REPUBLIC OF INDONESIA
JAKARTA CAPITAL CITY GOVERNMENT
REGIONAL DEVELOPMENT PLANNING BOARD

REPUBLIC OF INDONESIA
JAKARTA INTEGRATED
URBAN TRANSPORT HUB DEVELOPMENT

FINAL REPORT

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JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

NIKKEN SEKKEI CIVIL ENGINEERING LTD.
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TOKYU LAND CORPORATION

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ABBREVIATIONS TABLE

ADB	Asian Development Bank
AMDAL	Analysis Dampak Mengenai Lingkungan Hidup
APM	Automaticed People Movement
BAPEDAL	Environmental Impact Management Agency
BAPEDALDA	Reginnal Environmental Impact Management Agency
BAPPEDA	Regional Planning and Development Board
BAPPENAS	The Ministy of National Development Planning Agency
BOT	Build, Operate, Transfer
BPJT	Toll Road Regulatory Board
BPLHD	Regional Environment management Agency
BPN	Badan Pertanahan National Republik Indonesia
BRT	Bus Rapid Transit
CAT	City Air Terminal
CBD	Central Business District
CSR	Corporate Social Responsibility
DBO	Design, Build, Operate
DGH	Directorate General of Highway
DGLT	Directorate General of Land Transportation
DGR	Directorate General of Railways
DKI Jakarta	Jakarta Capital City Government
EIA	Environmental Impact Assessment
EIRR	Economic Internal Rate of Return
FIRR	Financial Internal Rate of Return
EMoP	Environmental Monitoring Plan
EMP	Environmental Management Plan
EPC	Environmental Protection Commitments
ESC	Environmental Supervision Consultant
F/S	Feasibility Study
GOI	Government of Indonesia
GOJ	Government of Japan
IEDC	Indonesia Economic Development Coridor
IEE	Initial Environmental Examination
IRR	Internal Rate of Return
ITS	Intelligent Transport System
Jabodetabek	Jakarta,Bogor,Depok,Tangerang,Bekasi
Jabotabek	Jakarta,Bogor,Tangerang,Bekasi
JBIC	Japan Bank for International Cooperation
JICA	Japan International Cooperation Agency
JUTPI	JABODETABEK Urban Transportation Policy Integration
KCJ	KAI Commuter Jabodetabek
LARAP	Land Acquisition and Resettlement Action Plan
LEP	Law on Environmental Protection
LGU	Local Government Unit

LRT	Light Rail Transit
MOT	Ministry of Transportation
MPA	Metropolitan Priority Area for Investment and Industry
MPW	Ministry of Public Works
MRT	Mass Rapid Transit
NPV	Net Rapid Transit
OD	Origin and Destination
ODA	Official Development Assistance
OECD	Organization for Economic Co-operation and Development
PFI	Private Finance Initiative
PI	Public Involvement
PPP	Public Private Partnership
PT.JTD	Jakarta Toll Development
PT.KAI	Railway Company of Indonesia
PT.MRTJ	Mass Rapid Transit Jakarta
PT.SMI	Sarana Multi Infrastruktur
PU	Ministry of Public Works
RAP	Resaettlement Action Plan
ROE	Return on Equity
ROI	Return on Investment
ROW	right-of-way
RPJM	Rencana Pembangunan Jangka Menengah
RPJP	Rancangan Pembangunan Jangka Panjang Nasional
SPC	Special Purpose Company
TOD	Transit Oriented Development
TOR	Terms of Reference

Chapter 1. Introduction

1.1 Background and purpose of project

1.1.1 Location of project

Country: Republic of Indonesia

Region: Approximately 10 hectares in Sudirman CBD, DKI Jakarta

(Source: : http://www2m.biglobe.ne.jp/~ZenTech/world/map/Indonesia/Indonesia_Outline_Map.htm

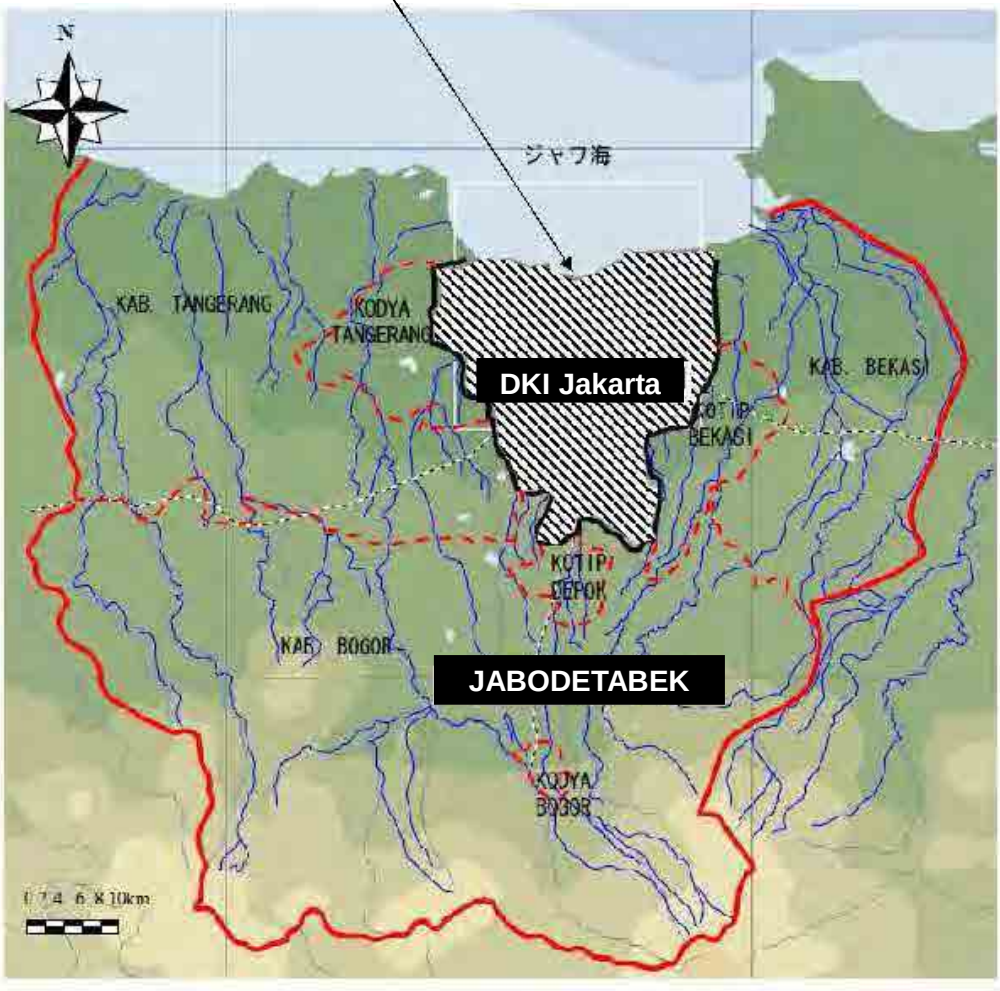


Figure-1.1.1 Location of DKI Jakarta (Source: Maps of various types prepared by Study Team)

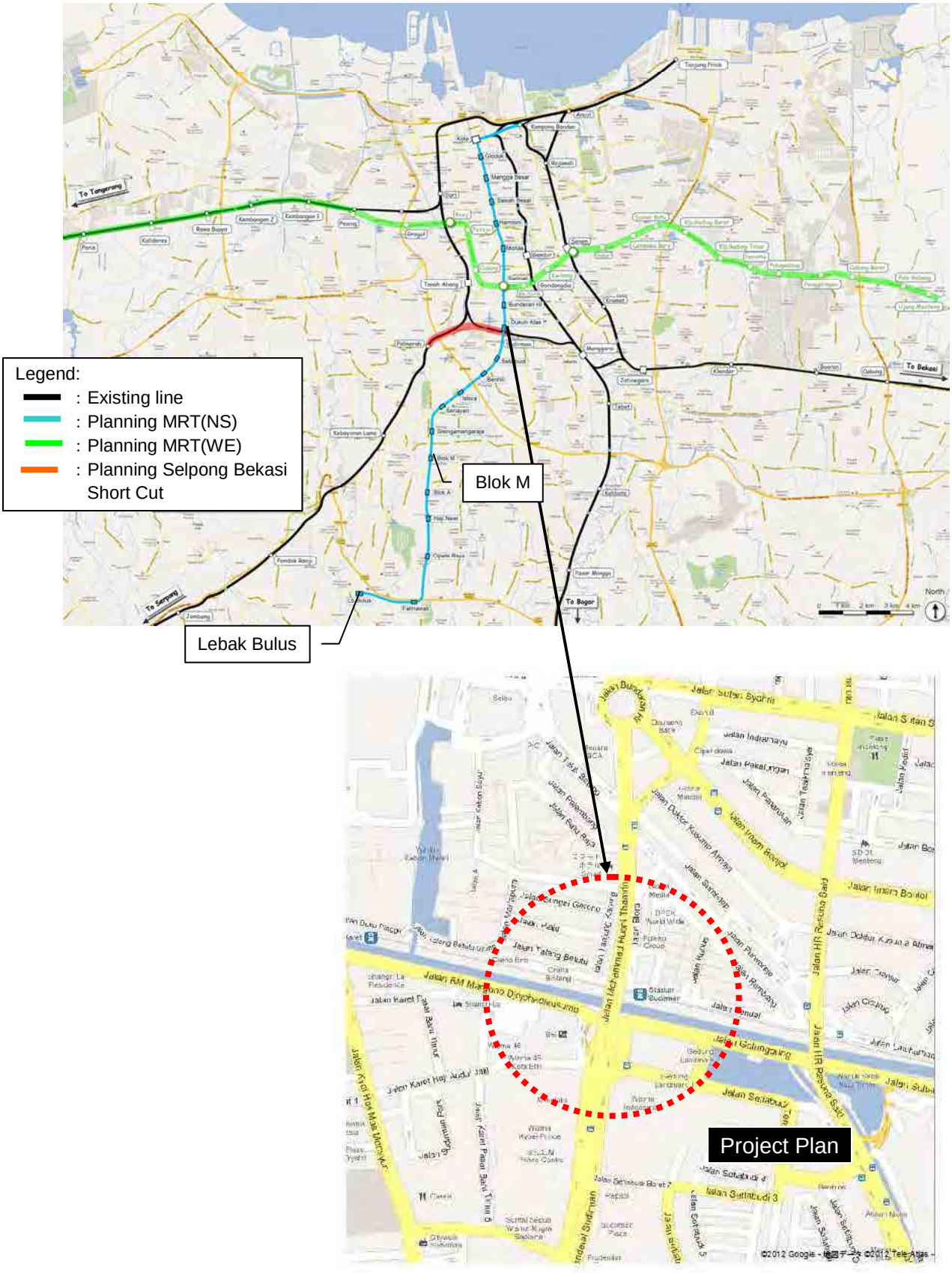


Figure-1.1.2 Project location （Source: Study Team）

1.1.2 Purpose and background

1) Background

(1) Conditions in Indonesia

The population of Indonesia is approximately 228 million persons, according to a 2008 government estimate, making it the fourth most populated country in the world. Indonesia has the world's largest Muslim population, as its people are 89% Muslim, less than 9% Christian, and less than 2% Hindu. Composed of more than 17,500 islands having a total land area of 1.89 million km^2, Indonesia is about five times the size of Japan.

The economic growth rate averaged approximately 7.3% from 1990 to 1996, but in 1998, Indonesia experienced negative growth of 13.13% due to the Asian currency crisis. The economy then recovered gradually, with an average economic growth rate of 5.2% from 2000 to 2008, achieving a relatively stable rate of growth. Growth slowed to 4.63% in 2009 during the global financial crisis that followed the 2008 bankruptcy of Lehman Brothers in the U.S. However, the country's economic growth recovered thereafter, to 6.20% and 6.46% in 2010 and 2011 respectively. As of the end of September 2012, the International Monetary Fund predicts that Indonesia will experience growth of 6% and 6.3% in 2013 due to the effects of the global economic downturn. Because Indonesia showed steady economic growth while many countries, including ASEAN nations, fell into negative territory, it is receiving attention as a country that can be expected to exhibit stable growth with its abundant natural resources.

(2) Current status and issues of the Jakarta capital region

The population of the overall Jakarta capital region grew to approximately 1.4 times over the 15-year period from 1990 (approximately 17 million) to 2005 (approximately 24 million), showing an average annual growth rate of 2%. In recent years, there has been a steady increase in traffic volume from the suburbs of Jakarta, which have experienced large population increases, to central Jakarta. Further increases in traffic volume are anticipated in the future due to population growth and an increasing rate of vehicle ownership.

The main urban problems facing the Jakarta capital region include flooding, garbage, traffic congestion, and environmental pollution, but flooding and traffic congestion are particularly serious problems.

One of the major reasons for the city's traffic congestion is that roads are not being developed; although more than 700,000 new cars are produced each year. There is even traffic congestion between industrial parks and the city's harbor, and this has a severe impact on industrial activity.

(3) Policy of the Government of Japan on aid to Indonesia

Indonesia is an important partner for Japan, both politically and economically, and the two countries have maintained a friendly relationship for a long period of time. Indonesia and Japan also have a close relationship of mutual interdependence in economic aspects such as trade and investment.

In July 2008, the economic cooperation agreement between Japan and Indonesia went into effect, and in December of 2010, both governments signed a memorandum of understanding for a special regional initiative to promote investment in the capital region,

the Metropolitan Priority Area for Investment and Industry (MPA). In this way both countries have agreed to cooperate in the area of infrastructure construction, and further strengthening of bilateral economic ties is expected.

To achieve further economic growth, Indonesia needs to improve the business and investment environment through the improvement of various regulations and systems and infrastructure construction, based on deeper economic cooperation in the Asian region, and to train highly skilled workers.

Japan's Aid Policy for the Republic of Indonesia (April 2012) specifies "assistance for achieving further economic growth" as one of its key policies, and includes the "Shipment and Transport Environment Improvement Program for the Jakarta Capital Region" for infrastructure construction in the capital region among the assistance measures designed to achieve this policy. Under this program, the transport and transportation environment will be improved to promote investment in the Jakarta capital region in order to achieve further economic growth and create employment opportunities. This program is consistent with the aforementioned policies in that it helps to improve the transport capacity of the mass transit network.

(4) Development policy and intentions of the Government of Indonesia

The development plans of the Government of Indonesia at the national level consist of a 20-year long-term national development plan and a five-year medium-term national development plan. The current long-term plan is a plan for 2005 to 2025 that was put into effect by a 2007 law, and the current medium-term plan is the second medium-term plan (2010-2014), which began after the end of the first medium-term plan (2004-2009). The medium-term national development plan for 2010-2014 states the following development goals for the transport sector: (1) Expanding transportation infrastructure and transportation capacity, (2) Improving access to transportation infrastructure, (3) Improving the safety of transportation infrastructure, (4) Restructuring systems related to transportation services, and (5) Measures for climate change (mitigation measures and adaptation measures). In the urban transport sector, the plan indicates MRT as particularly necessary for strengthening the railway network.

In the area of Dukuh Atas Station on the Jakarta MRT north-south line, the Directorate General of Railways of the Indonesian Ministry of Transportation has a plan to add a connection to the western line by way of a Serpong line shortcut, a loop line plan, and an airport line plan; and therefore, it is strongly expected that this will involve construction of a transportation plaza on artificial ground, underground development, and networks with surrounding buildings.

The MRT administration company, which is in charge of the Jakarta MRT north-south line, has also formulated a redevelopment plan for the area of Dukuh Atas Station, and it is considered that it will be possible to complement and collaborate with them through this project.

Both parties have an understanding that the cooperation of private businesses in development of commercial applications both above and below ground and in the artificial ground portion in this area will help to rationalize the development project, reduce the public burden, and produce earlier investment effects, and there is a growing recognition

that it may be appropriate to pursue the possibility of a PPP initiative, combining ODA with private investment.

(5) Situation of railway development based on Japanese ODA in the Jakarta capital region

At present in this area, outsourcing of planning and execution design based on Japanese ODA are underway for Dukuh Atas Station (intermediate underground station) of the DKI Jakarta Mass Rapid Transit line (hereafter "MRT north-south line"), which passes through South Jakarta, Central Jakarta and North Jakarta. Investigation and studies are also underway concerning a shortcut connecting to the western portion of the Serpong line, a plan for an urban railway loop line, and connection to the airport line from Sukarno-Hatta International Airport in a plan to increase transport capacity in the Jakarta metropolitan area under a JICA survey. However, no comprehensive plan has been formulated concerning transfers among lines and development of transportation hubs, and there is concern that the facilities to be constructed may be inconvenient for users.

(6) Need for infrastructure development in the Jakarta capital region

Most of the economic activity in the Jakarta capital region is concentrated in DKI Jakarta, and the increase in the volume of commuters traveling from surrounding cities to DKI Jakarta and the traffic congestion at peak times due to commuter traffic are now serious problems. The level of satisfaction with public transit on the part of commuters in Jakarta is the lowest of any major city in Asia, and the need for construction of a large-scale public transport system in particular is extremely high.

This project is in alignment with the priority areas for Japanese aid, as it will build transportation hub space for subway station and railway station use in the central part of the Jakarta capital region, build infrastructure that will provide a basis for attraction for the revitalization of districts linked with the neighborhood around the station, improve services for railway users, and promote a modal shift to public transportation. It is highly appropriate and necessary to support the project, considering also that Dukuh Atas Station and the Sudirman railway station are located in this area and could potentially be moved underground in the future.

2) Purpose

This project will create a highly convenient urban space centered around the railway stations in the central part of the Jakarta capital region, where multiple railway lines are to connect, through transportation hub development for use of the railway stations (underground walkway, transportation plaza on artificial ground above the canal, bus terminal, etc.) and commercial facility development using the space around it. In addition, the project will increase railway ridership by creating a high quality urban space, thereby alleviating the increasingly severe traffic congestion of the capital region and helping to improve the investment environment in the capital region.

The purpose of this endeavor is to perform a survey to confirm the appropriateness, effectiveness, efficiency, etc. of a development project using private capital, for the sake of implementation of the project.

The project will be evaluated after surveying the current status and issues of this area, which faces many problems, and conducting general infrastructure development planning, based on views and trends among persons related to the Indonesian government. In addition, approximate project costs will be calculated in accordance with the proposed infrastructure development plan; the project scheme will be studied, including the division of roles and costs between the public and private sector portions; the appropriateness, efficiency, etc., of the project will be evaluated; and a comprehensive evaluation will be performed, based on the results of risk studies.

1.1.3 Necessity and appropriateness of the project

1) Conformity to development aims of the DKI Jakarta government

The DKI Jakarta government has established a public transport development plan whose main components are the construction of transport-related facilities, the implementation of transport reduction measures and the construction of a mass transit system. Of these components, measures to strengthen public transport comprise the construction of a public transport infrastructure including busways, monorails and a mass rapid transit (MRT) system, the connection of station facilities with the urban facilities in front of the station, and other measures to provide improved convenience. This will enhance the public transport network and provide improved connectivity, reliability, comfort, and efficiency and improve the level of service both qualitatively and quantitatively, thereby attracting users from the following directions:

- Improved connectivity between the Jakarta urban zone and the transit systems of surrounding regions, improving access to public transport
- Construction of a major road network and expansion of the bus and rail track transport network
- Encourage use of the mass transit system
- Improved utilization factor for bus, rail and other public transport and reduction of the use of private vehicles

The purpose of this project is to improve convenience for users through enhanced connectivity between station facilities and the bus system and connections with urban facilities, and therefore it is consistent with the transport development policy of the Jakarta government.

2) Situation of Japanese ODA based railway development in DKI Jakarta

At present in this area, planning and execution design ordering are underway for Dukuh Atas (intermediate underground station) of DKI Jakarta Mass Rapid Transit (below, "MRT north-south line"), based on Japanese ODA. Investigation and studies are also underway concerning a shortcut connecting to the western portion of the Serpong line, a plan for an urban railway loop line, and connection to the airport line from Sukarno-Hatta International Airport in a plan to increase transport capacity in the Jakarta metropolitan area under a JICA survey. However, no comprehensive plan has been formulated concerning transfers among lines and development of transportation hubs, and there is concern that the facilities to be constructed may be inconvenient for users.

3) Status of BRT plan in DKI Jakarta

The Transjakarta bus rapid transit (BRT) routes in the Jakarta capital region consist of 11 routes as of 2012. These routes have 181 stops and extend for a total length of 172 km. Plans call for the BRT system to be expanded to 15 routes by 2020. At present, three routes go to Dukuh Atas Station. The new route plans have not yet been announced.

4) Need for infrastructure development

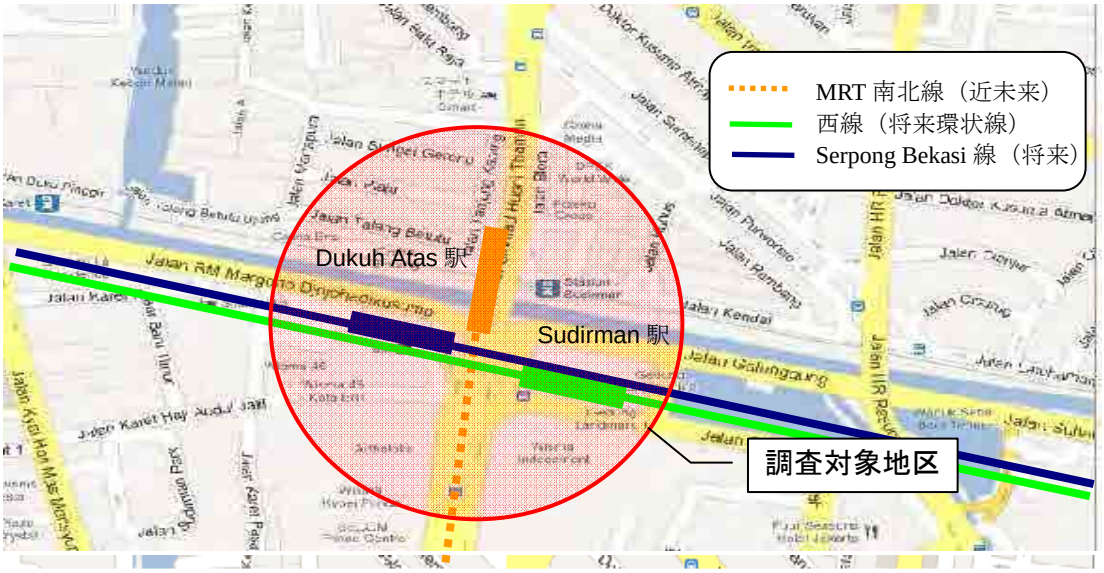
In the Jakarta capital region, which suffers from severe traffic congestion, construction on the MRT north-south line is currently proceeding with support from yen denominated loans.

This project is in alignment with the priority areas for Japanese aid, as it will build transportation hub space for subway station and railway station use in the central part of the Jakarta capital region, build infrastructure that will provide a basis for attraction for the revitalization of districts linked with the neighborhood around the station, improve services for railway users, and promote a modal shift to public transportation. It is highly appropriate and necessary to support the project, considering also that Dukuh Atas Station and the Sudirman railway station are located in this area and could potentially be moved underground in the future.

1.2 Project overview

1.2.1 Scope of project

The scope of this survey is the area around Dukuh Atas Station on the Jakarta MRT north-south line in DKI Jakarta, Indonesia.



Source: Study Team

Figure-1.2.1 Scope of survey

1.2.2 Focus of project

The main points of this project are summarized below.

- The project is aimed at integrated development of the area through network formation with consideration for transportation hub establishment and collaboration with development of the surrounding area.
- It will support comprehensive development including an underground walkway and artificial ground above the canal, with consideration for plans at Sudirman Station that include an aboveground station, an underground station (to be included in future planning) and an elevated structure plan.
- It will propose an attractive project scheme that allows easy participation by private investors.

1) Formation of a transportation hub and development of artificial ground, underground walkway, etc.

An underground walkway and artificial ground will be used to form a three-layered network (underground, surface, and overpass road surface) within the public land of canal, railway, and road space, and a transportation hub space will be formed through compositive, integrated linkage of the railway station, connecting public transport systems, walkway, and transportation plaza, etc.

Stores and other commercial facilities are planned in the underground plaza and underground walkway, making use of the dynamism of the private sector. On a portion of the artificial ground as well, service facilities for railway users are planned.

2) Three-dimensional use of public land to develop a compositive transportation hub

Because there is great difficulty in securing land for transportation infrastructure in central DKI Jakarta, three-dimensional use of the public land of canal, railway, and road space, etc., is planned in this project, in order to realize transportation infrastructure at an early stage in conjunction with the process of development of the Jakarta MRT north-south line, and to produce positive effects at an early stage.

3) Linkage and integration of transportation base with surrounding development by forming a pedestrian network above and below ground

To promote linkage of this transportation base with the neighborhood of Dukuh Atas Station, where further development is anticipated, a pedestrian network connecting the two is planned. This network will be effective in attracting users to public transportation, because it will expand on plane the range of pedestrian movement and provide more convenient access to destinations in the surrounding neighborhood. This can also be expected to improve the business profitability of commercial facilities in the area and to enhance the asset value of connected private sites by increasing foot traffic. Therefore, it will increase the level of integration as an urban base while strengthening linkage with the neighborhood and contributing to its functioning as a business and commercial base.

4) Use of space above subway and artificial ground

In conjunction with the construction of Dukuh Atas Station on the Jakarta MRT north-south line (three levels below ground), the possibility of utilizing a portion of the space above the

station to develop a public walkway and transfer facilities will be studied. The subway station is already in the bidding stage, and the plans cannot be changed in a way that would have a significant impact on its structure; however, it may be possible to use the space effectively if this can be accomplished within the restrictions.

Similarly, it would be less expensive to construct service facilities above the artificial ground, compared to the case of acquiring other land; and it may be possible to use the space effectively if this can be accomplished within a variety of restrictions.

5) Improving maintenance of public facility spaces while reducing costs
By introducing service facilities above the underground walkway and artificial ground, it will be possible to improve the quality of maintenance and management after completion of the station base; and in addition, income from the private investment facilities can be used to cover a portion of the expenses, resulting in an ongoing reduction of the public burden.

1.2.3 Project overview

This project involves various types of infrastructure development to optimize the functioning of the Dukuh Atas Station area as a transportation hub, with consideration for transfers among the existing western line and the planned MRT north-south line, Serpong-Bekasi line, airport access line, and TransJakarta lines 4 and 6. In addition to the existing Sudirman Station, and Dukuh Atas Station whose construction is already planned on the MRT north-south line, it is intended to provide smooth transfers with other means of transportation (Serpong-Bekasi line, airport access line, TransJakarta, general buses, taxis, general cars, etc.), and to promote integrated development with buildings surrounding the station.

In the plan, the first level below ground will include an underground walkway that will link the concourse of Dukuh Atas Station on the MRT north-south line with the existing Sudirman Station, without the need to come up above ground amid the surrounding development area. Also, at the same height as Thamrin/Sudirman street level, artificial ground will be constructed above Banjir Kanal for development of a transfer plaza for users of the stations of TransJakarta lines 4 and 6, general buses, taxis, and cars, and the railway station. This is the same height as the concourse level of the existing Sudirman Station, and while forming a comfortable urban space that provides a smooth connection from the north side of Banjir Kanal to its south side, this plan will also deliver the benefit of encouraging development in the surrounding area.

[General scale of public facilities]

- Underground walkway: Effective width 10 m x height 62 m x depth 17.1 m,
  Effective width 8 m x height 64 m x depth 8.4-11.0 m
- Area of artificial ground: Approximately 8,000 m^2 (east side),
  Approximately 8,000 m^2 (west side)

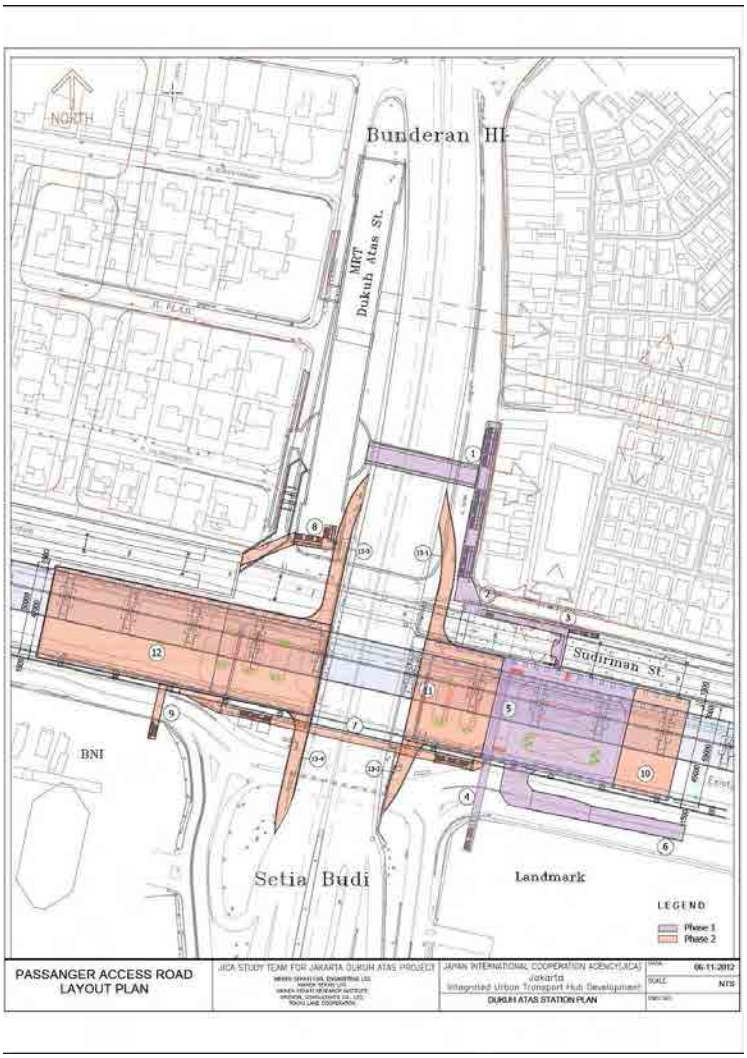
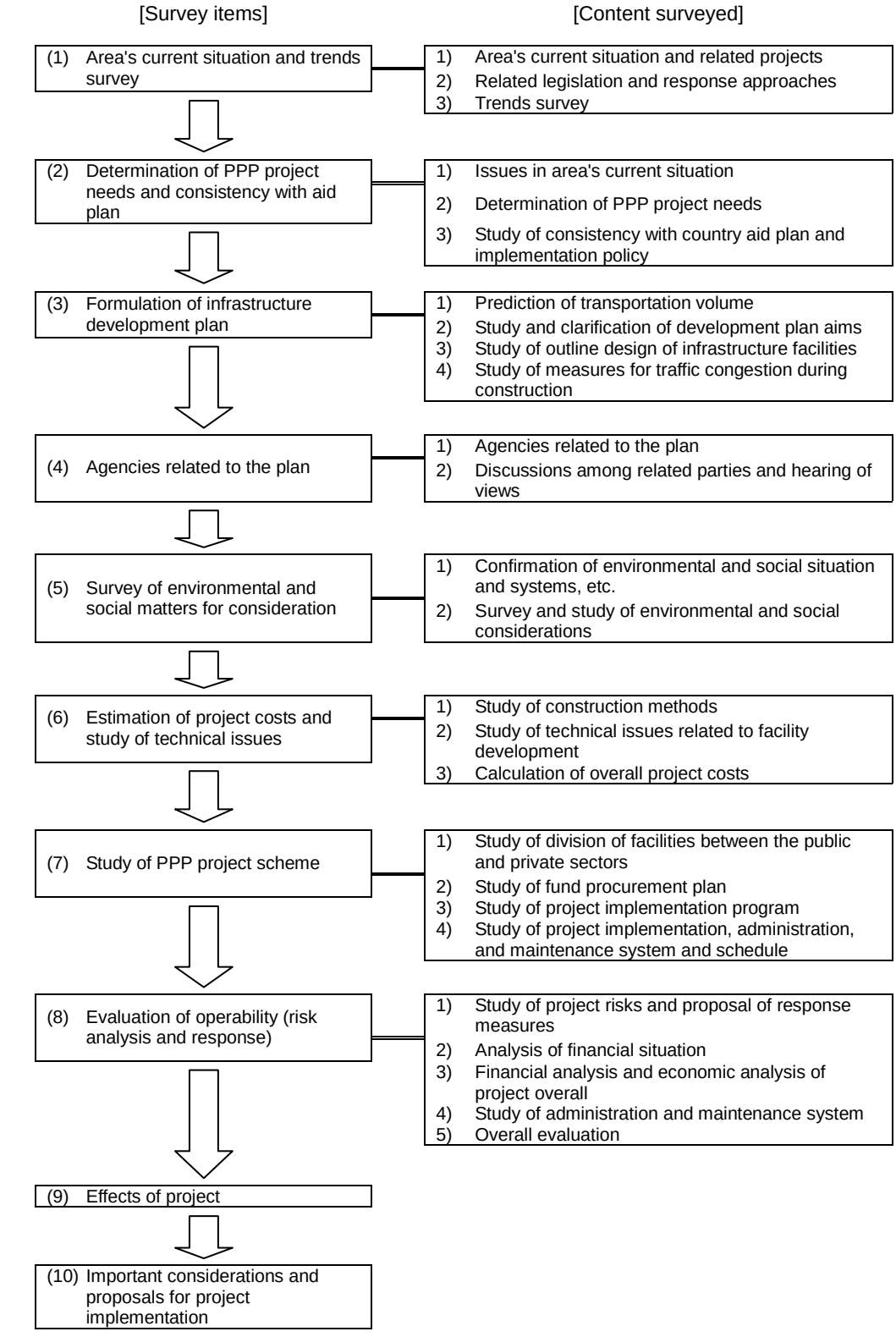


Figure-1.2.2 Public facilities to develop（Source: Study Team）

1.3 Survey implementation framework

1.3.1 Content of survey

The content of the survey is as given in Figure-1.3-1. below.



Source: Study Team

Figure-1.3.1 Content of survey

1.3.2 Survey implementation framework

The implementing organizations of this survey on the Indonesian side are the National Development Planning Agency of the Ministry of National Development Planning (BAPPENAS), the DKI Jakarta Capital City Government, and the Directorate General of Railways of the Ministry of Transportation (DGR).

Technical and practical consultations and discussions with a working group centered around BAPPEDA of DKI were held for the sake of smooth implementation of the survey. In addition, study meetings were held with a steering committee which was organized to study the content of survey operations with regard to major items; and the survey is being implemented alongside efforts to build consensus.

The composition of the steering committee is as follows.

Table 1.3.1 Steering Committee

	Affiliation	Position
Chairman	Ministry of National Development Planning	Deputy Minister
Vice chairman	Public Private Partnerships Development, BAPPENAS	Director
Vice chairman	Regional Development Planning Board, DKI Jakarta	Head
Member	Directorate of Transportation, BAPPENAS	Director
Member	Directorate of Urban and Rural Development, BAPPENAS	Director
Member	Directorate General of Railways, Ministry of Transportation	Director General
Member	Directorate General of Water Resources, Ministry of Public Works	Director General
Member	Directorate of Rivers and Shores, Directorate General of Water Resources, Ministry of Public Works	Director
Member	BBWS Office, Directorate General of Water Resources, Ministry of Public Works	Director
Member	Financial Policy Agency, Ministry of Finance	Director General
Member	Financial Risk Management Center, Ministry of Finance	Director
Member	Urban Planning and Environmental Supervisor, DKI Jakarta	Lieutenant Governor
Member	Industry, Trade and Trade Transport Supervisor, DKI Jakarta	Lieutenant Governor
Member	Urban Planning and Environmental Supervisor, DKI	Secretary
Member	Spatial Planning Agency, DKI Jakarta	Director General
Member	Transportation Agency, DKI Jakarta	Director General
Member	Public Works Agency, DKI Jakarta	Director General
Member	Regional Financial Supervisory Agency, DKI Jakarta	Director General
Member	Spatial & Natural Environment Bureau, DKI Jakarta	Director General
Member	PT. Mass Rapid Transit Jakarta	President
Member	PD. Pasar Jaya	President
Member	PT. Jakarta Toll Road Development	President
Member	PT. KAI	President

Source: Study Team

In addition, during the study period, from Yokohama City, an advisor of this survey, we are also introducing redevelopment case in Yokohama (Totsuka Station Vicinity Development).

Chapter 2. Circumstances of the Project

2.1 Socio-economic Circumstances

2.1.1 Socio-economic circumstances in the Special Capital Territory of Jakarta

The Special Capital Territory of Jakarta is the capital of Indonesia, and is the country's largest city. It has a population of more than 9.5 million, and in 2011 the population of the urban area including the surroundings was 22.24 million, the fourth highest in the world. It is one of the few global scale megacities in Southeast Asia. The Special Capital Territory of Jakarta which is the business and economic center is a single administrative province consisting of five administative cities, South Jakarta, East Jakarta, Central Jakarta, West Jakarta, and North Jakarta, and the group of islands known as "Thousand Islands." The area is about 662.33 km², about 0.03% of the national land, and the population of 9.5 million represents 4% of the total population of the country.

The GRDP of Jakarta in 2008 amounted to Rp565.9 trillion, or about 13.9% of the total for Indonesia (Rp3,949.3 trillion), an increase of 6.04% compared with the previous year (6.1% nationwide average). Finance, leases, and services accounted for 35% of the GRDP, followed by trade, accommodations, food and drink (20.1%), manufacturing (16.2%), services (12.8%), and all sectors apart from mining and quarrying recorded positive economic growth (2007 statistics). The value of goods exported in the period January to October 2008 was US$8.01217 billion (+4.26% compared with the same period the previous year), and the main destinations for the exports were United States US$1.32872 billion (6.58%), ASEAN countries US$2.24539 billion (28.02%), and countries other than ASEAN US$2.83723 billion (35.41%). Also, the value of exports to Europe was US$674.66 million (8.42%), and to Australia and Africa was US$395.49 million (4.94%), the exports include clothing and fibers, shoes, motorcycles, fishery products, electronics, knitwear, etc. Also, the value of imports in the year 2008 was US$53.5319 billion (-6.52% compared with the previous year). Sources of the imports included Asian countries (including ASEAN and non-ASEAN countries) US$38.71105 billion, Africa US$444.65 million, United States US$5.11689 billion, Australia and Oceania US$1.89033 billion, and Europe US$7.3689 billion, the main imports being capital goods, raw materials, consumer goods, etc. (2007 statistics).

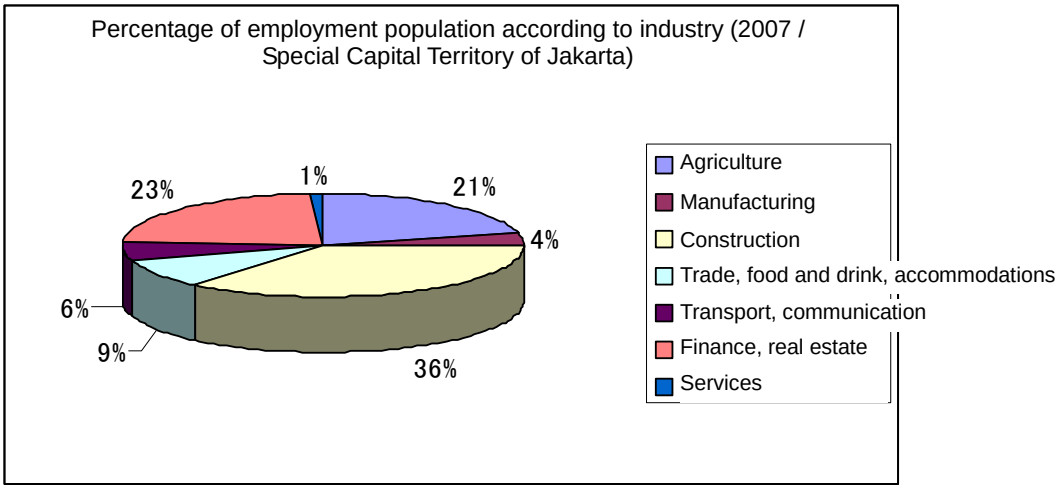
The energy consumption (BBM and electricity) and production indices (total) of industry in Jakarta is on a decreasing trend. The main reductions are in machinery and foodstuffs, but production of fibers has temporarily increased due to start of year contracts, and there were expectations for the year 2009 in Indonesia as a whole. In particular, the prospects for clothing were good, and there were many examples of switching of orders to Indonesia from RRC and Vietnam where there have been significant increases in production costs. Also, in the 4th quarter of 2008, the percentage of transport and communication related goods reached record levels.

Figure-2.1.1 Divisions of the Special Capital Territory of Jakarta

Table 2.1.1 Administrative divisions of the Special Capital Territory of Jakarta

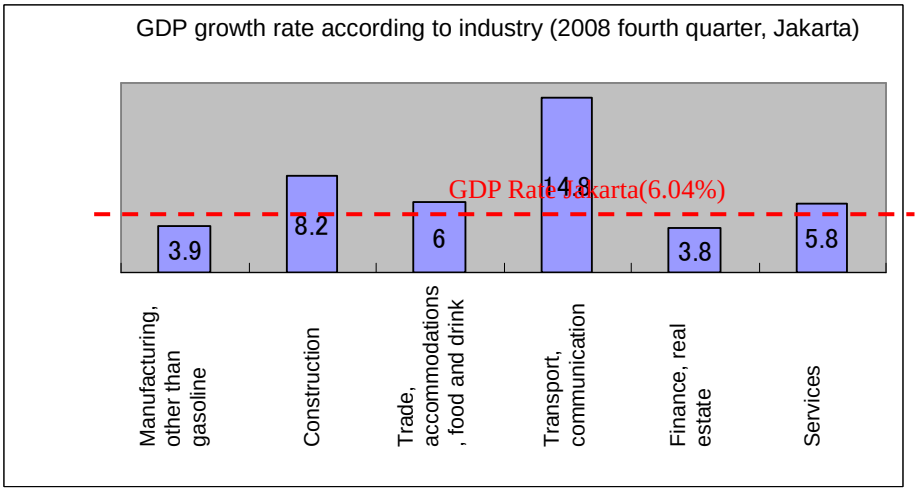
Administrative city / administrative Regency	Area (km^2)	Population (No.)	Population density (No./km^2)
South Jakarta city	141.27	2,057,080	14,561
East Jakarta city	188.03	2,687,027	14,290
Central Jakarta city	48.13	898,883	18,676
West Jakarta city	129.54	2,278,825	17,591
North Jakarta city	146.66	1,645,312	11,218
Kepulauan Seribu Regency	8.7	21,071	2,422
Total	662.33	9,588,198	14,476

Source: http://www.bps.go.id/hasilSP2010/dki/3100.pdf)



Source: Basic Information on Indonesia; ASEAN-Japan Center

Figure-2.1.2 Employment population of Special Capital Territory of Jakarta according to industry



Source: Basic Information on Indonesia; ASEAN-Japan Center

Figure-2.1.3 GDP growth rate of Special Capital Territory of Jakarta

2.2 Present circumstances of the area

2.2.1 Urban circumstances of the area

Dukuh Atas Area is the only area in central Jakarta, where as the important North-South axis of the city, Thamrin/Sudirman boulevard meets with the East-West axis of the railway from Tanah Abang to Bekasi, making it one of the most important urban transport hub in the whole city area. Along with also the current transjakarta BRT Koridor 1 serving Thamrin/Sudirman boulevard holding a station in Dukuh Atas, which is also linked with BRT Koridor 4 (Dukuh Atas – Puro Gadung), and BRT Koridor 6 (Dukuh Atas - Ragunan) making 3 BRT lines concentrating in Dukuh Atas.

On the other hand , large development areas around Dukuh Atas, like Buderan HI (Figure-2.2.4), Mega Kuningan (Figure-2.2.5), and Senayan Square (Figure-2.2.6) are all isolated from railway networks or Transjakarta BRT network, depending heavily on access by private vehicles. These are all developments not situated in a urban transport hub.

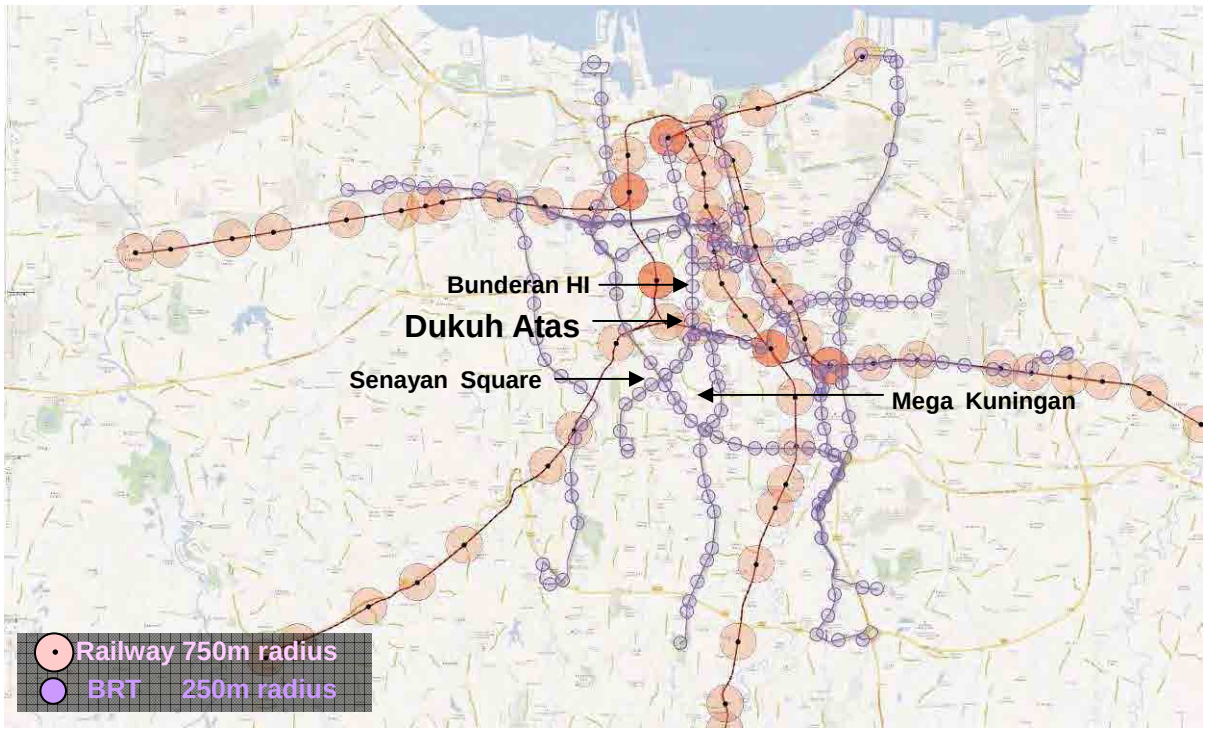


Fig-2.2.1 Public transport network and large development around Dukuh Atas
（Source：Study Team）

■ **Grand Indonesia Development**

- **High Class Development in Jakarta**
- **Development Year**
  Year 2008
- **Development Scheme**
  Land acquisition by private company
  BOT scheme (30years)
  Additional development with the existing hotel renovation
  Land owner (Hotel company) Developer (Tobacco company)
- **Area**
  Apx. 7ha
- **Floor Volume**
  Apx. 64ha (All Commercial apx.25ha, Shop area apx.13ha)
  Hotel 14 floors
  Office Tower 57 floors
  Residence Tower 56 floors
  Commercial Complex 8 floors (including SEIBU)
  Parking 3000 vehicles（excluded from volume）
- **Current Land Regulation**
  Comemrcial area, Building area 50%, Floor volume 500%, Building height 60 floors.

Figure-2.2.2 Bunderan HI Development（Source：Study Team, Google Earth）

Mega Kuningan

■ **Mega Kuningan Development**

・ **Development Company under finance from Ministry of Finance**
Promoting urban development and economic growth in Jakarta CBD

・ **Development Year**
From year 1993 onwards

・ **Development Scheme**
Part of the land owned by Ministry of Finance Transferring land rights to PT RNI with government development vision forming new BKS-PPLK (Co-operation Board of Mega Kuningan Area Development Project) with private company PT AGP (share: PRT RNI 49: PT AGP 51) Former land owners with options of compensation, consolidation, and equity participation.Land is already sold to 15 individual developers

・ **Volume**
Apx.54ha+12ha (on going)
(35ha Sold to private (80% Commercial, 20% Residence)
(19ha Public owned (infrastructure)
約 54ha＋12ha(進行中)

・ **Current Land Regulation**
Commercial Area, Building Area 45%, Volume 400%
（Past250%）

Figure-2.2.3 Mega Kuningan Development（Source：Study Team and Google Earth）

Senayan Square

■ **Senayan Square Development**

40 years development rights acquired from the Indonesian government.

BOT scheme by KOA (Kajima overseas Asia) company, with development, design, construction, and operation

- **Development Year**

From 1989 still on going

- **Development Scheme**

Former land of athletes village use in the 1962 Asian games.

40 years development rights gained from the Indonesian government

Multi-complex BOT project

PT STS (Senayan Trikarya Sempana) was formed by KOA , Bung Karno stadium operation agency BPGK(Badan Pengelola Gelora Bung Karno) holding 10% of shares.

After the BOT contract is finished, it would be handed back to the government.

- **Floor Volume**

Apx.20 ha
Year 1996
Shopping center “Plaza Senayan”
Year 1997
18 Floors office building ”Central Senayan I”
Year 1998
High story apartment “Apartment Plaza Senayan”
（24Floors A building、28Floors B building）
Year 2005
Multi complex amusement “Plaza Senayan Arcadia”
Year 2008
28 Floors office building “Central Senayan II”

- **Current Land Regulation**

Commercial Area, Building area 40%, Volume 300%

Figure-2.2.4 Senayan Square Development（Source： Study Team and Google Earth ）

Looking closely at the 1km radius area of Dukuh Atas, A flood prevention canal called Banjir Kanal intersects with the Thamrin/Sudirman boulevard in Dukuh Atas. In the north there is Bunderan HI district where are high class malls and hotels in Grand Indonesia and Plaza Indonesia, and also the Japanese embassy is situated. And in the south there is Setia Budi district, where head offices of major Indonesian companies and high class condominium are situated.

Both districts are concentrated area of high volume high density developments, while on the other hand Dukuh Atas is an only area with low volume, high density, left out from the massive development around Jakarta CBD area.

The reasons for Dukuh Atas being undeveloped all these years can be evaluated from the situation that the flood canal bringing minus image from pollution and annual flood to the area, and also the Sudirman bridge separating area with elevation, making it hard to bring the area into high volume high density usage. Also the area north east area of Dukuh Atas belongs to the Menteng area which has a long and complicated history, complexity in land ownership around the area.

But on the other hand, Dukuh Atas is an area where the main public transport axis of Transjakarta koridor 1 connecting Blok M to Kota and koridor 6 which operated in the Kuningan area meets, also the commuter line railway from Bekasi to Tanah Abang with the Sudirman station in the Dukuh Atas area, where many passengers use it for the access to the other CBD areas of Jakarta, it is the most important transportation hub in the city.

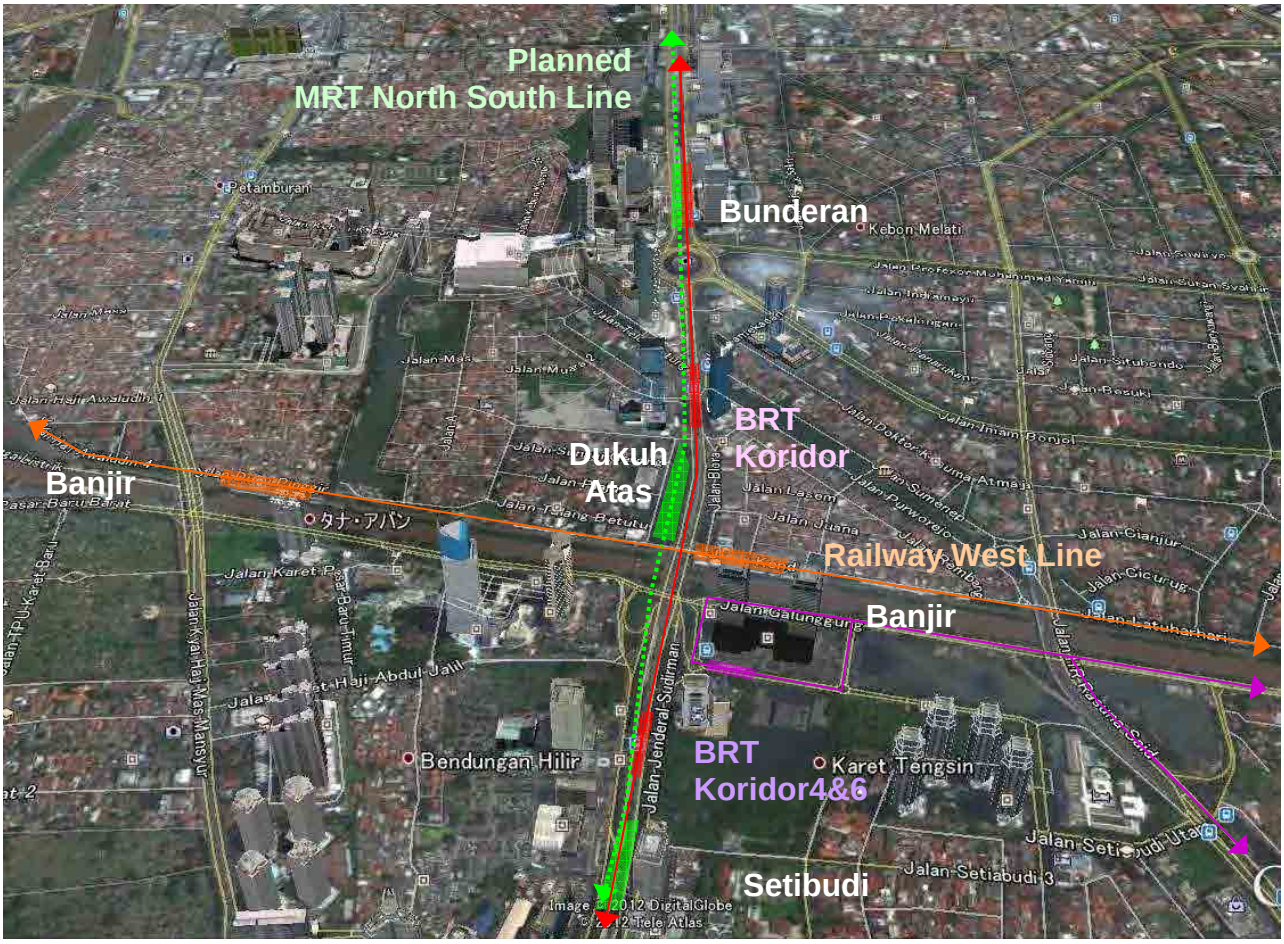


Figure-2.2.5 1km radius of Dukuh Atas and its urban situation
（source：Study Team and Dukuh Atas）

Around the 1km radius of Dukuh Atas, there are 4 commercial buildings with over 1ha of floor area.

Table-2.2.1 Dukuh Atas 1km radius commercial building over 1ha floor area
（Source：Study Team）

Building Name		Floor Area(㎡)	Remarks
1	City Walk Sudirman	26,700	Low-rise: 4th floor, Luxury-oriented commercial complex, High-rise: Housing
2	Plaza Indonesia	40,000	Low-rise: Hotel (Grand Hyatt), Luxury-oriented commercial complex, Housing, Office tower
3	Grand Indonesia	250,000	Hotel(Hotel Indonesia Kempensky) Luxury-oriented commercial complex 10th floor, Residence Tower, Office Tower
4	Thamrin City	20,700	Low-rise: 8th florr Intermediate-oriented commercial High-Rise: Residence Tower, Detached Housing

Around the 1km radius of Dukuh Atas, there are 16 office buildings with over 1ha of floor area

Table-2.2.2 Dukuh Atas 1km radius office building over 1ha floor area
（Source：Study Team）

Building Name		Floor Area(㎡)	Remarks S Class：Floor Area over 1ha, building age under 11 years A Class：Floor Area over 1ha, building age over 11 years ※CBRE American Real Estate sample factor
1	Plaza Tower	**144,320**	S Class Office
2	Wisma Nusantara	**50,400**	A Class Office
3	Graha Mandiri	**43,200**	A Class Office
4	Menara BCA	**74,000**	S Class Office
5	UOB Plaza	**81,000**	A Class Office
6	The City Tower	**49,500**	A Class Office
7	Landmark	**109,800**	A Class Office
8	BNI	**59,800**	A Class Office
9	Wisma46	**136,400**	A Class Office
10	Wisma Indocement	**28,000**	A Class Office
11	Kyoei Prince	**55,640**	A Class Office
12	Indofood	**68,400**	A Class Office
13	Wisma Nugra Santana	**30,800**	A Class Office
14	Mid Plaza	**51,600**	A Class Office
15	Chase Plaza	**44,800**	A Class Office
16	Wisma BCA	**28,200**	A Class Office

※ The floor areas of the buildings are measured according to the Google Earth map for building area and number of stories, to avoid information disparity, and it differs from the actual floor area.

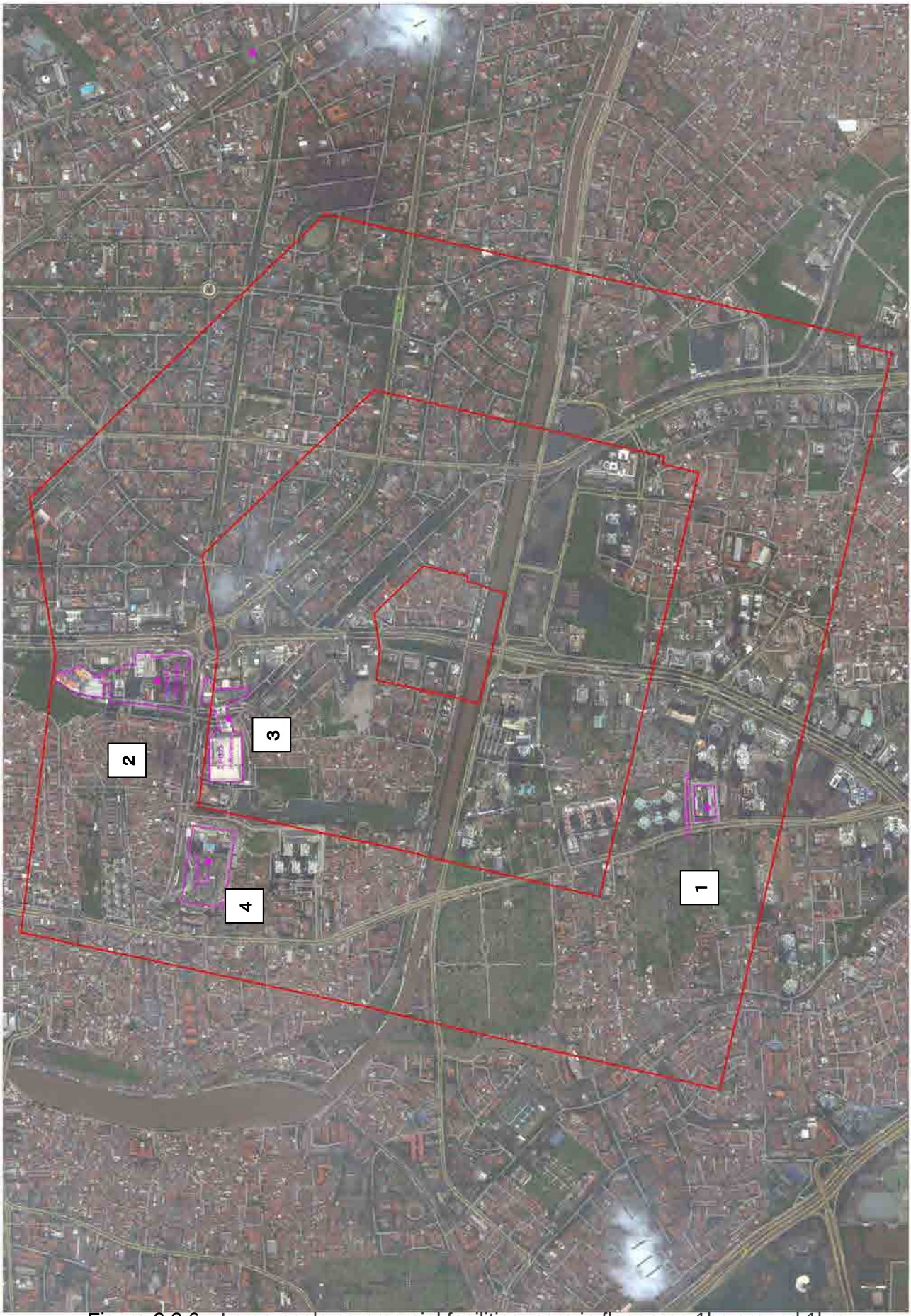


Figure-2.2.6 Large-scale commercial facilities more in floor area 1ha around 1km Dukuh Atas area (Source: Study Team)

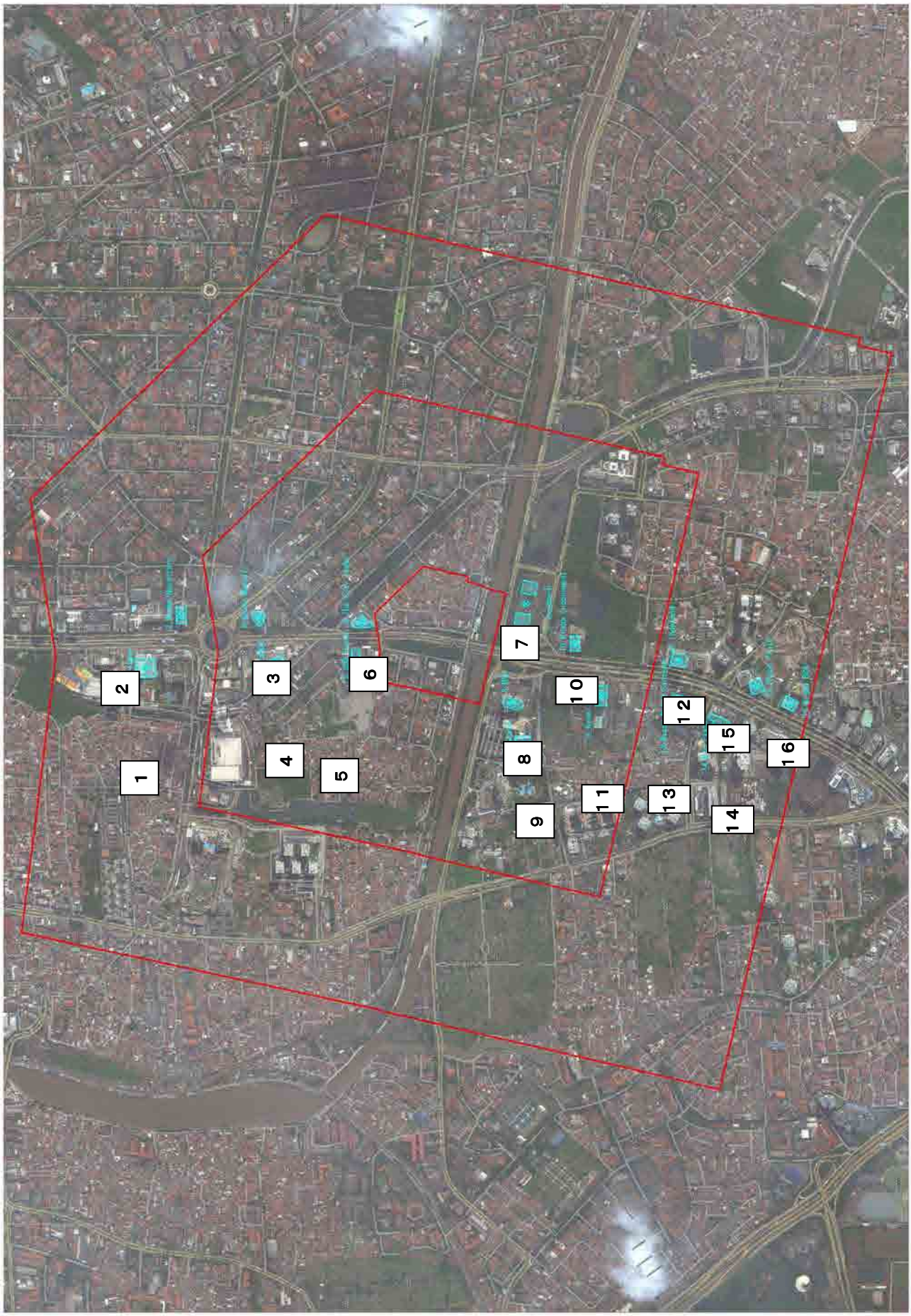


Figure-2.2.7 Office building in the vicinity of floor area of more than 1ha around Dukuh Atas area (Source:Stury Team)

The area around the project site in Dukuh Atas is located at the boundary between Central Jakarta city second district and South Jakarta city. In other words, at the southwest end of the Menteng subdistrict and the east end of the Tanah Abang subdistrict of Central Jakarta city, and the northwest end of Setia Budi subdistrict of South Jakarta city.

Tanah Abang District

Menteng district

Setia Budi district

Figure-2.2.8 Dukuh Atas Area

（Source：http://www.tataruangindonesia.com/）

Dukuh Atas area is situated in both two city districts (Jakarta Pusat and Jakarta Selatan) making it hard to gain accurate data as an single area, there for combined data of annual statics of sub-district from the separate districts are used to analyze it's current population and population density of the area.

Table-2.2.3 Tanah Abang,Menteng district population

（Source：Jakarta Pusat Dalam Angka 2012, Kota Administrasi Jakarta Pusat）

POPULATION & EMPLOYMENT

Tabel 4.1.1 **Jumlah Penduduk Menurut Jenis Kelamin, Rasio Jenis Kelamin, Kepadatan Penduduk dan Kecamatan**

Table *Number of Population by Sex, Sex Ratio, Density, and Sub-District*

2010

Kecamatan *Sub-District*	Luas *Area* (km^2)	Jenis Kelamin / *Sex*		Jumlah *Total*	Rasio Jenis Kelamin *Sex Ratio*	Kepadatan Penduduk (jiwa/km^2) *Population Density (person/ km^2)*
		Laki-laki *Male*	Perempuan *Female*			
(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*
Tanah Abang	9,31	73 689	70 770	144 459	104	15 517
Menteng	6,53	33 774	34 535	68 309	98	10 461
Senen	4,22	47 287	47 253	94 540	100	22 583
Johar Baru	2,38	58 925	57 336	116 261	103	48 849
Cempaka Putih	4,69	43 616	41 234	84 850	106	18 092
Kemayoran	7,25	109 072	106 259	215 331	103	29 701
Sawah Besar	6,16	49 793	51 008	100 801	98	16 364
Gambir	7,59	39 170	39 252	78 422	100	10 332
Jumlah/*Total*	48,13	455 326	447 647	902 973	102	18 761

Sumber / *Source* : Sensus Penduduk 2010 / *2010 Population Census*

Table-2.2.4 Setiabudi district population

（Source：Jakarta Pusat Dalam Angka 2012, Kota Administrasi Jakarta Pusat）

Penduduk dan Ketenagakerjaan/*Population and Manpower*

Tabel 3.1 / *Table* Luas Wilayah , Jumlah Penduduk, Kepadatan Penduduk, dan Rasio Jenis Kelamin Menurut Kecamatan, 2011

Area, Population, Density and Sex Ratio by District, 2011

Kecamatan/ *District*	Luas*)/ *Area (km2)*	Penduduk Hasil Susenas 2011/ *Population*			Kepadatan *Density*	*Sex Ratio*
		Laki-Laki *Male*	Perempuan *Female*	Jumlah/ *Total*		
(1)	(2)	(3)	(4)	(5)	(7)	(8)
1. Jagakarsa	24,87	190 147	190 394	380 541	15 301	99,87
2. Pasar Minggu	21,69	143 580	160 562	304 142	14 022	89,42
3. Cilandak	18,16	132 567	119 258	251 825	13 867	111,2
4. Pesanggrahan	12,76	133 326	142 947	276 273	21 651	93,27
5. Keb. Lama	16,72	193 099	189 703	382 802	22 895	101,8
6. Keb. Baru	12,93	59 963	49 346	109 309	8 454	121,5
7. Mp. Prapatan	7,73	32 612	30 844	63 456	8 209	105,7
8. Pancoran	8,63	69 221	62 167	131 388	15 225	111,3
9. Tebet	9,03	44 303	53 949	98 252	10 881	82,12
10. Setiabudi	8,85	42 896	47 475	90 371	10 211	90,35
Jumlah/*Total*	145,73	1 041 714	1 046 645	2 088 359	14 330	99,53

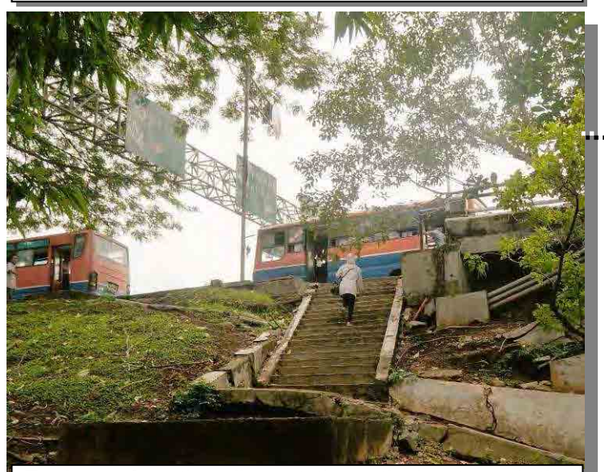
Sumber/ *Source:* Survei Sosial Ekonomi Nasional 2011

*) Berdasarkan SK Gubernur Provinsi DKI Jakarta Nomor : 171/2007
Tanggal 22 Januari 2007

Present situation in the subdistrict 1

Pedestrian's walk flow line is not provided on Dukuh Atas Bridge.

Interchange from Sudirman railway station to feeder transport is carried out on the bridge



To change from the railway station to the bus towards the city center it is necessary to pass in the opposite direction under Dukuh Atas Bridge and again climb stairs.

Figure 2.2.9 Present situation in Dukuh Atas subdistrict 1 (Source: Study Team)

Sudirman Station (station building was renovated two years ago)

Connection between Sudirman Railway Station and Dukuh Atas Bridge during rush hour

Public market PASAR BLORA standing on public space

Present situation in the subdistrict 2

The width of the pedestrian walkway on Dukuh Atas Bridge north side tunnel is less than 2m, but still during rush hour it is used by many pedestrians

The road on the west side to the south of the river is an important east-west trunk road, and traffic congestion occurs on it at all times

The road on the east side to the south of the river has congestion at the crossroads where it flows again into Sudirman Road, but is comparatively free to the east

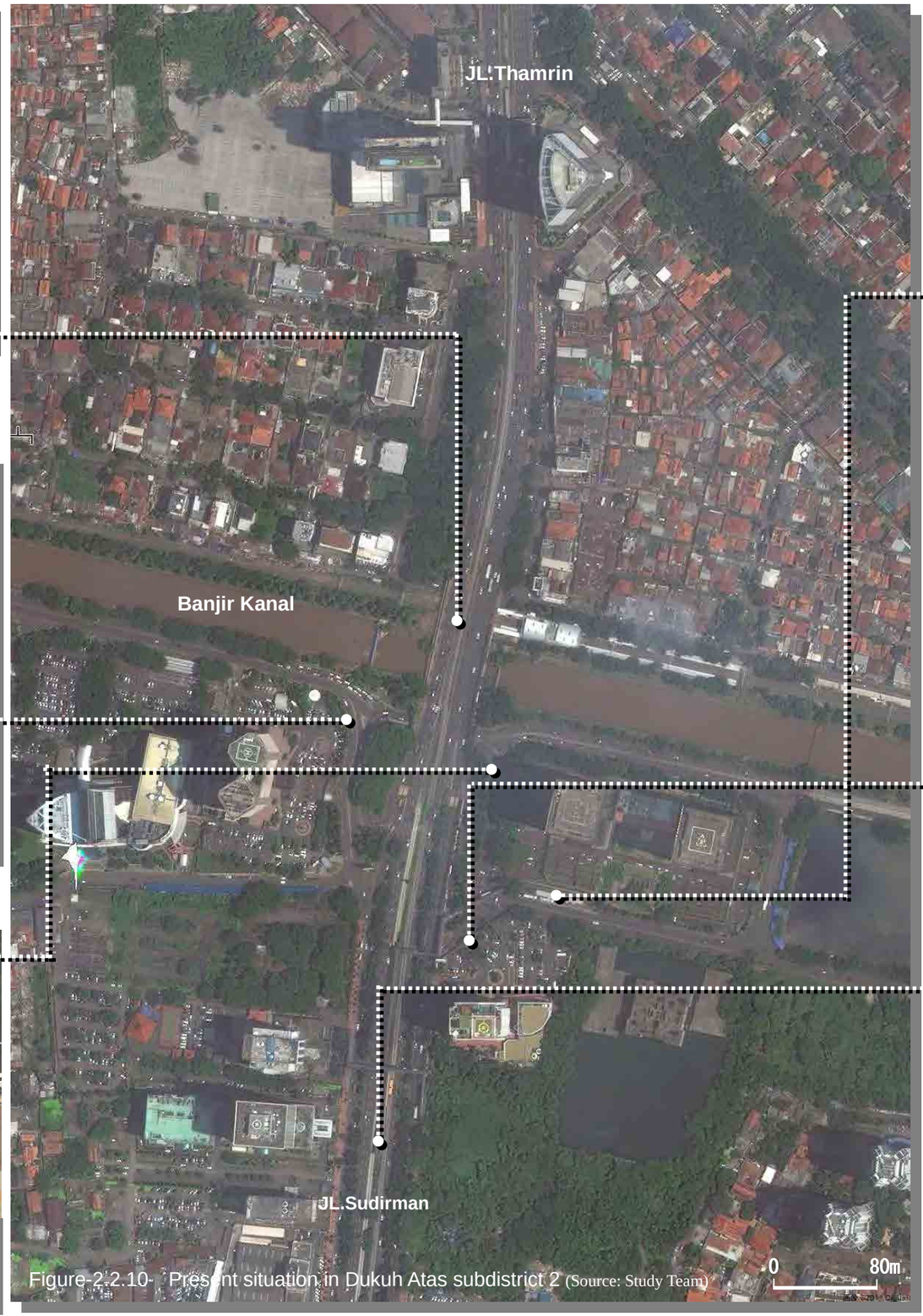


Figure-2.2.10- Present situation in Dukuh Atas subdistrict 2 (Source: Study Team)

TransJakarta Koridor 4 & 6 Dukuh Atas 2 Station

TransJakarta Connecting road between Koridor 1 and Koridor 4 & 6

TransJakarta Koridor 1 Dukuh Atas Station

Present situation in the subdistrict 3

MRT Dukuh Atas Station candidate site is currently owned by DKI JAKARTA as a green area

The northwest side is more urbanized compared with the east side, with medium- and high-rise buildings along the roads

Water supply pipe bridge crossing the river (Banjir Kanal), Banjir Kanal is a river that serves the function of flood adjustment

Figure 2.2.11 - Present situation in Dukuh Atas subdistrict 3 (Source: Study Team)

Along the roads on the northeast side are 2- to 4-story commercial buildings. Behind is a residential area

Connection between Sudirman Railway Station and Dukuh Atas Bridge

Pipe bridge crossing the river (Banjir Kanal)

3) Road traffic situation

Jakarta is plagued with traffic congestion, so in 1992 the "3 in 1" rule was introduced to relieve the congestion. This requires that during the rush hour times from 7:00 to 10:00am and from 4:30 to 7:00pm, only cars with three or more persons are allowed on the main roads within the city. However, in the center of Jakarta the number of vehicles per day has increased by more than 200, and the number of bikes by more than 900, so as of 2012, the area occupied by vehicles exceeds the area of road, and traffic is approaching the stage of complete paralysis or “gridlock.”

For the current situation of Dukuh Atas being an undeveloped area, the vehicle traffic volume created in the area is very limited. But as the area evolves into an important transport hub in the city with surrounding high volume development occurring, even considering TOD implementation, a concentrating vehicle volume from logistics cannot be avoided in the area. Therefore to analyze future traffic volume, a basic traffic study of the current situation is needed.

(1) Thamrin Road and Sudiman Road

Thamrin Road and Sudiman Roads may be referred to as the face or backbone of Jakarta, which are lined on both sides with the headquarters of banks, the main hotels, central government buildings, embassies, public department stores, and offices of various foreign companies, so it is one of the major trunk roads in Jakarta. To the north of Banjir Kanal it is referred to as Thamrin Road, and to the south as Sudirman Road. In Jakarta which has no large scale transport traffic means, the major Thamrin Road and Sudiman Road carries heavy traffic, not only during rush hour but there is always traffic congestion, and during the commuting hours the "3 in 1" rule is implemented.

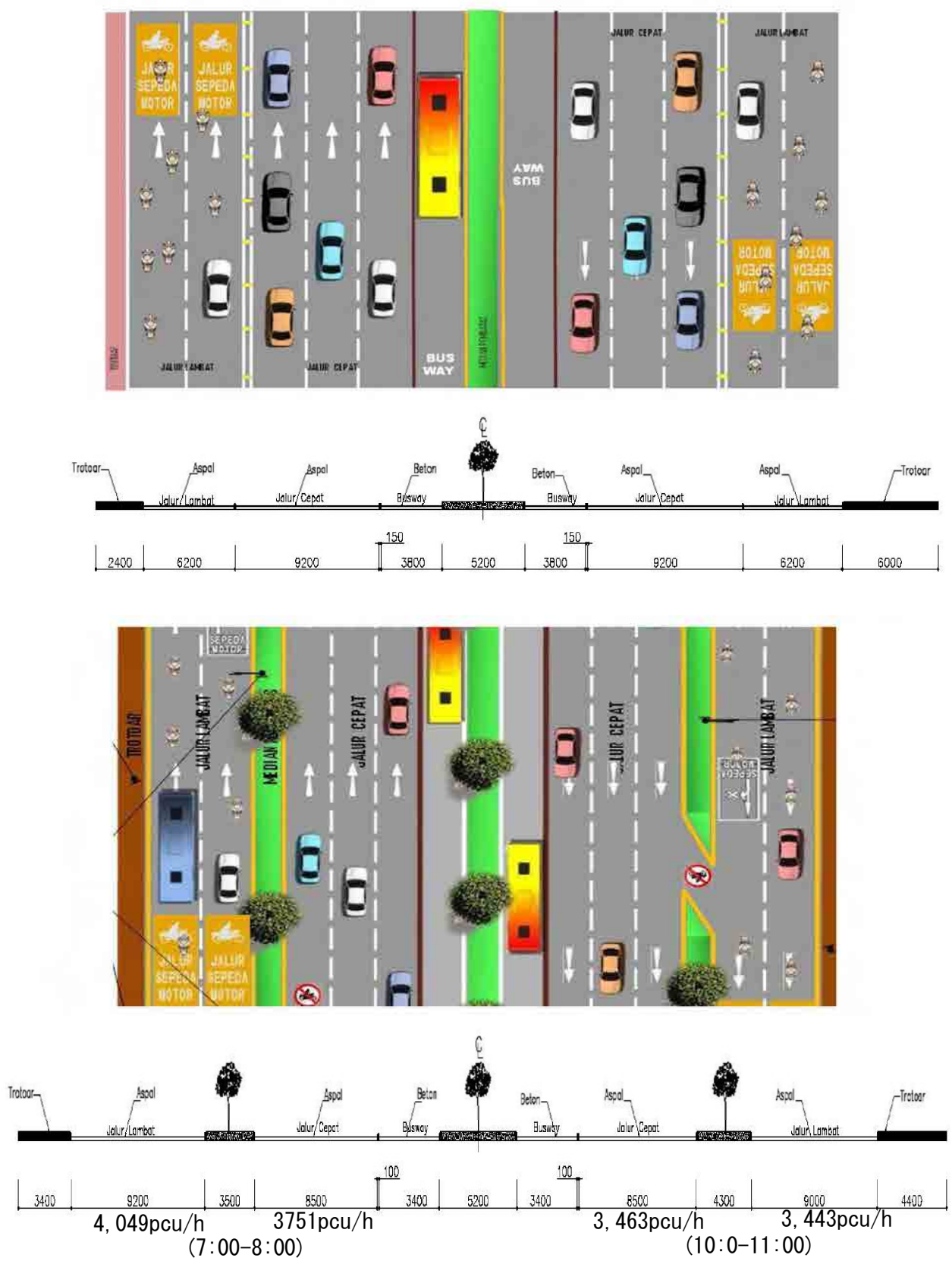
The planning area is situated around the bridge crossing of the Banjir Kanal, therefore the road composition in the area is 3 lanes + BRT lane + pedestrian sidewalk in one direction. The road composition on the north (Thamrin boulevard) and south (Sudirman boulevard) have both 2 sub-lanes 3 main-lane + BRT lane, therefore the Dukuh Atas area is creating a bottle neck, having more aspects to create a traffic congestion in the area.

The actual traffic volume of the Sudirman boulevard close to Dukuh Atas gained from the past studies in north side of semanggi interchange, record 160,000 vehicle / day, 15,000 vehicle/ hour for peak time, and could be classified in the Japanese road standard as Type 4 Class 1 road.

Dukuh Atas 1 Station of TransJakarta Koridor1 is about 250 m to the south of Banjir Kanal, and connects with Dukuh Atas 2 Station of TransJakarta Koridor 4 & 6.

Source: Study Team

Figure-2.2.12 Thamrin Road and Sudiman Road



Morning Peak Time north side of Semanggi intersection July-September 2010

Figure-2.2.13 Thamrin/Sudirman Road Lane configuration

（Source：Engineering Consulting Services for Jakarta Mass Rapid Transit System Project）

(BASIC ENGINEERING DESIGN REPORT (FINAL))

(2) R.M. Margono Djojohadikoesoemo Road, Galunggung Road

(a) R.M. Margono Djojohadikoesoemo Road

This is a road that extends east-west along the south side of Banjir Kanal from Karet to Sudirman Road. Due to the complicated crossroads with the Sudirman Road underpass tunnel, there is always congestion on the east side of the road on the two lanes on one side. Also, it is planned to use the central reservation of this road for a monorail (or the BRT scheme).


Source: Study Team

Figure-2.2.14 R.M. Margono Djojohadikoesoemo Road

(b) Galunggung Road

This is a road that extends east-west along the south side of Banjir Kanal from Sudirman Road to HOS.Cokrominoto Road. The road has one lane per side, and only along the westbound lane in a landmark district is there a dedicated BRT lane. To the west of the landmark district there is a dedicated BRT lane (both directions) in the center of the road. A monorail (or a BRT scheme) is planned that will use the central reservation of this road.

Source: Study Team

Figure-2.2.15 Galunggung Road

(3) Blora Road, Tanjung Karang Road

(a) Blora Road

This is a one-way road to the east of Thamrin Road up to Sudirman Station. The road is wide enough in places for two to three lanes, but at the T-junction signal there is confusion between right turning vehicles and left turning vehicles, and during times of congestion vehicles are two

abreast turning right and are in a single line turning left. The further north, the more vehicles are parked on the road.

Vehicles can U-turn in front of the Sudirman station through Thamrin Road via Tanjung Karang Road and coming out onto Thamrin Road. Therefore when the rotary in front of Hotel Indonesia is restricted there is great congestion caused by vehicles doing a U-turn there.


Source: Study Team

Figure-2.2.16 Blora Road

(b) Tanjung Karang Road

This is a road with one lane in each direction on the west side of Thamrin Road. It carries heavy traffic in both directions with vehicles from Thamrin Road from the north doing a U-turn via Blora Road, and vehicles from Thamrin Road from the south going towards Manggarai.


Source: Study Team

Figure-2.2.17 Tanjung Karang Road

(4) Kendal Road

This is a two lane, one-way road that extends from the front of Sudirman Road and runs along the JABODETABEK railway west line to HOS.Cokroaminoto Road. Even though the road is narrow there is heavy traffic with vehicles passing from Thamrin Road towards Manggarai.

(5) Status of Road Congestion

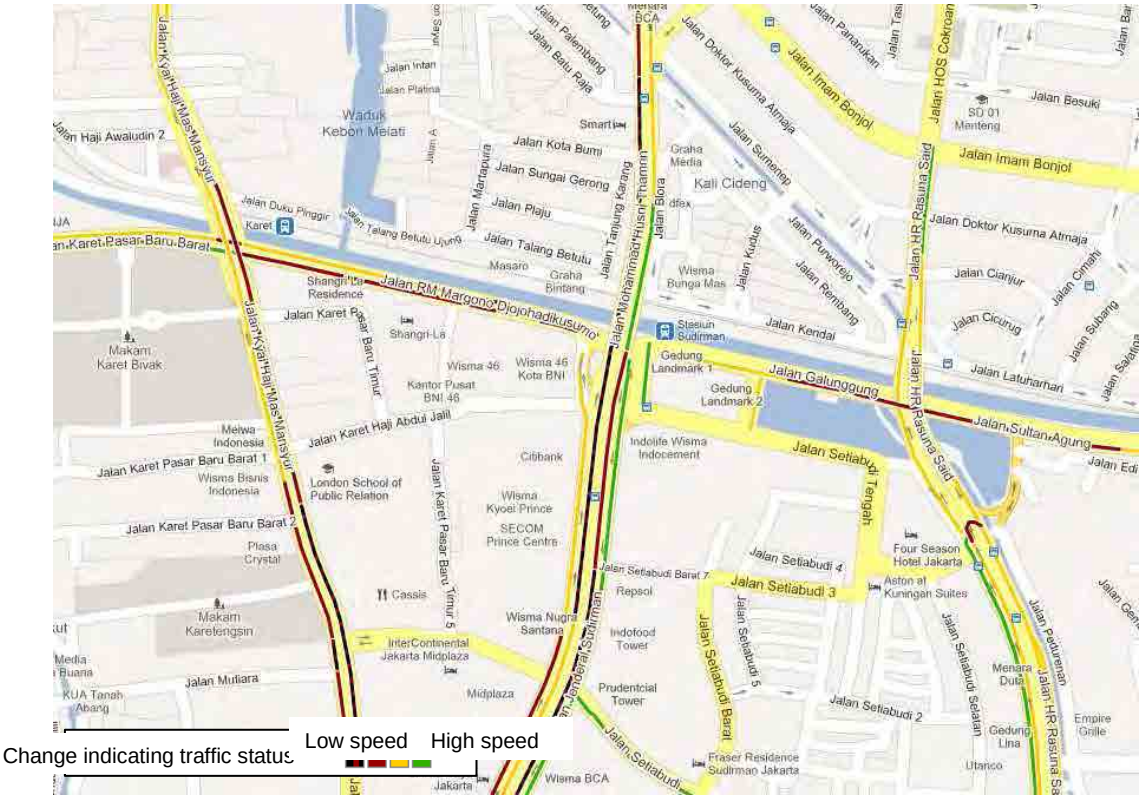


Figure-2.2.18 Traffic in the Dukuh Atas area (around 9:00 am on weekdays)
(Source: GoogleMaps)

Figure-2.2.19 Traffic in the Dukuh Atas area (around 6:00 pm on weekdays)
(Source: GoogleMaps)

At present, the heaviest traffic congestion can be seen in the Dukah Atas area around 9:00 am. There is particularly heavy congestion due to northbound traffic on Thamrin Road and Sudirman Road, to the south of the Banjir Kanal, in particular before Dukuh Atas Bridge, congestion extending to the south occurs originating at the junctions with side roads.

Also, in the south side of the Dukuh Atas area, congestion occurs on roads passing under Dukuh Atas Bridge between east and west, and these roads can be said to be the main trunk roads for east-west traffic in this area. These east-west roads (RM Margomo Djojohadikusomo Road, Galunggung Road) play an important role in connecting Rasuna Said Road which runs north-south on the east side and Kyai Haji Mas Mansyur Road which runs north-south on the west side, where during the morning rush hour period congestion occurs from the west towards the east.

During the evening peak time for commuting home, congestion occurs on Thamrin Road and Sudiman Road due to southbound traffic, the opposite to the mornings, and congestion occurs at the branches to side roads to the south of Banjir Kanal. On the east-west roads there is not so much congestion as in the mornings.

2.2.2 Position with Respect to Upper Level Plan

Position of the Dukuh Atas area stated in the upper level plan is shown in Figure-2.2.20

1) Stated Position in the MPA Master Plan Study in JABODETABEK Area

As cooperation agreement for the "Establishing Metropolitan Priority Areas" was signed between Japanese and the Indonesian government in December, 2010, JICA has started its "Master Plan Study for Establishing Metropolitan Priority Area for Investment and Industry (MPA) in JABODETABEK Area" from May, 2011 to set forward the MPA framework.

From the Master Plan Study, The 3rd Steering Committee was held on October, 2012, where the Dukuh Atas area was chosen as a first priority development area in the "Fast Track Projects: " As part of the "A. Better Urban Environment, A1. New public transport System based on the MRT, (4) Traffic Terminal and Park & Ride development ".

Inside the master plan study, the project goal is to improve accessibility of the citizens to the amenities located in the stations by solving congestions and to introduce multi-modal facility at the railway and MRT stations.

Also for the MRT north-south line constructions is stated in the upper master plan of the national level, MP3EI (Master Plan for the Acceleration and Expansion of Indonesia's Economic Development 2011-2025) , Dukuh Atas area individually is not stated in the national level.

2) Position with respect to RTRW(Spatial Plan DKI Jakarta) 2011-2030

The Jakarta Provincial Government has adopted the Spatial Plan DKI Jakarta (RTRW) 2011-2030 as the spatial plan for the governments in all parts of the province as the highest level plan. For each subdistrict, building to land ratios, floor area ratios, road widths, etc., are defined in the City Plan Sheet (LRK). As a rule the LRK (City Plan Sheet) is revised every five years as needed. Also, for areas where new large scale land use changes are anticipated, prior to the preparation of the LRK, in the Urban Design Guidelines (UDGL) new land use policies, building area ratios, floor area ratios are set, and after approval by the Regional Spatial Coordination Team of Jakarta (Tim Koordinasi Penataan Ruang Daerah Khusus Ibukota Jakarta) the LRK (City Plan Sheet) is prepared.

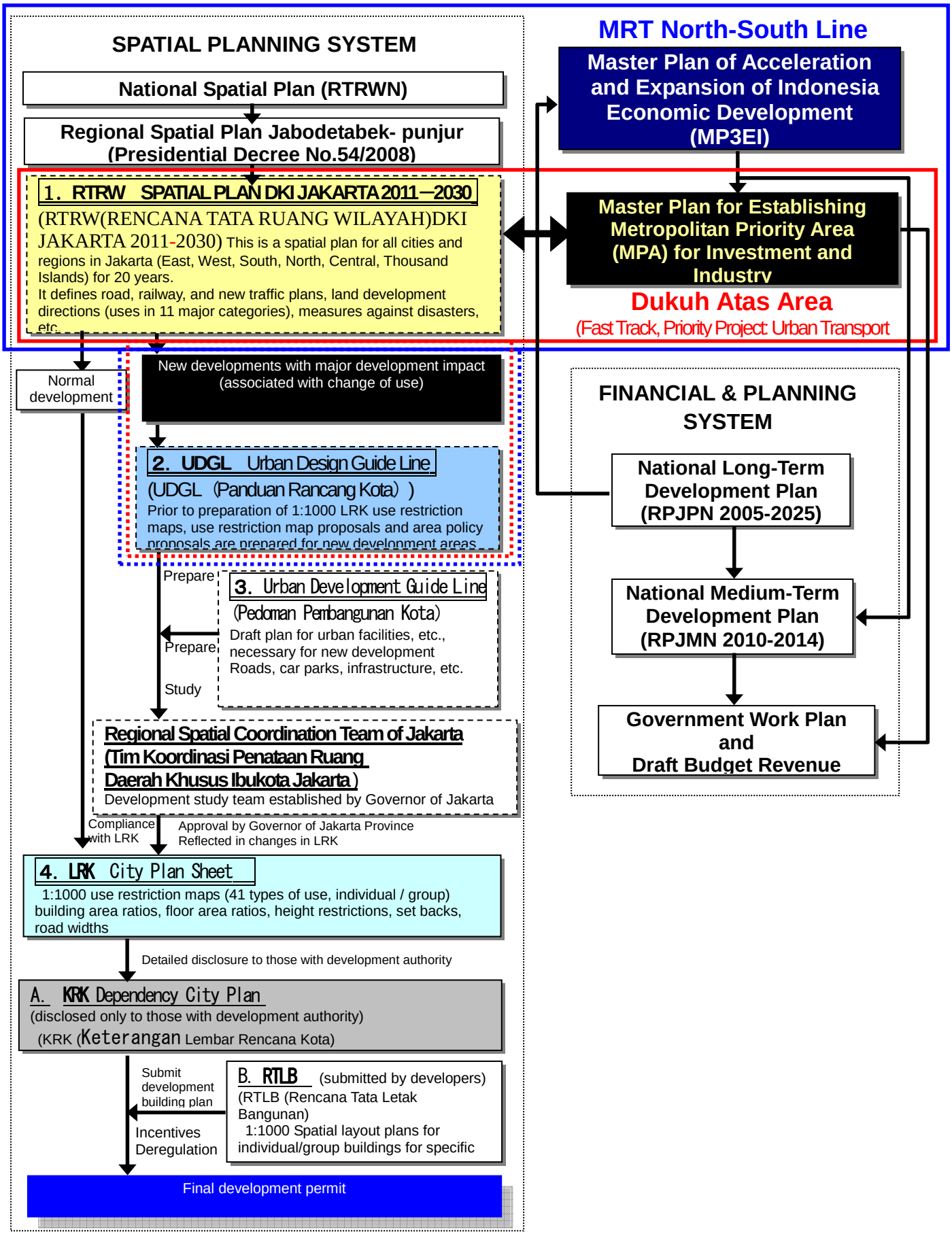


Figure-2.2.20 Land use map DKI Jakarta Province 2008 Source: Study Team

LIST OF FAST-TRACK PROJECTS (FTPs) AND PRIORITY PROJECTS

(for 3rd Steering Committee on 9 October 2012)

Project cost is provisional.

GOALS AND PROGRAM	PROJECT DESCRIPTION	POSSIBLE FUNDING SCHEME(*1)	COST(*2) (Billion IDR)	CHALLENGES & ACTION TO BE TAKEN
A. BETTER URBAN ENVIRONMENT				
A.1 都市高速鉄道(MRT)を中核とした新都市交通システム	(1) ジャカルタ都市高速鉄道(MRT) <早期実施事業 3.1> This project is to introduce a rail-based mass rapid transit (MRT) System in Jakarta. The first priority was given to the Jakarta Mass Rapid Transit North – South Line and the second priority corridor is East – West Line. The North –South Line is divided into two sections, Phase I (Lebak Bulus – Bundaran HI) and Phase II (Bundaran HI – Kampung Bandan).	**Public** Total (*3) : **33,300** Public : 33,300 - Government of Indonesia: 5,000 - Foreign Assistance: 28,300	**33,300** 33,300 5,000 28,300	**For N-S Line** (1) N-S I : Completion of Land Acquisition (2) N-S I : Contract signing of construction works, rolling stocks and E&M (3) N-S II: Listing on Blue Book and Finance Request for construction (4) N-S II: Approval of LARAP and Land Acquisition (5) Commencement of Operation N-S I (2016) and N-S II (2018) **For E-W Line** (6) Listing on Blue Book and Finance Request for ES and Construction for E-W (7) Coordination among Relevant Government Entities regarding Implementation Structure (8) Commencement of Operation (2030)
	(2) ジャカルタ首都圏鉄道輸送能力増強 <早期実施事業 3.2> +第2フェーズ This project is to improve present commuter railway system in JABODETABEK. Procurement of rolling stock and improvement of railway facilities to remove bottlenecks regarding the railway operation for short-term plan of capacity enhancement as Phase I (FTP3.2). Further improvement would be implemented as Phase II.	**Public** Total (*3) : **8,300** It is envisaged that the project will be implemented under a conventional fund scheme. Public : 8,300 - Government of Indonesia: 1,400 - Foreign Assistance: 6,900	**8,300** 8,300 1,400 6,900	(1) Listing on Blue Book and Finance Request (2) Acceleration of Land Acquisition for Depok Workshop Area (3) Commencement of Construction
	(3) ジャカルタ モノレールの整備 Construction of the planned circular monorail has been suspended and recently DKI Jakarta has determined to cancel the project. The feasibility of the remaining section from Kuningan to Ragunan should be examined.			This project will be excluded when the GOI approves the termination of monorail plan.
	(4) 駅前広場整備、パーク&ライドシステムの導入 The project is to improve accessibility of the citizens to the amenities located in the stations by solving congestion and to introduce multi-modal facility at the railway and VRT stations. The first priority of the development has been given to Dukuh Atas Station.	**PPP** The demarcation of works is tentatively considered as follows: Item / Public / Private Land acquisition / ✓ / Resettlement / ✓ / Design&Construction / ✓ / ✓ O & M / / ✓ Total **4,400** Private : 2,200 Public : 2,200 - Government of Indonesia: 1,100 - Foreign Assistance: 1,100	**4,400** 2,200 2,200 1,100 1,100	(1) Formulation of Implementation Plan, including EIA/LARAP (2) Selection of Investment Scheme (3) Listing on PPP Book by GoI
	(5) 共通チケットシステム(スマートカード)の導入 Smart cards and integrated ticketing have become widely used by public transit operators around the world. Card users may use their cards for other purposes than for transit, such as small purchases.	**Private** Total : **500** All necessary investment and operating costs will be borne by private entities. The project is viable without financial support from the Government.	**500** 500	(1) Coordination among Key Transportation Companies for the Operation of Smart Card, including Distribution of Card and Card Readers. (2) Unification of Integrating Ticketing System
A.2 都市内および周辺道路網の整備	(1) ジャカルタ首都圏道路ネットワーク改善 <早期実施事業 4.1> This project aims to alleviate the traffic congestion at heavily congested intersections and railway crossings on major road networks in JABODETABEK, through the realization of construction of grade separated intersections and other at-grade countermeasures.	**Public** Total (*3) : **1,900** The scope of the project will be finalized in accordance with the results of "Feasibility Study on Metropolitan Arterial Road Improvement Project". Public : 1,900 - Government of Indonesia: 600 - Foreign Assistance: 1,300	**1,900** 1,900 600 1,300	(1) Approval of EIA (2) Listing on Blue Book and Finance Request (3) Commencement of Construction

Note : (*1) "Possible Funding Scheme" is tentatively set. The scheme would be modified with the progress of further studies. The project categorized under Private might require Public funding if necessary depending on the results of further studies.
(*2) "Cost" is provisional estimation. In particular, the costs for the projects under on-going M/P or F/S are still preliminary. The allocation of cost by funding source is also provisional. "Private" indicates the funding from private sectors including the project costs under the management of SOE.
(*3) Marked "Total (*3) " in the column of "COST" indicates that the project cost includes price escalation and contingency.

Figure-2.2.21 Dukuh Atas under the MPA Fast Track Project

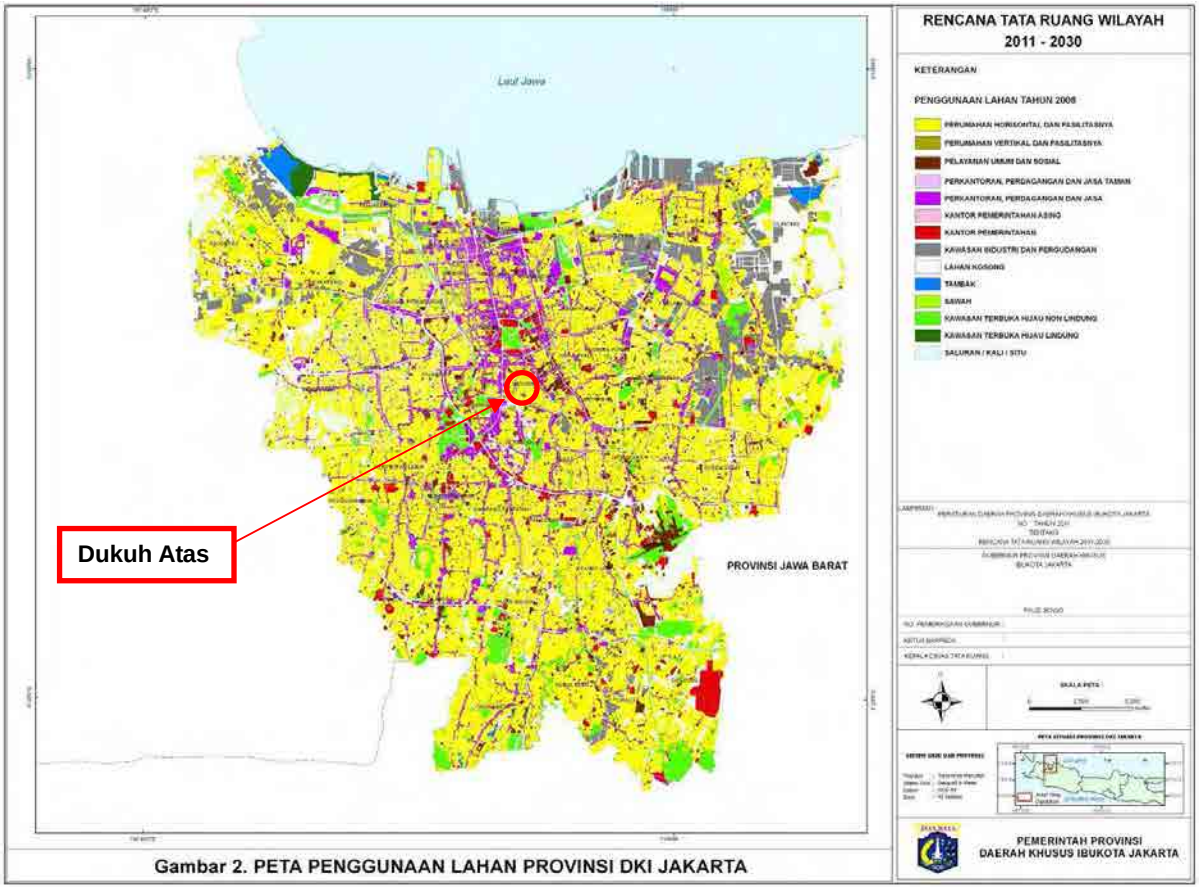
(Source) MPA 3rd Steering Committee)

2) Position of Dukuh Atas area in the RTRW (Spatial Plan DKI Jakarta) 2011-2030

(1)Current land use

As of 2012, the Dukuh Atas area is zoned as yellow (residential, low rise facilities) use, separating the purple (business, commercial) use areas to the north and south, and remains within the high building area ratio development area along Thamrin - Sudirman Road.

In the center of Jakarta commercial and business areas extend linearly only along the main trunk roads, with the majority of the other areas being high-density residential (Kampung).

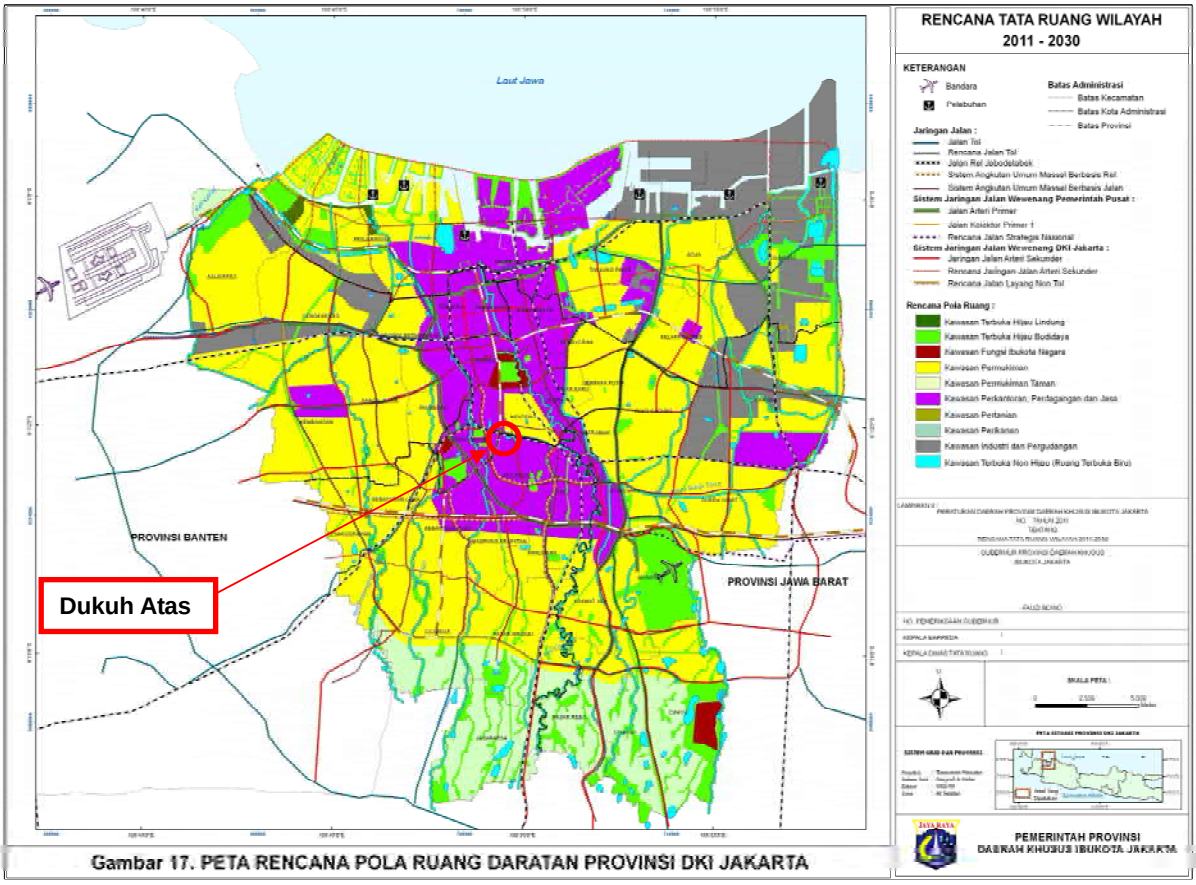


Source: RTRW DKI Jakarta 2030 versi Februari

Figure-2.2.22 Land use map DKI Jakarta Province 2008

(2) Future spatial use policies

In the city center of Jakarta, it is the policy that in the future commercial and business areas would only be along the main roads, not linearly but the developed in a planar manner. However, Menteng subdistrict located to the northeast of Dukuh Atas has many historical residential buildings, so it will continue as a residential area.



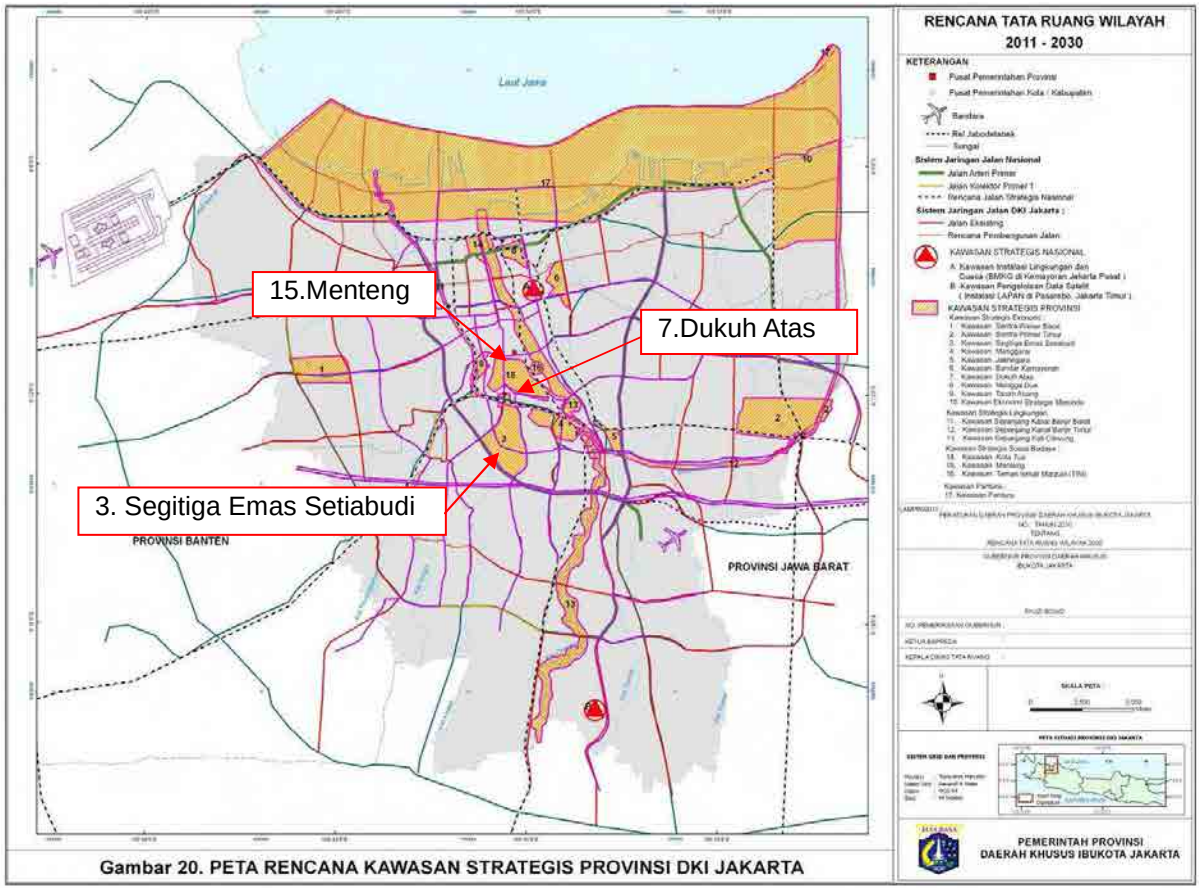
Gambar 17. PETA RENCANA POLA RUANG DARATAN PROVINSI DKI JAKARTA

Source: RENCANA TATA RUANG WILAYAH DKI JAKARTA 2030)

Figure-2.2.23 Plan of the Provincial Land Spatial Pattern of DKI Jakarta

(3) Position regarding strategic areas

Strategic area No. 7 is located in the Dukuh Atas area in an area about 200 m radius. To the north is strategic area No. 15 in Menteng subdistrict that includes the large-scale commercial district Bunderan HI, and to the east is No. 3 Segitiga Emas (Golden Triangle) Setiabudi, one of the CBD districts of Jakarta where development has progressed since the 1990s.

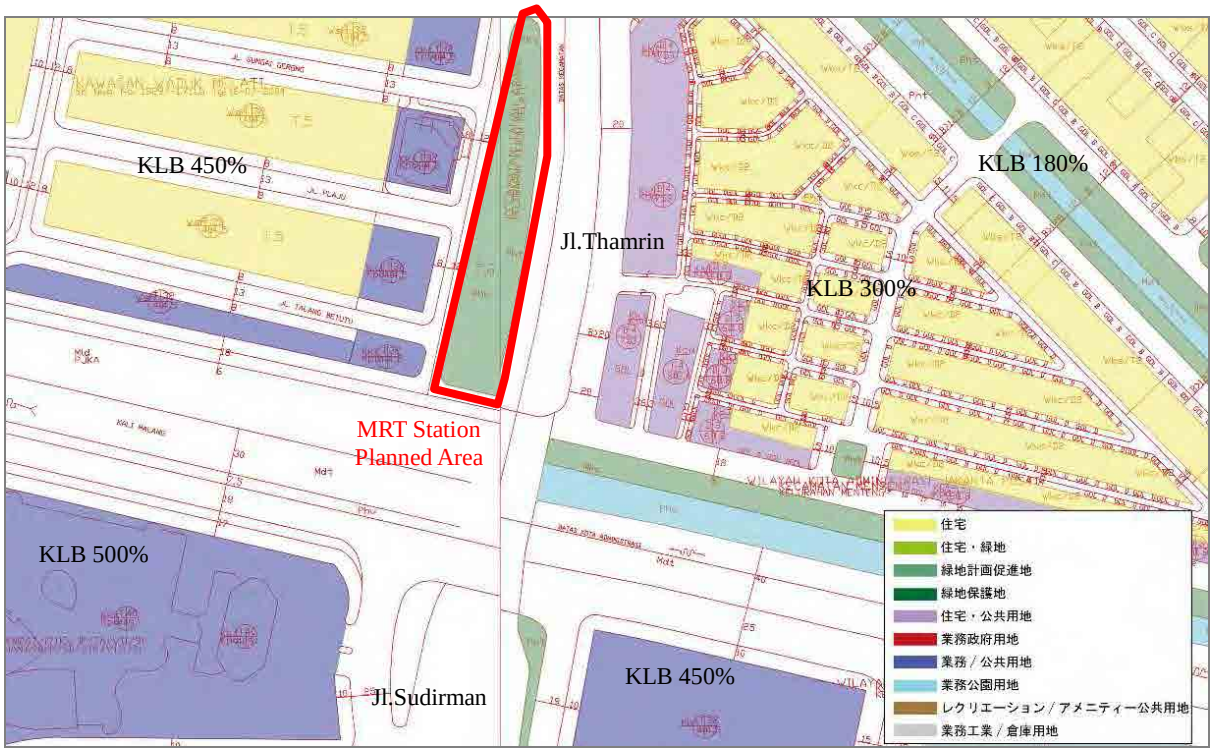


Gambar 20. PETA RENCANA KAWASAN STRATEGIS PROVINSI DKI JAKARTA

Source: RENCANA TATA RUANG WILAYAH DKI JAKARTA 2030

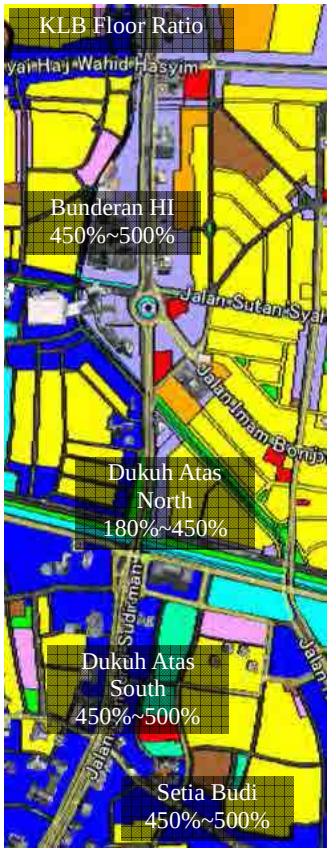
Figure-2.2.24 Area DKI JAKARTA Province's Strategic Plan

3) Current land use plan under the LRK plan sheet



Source: Drawings supplied by DKI Tata Ruang

Figure-2.2.25 Existing LRK (City Planning Sheet)



Source: http://www.tatakota-jakartaku.net/

Figure-2.2.26 Existing LRK around the area

At present in Dukuh Atas, the floor area ratios (KLB:Koefisien Lantai Bangunan) tend to be low compared with the commercial and business center Bunderan HI subdistrict to the north on the LRK (City Plan Sheet) and the commercial and residential high-rise center Setia Budi subdistrict to the south.

The building area ratios (KDB: Koefisien Dasar Bangunan) are set to 40% to 60%, being set lower the higher the floor area ratio (KLB:Koefisien Lantai Bangunan).

In particular in the north side of the Dukuh Atas area, business use is zoned for both sides of Thamrin Road only, but areas away from the road are zoned as residential, so the floor area ratios are low. Also, to the northwest of the area there are landacape restrictions in a part of the Menteng subdistrict, which is a historical area.

Also, the planned site at MRT Dukuh Atas Station is currently zoned as a green area, so at present there are no restrictions on floor area ratio and building area ratio. Likewise along the river there are no restrictions on floor area ratio and building area ratio.

4) Land ownership

Most of the land ownership around the Dukuh Atas area is private. Land for roads is all managed by the Jakarta Provincial Government. In the case of rivers, Banjir Kanal which flows east-west is managed by the Ministry of Public Works, Directorate General of Water Resources, and rivers flowing to the Menteng subdistrict in the northeast are owned by the Jakarta Provincial Government PU.

The Jakarta Provincial Government owns the green strips on the two sides of rivers. Also, the green area where the MRT Dukuh Atas Station is planned is owned by Jakarta Provincial Government.

Other publicly owned land includes the approximately 3,000 m^2 land where the public market (PASAR BLORA) is located, which is owned by the public corporation PD PASAR JAYA, which operates all the public markets.

Figure-2.2.27 Existing Landownership in Dukuh Atas

2) Status of land use

Regarding the status of land use around Dukuh Atas station, high-rise business and commercial buildings are located along the Thamrin Road and Sudiman Road. Compared with the adjacent districts to the north and south, it can be seen that the use for business and commercial purposes is extremely limited. In the north, near commercial areas of small-scale and medium-high rise buildings, land-use immediately changes to low-rise residential use.

Figure-2.2.28 Existing Landownership in Dukuh Atas (Source: Study Team)

6) Status of the surrounding buildings

The status of the buildings in the Dukuh Atas area has been summarized below after surveying their uses and number of stories (refer to Figure-2.2.12).

The status of the land use significantly differs on the east and the west side of Sudirman/Tamrin Road. The west side comprises lots as large as about __## m2. In contrast, the east side is characterized by dense distribution of extremely small lots Since no roads can be found to allow access by vehicles, the east side poses a dangerous condition where disasters cannot be prevented.

(a) Use

In both the east and west areas, the lots facing a main street are often used as commercial complexes and offices while the lots in the other areas consist mostly of dwelling houses.

(b) Number of stories

On Tanjung Karang Road west of Sudirman/Tamrin Road, buildings are four-story or higher and the two building currently under construction are higher than 10-story. Mid-rise residences exist only on lots along the railway tracks, and the other lots are occupied by single or two-story large residences.

On Blora Road and Kendal Road east of Sudirman/Tamrin, three-story buildings are conspicuous, with several mid-rise buildings standing on Blora Road. Some buildings currently under construction can also be found. Buildings off the main streets are mostly single or two-story structures.

(c) Construction type

Low-rise buildings are brick structures and mid-rise buildings are of reinforced concrete construction. The mid-rise building being constructed on Blora Road east of Sudirman/Tamrin Road is a steel structure.

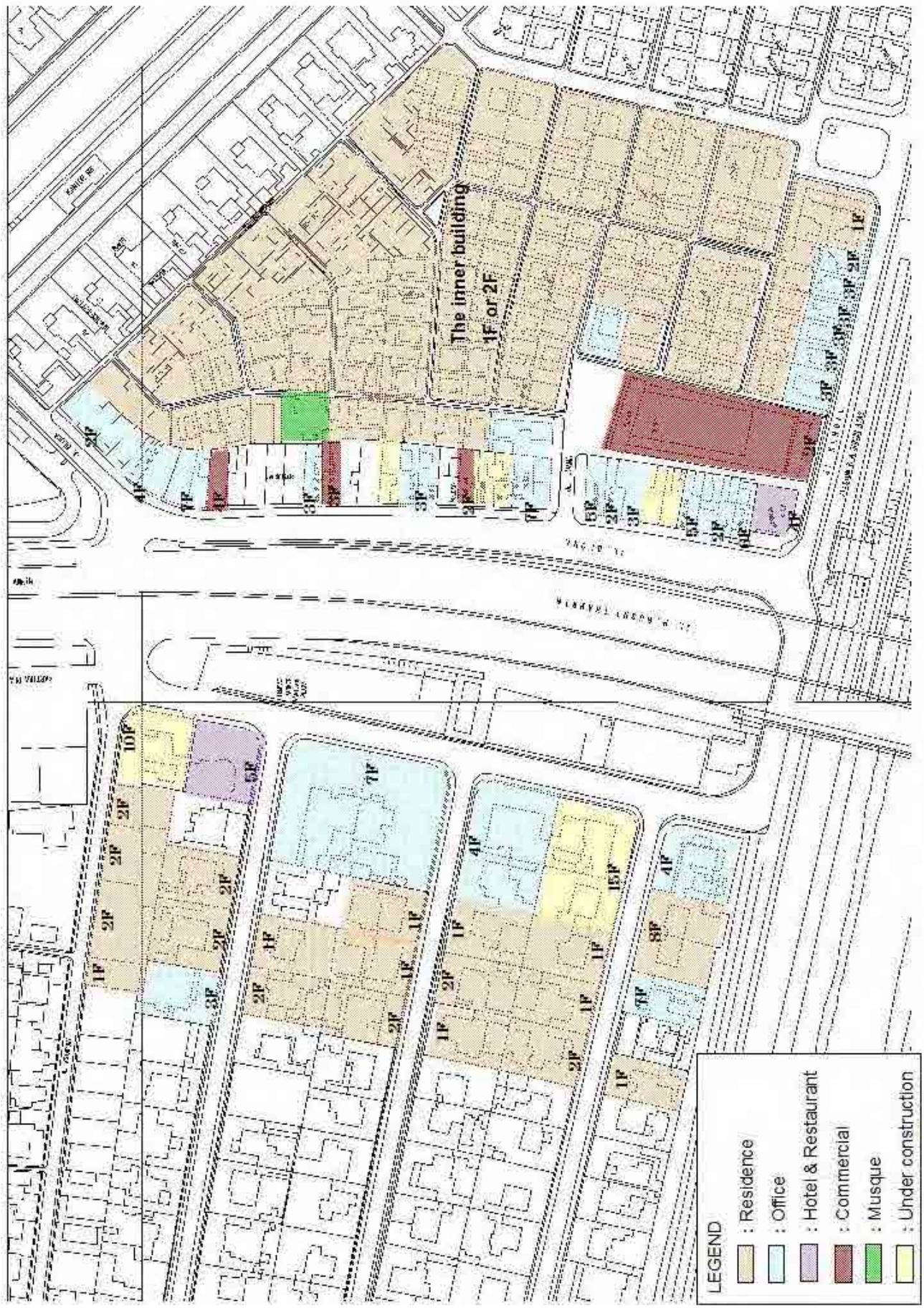


Figure-2.2.29 Existing Building in Dukuh Atas Area