

6-5 Conclusion and Recommendation

Development plan

It was just at the beginning of the social unrest and economic crisis in 1998 when the master plan covering 1,000 ha was formulated. To respond to this situation, some measures were taken in planning works e.g. the development area was reduced to 300 ha, leaving the other 700 ha for future expansion area, and within the 300 ha area only middle- low-class housing under the 1:3:6 housing policy of the government was allocated, excluding high-class housing for future development in response to the declining housing demand especially in the upper class.

Financial analysis

As the result of these measures, the financial analysis showed that *the IRR would be at 17% for the total housing project, and when it is divided into KASIBA (land and infrastructure) and LISIB (housing), the former around 6 % and the latter 8% (Low class)-13%(Middle class)*. It is apparent that if the former (KASIBA) is set at a lower level, the latter (LISIBA) increases, and if the upper class housing is included when the economy is normalized, the IRR tends to further go up. The financial analysis showed: 1.) KASIBA is feasible when the real interest rate is 10% (the government has been taking measures for lowering interest rates for the Indonesian economic recovery); 2.) With low-cost fund provided by the government (KMB), the infrastructure cost can be recovered through KASIBA; 3.) Cross-subsidy from middle-class (13%) to low-class (8%) becomes possible; 4.) The selling price of LISIBA should be determined, taking into consideration the reasonable profit to LISIBA developers in addition to the KASIBA cost recovery.

Pilot project

It may be concluded that KASIBA can be applicable in the outskirts of Jakarta. However, taking into consideration the unpredictable economic situation and the housing demand, it is recommended to start the preparation of the pilot project in one small-scale community where Perum Perumnas has already acquired land, in the planned KASIBA development area (300 ha). Expansion shall be examined in response to the socio-economic condition and housing demand in the future, because phased-development is one of the basic advantages of KASIBA. In the pilot project, KASIBA Law and government regulations will be applied for the first time in Indonesia.

Metropolitan urban area and agency

The metropolitan urban area and agency, covering several regencies and municipalities is due to be established based on the Law No. 22/1999 and the government regulations. It is recommended that the pilot project be handled by this agency, and not by the Bogor regency only, where the project is located, because housing demand to be met in the pilot project comes from DKI Jakarta and other surrounding areas. Therefore, shares of the fund for the pilot project must be also coordinated through this agency. The real housing demand and the funding capacity of the KMB shall be scrutinized in the framework of the Metropolitan urban area. The housing demand relies on the government financial measures, especially housing loans to the public, which will be established in the new government.

KASIBA in reviewing Jabotabek Master plan (1997)

KASIBA case study showed that it is effective in leading urban and housing development along the railway so as to create a rail-oriented town aiming at the environment and transport improvement in the Jakarta area. It is desirable that the government enhance this urban policy through the application of KASIBA. Especially KASIBA and the urban policy should be

examined in reviewing the Jabotabek Master plan (1997) in the changing economic trends, which will be done by the new government. This is related to the proposal on the study for urban development through KASIBA in the Jakarta Metropolitan area.

Chapter 7 Case Study of Land Consolidation in Jatiasih

7-1 Basic Feature of Jatiasih District

7-1-1 General

(1) Location

Jatiasih District (Kecamatan) is located in the outskirts of DKI Jakarta, about 20km east from its center with an area of 2,450ha. Its location is exactly within the fringe of the Jakarta metropolitan area, where an urban conurbation of Jakarta extends and a recent very high population migration potential, both from the outbound and inbound of JKT, can be observed.

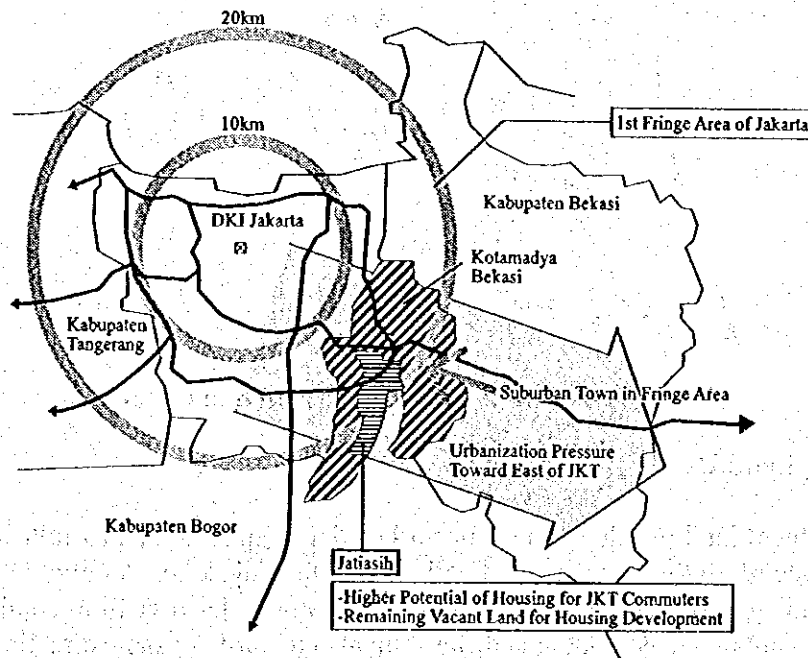


Figure 7-1-1 Location of Jatiasih in Jakarta Conurbation

(2) Administrative Jurisdiction

Jatiasih District is one of the jurisdictions in Bekasi Municipality (*Kotamadya*) under Bekasi Regency (Kabupaten), which consists of 7 Districts (*Kecamatan*); Pondokgedé, Jatiasih, Bantargebang, Bekasi Timur, Bekasi Selatan, Bekasi Barat, and Bekasi Utara. This municipality was newly established in May 1997.

Jatiasih District is divided into 6 Sub-districts (*Desa*); Jatiasih, Jatirasa, Jatimekar, Jatikramat, Jatiluhur and Jatisari. Moreover, each Sub-district consists of some Dusuns - RWs - RTs in hierarchy order of local administrative communities.

(3) Population

Total population of Jatiasih District counted for 91.5 thousands in December 1997, according to the data by District office. (Another statistical data published by Municipality office indicates a total population of 104.5 thousand in 1996, with an increasing rate of 7.1% to the previous year.) Population density is 42.7 persons per hectare and this figure is not so high comparing

with the neighbor districts such as Bekasi Timur (110 person/ha), Bekasi Selatan (110 person/ha) and Pondokgede (61 person/ha). The total number of families registered was 21,197 in 1996, and the average family size is 4.13 persons per family.

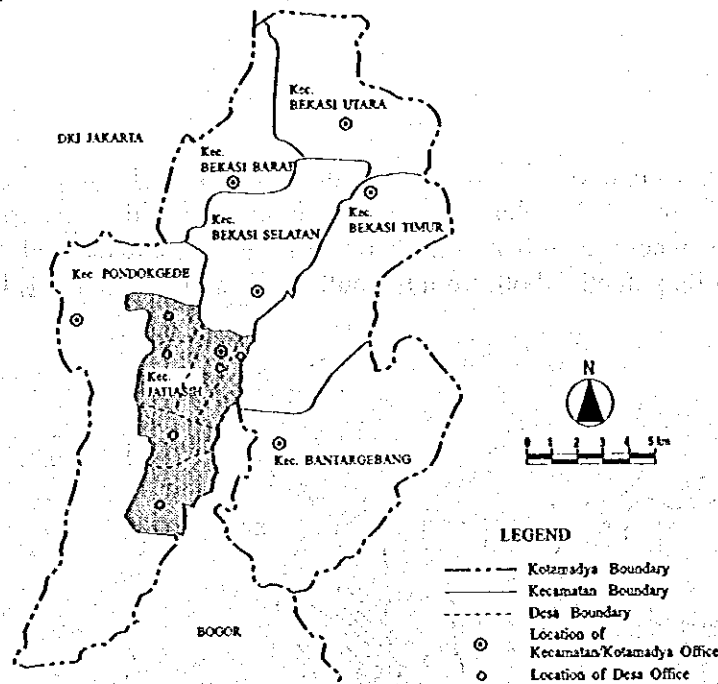


Figure 7-1-2 Administrative Jurisdiction of Jatiasih

(4) Existing Land Use

The topographical land profile of the Jatiasih District is summarized as follows: it is a plain with the altitude of 20 to 50 meters, and with moderate land slope. A rather big river Ci Keas flows into Kali Bekasi along the eastern border of Jatiasih District from south to north, and some small streams such as Cakung and Baru run also toward the same direction.

In general, the existing land use of Jatiasih shows a typical pattern of suburban of Jakarta metropolitan area; that is, mixed land use with suburban agriculture fields and newly developed/under-development subdivision estates. The irrigated paddy fields extend along the valleys and agricultural settlements are scattered almost all over the plain. Some necessary shops/facilities for local activities are located along the arterial roads and form a linear local community center.

(5) Major Urban Structural Characteristics

As Jatiasih District in Bekasi Municipality is located in the fringe area next to Pondokgede adjoining to DKI Jakarta in the southeast, existing urban structure of Jatiasih is characterized as a typical Jakarta conurbation from the two aspects, its location in JABOTABEK and the present land use of Jatiasih itself. The present situation of Jatiasih District is summarized in the following three points:

1) No Patterned Road Network

There is a rather poor road transport network within the area. Only two primary local roads connecting to the neighbor districts: one is the gateway road to/from the interchange of Bekasi

Barat running toward the north from the center and another is the east-west local road connecting to/from Pondokgede and Bantargebang districts. Both roads are two-lane asphalt paved roads with insufficient width and maintenance. Other roads connecting each village are mainly running through north-south direction along the part of ridges in the district.

2) Mixed Residential Area; Agriculture Villages and Newly Developed Subdivisions

The old villages extend along the above-mentioned primary and small local roads, and meanwhile, the newly developed subdivisions are located in old agriculture fields connected by the only gate road from the existing public road. Therefore, two different types of residential areas are mixed like a mosaic, traditional agriculture villages on the higher land and new subdivisions on the lower area.

3) Vague Land Use Pattern

Since some local/small commercial facilities are scattered only along the Pondokgede-Bekasi Kabupaten road and they are all in small scale except Jatiasih market, it is difficult to identify a certain land use pattern as a whole but very vague without any characteristic.

7-1-2 Urban Development Plan and Program

(1) Spatial Plan

Since Bekasi Municipality was newly established in May 1997, it does not have its own 'Spatial Plan' as of now, but only a tentative plan followed previous spatial plan. They are going to review old spatial plans by each District and form a new spatial plan from the year 1997/98. The new spatial plan, however, is not yet completed.

According to the tentative spatial plan, two regional centers for the primary economic service are planned; one large center is proposed between Bekasi Selatan and Bekasi Timur, and another is planned to be located in Jatiasih. Though the detail contents of the regional center are not clarified, it's true that the Jatiasih District is defined as its importance in the regional/urban development context.

Meanwhile, another future plan was illustrated together with Pondokgede District, western neighbor of Jatiasih, and the distribution of commercial/regional centers is almost the same as the above-mentioned spatial plan.

Based on the available future plans, the future urban structure of Jatiasih can be summarized as follows:

- As most of the area of Jatiasih is planned for housing estates with low/medium density together with some open spaces, accordingly Jatiasih is defined as the future residential area for the Jakarta metropolitan people.
- Since there is a proposal of commercial/economic service center around Jatiluhur in Jatiasih, though the detailed content is not clarified, some regional core function is expected in Jatiasih.
- The location of Jatiasih can be explained as a very strategic location from a viewpoint of toll expressway network; one is the Outer Ring Road with an interchange under construction and the other one is the proposed Jatiasih-Karawang Timur road.

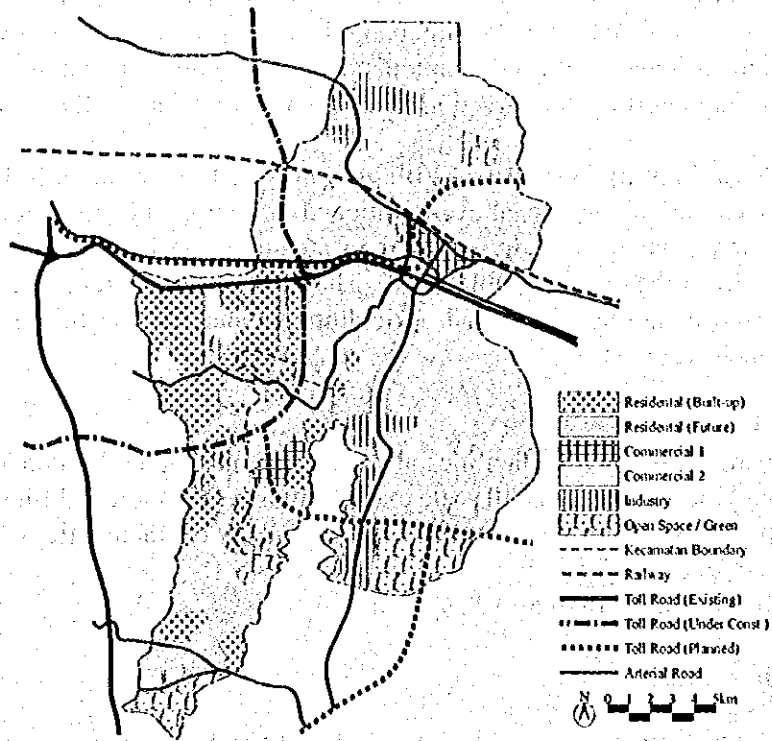


Figure 7-1-3 Tentative Spatial Plan of Bekasi Municipality

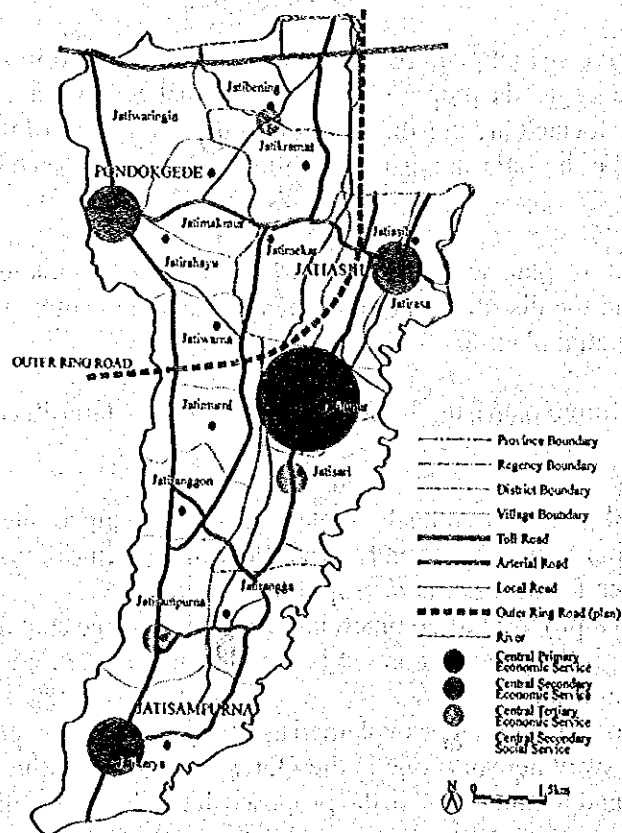


Figure 7-1-4 Structure Plan of Pondokgede/Jatiasih

(2) Outer Ring Road Project

One of the most significant projects from the viewpoint of urban/regional development in this district is the 'Outer Ring Road' project. This is a BOT scheme under BINA MARGA, and its southeastern section of Outer Ring Road runs through the Jatiasih and Pondokgede Districts connecting Jakarta-Bogor (Jagorawi) and Jakarta-Cikampek toll expressway. Its route location is already confirmed and land acquisition of the right of way is almost completed. One interchange (on-off ramp) is planned at Desa Jatiasih in order to serve the local usage. The accessibility of Jatiasih to/from Jakarta will be tremendously improved when this project is completed.

(3) Other Arterial Road Projects

According to the spatial plan, there are other two toll expressway proposals: one is the Kali Malang toll road running parallel in the north of the existing Jakarta-Cikampek toll expressway, and another is the Jatiasih-Karawang Timur toll road connecting the Outer Ring Road at Jatiasih to the east through Bantargebang District. As the details of the projects are not confirmed yet, only the proposed routes of two projects are illustrated in the figure.

In addition to the above, some local road improvement plans are also indicated in the map of spatial plan.

(4) Housing Development

There are many real estate development schemes for housing in and around Jatiasih, especially in the north and west part. These development projects have been carried out since the early 1990s due to the advantageous location to/from DKI Jakarta, only 4 to 5 km away from Jatibening and Bekasi Barat interchanges, after the completion of the Jakarta-Cikampek toll expressway. According to a statistical data of the Regency, the total number of developers and area in Jatiasih District used for housing until 1996 counts for 22 and 864ha, about 35% of the total area, though details are not clear. Meanwhile, a number of 1,291 low-cost houses (RS) was constructed in Jatiasih under the 6th Five-Year-Plan (REPELITA VI), from April 1994 to March 1997.

(5) Location Permit

The distribution of location permits in Jatiasih covered almost 1/3 to half of the total area in 1997 as shown in Figure 7-1-5. Most of the location permits are concentrated in Desa Jatimekar, Jatilihul and Jatisari, and purposes are housing developments in a scale within 100ha.

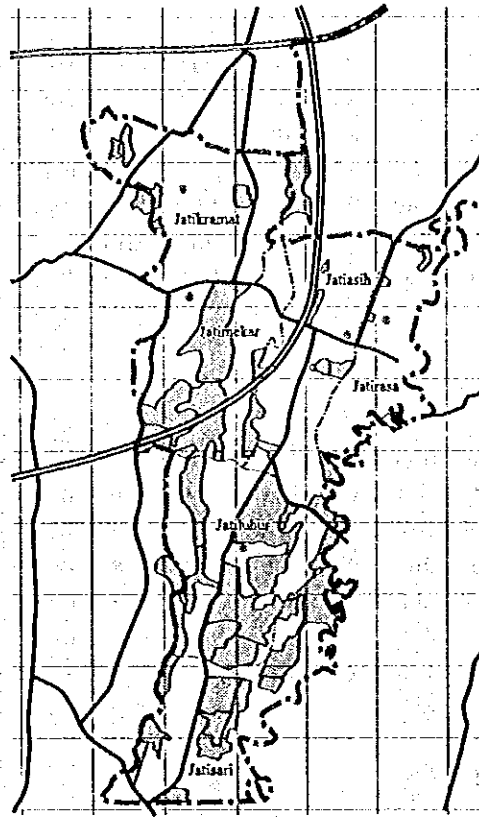


Figure 7-1-5 Location Permit in Jatiasih, 1997

7-1-3 Site Selection for Concept Development Plan

At the beginning of the case study on Land Readjustment (L/R) project in the Jatiasih District, a site selection for concept development plan was examined in order to determine an area about 1,000ha within Jatiasih. Concept development plan is a so-called master plan for general urban development, which prospects a desirable urban structural concept in the future, in line with the possible implementation of major urban development projects including L/C or L/R.

(1) Criteria for Site Selection

Since major purposes of the case study on L/R in Jatiasih are to consider the following points, a certain area for future development planning should be selected including a high potential area for the project implementation.

- Typical example of L/R project in the urban conurbation of Jakarta,
- Applicability of various types of L/R project,
- Possible development of urban/regional center,
- Harmonious development between old and new communities,
- Land provision for large-scale infrastructure, etc.

A site selection of case study area for Land Consolidation project was carefully considered mainly from the following viewpoints:

1) Future urban development structure of Jakarta Metropolitan Area;

Jatiasih, one of the districts (Kecamatan) in Bekasi Municipality (Kotamadya) about 20km east from the center of Jakarta, was chosen as a typical area where a potential recent residential development existed in the suburban of JMA, in order to conduct a study on a typical example of L/C project in the urban conurbation area.

2) Possible urban development system with transportation infrastructure development;

The Jatiasih-Karawang Timur toll road is proposed to run through the area as well as the southeastern section of Outer Ring Road. A possibility of urban development, through L/R system, in association with those infrastructure developments will be also examined.

3) Establishment of new regional center;

According to the tentative spatial plan of Bekasi Municipality, two regional centers for primary economic service are planned; one is proposed in the urbanized area between Bekasi Selatan and Bekasi Timur, and the other is in Jatiasih. As Jatiasih is defined as important in regional/urban development context, it will be examined how to realize the new regional center applying L/R system.

4) Area for a community development on a certain scale;

As an area of about 1,000ha was selected as the area for concept development plan of L/R project, this scale was estimated from viewpoints of a regional community planning; a range of daily people's activity, local government jurisdiction, etc. In general, the basic elements of the local community consists of RW or RT within the village (Desa) and the area should be determined by this unit. Since the composition/border of each RW/RT was not clarified yet, the area for concept development plan was determined based on a village-unit in this stage.

5) Other existing conditions;

- Topographical condition for future urban development,
- Demographic condition,
- Existing land use,
- Community structure,
- Necessity of infrastructure development,
- Effectiveness of L/C implementation, etc.

(2) Case Study Area for Concept Development Plan in Jatiasih

As the result of site selection in accordance with the above-mentioned criteria, an area of about 1,000ha which is mainly composed of three villages (Desa); Jatimekar, Jatiasih and Jatiluhur was proposed for further concept development plan.

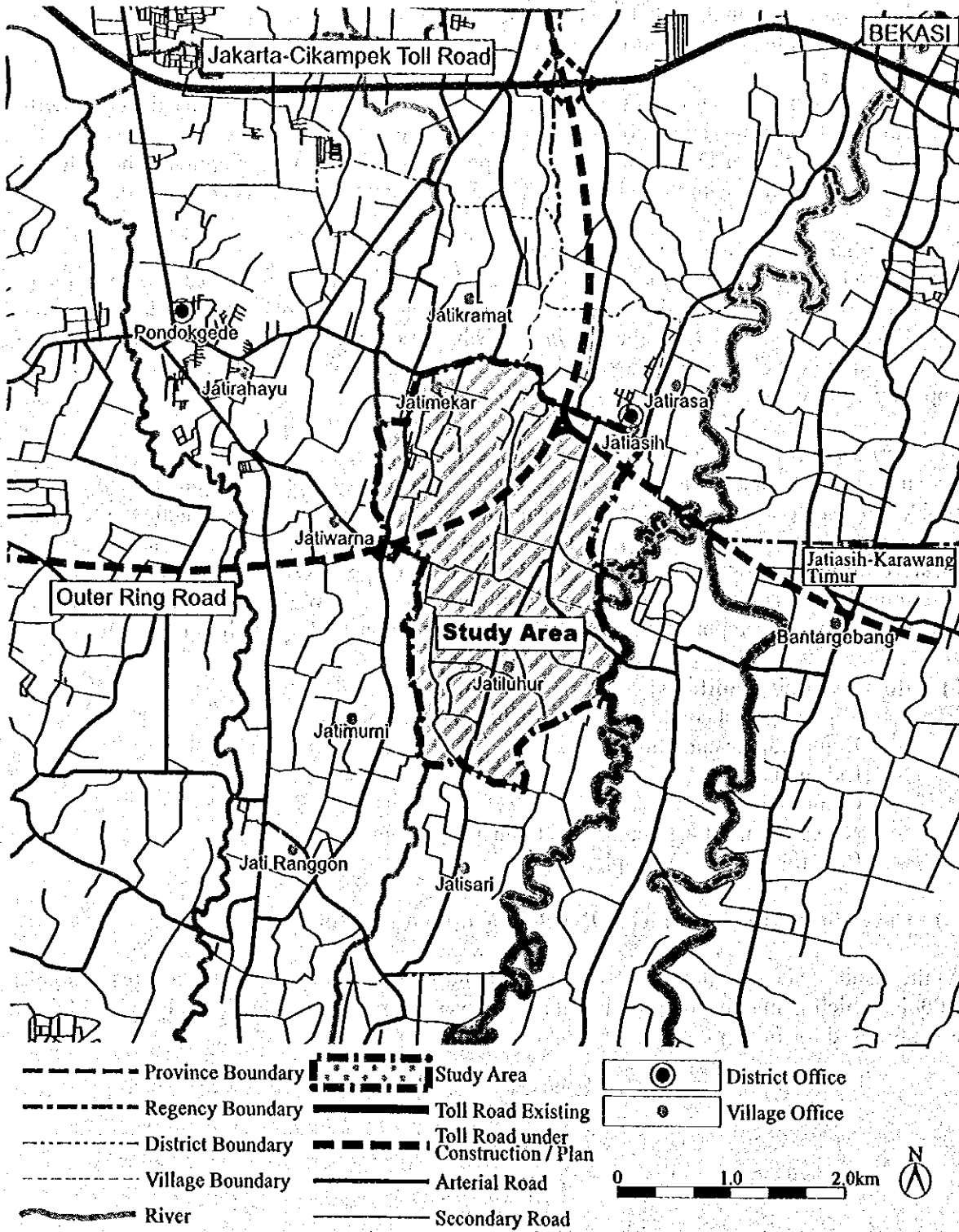


Figure 7-1-6 Proposed Site for Concept Development Plan in Jatiasih

7-2 Concept Development Plan (1,000ha)

7-2-1 Regional Development Structure

(1) Enough Potential of Urban Development

As a result of the analysis on existing conditions of the selected case study area in Jatiasih, it could be found enough future urban development potential among JABOTABEK area; e.g.

- Fringe of Jakarta Metropolitan Area

The case study area in Kecamatan Jatiasih is located about 20km southeast from the center of Jakarta, so called a fringe of Jakarta metropolitan area, where there are many urban development schemes such as housing, commercial, industrial in line with recent typical urbanization sprawl in this decade. This urban development pressure will continue as long as the Jakarta metropolitan area will grow even in the future.

- Many Housing Developments by Private Sector

There are many housing development projects in and around the area in various stages; already developed, in marketing, on construction, land acquisition, in planning, etc., especially in the northwestern part of the area, reflecting a direct development pressure from DKI Jakarta. Some of these developments are now still in progress even after the economic recession in 1998.

- Direct Access by Outer Ring Road

Though this area is already served with the existing Jakarta-Cikampek toll expressway, about 5 to 8km from the Bekasi Barat interchange, a tremendous improvement of access can be achieved when the southeastern section of the Outer Ring Road is completed with Jatiasih interchange which will be located exactly within the area.

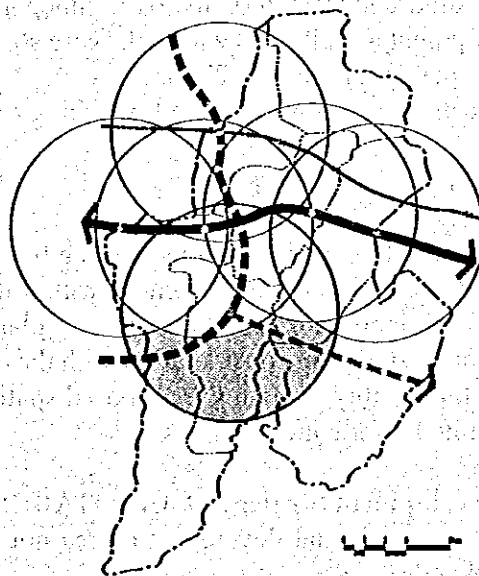


Figure 7-2-1 New Coverage Area by Jatiasih Interchange (Outer Ring Road)

- **Proposal of a regional center development in the spatial plan**
A new regional center with functions of commerce, business and local community is proposed within the area to create another sub-core of Bekasi municipality separate from the main urban core around the existing CBD and interchange of Bekasi Barat, according to the spatial plan. It may become possible to develop a new type regional center with multi-complex urban functions.
- **Existing inefficient land use**
As a reform of land use, from agriculture to urban use, is frequently observed in the fringe of the JKT metropolitan area, it is also revealed in this area to divert a paddy field into residential estate and there are mixed land uses of urbanized and rural functions without any order. This results in inefficiency both for urban and agricultural functions. This disordered land use should be guided into a proper land use pattern from urban planning viewpoints.

(2) Consideration on Recent Economic Recession

The recent economic recession in Indonesia is a quite serious problem not only for urban development but also for the whole economic activity. As the analysis on its influences is not our study subject and there are many alternative scenarios to recover this inferior condition, following considerations are applied so far:

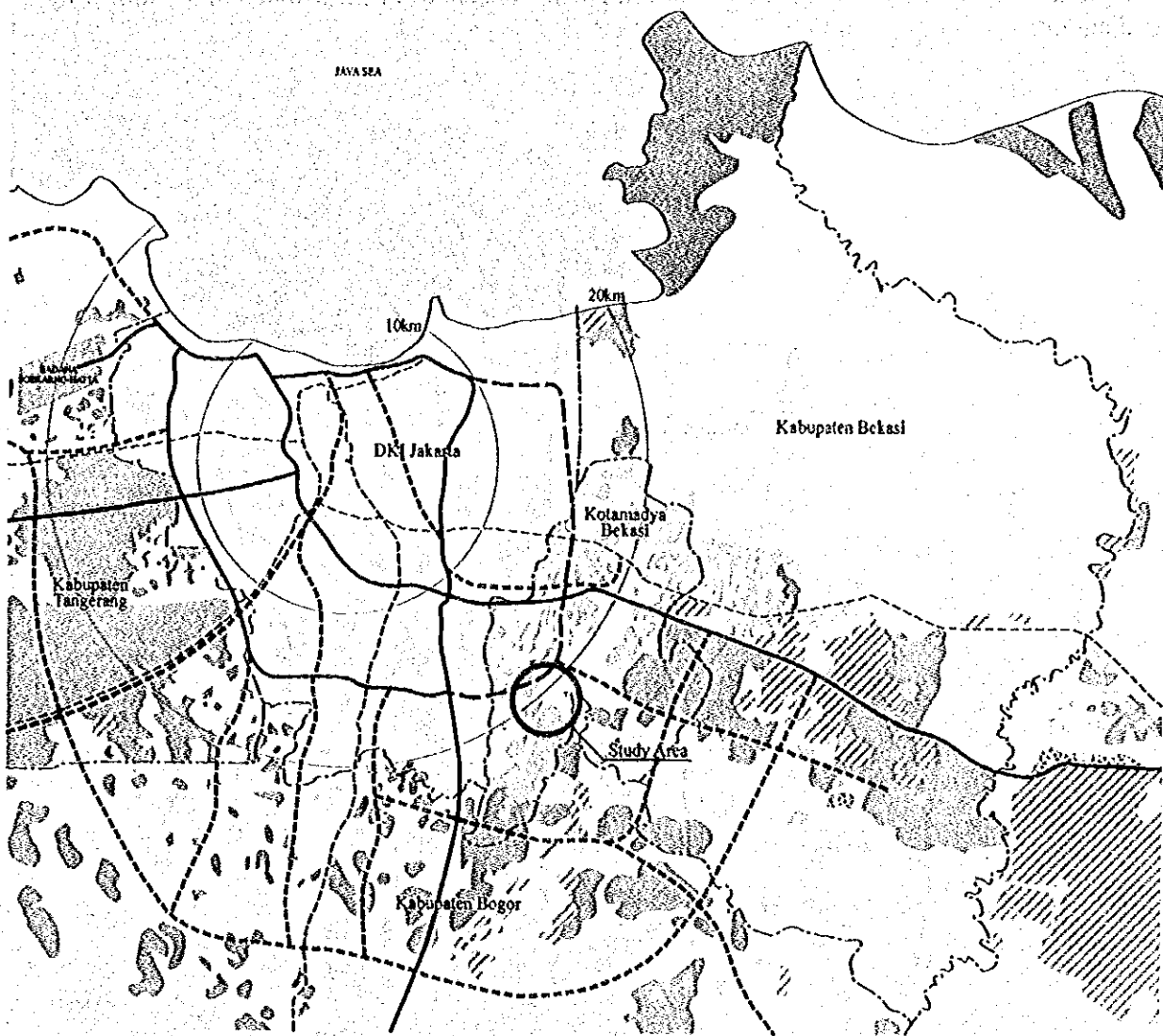
- There are still housing development demands in this area as some existing projects are going on.
- As the actual housing demand structure is not certain in this stage, a demand by middle income level is supposed to be continued, being supported through some government system such as 'Housing Saving for Down-payment' (TAPERUM).
- A population forecast for Jatiasih in 'Development Strategy of Jabotabek Area' (1997) allocates a quite large amount of population increases: 133thousand persons from 1995 to 2005 and 112thousand from 2005 to 2015. Since the most applicable area for future housing development in Jatiasih is within the case study area, 1/3 to a half of this demand could be acceptable for the year 2010.
- Demand framework can be also considered in line with a stage planning.

(3) Future Development Plans

A future regional development structure, which could suggest a basic role/function of the case study area from a regional and urban development context within the Bekasi Municipality, is necessary to be drawn up as an important precondition for the planning. It can be analyzed through some related development studies in consideration with the existing features of various developments in the Bekasi Municipality, though the proposed spatial plan of Bekasi (refer to Chapter 7-1) can provide a limited information.

1) Proposed Function in Development Strategy of JABOTABEK Area (1997)

The study area is identified as a residential development area not in large scale same as its vicinity of Jatiasih and Pondokgede.



LAND DEVELOPMENT PLAN

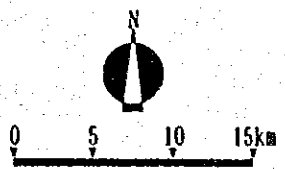
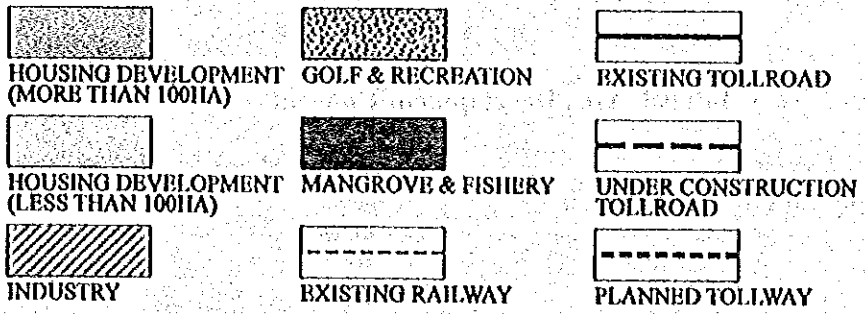


Figure 7-2-2 Location on Study Area in JABOTABEK Development Plan

2) Conceptual Structure within Bekasi Municipality

Though a regional structure plan of Bekasi Municipality has not been authorized, a concept structure of Jatiasih can be supposed as an integrated urban function of residence with a regional sub-center. An image of area development concept can be illustrated in the following diagram.

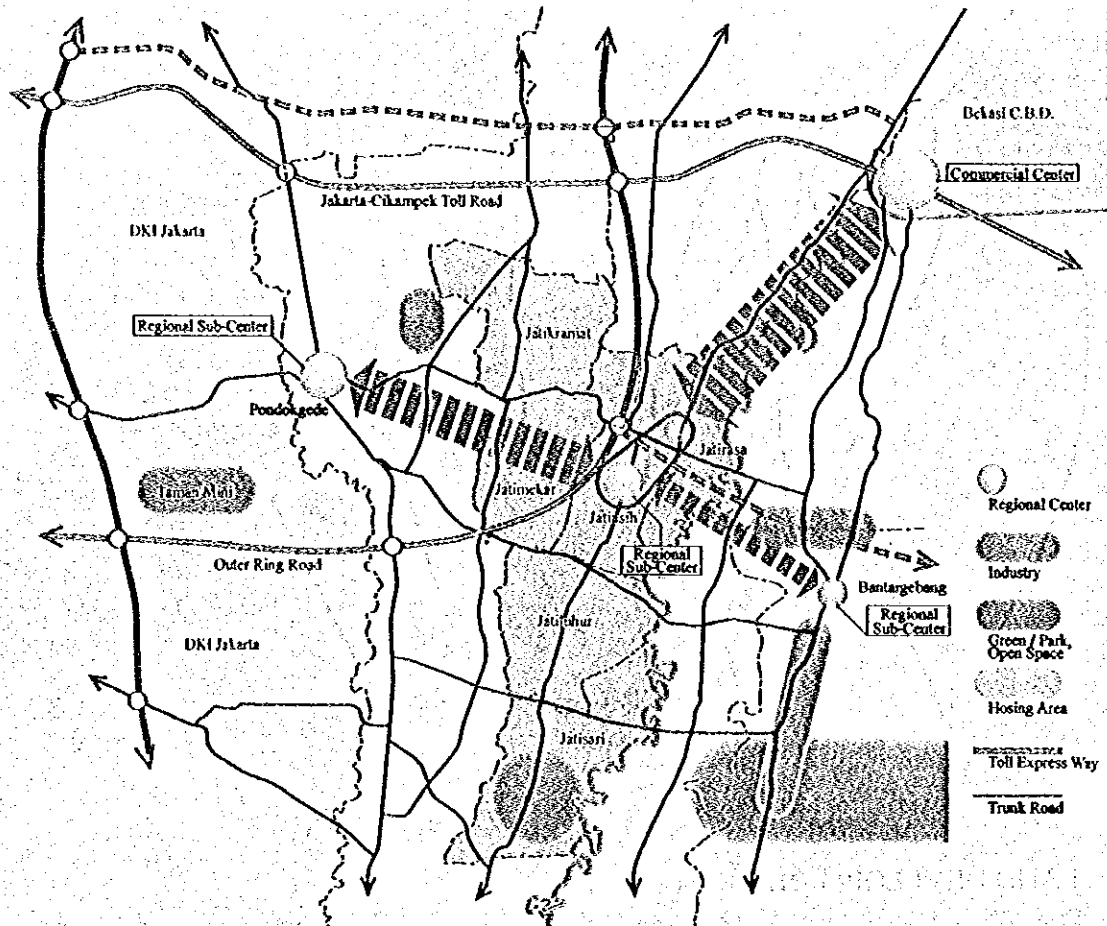


Figure 7-2-3 Jatiasih Area Development Concept

7-2-2 Existing Condition and Site Evaluation

(1) Existing Condition

The study area covers most of 3 sub-districts (Desa) in Jatiasih District (Kecamatan): major parts of Jatiasih and Jatimekar, and whole Jatiluhur, and total area is 1,108ha. The composition of local community under Desa such as Dusun, RW and RT is summarized in the following Table and Figure.

Table 7-2-1 Administrative Jurisdiction of Concept Development Area

Desa	Dusun	RW	No. of RT	Area(ha)	RW, out of area
Jatiasih	1. Kebantenan	8,9,10	14	117.61	11,13
	2. Bendungan	5,6,7,12,14,15	18	129.18	1,2,3,4
Jatimekar	1. Rawa Bogo	1,2,3,4,5,6,7	37	270.07	-
	2. Panahan	1,2,3	19	121.74	-
	3. Jaha/Cakung	2,5,6	14	30.79	1,3,4
Jatiluhur	1. Bulak	1,2,7,8	15	167.27	-
	2. Wadas	3,4	9	183.00	-
	3. Batu Tumbuh	5,6	8	88.14	-
Total		30	134	1,107.80	

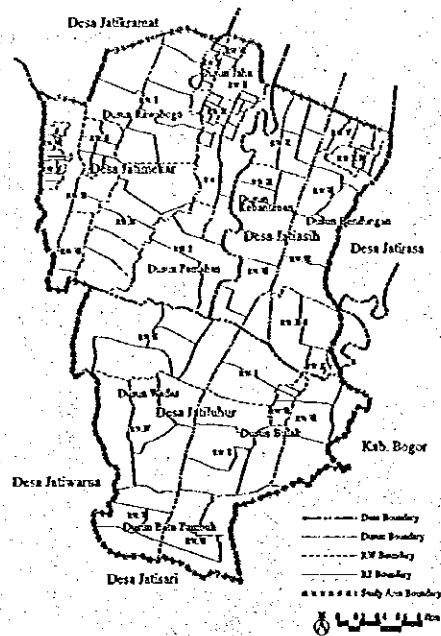


Figure 7-2-4 Administrative Boundary of Concept Development Area

1) Population

Total population of the study area was 34,642 persons in 1998 and total number of households was about 7,000. Accordingly the average household size is 4.95 person/household. The population density by RT is classified into two: a rather low density of 10 to 50 person/ha is observed in ordinary settlements, and 100 to 360 person/ha in newly developed residential estates.

2) Land Use

Topographical profile of the study area is a plain with the altitude of 20 to 50 meters with moderate land slope. Existing land use is composed of major three categories: settlements, mixed crop plantation and vacant land for development, respectively 31%, 45% and 16% of the total. Paddy field has located in Jatimekar but recently this location is prepared for housing development. Local commercial facilities are only along Kabupaten road, Jl. Raya Pondokgede-Bekasi.

Existing land use is illustrated in Figure 7-2-5.

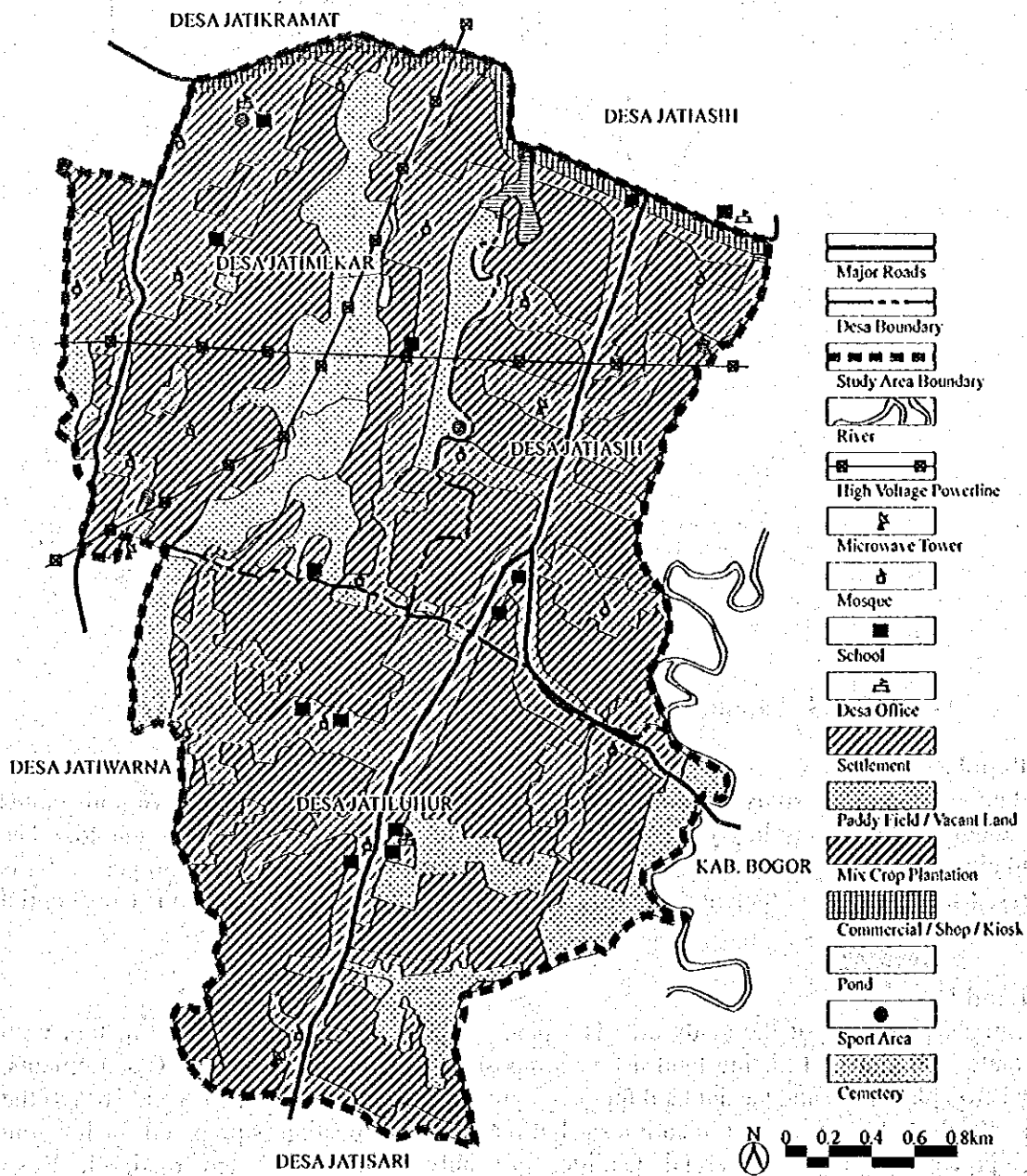


Figure 7-2-5 Existing Land Use, Concept Development Area

3) Road Network

Major roads for automobiles in the study area are limited and consist of 2 municipal roads and 2 district roads. They are paved with asphalt in 6 to 8-meter widths and served by public transport (Mikrolet).

- Jl. Raya Pondokgede-Bekasi: East to west along the northern border of the area,
- Jl. Jatiasih-Jatiluhur: North to south through the center of the area,
- Jl. Parpostel: toward east from Jl. Jatiasih, and
- Jl. Kodau: North to south along the western border of the area.

Other sub-district roads, which connect each community in the area, are of narrow widths and with gravel or dirt surface, therefore, are relatively in poor condition especially in rainy season.

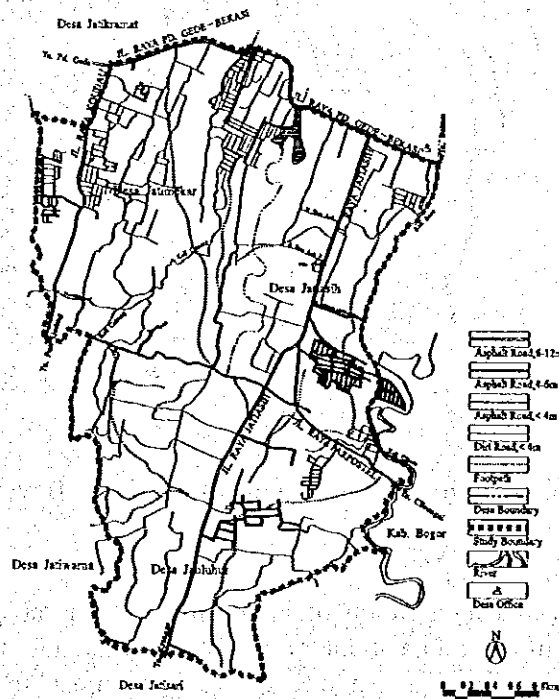


Figure 7-2-6 Existing Road Network, Concept Development Area

4) Public Facilities

i) Drainage

Two rivers running through the area have a function as primary drainage and have a permanent flow. The drainage system of Desa roads is poor, while that of major roads is equipped even in primitive level. In spite of insufficient drainage system, there is no serious flood area within the study area, except for limited swamp areas, because of its topographical advantage.

ii) Educational/Cultural Facility

There are 6 kindergartens, 7 elementary schools, 5 junior high schools, 1 senior high school and 2 Islamic schools, and educational facilities are relatively complete in terms of number in the area.

iii) Religious Facility

There are many Moslem religious facilities: 5 mosques/mushollas in Desa Jatiasih, 7 in Desa

Jatimekar and 5 in Desa Jatiluhur.

Distribution of various public facilities is shown in Figure 7-2-7.

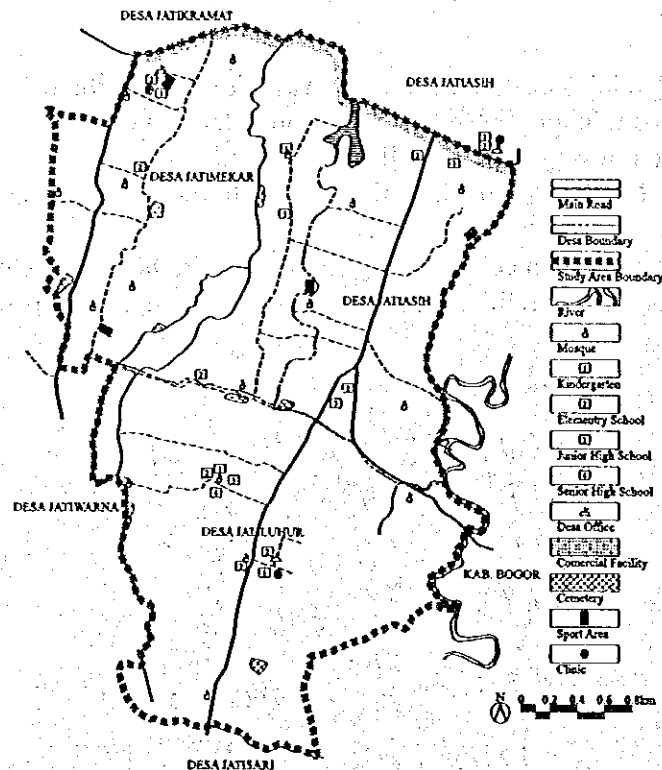


Figure 7-2-7 Existing Public Facilities, Concept Development Area

5) Land Right and Land Value

Since the investigation and registration of land tenure in this area has been conducting in 1998/99, there are no sufficient data about land rights. Land tenure in the area consists of Hak Milik, Hak Girik, Hak Guna Bangunan and Kas Desa, and almost 90% of the land in Jatiasih are registered but only 18% in Jatiluhur. Most of the area is private-owned land (88%) Desa land is only 2%, according to the limited information.

There are two kinds of data on land value. One is land value for land and building taxation and another is the actual land transaction for developments. Land value for taxation depends on its land use and its location from the frontage road. The unit values in Jatiasih vary from Rp.22,500/m² in housing area to Rp.225,000/m² in commercial area.

6) Housing Development Condition

There are 23 locations of development with different development status in the area. Most of them are for housing in less than 100ha and detailed information is summarized in Table 7-2-2 and Figure 7-2-8.

Table 7-2-2 Development Status in Concept Development Area

No	Name of Company	General Information			Land Acquisition				Development Status				Remarks	
		Location (Desa)	Date of Approval		Total Land Area (ha)	Land Acquired (ha)	Start of Land Acquisition	Average Cost (Rp./m ²)	Developed		Under Construction	Planning		
			Location	Principle Permit					Area (ha)	Number of Houses				Number of Sold
1	Candra Baru	Mekar	na	na	-	12	1991	-	12	430	450			Old real estate
2	Nasio Citra Mahya	Mekar	na	na	-	10	1991	-	10	300	300			Old real estate
3	Buana Jaya	Mekar	na	na	-	0.5	1991	-	0.5	40	40			Old real estate
4	Dewan Pertimbangan Agung	Mekar	na	na	-	4	-	-	-	-	-		X	
5	Perum Kodau V	Mekar	na	na	-	13	1990	-	13	315	315			Old real estate
6	PT. Angkasa Puri	Mekar	na	na	-	12	1990	-	12	350	350			Old real estate
7	PT. Graha Asadhana Pratama	Mekar	12.06.93	08.07.94	15	8	-	-	-	-	-		X	Paddy Field
8	PT. Aji Satria Sena Kaya	Mekar	02.02.96	06.03.96	20	20	-	-	-	-	-		X	Land fill
9	PT. Prestasi Mekkota Utama	Mekar	28.06.94	08.08.95	100	67	-	-	-	-	-		X	Paddy Field
10	Taman Ismail Marzuki	Mekar/Ash	na	na	16	16	-	-	-	-	-		X	
11	Perumahan Angkatan Udara	Ash	na	na	-	7	1990	-	7	160	-			Old real estate
12	PT. Maya Kencana Raya	Ash	03.04.93	27.02.93	3.6	3.6	1993	-	0.6	1	-		X	Taxi pool house
13	Nasrud Zahiroddin	Ash	05.06.98	02.20.98	0.33	-	-	-	0.33	1	-			Petro Station
14	PT. Hatmo Haji & Kawan	Ash	23.03.95	01.03.95	40	24	1995	50-80,000	24	100	-		X	Marketing
15	Pt. Duta Putra Mhikota Pri Gading	Luhur Maru	18.01.95	23.01.95	50	22	1993	20,000	-	-	-		X	Land fill
16	PT. Jati Unggul Perumahan Kopestel	Luhur	18.09.96	01.26.95	10.8	10.8	1996	-	10.8	410	180		X	Marketing
17	Kompas	Luhur	19.12.97	01.09.98	1.4	1.4	1997	-	-	-	-		X	Land fill
18	Parpostel	Luhur	na	na	-	5	1988	15,000	-	-	-			Occupied
19	PT. Busana Risma Perumahan Mandosi	Luhur/Ash	10.06.93	27.05.93	4.5	4.5	1993	15,000	4.5	257	257			Occupied
20	PT. Madya Pura Sarana Jatuhur	Luhur	na	18.08.92	13	13	-	-	-	-	-		X	Land fill
21	PT. Citra Marga Nusapala Persada	Luhur	29.09.95	09.10.95	10	7	1995	40,000	-	-	-		X	Land fill
22	Perumahan Jatuhur Permai (AURI)	Luhur	na	na	-	14	1985	5,000	14	3	-		X	Land fill
23	PT. Asabri	Luhur	08.03.97	05.05.97	20	10	1997	40,000	10	-	-		X	Road developed

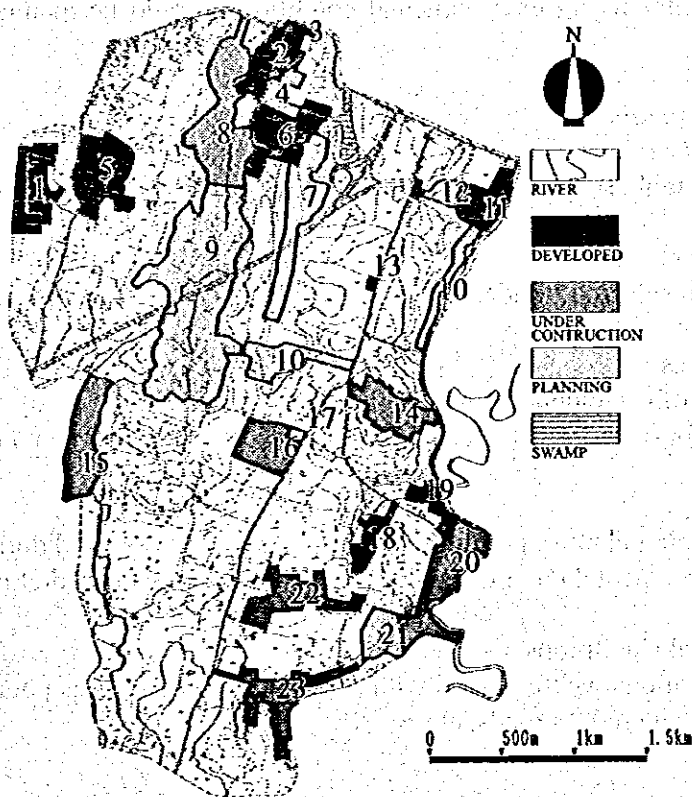


Figure 7-2-8 Development Status in Concept Development Area

(2) Site Evaluation

A preliminary site evaluation was carried out based on the results of the site survey (1), which was conducted from August to September 1998. The major characteristics of the study area are identified from the following viewpoints for better living environments.

1) Elements to be Conserved

Though there are no identified historic or archaeological sites in and around the area, major existing environmental elements to be conserved for better urban life are listed as follows:

i) River and Greenery

Two rivers of Cikeas/kali Baru and Cokung running through the study area from south to north direction play a role not only of irrigation and drainage but also of landscape scenery together with greenery alongside. They are significant elements to be improved and preserved for future urban living environment.

ii) Mosque and Cemetery

There are 17 mosques/mushollas, 2 Islamic schools and 8 cemeteries in the area. They are carefully taken into consideration when development projects are planned, since Islam is the dominant religion.

iii) Well-planned Sub-division Estates

Several sub-division housing estates developed by private sector during this decade keep a proper living environment as far as its inside of the estates, in comparison with the ordinary homestead community. As a harmony with neighboring ordinary settlements is further issues to be solved, these better living environmental conditions should be maintained and managed even in the future.

2) Hazardous Elements

Though seriously hazardous and negative elements for better environments are not specified in comparison with neighboring areas, major features are summarized as follows:

i) Natural Disasters

Some swamp area inside and beside the east part of the study area is a flood prone area.

ii) Traffic Accidents

It is not safe for traffic accidents along all the arterial roads in the study area, because of no facilities installed for pedestrian such as sidewalk, pedestrian crossing and traffic lights.

iii) Pollution

Public opinions on air and noise pollution in the area were not obtained during field survey and interview, but environmental conditions along arterial roads are deteriorating.

iv) Poor Residential Conditions

There are a few locations where houses with poor conditions, such as poor road access, weak structure, garbage scattered on roads, etc.

3) Lacking Elements

i) Road Network

In general, there are no wide roads with more than 2 lanes where through traffic pass the roadside obstacles (parking cars, minibuses, etc.) all over the study area, and paved width is narrow in spite of enough right of way. There is no sufficient east-west connection across River Kali Cakung for automobiles within the area, and most of the roads for automobile are north to south direction, moreover there are so many blind/dead alleys everywhere in the study area. Motorcycles and bicycles are only the modes of transport inside of the area away from the arterial roads except for some planned subdivision estates, because there are only small footpaths.

ii) Public Transport

As the major public transports in the area are Microlet and Ojek, there can be seen poor service area for public transport farther than 800m.

iii) Parks and Other Community Facilities

The number of these public facilities is almost sufficient, and they are relatively well located in the area. Quality may be where improvement ought to be made.

(3) Summary of Existing Condition of Concept Development Area

In general, not so many elements to be conserved can be found within the case study area, but most of the factors identified are the necessity of future improvement and development.

General features of the case study area can be summarized as follows:

- Rather low population density: 30 persons/ha in 1998
- Low efficiency of land use: Mixed crop agriculture (60%), settlement/housing (30%)
- Commercial facilities: only along the regional road
- Many land development projects: 340ha in total; developed (65ha), under construction (55ha), planning (220ha)
- Lack of regional arterial network: from east to west connection
- Insufficient regional arterial roads: narrow 2 lanes with poor pavement condition
- Poor arterial roads within the area: incomplete network for motorized vehicles without pavement
- Inconvenient coverage by public transport service
- No preservation of water ways
- Public facilities in a primitive level: drainage system, water supply system, park and play lots, etc.
- Not enough regional amenity core

7-2-3 Concept Development Plan

(1) Development Directions

1) Development Theme

a) Catch Phrase: *Kota Kukaku-seiri*

A title, '*Amenity and Prosperity in urban life through L/C Project for 21st century*'—as a Model Suburban Town in Jakarta Metropolitan Area—(tentative), is set up as a development theme for the concept plan.

This aims a pilot project of substantial Land Consolidation project in the area under the integrated urban planning in accordance with a policy of the spatial plan.

b) Population Framework

Future population of the whole study area is estimated as a target to the year 2010, taking into consideration very moderate increase in comparison with the previous framework in the JABOTABEK development strategy plan.

New Residents	: 30,000 – 50,000	persons
Existing Population	: 35,000	persons
Total	: 65,000 – 85,000	persons

It is able to develop 10 to 15 residential clusters, in a scale of 30 ha with a density of 100 person/ha, within the whole study area. As a result, gross population density will increase from 65 to 85 person/ha.

2) Regional Road Network

Since transportation in this area completely depends on road transport both public and private, a systematic road network development is an essential factor of transportation plan as well as urban development.

a) Toll Expressway

There are still so many uncertainties on the projects of regional toll expressways such as Jatiasih-Karawang Timur expressway and others, partially because of the BOT system. The construction schedule of the Outer Ring Road is not confirmed even though almost 90% of the land acquisition has been already completed. However, the conditions of two toll expressways were determined through discussions with BINA MARGA and local government as follows:

- Outer Ring Road: an interchange (on-off ramp) to access JL. Raya Jatiasih is located at the north edge of the study area.
- Jatiasih-Karawang Timur Road: this toll road is also planned to serve large-scale housing/industrial developments such as Kota Legenda, MM2100, Lippo Cikarang, towards the east, and a junction with Outer Ring Road is developed at the almost same location.

Accordingly, this area becomes a very strategic location from a viewpoint of express network.

b) Regional Arterial Roads

Following points are the targets of planning:

- Completion of a grid pattern network of regional (primary) arterial roads through improvement of existing roads and construction of missing links, especially strengthening the east-west connection not existing at present.
- Widening of Jl. Raya Jatiasih to cope with the traffic demand to/from the toll expressway as a backbone of the area.
- Development of internal (secondary) arterial roads in the area with adequate network density for smooth access from each sub-community to the arterial roads.
- Provision of enough collector roads to access to each housing lot.
- Pedestrian network together with greenery and open space network.

A proposal of regional arterial road network is illustrated in the Figure 7-2-9.

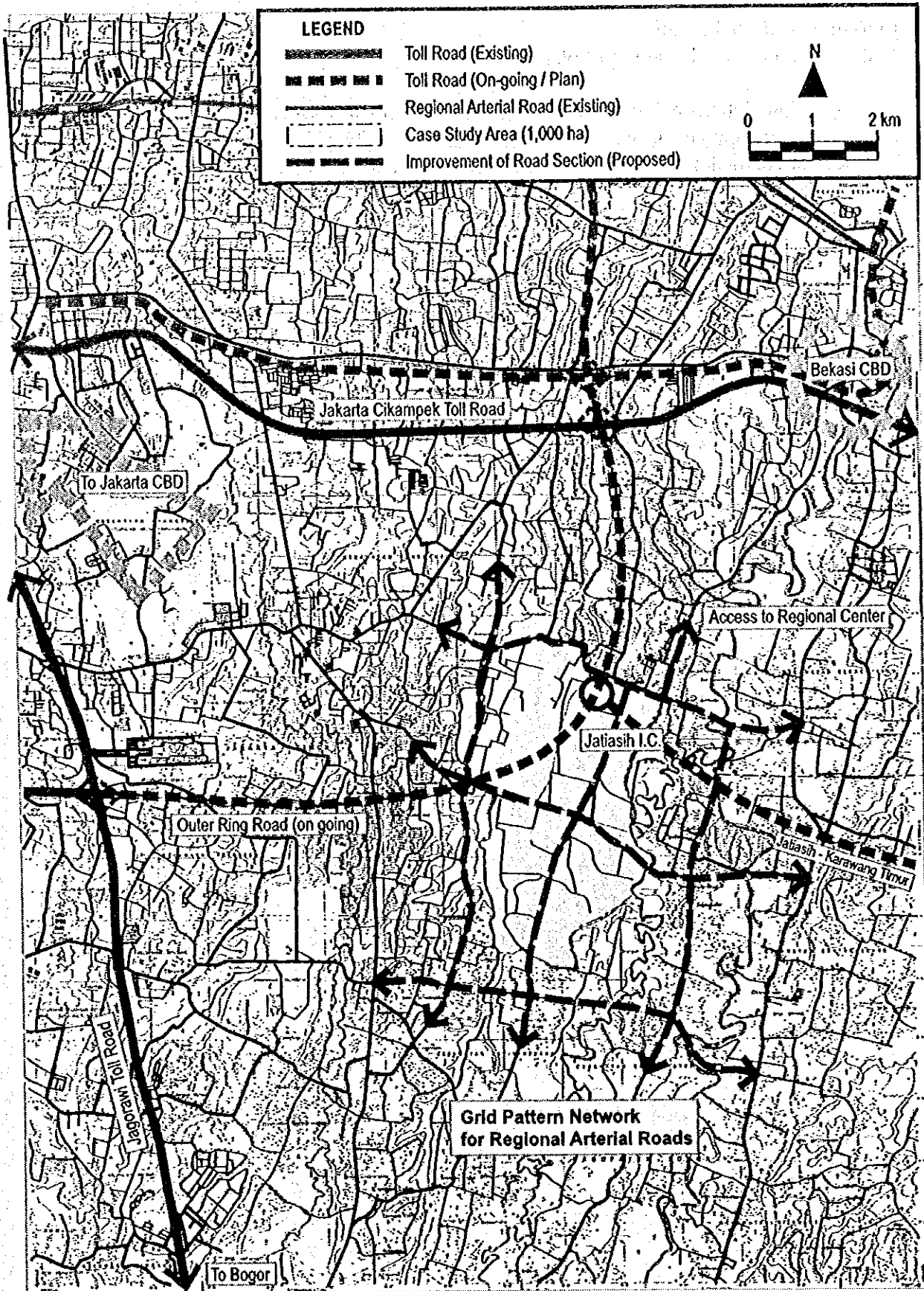


Figure 7-2-9 Proposed Regional Arterial Road Network

3) Alternative Development Scenarios

The basic information for future development structure can be provided from the Spatial Plan of Bekasi. This is composed of a very simple land use plan: residential (built-up and future), commercial (regional and neighborhood), industry and open space/green. Most of the area in Jatisaih is covered by future residential zones together with the existing settlement area. This means Jatisaih basically has a monotonous function of residence in the fringe area of DKI Jakarta in the future.

One exception is an allocation of a commercial area within the case study area. As the detail characteristics of commercial area is not clarified in the plan, provable functions can be estimated in wide range as follows:

- Regional commercial center for Jatisaih,
- Regional center for the wider area including surroundings such as Pondokgede and Jatisampurna,
- Regional center comprising of some complex functions together with commercial facilities, such as industries of logistics, goods distribution, communication & information, etc., in order to fully utilize the advantageous location proximate to the Outer Ring toll way interchange.

In this stage, two alternative scenarios are examined as comparative targets of the concept planning, from the following context of the development.

Alternative A: Ordinary Land Consolidation without Comprehensive Plan

This plan is based on an orthodox or ordinary development context following a natural development trend.

- Gradual residential area development unified into Jakarta conurbation area.
- Rather small scale housing development.
- No strategic commercial development in large scale.
- Less identity of the community.

Alternative B: Integrated Land Readjustment and Community Redevelopment

Meanwhile, another plan is also set up as a model case of strategic development for the case study area through an integrated city planning. Major issues of this alternative are:

- Formulation of quasi-independent community, even in the Jakarta conurbation area.
- Development of multi-function regional sub-center.
- Efficient land use pattern.
- Establishment of model suburban community.

As the alternative B is recommendable one, each alternative is summarized for comparison in the following diagram.

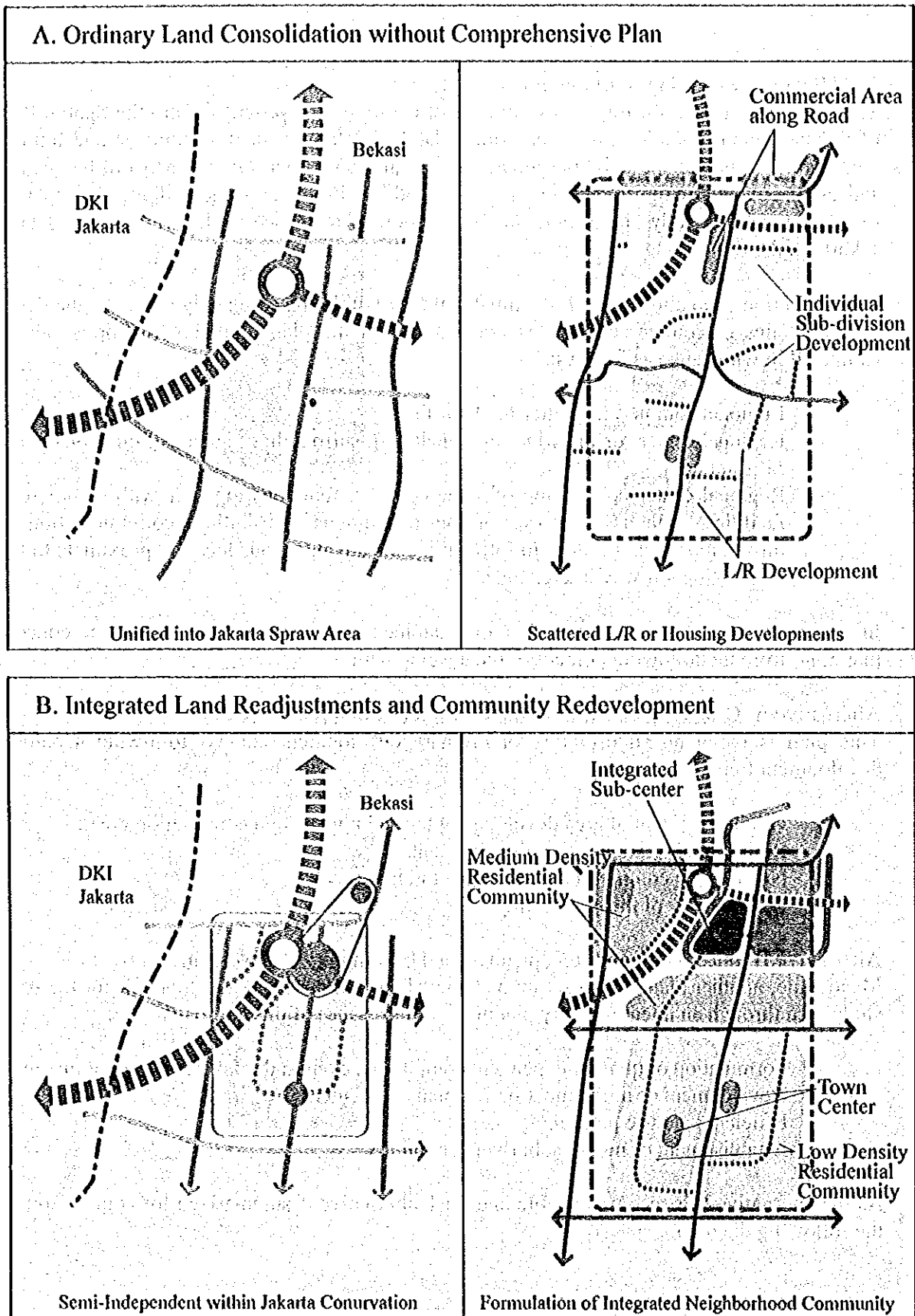


Figure 7-2-10 Alternative Development Scenarios

4) Planning Theme within the Case Study Area

Major subjects for L/C concept planning, in order to solve the existing constraints and to create a comfortable living environment in the future, can be identified from the following aspects:

- Improvement of systematic road network,
- Orderly arrangement of land-use zoning,
- Development of public facilities/utilities in compliance with accurate standard, facilities.

Preliminary analyses both on transportation and land use are summarized in the Figures.

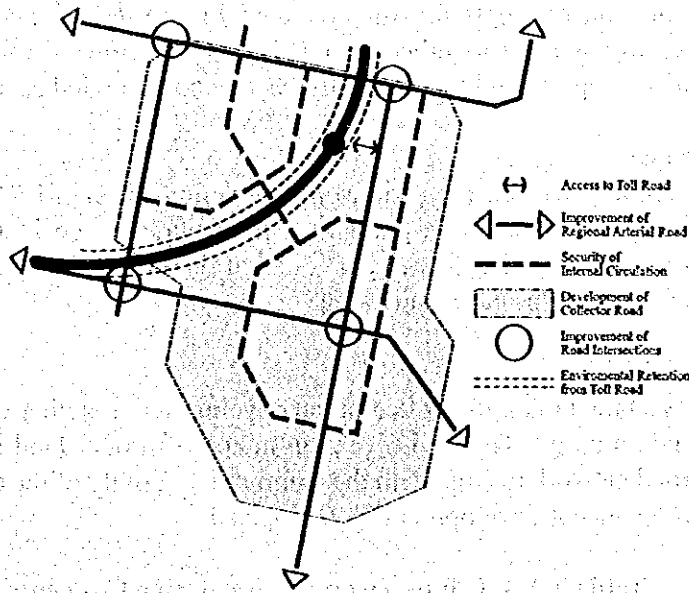


Figure 7-2-11 Development Theme -Transportation-

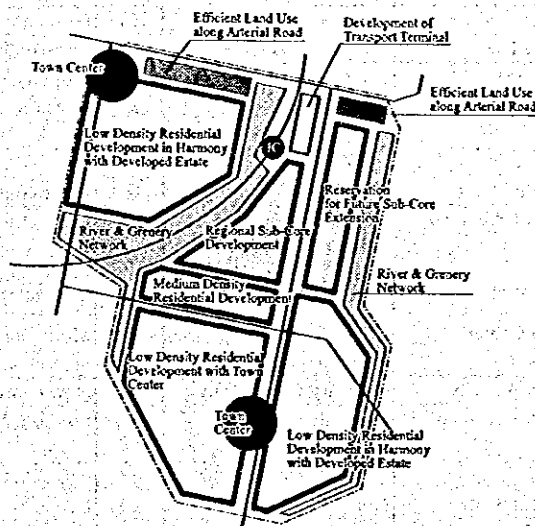


Figure 7-2-12 Development Theme -Land Use-

5) Implementation Strategy

The development stage and method will be examined in the proposed whole concept planning area. As it is very difficult to execute whole plan within certain duration, a priority area can be selected in accordance with an applicability of L/R project as well as other ordinary urban development projects.

(2) Concept Development Plan

1) Comparison of Alternatives

Preliminary proposal of concept development plan for the case study area is examined in accordance with the two alternative development scenarios mentioned above. These two examples of development concepts are illustrated in Figure 7-2-13 and 7-2-14, showing a conceptual land use arrangement together with a skeletal structure of road system. They are compared from various aspects and the alternative B is recommended as a result.

Plan A: (for Reference)

This is a development image of the area with some implementation of L/C projects not in large scale, without a comprehensive urban planning. It is likely to be in the future without a comprehensive city planning and enforcement. It's not recommendable as the goal of a long-term urban development for this case study area.

Plan B: (Recommendable)

Plan B is suitable as a target of an integrated urban development together with L/R projects and redevelopment of community. This can reveal an image of proper land use orderly arranged with a systematic road network to cope with the community activity of the case study area. This is recommended as a concept development plan proposal.

Table 7-2-3 Comparison of Alternative Concepts

Items	Alternative A		Alternative B	
1. Road Network				
Toll Expressway	Outer Ring Road	⊙	Outer Ring Road	⊙
	Jatiasih-Karawang	○	Jatiasih-Karawang	○
Regional Arterial Road	Grid pattern	○	Grid pattern	○
Arterial Road	Direct access	△	Systematic Network	⊙
Collector Road	within developed area only	△	properly served to whole area	⊙
2. Land Use Pattern				
Neighborhood Unit	No concept	×	Clear concept	⊙
Utilization of Potential	Not enough	×	Fully utilized	⊙
Density	Diffuse	×	Orderly arranged	⊙
Pattern	Vague	×	Systematic	⊙
Amenity of Center	Monotonous in small scale	△	Multi-function in large scale	⊙
Community Activity	Ordinary Community	△	New community	⊙
Unify old & new com.	Difficult	×	Possible	○
3. Implementation				
Development Scale	Not so large	○	Large	△
Stage Development	apt to be Random development	×	Guided development by neighborhood	⊙
Overall Evaluation	Not recommendable	×	Recommendable	⊙

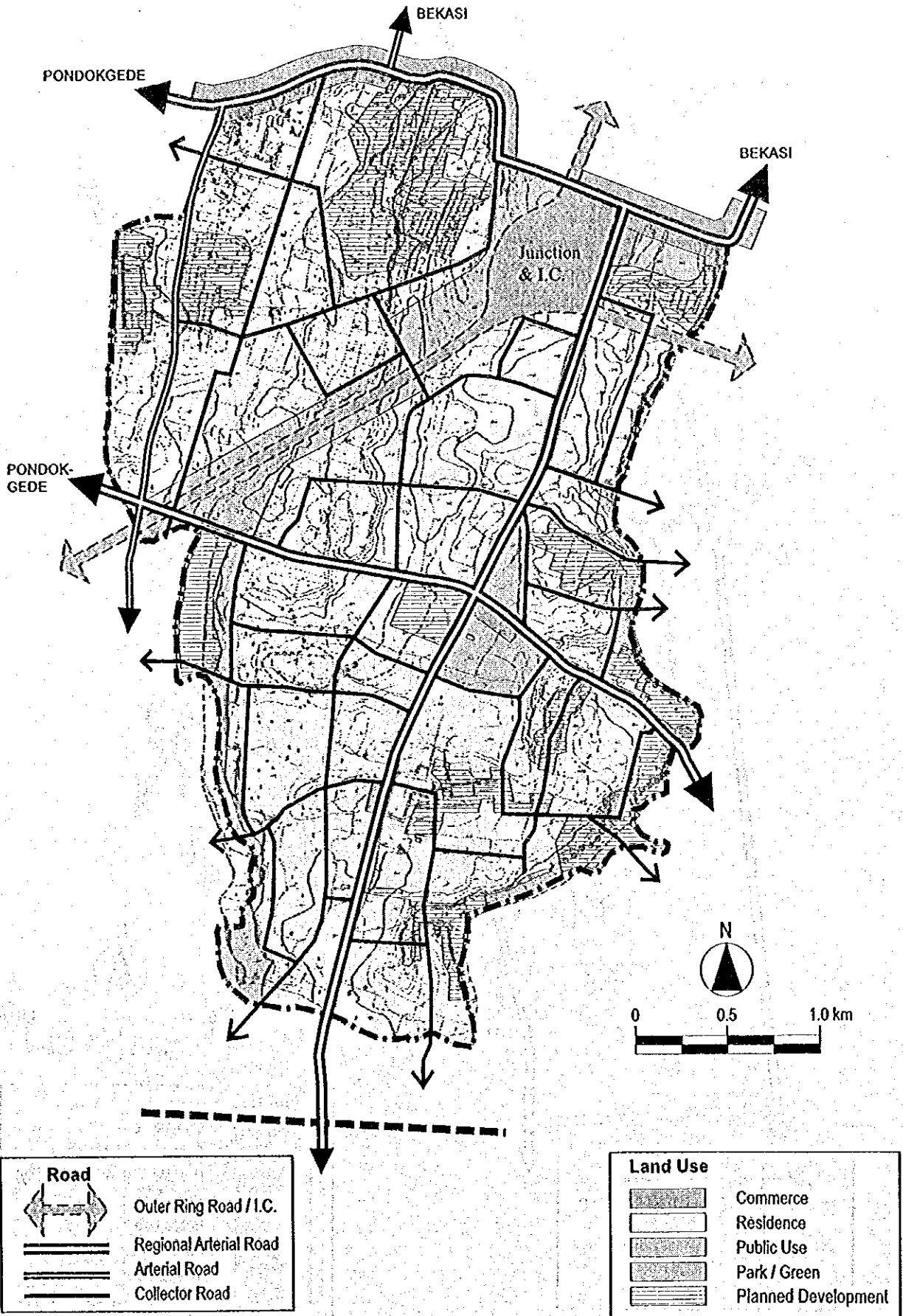


Figure 7-2-13 Concept Development Plan (A: Alternative)

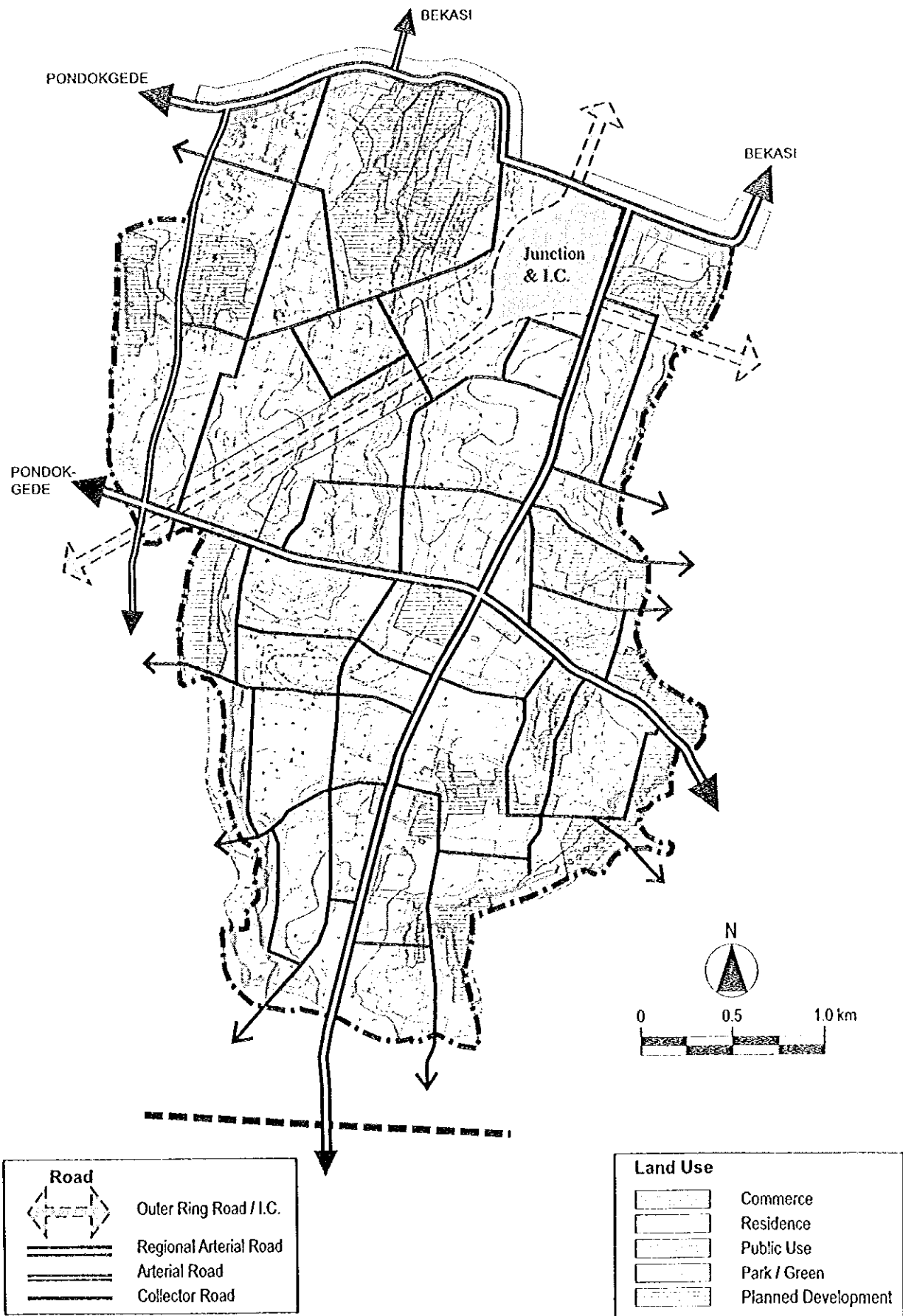


Figure 7-2-13 Concept Development Plan (A: Alternative)

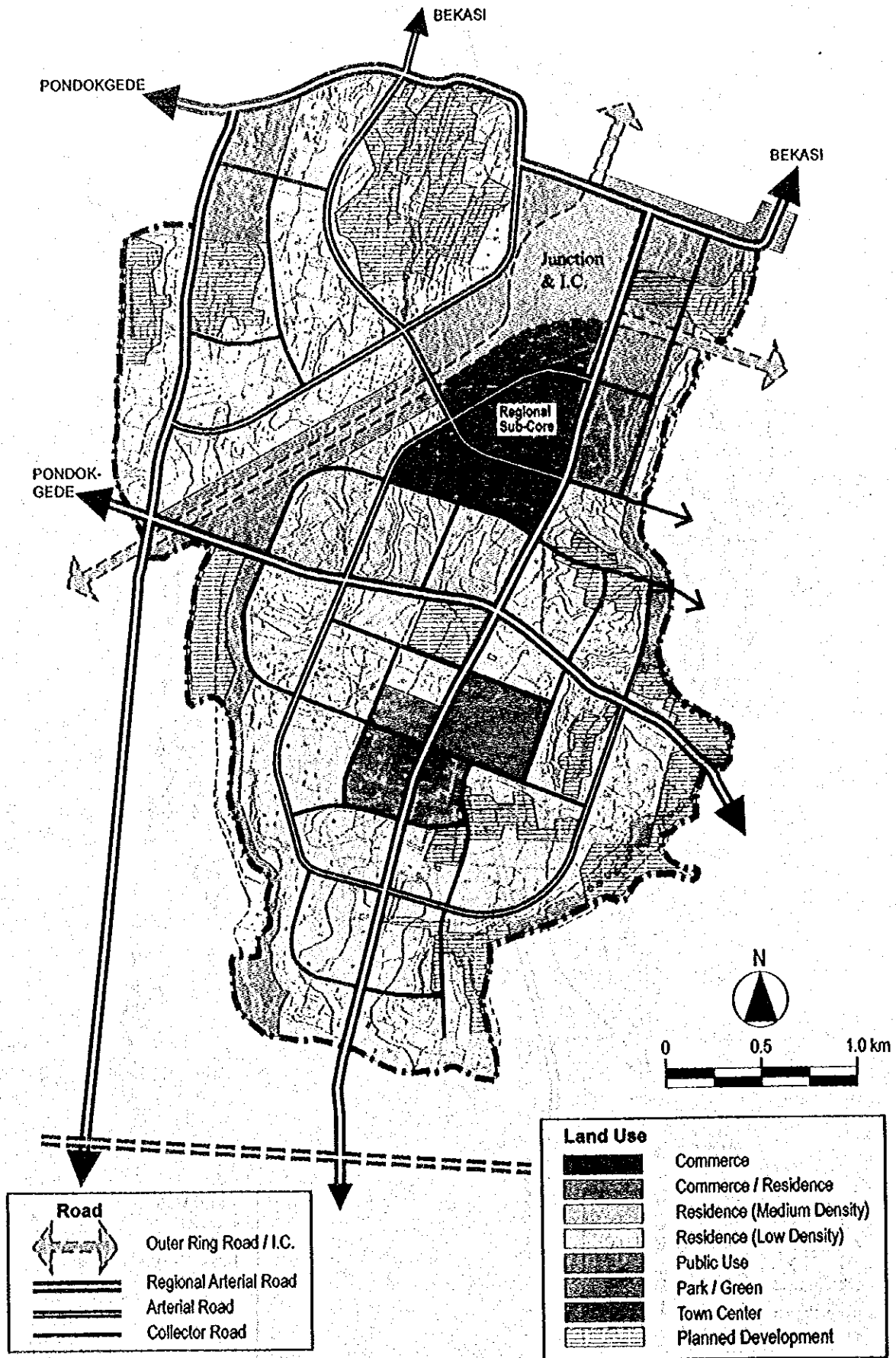


Figure 7-2-14 Concept Development Plan (B: Recommended)

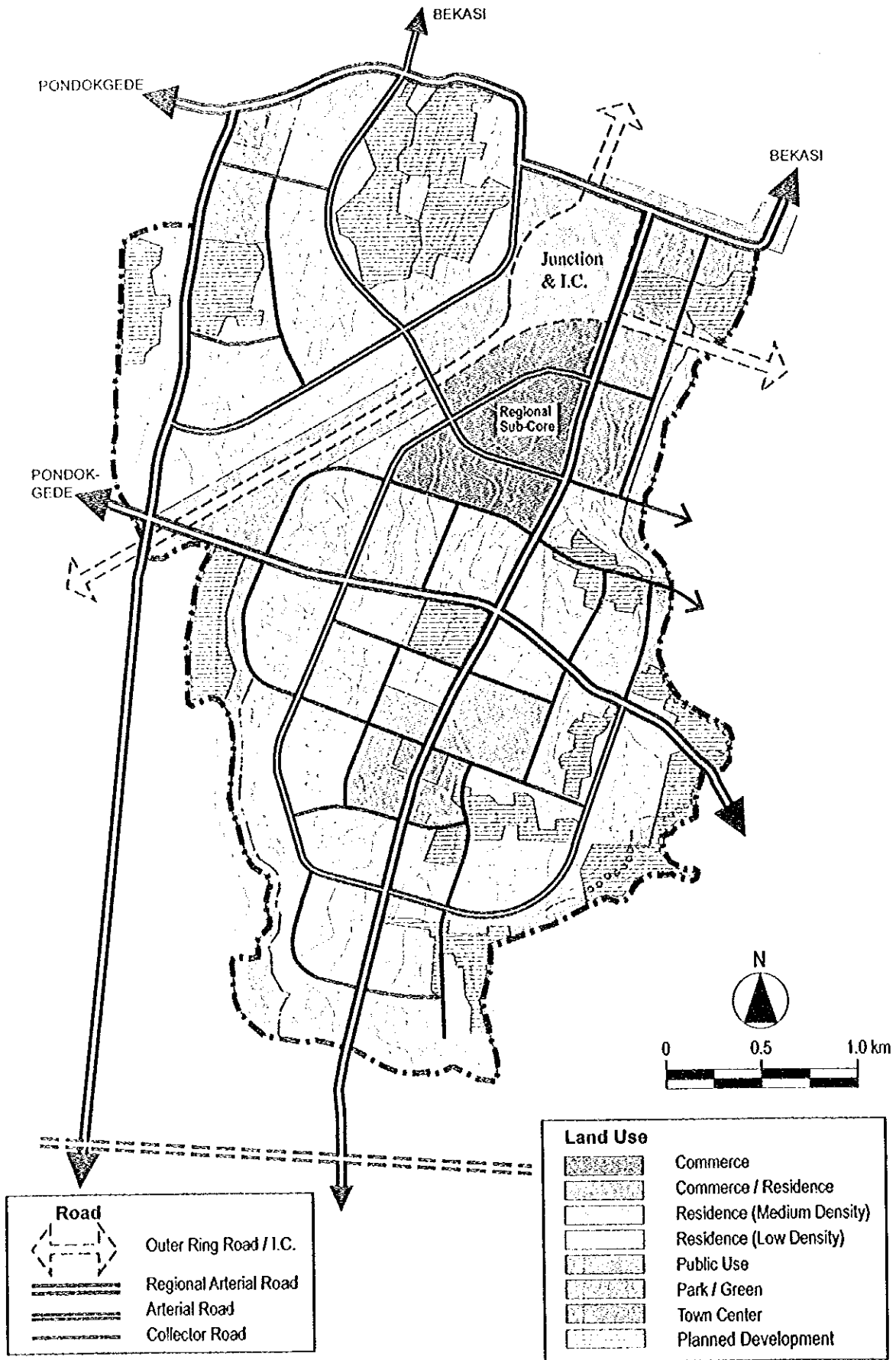


Figure 7-2-14 Concept Development Plan (B: Recommended)

2) Site Selection for L/C Master Plan (within 300ha)

An area of about 300ha in the Concept Development Plan is selected for L/C Master Plan, considering development priority, applicability of L/C project and desirable impacts for further implementation.

Whichever alternative concept is chosen, A or B, the necessary arterial road network for the area is stable, nevertheless, the roles of Jl. Raya Jatiasih and the east-west road are essential. When a priority L/C project is defined as a project to provide the land for these right of way (ROW) as a part of land contribution and construct them together with necessary infrastructures in the area, an area which forms a certain sub-community including both road sections will become a candidate.

Moreover, the following conditions are taken into consideration to find some priorities of the candidate area.

- Less housing development estates by private sector,
- Rather low efficiency of land use (mix crop land, scattered old settlements, low population density),
- Suitable geographic condition for construction works,
- Rather low land price in the area.

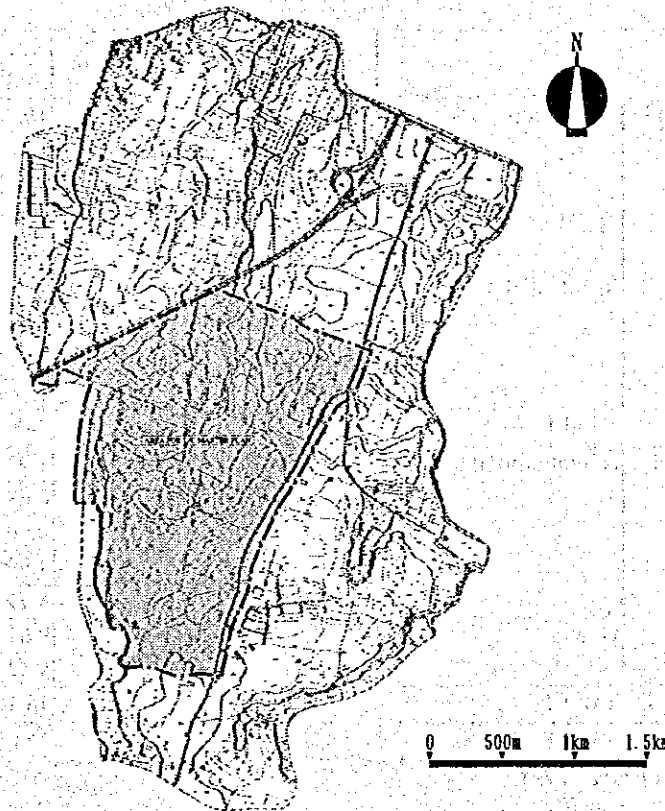


Figure 7-2-15 Selected Site for L/C Master Plan

2) Site Selection for L/C Master Plan (within 300ha)

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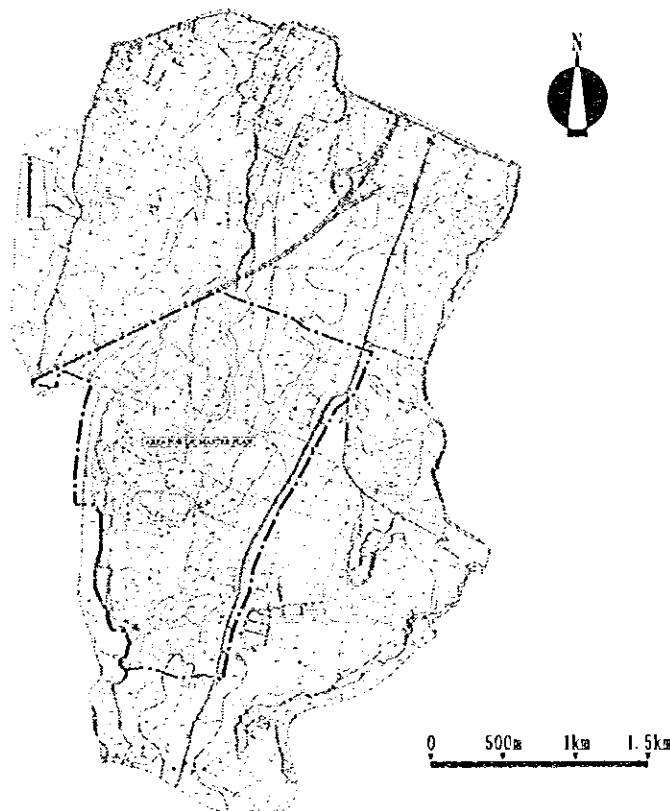


Figure 7-2-15 Selected Site for L/C Master Plan