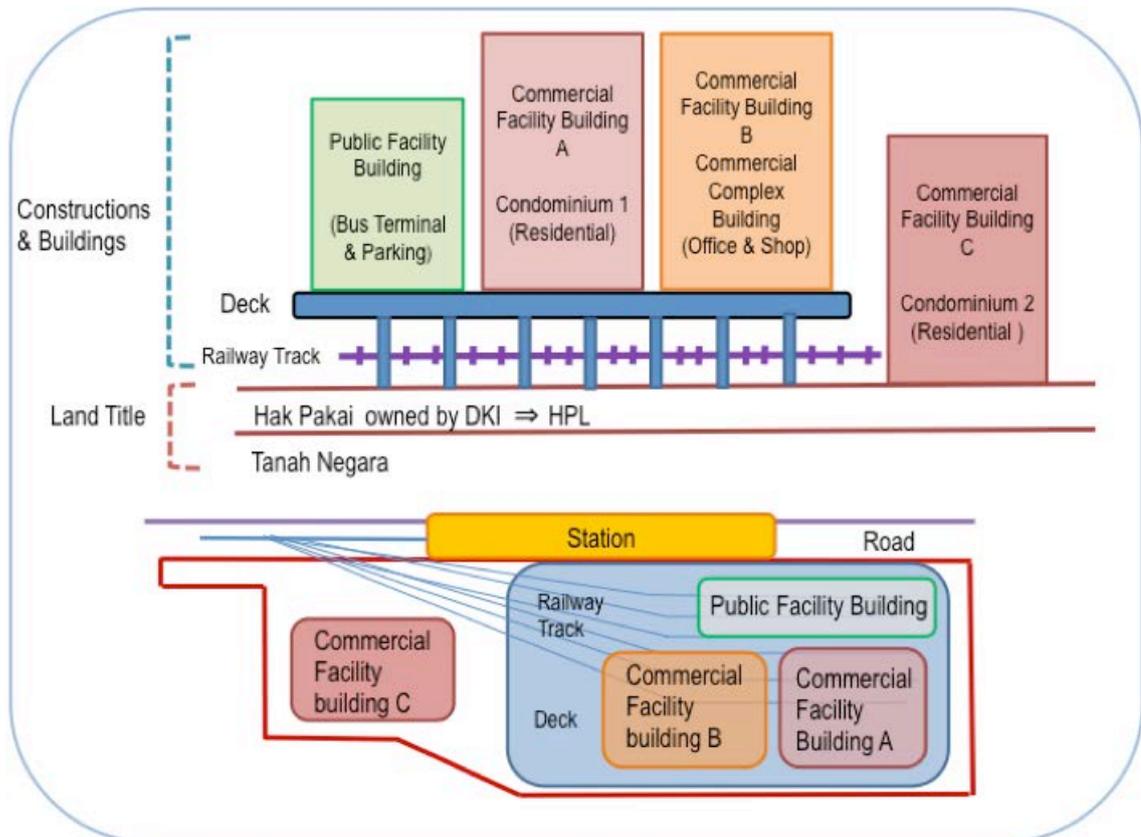
5.1 Project Background and Legal Survey

5.1.1 Project Background

(1) Project Design

The proposed Project is the development of the Lebak Bulus Station area (hereinafter referred to as “Project Area”), in which a complex facility is envisioned in the form of a metro-railway terminal station including public infrastructure facility such as inspection shed and workshop, complimented by a bus terminal, pedestrian deck, station plaza, public park and ride facility, and commercial facility, wherein part or all of which are to be constructed on top of the metro-railway station, with the aim of enhancing the metro-railway passengers’ convenience, increasing the number of the metro-railway passengers, contributing to stable management of the metro-railway operator, and developing the Project Area as the center of south Jakarta.

Figure 5.1-1 shows a simple picture of the plan in the Project as an assumption in this survey.



Source : JICA Study Team

Figure 5.1-1 Layout Plan of the Project as an Assumption in the Survey

(2) Current Land Title

The Project Area covers 8.4 ha. The type of title given to the Project Area is Right of Use, (*Hak Pakai*: HP).⁶ The JICA Study Team understands that HP has originated from state land and was issued to the Provincial Government of the Special Capital Region of Greater Jakarta (*Daerah Khusus Ibukota*: DKI) for a period for so long as the land is used by DKI for the intended purpose stated in the decision issued by the competent authority for the grant of HP to DKI.⁷

⁶ This is based on information obtained from an official of the Regional Financial Management Agency (*Badan Pengelola Keuangan Daerah*, BPKD) of the Provincial Government of the Special Capital Region of Greater Jakarta (DKI).

⁷ The competent authority in this matter is the local Land Office after receiving approval from the Head of *Badan Pertanahan*

(3) Relevant Parties

The relevant parties in this survey are:

- a. DKI as the current landowner (in some case, continuously owns the land title);
- b. PT. Mass Rapid Transit Jakarta (MRTJ) as the proposed operator of the metro-railway system;
- c. The company wholly controlled (or to be established and wholly controlled) by DKI, as the proposed landowner in some case (Property *Badan Usaha Milik Daerah*: BUMD)⁸;
- d. A Japanese private investor (JPI1), who invests in the project company, which will carry out the development as the project owner and operation of the commercial facility buildings (PJCo1);
- e. A Japanese private investor (JPI2), who invests in the project company or an existing construction company, which engages in construction services such as design and construction work for public facility building (PJCo2)⁹;
- f. Domestic and/or foreign private financial institutions, which provide debt financing, partially or wholly, to the PJCo1; and
- g. Japan International Cooperation Agency (JICA) as the potential provider of part of the financing of public infrastructure facilities.

5.1.2 Legal Survey

(1) Overview of Legal Survey

The feasibility of the Project for the JICA overseas loans and investments and foreign investment by Japanese companies is examined through this legal preparatory survey (herein referred to as the Preparatory Legal Survey).

The Preparatory Legal Survey consists of two phases. This report covers the Phase 1 survey. In Phase 1, the following are the three key issues focused mainly in examining the Project:

- a. Issues related to foreign investment;
- b. Issues related to land title; and
- c. Cooperation with public sector including utilization of land owned by state and regional governments.

The JICA Survey Team has reviewed several options of business structure for the Project and narrowed down the option, which could be feasible from the Indonesian legal perspective. The basic legal framework of relevant Indonesian laws and regulations will also be provided to the extent required for analysis of the feasibility.

(2) Legal Survey Partner

In order to execute this survey efficiently and effectively, a partner with high professional skills to make proper legal opinion based on proficiency and knowledge of Indonesian laws and regulations is necessary. The JICA Survey Team selected the group of Nagashima Ohno & Tsunematsu (NO&T), a Japanese legal firm, and its Indonesian partner legal firm, Soemadipradja & Taher (S&T) as the legal survey partner. In order to select a sufficient partner, the JICA Survey Team had the following approach:

⁸ *Nasional* (the National Land Agency, BPN) (refer to Article 42 of Government Regulation No. 40 of 1996, GR 40/1996).
⁸ For the purpose of this survey, the JICA Study Team assumed the BUMD will take the form of a PT Company (see Section 4.3.4).

⁹ Public infrastructure facilities are basically closed for foreign investment. Construction may be carried out by a PT company in which foreign investor owns a maximum of 67% shares (it is envisaged that the PT company specifically will be engaged in physical construction only, not in the management or operation of the public infrastructure building). A more detailed information is stated in Section 2.1.

Step1: Had a pre-meeting with several Indonesian and Japanese legal firms.

Step2: Distributed the Terms of References (TOR) made by the JICA Survey Team to five candidate legal firms selected after the pre-meeting, and

Step3: Examined all the proposals submitted by the five legal firms.

(3) Survey Method and Legal Report

A tailor-made approach is necessary for the legal survey due to the special nature of the Project. The JICA Survey Team has proactively addressed the legal survey including discussion with regulatory boards such as DKI and others, searching for similar cases, creating ideas, and other activities in cooperation with the legal survey partner. The summary of results of the legal survey is submitted with a report¹⁰ made by NO&T and S&T (Legal Report by NO&T and S&T). The legal part in the JICA preliminary survey is made based on the legal report by NO&T and S&T. Legal basis and legal opinions in this report are based on those written in the legal report by NO&T and S&T.

5.2 Foreign Investment and Project Company

5.2.1 Foreign Investment under Indonesian Law

Indonesia encourages foreign direct investment into the country. A set of laws and regulations has been adopted to accommodate and facilitate incoming foreign investment. The primary law on the matter is Law No. 25 of 2007 regarding Investment (the **Investment Law**).¹¹ A specific agency, called the Indonesian Investment Coordination Board (*Badan Koordinasi Penanaman Modal*: BKPM), is set up to administer foreign direct investment at the national level with mirror agencies at the provincial and local levels. Foreign investments poured into business sectors will require approval from BKPM.

The President of the Republic of Indonesia sets out a list of business activities closed to foreign investment or open to foreign investment but subject to specific conditions. This list is known as the “Negative List”. The list also sets out the maximum foreign ownership of equity in the relevant lines of business.¹²

Where the Negative List is silent with respect to a specific line of business, the investor may seek confirmation directly from BKPM on the matter. Often there are BKPM administrative policies that are not published and therefore not immediately known to the general public, but which may be obtained by contacting BKPM.

BKPM issues regulations to implement the Investment Law. The BKPM regulations contain technical requirements and conditions with which foreign investors must comply in order to operate their investments in Indonesia.

The investment must take the form of a PT Company set up by foreign investor/s subscribing for shares in the PT Company (if the PT Company already exists).¹³ The amount of share capital and loans that may be invested into the PT Company are subject to BKPM approval. BKPM only permits investment in United States dollars or Indonesian rupiah.

The BKPM approval will set out the parameters of investment including a schedule¹⁴ for the PT Company to commence the construction of the Project.

¹⁰ “Survey of Legal Aspects of the Lebak Bulus Station Area Development Project”

¹¹ This law replaces the previous law which specifically addressed only foreign investment, namely, Law No. 1 of 1967. The current Investment Law covers domestic investment as well as foreign investment.

¹² There are specific statutory laws that also stipulate maximum foreign investment and/or a statutory obligation for the foreign investor to divest his equity to Indonesian citizens or entities. See for instance Law No. 4 of 2009 on Minerals and Coal Mining (to be read in conjunction with its implementing regulations, particularly Government Regulation No. 23 of 2010 as amended by No. 24 of 2012) and Law No. 13 of 2010 on Horticulture. These pieces of legislation contain stricter restrictions and conditions compared with those in the Negative List and to this extent override any restrictions or conditions in the Negative List.

¹³ The Indonesian law requires that there must be a minimum of two shareholders of a company (see Article 7 (1) of the Company Law).

¹⁴ The schedule to construct the Project would usually take three years, but may be extended upon the written request of the PT.

The PT Company may acquire and own land, construct, and operate the building, and is at the liberty to operate and sell any of its properties, including land (or any subdivision of it) and buildings. Once the PT Company is in commercial production (i.e., in operation), it will need to apply for a permanent business license from BKPM. The license will allow the PT Company to sustain its business for as long as the PT Company carries out business activities under the license.¹⁵

Within a certain period after commercial production, the foreign investor is required to divest its shares to Indonesian citizens or entities.

With respect to property development, the maximum amount of foreign shareholding and the amount of shares to be divested depends on the kind of property project to be developed. Development of a commercial property such as an office building, apartment building, shopping mall, hotel, or a combination of these is 100% open to foreign investment.¹⁶ However, the requirement to divest shares to an Indonesian citizen or entity within a certain period after commercial production continues to apply.

A commercial property development requires an investment of at least Rp10 billion or its equivalent in US dollars. (This amount does not include the value of the land and the building.) The issued capital and paid up capital of the PT Company must be at least Rp2.5 billion.

It is legally possible to have the office building and apartment building leased out, or divided into individual units with strata title issued for each so that each unit may be sold by the property developer.¹⁷ A shopping mall is usually divided into leased space and which is leased out. A hotel usually rents rooms, as well as dining, functional and meeting venues within its property.

With respect to public infrastructure facilities, there is a limited scope for foreign investment, because ownership, management, and operation of public infrastructure facilities are closed to foreign investment.¹⁸ Foreign investment is apparently open with respect to, among other things:¹⁹

- a. Pre-design and architectural consultancy service;
- b. Architectural design service;
- c. Contract administration service;
- d. Architectural design and contract administration;
- e. Other architectural service;
- f. Building foundation and structural design engineering;
- g. Civil design engineering;
- h. Engineering and installation service during construction;
- i. Turn-key transportation facility integrated engineering service;

¹⁵ An exception to this principle is where a piece of legislation or a regulation provides otherwise. In general, see Article 31 paragraph (11) of BKPM Regulation No. 5 of 2013.

¹⁶ However, with respect to foreign investment in a hotel, the 100% foreign shareholding applies only with respect to a hotel that has a rating of four stars or more. Additionally, the 100% foreign shareholding applies to investment in these properties, not with respect to the investment in the construction company that is to build these properties. This could change when the government issues the negative investment list (Negative List), which is used by BKPM as guidance in approving the maximum foreign shareholding in a new investment. A new Negative List is expected to be issued in the very near future. The new Negative List could change the 100% foreign shareholding to a reduced percentage. It will therefore be necessary to review the new Negative List once it is issued.

¹⁷ This applies to office buildings and residential apartments. This does not apply to a shopping mall building or a hotel. The property developer in this instance is the PT Company established by the foreign investor. There is a regulatory requirement with respect to buildings which are divided into individual units, that the unit owners must establish a tenants' association. The tenants' association will eventually hold title to the common property in such buildings. Eventually, the HGB covering the common property will need to be transferred to the tenants' association. With regard to the latter, see Articles 74 and 75 of the Condominium Law.

¹⁸ This is based on Attachment I of the latest draft Negative List (in respect of the Negative List, see note 11).

¹⁹ This is also based on the latest draft Negative List. These lines of business are registered under the Indonesian line of business classification (KBLI) code number 71100.

- j. Turn-key water and sanitation integrated engineering service;
- k. Turn-key manufacturing plant integrated engineering service; and
- l. Other turn-key manufacturing plant integrated engineering service.

The maximum foreign shareholding is 55% with respect to each of these lines of business.

Interestingly, there is an indication that the development of land transportation passenger terminal (for public use) is open to foreign investment, with a maximum foreign shareholding of 49%, and subject to written recommendation of the Minister of Transportation.²⁰

Development, i.e., the actual construction of public infrastructure can be performed by a PT Company engaged in construction services. Such PT Company may have a maximum of 67% foreign shareholding.²¹ Other than the provisions on the foreign shareholding limitation, there are other government and industry requirements that must be satisfied in order to engage in this line of business.

5.2.2 Line of Business in Project Companies

A project company (PJ Company) would need to be a PT Company established under the auspices of the Investment Law. Under the Indonesian law, a PT Company must hold a specific business license, and as such would need to engage in the activities specified in the business license. There is no business license for a PT Company, the main business of which is merely to hold shares in other PT companies.

The line of business of PJ Company is to engage in the development and operation of a commercial property such as an office building, apartment building, shopping mall, hotel or a combination of these. The shares of the PJ Company can be wholly or partially owned by a foreign investor.

For clarity, it is advisable to review the Negative List. The latest draft Negative List indicates that:

- a. Construction service is subject to a maximum of 67% foreign shareholding;
- b. Office building, apartment building, shopping mall, and hotel (three to five stars) ownership, operation, and management are not stipulated in the draft Negative List and are therefore open to 100% foreign shareholding²²; and
- c. Commercial building/commercial property management service (provided by a company that is not the owner of the commercial property) is also not stipulated in the draft Negative List, and should therefore be open to 100% foreign shareholding.²³

As matters regarding PJ Company for public facilities already mentioned in the previous section, there is a limited scope for foreign investment because ownership, management, and operation of public infrastructure facilities are closed to foreign investment. The line of business of PJ Company is just to engage in construction services such as design and construction work for public facility building. A maximum of 67% of the shares of the PJ Company can be owned by a foreign investor.

Other than the provisions on the foreign shareholding limitation, there are other government and industry requirements that must be satisfied in order to engage in this line of business.

If the PJ Company is proposed to coordinate the activities of the subsidiary PJ companies, the line of business in which it may engage might be “management consultancy”. This line of

²⁰ See note 14. The KBLI code for this line of business is 52211.

²¹ See note 14. The KBLI code for this line of business is 41014.

²² Informal research at BKPM indicates that these lines of business are open to foreign investment with no limit on foreign shareholding.

²³ The JICA Study Team has not carried out research on this matter. Therefore it is advisable for the foreign investor to obtain a written confirmation from BKPM on whether this line of business is open to 100% foreign shareholding.

business is 100% open to foreign ownership. However, since it would be required to engage in actual business, the parent company would need to charge the subsidiary for services rendered to the subsidiary companies.

5.3 Land Title Issues in the Project

5.3.1 Land Title under Indonesian Agrarian Law

(1) Introduction

The underlying principle of Indonesian land law is that the state (represented by the national government) directly controls the land (*Hak Menguasai Negara*: HMN). This principle grants the state the authority to determine the use, to regulate, and to administer matters regarding the land. Any plot of land upon which there is no claim or right would constitute state land (*Tanah Negara*).

The law regarding land and land title is primarily the Basic Agrarian Law (BAL),²⁴ which is implemented by various lower level regulations.

The BAL is supplemented by Law No. 20 of 2011 regarding condominiums (the Condominium Law) that introduce the concept of strata title, known locally as *Hak Milik Satuan Rumah Susun* : HMSRS.²⁵ The Condominium Law allows the issue of strata title over multiple units in multiple-story buildings. The strata title includes a component of joint ownership over the underlying land title.

(2) National Land Agency (BPN)

The government agency that has authority to regulate matters regarding land rights under the BAL is the National Land Agency (*Badan Pertanahan Nasional*: BPN). BPN has established a regional office in each province called BPN Regional Office (*Kantor Wilayah* BPN). Each BPN Regional Office oversees the operation of the Land Office (*Kantor Pertanahan*) at the local level, i.e., in a regency (*kabupaten*) or municipality (*kotamadya*).

A land title such as HP is registered with the local Land Office and the Land Office issues the title certificate to the owner. Any change of status of the owner or the land requires registration with the Land Office. The BAL and its implementing regulations require that in respect of a registered land title such as right of building (*Hak Guna Bangunan*: HGB), any change of ownership to the land, including any security interest established upon it, must be made in a prescribed document prepared and signed in the presence of a specific appointed official called a Land Deed Official (*Pejabat Pembuat Akta Tanah*: PPAT) and registered with the Land Office.

(3) Types of Land Title

The BAL and its implementing regulations set out the type of land title that a legal entity may own, namely:

- a. Right of building (*Hak Guna Bangunan*: HGB);
- b. Right of cultivation (*Hak Guna Usaha*: HGU);
- c. Right of use (HP); and
- d. Right of management (*Hak Pengelolaan*: HPL).

The land titles that are relevant to the Project, namely, HP, HPL, and HG is explained in this section. The strata title, HMSRS is also touch upon in this section.

²⁴ The House of Peoples' Representatives, the national parliament, is reported to be debating a bill on Land Law that would likely introduce certain amendments to BAL.

²⁵ The House is also debating a bill to revise the Condominium Law.

1) HP

An HP is the right to use the land and/or harvest the produce of the land, which is directly controlled by the state or is owned by another person. The right grants the power and duties that are specified in the grant decision by the competent authority or which are specified in the agreement with the land owner (which is not a lease agreement or a land cultivation agreement), and anything else to the extent not contradictory to the spirit and the provisions of the relevant law.

An HP owned by the government cannot be the subject of a security interest .

In the Project, an HP is not a title, which may issue strata titles on top of it. To permit this, the HP should be converted into a land title upon which strata titles can be issued.

2) HPL

An HPL is a right that arises from the state's authority to have direct control over the land (*Hak Menguasai Negara*) which gives the holder of this right the power to: (a) plan the designation and use of the land; (b) use the land for its activities; and (c) grant a part or parts of the land to a third party under terms and conditions determined by the holder of such right.²⁶

An HPL may only be issued to:

- the government (national, provincial or local);
- an agency of the government;
- a state-owned company;
- a provincial or local government owned company;²⁷
- an independent authority agency of the government (*Badan Otorita*); or
- a government legal entity designated by the government.

The HPL may be issued for as long as the land is used by the holder to carry out its main duty and function as these relate to the land. The HPL is not transferable and cannot be the subject of a security interest.

The HPL owner may, however, allow another party to apply for a secondary land title to be issued on top of all or part of the HPL for a specific period. The secondary land title could be an HGB or an HP. At the end of the specific period, the secondary land title would lapse and the land would revert to the HPL owner.²⁸

To allow the establishment of the secondary title on top of the HPL, the HPL owner and the proposed applicant for the secondary title would need to enter into an agreement stipulating the terms and conditions of their arrangement.²⁹ The agreement could include the principle that for the duration of the secondary land title the proposed applicant may encumber the secondary land title with security (such as a mortgage), allow the land to be used for the development of condominium buildings that allows the issuance of strata title in respect of individual units and/or allow the secondary land title to be transferred to another party.

3) HGB

An HGB is a right to build and own a building/s on land. This right is issued for a maximum of 30 years (and thereafter may be extended for a maximum of 20 years, and renewed for the initial period of HGB). The HGB can be issued to an Indonesian citizen or an Indonesian legal entity (including a PT Company the shares of which are partially or wholly owned by foreign

²⁶ See Article 1 Point 3 of Regulation of the Minister of Agrarian Affairs No. 9 of 1999 (Regulation 9/1999) as supplemented by Article 3 of Regulation of the Minister of Home Affairs No. 5 of 1974.

²⁷ Under Article 12(1) of Regulation of the Minister of Home Affairs No. 3 of 1987, however, only a state-owned company or a provincial or local government owned company the shares of which are wholly owned by the respective governments would be eligible to be issued an HPL.

²⁸ The secondary land title can be extended by its holder subject to prior consent from the HPL holder.

²⁹ See Article 4(2) of Regulation 9/1999.

shareholders). The HGB can be encumbered with security (such as *Hak Tanggungan* or registered mortgage) and is transferable to an eligible party.

The HGB can be used as the underlying title to set up a condominium building with multiple individual units, each of which is issued with a strata title (HMSRS). Each strata title owner will have a pro-rata proportional interest in the common property of the condominium building, including the HGB. The strata title period may not exceed the effective period of the HGB (and any extension and/or any renewal to it).

4) HSMR

As mentioned earlier, an HMSRS is a strata title issued over a condominium unit, its main purpose is to facilitate the individual sale of such units, and its main function is for residential purpose. The HMSRS is issued by BPN once the condominium building has been constructed and the relevant condominium unit is in a form that is fit for use.³⁰

5.3.2 Issues Associated with Hak Pengelolaan (HPL) and Hak Guna Bangunan (HGB) on Top of HPL

(1) Limitation of HP

As indicated earlier in this Preparatory Survey, the land title over the Project Area is currently an HP, a title upon which strata titles may not be issued, and which may not be subject to security in the Project.

An HGB is a prerequisite to construct a multi-story building upon which strata titles can be issued and which can be subject to mortgage. Under the current land legislation, an HP cannot be an underlying land title upon which an HGB may be issued.

To allow the issue of an HGB, the HP would need to be converted into an HPL. This is because an HGB can be issued on top of an HPL.

(2) Conversion of HP into HPL

To convert an HP into an HPL, the HP holder would need to apply to the Land Office to be issued with an HPL upon the holder releasing its ownership of the HP to the state.³¹ Technically, the land will revert to the state, and the state, through BPN, the BPN Regional Office, and the Land Office, will grant a new land title to the land (i.e., the HPL). The grant of the HPL will be issued by the BPN, and delivered by the BPN Regional Office to the local Land Office. Once issued, the HPL grant would need to be registered with the Land Office (and there are requirements to fulfill in order to do this) before the HPL certificate could be issued to the recipient.

The process to convert the HP into HPL is likely to take time because of the various administrative steps that need to be satisfied. It may take up to 12 months to complete the process. However, given that the HP holder is DKI (i.e., a government agency), and that the relevant administrative steps are overseen by another government agency (primarily the BPN, BPN Regional Office, and Land Office), it is foreseeable that the process could be expedited.

(3) BUMD as HPL Applicant

One aspect to consider in deciding upon a structure for the Project is whether it is possible to avoid engaging in any government tender process. In relation to the land, it is possible that DKI transfers title to the land to a BUMD which is 100% controlled by DKI. If the land is owned by a BUMD, this would avoid the requirement to go through any government tender process.

The time taken to process the grant of the HPL to a BUMD may take longer, as BPN may perceive a BUMD to be a lower priority than a government agency.

³⁰ See Article 44(1) and (2) of the Condominium Law.

³¹ See Article 55(1) of Government Regulation No. 40 of 1996 and Articles 66 and 67 of Regulation 9/1999.

The possibility of a BUMD becoming the HPL holder in the Project depends on DKI's preference on the matter.

(4) **HGB on HPL**

After the land title converts to an HPL, it would be possible for DKI (if it is the HPL holder) to enter into an arrangement with another party (the Applicant), which could be a BUMD (e.g., MRTJ) or a private company (e.g., the Master SPC or one of the subsidiary SPCs), that would enable the Applicant to apply for and be granted an HGB on top of the DKI's HPL.

The arrangements that would allow this to occur are the Asset Utilization Cooperation, build-transfer-operate (BTO), and build-operate-transfer (BOT) only, which require the selection of Applicant through a tender process in compliance with Government Regulation No. 6 in 2006 (GR27/2014) a regulation for utilization of assets owned by state or regional government³².

The arrangement would be documented in a contract between DKI and the Applicant, listing the terms and conditions of permitting the Applicant to apply for the HGB and build the various buildings it wishes to build upon the land including using the HGB as the underlying land title for the purpose of setting up condominiums, the issue of strata titles (HMSRS) in respect of the individual condominium units, and encumbering the HGB with any security interest (by way of a registered mortgage or otherwise). The contract would also set out the amount of revenues payable to DKI each year for the duration of the contract and other payment obligations.

The Applicant could then apply for an HGB at the relevant Land Office. The contract is one of the primary documents which the Land Office will require in order to process the grant of an HGB.

The process could take 4 to 12 months to complete.

The HGB may be issued for a maximum period of 30 years (and thereafter may be extended for another maximum of 20 years), all of which is subject to the terms of the contract between DKI and the Applicant, and approval from DKI. Thereafter, unless it is renewed, the HGB lapses (as would any HMSRS) and the land would revert to HPL.

The HGB is a prerequisite for the development (including building) of any condominium buildings.

5.3.3 Land Title to the Property

The apartment buildings, commercial buildings and public infrastructure facility buildings are to be built on the basis that eventually strata titles are to be issued in respect of these buildings. Given this, it is necessary to understand the underlying legal framework for strata title buildings in Indonesia.

(1) **Multi-story Building and Strata Title**

The basis of the grant of strata title is the Condominium Law. Although the law is referred to in the English language as the "Condominium Law", a literal translation of the phrase is "Multi-story Building Law". The law contains a definition of what is meant by a *rumah susun* or multi-story building.

A multi-story building is "a building of multiple levels which is built in an environment that is divided into parts that are functionally structured, comprising units, each of which may be owned and used individually, primarily for residential purposes, complemented by a common area, common property and common land"³³. This definition does not limit the use of the unit to residential purposes only; therefore it could also be applicable to various other uses³⁴.

³² The issue on related legislation for utilization of assets is discussed in more detail in Section 4.3.1

³³ Article 1 Point 1 of the Condominium Law

³⁴ Article 50 of the Condominium Law

To develop a multi-story building, the developer must be in possession of a specific license issued by the Governor. One of the requirements to apply for the license is the possession of a relevant land title certificate.³⁵

(2) Land Title for a Multi-story Building

The Condominium Law specifies that the types of land title that are eligible for a multi-story building are as follows³⁶:

- a. Right of ownership (*Hak Milik*: HM);³⁷
- b. HGB or HP on state land; and
- c. HGB or HP on an HPL.

Given that the current land title to the land is an HP on state land, the maximum period of ownership is 20 years. This period may be extended for another 20-year period. With regard to HGB, even if it is an HGB on HPL, the maximum period of ownership is 30 years, and thereafter may be extended for another maximum of 20 years.

In theory, it is possible to develop a multi-story building on an HP on state land. However, the practice in the property development industry is that strata titles can only be issued on land that is either *Hak Milik* or HGB. However, there is a downside on doing the Project on an HP on state land basis, like the DKI government will continue to be the land owner and must be involved on the issue of strata title. Additionally, since the land is owned by the government, it cannot be mortgaged. A further consequence of this is that probably the strata title may also be subject to this prohibition on mortgaging of state asset. One other downside is that in practice strata title on HP cannot be owned by foreign citizens³⁸.

HGB on HPL (HGB *diatas* HPL) would be necessary, if the land and the strata title are to be mortgageable.

Moreover, only land title underlying multi-storey building is *Hak Milik* or HGB, so that a foreign investor will be able to issue HMSRS³⁹.

Therefore, a key issue for the Japanese investors to develop the commercial facility buildings in the Project is that the developer holds an HGB. As indicated in earlier sections, to be in possession of an HGB, the current land title, an HP would need to be first converted into an HPL, to allow the grant of one or more HGBs on top of the HPL.

5.4 Legal Framework for Public-Private Partnership (PPP) and Cooperation between the Public and Private Sectors in Infrastructure and/or Urban Development in Indonesia

5.4.1 PPP under Indonesian Law

PPP in Indonesia has a distinct meaning. It refers to the construction and operation of public infrastructure initiated or approved by the national government, and partially, directly, or indirectly financed by the national budget.⁴⁰ The concept is embodied in Presidential Regulation No. 67 of 2005 as last amended in 2013 (the PPP Regulations).⁴¹ Such project can originate from the private sector, a state-owned company or the regional or national government, and must eventually apply a tender process. The initiative should include a pre-feasibility study, a cooperation (*kerjasama*) work plan, a project financing and financing

³⁵ See Article 29(3) and (4) of the Condominium Law.

³⁶ See Article 17 of the Condominium Law.

³⁷ An HM may generally only be owned by an individual who is an Indonesian citizen (see Article 21(1) of the BAL).

³⁸ S&T mentioned that it still need to check the latter with BPN.

³⁹ S&T mentioned that it still need to check the latter with BPN.

⁴⁰ It is possible for a provincial, regency, or municipal government to initiate such project. However, the final decision on the matter will be made by the national government.

⁴¹ See Presidential Regulation No. 67 of 2005, as amended by No. 13 of 2010, No. 56 of 2011, and No. 66 of 2013.

source plan, and a cooperation offering plan, which includes a schedule, process, and evaluation method.

With regard to the proposed Project, because of the plan to construct not only public infrastructure but also commercial infrastructure, the Project is unlikely to be eligible to be the subject of a PPP as described under the PPP Regulations.

5.4.2 Investment Schemes Other than the PPP Regulations of Indonesia

The investment schemes that the Project sponsors can consider are as follows:

- a. Investment schemes under Government Regulation No. 27 of 2014 (GR27/2014), if DKI is to be involved directly as the land owner of the Project; or
- b. If DKI is to be involved indirectly through a BUMD, a joint venture between the BUMD and JPI.

5.4.3 Investment Schemes under GR27/2014

The underlying idea in GR27/2014 is that the government⁴² (in this case DKI) may enter into a cooperation with a third party on how an asset which the government owns (in this case, a plot of land) may be used so that the third party and the government may earn revenues for the duration of the cooperation. At some point during the cooperation period (generally at the end), the asset must revert to the government.

The available cooperation schemes under GR27/2014 that are relevant to the Project are as follows:

- a. *Kerjasama pemanfaatan barang* (asset utilization cooperation); and
- b. BTO or BOT schemes, which are divided into:
 - i) One in which it is possible to have a land title (such as *Hak Guna Bangunan* or right of use (HGB), detailed further below) that could be owned by the BTO or BOT operator; or
 - ii) One which does not involve the creation of a land title that could be owned by the BTO or BOT operator.

These cooperation schemes require a tender process to appoint the third party with which the government may contract.

A summary of the cooperation schemes under GR27/2014 can be seen in Table 5.4-1.⁴³

⁴² The “government” could be the national government, a provincial government or a local government (i.e. a regency (*kabupaten*) government or a municipal (*kotamadya*) government), or any agency of such government.

⁴³ Under the BTO scheme the title to the land continues to be vested with the government. The operator does not have title to the land. Therefore on the chart, there is no column for “With HGB” under the title “BTO”. Under the asset utilization cooperation scheme a HGB can be obtained, depending on how the cooperation is structured. Given this a reference to “With HGB” and “Without HGB” are not included under the title “Asset Utilization Cooperation”.

Table 5.4-1 Summary of the Cooperation Schemes Under GR27/2014

	BTO	BOT	BOT	Asset Utilization Cooperation
	Without HGB	With HGB	Without HGB	
Commercial types of Buildings	- Commercial building development is possible. However, a strata title (e.g HMSRS) cannot be issued in a BTO without HGB. ⁴⁴	- Commercial building development is possible. ⁴⁵ - (e.g. Ancol, Rasuna Epicentrum Kuningan)	- Commercial building development is possible. ⁴⁶ - (e.g. Senayan City)	- Commercial building development is possible (it should be possible to have a HGB issued). ⁴⁷
Period	- 30 years (cannot be extended)			- Up to 50 years (thereafter potentially renewable).
Registration	- Not possible due to no effective registration system for buildings yet. ⁴⁸ - Not possible to register lease receivables. ⁴⁹	- Possible to register HGB subject to HPL holder's prior consent. ⁵⁰ - Possible to issue and register strata titles subject to HPL holder's prior consent ⁵¹ - Not possible to register lease receivables.	- Not possible due to no effective registration system for buildings yet. - Not possible to register lease receivables.	- Possible to register HGB subject to HPL holder's prior consent. ⁵² - Not possible due to no effective registration system for buildings yet. - Possible to register strata title subject to HPL holder's prior consent. - Not possible to register lease receivables.
Collateral & Security Settings	- Not possible on the property and the buildings, ⁵³ but possible only on lease receivables (by way of fiduciary security). ⁵⁴	- HGB can be collateralized by a mortgage. ⁵⁵	- Not possible on the property, ⁵⁶ but possible only on lease receivables (by way of fiduciary security).	- HGB can be collateralized by mortgage. ⁵⁷
Sectional Ownership	- Not possible to have a sectional ownership. ⁵⁸	- Possible to have a sectional ownership (such as HMSRS on top of HGB). ⁵⁹	- Not possible to have a sectional ownership. ⁶⁰	- Possible to have a sectional ownership (such as HMSRS on top of HGB). ⁶¹
Transfer of Right	- Title to the land and buildings must be transferred to Government after completion of the	- HGB may be transferable (approval from HPL holder is required under	- BOT Right is practically not transferable.	- HGB may be transferable (approval from HPL holder is required under

⁴⁴ Because the operator does not hold the HGB title, strata title cannot be issued thereupon. (See Article 17 the Condominium Law, see section 3.1.1).

⁴⁵ If the BOT includes the HGB, title to the HGB would be vested with the operator.

⁴⁶ This is based on GR27/2014.

⁴⁷ This is based on GR27/2014.

⁴⁸ Although there is a regulation that stipulates that buildings can be registered and title certificate on ownership can be issued (Article 12(1) Government Regulation No.36 of 2005 (GR 36/2005) and Article 13 DKI Provincial Regulation No.7 of 2010), this is not yet put into effect, pending the issue of a Presidential Regulation to implement GR 36/2005. However, under a BTO, the building itself will be owned by the government and therefore will be registered in the name of the government, not the operator.

⁴⁹ There is no legal framework that allows registration of lease receivables, except when establishing a fiduciary security over the lease receivables. In the case of the latter, the receivables must be listed in the fiduciary security document, and the fiduciary security document must be registered with the relevant fiduciary security registration office.

⁵⁰ This note is applicable where the land is HPL and the HGB is issued on top of the HPL. The consent is to be embodied in an agreement between the HPL owner and the HGB owner, see Article 4(2) Regulation of the Minister for Agrarian Affairs No.9 of 1999 (RMA 9/1999).

⁵¹ This can be derived from reading together Article 21 Government Regulation No.40 of 1996 (which allows a HGB to be issued on top of state land or a HPL), Article 17 of the Condominium Law (which allows a condominium building to be built on HGB).

⁵² See note 49.

⁵³ This is because title to the land and building is held by the government, not the operator.

⁵⁴ In respect of fiducia (translated as "fiduciary security") please refer to Law No. 42 of 1999.

⁵⁵ That a HGB can be the subject of a mortgage, see Article 4(1) Law No.4 of 1996 regarding Mortgage (Law 4/1996). The building can be the subject of the same mortgage, see Article 4(4) of Law 4/1996. The building currently cannot be separately be the subject of a separate security interest. Once the building registration system is effective, and a building title certificate is issued, it should be possible to have the building be the subject of a registered fiduciary security. The strata title, if issued on the HGB, can be the subject of a mortgage (see Article 47(5) of the Condominium Law).

⁵⁶ The building can only be the subject of a registered fiduciary security if the building registration is already effective (see note 54).

⁵⁷ See note 54.

⁵⁸ This is not possible because the land title certificate and the building is owned by the government, not the operator.

⁵⁹ This is subject to the consent of the owner of the land. See note 49.

⁶⁰ Sectional ownership requires the land to be, among other things, a HGB (Article 17 of the Condominium Law. Since this BOT scheme does not include a HGB, sectional ownership will not be possible.

⁶¹ See note 49.

	construction of the buildings. – BTO Right is practically not transferable.	Government Decree No.122/2001). ⁶² – Buildings on HGB are not transferable ⁶³ . – Strata title on HGB may be transferable subject to the terms of the BOT contract. – BOT Right is practically not transferable.		Government Decree No.122/2001). ⁶⁴ – Buildings on HGB are not transferable ⁶⁵ . – Strata title on HGB may be transferable subject to the terms of the Asset Utilization Cooperation contract. – Asset Utilization Cooperation Right is practically not transferable ⁶⁶ .
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Source: JICA Study Team

(1) Asset Utilization Cooperation

From discussions with certain DKI officials, the JICA Study Team further understood that DKI's current primary preference is to apply the Asset Utilization Cooperation scheme among the schemes under the GR27/2014⁶⁷.

The Asset Utilization Cooperation is a *kerjasama* (cooperation) for the utilization of an asset (in this case land) owned by the government. The cooperation in this case would take the form of a contract (i.e., the cooperation agreement) between the government and the third party. The contract would stipulate how the government and the third party structure their cooperation. This would include the period of cooperation, the government's entitlements under the cooperation (e.g., a periodic fee payable to the government, the government's profit share from the project established under the cooperation agreement), the two parties' rights and obligations in detail.

The JICA Study Team noted that it is currently DKI's preference to use this method when DKI would like to develop an asset for which it does not have all or part of the finances necessary for the development.

Below are the following conditions that apply to the Asset Utilization Cooperation:⁶⁸

- a. The third party must be selected through a tender process, participated in by at least three bidders;
- b. The third party must make a fixed contribution to, and share profits of the cooperation with, the government for the duration of the cooperation period (the amount of the contribution will be determined by a selected team from the government);
- c. The amount of contribution and profit share is subject to approval of the Minister of Finance or, in the case of a provincial government, the Governor;
- d. For the duration of the cooperation, the partner may not subject the asset to any security interest;⁶⁹
- e. The period of cooperation shall be for a maximum of 30 years and thereafter may be extended. However, the total period may not exceed 50 years; and

⁶² Assuming that the underlying land is HPL, consent from the HPL owner will be required (Article 34 (2) GR 40/1996).

Conformity with administrative requirements of BPN Regional Office, Land Office and DKI is also required.

⁶³ Currently, there is no legal framework for this matter. Although there is a regulation that stipulates that buildings can be registered and title certificate on ownership can be issued (Building Law 28/2002, Article 12(1) Government Regulation No.36 of 2005 (GR 36/2005) and Article 13 DKI Provincial Regulation No.7 of 2010), this is not yet put into effect, pending the issue of a Presidential Regulation to implement GR 36/2005.

⁶⁴ See note 61.

⁶⁵ See note 62.

⁶⁶ It is possible to transfer the right of Asset Utilization Cooperation subject to consent of HPL holder in accordance with terms of the contract. NO&T, however, has not seen actual case yet.

⁶⁷ S&T has checked with BPN and BPKD DKI.

⁶⁸ See GR27/2014.

⁶⁹ A security interest may not be imposed on the land that is the subject of the cooperation agreement (in this case, the HPL). However, the cooperation agreement could stipulate a clause in which the government will allow the third party to apply for a new land title on top of the current land (the HPL) such as an HGB, and that the HGB can be the subject of a security interest, or even to have the HGB to be the underlying land title for the issuance of strata titles in the future. See Note 50.

- f. The land must have one of the certificate titles (e.g., HP, HPL, or HGB)⁷⁰ and must be registered in the name of the government or an agency of the government.

(2) **BTO and the BOT**

Although there seems to be an overlap among BOT or BTO with HGB and an Asset Utilization Cooperation under which an HGB could be issued, it should be noted that the process to be granted with either of them is different and involves the creation of different kinds of contract with the government.

The BTO and BOT schemes allow the buildings to be built with or without an HGB basis. The schemes that allow the grant of an HGB are similar to an Asset Utilization Cooperation under which an HGB may be granted.

The schemes that do not allow the grant of an HGB, would permit the developer to construct and operate the building for the agreed period, and receive revenues from the rent of the space in the building. But, it would not permit the issuing and hence sale of strata titles units.

Additionally, the HGB under a BOT or BTO scheme will end upon the expiry of the BOT or BTO period and thus will not be extendable or renewable. This is different from an HGB under Asset Utilization Cooperation, where the HGB could be extended and (potentially) renewed depending on the period of cooperation and how the matter is addressed in the cooperation agreement.

Where strata title is issued on HGB under the scheme stipulated in GR27/2014, at the end of the agreement of the scheme, the strata will also lapse. The underlying idea of the scheme is that the asset will return to the government at the end of the cooperation scheme, whether that is a BTO, BOT, or an Asset Utilization Cooperation scheme.

As mentioned above, since the underlying land title reverts to the state, the strata title could only be issued up to the date when the HGB expires. An exception to this is where the HGB is renewed or extended, which implies that the relevant underlying agreement is renewed or extended.

It means that strata title and HGB underlying the strata title under a BOT or BTO scheme will end upon the expiry of the period and thus will not be extendable or renewable, while strata title and HGB underlying the strata title under the Asset Utilization Cooperation could be extended and (potentially) renewed depending on the period of cooperation and how the matter is addressed in the cooperation agreement.

(3) **Joint Venture with a BUMD**

It is possible for DKI to use a BUMD which is 100% controlled by DKI to be the entity that will hold title to the land. In this case DKI releases title to the land in favor of the BUMD and the BUMD immediately applies for an HPL title to the land.

Where the land is registered in the name of a BUMD, the investment schemes under GR27/2014 do not apply.

A BUMD can take the form of an Indonesian limited liability company established under Law No. 40 of 2007 (Company Law), locally known as a *Perseroan Terbatas* or PT Company. Although the capital of the BUMD originates from the provincial government's budget, the BUMD is legally a separate entity from the provincial government. As such, the restrictions applicable to the government, as described in Section 1.2.3 would not be applicable to the BUMD, subject to any specific provincial regulations on the matter.

Given this, if a BUMD owns title to the land, and wishes to enter into a cooperation or joint venture with a third party⁷¹ to develop the land, this would not be subject to the rules regarding PPP or the investment schemes under GR27/2014 earlier described.

⁷⁰ On HPL

⁷¹ The third party could be a private PT Company or another BUMD.

To carry out the cooperation or joint venture, however, the BUMD must comply with legislation on cooperation between a BUMD and a third party, such as the Decree of the Minister of Home Affairs No. 43 of 2000 and Decree of the Governor of DKI No. 39 of 2002.

The requirements include:⁷²

- a. The joint venture must be incorporated as a legal entity under Indonesian law;
- b. The joint venture company must have tax registration number;
- c. Having approval of BKPM or the relevant authority regarding the matter; and
- d. Having evidence, such as a bank guarantee, of its status as a bona fide and credible company.

Compliance by the BUMD of the requirements under these regulations may take time and must be taken into consideration in preparing the Project timetable.

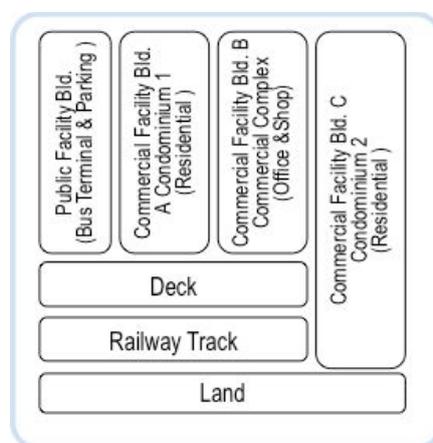
Where the HPL will be owned by a BUMD, the BUMD must be a PT Company in which all of the shares are owned or controlled by DKI.

5.5 Legal Feasibility on the Project

5.5.1 Legal Land Titles and Property Rights in the Project

The JICA Study Team and Legal Partner have discussed with BPN, BPKD DKI, and others including relevant land authorities and several agencies in DKI to get legal feasible structures for implementing the Project.

For clarifying the point on complicated issue on land title to develop the buildings in the Project, shown below is a simple image of the Project used for the discussion.



Source : JICA Study Team

Figure 5.5-1 Simple Image of the Project

Through the discussion with above relevant organizations and practical matters known in the past cases, the JICA Study Team reached some keen information to consider on the land title in the Project, as follows:

- a. HGBs cannot be issued on top of the deck or railway track. They could only be issued directly on top of the HPL⁷³.
- b. Because as a matter of practice, an HPL is issued to cover a large area; therefore, it is unlikely that the Land Office will allow the issuance of four HPLs each adjacent to one another.⁷⁴

⁷² See Article 6 paragraph (2) on Decree of the Governor of DKI No. 39 of 2002.

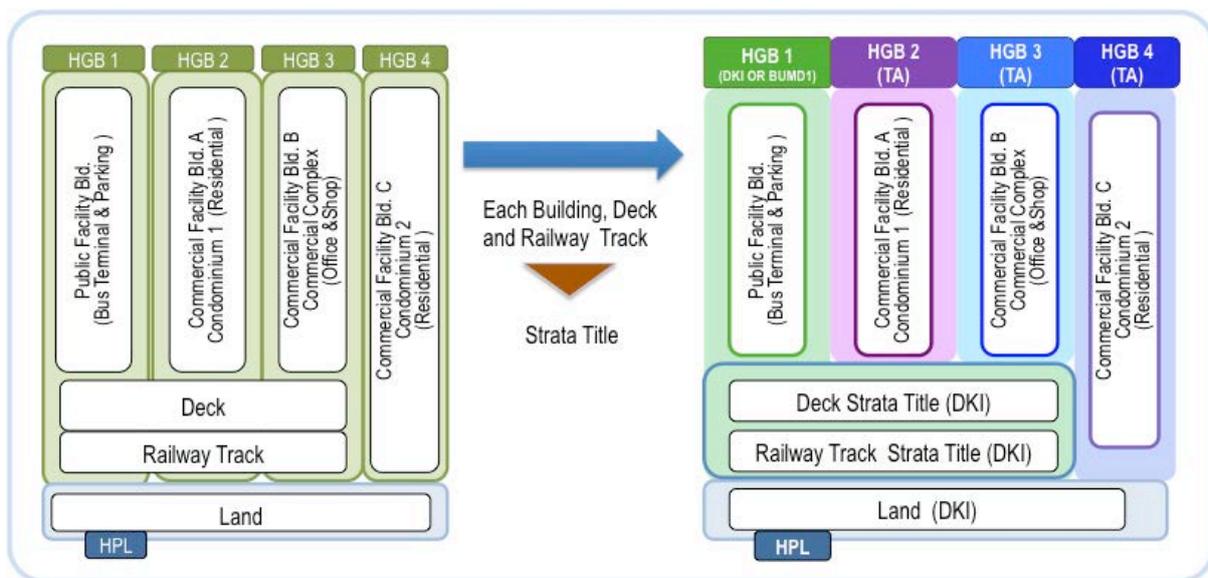
⁷³ S&T got this concept from discussions with the relevant land authorities and several agencies within DKI.

- c. The issuance of strata titles in respect of the deck and railway track seems to be possible.⁷⁵
- d. HGB can be separated to develop various buildings except for the deck and railway track on each of them.⁷⁶
- e. The form of land title in the buildings and process of setting the land titles for developing the buildings are different, depending on who is the HPL holder.

It is not yet clear when the strata titles for the deck and railway track can be issued, because this kind of structure has never occurred. Theoretically, it should be possible to issue the strata title for the deck and railway track as soon as construction of these have been completed and a building use permit has been issued in respect of them. From the JICA Study Team’s point of view, the deck and railway track will likely not form part of HGB on top of which the multi-story building will be constructed.⁷⁷ The JICA Study Team understood from BPN and BPKD DKI that the agreement between the HPL holder and the investor (or the BUMD as the case may be) who wins the tender, there must be a clause which states that the deck and railway track will not form part of HGB that will become the common land for the purpose of issuing the strata titles.⁷⁸

The land title underlying strata title in the deck and railway track is HGB.⁷⁹

Under these circumstances, the most feasible and hence preferable land title in the Project is considered as shown below in Figure 5.5-2.



Source : JICA Study Team

Figure 5.5-2 Basic Concept with Feasible Structure of the Land Title in the Project

Points:

- a. One HPL that covers the entire Project Area is issued.
- b. Four separate HGBs (HGB1, HGB2, HGB3, and HGB4) each adjacent to one another are issued on top of the HPL for the construction of the public facility building, condominium 1, commercial complex building, and condominium 2.

⁷⁴ This is the practice as S&T knows it from handling several projects on HPL land.

⁷⁵ This is based on discussions with a BPN official and a DKI official on a no names and informal basis.

⁷⁶ Development of various buildings must exclude the railway track and deck. The railway track and deck will be built and developed by DKI or MRTJ.

⁷⁷ S&T’s opinion

⁷⁸ Through discussion with BPN and BPKD DKI, S&T has same opinion as this.

⁷⁹ S&T’s opinion

- c. Each development owner of the building has each HGB right.
- For public facility building including bus terminal and parking building, HGB1 is owned by DKI or BUMD.
- For condominium 1, HGB2 is owned by PJCo1, a project company in which JPI 1 (a Japanese investor) invests.
- For commercial complex building, HGB3 is owned by PJCo1, a project company in which JPI1 (a Japanese investor) invests.
- For condominium 2, HGB4 is owned by PJCo1, a project company in which JPI1 (a Japanese investor) invests.
- * With regard to public facility building, DKI or BUMD directly or indirectly wholly controlled by DKI must be a development owner and engages in management.⁸⁰
- d. After completion of the buildings, strata titles are issued in respect of HGB2, HGB3, and HGB4 to enable:
- i) The grant of strata title to the deck and railway track built on HGB1, HGB2, and HGB3;
 - ii) The grant of strata title to the individual unit owners of condominiums 1, 2, and commercial complex building built on HGB2, HGB3, and HGB4; and
 - iii) The strata titles to be mortgaged as security for financing.
- *Strata title in respect of the deck and railway track is quite a new concept in an unprecedented manner. It is considered to be transferred to DKI and BUMD and be managed by each of them.
- e. HGB2, HGB3, and HGB4 underlying condominium 1, commercial complex building, and condominium 2 (allotment is calculated on a pro rata basis with exclusive area of each unit) are eventually transferred to the building's tenants' association as common property for the duration of the relevant HGB (and any extension and any renewal to it).
- HGB1, HGB2, and HGB3 underlying the deck and railway track (allotment is calculated on a pro rata basis with area) are owned by DKI or BUMD.

Based on the basic concept of structure of the land title in the Project, below are two options for the structure that would depend on this key issue of: who will be the registered owner of the land once it is converted to an HPL.

- The HPL is owned by DKI; or
- The HPL has been “transferred” by DKI to a BUMD, 100% controlled by DKI.

The implementation process is different in each case because determining whether GR27/2014 should be applied for the implementation of the Project depends on who is the HPL holder.

Any future partnership or cooperation with DKI related to land would likely need to be done through the schemes available under GR27/2014.

DKI has not yet firm on who is the HPL holder. The possibility of a BUMD becoming the HPL holder in the Project depends on DKI's preference on the matter.

From meetings with DKI, it has been deciphered that DKI prefers to continue to own the land. Past experience in building complex projects such as the Ancol Entertainment and Sports Complex, have been given as examples of where DKI might have been in a better position to gain revenues from the cooperation, especially if it retained ownership of the land.

⁸⁰ By BKPM regulation. Detailed explanation is in Section 2.1.

However, the DKI's view on this matter is not fixed yet, since the official in the unit within BPKD DKI that is in charge of BUMDs sees the advantage of the Property BUMD holding the HPL rather than DKI, since the Property BUMD could better manage the HPL and could focus on the HPL and the Project on top of it.

DKI would need to determine whether the MRTJ railway track that goes to or is in the Lebak Bulus Station will be owned by MRTJ (which is 99% owned by DKI, with the other 1% owned by another BUMD PT Company owned by DKI) or by DKI. Any determination on this matter would have an impact on how the Project can be implemented.

(1) **Option 1 if DKI continues to own the HPL**

If DKI maintains ownership of the HPL, it would cause any non-government party who wishes to carry out the Project have to cooperate with DKI through the investment schemes that require a tender process under GR27/2014. This is applicable even if a BUMD is to be the party that would cooperate with DKI.

The investment schemes described in GR27/2014 are as follows:

- i) Asset Utilization Cooperation;
- ii) BTO; and
- iii) BOT.

Since each scheme is explained in Section 4.3, the matter is not discussed further in this section.

The preferred scheme for the investor in the Project is the Asset Utilization Cooperation, since this does not require any transfer of assets built and the cooperation period may be up to 50 years.

As mentioned in Section 4.3.1, DKI's current primary preference is to apply the Asset Utilization Cooperation scheme.

The Asset Utilization Cooperation scheme would:

- a. Allow the winning bidder or JPI1 to establish the PJ Company with someone for developing and managing as PT Company (PJCo1) that engages in development and management of the commercial facility buildings;
- b. Allow the winning bidder or JPI1 to be issued three of HGBs (HGB2, HGB3, and HGB4) each adjacent to one another for the construction of the commercial facility buildings on top of the HPL and to transfer the HGBs to other parties;

* HGB1 or HGB for the construction of the public facility buildings such as bus terminal and parking may be excluded due to issues related to limitation of foreign investment stipulated in the regulation in BKPM. It may be issued to a BUMD or to DKI. It would depend on DKI's plan regarding public facility building.
- c. Allow PJCo1 to mortgage HGB2, HGB3, and HGB4 as security for the financing of the construction of apartment building under HGB2 and HGB4, and the commercial complex under HGB3;
- d. Allow PJCo1 to issue strata titles in respect of HGB2, HGB3 and HGB4 subject to the consent of mortgagee thereof, to enable:
 - i) the grant of strata title to the railway track and deck;
 - ii) the grant of strata title to the individual unit owners of commercial facility buildings on HGB2, HGB3 and HGB4; and
 - iii) the strata titles to be mortgaged as security for financing; and

- e. HGB2, HGB3 and HGB4 underlying the condominium 1, commercial complex building and condominium 2 (allotment is calculated on a pro rata basis with exclusive area of each unit) are eventually transferred to the building's tenants' association as common property for the duration of the relevant HGB (and any extension and any renewal to it). HGB1 and HGB2 and HGB3 underlying the deck and railway track (allotment is calculated on a pro rata basis with area) are owned by DKI or BUMD.

(2) Option 2 if the BUMD owns the HPL

Where the HPL will be owned by a BUMD, the BUMD must be one in which all of the shares are owned or controlled by DKI, in this case the Property BUMD.

As mentioned in Section 4.3.4, where DKI allows the HPL to be issued to a BUMD and the HPL is owned by BUMD, regulations under GR27/2014 would not be applicable for the implementation of the Project; therefore, cooperation with DKI through the investment schemes that require a tender process under GR27/2014 are not required.

The selection of parties with which the BUMD will contract to allow the grant of HGBs and the development of various buildings on HGBs will not require a tender process. In addition, it is not necessary for investors who wish to carry out the Project to use schemes such as BOT, BTO, and Asset Utilization Cooperation under GR27/2014 for the implementation.

In this arrangement, the Property BUMD as the HPL owner could enter into a contract with the PJCo1 under which the Property BUMD will permit PJCo1 to establish HGBs on top of the HPL. The contract could specifically carve out the possibility of any structure constructed on the HPL (e.g., the railway track and deck) from becoming the subject of HGBs designated as "common land" for the commercial facility buildings. The objective of this carve out is to ensure that the railway track and deck may later be granted separate strata titles.⁸¹

Please note that under the current DKI regulation on BUMD cooperation, any proposal to enter into cooperation is subject to a favorable recommendation of the BUMD Supervisory Agency of DKI and approval from the governor of DKI.

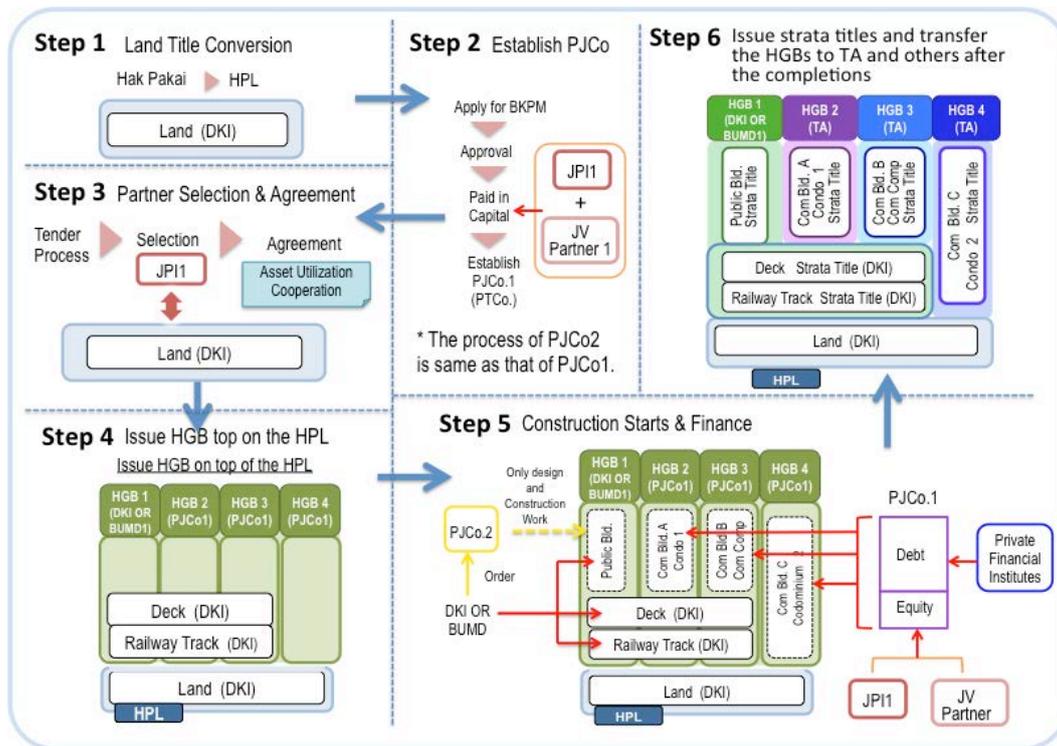
Please further note that since the transfer or release of land by DKI to the BUMD would indicate a disposal of an asset by the government to a third party (i.e., the Property BUMD), this would likely require the approval of the Minister of Finance and the Provincial House of Peoples' Representatives.

5.5.2 Project Execution Plan

(1) Option 1: If DKI is the HPL Owner

The case that PJCO1 invested by JPI 1 is the tender winner under the Asset Utilization Cooperation scheme regarding land as an example. In this case, the steps, as shown in Figure 5.5-3, regarding matters of land title are considered.

⁸¹ This information originated from discussions with an official at BPN Legal Bureau on anonymity and informal basis.



Source : JICA Study Team

Figure 5.5-3 Implementation Process

Step 0: Current Land Title – HP Land Title Holder: DKI

Step 1: Land Title Conversion HP >> HPL

- DKI (HP holder) applies to the Land Office to be issued with an HPL upon the holder releasing its ownership of HP to the state.⁸²
- This would take place in 12 months.

Step2: Establishment of PJCo1 (and PJCo2)

- JPI 1 established PJCo1 to engage in the development and management of commercial facility buildings after getting BKPM approval.⁸³

* Approval can be obtained in 3 to 14 days.⁸⁴

* PJCo1 must establish a PT Company with at least two shareholders. In some cases, the shareholders are assumed; the joint venture (JV) among JPI 1 with BUMD, local company, other Japanese investors and/or others.

If JPI 1 applies for a JV with BUMD, this may take more time and labor costs has to be satisfied with the requirements stipulated under other regulations regarding cooperation with BUMD⁸⁵, and these matters must be taken into consideration in preparing the plan including the project timetable.

- JPI 2 established PJCo2 to carry out the construction work of public facility building with local partner or BUMD after getting BKPM approval. It is envisaged that PJCo2

⁸² Process of the conversion is stated in section 3.2.2.

⁸³ The process to get BKPM approval is stated in section 2.1.

⁸⁴ More detailed is stated in section 8.3.

⁸⁵ More detailed is stated in section 4.3.4.

will specifically engage in construction services only such as design and physical construction work for public facility building, not in the management or operation of the public infrastructure building.⁸⁶ Otherwise, JPI 2 provides equity into an existing construction company that already had a sufficient license to carry out construction services such as design and construction work for public facility building. JPI 2 can own a maximum of 67% shares in the company.

Step 3: Selection of Partner with Tender Process and an Agreement with Tender Winner to Implement the Project on the Land

- Tender process is necessary in compliance with GR27/2014.
- DKI implements the tender process for a land user on HPL, and JPCo1 invested by JPI1 wins the tender.

As a rough estimate, it could take 60 to 90 days to set up the tender process, and if there are no clarifications, objections, or complaints, another 60 to 120 days to determine the final winning bidder.⁸⁷

It depends a lot on DKI as well as on the method of tender used and how the tender is set up.⁸⁸

Step 4: Issuance of HGBs on Top of the HPL

- PJCo1 applies for issuance of HGBs (HGB2, HGB3, and HGB4) each adjacent to one another on top of the HPL in respect of the construction of commercial facility buildings.
- Three HGBs (HGB2, HGB3, and HGB4) are issued to PJCo1.
- DKI or BUMD (depending on DKI's plan on the matter) applies for the issuance of HGB1 on top of HPL in respect of the construction of public facility building.
- HGB1 is issued to applicant, DKI or BUMD.

Step 5: Construction Starts and Debt Provisions

- PJCo1 submits the application for the construction permit of commercial facility buildings.⁸⁹
- After entering into a loan agreement with PJCo1, domestic and/or foreign private financial institutions provide debt to PJCo1.
- After getting the permit, the construction of commercial facility buildings is started.
- Design and construction work of public facility building is carried out by PJCo2.

JICA would provide part of the financing of public facility building, if the investment related to public facility building satisfied the criteria of the JICA loans or investments.

Step 6: Building Completion, Strata Title Issuance and HGB Transition to the Tenant Association

⁸⁶ Public infrastructure facilities are closed to foreign investment, except for some areas. A more detailed information is stated in Section 2.1.

⁸⁷ S&T's opinion

⁸⁸ S&T's opinion

⁸⁹ The process to get the construction permit is stated in Section 7.2.2.

- After the construction is completed, strata titles are issued in respect of the railway track, deck, and units that comprise the commercial facility buildings such as condominiums and commercial complex building, and public facility buildings such as parking buildings and bus terminal.
- HGB2, HGB3, and HGB4 underlying the condominium 1, commercial complex building, and condominium 2 (allotment is calculated on a pro rata basis with exclusive area of each unit) are eventually transferred to the building's tenants' association as common property for the duration of relevant HGB (and any extension and any renewal to it).

HGB1, HGB2, and HGB3 underlying the deck and the railway track (allotment is calculated on a pro rata basis with area) are owned by DKI or BUMD.

(2) **Option2: If BUMD as HPL Owner**

In this case, the following steps regarding matters of land title are considered:

Step 0: Current Land Title – HP Land Title Holder: DKI

Step 1: Land Title Conversion and Title Holder Change HP >> HPL

- Tender process is not necessary in compliance with GR27/2014.
- DKI applies for the approval of the Minister of Finance and the Provincial House of Peoples' Representatives to release the HP in favor of the Property BUMD.
- The Property BUMD applies for HPL.

Step 2: Agreement between the Property BUMD and PJCo1 Invested by a Japanese Investor or JPI 1 for Project Implementation

* No process in compliance with GR27/2014 is required.

Thereafter, the process is similar as the case of HPL holder who is DKI.

5.6 Management Flexibility and Exit Strategies on the Project

5.6.1 Management Flexibility on the Project

The land ownership structure would have an impact on the JPI's flexibility in selecting the operator of the Project and each sub-project (e.g., condominiums, commercial complex).

(1) **If the Land is owned by DKI**

As described in earlier sections, where the HPL is owned by DKI, the selection of the operator will have to comply with the arrangements required under GR27/2014. Therefore, it is expected that there could be less flexibility in selecting the operator of the Project and each sub-project.

(2) **If the Land is owned by the Property BUMD**

It is perceived that there could be more flexibility where the Property BUMD is the owner of the land, since there will likely be less direct DKI influence in determination of the operator of the Project and each sub-project.

5.6.2 Exit Strategies on the Project

This section focuses on how the foreign investors (i.e. the JPII), could exit each of the sub-projects, namely:

- a. Project Company (JV Company) for Condominiums; and
- b. Project Company (JV Company) for Commercial Complex Building.

(1) General Exit Requirements

- a. Generally, the foreign shareholder could transfer its shares in the Project Company to a third party. The transfer would likely be subject to:
 - i. Approval of the other shareholders in the Project Company (JV Company) and any approval requirements under the Articles of Association (AoA) of the Project Company (JV Company) and any shareholders agreement or joint venture agreement among them;
 - ii. If the Project Company is a BUMD, the transfer of shares may be subject to approval of the BUMD Supervisory Agency of the DKI; and
 - iii. Since the Project Company (JV Company) will be set up as a foreign investment company, the approval of BKPM will be required.
- b. The above transfer requirements would also be applicable where foreign investor wishes to exit by way of selling their shares to the public, if the Project Company (JV Company) carries out a public offering of shares. (It is likely that DKI might prefer the exit not to go through a public offering of shares, as this could cause DKI to potentially have to deal with individual public shareholders.)

(2) Project Company for Condominiums

The general exit requirements described in Section 6.2.1 would apply. In the case of the Project Company for the Condominiums, however, there is an added complexity. In practice, the identity of the apartment building developer is one of main factors considered by the purchasers of the apartment units. Given this, the market demands for the developer to operate the building, even after a tenants' association has been established. This affects the flexibility of exit by foreign shareholders.

(3) Project Company for Commercial Complex Building

The general exit requirements described in Section 6.2.1 and the complication described in Section 6.2.2 would apply, particularly where strata titles are issued in relation to the commercial complex building.

5.7 Property Construction Issues on the Project

5.7.1 Conditions and Restrictions on the Property

In considering the Project, the following matters should be taken into consideration:

- a. Any development must comply with Law No. 28 of 2002 regarding Buildings (the Building Law) and its implementing regulations including compliance with spatial planning requirements and building requirements, e.g., building coverage ratio (*Koefisien Dasar Bangunan*: KDB) and floor plan coverage ratio (*Koefisien Lantai Bangunan*: KLB).⁹⁰

⁹⁰ The JICA Study Team researched on this matter however the team has not been able to determine the building coverage ratio for the Lebak Bulus Stadium area, since the official at the relevant agency contacted for this purpose requires a presentation of a map of the area as well as a building plan in respect of the proposed development. As such, this matter has to be discussed directly with DKI.

- b. The requirement to develop a public apartment building for each commercial multi-story building is built on (e.g., the apartment building and the commercial complex, for which strata titles will be issued).
- c. The requirement to develop a public cemetery within the same municipality where the multi-story building will be built.

5.7.2 Application and Approval Process for Development and Construction on the Property

(1) Preparation

The key document required to be able to develop a property is the building construction permit (*Izin Mendirikan Bangunan*: IMB). A summary of the steps to obtain the IMB are as follows:

Step 1. Prior to acquiring land, it must first be determined whether it is necessary to possess a principal approval to clear land (*Persetujuan Prinsip Pembebasan Lahan*: SP3L).

Step 2. Apply for a use of location permit (*Surat Izin Penunjukan Penggunaan Tanah*: SIPPT) from the governor of DKI.

Step 3. Apply for a city plan determination (*Ketetapan Rencana Kota*: KRK) and a building location plan (*Rencana Tata Letak Bangunan*: RTLB), also known as the “Block Plan”.

Step 4. Prepare the complete technical drawing/s or plan, structural plan, and installation designs of the building.

Step 5. Apply for environmental permit (*Izin Lingkungan*) in the form of:

- i) Environmental impact analysis (*Analisa Mengenai Dampak Lingkungan*: AMDAL), if the building covers 15,000 m² or more; or
- ii) Environmental management report – environmental monitoring report (*Usaha Pengelolaan Lingkungan – Usaha Pemantauan Lingkungan*: UKL-UPL), if the building covers an area between 2,000–14,999 m².

Step 6. Prepare a copy of the land title certificate and/or a copy of the land utilization cooperation agreement (if the land is owned by another party).

Step 7. After the above permits and documents have been obtained, the applicant should be in a position to submit an application for IMB. The application is made using a prescribed form, must be in the Indonesian language and is submitted to the Development of Supervision and Management Building Office (*Dinas Pengawasan Penertiban Bangunan*: **DPPB**) of DKI.

(2) Process

A summary of the IMB application process is as follows:

Step 1. The IMB application (PIMB) is submitted to DPPB of DKI.

Step 2. The PIMB, along with the submission documents, are reviewed to ensure compliance with the administrative and technical perspective.

Step 3. The architectural plan (*Gambar Rencana Arsitektur*) will first be reviewed by the City Architectural Advisory Team (*Tim Penasehat Arsitektur Kota*: TPAK).

Step 4. If approved by TPAK, a site visit will be carried out.

Step 5. DPPB will then calculate the IMB levy.

Step 6. A valuer will deliver an IMB levy payment order to the applicant.

Step 7. The applicant pays the IMB levy to the Provincial Treasury Account and receives a payment receipt (*Surat Tanda Setoran*: STS).

Step 8. The Building Construction Advisory Team (*Tim Penasehat Konstruksi Bangunan*: TPKB) will review the technical structure plan, and the Building Installation Advisory Team (*Tim Penasehat Instalasi Bangunan*: TPIB) will review the installation plan of the building.

Step 9. After the plans are approved by TPKB and TPIB, the IMB will be prepared for issuance.

Step 10. Once issued, DPPB will make the IMB available for collection.

The above process may take approximately 35 days since the acceptance of PIMB by DPPB DKI.

(3) Checklist of Submission Documents

The following is a checklist of documents for the purpose of IMB application process.

- a. A completed and signed PIMB form (which includes the company's official seal).
- b. A copy of the applicant's AoA.
- c. A copy of the application signatory's identity card.
- d. A copy of the applicant's tax registration number (NPWP).
- e. A copy of the land title certificate, certified by a Notary, or a copy of the land utilization cooperation agreement.
- f. A copy of the applicant's annual tax return of the preceding year.
- g. A copy of documentary evidence of payment of land tax (PBB) on land for the current year.
- h. A copy of KRK and RTLB.
- i. A copy of SIPPT.
- j. The architectural plan (*Gambar Rencana Arsitektur*) signed by a licensed architect (SIPTB)
- k. Approval of TPAK, if the building area (floor plan) is 1,500 m² or more.
- l. Soil research report prepared by a licensed soil consultant.
- m. Structure calculation and structural plan prepared by a licensed structure designer (SIPTB).
- n. Approval of TPKB, if the building is over eight floors high or has a basement, or special structure.
- o. The Building Installation and Accessories Plan signed by a licensed building installation designer (SIPTB), covering:
 - i. Electrical systems,
 - ii. Electronic systems,
 - iii. Fire prevention systems,
 - iv. Plumbing, and
 - v. Elevators, escalators.
- p. Design report.
- q. Approval of TPIB if the building covers 800 m² or more, or is a building that requires special systems.
- r. Environmental license.
- s. Documentary evidence of appointment of building contractor and building supervisor.

- t. Governor's approval in respect of the building.⁹¹
- u. A copy of the cooperation agreement between the HPL owner and the HGB owner,⁹² in case that the owner of HPL is different from the owner of HGB.

5.8 Other Related Laws

5.8.1 Offshore Loan

The PT Company may obtain loans from its shareholders or other parties; however, this must be stated in the PT Company's BKPM approval. One of the benefits of such inclusion in the BKPM approval is that the loan would be recognized as foreign investment for the purpose of repatriation to the foreign lender.

There are, however, other regulations applicable to an offshore loan. Most of these regulations are issued by Bank Indonesia, the central bank. A PT Company that intends to obtain an offshore loan is required to submit a plan to obtain the offshore loan, and any changes to it, to Bank Indonesia.⁹³ The offshore loan must be documented. Once the offshore loan has been obtained, the PT Company must report it to Bank Indonesia⁹⁴, and submit periodic reports to Bank Indonesia.⁹⁵ Non-compliance, including late submission of the plan or report, may be subject to administrative penalties, investigation, and fines.

5.8.2 Foreign Exchange and Repatriation

Indonesia allows residents to own and use foreign exchange, subject to any regulations issued by Bank Indonesia on the matter.⁹⁶ This has been the basis to allow a free flow of foreign exchange in and out of Indonesia.⁹⁷

With regard to the repatriation of investment and investment proceeds, the Investment Law provides that a foreign investor has the right to transfer and repatriate in foreign currency the following:⁹⁸

- a. Capital;
- b. Profits, bank interest, dividends, and other revenues;
- c. Funds for:
 - i) the purchase of raw and supporting materials, semifinished or finished goods; or
 - ii) the reimbursement of capital goods to secure the investment;
- d. Additional funds required for financing of the investment;
- e. Funds to repay a loan;
- f. Royalties or other payable costs;
- g. Income of foreign individuals employed in an investment company;
- h. Proceeds of sale or proceed of liquidation of the investment;
- i. Compensation for loss;

⁹¹ This is required wherein a building is built on top of public facility or infrastructure. See Article 23 of Governor of DKI Regulation No. 129 of 2012 (Governor Regulation 129/2012).

⁹² See Article 28 of Governor Regulation 129/2012.

⁹³ See Bank Indonesia Regulation No. 14/21/2012 and Bank Indonesia Circular No. SE.15/17/Dint.2013

⁹⁴ In practice the PT must also report the loan to the Ministry of Finance's Fiscal Analysis Agency (*Badan Analisa Fiskal Kementerian Keuangan*) and to the Offshore Commercial Loan Team (*Tim PKLN*) under the Office of the Coordinating Minister for the Economy.

⁹⁵ There is no requirement to submit periodic reports to other agencies.

⁹⁶ See Law No. 24 of 1999 on Foreign Currency Flow and Foreign Currency Exchange Rate.

⁹⁷ In respect of foreign currency obtained from an offshore loan, see Section 8.1.

⁹⁸ See Article 8(1) of the Investment Law.

- j. Compensation for a takeover;
- k. Payment made for technical assistance, payable costs for technical services and management services, payment made under project contracts, and payment for intellectual property rights; and
- l. Proceeds from asset sales.

5.8.3 Establishment of the PT Company under Indonesian Law

A PT Company must have at least two shareholders, which is a requirement set out in the Company Law.

To establish a PT Company, the incorporators (which will later be the shareholders), would need to apply for and obtain principle license from BKPM. During this time, the incorporators could commence the preparation to establish the PT Company by agreeing to the form and content of the PT Company's deed of establishment. The deed of establishment contains the PT Company's initial AoA.

Once the principle license has been obtained, the incorporators sign the deed of establishment before the notary. The notary will electronically apply to the Ministry of Law and Human Rights (**MoLHR**) to have the deed of establishment approved.

The notary will require the incorporators to immediately arrange necessary requirements to obtain the PT Company's tax registration number, set up a bank account, arrange share capital to be remitted into the bank account, and obtain documentary evidence from the bank that funds equal to the issued share capital is in the bank account. All these documents will be required by the notary to complete the application process, by submitting these documents along with a certified copy of the deed of establishment to MoLHR. (Given this, the process of obtaining the MoLHR approval very much depends on the incorporators who provide the notary with these necessary documents).

MoLHR approval in respect of the deed of establishment is an evidence that the PT Company has obtained the status of a legal entity separate from its incorporators.

The process may take from two weeks to four months, depending on the completeness of the documents required to be submitted to MoLHR.

BKPM in-principle application preparation depends on the applicants' ability to meet the requirements of the application. Approval can be obtained in 3 to 14 days. Payment of capital depends on how fast the company can obtain the necessary documents to set up a bank account, e.g., certificate of company domicile, tax registration number, and copy of the company's deed of establishment from the notary.

(1) Articles of Association

The Articles of Association (AoA) of the PT Company will initially be contained in the deed of establishment. The provisions in the AoA bind not only the shareholders, directors, other officers, staff, and employees of the PT Company, but also third parties.

The AoA sets out the PT Company's objective, term of establishment, and other matters as required by the Indonesian Company Law and agreed by the incorporators.

Any change to the AoA requires the approval of shareholders in a general meeting or by way of a circular resolution, and either registration or approval of MoLHR. Certain changes to the AoA require BKPM approval before the change may be made.

AoA must contain a stipulation that the PT Company sets up a reserve fund equal to a minimum of 20% of the PT Company's issued capital, which will be funded from part of the PT Company's annual profit.⁹⁹

⁹⁹ See Article 70 of Company Law.

(2) Management

The PT Company has three organs:

- a. Board of Directors (BoD);
- b. Board of Commissioners (BoC); and
- c. General Meeting of Shareholders (GMS).

(3) Board of Director

The Board of Directors (BoD) manages the PT Company on a day-to-day basis and represents the PT Company in any action or transaction. The AoA may stipulate that only the President Director may represent the BoD and therefore the PT Company in such action or transaction. Under the Indonesian Company Law, the BoD acts as a board. However, unless specifically stipulated in the AoA, any director may represent the BoD and thus the PT Company in any action or transaction.

The AoA may stipulate that for a certain action or transaction (as specified in the AoA) the BoD must first obtain approval of the BoC or the GMS.

Members of the BoD may be foreign citizens. However, if the BoD has the position of Director of Human Resources, this position may only be held by an Indonesian citizen.

There is no minimum or maximum number of members of the BoD; however, at least one member of the BoD must reside in Indonesia.¹⁰⁰

(4) Board of Commissioners

Unlike the BoD, the BoC may only act as a board collectively. A member of the BoC has the authority to access all of the PT Company's premises, books, and records in order to carry out their responsibilities.

A member of the BoD may not simultaneously serve as a member of the BoC.

The BoC must carry out periodic meetings and must prepare a BoC report to be presented to the annual GMS.

The signature of all members of the BoC, as well as all members of the BoD, must be affixed to the PT Company's annual financial report.

A PT Company must have at least one member of the BoC. Members of the BoC are not required to reside in Indonesia.

(5) General Meeting of Shareholders

The third organ of the PT Company is the shareholders in general meeting (GMS).

The GMS reviews and decides on the annual financial report prepared by the BoD and BoC. An approval by the GMS would release the members of the BoD and BoC from their duties in relation to the annual financial report.

The GMS has the power to approve or disapprove the BoD's recommended distribution of dividends. Unless stipulated otherwise, annual profits of the PT Company, less the necessary funds to set up the reserve fund referred to above, may be distributed as dividends.

The shareholders may pass a resolution by way of a circular resolution; however, it is a statutory requirement that any such resolution is only effective if agreed and signed by all shareholders.

The requirements to hold, quorum and pass votes in a GMS are stipulated under the Company Law.

¹⁰⁰ This is based on BKPM administrative practice.

5.9 Summaries and Conclusions

The below legal views on three key legal issues (i.e., a. Foreign Investment, b. Land Title, and c. Cooperation with the Public Sector including Utilization of Land Owned by the State and Regional Governments) for implementing the Project are derived from this Phase 1 study of the Legal Survey.

(1) Foreign Investment

Foreign investors may join in the following investments in the Project:

- a. Investment in PT Company that engages in development and management of the commercial facility buildings including office, apartment, shopping mall, three stars and above hotel. 100% foreign ownership is allowed in above investment.
- b. Investment in PT Company that engages in construction services such as design and construction work for public facility building including bus terminal and parking building in the Project. Maximum 67% foreign ownership is allowed in above investment.

* Foreign investors may not become the development owner themselves, invest in, develop, and/or manage public infrastructure project in Indonesia.

(2) Land Title

- a. Current land title, HP is converted to HPL, HGBs are issued on top of HPL, and buildings are constructed on HGBs in the Project. This process is necessary for setting and owning strata titles by foreign investors and setting securities or collaterals for financing; therefore, it is key for the implementation of the Project.
- b. One HPL that covers the entire Project Area is issued. Separate multiple HGBs are issued each adjacent to one another on top of HPL for the construction of public facility building and commercial facility buildings. Each development owner of the building has each HGB right. (e.g., HGB for public facility building is owned by DKI or BUMD. HGBs for commercial complex buildings are owned by the Japanese investors.)
- c. Strata title or HMSRS
 - i. Strata titles for commercial facility buildings and public facility building (bus terminal and parking building) can be issued on HGBs on top of HPL under current Indonesian Laws.
 - ii. HGBs underlying buildings with strata titles are eventually transferred to the building's tenants' association as common property for the duration of relevant HGBs; HGB2, HGB3, and HGB4 underlying condominium 1, commercial complex building, and condominium 2 (allotment is calculated on a pro rata basis with exclusive area of each unit) are eventually transferred to the building's tenants' association as common property for the duration of relevant HGB (and any extension and any renewal to it).
- d. Strata title in respect of the railway track and deck
 - i. The issue of strata titles in respect of the deck and railway track seems to be possible. It is based on discussions with a BPN official and a DKI official on condition of anonymity and informal basis.
 - ii. There must be a clause that states that the deck and railway will not form part of HGB that will become the common land for the purpose of issuing strata titles.
 - iii. Strata title in respect of railway track and deck is quite new concept in an unprecedented manner. Therefore, it is expected to take more time than the Project in compliance with current Indonesian laws, because additional negotiations with related

regulatory boards and development of new laws are necessary to implement the Project.

iv. Land title underlying the strata title in respect of railway track and deck is HGB.

v. HGB1, HGB2, and HGB3 underlying the deck and railway track (allotment is calculated on a pro rata basis with area) are owned by DKI or BUMD.

(3) Cooperation with the Public Sector including Utilization of Land Owned by the State and Regional Governments (GR27/2014)

- a. Where HPL is owned by DKI (DKI owns continuously the land title after the conversion from HP to HPL), the Project must be implemented based on agreement with DKI through the scheme in compliance with GR27/2014 (one of the three schemes such as BTO, BOT, or Asset Utilization Cooperation).
- b. In case of above i, the party who carries out the Project (as the Project partner with DKI) must be selected through tender process.
- c. Asset Utilization Cooperation has an advantage among the three schemes stipulated in GR27/2014. Through the discussion with officers in BPN and BPKD DKI, it is confirmed that DKI's current primary preference is to apply the Asset Utilization Cooperation scheme among the schemes under GR27/2014. It is also favorable for investors to maintain flexibility (terms of HGB and others).
- d. Where BUMD owns the HPL (holder of the land title is changed from DKI, who is the owner of current land title, HP to BUMD at the conversion of the land title from HP to HPL), GR27/2014 is not applied to the Project.
- e. Although strata title and HGB underlying the strata title under a BOT or BTO scheme will end upon the expiry of the BOT or BTO period and thus will not be extendable or renewable, strata title and HGB underlying the strata title under the Asset Utilization Cooperation could be extended and (potentially) renewed depending on the period of cooperation and how the matter is addressed in the cooperation agreement.

It is necessary to develop feasible structure based on the matters related to legal issues as mentioned above.

Chapter 6 Project Cash Flow and Sensitivity Analysis

6.1 Analytical Framework of Cash Flow Analysis

(1) **Purpose of Analysis**

The purpose of this cash flow analysis is to analyze the profitability of the project and the sensitivity when major prerequisites would change.

(2) **Scope of Work**

The scope of work (work sharing between private and public) for this Project is shown in Table 6.1-1.

Table 6.1-1 Scope of Work(Work Sharing between Private and Public)

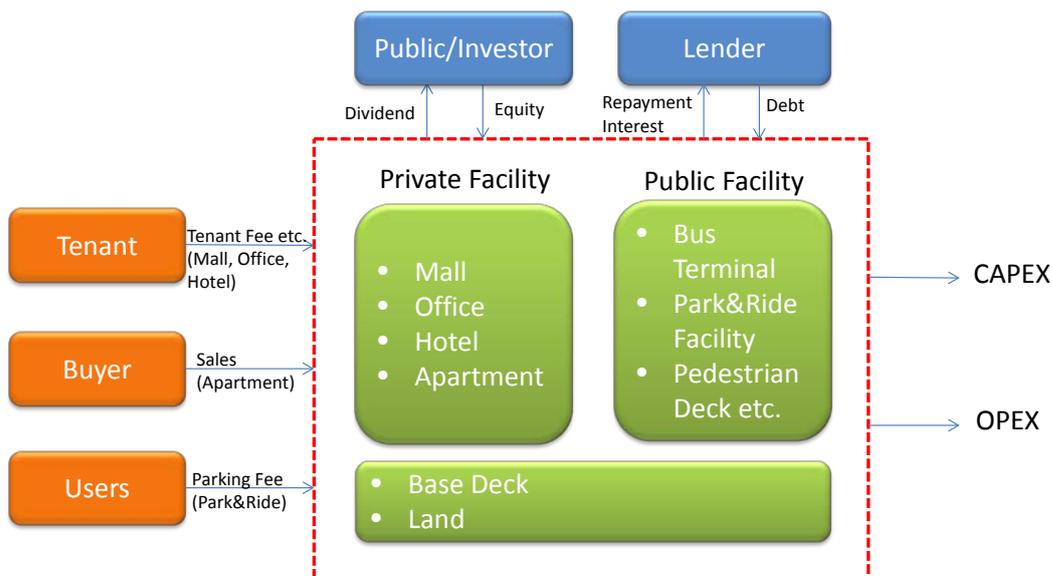
Private (Including JV Corp.)	Public
<ul style="list-style-type: none"> ● Construction, operation and maintenance of private facilities (mall, office, hotel/serviced apartment, apartment for sale) ● Construction, operation and maintenance of public facilities (bus terminal, park and ride facility, pedestrian deck, etc.)* ● Financing for abovementioned construction works. 	<ul style="list-style-type: none"> ● Provision of land ● Financing and construction of base deck (foundation, column and deck)

Source : JICA Study Team

*Operation of bus terminal shall be done by the public without interruption; therefore, the work is excluded from the Scope of Work.

(3) **Analytical Framework**

This report aims to clarify the profitability of the Project when the scope of work mentioned in Table 6.1-1 is done. As the figure below shows, cash flow analysis was done by considering all the costs regarding construction, operation and maintenance done by both private entities and the government including the cost for land and base deck. Additionally, all income from the Project, including tenant fees, sales of apartment, and parking fees, are included. Thereafter, the equity and debt finance are assumed to cover the financial demand.



Source : JICA Study Team

Figure 6.1-1 Analytical Framework

As the figure below shows, the assumptions on revenue, operation and capital cost are mainly based on the result of market survey done by Colliers and some additional consideration by the JICA Study Team (hereinafter referred to as the “the JICA Study Team”). The facility plan and the floor area calculation are done by the Study Team in consideration of the market survey result. Based on the assumptions, the profitability of the each business was simulated first; then, overall profitability of the project was simulated.

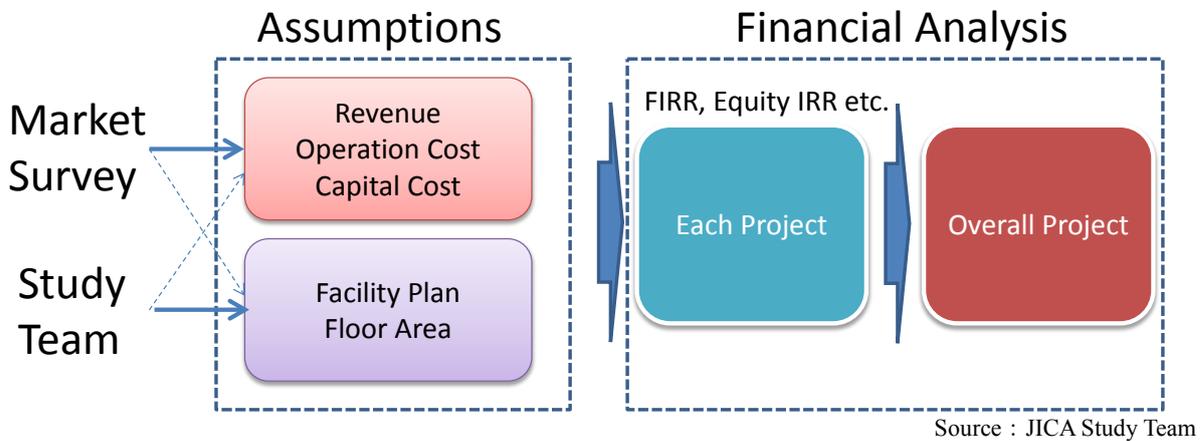


Figure 6.1-2 Analytical Flow of Cash Flow Analysis

Source : JICA Study Team

6.2 Assumptions for Cash Flow Analysis

The assumptions for the cash flow analysis are shown bellow.

(1) Floor Area

The tentative floor area of each facility in this Project is shown in Table 6.2-1.

Table 6.2-1 Floor Area of Each Facility

			Gross Floor Area (m2)	% of Net Floor Area	Net Floor Area (m2)	
Private	Complex	Mall*	34,125	75.6%	25,799	
		F&B	17,063	75.0%	12,797	
		Special Shop	8,873	75.0%	6,654	
		Supermarket	1,945	78.0%	1,517	
		Gym	3,105	80.0%	2,484	
		Cinema	3,140	75.0%	2,355	
		Base Deck**	1,102	100.0%	1,102	
		Office*	47,419	72%	34,141	
		Base Deck**	1,531	100%	1,531	
		Hotel*	25,726	80%	20,581	
		Hotel Room	8,232	80%	6,586	
		Meeting Room	978	80%	782	
		Ballroom	1,441	80%	1,153	
		F&B	772	80%	617	
		Other	7,872	80%	6,298	
	Service Apartment	6,432	90%	5,788		
	Base Deck**	831	100%	831		
	Apartment	Apartment*	43,206	86%	37,157	
		1BR	10,802	86%	9,289	
		2BR	28,084	86%	24,152	
		3BR	3,889	86%	3,344	
		Retail	432	86%	372	
		Parking*	10,614	80%	8,491	
Total Base Deck for Private Portion			3,464	100%	3,464	
Private Sub-Total			150,476	81%	121,142	
Public	Parking	Building*	43,760	80%	35,008	
		Base Deck**	4,190	100%	4,190	
	Public Space	Pedestrian Deck	2,150	100%	2,150	
		Roof Work	1,440	100%	1,440	
		Bus Terminal	10,400	100%	10,400	
		Base Deck**	12,037	100%	12,037	
	Base Deck for Public Portion			16,227	100%	16,227
	Public Sub Total			57,750	113%	65,225
Grand Total			208,226	90%	186,368	

Source : JICA Study Team

(2) Revenue and Occupancy Ratio

The assumptions on revenue from private facilities are shown in Table 6.2-2. The assumptions on revenue from the shopping mall, offices, and hotel/serviced apartments are assumed based on the market survey done by Colliers¹⁰¹. For the assumptions on apartments for sale, the results of a market survey done by Colliers and TNS¹⁰² are evaluated and set by the JICA Study Team.

¹⁰¹ Colliers International, 2014, Final Report: Highest and Best Use Study for 8.4 Hectare Land in Lebak Bulus, South Jakarta

¹⁰² TNS, 2014, Lebak Bulus Station Area Development Qualitative Report

Table 6.2-2 Revenue from Private Facilities

Mall	F&B Tenant Fee (Million Rp./net m2)	3.96	
	Specialty Tenant Fee (Million Rp./net m2)	3.96	
	Supermarket Tenant Fee (Million Rp./net m2)	0.84	
	Gym (Million Rp./net m2)	0.60	
	Cinema (Million Rp./net m2)	0.60	
	Service charge for F&B/Specialty	1.08	
	Service charge for Supermarket/Gym/Cinema	0.54	
Office	Tenant Fee (Million Rp/net m2)	2.90	Lobby Rp.4.248M/m2, Office Rp.2.832M/m2, Office floor: 7-28F, Average=(4.248+2.832*21)/22=2.90
	Service Charge (Million Rp/net m2)	0.60	
Hotel/Service Apartment	Room Revenue (Million Rp./net m2)	8.50	Average room rate Rp.665,400, 201 rooms, 5,746m2, 665,400x201*365/5,746=8.495M
	Meeting Room Revenue(Million Rp./net m2)	24.35	Rate Rp.100,000, 467 pax, 700 m2, 100,000x467x365/700=24.35
	Ballroom Revenue (Million Rp./net m2)	30.40	Rate Rp.100,000, 833 pax, 1,000 m2, 100,000x833x365/1,000=30.4
	F&B Revenue(Million Rp./net m2)	25.90	Coffee shop: Average check Rp.90,000/seat, 267 seats, 400m2 Specialty restaurant: Average check Rp. 250,000/seat, 60 seats, 150m2
	Minor Operation Revenue(% of sub total revenue)	3.20%	Minor revenue: 3% of sub total revenue, Telephone revenue: 0.2% of sub total revenue
	Service Apartment Revenue (Million Rp./net m2)	4.7	1BR(60m2) Rp.520,000/m2/month, 25rooms; 2BR(100m2) Rp.374,400/m2/month, 15rooms; 3BR(150m2) Rp.270,400/m2/month, 10rooms 650,000*60*25+374,400*150+15*270,400*10=13,660,000
	Service Charge (Million Rp/net m2)	0.65	
Residence	Sales price of 1BR (Million Rp./net m2)	24.00	
	Sales price of 2BR (Million Rp./net m2)	24.00	
	Sales price of 3BR (Million Rp./net m2)	24.00	
	Sales price of Retail (Million Rp./net m2)	24.00	

Source : JICA Study Team

The assumptions regarding the occupancy ratio for private facilities are shown in Table 6.2-3 below. Those assumptions are based on the results of a market survey done by Colliers.

Table 6.2-3 Occupancy Ratio of Private Facilities

Mall	F&B/Specialty	0.95	
	Supermarket/Gym/Cinema	1.00	
Office		0.98	Lobby 100%, Office 98.1%, Office floor: 7-28F, Average=(100%+98.1%*21)/22=%
Hotel	Room	0.75	
	Meeting Room	0.43	Occupancy Ratio 75%, Utilization per week 4, 75%x4/7
	Ballroom Rvenue	0.23	Occupancy Ratio 80%, Utilization per week 2, 80%x2/7
	F&B Revenue	0.85	Coffeeshop:100%, Speciality restrant:47%
	Service Apartment	0.75	
Residence	Take up Ration (1st year)	0.40	
	Take up Ratio (2st year)	0.60	

Source: JICA Study Team

The assumptions on revenue and occupancy ratio for public facilities are shown Table 6.2-4 below. Those assumptions are based on the market survey results done by Colliers.

Table 6.2-4 Occupancy Ratio of Public Facilities

Parking	Parking Fee (Million Rp./net m2)	0.76	Average parking fee per lot per hour:Rp.4,000, Number of Parking lot: 760, Operation day per annum: 365, Operation hour per day:24
	Average occupancy per day	50%	

Source : JICA Study Team

(3) Operating Cost

The assumptions on operating cost for private facilities are shown in Table 6.2-5 below. Those assumptions are based on the market survey results done by Colliers.

Table 6.2-5 Operating Cost of Private Facilities

Mall	Operating expenses of Mall centre (% of service charge)	100%	Operation expense include; Salary, General and administration, Maintenance, Marketing
	Marketing agency(% of rental revenue)	5.0%	
	Reparement(% of rental revenue)	3.0%	
Office	Service Fee (% of svc. Charge)	100.0%	Building management 20% of svc.charge, Utility 35% of svc. Charge, Housekeeping 15% of sv.s.charge, Security 15% of svc. Charge, Engineering 15% of svc. charge
	Agent fee(% of rental revenue)	5.0%	
	Repairement (% of rental revenue)	3.0%	
Hotel	Room (% of room revenue)	18.3%	
	F&B(% of F&B revenue)	54.5%	
	Minor Operation(% of Minor operation revenue)	42.4%	
	Other Operating Expenses (% of gross revenue of hotel)	25.1%	Other operationg expenses includes Administrative & general, Sales and marketing, Maintenance, and Utilities
	Operating expenses of service apartment (% of service charge)	100.0%	Operation expense include; Salary, Security, Housekeeping, Utility, Engineering, Others, Marketing
	Basic management fee(% of total revenue)	3.0%	
	Incentive management fee(% of GOP)	7.0%	
Residence	Operational Expencc(% of total revenue)	7.0%	

Source : JICA Study Team

The assumptions on operating cost for public facilities are shown in Table 6.2-6. Those assumptions are based on the market survey results done by Colliers.

Table 6.2-6 Operating Cost of Public Facilities (Tentative)

Parking	Operation cost(% of sales)	90.0%
Other	Operation cost(Million Rp./m2)	0.34

Source : JICA Study Team

(4) Construction Cost (Excluding Base Deck)

The assumptions on construction cost (excluding base deck) are shown in Table 6.2-7 below. Those assumptions are based on the market survey results done by Colliers. Since the major part of land acquisition was already completed by DKI, no additional cost will be incurred for land acquisition for the private entity or JV Corp. However, the purpose of this cash flow analysis is to evaluate the profitability of the overall Project without concern as to who will shoulder the final costs of each component. Therefore, the land acquisition cost is also added as a Project cost.

Table 6.2-7 Construction Cost of Private Facilities

Mall	Construction (Million Rp/gross m2)*	7.25	Estimated by Study Team
	Pre-operation cot (% of constr. Cost)	16.0%	Building permit 3% of Constri. Cost, Consultancy cost: 8% of constri.cost, Advertising and promo: 3.0% of constri.cost, Contingency: 2%
Office	Construction (Million Rp/gross m2)*	9.54	Estimated by Study Team
	Pre-operation csot (% of constr. Cost)	15.5%	Building permit 3% of Constri. Cost, Consultancy cost: 8% of constri.cost, Advertising and promo: 2.5% of constri.cost, Others: 2%
Hotel/Service Apartment	Construction (Million Rp/gross m2)*	8.19	Estimated by Study Team
	Pre-operation csot (% of constr. Cost)	15.5%	Building permit 3% of Constri. Cost, Consultancy cost: 8% of constri.cost, Advertising and promo: 2.5% of constri.cost, Others: 2%
Residence	Residence Construction (Million Rp/gross m2)*	8.58	Estimated by Study Team
	Parking Construction (Million Rp/gross m2)	4.50	
	Pre-operation csot (% of constr. Cost)	16.0%	Building permit 3% of Constri. Cost, Consultancy cost: 8% of constri.cost, Advertising and promo: 3.0% of constri.cost, Contingency: 2%
Land	Value of Land(Million Rp./m2)		Land: Rp.15M/m2, Land Preparation Rp.0.5M/m2
	Value of Land(Million Rp./m2)	15.50	Land: Rp.15M/m2, Land Preparation Rp.0.5M/m2 (no connection with sensitivity analysis)
Base Deck	Construction for Foundation (Million Rp/gross m2)	22.79	No sensitivity connection
	Construction for Column&Deck (Million Rp/gross m2)	2.74	No sensitivity connection

Source : ICA Study Team

The assumptions on construction cost of public facility (excluding base deck) are shown in Table 6.2-8 below. Those assumptions are based on the market survey results done by Colliers. The concept of inclusion of land acquisition cost into the cash flow calculation is the same as for the private facilities.

Table 6.2-8 Construction Cost of Public Facilities

Parking	Construction (Million Rp/gross m2)*	4.50	
Pedestrian	Construction (Million Rp/gross m2)*	4.10	
Roof Work	Construction (Million Rp/gross m2)*	5.90	
Ramp way	Construction (Million Rp/gross m2)*	6.00	
Land	Value of Land(Million Rp./m2)	15.50	Land: Rp.15M/m2, Land Preparation Rp.0.5M/m2

Source: JICA Study Team

(5) Base Deck Construction Cost

The assumptions on base deck construction cost are shown in Table 6.2-9 below. Those assumptions are based on the calculation by the JICA Study Team. Since the base deck is planned to be constructed prior to the construction of private and public facilities, the construction cost for base deck shall not be included in the investment cost of private entity or JV Corp. However, the purpose of this cash flow analysis is to evaluate the profitability of the overall Project without concern as to who will shoulder the final costs. Therefore, the base deck construction cost is also added as a Project cost.

Table 6.2-9 Base Deck Construction Cost of Private Facilities

Construction for Foundation (Million Rp/gross m2)	22.79	No sensitivity connection
Construction for Column&Deck (Million Rp/gross m2)	3.30	No sensitivity connection

Source : JICA Study Team

The assumptions on base deck construction cost of public facilities are shown in Table 6.2-10 below. Those assumptions are based on the JICA Study Team's calculation. The concept of inclusion of base deck cost in the cash flow analysis is the same as for the private facilities.

Table 6.2-10 Base Deck Construction Cost of Public Facility

Foundation (Parking)	Construction (Million Rp/gross m2)	5.48	Foundation 4.8 Million USD, Foundation 12,000m2, 1USD=11,700IDR(average 2013/5-2014/3), 4.8/12,000x11,700
Colum&Deck (Parking)	Construction (Million Rp/gross m2)	7.01	Estimated by Study Team
Foundation (Other)	Construction (Million Rp/gross m2)	2.74	Estimated by Study Team
Colum&Deck (Other)	Construction (Million Rp/gross m2)	11.90	Estimated by Study Team

Source : JICA Study Team

(6) Assumptions on Financing and Tax

The assumptions on financing and tax are shown in Table 6.2-11 below. For financing, private sector investment finance (PSIF) from JICA is assumed to be utilized. PSIF is not available for purely private business, but the private facilities (excluding apartments for sale) and public facilities in this Project are inseparable as one development project. Therefore, estimated interest for PSIF (10%, 20 years (Rupiah basis for the first 10 years utilizing FX Swap. Later 10 years, refinance shall be considered based on market condition.)). The interest rate for the investment of apartments for sale is assumed to be 12% as the market rate in Indonesia. The corporate tax and insurance cost are based on the survey done by Colliers.

Table 6.2-11 Assumptions on Financing and Tax

Financial Assumption				
Private	Complex	Interest rate	10.0%	PSIF
		Repayment Period	16	Loan period 20 yrs
		Debt Ratio	70%	
		Lease Rate	16%	Lease payment for private facility, paid from operating co. to On-deck SPC
	Apartment	Interest rate	12.0%	Loan in Rp.
		Repayment Period	2	
Debt Ratio		70%		
Public		Interest rate	10.0%	PSIF
		Repayment Period	16	Loan period 20 yrs
		Debt Ratio	70%	
Operation Period	Private	years	30	
	Public	years	33	Public facility such as bus terminal start operation earlier than private facility
Infration		Annual Infration Rate	6.0%	
	Tax	Corporate Tax for Office & Mall	10.0%	Based on Colliers Report
		Corporate Tax for Hotel(% of EBT)	25.0%	Based on Colliers Report
		Corporate Tax for Apt(% of Sales)	5.0%	Based on Colliers Report
		VAT(% of sales)	10.0%	
	Property Tax (% of building)	0.1%	Based on Colliers Report	
Insurance		Insurance(% of total revenue)	0.5%	Based on Colliers Report
Depreciation		Depreciation period (year)	30	

Source : JICA Study Team

6.3 Results of Cash Flow Analysis

(1) Profitability of Each Business

The results of cash flow analysis on the profitability of each business in private facilities are shown in Table 6.3-1 below. The following analysis has been done for the purpose of clarifying the feasibility of business by itself. Therefore, it is assumed that each operating company invests and gets finance from financial institution and constructs the facility by themselves, although in reality JV Corp. would construct the facility and lease it to operating company.

Table 6.3-1 Profitability of Each Business in Private Facility

	FIRR	Equity IRR
Mall	19.0%	24.7%
Office	18.0%	23.3%
Hotel/Service Apartment	20.7%	26.3%
Apartment for Sales	19.6%	28.0%

Source : JICA Study Team

The results of cash flow analysis on the profitability of park and ride facility and other public facilities are shown in Table 6.3-2 below.

Table 6.3-2 Profitability of Each Business in Public Facilities

	FIRR	Equity IRR
Park & Ride Facility	-3.3%	-11.2%
Other Facility	No Income	No Income

Source : JICA Study Team

(2) Profitability of Overall Project

The profitability of the entire private facility, entire public facility, and the total combined private and public facilities are shown in Table 6.3-3 below. As mentioned previously, this financial analysis aims to see if the business by itself is financially feasible or not. The table below shows the result of consolidated cash flow analysis of private and public facility.

Table 6.3-3 Profitability of Overall Project

	FIRR	Equity IRR
Private Facility	19.0%	24.7%
Public Facility	NA	NA
Private + Public Facility	13.2%	13.7%

Source : JICA Study Team

6.4 Sensitivity Analysis on Cash Flow Analysis

The sensitivity analysis is done by simulating how the profitability changes when the revenue, operating cost, construction cost, and interest rate changes. Table 6.4-1 below shows the results of the sensitivity analysis, which describe how the equity internal rate of return (IRR) of the whole Project would change when the abovementioned parameter increases or decreases by 20% from the current setting (base case).

Table 6.4-1 Sensitivity Analysis (Equity IRR of Whole Project)

	20% Increase	Base Case	20% Decrease
Revenue	17.0%	13.7%	10.4%
Operation Cost	11.9%	13.7%	15.5%
Interest Rate	12.3%	13.7%	15.1%

Source : JICA Study Team

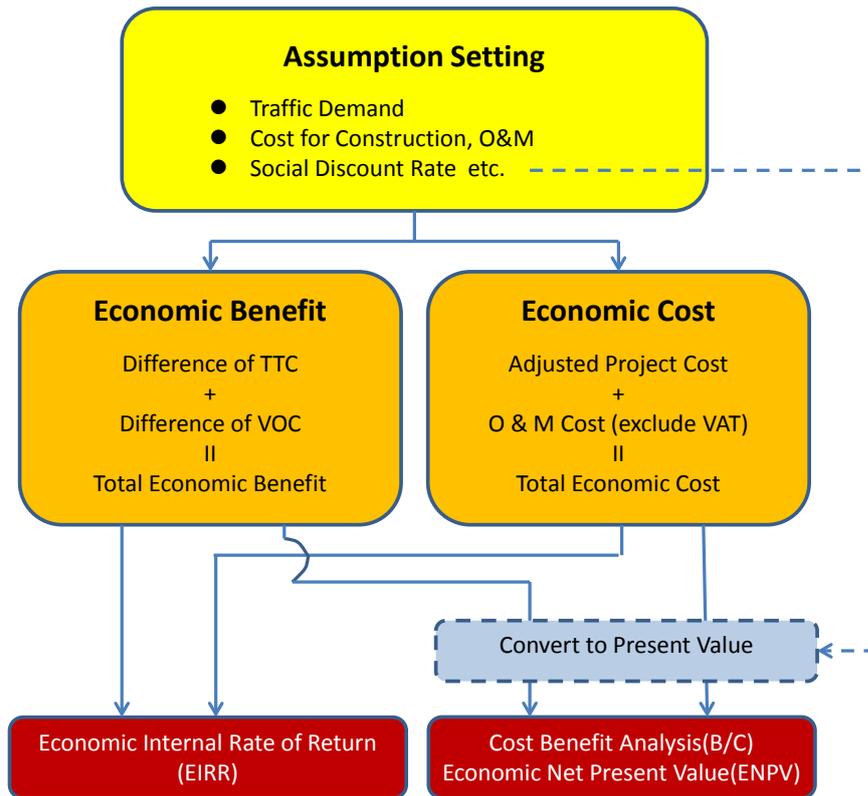
6.5 Analytical Framework of Project Effect Analysis

(1) Purpose of Project Effect Analysis(Economic Analysis)

The purpose of economic evaluation is to assess socio-economic validity of the project.

(2) Flow of Economic Analysis

As figure below shows, the first step of economic analysis is to set assumptions. Secondly, the Study Team calculated economic benefits and costs of the project. By utilizing this economic benefits and costs, Economic Internal Rate of Return (EIRR) was calculated. Also by converting this economic benefits and costs into present value, Benefit Cost Ratio (B/C) and Economic Net Present Value (ENPV) are calculated.



Source : JICA Study Team

Figure 6.5-1Flow of Economic Analysis

(3) Calculation Method of Economic Benefit

In case of economic analysis for station area development, it is common to estimate economic benefit from the land escalation of the surrounded area; however, we calculate economic benefit from the view point of ease of serious traffic jam of Jakarta. This station area development will bring significant improvement of accessibility between MRT and other public transportation mode and increase of MRT users would be expected.

In this economic analysis, we simulated how the accessibility improvement by the project shall increase the MRT users bringing the ease of traffic jam in Jakarta through traffic demand model. This impact was calculated as economic benefit by measuring Traveling Time Cost (TTC) and Vehicle Operating Cost (VOC).

Benefit for reduction of TTC is calculated by that TTC without the project minus TTC with the project.

$$\text{Benefit of Reduction of TTC} = (\text{TTC without the Project}) - (\text{TTC with the Project})$$

TTC is calculated by multiplying Unit TTC and traveling time and traffic volume.

$$\text{TTC (VND)} = \text{Unit TTC (VND/vehicle/time)} \times \text{Travel Time (hour)} \times \text{Traffic (vehicle)}$$

Benefit for reduction of VOC is calculated by that VOC without the project minus VOC with the project.

$$\text{Benefit of Reduction of VOC} = (\text{VOC without the Project}) - (\text{VOC with the Project})$$

VOC is calculated by multiplying Unit VOC and traveling distance and traffic volume.

$$\text{VOC (VND)} = \text{Unit VOC (VND/vehicle/km)} \times \text{Traveling Distance (km)} \times \text{Traffic Volume (vehicle)}$$

(4) Calculation Method of Economic Cost

The project costs include construction cost for the station area development and operation and maintenance costs. Ideally, economic cost should be calculated by shadow price which reflect social value of good and services of the country; however, actual calculation of shadow price is difficult. Therefore, Standard Conversion Factor (SCF) is used to convert the nominal cost to economic costs. In this economic analysis, 0.85 is used as SCF which is commonly used in infrastructure project in Vietnam.

6.6 Assumption of Economic Analysis

(1) Common Assumption

Common Assumptions for the economic analysis is shown in Table below.

Table 6.6-1 Common Assumption

Item	Assumption	Remarks
Social Discount Rate	12%	Refer to ADB(1997) Guideline for Economic Analysis for Project
Project Period	30 years (O&M period)	
Price Standard Year	2011	Inflation during project period is not concerned

Source : JICA Study Team

(2) Assumption of Economic Benefit

For economic benefit calculation, the following improvement was assumed from the station area development.

Table 6.6-2 Improvement of Accessibility to MRT

	Without Project	With Project
Distance from Bus Terminal to MRT Station	200m	60m

Source : JICA Study Team

The Unit TTC and Unit VOC are based on “The Study on the Development of Lebak Bulus Station Area in Jakarta”, The Ministry of Economy, Trade and Industry of Japan, 2013 with inflation adjustment.

Table 6.6-3 Unit TCC

(2014)

	Income Level	TCC(Rp./hr)
Person	Low	19,167
	Middle	5,657
	High	2,270
Car	Low	33,208
	Middle	11,135
	High	4,185
Motocycle	Low	23,912
	Middle	7,554
	High	3,050
Truck		19,167

Source : JICA Study Team

Table 6.6-4 Unit VOC

(2014, Rp./Km)

Speed (km/h)	Car	Motocycle	Truck (Large)	Truck (Medium/Small)	Bus (Large)	Bus (Medium)	Bus (Small)	Bus Way
0-10	11,440	1,307	28,879	14,172	18,340	9,833	5,758	41,961
10-20	5,443	769	15,312	5,167	10,660	5,333	2,771	20,251
20-30	3,940	613	12,091	3,831	8,982	4,154	2,113	15,068
30-40	3,182	530	10,607	3,243	8,316	3,929	1,833	13,634
40-50	2,746	482	9,887	2,943	-	-	-	-
50-60	2,498	454	9,649	2,804	-	-	-	-
60-70	2,395	446	9,785	2,775	-	-	-	-
70-80	2,414	450	10,241	2,834	-	-	-	-
80-90	2,537	468	10,990	2,967	-	-	-	-

Source : JICA Study Team

6.7 Result of Economic Analysis

(1) Result of Quantitative Analysis

Table below shows the result of economic analysis. EIRR was 32% which is higher than social discount rate of 12%. B/C is more than 1.0 and ENPV is positive. The result of economic analysis shows that this project gives high socio-economic benefit to the society.

Table 6.7-1 Result of Economic Analysis

Indicator	Result	Remarks
Economic Internal Rate of Return(EIRR)	32%	Higher than social discount rate (12%)
Benefit Cost (B/C)	1.66	Higher than 1.0
Economic Net Present Value (ENPV)	1,378 Billion Rp.	Positive

Source : JICA Study Team

(2) Result of Sensitivity Analysis

Table below shows how the results of economic analysis are affected when economic benefit, cost of facility and O&M increase or decrease. The results show the impacts of those changes gives limited impact on the results of economic analysis.

Table 6.7-2 Result of Sensitivity Analysis

		EIRR (%)	B/C	ENPV (Billion Rp.)
	Base Case	32%	1.66	1,378
Cost of Investment	10% Increase	26%	1.57	1,281
	10% Decrease	45%	1.81	1,579
Cost of O&M	10% Increase	31%	1.64	1,370
	10% Decrease	33%	1.73	1,491

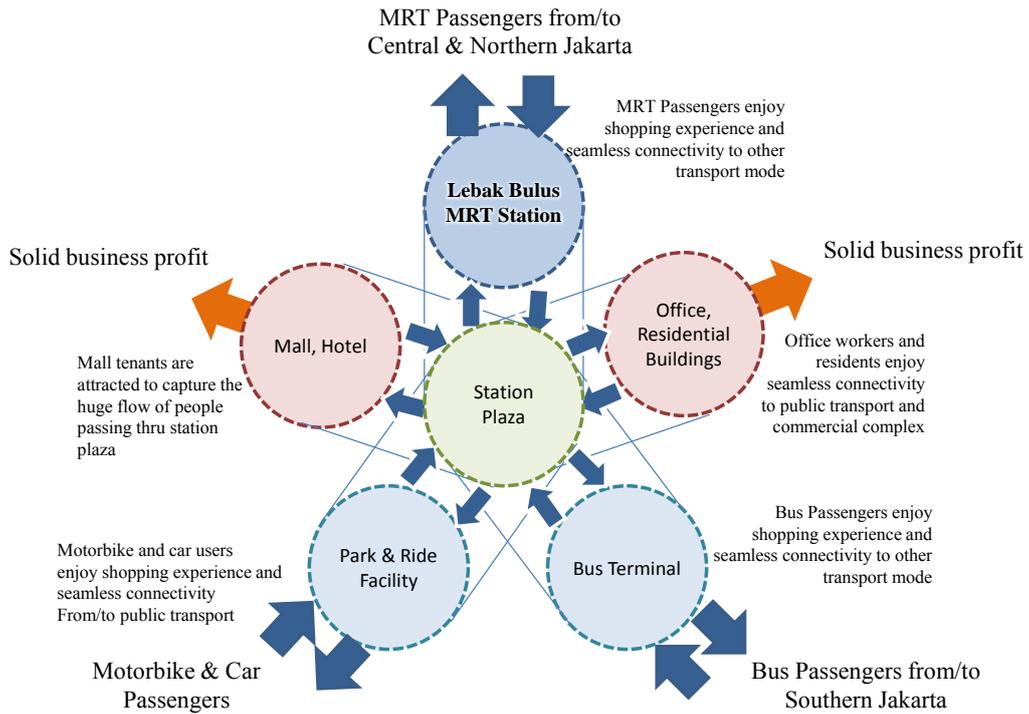
Source : JICA Study Team

(3) Result of Qualitative Analysis

By connecting the bus terminal and Park & Ride facility to Lebak Bulus station, bus passengers/car and motorbike drivers from southern Jakarta can transit to MRT safely and seamlessly.

Integrated public transport hubs co-located with retail and commercial activities together with park & ride facility make it more attractive to use public transport system, thereby reducing traffic congestion in the city.

Increase in passengers of the MRT, thereby increase in profit of the train operating company. Increase in DKI Jakarta's revenue from concession fees from the private developers. Also the station area development would bring reinvigoration of the area around Lebak Bulus Station.



Source : JICA Study Team

Figure 6.7-1 Integrated Impact of the Project

Chapter 7 Environmental and Social Considerations

7.1 Environmental and Social Considerations on Construction of the Deck

(1) Procedures of Environmental and Social Considerations that have already been implemented in the MRT Project

Procedures of Environmental and Social Considerations that have already been implemented in the MRT Project are the Environmental Impact Assessment Document (AMDAL) approved in August 2005 and updated AMDAL in November 2010. Though these processes were conducted before the latest JICA guidelines for environmental and social considerations were formulated, AMDAL documents were prepared and approved in accordance with Indonesian regulations and previous JICA guideline in 2004 under Japanese Yen Loan project, which basically covers the requirement of the latest JICA guidelines. Some gaps between Indonesian regulations and the latest JICA guidelines are not significant with regard to this project since gaps such as emphasis on natural environment and indigenous people are not critical for this project which is implemented in the city center.

Regarding land acquisition and resettlement, Land Acquisition and Resettlement Action Plan (LARAP) was formulated in January 2011 that is the latest one so far. This LARAP was prepared and implemented in accordance with the JICA guidelines as well.

Table 7.1-1 Procedures of Environmental and Social Considerations that have already been implemented in the MRT Project

Period	Content	Note
August, 2005	AMDAL	-
November, 2010	Updated AMDAL	There are two following reasons why EIA has been updated. •Change in environmental impacts by modification of the project (e.g. shortening of total extension distance) •Change in environmental baseline as five years passes
January, 2011	LARAP	-

Source : JICA Study Team

(2) Progress of AMDAL and LARAP for MRT Project

Monitoring survey has been implemented in compliance with the Environmental Monitoring Plan (RPL) formulated in the latest AMDAL (November, 2010). Therefore the monitoring report for the third quarter of 2013 was obtained through this Project and the latest progress status was interviewed from MRTJ.

Land acquisition has already been completed at the present moment. As soon as an adjustment and conference with the rest of government agencies that possess a building in the Depot site is over, it was said that the existing building could be removed.

Table 7.1-2 Progress of AMDAL and LARAP

Contents	Information source	Note
Environmental Monitoring Plan (RPL)	Person in charge in MRTJ	【 March 2014 】 According to the obtained information, a part of the monitoring study has been begun. However the monitoring might be proceeded in other components of the MRT site (underground section and others), not in the Depot site. (The third quarter report was obtained in May.)
LARAP	Person in charge in MRTJ	【 As of March 2014 】 Procedures of land acquisition of the depot part of the Lebak Bulus have been nearly completed. Only remaining issue is the consensus building with other ministries that possess the land within the area (e.g. Ministry of Youth and Sport has the authority to the stadium site, etc.)

Source : JICA Study Team

(3) Necessary Procedures of Environmental and Social Considerations for Construction of the Deck

Necessary procedures for construction of the deck were confirmed with Jakarta Environmental Management Agency (BPLHD).

According to the Government Regulation of Number 05 of 2012, AMDAL practice shall be implemented again or the additional document (Addendum) to the AMDAL shall be prepared in case there are some changes in the project for which the AMDAL was prepared. As for this Project, since the change of the plan was covered less than 50% of the area and additional impacts would be small, only Addendum was to be formulated. The contents that were discussed and agreed with BPLHD are as follows;

- 1) While three sections, i.e. elevated section, underground section and depot section were studied in the latest Updating AMDAL (2010), the Addendum will be formulated only for the depot section.
- 2) As for the baseline environmental information for the Addendum, existing secondary information such as monitoring information based on RKL will be utilized effectively.
- 3) In Addendum AMDAL, both KA-ANDAL (scoping and environmental impact report) and RKL-RPL (environmental management and environmental monitoring plan) will be included.

The coverage of Updating AMDAL and the Addendum is show in the table below.

Table 7.1-3 Regulation regarding Environmental Impact Assessment (National Level)

Coverage	Updating AMDAL	Addendum
Elevated Section of the MRT	Covered	Not covered
Underground Section of the MRT	Covered	Not covered
Depot	Covered	Covered

Source : JICA Study Team

(4) Future Procedures of Environmental and Social Considerations on Construction of the Deck

Before launching the project, Addendum AMDAL should be approved by the government. Requested major procedures are as follows;

- ① The Project proponent will formulate the draft Addendum AMDAL.
- ② The project proponent will submit the draft to BPLHD.
- ③ BPLHD will examine the draft and give the instruction to modify the draft if necessary.
- ④ The project proponent will modify the draft in accordance with the comments of ③, and submit it as the final version.
- ⑤ Addendum AMDAL will be approved.

As of the end of April 2015, the project proponent has not been determined. Thus, the Study Team has formulated the draft Addendum AMDAL which will be the basis of ①. After the project proponent is decided, the Addendum AMDAL is needed to be completed by following the steps from ①. A series of procedure may take around 4 months, however, this will not cause any delays of the project implementation schedule. Addendum AMDAL has been completed in this study and significant change is not expected, thus additional cost to modify the document will be very limited.

(5) Additional Impacts from Deck Construction

The deck construction will be conducted within the depot area in which both AMDAL and LARAP have already been formulated, approved and executed. Therefore additional land

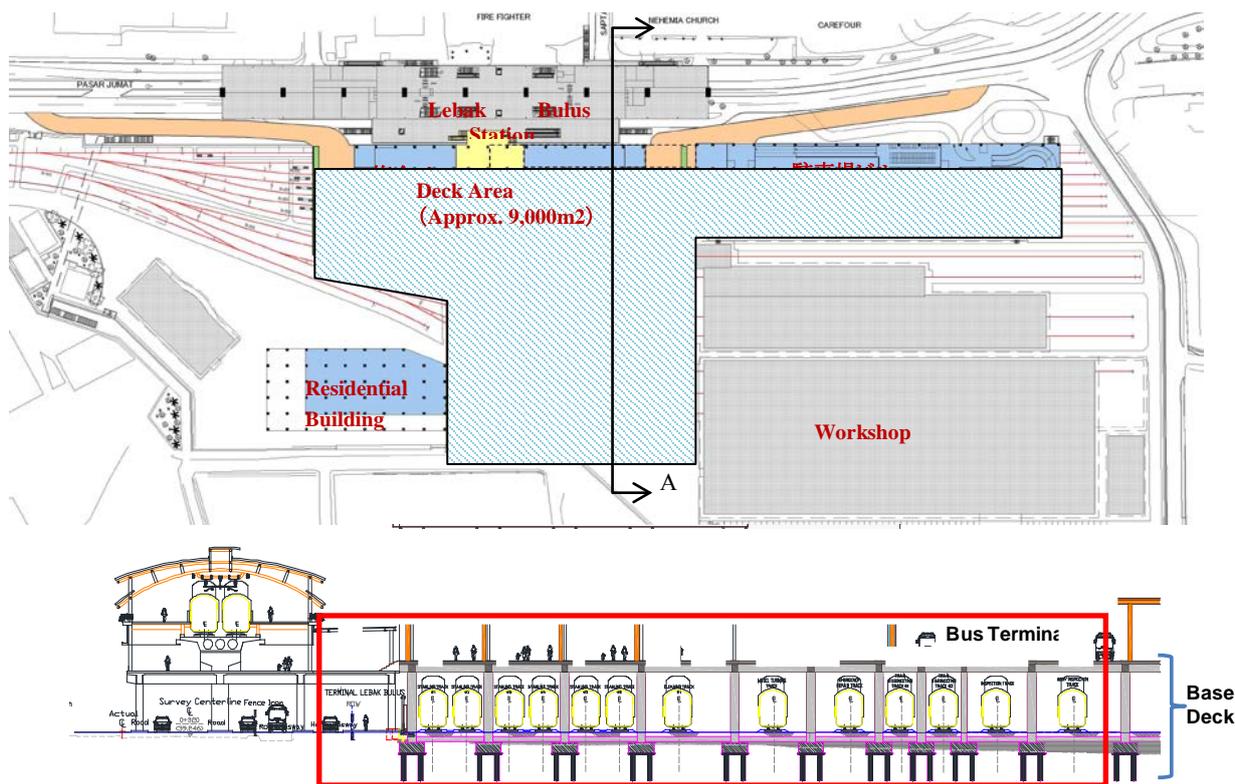
acquisition and resettlement will not be caused. Additional impacts on natural environment are not expected either. Though some impacts on living environment and social environment are expected to be increased by the increase of the work volume of the construction, no additional significant impacts are expected.

In consideration of the above situation, the scoping was conducted and specified in accordance with the JICA Guidelines for Environmental and Social Considerations based on the results of the site inspection, interviews to the concerned parties and subcontractor’s work. The results clarified the items in which adverse impacts are expected to increase when the deck is additionally constructed, compared with the original Updating AMDAL. As described above, as the construction volume increases, the amount of materials, operation of heavy equipment and construction workers will be increased and some impacts on environmental and social impact items are expected to be increased. However additional significant impacts are not expected to be generated. The details are shown in the following section. With regard to LARAP, the same as above, documents such as a due diligence report are not required because there is no additional impact on the land acquisition and resettlement by this deck construction.

7.2 Environmental and Social Considerations

(1) Outline of Project Components that cause environmental and social impacts

The Project components that may cause environmental and social impacts are construction of the deck. Major elements of the deck are as follows.



Source : JICA Study Team

Figure 7.2-1 Layout and Cross-section of Deck Area

(2) Environmental and Social Baseline

Regarding the environmental and social status as a reference, the following changes were recognized from the latest approved AMDAL.

Table 7.2-1 Comparison between Updated AMDAL (2010) and Current Status

No.	Items	Comparison Results
1. Living Environment		
(1)	Air Pollution	While NO ₂ and SO ₂ are increasing, TSP is decreasing. As a whole, significant change did not occur.
(2)	Noise and Vibration	Both noise and vibration are increasing. This trend is considered to be associated with the increase of traffic volume.
2. Natural Environment		
(1)	Climate	Basically no change occurs.
(2)	Ecosystem	Basically no change occurs.
(3)	Hydrology	Basically no change occurs.
(4)	Topography and Geology	Basically no change occurs.
3. Social Environment		
(1)	Population	The population is increasing.
(2)	Traffic Condition	Traffic volume and traffic jam is increasing.
(3)	Public Facilities	Basically no change occurs.
(4)	Medical Facilities and Hospitals	The number of doctors has been increased. But the number of hospitals has not been changed.

Source : JICA Study Team

(3) Regulations and Organizations regarding Environmental and Social Considerations in the Host Country

Major regulations regarding environmental and social considerations are as follows. Central government ministry responsible for AMDAL-related aspects is the Ministry of Environment and Forestry. The local governmental department in charge of examination of AMDAL Addendum regarding deck construction is Jakarta Environmental Management Agency (BPLHD).

Table 7.2-2 Regulations regarding Environmental and Social Consideration (National Level)

No.	Regulations	Contents
1	Law Number 32 of 2009	Environmental Protection and Management Act
2	Government Regulation Number 27 of 2012	Environmental Permit
3	Regulation of the MOE Number 05 of 2012	Types of the activities that will require preparation of the AMDAL report
4	Regulation of the MOE Number 16 of 2012	Guideline for preparation of environmental related documents
5	Regulation of the MOE Number 17 of 2012	Guideline for community participation in the procedures of AMDAL and environmental permit
6	Law Number 26 of 2007	Spatial Planning
7	Law Number 31 of 1999	Forestry
8	Law Number 41 of 2009	Protection of Sustainable Food Crops Farmland
9	Law Number 19 of 2013	Protection and Empowerment of Farmers
10	The National Ambient Air Quality Standards (covering SPM, PM ₁₀ , SO ₂ , NO ₂ , O ₃ , Pb, and CO)	Air Quality Standard
11	State Minister of Environment Decree No.KEP-48/MENLH/11/1996	Noise Standard
12	State Minister of Manpower Decree No.KEP-51/MEN/1999	Physical threshold values at work sites

Source : JICA Study Team

(4) Comparison with Alternatives (including zero-option)

For additional deck construction to the existing depot plan, there is no particular alternative in order for the environmental and social considerations. Zero-option is not to construct the deck, which was not adopted because station area development in the future will cause little environmental and social impacts and will disrupt the operation of MRT.

(5) Scoping and TOR for Study on Environmental and Social Considerations

As described above, the following contents that were agreed with BPLHD were conducted as environmental and social considerations.

1) While three sections, i.e. elevated section, underground section and depot section were described in the latest Updating AMDAL (2010), the Addendum will be formulated only for the depot section.

2) As for the baseline environmental information for Addendum, existing secondary information such as monitoring information based on RKL should be utilized efficiently.

3) In Addendum AMDAL, both KA-ANDAL (scoping and environmental impact report) and RKL-RPL (environmental management and environmental monitoring plan) will be prepared.

(6) Study Results of Environmental and Social Considerations (including prediction results)

Results of environmental and social impact assessment based on the study findings are as follows.

Table 7.2-3 Items that impact are expected to be changed

Category		Item	Evaluation		Reason of evaluation
			Pre-construction /Construction	Operation	
Living environment	1	Air pollution	△	-	C: Though temporary, some impacts on air quality caused by the movement of construction equipment are expected. However it will not be significant. O: No particular impact is expected.
	2	Water pollution	△	-	C: Water pollution from drainage water caused by the increase of heavy equipments, vehicle and construction worker's camp is expected. However it will not be significant. O: No particular impact is expected.
	3	Waste	△	-	C: Though generation of construction waste will increase, the impact will not be significant. O: No particular impact is expected.
	4	Soil contamination	-	-	No particular impact is expected.
	5	Noise/ vibration	-	-	C: Noise will be generated by operation of construction equipment and vehicle, but the impact will not be significant. O: No particular change is expected.
	6	Ground Subsidence	-	-	No particular change is expected.
	7	Offensive Odor	-	-	No particular change is expected.
	8	Bottom Sediment Contamination	-	-	No particular change is expected.
Natural environment	9	Protected areas	-	-	No particular change is expected.
	10	Ecosystem	-	-	No particular change is expected.
	11	Hydrology	-	-	No particular change is expected.
	12	Topography/ geology	-	-	No particular change is expected.
Social environment	13	Involuntary resettlement	-	-	No particular change is expected.
	14	Poor people	-	-	No particular change is expected.
	15	Ethnic Minorities/indigenous people	-	-	No particular change is expected.
	16	Local economy such as employment and livelihood	○	-	C: Positive impact is expected, since great expansion of employment by deck construction is expected in addition to the construction of the Depot. (350 people→850

Category	Item	Evaluation		Reason of evaluation
		Pre-construction / Construction	Operation	
				people) O: No particular change is expected.
	17 Land use and utilization of local resources	-	-	No particular change is expected.
	18 Water usage	-	-	No particular change is expected.
	19 Social Infrastructures and Services	-	-	No particular change is expected.
	20 Social institutions and local decision - making institutions	-	-	No particular change is expected.
	21 Unequal Distribution of Benefit and Damage	-	-	No particular change is expected.
	22 Local conflicts of interest	-	-	No particular change is expected.
	23 Cultural heritage	-	-	No particular change is expected.
	24 Landscape	-	-	No particular change is expected.
	25 Gender	-	-	No particular change is expected.
	26 Children's right	-	-	No particular change is expected.
	27 Infectious diseases, such as HIV/AIDS	△	-	C: Increase of risks of infectious diseases caused by the influx of a large number of construction workers is expected, but it will not be significant.
	28 Occupational environment (including Occupational safety)	-	-	No particular change is expected.
Others	29 Accidents	△	-	C: Increase of risks of accidents associated with construction activities is expected, but it will not be significant. O: No particular change is expected.
	30 Transboundary impact, Climate change	-	-	No particular change is expected.

Note C: Construction stage O: Operation stage

○ : Positive impact is expected, △ : Some but not significant impact is expected, - : No impact is expected

Source : JICA Study Team

(7) Impact Assessment

As described above, additional impacts caused by deck construction that need additional countermeasures for environmental and social considerations or mitigation measures are not expected.

(8) Mitigation Measures and Cost for Implementation of Mitigation Measures

Additional mitigation measures will not be implemented for the construction of the deck. Therefore, mitigation measures and cost sharing of them will be implemented by following the existing mitigation measures.

(9) Monitoring Plan

Additional monitoring will not be implemented for the construction of the deck. Therefore monitoring activities will be implemented by following the existing monitoring plan.

(10) **Stakeholder Meetings**

Stakeholder meetings were held while AMDAL and Updating AMDAL for MRT Project was conducted. Thus, additional stakeholder meeting was not conducted in this survey.

7.3 Land Acquisition and Resettlement

(1) **Necessity of Land Acquisition/ Resettlement**

Land acquisition and resettlement were studied and planned under the MRT Project. This additional deck construction will not cause either land acquisition or resettlement.

(2) **Legal Framework for Land Acquisition and Resettlement**

Since the Project will not cause either land acquisition or resettlement, there is no related legal framework.

(3) **Scale and Scope of Land Acquisition and Resettlement**

The Project will not cause either land acquisition or resettlement.

(4) **Grievance Mechanisms**

Since the Project will not cause either land acquisition or resettlement, it is not applicable.

(5) **Implementation Structure (Identification of the organization in charge of resettlement and its responsibility)**

Since the Project will not cause either land acquisition or resettlement, it is not applicable

(6) **Implementation Schedule (After completion of compensatory payment for losses on assets, resettlement starts.)**

Since the Project will not cause either land acquisition or resettlement, it is not applicable

(7) **Cost and Financial Resources**

Since the project will not cause either land acquisition or resettlement, it is not necessary.

(8) **Monitoring Structure in the Implementing Institution, Monitoring Form**

Since the Project will not cause either land acquisition or resettlement, it is not applicable.

(9) **Community Meeting**

Since the Project will not cause either land acquisition or resettlement, it is not applicable.

7.4 Confirmation Items regarding Environmental and Social Considerations

(1) **Draft of Monitoring Forms**

Since there is no item that needs additional monitoring in the Project, it is not applicable.

(2) **Environmental Checklists**

The environmental checklists for the Project are as follows.

Table 7.4-1 Environmental Checklists

Category	Environmental Item	Main Check Items	Yes: Y No: N	Detailed Environmental and Social Considerations (Reasons for Yes/No, Mitigation Measures, etc.)
1 Permits and Explanation	(1) EIA and Environmental Permits	(a) Have EIA reports been already prepared in official process? (b) Have EIA reports been approved by authorities of the host country's government? (c) Have EIA reports been unconditionally approved? If conditions are imposed on the approval of EIA reports, are the conditions satisfied? (d) In addition to the above approvals, have other required environmental permits been obtained from the appropriate regulatory authorities of the host country's government?	(a) N (b) N (c) N (d) N	(a) The EIA report has already been approved, but Addendum report for construction of the deck should be approved. The draft of Addendum has been prepared. (b) The EIA report has already been approved. Since implementing institution of the project has not been determined, the draft of Addendum has not been approved. (c) Nothing in particular. (d) There is no permit to need to acquire except Addendum.
	(2) Explanation to the Local Stakeholders	(a) Have contents of the project and the potential impacts been adequately explained to the local stakeholders based on appropriate procedures, including information disclosure? Is understanding obtained from the local stakeholders? (b) Have the comment from the stakeholders (such as local residents) been reflected to the project design?	(a) N (b) N	(a) The existing plan has already been explained and agreed by the local stakeholders but development of the deck has not been explained to them yet. (b) ditto
	(3) Examination of Alternatives	(a) Have alternative plans of the project been examined with social and environmental considerations?	(a) Y	(a) The project of additional deck construction was compared with Zero Option.
2 Pollution Control	(1) Water Quality	(a) Is there a possibility that soil runoff from the bare lands resulting from earthmoving activities, such as cutting and filling will cause water quality degradation in downstream water areas? (b) Do effluents from the project facilities, such as stations, comply with the country's effluent standards and ambient water quality standards? Is there a possibility that the effluents will cause areas not to comply with the country's ambient water quality standards?	(a) N (b) Y	(a) Additional impacts caused by construction of the deck are not expected. (b) The deck will be constructed and operated in compliance with Indonesia's water quality standards
	(2) Wastes	(a) Are wastes generated from the project facilities, such as stations and depot, properly treated and disposed of in accordance with the country's regulations?	(a) Y	(a) Wastes will be treated and disposed of properly.
	(3) Noise and Vibration	(a) Do noise and vibrations from the vehicle and train traffic comply with the country's standards?	(a) Y	(a) Noises and vibrations comply with the Indonesian standards.
	(4) Subsidence	(a) In the case of extraction of a large volume of groundwater, is there a possibility that the extraction of groundwater will cause subsidence (especially in case of Undergrounds/Subways)?	(a) N	(a) Additional impacts caused by construction of the deck are not expected.
3 Natural	(1) Protected Areas	(a) Is the project site located in protected areas designated by the country's laws or international treaties and conventions? Is there a possibility that the project will affect the	(a) N	(a) No impact is expected/

Category	Environmental Item	Main Check Items	Yes: Y No: N	Detailed Environmental and Social Considerations (Reasons for Yes/No, Mitigation Measures, etc.)
		protected areas?		
	(2) Ecosystem	<p>(a) Does the project site encompass primeval forests, tropical rain forests, ecologically valuable habitats (e.g., coral reefs, mangroves, or tidal flats)?</p> <p>(b) Does the project site encompass the protected habitats of endangered species designated by the country's laws or international treaties and conventions?</p> <p>(c) If significant ecological impacts are anticipated, are adequate protection measures taken to reduce the impacts on the ecosystem?</p> <p>(d) Are adequate protection measures taken to prevent impacts, such as disruption of migration routes, habitat fragmentation, and traffic accident of wildlife and livestock?</p> <p>(e) Is there a possibility that installation of rail roads will have impacts, such as destruction of forest, poaching, desertification, reduction in wetland areas, and disturbance of ecosystems due to introduction of exotic (non-native invasive) species and pests? Are adequate measures for preventing such impacts considered?</p> <p>(f) In cases the project site is located at undeveloped areas, is there a possibility that the new development will result in extensive loss of natural environments?</p>	<p>(a) N</p> <p>(b) N</p> <p>(c) N</p> <p>(d) N</p> <p>(e) N</p> <p>(f) N</p>	<p>(a) Additional impacts caused by construction of the deck are not expected.</p> <p>(b) Additional impacts caused by construction of the deck are not expected.</p> <p>(c) Additional impacts caused by construction of the deck are not expected.</p> <p>(d) Additional impacts caused by construction of the deck are not expected.</p> <p>(e) Additional impacts caused by construction of the deck are not expected.</p> <p>(f) Additional impacts caused by construction of the deck are not expected.</p>
	(3) Hydrology	(a) Is there a possibility that alteration of topographic features and installation of structures, such as tunnels will adversely affect surface water and groundwater flows?	(a) N	(a) The deck is designed in order not to adversely affect soil penetration of rain water.
3 Natural Environment	(4) Topography and Geology	<p>(a) Is there a soft ground on the route that may cause slope failures or landslides? Are adequate measures considered to prevent slope failures or landslides, where needed?</p> <p>(b) Is there a possibility that civil works, such as cutting and filling will cause slope failures or landslides? Are adequate measures considered to prevent slope failures or landslides?</p> <p>(c) Is there a possibility that soil runoff will result from cut and fill areas, waste soil disposal sites, and borrow sites? Are adequate measures taken to prevent soil runoff?</p>	<p>(a) N(b)</p> <p>N(c) N</p>	(a)(b)(c) Additional impacts caused by construction of the deck are not expected.

Category	Environmental Item	Main Check Items	Yes: Y No: N	Detailed Environmental and Social Considerations (Reasons for Yes/No, Mitigation Measures, etc.)
4 Social Environment	(1) Resettlement	(a) Is involuntary resettlement caused by project implementation? If involuntary resettlement is caused, are efforts made to minimize the impacts caused by the resettlement? (b) Is adequate explanation on compensation and resettlement assistance given to affected people prior to resettlement? (c) Is the resettlement plan, including compensation with full replacement costs, restoration of livelihoods and living standards developed based on socioeconomic studies on resettlement? (d) Are the compensations going to be paid prior to the resettlement? (e) Are the compensation policies prepared in document? (f) Does the resettlement plan pay particular attention to vulnerable groups or people, including women, children, the elderly, people below the poverty line, ethnic minorities, and indigenous peoples? (g) Are agreements with the affected people obtained prior to resettlement? (h) Is the organizational framework established to properly implement resettlement? Are the capacity and budget secured to implement the plan? (i) Are any plans developed to monitor the impacts of resettlement? (j) Is the grievance redress mechanism established	(a) N (b) N (c) N (d) N (e) N (f) N (g) N (h) N (i) N (j) N	(a) Additional impacts caused by construction of the deck are not expected. (b) Additional impacts caused by construction of the deck are not expected. (c) Additional impacts caused by construction of the deck are not expected. (d) Additional impacts caused by construction of the deck are not expected. (e) Additional impacts caused by construction of the deck are not expected. (f) Additional impacts caused by construction of the deck are not expected. (g) Additional impacts caused by construction of the deck are not expected. (h) Additional impacts caused by construction of the deck are not expected. (i) Additional impacts caused by construction of the deck are not expected. (j) Additional impacts caused by construction of the deck are not expected.
	(2) Living and Livelihood	(a) Where railways are newly installed, is there a possibility that the project will affect the existing means of transportation and the associated workers? Is there a possibility that the project will cause significant impacts, such as extensive alteration of existing land uses, changes in sources of livelihood, or unemployment? Are adequate measures considered for preventing these impacts? (b) Is there any possibility that the project will adversely affect the living conditions of inhabitants other than the affected inhabitants? Are adequate measures considered to reduce the impacts, if necessary? (c) Is there any possibility that diseases, including infectious diseases, such as HIV will be brought due to immigration of workers associated with the project? Are adequate considerations given to public health, if necessary? (d) Is there any possibility that the project will adversely affect road traffic in the surrounding	(a) N (b) N (c) N (d) N (e) N (f) N	(a) Additional impacts caused by construction of the deck are not expected. (b) Additional impacts caused by construction of the deck are not expected. (c) Additional impacts caused by construction of the deck are not expected. (d) Increase of construction vehicle caused by construction of the deck is expected, but the impact will be minor. (e) Additional impacts caused by construction of the deck are not expected. (f) Additional impacts caused by construction of the deck are not expected.

Category	Environmental Item	Main Check Items	Yes: Y No: N	Detailed Environmental and Social Considerations (Reasons for Yes/No, Mitigation Measures, etc.)
		<p>areas (e.g., by causing increases in traffic congestion and traffic accidents)?</p> <p>(e) Is there any possibility that railways will impede the movement of inhabitants?</p> <p>(f) Is there any possibility that structures associated with railways (such as bridges) will cause a sun shading and radio interference?</p>		
	(3) Heritage	(a) Is there a possibility that the project will damage the local archeological, historical, cultural, and religious heritage sites? Are adequate measures considered to protect these sites in accordance with the country's laws?	(a) N	(a) Additional impacts caused by construction of the deck are not expected.
	(4) Landscape	(a) Is there a possibility that the project will adversely affect the local landscape? Are necessary measures taken?	(a) N	(a) Additional impacts caused by construction of the deck are not expected.
	(5) Ethnic Minorities and Indigenous Peoples	(a) Are considerations given to reduce impacts on the culture and lifestyle of ethnic minorities and indigenous peoples? (b) Are all of the rights of ethnic minorities and indigenous peoples in relation to land and resources respected?	(a) N (b) N	(a) Additional impacts caused by construction of the deck are not expected. (b) Additional impacts caused by construction of the deck are not expected.
4 Social Environment	(6) Working Conditions	(a) Is the project proponent not violating any laws and ordinances associated with the working conditions of the country which the project proponent should observe in the project? (b) Are tangible safety considerations in place for individuals involved in the project, such as the installation of safety equipment which prevents industrial accidents, and management of hazardous materials? (c) Are intangible measures being planned and implemented for individuals involved in the project, such as the establishment of a safety and health program, and safety training (including traffic safety and public sanitation) for workers etc.? (d) Are appropriate measures being taken to ensure that security guards involved in the project do not violate safety of other individuals involved, or local residents	(a) Y(b) Y(c) Y(d) Y	(a) Construction of the deck will be implemented in accordance with Indonesia's regulations. (b) Construction of the deck will be implemented by ensuring the safety considerations. (c) Construction of the deck will be implemented by ensuring the safety considerations (d) Construction of the deck will be implemented by ensuring the safety considerations
5 Others	(1) Impacts during Construction	(a) Are adequate measures considered to reduce impacts during construction (e.g., noise, vibrations, turbid water, dust, exhaust gases, and wastes)? (b) If construction activities adversely affect the natural environment (ecosystem), are adequate measures considered to reduce impacts? (c) If construction activities adversely affect the social environment, are adequate measures	(a) Y (b) Y (c) Y (d) Y	(a) Increase of impacts caused by construction of the deck is minor and mitigation measures planned in the original EIA will be considered. (b) Increase of impacts caused by construction of the deck is minor and mitigation measures planned in the original EIA will be considered. (c) Increase of impacts caused by construction of the deck is minor and

Category	Environmental Item	Main Check Items	Yes: Y No: N	Detailed Environmental and Social Considerations (Reasons for Yes/No, Mitigation Measures, etc.)
		considered to reduce impacts? (d) If the construction activities might cause traffic congestion, are adequate measures considered to reduce such impacts?		mitigation measures planned in the original EIA will be considered. (d) Increase of impacts caused by construction of the deck is minor and mitigation measures planned in the original EIA will be considered.
	(2) Monitoring	(a) Does the proponent develop and implement monitoring program for the environmental items that are considered to have potential impacts? (b) What are the items, methods and frequencies of the monitoring program? (c) Does the proponent establish an adequate monitoring framework (organization, personnel, equipment, and adequate budget to sustain the monitoring framework)? (d) Are any regulatory requirements pertaining to the monitoring report system identified, such as the format and frequency of reports from the proponent to the regulatory authorities?	(a) Y (b) Y (c) Y (d) Y	(a) It has already been prescribed in the approved EIA. (b) It has already been prescribed in the approved EIA. (c) It has already been prescribed in the approved EIA. (d) It has already been prescribed in the approved EIA.
6 Note	Reference to Checklist of Other Sectors	(a) Where necessary, pertinent items described in the Forestry Projects checklist should also be checked (e.g., projects including large areas of deforestation). (b) Where necessary, pertinent items described in the Power Transmission and Distribution Lines checklist should also be checked (e.g., projects including installation of power transmission lines and/or electric distribution facilities).	(a) N (b) N	(a) Additional impacts caused by construction of the deck are not expected. (b) Additional impacts caused by construction of the deck are not expected.
	Note on Using Environmental Checklist	(a) If necessary, the impacts to transboundary or global issues should be confirmed (e.g., the project includes factors that may cause problems, such as transboundary waste treatment, acid rain, destruction of the ozone layer, or global warming).	(a) N	(a) Additional impacts caused by construction of the deck are not expected.

1) Regarding the term "Country's Standards" mentioned in the above table, in the event that environmental standards in the country where the project is located diverge significantly from international standards, appropriate environmental considerations are required to be made.

In cases where local environmental regulations are yet to be established in some areas, considerations should be made based on comparisons with appropriate standards of other countries (including Japan's experience).

2) Environmental checklist provides general environmental items to be checked. It may be necessary to add or delete an item taking into account the characteristics of the project and the particular circumstances of the country and locality in which it is located.

Chapter 8 Consensus Building among Stakeholders

(1) Consensus Building among Stakeholders

Main Indonesian stakeholders in this Project are shown in Figure xxx. DKI Jakarta is a huge organization consisting of many lower cells. Although it is expected that BAPPEDA is the main consultative agency, there are other agencies with which the JICA Study Team has to have discussions, share information, and cooperate with, such as Dinas Perhubungan who controls the bus terminal in Lebak Bulus; Dinas Tata Ruang who formulates spatial planning and land use; and Dinas Pekerjaan Umum who takes care of public works.

The JICA Study Team has had discussions with MRTJ regarding technical coordination. Technical coordination meetings have been held several times not only with MRTJ, but also with construction supervision consultants of MRT project and DGR as well. It has been mutually understood among the technical staff who attended the meetings how important and realistic it is to construct the deck in coordination with CP107.

Some information has been shared with Dinas Tata Ruang. There was information which says that UDGL would be revised to include Lebak Bulus Development Project in the spatial plan of DKI Jakarta in detail. However, the Project was not reflected in the revised UDGL in 2014. Discussions with Tata Ruang should be made after this Project is officially approved by DKI Jakarta to incorporate this Project into DKI Jakarta's spatial and land use plan.

Dinas Perhubungan has completed relocation of long and middle distance bus terminals for depot construction. Short distance bus terminal is still in operation at the depot construction area. Dinas Perhubungan has officially requested deck construction to DKI Jakarta to secure space for the short distance bus terminal with an official letter called "Nota Dinas". However, among the turmoil of sudden change of director general of BAPPEDA, it appears that this document did not pass internally in DKI Jakarta, and thus official approval has not yet been given. Although the JICA Study Team has continuously discussed with various stakeholders and gained the support regarding the necessity and reality of this Project from the early stage of the study, in reaction to the situation, a steering committee meeting was held in April 2014, in order to stimulate consensus building among various stakeholders. During the meeting, the main topic discussed was the basic concept of the Project and no objection has been raised against the proposed project concepts. However, MRTJ insisted that deck construction might delay MRT construction works because deck construction is supposed to progress in parallel with MRT construction works, and thus strongly opposing this project to be implemented in parallel with MRT construction works. Since then, MRTJ has been refusing to make any discussions on this project.

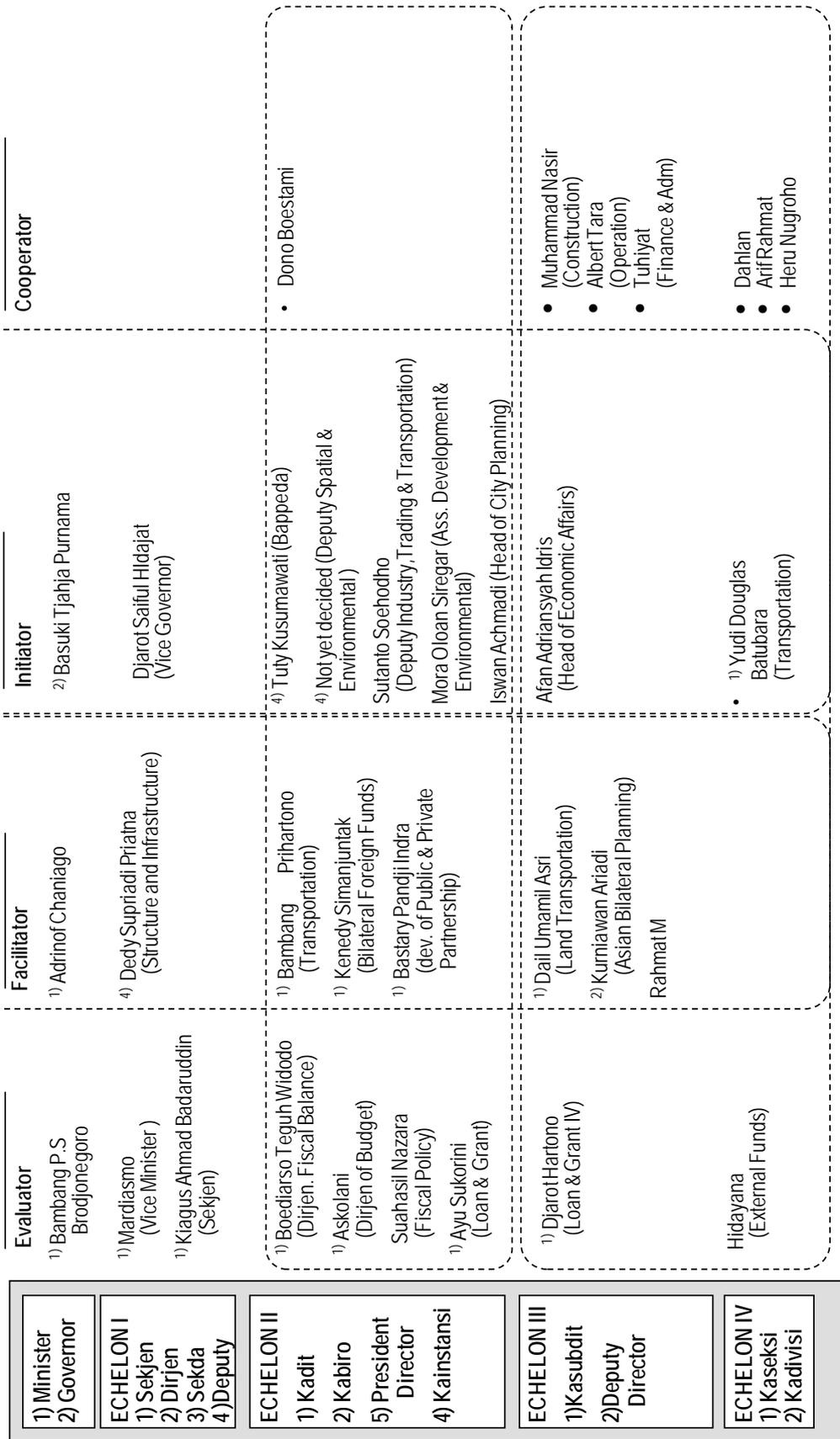


Figure 8.1-1 Stakeholder Map

(2) Action Plan

The bottleneck to realize this project is that DKI Jakarta still does not give approval to this project, thus budget for the deck has not yet been allocated. This is why the implementation body has not been appointed officially yet, putting all the official processes at a standstill. This may come mainly from the fact that MRTJ, who is supposed to be the implementation body of the project, is refusing the deck construction in parallel with MRT construction works. Therefore, there is no choice but to expect MRTJ to ease its opposition to the project.

After the above mentioned issue is settled, the actions to be taken to realize this project are summarized in the following table;

Table 8.1-1 Acton Plan

No	Necessary Action	Target Date	Action Taken by	Note
1	The project to be approved by DKI Jakarta.	September,2015	DKI Jakarta	This may require MRTJ's consent.
2	Securing the budget for the project	November, 2015	DKI Jakarta	
3	Determination of project implementation body	December,2015	DKI Jakarta, MRTJ	This may require MRTJ's consent.
4	Preparation of Tender Document for procurement of contractor for deck construction works.	May, 2016	DKI Jakarta, MRTJ	-
5	Procurement of Contractor	February, 2017	DKI Jakarta, MRTJ	Depending on actual delay of MRT construction schedule.
6	Contract amendment of CP107 to incorporate deck into CP107's works.	February, 2017	DKI Jakarta, MRTJ	Depending on actual delay of MRT construction schedule.
7	Determination of investor for commercial facilities.	as soon as possible	DKI Jakarta, MRTJ	-

Source : JICA Study Team