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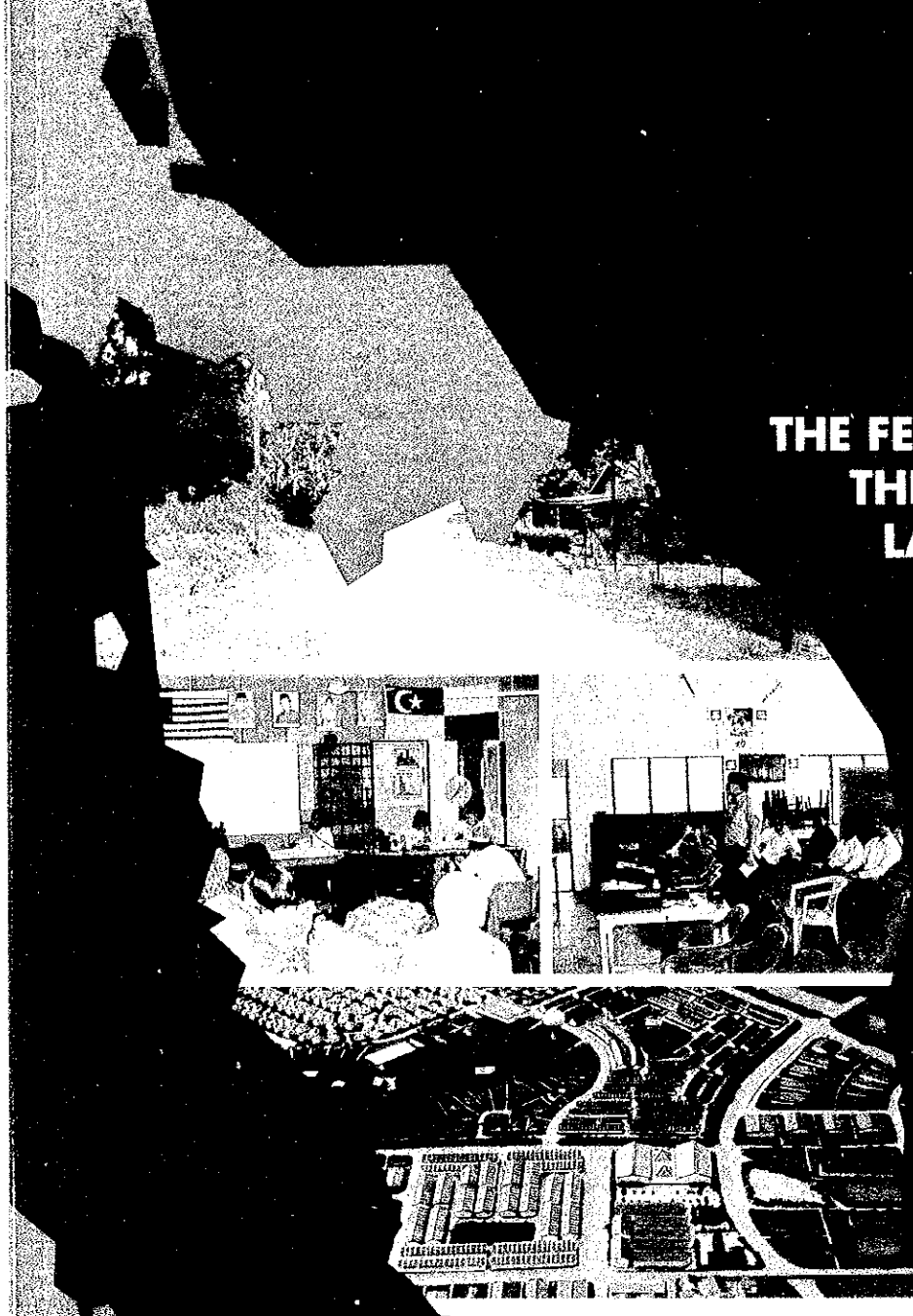

THE FEASIBILITY STUDY ON THE INTRODUCTION OF LAND READJUSTMENT IN MALAYSIA

FINAL REPORT
SUPPLEMENTAL TEXT
Volume 2

Replotting Planning

MAY 1995

ALMEC CORPORATION
JAPAN ASSOCIATION OF LAND READJUSTMENT

SUPPLEMENTAL TEXT VOL.2
REPLOTTING DESIGN
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CHAPTER 1 METHODOLOGY AND PROCEDURE

1.1 Overall Framework

1) Objective and Rationale of Replotting

Replotting is a method to reorganize original land parcels in such a manner that planned infrastructure and public facilities can be constructed and, at the same time, the utility of land parcels will be increased equitably by exchanging, amalgamating and/or subdividing the parcels. The land parcels after the process of reorganization are called "replots". While project implementation planning provides the framework of the project, replotting design determines specifically the rights and location of the lands in compliance with the approved and consented layout plan.

Replotting has two important aspects, as follows:

(a) Technical Aspect of Replotting

Replotting work is supported by a set of technical methods of calculating values of lands "before" and "after" the project, determining the entitled value, locating the replots, and adjusting the difference between the entitled value and the final value of the replots. The basic aim is to distribute the shares and contribution (or profits and costs due to the project) equitably among landowners.

(b) Legal Aspect of Replotting

Land readjustment touches only on the physical aspects of the lands. This means that all changes and encumbrances imposed on the lands will be carried over automatically to the replots. The legal status of the lands will not change throughout the project period until the replots are finally designated and new titles are issued. With this, the implementing bodies are free from cumbersome procedures and the rights of landowners are totally protected.

2) Overall Procedure of Replotting Design

The replotting design process normally commences when the project implementation plan has been completed where the LR plan and preliminary design are available. However, since replotting design is the major concern of landowners and affects the layout plan, financial land plan, and, thus project implementation plan, it is desired that preliminary replotting work will be conducted before project implementation plan is officially approved and becomes a sort of legal document.

Officially, replotting planning is divided into the following four phases:

i) Land Valuation: Land valuation in the LR is an integral part of replotting work. The LR land valuation provides a detailed method of evaluating individual lots and replots objectively. Accordingly, the street value method is proposed in this Study. The street value method, firstly, focuses on access roads to lots and, secondly, evaluates lots and blocks in terms of value index. To ensure equity and appropriateness, professional valuers must be appointed to supervise land valuation work.

ii) Preparation of Replotting Design: In the replotting design phase, the location, acreage, and shape of replots are determined in order to preserve the entitled values of original lots. As a result of this phase, provisional replotting can be designated.

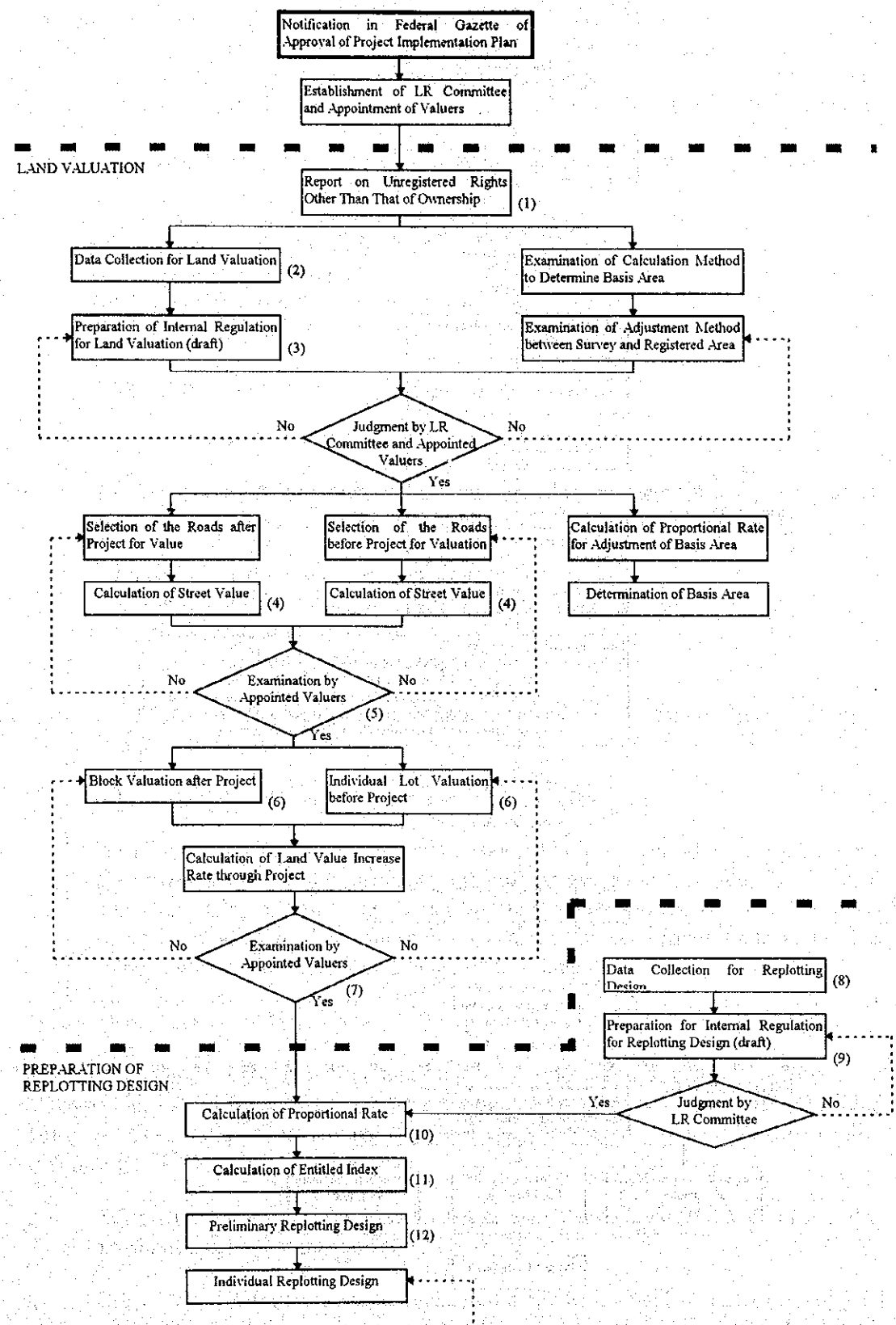
iii) Preparation of Replotting Plan: After construction and building relocation works, a set of replotting plans are prepared to confirm the physical and land administrative changes brought about by the project.

iv) Enforcement of Replotting Plan: The replotting plan will be officially announced in the Federal Gazette. Accordingly, new land titles will be issued and liquidation will be done finally.

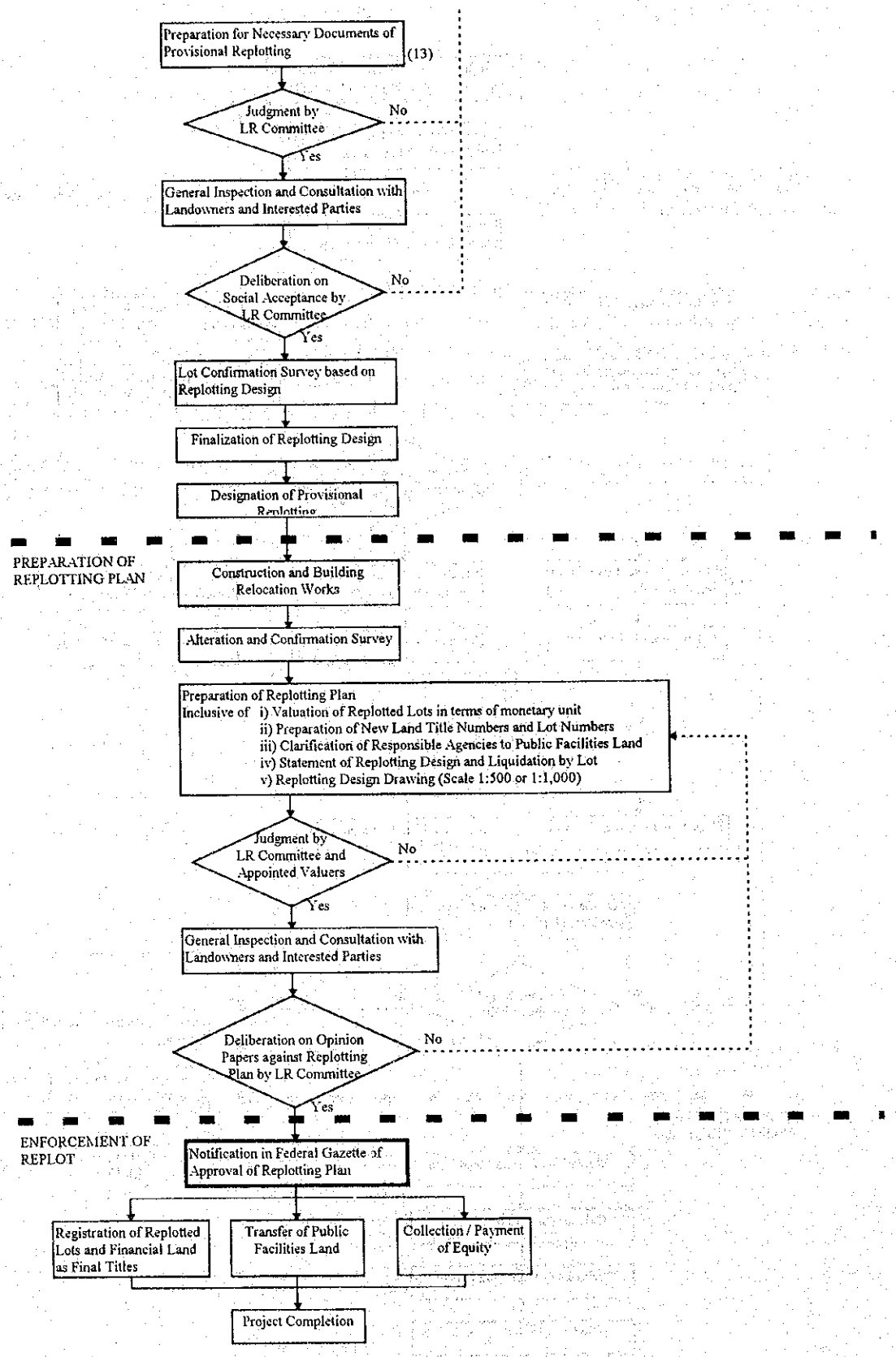
Reviewing the replotting methods applied by the Study Team in the two case study areas and taking the proposed Malaysian LR System into account, the detailed procedure is illustrated in Figure 1.1. Important decisions will be made from time to time by an LR committee consisting of elected landowners and interested parties. To avoid redundant feedback, unofficial preparatory work should be undertaken.

Appendix 1.1 provides a supplementary description of the replotting procedure.

Figure 1.1
Detailed Procedure of Replotting Work



Cont. Figure 1.1



1.2 Preparatory Work

1) Policy Setting

The determined items under a project implementation plan are not sufficient to guide replotting design work smoothly. Prior to the work, therefore, design principles and relevant technical matters should be regulated. In land readjustment projects, however, one cannot impose a standard regulation since the increase in land utility varies in every project.

Accordingly, the following items must be clarified prior to replotting design work:

(i) how to determine the basis area;
(ii) how to evaluate land;
(iii) how to design replots;
(iv) how to modify replots as appropriate lots; and
(v) the necessary items to be noted for some special lots

2) Supplemental Survey

(a) Present Condition Survey

The present condition survey should be done during the project implementation planning phase. But the following items can be resurveyed, if necessary:

- roads, rivers, open space and public facilities,
- buildings and other structures (whether transferable or not),
- land use condition by lot, and
- soil quality and its historical change

In addition, soil quality must be carefully surveyed when the land is to be replotted to agricultural use.

(b) Land Rights Survey

A land rights survey is also supposed to have been done previously. But land rights are often changeable and, therefore, then the latest information must be collected when replotting design is set about. As for private land rights, the information pertaining to alienated land can be easily accessed in land offices while T.O.L. has to be confirmed in the presence of a T.O.L. holder.

3) Determination of Basis Area

Basis area is defined as the precise lot area subject to replotting plan before the project. In Malaysia, Final Titles are considered to have enough accuracy as basis area while Qualified Titles are less accurate. There are two ways to determine the basis area on Qualified Titles as follows:

i) Site Survey: A licensed surveyor measures areas with Qualified Titles on site. It is ideal but costly and time consuming.

ii) Proportional Adjustment: The registered areas with Qualified Titles are adjusted proportionally to the surveyed subdistrict area or the total project area. Under this case, the following documents are to be prepared.

- subdistrict location map
- surveyed areas of subdistricts
- proportional adjustment rates on subdistricts
- statement of basis area by lot

The Study Team employed ii) in the case studies.

4) Preparation of Working Map

Replotting design work is undertaken on some working maps such as an existing cadastral map, a future block design map, or an overlay of the two maps. An existing cadastral map must indicate not only lot shapes but also the project area boundary, lot numbers, and other noticeable land rights other than ownership. On the other hand, as a result of LR physical plans and a block confirmation survey, a future block design map is prepared.

1.3 Land Valuation

1) Necessity of Land Valuation

Land valuation in LR projects has its own purposes and methods that are different from the valuation for land transaction and tax assessment. The primary purpose of land valuation is to distribute costs and profits of the project or to calculate the contribution and shares among landowners equitably. To meet this objective, LR land valuation is equipped with the method to handle the following situations:

- Assessment of a large number of land parcels with different features in the project areas according to a uniform rule agreeable to the parties concerned.
- Assessment of land parcels on a comparable basis for "before" and "after" effects of the project.
- Work completion within a reasonable time period.

Accordingly, while normal land valuation considers social, economic and administrative factors, the LR valuation puts more consideration on physical and geographical factors such as location, area, environment, etc.

2) Land Valuation Method

Generally, land valuation has many complicated criteria; some are even conflicting. For an LR project, land valuation must be done based on the following requirements:

- The physical and legal conditions which affect land value must be identified.
- All information concerning land value such as land transaction records and predictable prices must be translated and treated as present value.
- Land must be valued objectively and comparatively within a project area. Therefore, indexation is a practical means while absolute value is not needed except liquidation.

To meet such requirements, the "Street Value Method" has been worked out and applied in LR projects extensively in Japan as well as in other countries such as Korea, where

choice of factors and the weight balance are different from each other. Although the street value method is not familiar to those who are engaged in land valuation in Malaysia, an alternative method has not been developed as yet during internal discussions between the Study Team members and their counterparts. Consequently, the street value method was employed for replotting design practice in the Study.

Figure 1.2 indicates the necessary work items for land evaluation assuming that the street value method would be applied in LR projects in Malaysia.

3) Street Value

(a) Roads subject to Street Value Calculation

Road functions can be distinguished by their hierarchy, connection, width, pavement and design. They affect the utility of facing lots to a great extent. Besides their use in transportation, some roads have the following secondary functions: (i) refuge and buffer space in case of disasters; (ii) ventilating passage and scenic greenery; and (iii) space for trenching drains and sinking piles.

In principle, the roads subject to street value calculation are all the roads which cope with vehicular traffic and pedestrians and have access to lots. Accordingly, street value must be calculated for the roads outside a project area which are, however, accessible to the lots within a project area. In addition, it does not matter whether the roads are public or private. Canals and waterways can be regarded as roads, if necessary.

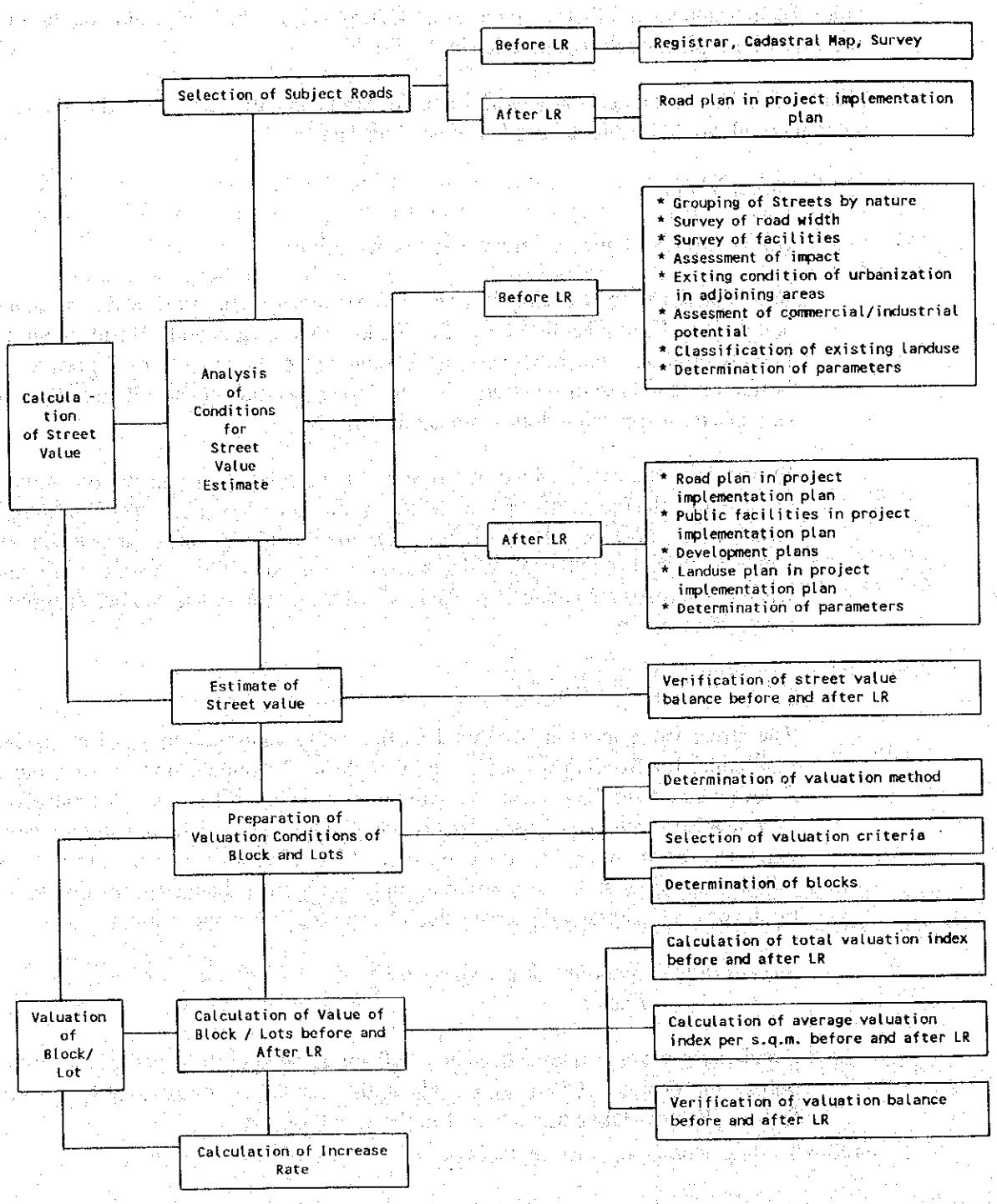
(b) Street Value Method

The street value method is defined as the utility value per sq.m. of a standard residential lot fronting a road at right angle in the middle portion of a block. Relevant streets in the project area will be selected and the street value calculated in comparison with that of a standard residential lot. The calculated street value is expressed as an index, but monetary unit. It is convenient for valuers to neglect inflation and time and to pay attention only to physical changes in relation to lots by the project. Street values are calculated by the following formula:

$$\textit{Street Value} = \textit{Standard Street Value Index} \times \left(\Sigma \textit{ Coefficient Value by Each Factor} \right)$$

Standard street value index is fixed at 1,000 and applied to the most valuable roads before the project. Other street values are calculated comparably by affected factors. Factors taken into account in the valuation are:

Figure 1.2
Work Items for Land Valuation



- Road factor: conditions of roads such as type, width, hierarchy, pavement, etc.

- Accessibility factor: accessibility to/from amenity or nuisance facilities such as distance between school, city center, transport terminal, shopping, cemetery, sewerage plant, etc.

- Availability factor: utilities within ROW (right-of-way) such as piped water, drainage and sewerage

Possible factors and ranges of coefficient values in street value calculation are summarized in Table 1.1. It is to be noted that the table is not uniformly applicable to any LR project. In preparing factors and coefficient values, it is required to sort them out taking into consideration the regional characteristics and a project implementation plan.

(c) Calibration of Street Values

To calibrate the calculated street values as to their appropriateness in the context of land valuation in Malaysia, the results must be compared with the land valuation records in a project area. The results must keep good balance with that of the prevailing method in Malaysia, the so-called "Direct Comparison Method".

On the other hand, there is no practical means to calibrate the calculated street values after the project in Malaysia. In fact, the effect of urban development projects may be incorporated into the land valuation practices for existing land. Officially, there is no necessity of estimating future land values. Therefore, the adjustment factors should be adequately assessed to follow and embody the project implementation plan.

4) Land Valuation for Individual Lot

In individual lot valuation before the project, a street value is considered as a standard value among the lots in touch with it. Individual lot value can be obtained by adjusting the related street value with affected factors as in the following formula:

Individual Lot Value = (Street Value) x (Σ Adjustment by Affected Factors on Lot)

Needless to say, each lot must be analyzed thoroughly by factor. The factors which affect valuation can be grouped into three. They are:

a. Relation between road and lot: height difference, corner lot, dual access roads and no access road

b. Physical conditions: lot acreage, lot shape, flat or slope, frontage and depth, swampy or rocky surface, etc.

c. Lot utility: existing land use, designated landuse in land title, existence of nuisance facility, encumbrance, etc.

Table 1.2 indicates an example of factors and coefficient values for individual lot valuation.

Table 1.1
Factors and Coefficient Values for Street Value Calculation

Factors	Condition	Coefficient Value
Condition of Street (Character, Continuity, etc)	Very Good	+ 30 % ~ + 50 %
	Good	+ 0 % ~ + 30 %
	Normal	-
	Bad	- 0 % ~ - 30 %
	Very Bad	- 30 % ~ - 50 %
Amenity (Neighbourhood Status)	Very Good	+ 40 % ~ - 80 %
	Good	+ 0 % ~ - 40 %
	Normal	-
	Bad	- 0 % ~ - 40 %
	Very Bad	- 40 % ~ - 80 %
Accessibility-1 (Shopping)	Very Near	+ 10 % ~ + 20 %
	Near	+ 0 % ~ + 10 %
	Normal	-
	Far	- 0 % ~ - 10 %
	Very Far	10 % ~ - 20 %
Accessibility-2 (Bus Line)	Very Near	+ 5 % ~ + 10 %
	Near	+ 0 % ~ + 5 %
	Normal	-
	Far	- 0 % ~ - 5 %
	Very Far	- 5 % ~ - 10 %
Accessibility-3 (Park. School)	Very Near	+ 5 % ~ + 10 %
	Near	+ 0 % ~ + 5 %
	Normal	-
	Far	- 0 % ~ - 5 %
	Very Far	- 5 % ~ - 10 %
Accessibility-4 (Others)	Very Near	+ 5 % ~ + 10 %
	Near	+ 0 % ~ + 5 %
	Normal	-
	Far	- 0 % ~ - 5 %
	Very Far	- 5 % ~ - 10 %
Width of Street	Very Wide	+ 5 % ~ + 10 %
	Wide	+ 0 % ~ + 5 %
	Normal	-
	Narrow	- 0 % ~ - 5 %
	Very Narrow	- 5 % ~ - 10 %
Type of Road	Pavement	-
	Metalled	- 0 % ~ - 20 %
	Earth	- 20 % ~ - 40 %
Sewerage / Drainage		± 10 % ~ ± 20 %
Water Supply		0 % ~ ± 10 %

Table 1.2
Coefficient Values of Lots

Factors	Condition	Coefficient Value
Category of Land Use	Commercial	+ 30 % ~ + 200 %
	Industrial	+ 0 % ~ + 50 %
	Residential	-
	Agriculture	- 0 % ~ - 30 %
	River.Roads. Railways.etc.	- 50 % ~ - 90 %
Size	Very Width/Length	- 5 % ~ - 10 %
	Width/Length	- 0 % ~ - 5 %
	Normal	-
	Small	- 0 % ~ - 5 %
	Very Small	- 5 % ~ - 10 %
Shape	Standard	-
	Bad	- 0 % ~ - 5 %
	Very Bad	- 5 % ~ - 10 %
Terrain	Standard	-
	Bad	- 0 % ~ - 5 %
	Very Bad	- 5 % ~ - 10 %
Existence of Dislike Facility (Cemetery etc)	Near	- 0 % ~ - 5 %
	Very Near	- 5 % ~ - 20 %
Difference Between High and Low	Very High	- 5 % ~ - 20 %
	High	- 0 % ~ - 5 %
	Standard	-
	Low	- 0 % ~ - 5 %
	Very Low	- 5 % ~ - 20 %
Corner Lot		+ 0 % ~ + 10 %
Land Adjoining to Front and Back Road		+ 0 % ~ + 10 %
Land not Adjoining to Any Road		- 5 % ~ - 20 %
Flooding Condition	Standard	-
	Bad	- 0 % ~ - 30
	Very Bad	- 50 % ~ - 90

5) Block Valuation

Block valuation is necessary to estimate the land value increase rate through the project and to calculate the proportional rate for replotting design. Basically, blocks after the project can be valued in the same way as that for individual lots. To carry out precise valuation, it is desirable to divide one block into some sub-blocks taking account of corner lots and backyard boundaries.

1.4 Replotting Design

1) Location of Replots

In replotting design, the original location is applied to replotting in principle. It is called "original replotting". The reasons why original replotting is given priority are as follows:

- Existing living and economic activities can continue and buildings can remain where they are despite the project. This can contribute to the reduction in compensation cost in total.
- Replotting can be easily understood since little room is left for landowners to form additional perceptions on replots.

In some cases, however, it is impossible to fully follow an approved layout plan and spare some land for financial land. There may be replots which must be transferred from their original lots. This is called "transfer replotting". Since this is a sensitive issue and may present difficulties explaining to landowners, transfer replotting needs some guidelines. For example, lots in the same block must be transferred to the same direction and the like.

2) Area of Replots

To calculate the area of replot or the area of contribution by lot, three kinds of calculation methods have been devised and developed in Japan.

i) Proportional Valuation Based Replotting Design Method: Original lot value is calculated and multiplied by a proportional rate to determine the replot value. A certain area of replot is given corresponding to the replot value. This method is considered logical in respect of fairness in land value.

ii) Areal Replotting Design Method: Frontage contribution and common contribution are set up in advance and the area of replot is calculated based on existing lot area. Accordingly, the replotted area can be determined without land valuation. The method is best suited to a small project area where lots are uniformly located.

iii) Combined Replotting Design Method: It is a combination of the above-mentioned two methods. More precisely, contribution for financial land is calculated by the proportional valuation based replotting design method while contribution for public facilities by the areal replotting design method. Calculation procedure is complicated and logical basis is unstable.

It is recommended that the proportional valuation based replotting design method is worth introducing in Malaysia where land valuation is rooted in administration as well as in the

people's minds.

3) Proportional Valuation Based Replotting Design Method

For the proportional valuation based replotting design method, individual lot valuation "before" project and block valuation "after" project are necessary inputs. Then, the land value increase rate can be calculated by making a comparison between the average lot value and the average block value in sq.m., as follows:

$$y = \frac{e}{a} \quad \textit{accordingly,} \quad e = a \cdot y$$

$$\textit{and, } E = A(1 - d) \quad \textit{therefore,}$$

$$E \cdot e = A \cdot a\,(1 - d)\,y$$

$$(1 - d)y = \frac{E \cdot e}{A \cdot a}$$

$$\textit{Assuming that, } \propto = (1 - d)y \quad \textit{then } (\propto : \textit{Proportional rate})$$

$$Ei \cdot ei = Ai \cdot ai \cdot \frac{E \cdot e}{A \cdot a} = Ai \cdot ai \cdot \propto$$

$$\textit{accordingly,}$$

$$Ei = \frac{Ai \cdot ai \cdot \propto}{ei}$$

$$\textit{contribution rate is,}$$

$$di = 1 - \frac{Ei}{Ai} \quad \textit{therefore,}$$

$$di = 1 - \frac{ai \cdot \propto}{ei}$$

where,

A	:	Gross area of the lot "before" project
a	:	Evaluated index per m^2 as an average
Ai	:	Area of each lot "before" project
ai	:	Evaluated index of each lot "before" project per m^2 as an average
E	:	Gross area of the lot "after" project except financial land
e	:	Evaluated index per m^2 "after" project as an average
Ei	:	Area of each lot "after" project
ei	:	Evaluated index of each lot per m^2 "after" project as an average

d : Average (aggregate) contribution rate in project area
di : Contribution rate of each lot
y : Average land value increase rate in project area (e/a)

1.5 Preparation of Replotting Plan

The specifications of replotting design are finally documented with statements and drawings. They are contained in a replotting plan with other ancillary documents necessary to enforce replots such as balance of equity, preparation of new lot numbers and transference of public facilities' land. The replotting plan will be legally enforced on the day following its notification in the federal gazette.

1) Specifications of Replotting Design

When construction work is completed, alteration and confirmation survey is conducted to confirm the location, shape and area of a new block and a replot. It determines the final condition for registry and equity purposes. Piles are driven after the survey. The replotting design is finally corrected by the alteration and confirmation survey and written in fixed statements.

2) Liquidation

Liquidation is a sensitive issue and interactive with replotting design. Although replotting design aims at distributing development benefits and contribution equitably among landowners, some imbalance is technically inevitable in replots but eventually levels off in liquidation. Collection and payment of balance is calculated by lot and filled out in a replotting plan.

Generally, a replotting design is required to reduce the number of unbalanced replots. But liquidation sometimes takes a more meaningful role to facilitate projects rather than standard replotting in the following situations:

i) Where existing buildings become larger than the replots due to contribution, collection of payment is an alternative for landowners. On the other hand, the implementing body must study these cases carefully in comparison with building compensation.

ii) Where replots are too small to be used for any buildings, contribution cannot be imposed on these lots from a city planning viewpoint. In principle, collection of payment is only one way to relieve such small lots. In Japan, many projects have internally regulated some alleviative measures since small landowners are liable to have weak financial capabilities.

The formula to calculate equity under the proportional valuation based replotting design method is as follows:

(Proportional Rate x Lot Value before the Project) - Replot Value = ± Equity

3) Preparation of New Lot Numbers

Original replotting is a principle in replotting design; however, almost all replots need some modifications on land titles. Accordingly, all lot numbers as well as all land title numbers are

considered to be renewed for administrative convenience. The new numbers are prepared and contained in a replotting plan. The implementing body is proposed to act as one representative entity from the landowners on the matter of land registration.

4) Transference of Public Facilities' Land

New public facilities' land after the project should be promptly registered as reserve land which clarifies the purpose, management office, etc., in the gazette. Accordingly, it is suggested that the necessary documents concerning transference of public facilities' land be contained in a replotting plan and enforced at once.

CHAPTER 2 REPLOTTING DESIGN IN KG. SERI SUBANG PROJECT AREA

2.1 Assumptions

The normal process of undertaking replotting design work involves intensive formal and informal consultations with landowners and other participants. However, in this study, no direct contacts with landowners or their representatives were made possible before preparing the plan or the objective of this case study. Therefore, it is noted that the replotting design work carried out in this study are based on the following assumptions:

(a) Statutory plan covering the project area: The project area will be covered under the gazetted local plan.

(b) Confirmation of land rights: This includes the following:

- the boundary of the project area has been determined by survey in the presence of landowners;
- area of public facilities lands has been confirmed by the administrator;
- difference in the area between the registered and actual one will be proportionally distributed to individual lots;
- area of the block has been determined with block confirmation survey; and
- no other rights except registered ownership have been declared.

(c) Land use restriction: Under the local plan, no more agricultural land will be allocated in the project area and the current practice of mixed use such as factory plus residence in one lot will no longer be allowed. Instead those who are presently engaged in agriculture will have to sell their lands and move out of the project area, or they may have to change their activities/lifestyle to conform to the local plan. Those who are operating a factory and residing in the same lot under agricultural purpose will have to maintain the factory in the industrial area after the project and look for residences within or outside the project area.

(d) Location of replots: The replots are mostly located near the original lots. However, there are cases where the enforcement of the local plan, some physical constraints, and the request of the landowners make it necessary for some lands to be replotted in remote locations and with different categories of land use.

It is assumed that all these are the results of consultations with landowners and the adjustment process.

2.2 Determination of Basis Area Before the Project

Prior to replotting design, it is necessary to determine the basis area before the project. According to the project implementation plan, the entire project area is 3,190,587 sq.m while the divided two portions, public facilities' land and alienated land, are 465,665 sq.m. and 2,783,782 sq.m., respectively. There is a difference of 58,860 sq.m. between the entire area and the divided ones because the former is the surveyed figure

and the latter is the registered one. The difference is probably caused by the existence of many lots with qualified titles (Q.T.) in the area. Actually, the ratio of Q.Ts. against F.Ts is 9:1, in terms of acreage.

To determine the basis area, the proportional adjustment was employed in the case study. Detailed adjustment procedures were as follows:

(i) The whole project area was divided into five blocks bounded by roads (refer to Figure 2.1).
(ii) Q.T. in each block was summed up on registration.
(iii) Q.T. in each block was surveyed on the map drawn to a scale 1:1000.
(iv) A proportional rate in each block was calculated by (ii) and (iii).
(v) Q.Ts. were multiplied by the proportional rate to adjust to the surveyed area in a block.

Table 2.1 indicates the results of proportional adjustment.

Figure 2.1
Divided Blocks for Basis Area Determination

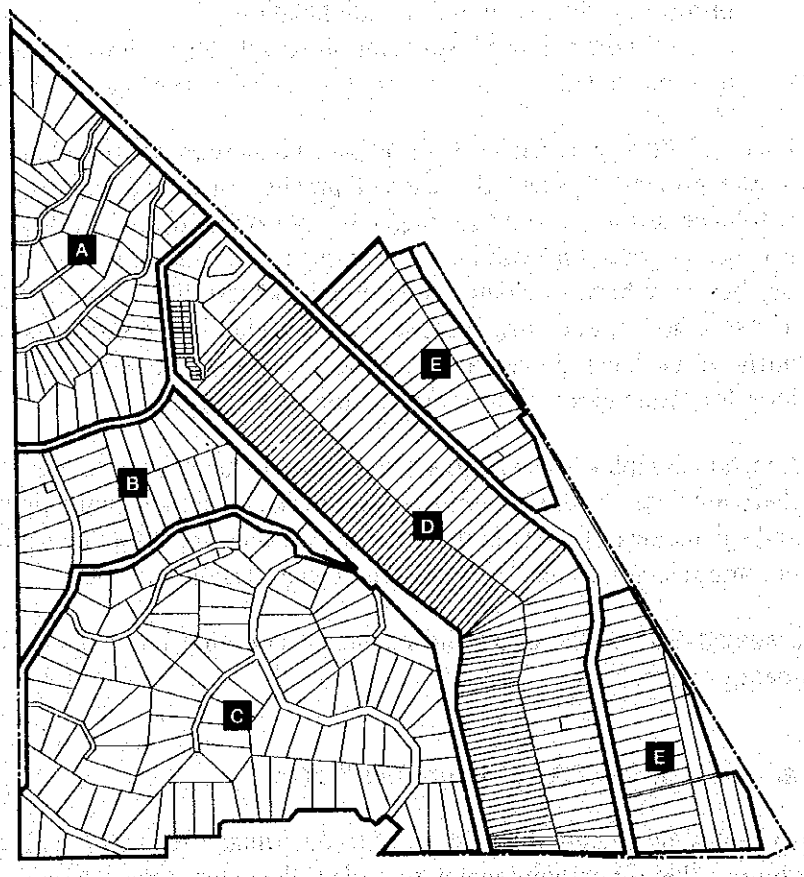


Table 2.1
Statement on Proportional Division Ratio

Zone	Q.T. F.T.	Registered Area (sqm) A	Adjusting Area (sqm) B	Difference (sqm) B - A	Proportional Division ratio B / A
A	Q.T.	394,871.02	393,972.00	-899.02	0.997724
B	Q.T.	266,516.02	270,362.00	3,845.98	1.014431
C	Q.T.	778,602.17	752,347.57	-26,254.60	0.966280
	F.T.	155,856.43	155,856.43	0.00	1.000000
	Total	934,458.60	908,204.00	-26,254.60	
D	Q.T.	761,431.99	723,693.51	-37,738.48	0.950438
	F.T.	41,415.49	41,415.49	0.00	1.000000
	Total	802,847.48	765,109.00	-37,738.48	
E	Q.T.	385,089.14	387,275.00	2,185.86	1.005677
Total		2,783,782.26	2,724,922.00	-58,860.26	

2.3 Land Valuation

Land valuation is a sensitive issue with respect to dealing with private property. Therefore, it requires consent among landowners not only as to its results but also its methodology and procedure. It is recommended that the LR committee establish the internal regulation to clarify the framework of land valuation prior to embarking on the work. Appendix 2.1 presents a draft of the internal regulation applied to the Kg. Seri Subang LR project and the following subsections work out land valuation in accordance with the regulation.

2.3.1 Calculation of Street Value

1) Roads Subject to Street Value

To calculate street value, roads were selected according to the following considerations (refer to Figures 2.2 and 2.10):

For Existing roads: all public roads
an external road accessible to the lots within the project area
insubstantial roads but R.O.W. are already reserved on cadastral map

For Future roads: all designed roads except for back lanes and side lanes

2) Standard Road

As discussed in Chapter 1, each road has several adjustment factors and each factor must be assessed within the allocated range of coefficient value in comparison with a standard road. Since a standard road is applied to the most valuable road section in the existing network, the road No. 2 is considered the most suitable where the road lies in front of a police station and nearby Pekan Subang (refer to Figure 2.2).

3) Adjustment Factors

The factors which adjust street values at the project area were examined considering the area characteristics. There were a total of eight chosen and each factor has a properly allocated range of coefficient value. The adjustment factors and their coefficient values are summarized in Table 2.2 and briefly described below:

Road Condition (hierarchy, connection, etc.): Although there is considerable through-traffic in the project area, all existing roads are substandard and some have missing links. Inversely, future roads are well-organized in a hierarchical manner in compliance with the JKR standard (refer to Figures 2.3 and 2.11).

Road Amenity (roadside land use condition): Existing roads were assessed from the viewpoint of orderly urbanization at roadside (refer to Figure 2.4). On the other hand, the favorable road network will totally enhance road amenity in the whole area.

Accessibility to/from Commercial Area: Distance is a prime variable to gauge accessibility. At present, Pekan Subang offers various commodities to the residents and, in the future, it will be expanded as a new urban center. Future roads were better assessed than the existing ones owing to the proposed new urban center rich in commercial facilities (refer to Figures 2.5 and 2.12).

Accessibility to/from Communal Facility: At present, there is one representative primary school. After the project, communal facilities will be enriched by additional primary school, new secondary school, several community halls and parks. Accordingly, existing roads were assessed in terms of their distance to the primary school and future roads were appreciated equally (refer to Figure 2.6).

Road Width: Since the standard road has a width of 10 m, wider roads were assessed positively while narrower ones, negatively (refer to Figures 2.7 and 2.13).

Pavement Type: Existing roads are paved with asphalt and macadam. This is different from road availability (refer to Figure 2.8).

Sewerage/Drainage: The sewer as well as the drainage system will be newly installed at all roadsides. They will support various activities on the lots.

Water Supply: Water pipes are partially installed under the existing roads (refer to Figure 2.9). On the other hand, water pipes will be installed and organized under all the roads in the future.

4) Results

In conclusion, the street value indexes "before" project range from 550 to 1,000 while from 2,320 to 2,750 "after" project (refer to Figures 2.14 and 2.15).

5) Calibration of Street Value

To calibrate the calculated street values and determine whether they were appropriate or not, the Valuation Department was consulted on the land values of nine lots in the project area which were evaluated according to the prevailing method in Malaysia (refer to Figure 2.16). The comparative results showed more or less the same tendency (refer to Figure

2.17). Judging from them, street values are applicable to the whole project area.

Table 2.2
Adjustment Factors and their Coefficient Values in Street Value Method

Adjustment Factor	Condition	Coefficient Value (%)
Road Condition (hierarchy, connection)	Future major road	25
	Future collector road	20
	Future major local road (A)	15
	Future major local road (B)	10
	Future major local road (C)	5
	Existing standard road	0
	Existing local road (A)	- 5
	Existing local road (B)	- 10
Road Amenity (roadside land use)	Future road network	+ 80
	Existing road along well-organized roadside	0
	Existing road along fair roadside	- 5
	Existing road along disordered roadside	- 10
Accessibility (commercial area)	Future road accessible to New Urban Center within 500 m	+ 20
	Future road accesible to New Urban Center more than 500 m	+ 10
	Existing road accessible to Pekan Subang within 500 m	0
	Existing road accessible to Pekan Subang from 500-1000 m	- 5
	Existing road accessible to Pekan Subang more than 1000 m	- 10
Accessibility (communal facility)	Future road network	+ 5
	Existing road accessible to the primary school within 500 m	0
	Existing road accessible to the primary school more than 500 m	- 5
Road Width	More than 20 m width	+ 10
	15 m width	+ 5
	12 m width	+ 2
	10 m width	0
	4-6 m width	- 5
	2-3 m width	- 10
Pavement Type	Asphalt road	0
	Macadamize road	- 5
Sewerage/Drainage	Future roads	+ 30
	Existing roads	0
Water Supply	Road with water pipe	0
	Road without water pipe	- 5

Figure 2.2
Numbering of Existing Roads

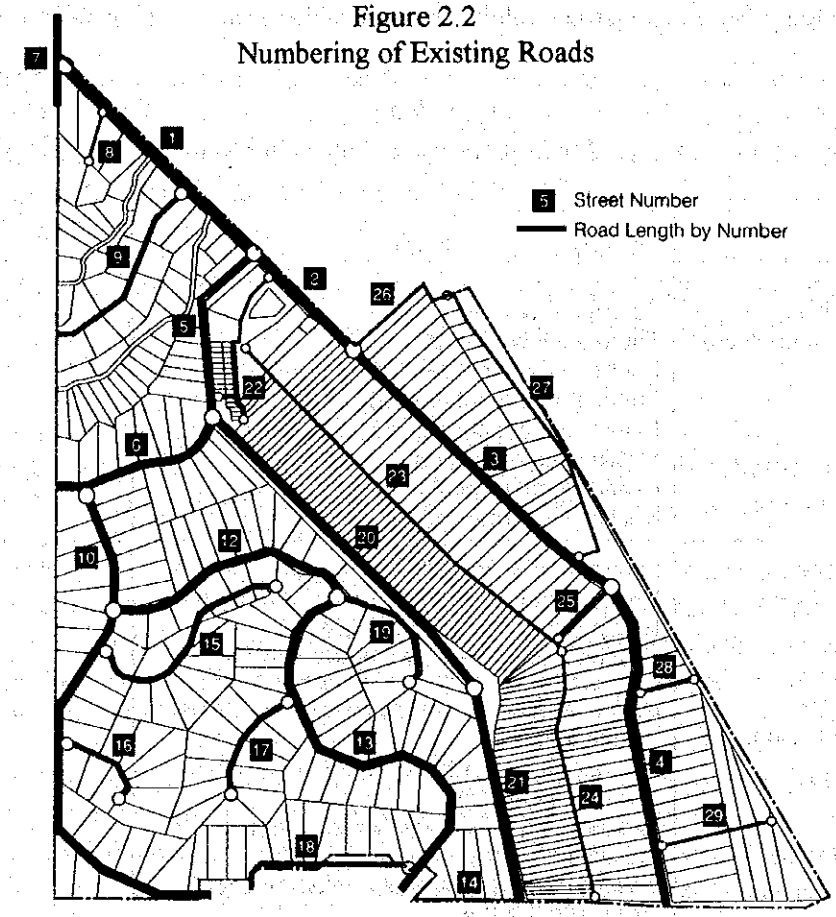


Figure 2.3
Road Hierarchy "Before" Project

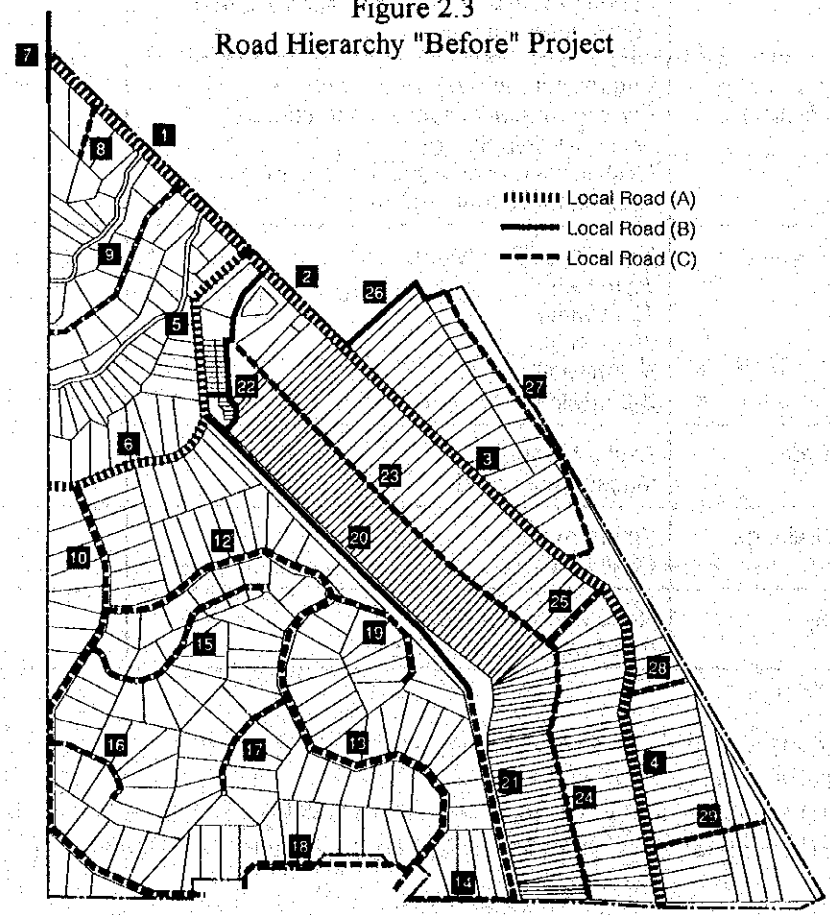


Figure 2.4
Road Amenity "Before" Project

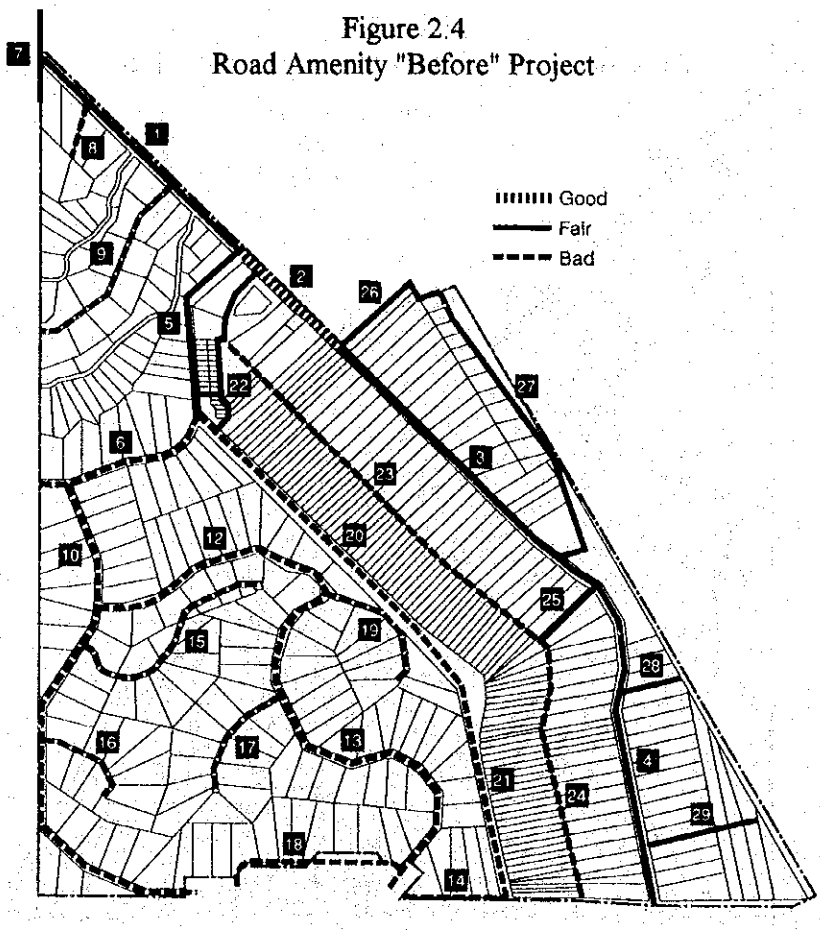


Figure 2.5
Accessibility to Commercial Area "Before" Project

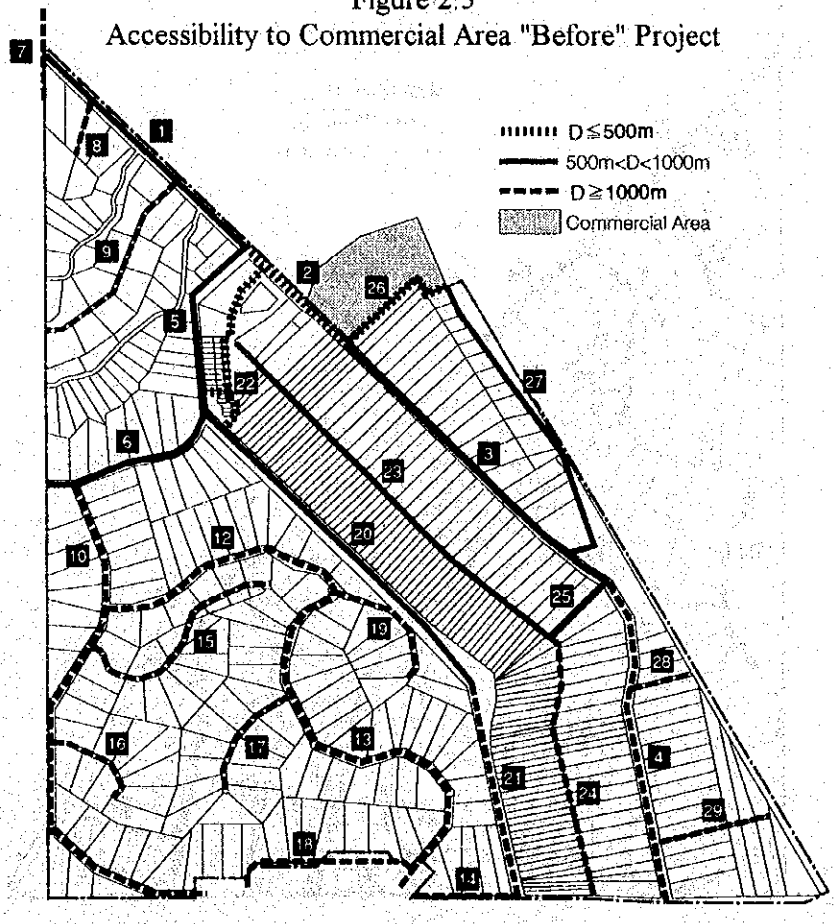


Figure 2.6
Accessibility to Public Facility "Before" Project

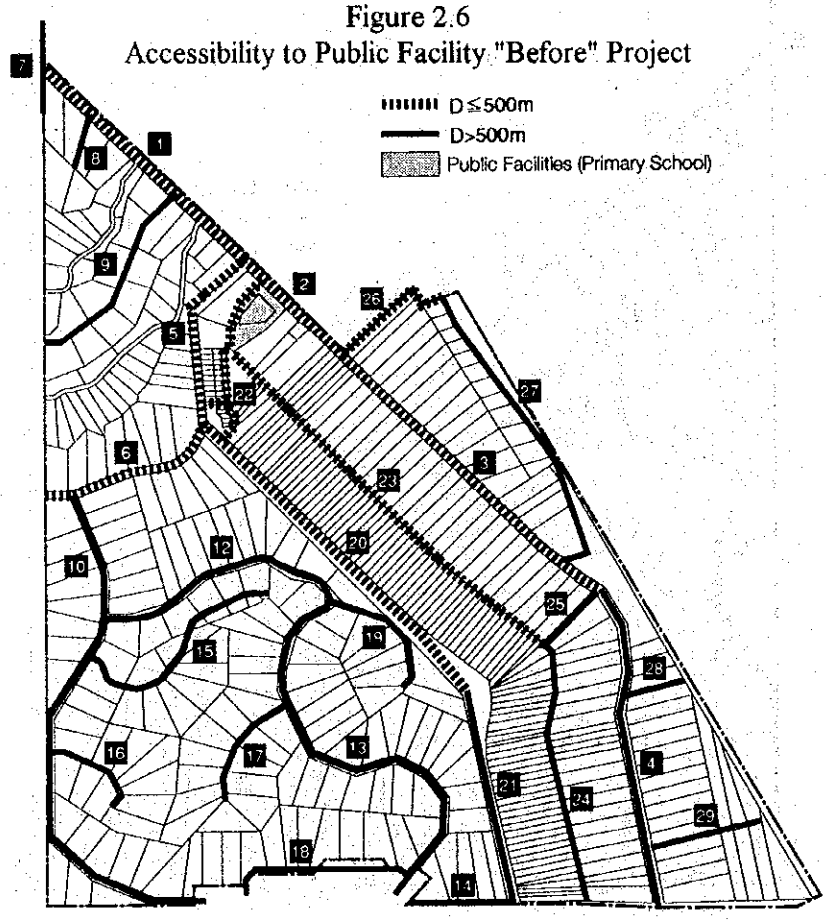


Figure 2.7
Road Width "Before" Project

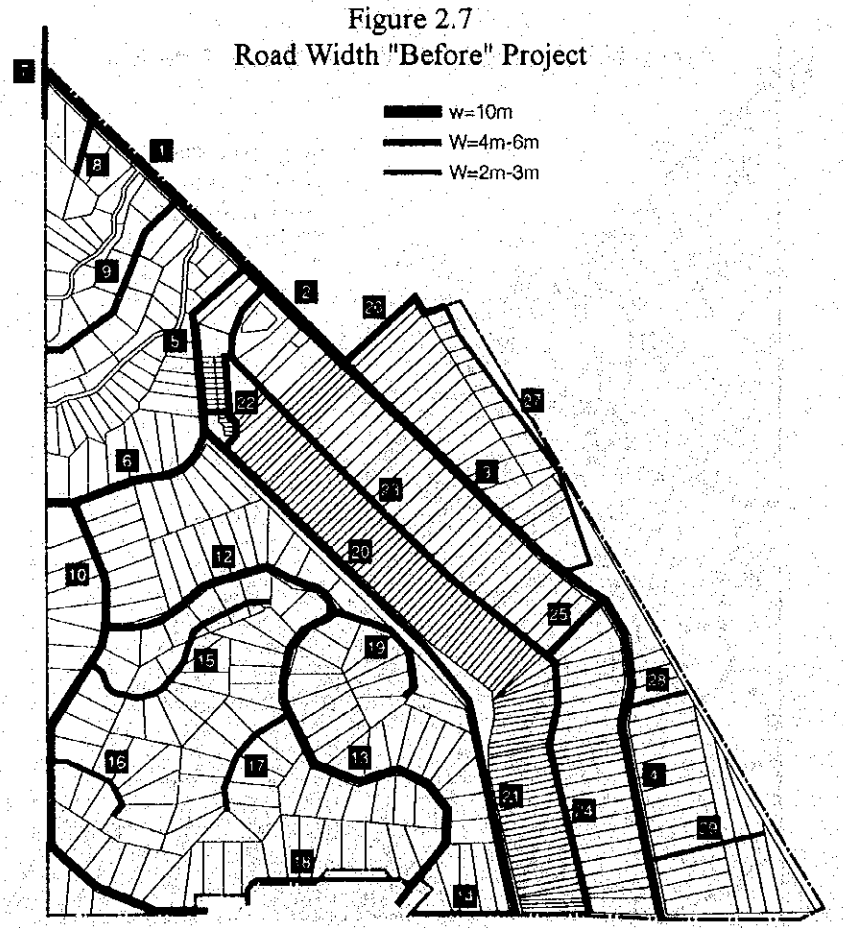


Figure 2.8
Pavement Condition "Before" Project

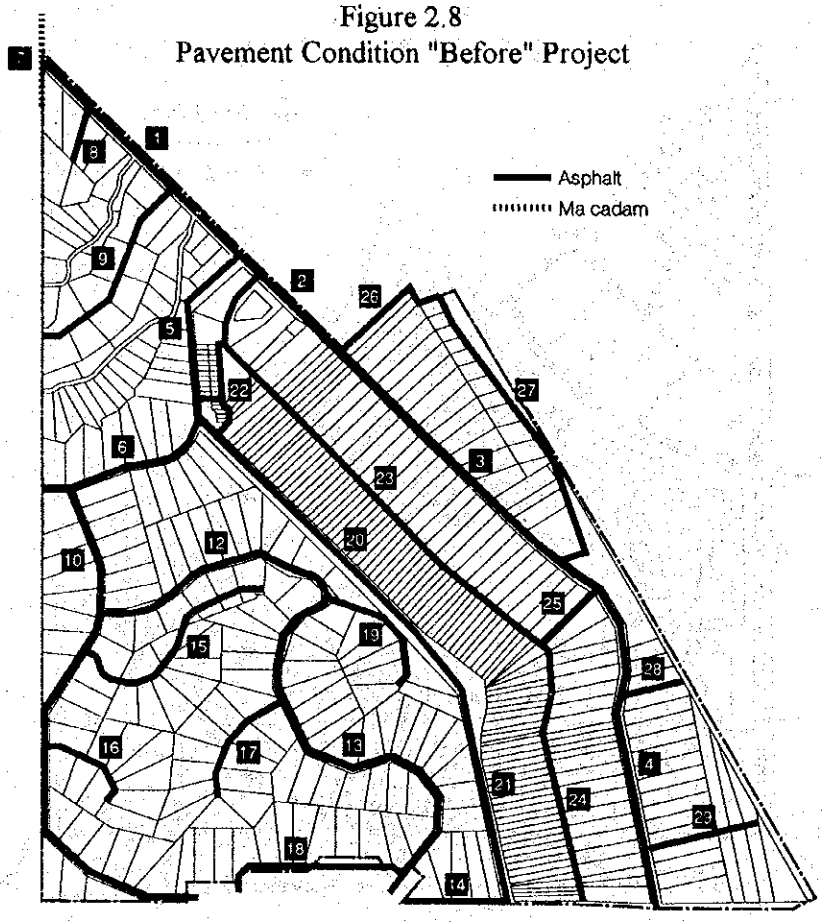


Figure 2.9
Water Supply Pipes "Before" Project

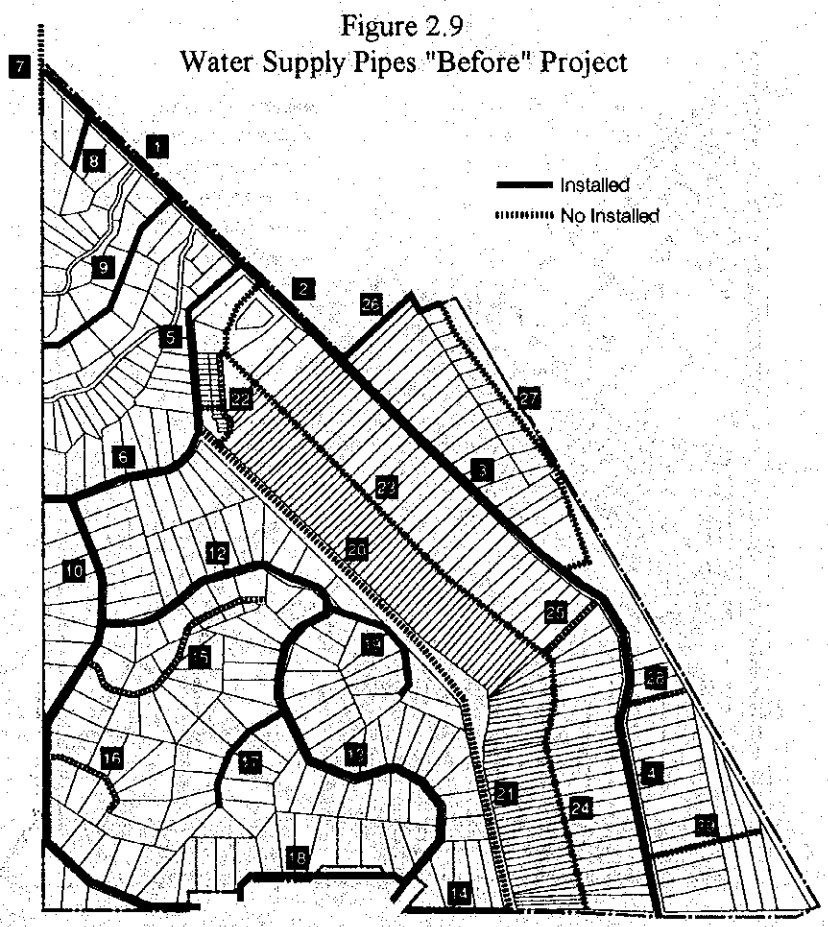


Figure 2.10
Numbering of Future Roads

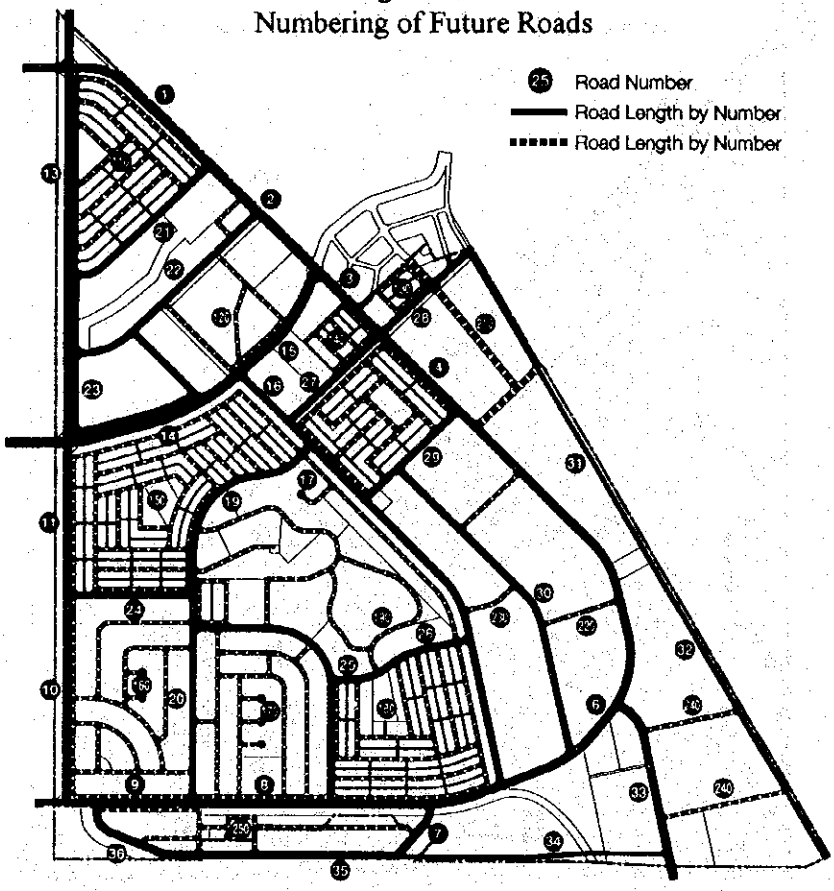


Figure 2.11
Road Hierarchy "After" Project

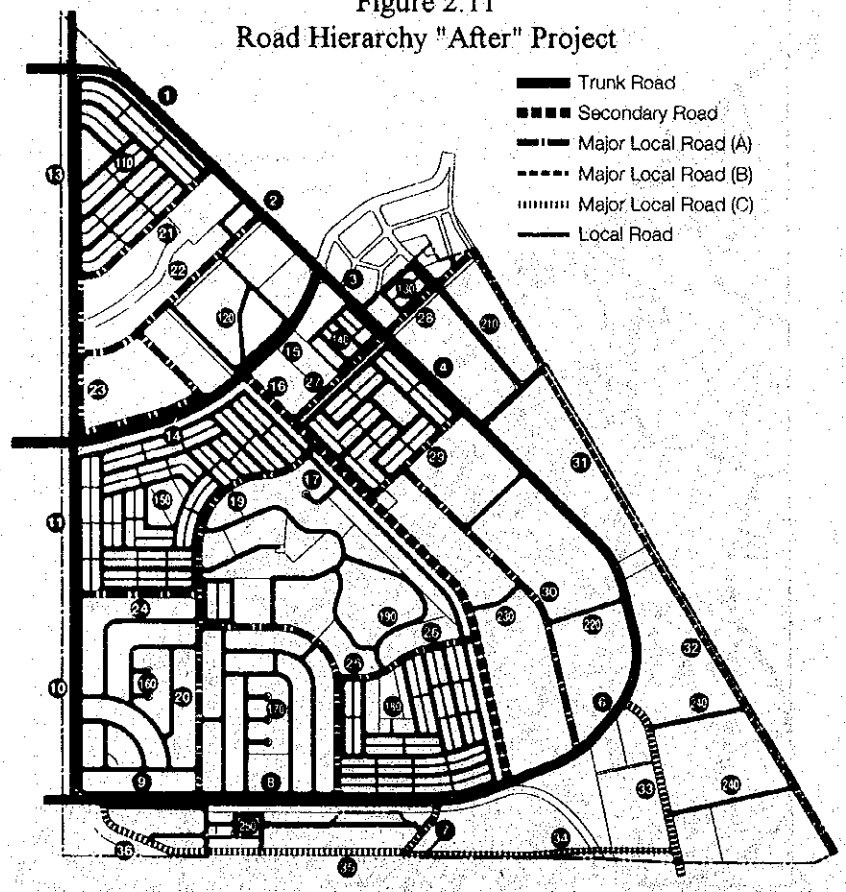


Figure 2.12
Accessibility to Commercial Area "After" Project

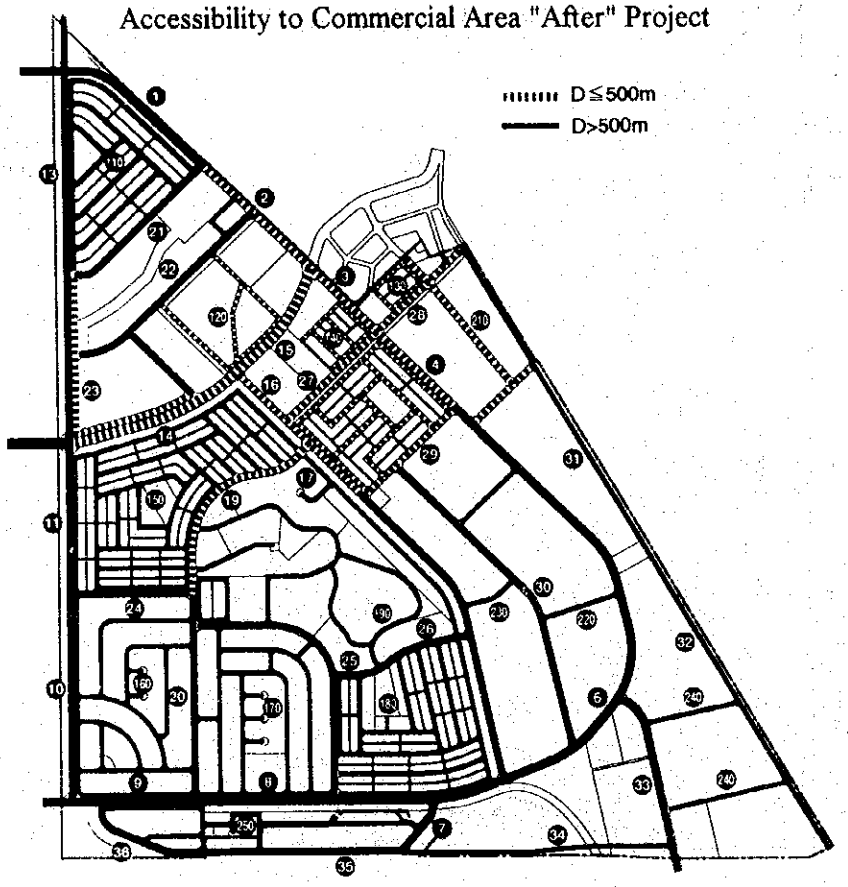


Figure 2.13
Road Width "After" Project

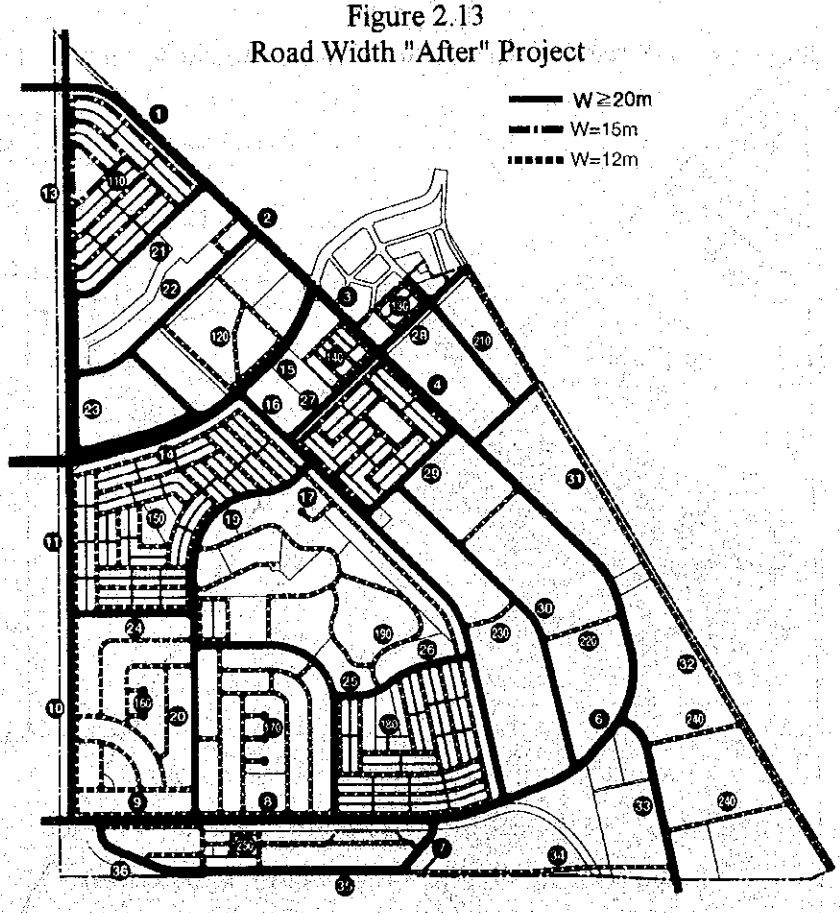


Figure 2.14
Street Value on Existing Road Network

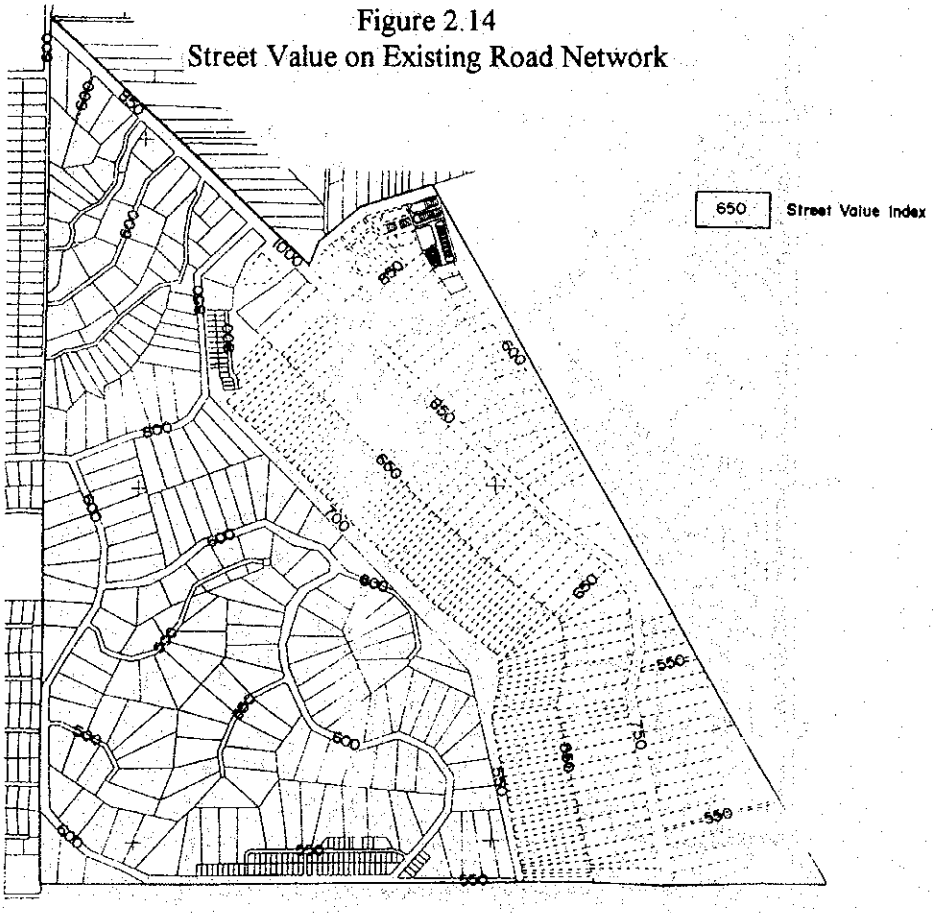


Figure 2.15
Street Value on Future Road Network

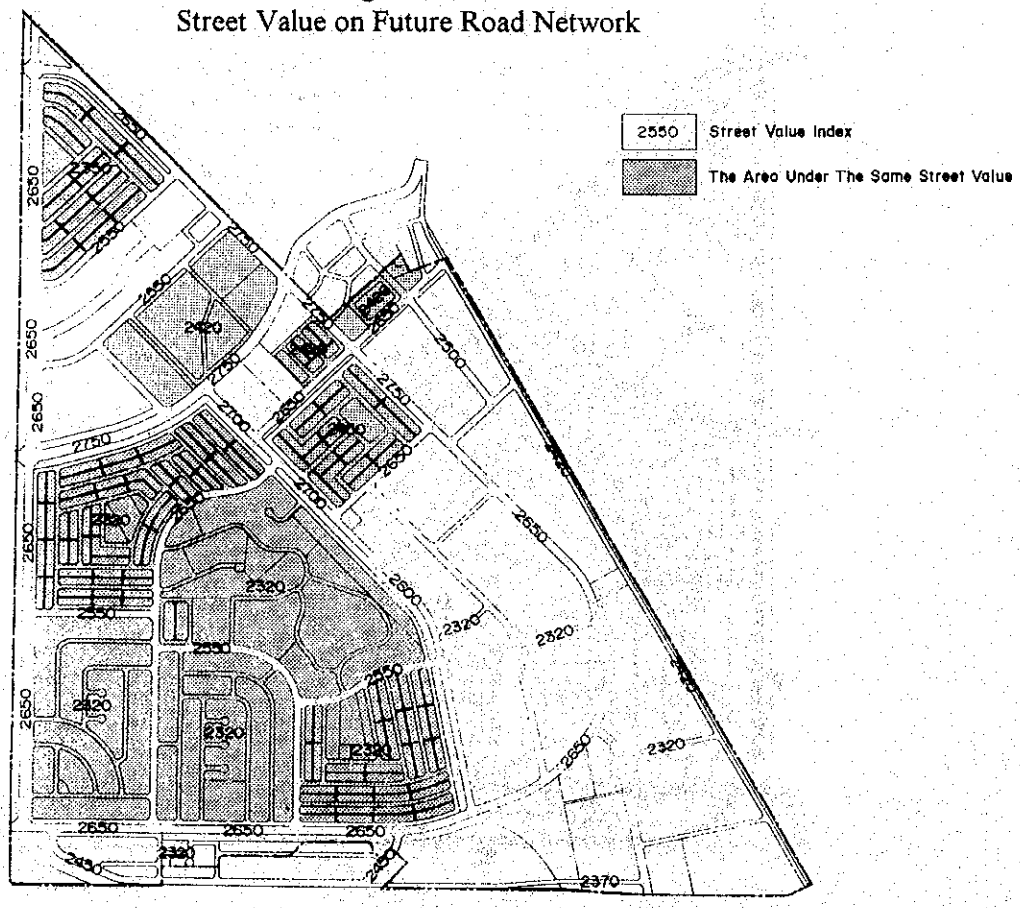


Figure 2.16
Location of Selected Lots

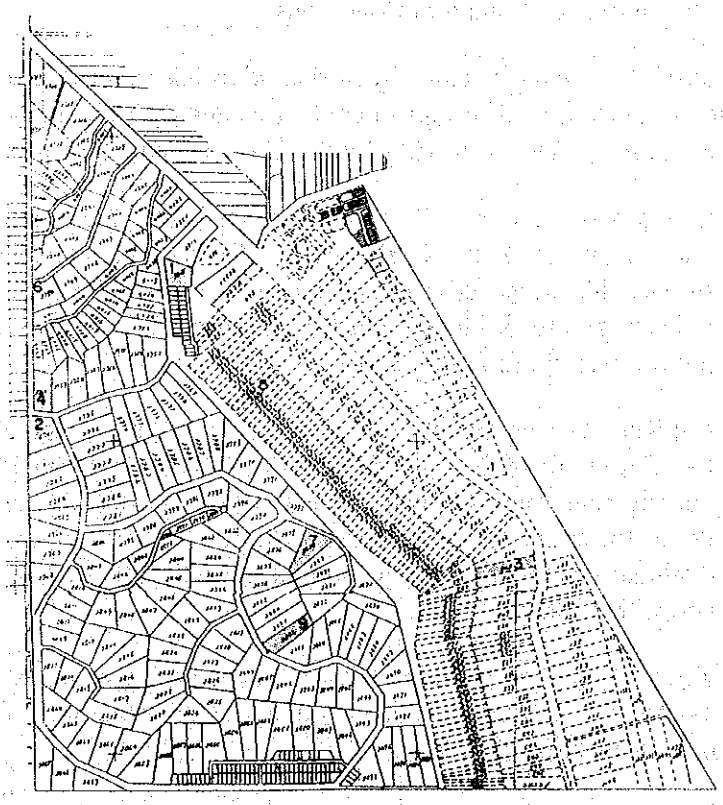
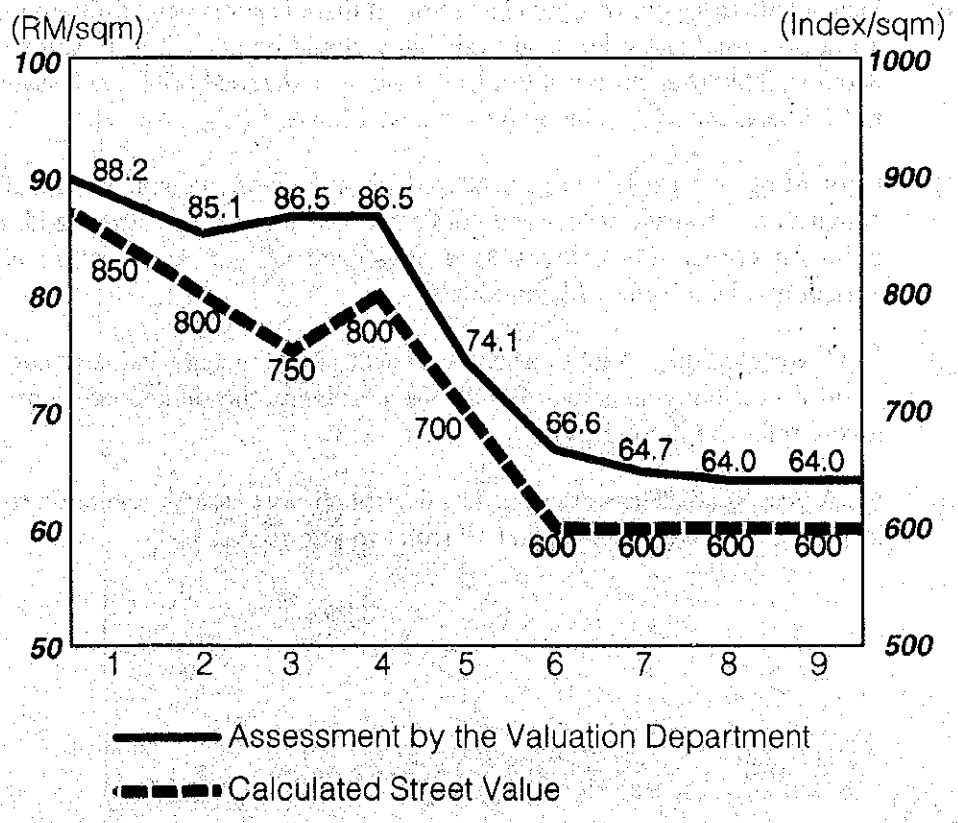


Figure 2.17
Comparison between Calculated Street Value and Assessed Value by Valuation Department



2.3.2 Land (Individual Lot) Valuation

1) Preparation of Valuation Conditions

Individual lots have been valued by further adjusting street values with adjustment factors that are unique to lots. The adjustment factors and their coefficient values shown in Table 2.3 have been applied to individual lots. The selected adjustment factors are as follows:

a) Category of Landuse: As land use affects land value so much, the coefficient value varies from -10% to +100% widely. The designated land use is the one written in the land title, irrespective of actual activities. (The Valuation Department also does it this way). Accordingly, once land is designated as commercial purpose, the value jumps up (refer to Figure 2.18).

b) Lot Size: The average lot size in the project area is as large as 6,300 sq.m. because there are a lot of agricultural lands. Unless the LR project is implemented, some contribution such as open space must be needed in the case of the individual development of a lot with an area of more than 5 acres. Accordingly, land valuation distinguishes the lots with an area of more than 20,000 sq.m., which is nearly five acres, from others.

c) Terrain Condition: Although it is a matter of degree, the slope directly affects land availability. Practically, a land with a gradient of more than 5% is inconvenient for development (refer to Figure 2.19).

d) Existence of Nuisance Facility: In the project area, a Chinese cemetery is considered to be a sort of nuisance facility. Accordingly, the lots facing it suffer from devaluation (refer to Figure 2.20).

e) Height Difference between Road and Lot: If there is some height difference between an access road and a lot, land availability would be decreased to some extent. In addition, it has been observed that land lower than the road bring unpleasant thoughts in Malaysia, especially among the Chinese-Malaysians.

f) Corner Lot: Corner lots are considered advantageous to commercial and industrial activities due to easy access and noticeable location. On the other hand, residential units on corner lots enjoy a little advantage and no appreciation is given to agricultural land (refer to Figure 2.20).

g) Dual Access Roads: A lot touching two roads at its frontage and backside can enjoy good accessibility as corner lots do. Accordingly, the same coefficient values are given (refer to Figure 2.21).

h) No Access Road: There are some lots that touch river reserve and not a road. These lots get a negative in land valuation (refer to Figure 2.21).

Table 2.3
Adjustment Factors and Their Coefficient Values for Land Valuation

Factors	Condition	Coefficient Value (%)	Note
Category of Land Use	Commerce Middle-Industry Service-Industry Detached/Semi-detached House Terrace House Agriculture	+ 100 + 40 + 30 + 10 0 - 10	
Size	$A < 20{,}000m^2$ $A \leq 20{,}000m^2$	0 - 5	
Terrain	Gradient $\leq$ 5% Gradient > 5%	0 - 5	
Existence of Nuisance Facilities	Adjoining Land	- 5	
Difference Between Road and Lot	$H \geq 3m$ $-1m \leq H \leq 3m$ $H < -1m$	- 5 0 - 5	only applied to the block valuation "after" project
Corner Lot	Commerce Industry Residence	+ 10 + 5 + 2	
Land Adjoining a Front and Back Road	Commerce Industry Residence	+ 10 + 5 + 2	
Land not Adjoining Any Road		- 5	

Figure 2.18
Currently Designated Land Use

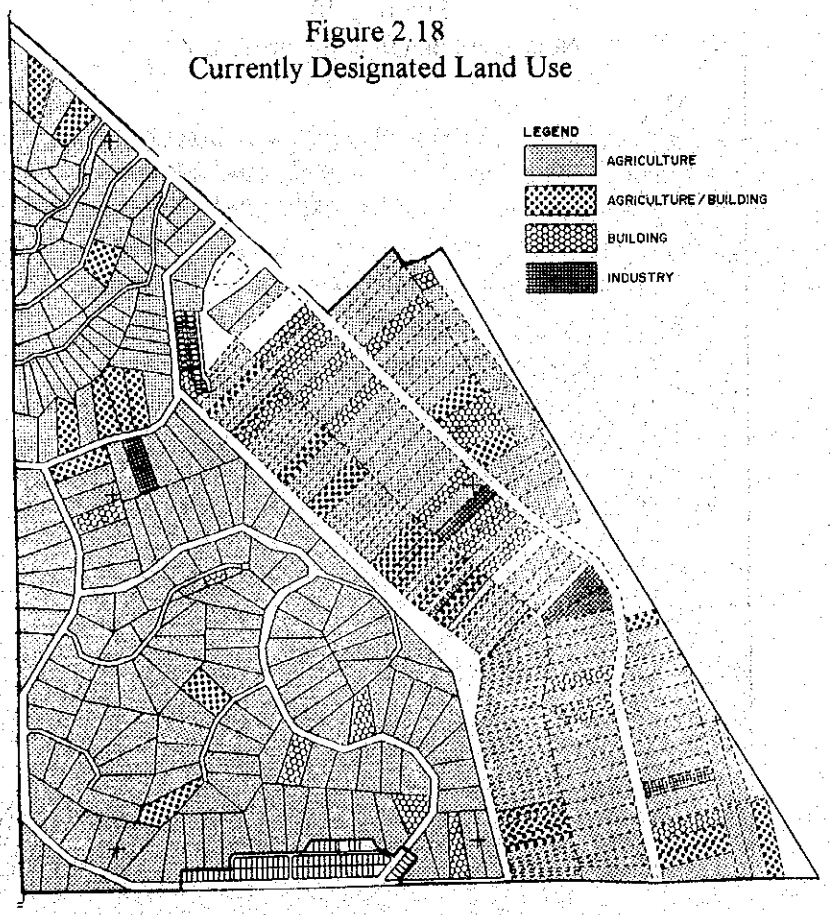


Figure 2.19
Hilly Area (more than 5% gradient)

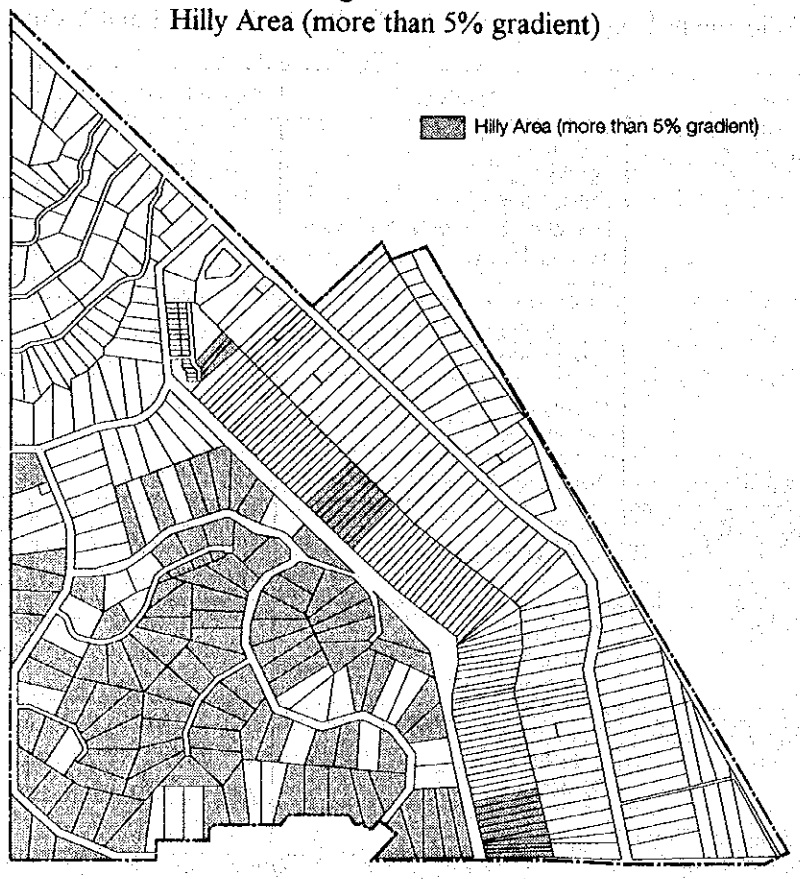


Figure 2.20
Nuisance Facility and Corner Lot

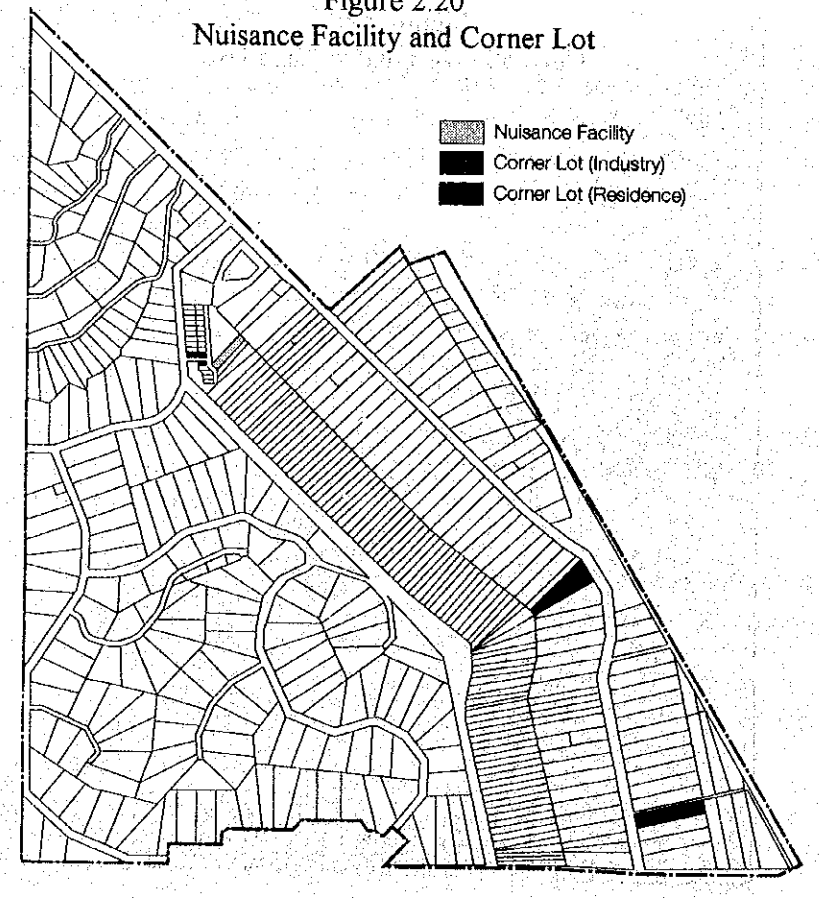


Figure 2.21
Access Road

2) Results

The existing individual lots have been valued in compliance with the prepared factors and coefficient values. The results are indicated in Table 2.4 and illustrated in Figure 2.22. The average lots were valued at an index of 603 while seven lots appreciated at an index valued more than 1,000 due to the current designated land use of industry and building. The low valued lots of less than 600 index are distributed on hilly area due to poor land utilization.

Figure 2.22
Individual Lot Valuation "Before" Project

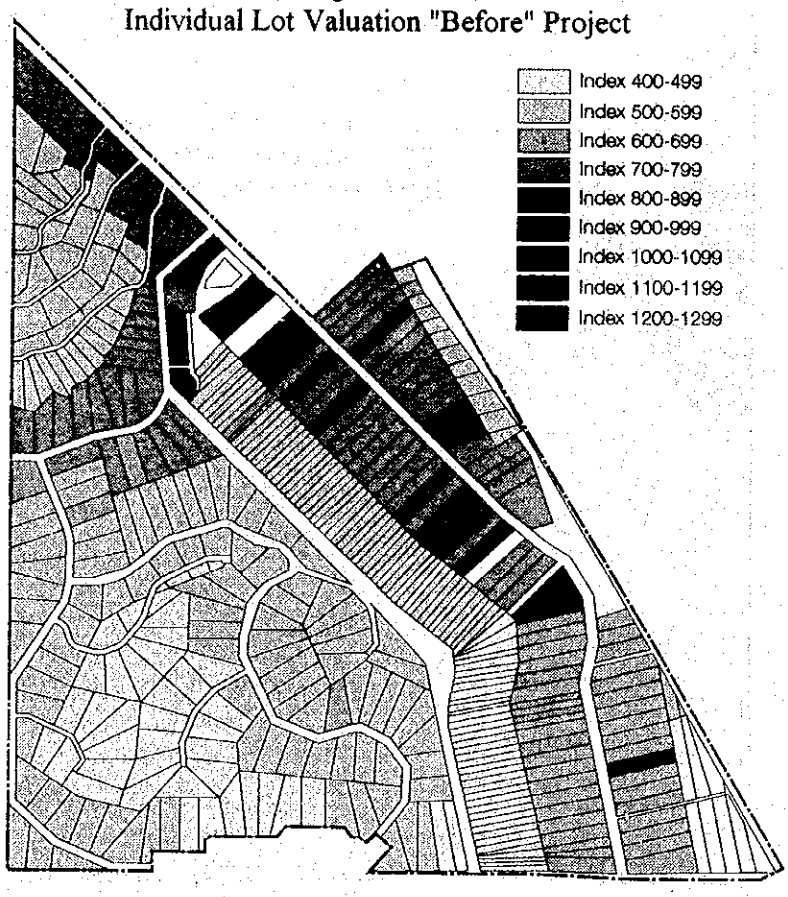


Table 2.4
Distribution of Lot Value Index "Before" Project

Unit Index	Number of Lots		Basis Area (m^2)	
400 - 499	85	(19.3%)	530,233.78	(19.4%)
500 - 599	193	(43.9%)	1,200,370.25	(44.1%)
600 - 699	42	(9.5%)	297,980.55	(10.9%)
700 - 799	72	(16.4%)	513,325.81	(19.0%)
800 - 899	36	(8.2%)	91,677.41	(3.4%)
900 - 999	5	(1.1%)	38,535.17	(1.4%)
1000 - 1099	4	(0.9%)	23,693.69	(0.9%)
1100 - 1199	2	(0.5%)	16,412.78	(0.6%)
1200 - 1299	1	(0.2%)	7,692.56	(0.3%)
Total	440	(100%)	2,724,922.00	(100%)

2.3.3 Block Valuation

1) Additional Preparatory Work

The designed blocks, which will be finalized through the proposed LR project, have been valued by the same method as that of the existing lot valuation. To obtain significant results, the following additional preparatory work were done:

- Some large blocks were further divided into sub-blocks.
- Since block valuation must be done prior to replotting design, corner lots cannot be precisely determined. Accordingly, corner lots were assumed adequately in proportion to the depth of blocks.

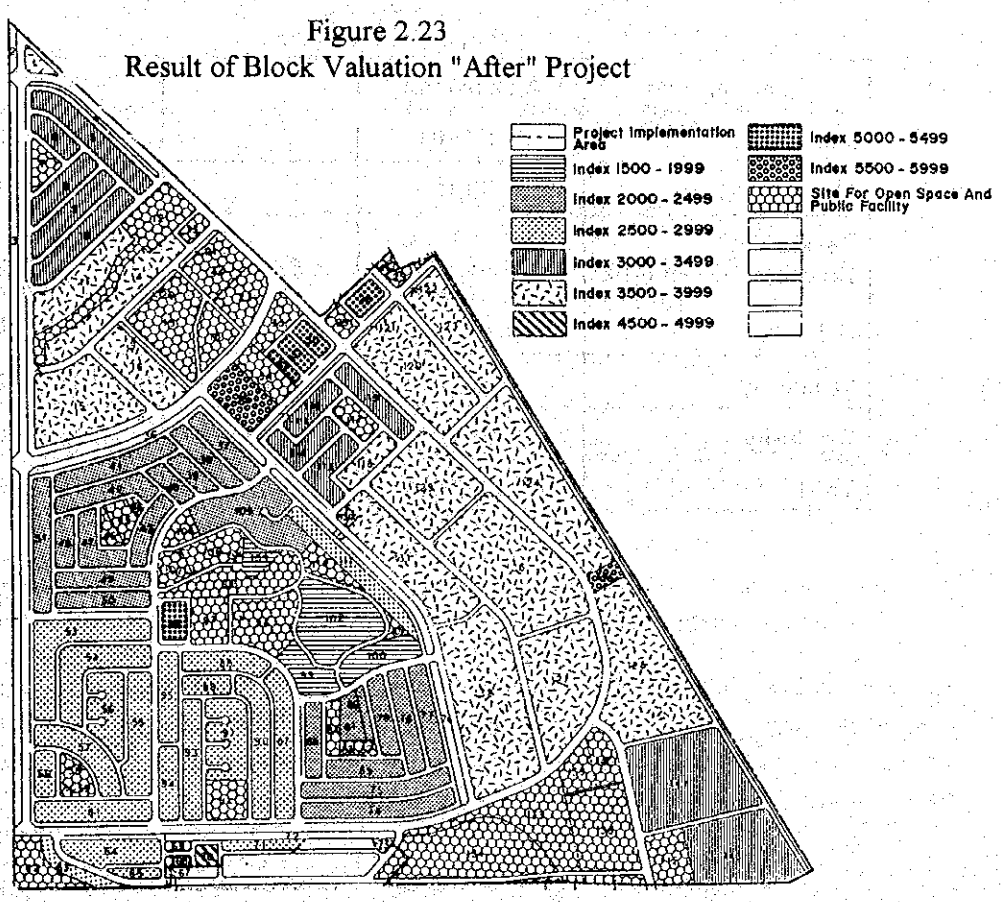
2) Results

The results of the block valuation are illustrated in Figure 2.23. The average block is estimated at 3,189 index value. Accordingly, the land value increase rate is expected to be 5.28, which is almost equal to the increase rate of 5.24 in the project implementation plan.

The block values can be grouped into the following land use types:

Land use Type	Value Index
Terrace House	2,300 - 2,500
Semi-Detached, Detached House	2,500 - 3,000
Service Industry	3,000 - 3,500
Middle-Scale Industry	3,500 - 4,000
Commerce	more than 4,500

Figure 2.23
Result of Block Valuation "After" Project



2.4 Replotting Design Plan

In order to prepare a replotting design reasonably and equitably, it is necessary for an implementing body to establish the design principles internally. Appendix 2.2 shows the draft internal regulation for replotting design applied to Kg. Seri Subang project area.

1) Proportional Rate and Financial Land Plan

Proportional rate is the key to calculating the acreage of replots under the proportional valuation based replotting design method. It is calculated by dividing the total value index of alienated land, excluding financial land, by the total value index of the alienated land "before" project, indicating the increased ratio of the land subject for replotting design. Form 5 shown in the Appendix of this volume can assist a replotting designer in determining the proportional rate in an LR project. However, financial land must be segregated from replots in advance in order to fill out Form 5.

Therefore, the financial land plan is proposed in accordance with the project implementation plan, as shown in Table 2.5. Firstly, all commercial and medical welfare sites are designated as financial land. Secondly, the site where the existing detached houses are strongly-built in a single line on State land are once designated as financial land and then disposed to the existing residents through the LR project. The rest of the financial land is adequately allocated among the sites of service and middle-scale industries.

The result of the filled out Form 5 for the project is shown in Table 2.6. In conclusion, the proportional rate was calculated at 3.031.

Table 2.5
Financial Land Plan

Financial Land	Area (sq.m.)		Valuation Index
Commerce	57,101		306,680,252
Medical Welfare	48,119		84,621,652
Residential			
Detached House111BL	18,120	@2,552	46,242,240
Terrace	1,880	@2,413	4,536,440
Sub-total	20,000		50,778,680
M-Industry	32,780	@3,604	118,139,120
S-Industry	45,000	@3,354	159,930,000
Total	203,000		711,149,704

Table 2.6
Statement on Proportional Rate

				Project Area	m^2
Private Lnad	"Before" Project		"After" Project		Remarks
	Basis Area m^2	Total Valuation Index	Area m^2	Total Valuation Index	
Alienated Land	2,724,922	1,642,061,957	E 1,581,395	F4,978,412,721	
Financial Land			203,000	711,149,704	
Total	A 2,724,922	B 1,642,061,957	C 1,784,395	D5,689,562,425	

Average Contribution Rate of Project

$$d = 1 - \frac{E}{A} = 1 - \frac{1,581,395}{2,724,922} = 0.4197$$

Unit Valuation Index Before Project

$$a = \frac{B}{A} = \frac{1,642,061,957}{2,724,922} = 603$$

Unit Valuation Index After Project

$$e = \frac{D}{C} = \frac{5,689,562,425}{1,784,395} = 3.189$$

Increase Rate of Project

$$y = \frac{e}{a} = \frac{3.189}{603} = 5.29$$

Unit Valuation Index of Alienated Land

$$e' = \frac{F}{E} = \frac{4,978,412,721}{1,581,395} = 3.148$$

Increase Rate of Alienated Land

$$y' = \frac{e'}{a} = \frac{3.148}{603} = 5.22$$

Proportional Rate of Alienated Land

$$k = \frac{F}{B} = \frac{4,978,412,721}{1,642,061,957} = 3.031$$

2) Replotting Design Work

Replotting design was carried out to locate the replot where in the index value is equivalent to the entitled share of the original lot. The entitled share of an original lot is calculated by multiplying the proportional rate with the assessed lot value.

In the beginning of replotting design, financial lands were duly allocated and then replotting of the private lands were undertaken with the following special considerations:

- Both current land use and future land use plan were observed. Current industrial and residential lots will be replotted to the areas with corresponding land use zoning, unless it is constrained by special reasons or requested by the landowners. In this connection, some transfer replottings are inevitable although original replotting is a principle.

- To ensure efficient lot utilization after the project, replots will be provided with sufficient frontage with rectangular shape.

- Basically, "one original lot to one replot" principle is applied. However, sometimes one lot must be divided into several lots due to the fixed design and use of lands such as terrace house and service industry.

3) Results

Replotting design plan has been worked out as illustrated in Figure 2.24 which also shows the location of the financial land. The results of the work are as follows:

- Contribution rates of individual lots vary considerably depending on changes in land use and location due to the project. Contribution rates are normally high when agriculture lands are replotted to industry or commercial lands. Some lots will gain more area (5-6%) while some contribute more than 60% (refer to Table 2.7 and Figure 2.25).

- The most popular case in the project is from agriculture to industry which accounts for approximately 46% in the area. Average contribution rate for this category is 48.7% ranging between 32.1% and 54.8%. The second and third popular cases are from agriculture to detached house and terrace house with average contribution rates of 37.1% and 29.0%, respectively (refer to Table 2.8).

- Some lots are too small to contribute to the project by means of a piece of land. Accordingly, the project must exempt them from physical contribution; furthermore, a couple of lots need additional land to meet the requirement deriving from the future land use plan. To ensure equity among landowners, such lots are finally settled in liquidation.

- The replotting design is further analyzed by zone; Zone A (northern industrial area), Zone B (residential area) and Zone C (eastern industrial area). It can be observed that many lots are replotted to their original location or nearby in Zone A, while many lots are transferred to remote places in Zone B and Zone C (refer to Figure 2.25). The zonal characteristics regarding contribution rates are as follows:

<u>Zone A (northern industrial area)</u>	
Number of original lots	59 lots
Basis area before project	350,050.22 sq.m
Acreage of replots	186,150.42 sq.m
Minimum contribution rate	26.9 %
Maximum contribution rate	59.8 %
Average contribution rate	46.8 %
<u>Zone B (residential area)</u>	
Number of original lots	152 lots
Basis area before project	986,147.86 sq.m
Acreage of replots	646,605.65 sq.m
Minimum contribution rate	-6.3 %
Maximum contribution rate	59.1 %
Average contribution rate	34.4 %

Zone C (eastern industrial area)

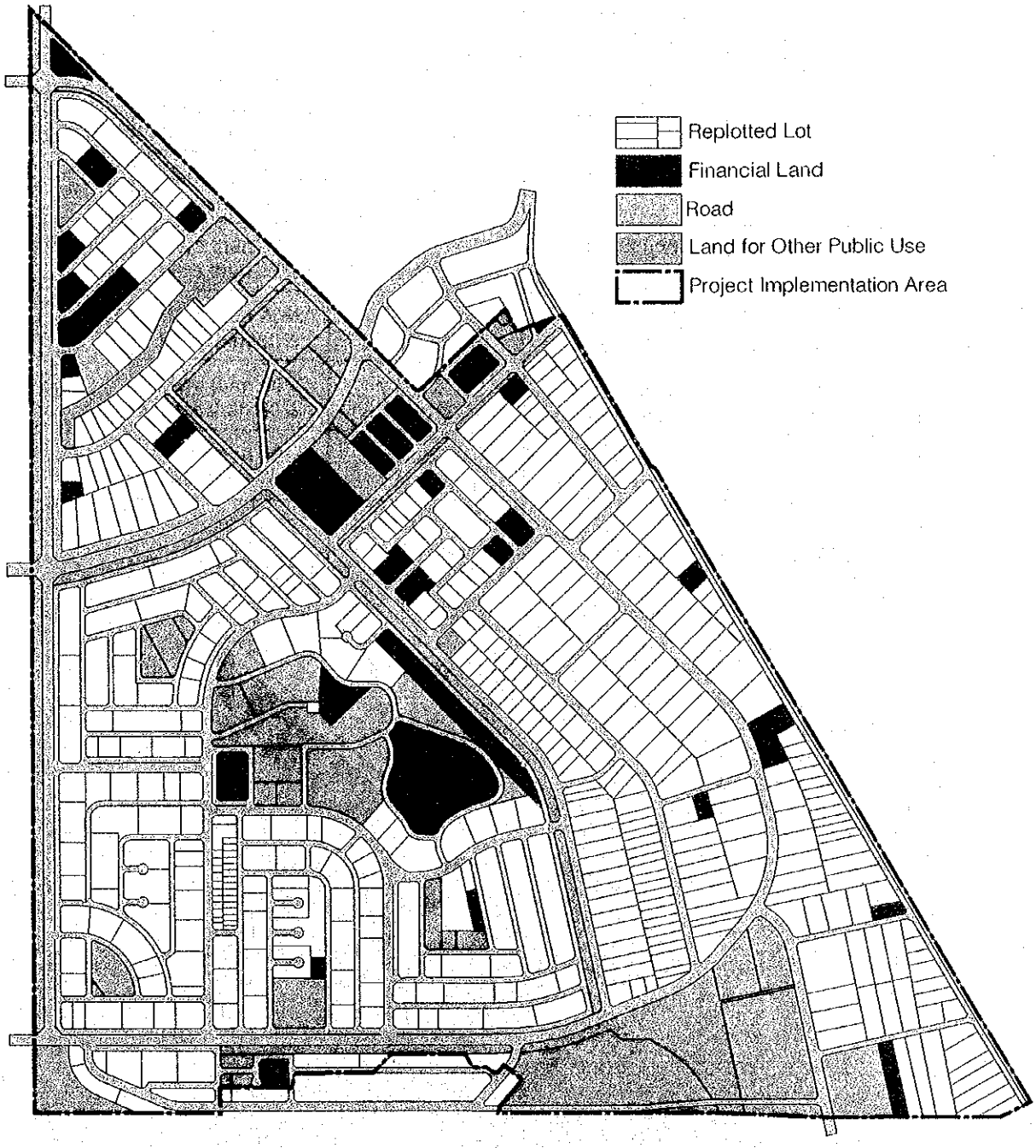
Number of original lots	229 lots
Basis area before project	1,388,723.92 sq.m
Acreage of replots	746,965.09 sq.m
Minimum contribution rate	2.8 %
Maximum contribution rate	63.2 %
Average contribution rate	46.2 %

4) Anticipated Problems and Issues

In reviewing the replotting design practice at the Kg. Seri Subang project area, the Study Team anticipates some problems and issues towards project implementation as described below. They should be thoroughly analyzed and discussed prior to the actual implementation.

- More than 40 % of the landowners have to shoulder the high contribution which accounts for 50 % or more of their lands. It seems to be difficult for them to consent to the replotting design plan.
- Not a few lots, especially for residential use, had to be divided in replotting design. It was inevitable due to realizing compact residential blocks through the project, but it should be avoided to the utmost.
- The project implementation plan directs the policy concerning financial land. However, as it focuses on industry and commercial lands rather than residential, the replotting work found difficulty in placing orderly shaped replots. Accordingly, allocation of financial land should be modified in the project implementation plan.
- The land use zoning is determined from a city planning viewpoint. It is considered adequate but there is some room for further adjustment of the proportions among commercial, residential and industry lands based on the landowners' demand.
- Some lots of currently erected detached houses were forced to be replotted to the block for semi-detached houses instead of that of detached houses due to small lot acreage. The necessity of blocks for small detached houses should be examined prior to the actual implementation.

Figure 2.24
Replotting Design in Kg. Seri Subang Project Area



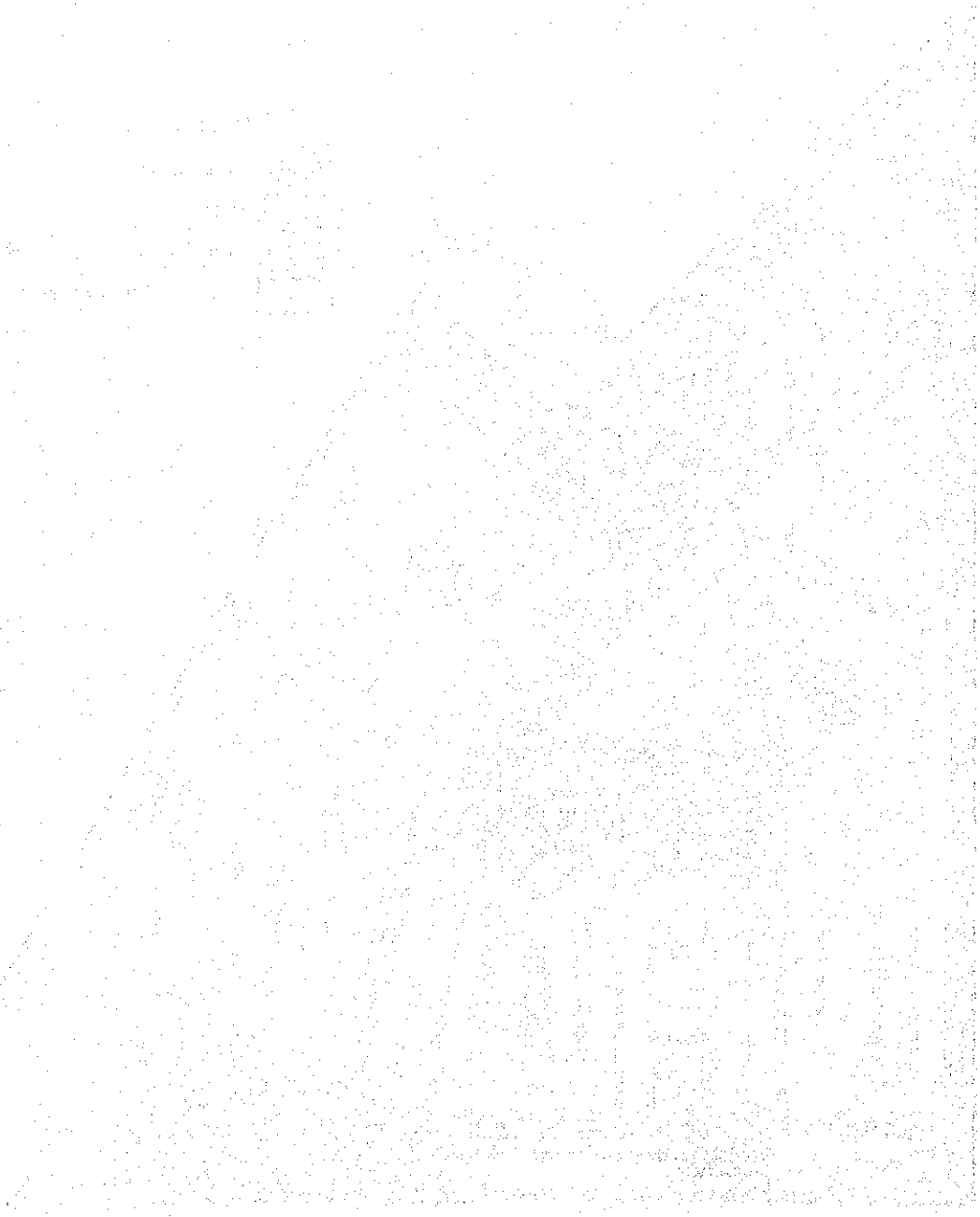


Table 2.7
Classification of Lots by Contribution Rate

Contribution Rate	No. of Lots	Basis Area "Before" Project	Replotting Area (m^3)
Less than 10%	38 (8.6%)	94,466.06 (3.5%)	89,858.15 (5.7%)
More than 10% Less than 20%	20 (4.5%)	145,823.81 (5.4%)	124,753.81 (7.9%)
More than 20% Less than 30%	25 (5.7%)	178,333.89 (6.5%)	131,412.49 (8.3%)
More than 30% Less than 40%	99 (22.5%)	698,763.26 (25.6%)	446,851.02 (28.3%)
More than 40% Less than 50%	76 (17.3%)	579,180.95 (21.2%)	325,717.13 (20.6%)
More than 50% Less than 60%	172 (39.1%)	955,490.85 (35.1%)	432,799.93 (27.4%)
More than 60% Less than 70%	10 (2.3%)	72,863.18 (2.7%)	28,328.63 (1.8%)
Total	440 (100.0)	2,724,922.00 (100.0%)	1,579,721.16 (100.0%)

Figure 2.25
Distributed Contribution Rates

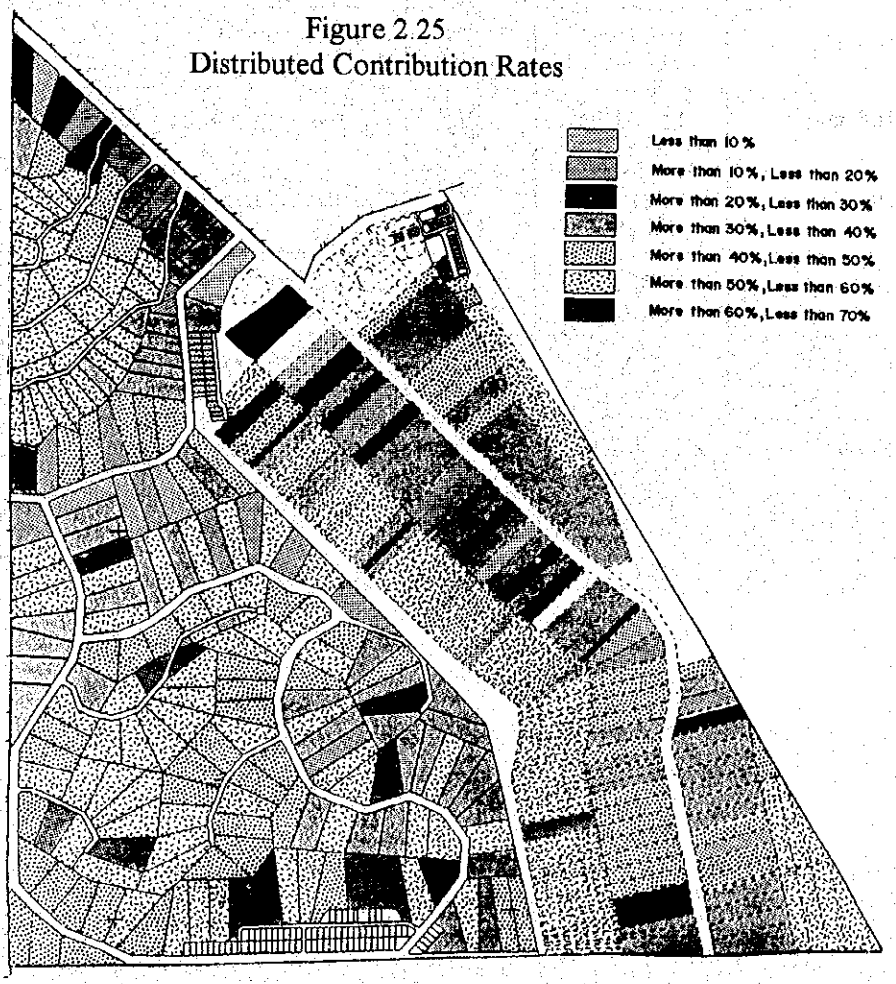


Table 2.8
Contribution Rate by Land Use Transformation

"Before" Project			"After" Project		
Land Use	Basis Area (m^2)	No. of Lots	Land Use	Replotting Area (m^2)	Contribution Ratio (%)
Agriculture	287,030.10 (10.5%)	43 (9.8)	Terrace House	203,723.98 (12.9%)	-5.4 ~ 40.0 Ave. 29.0
Agriculture	165,012.98 (6.1%)	20 (4.6)	Semi-Detached	97,906.96 (6.2%)	-6.3 ~ 55.4 Ave. 40.7
Agriculture	347,542.37 (12.8%)	42 (9.5)	Detached House	218,581.30 (13.8%)	9.4 ~ 54.9 Ave. 37.1
Agriculture	152,066.33 (5.6%)	32 (7.3)	Service Industry	80,845.29 (5.1%)	26.9 ~ 55.1 Ave. 46.8
Agriculture	1,404,568.18 (51.5%)	228 (51.8)	Middle Industry	719,953.68 (45.6%)	29.0 ~ 63.2 Ave. 48.7
Agriculture	81,626.09 (0.3%)	10 (2.3)	Two Residential Types	56,673.24 (3.6%)	11.6 ~ 54.8 Ave. 30.6
Agriculture	66,266.06 (2.4%)	8 (1.8)	Residence + Industry	36,049.90 (2.3%)	32.4 ~ 59.1 Ave. 45.6
Building	31,777.01 (1.2%)	5 (1.1)	Terrace House	23,437.79 (1.5%)	2.0 ~ 39.1 Ave. 26.2
Building	19,372.13 (0.7%)	26 (5.9)	Semi-Detached	15,164.28 (1.0%)	3.1 ~ 39.5 Ave. 21.7
Building	10,851.34 (0.4%)	1 (0.2)	Detached House	8,430.00 (0.5%)	22.3 Ave. 22.3
Building	19,185.24 (0.7%)	5 (1.1)	Service Industry	14,748.46 (4.1%)	6.5 ~ 39.9 Ave. 23.1
Building	95,625.26 (3.5%)	14 (3.2)	Middle Industry	64,516.48 (4.1%)	26.4 ~ 49.8 Ave. 32.5
Industry	43,998.91 (1.6%)	6 (1.4)	Middle Industry	39,689.80 (2.5%)	2.8 ~ 19.9 Ave. 9.8
Total	2,724,922.00 (100.0%)	440 (100)	Total	1,579,721.16 (100.0%)	-6.3 ~ 63.2 Ave. 42.0

Figure 2.26
Locational Relationship Between Original Lots and Replots

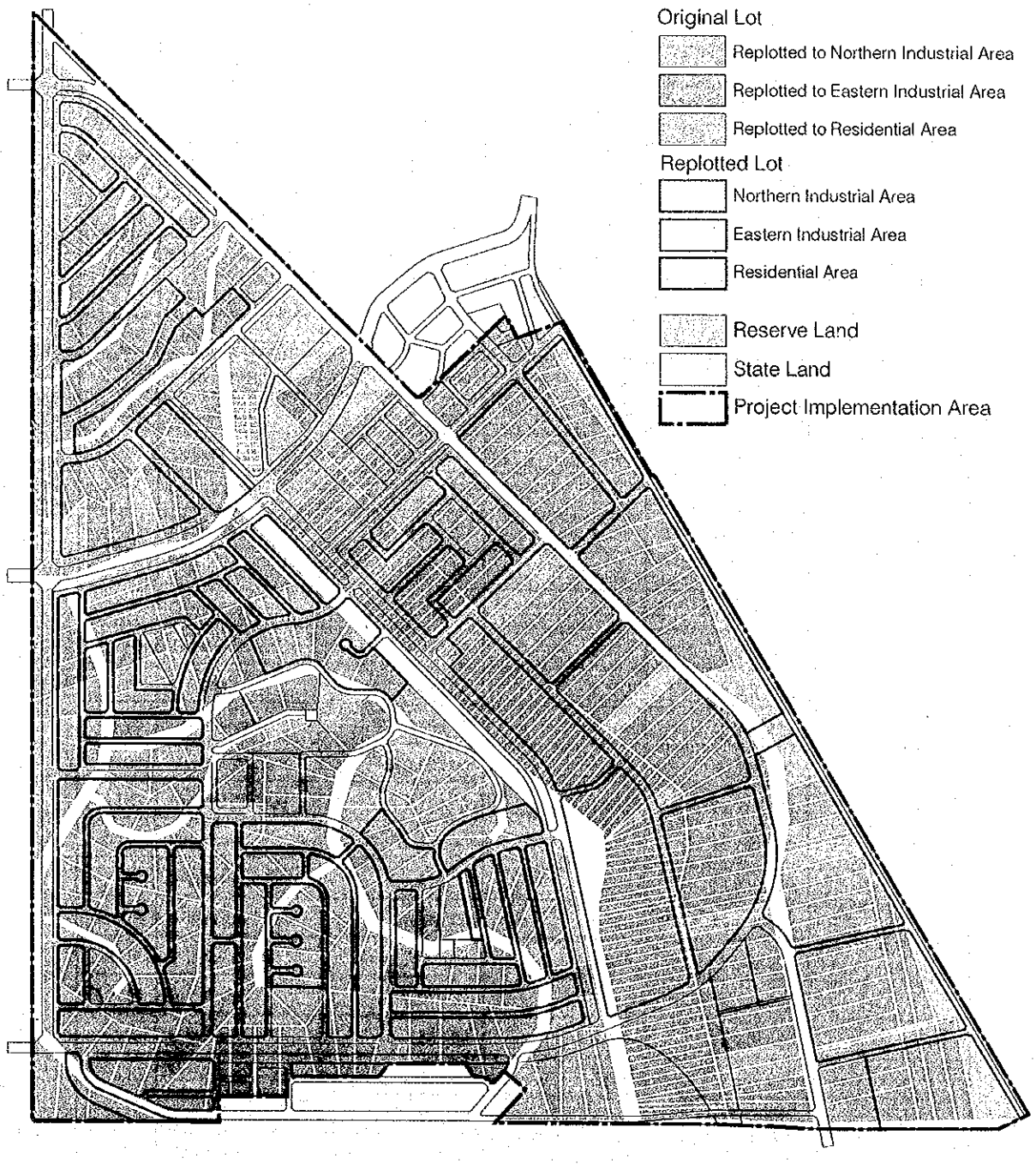


Table 2.9
Details of Financial Land

Block No.	Land Use	Area (m^2)	Unit Index	Valuation Index	Remarks
1	M-Industry	5,590.00	3,843	21,482,370	
5	S-Industry	2,991.86	3,570	10,680,940	
6	S-Industry	4,454.92	3,250	14,478,490	
8	S-Industry	3,723.98	3,265	12,158,794	
9	S-Industry	3,851.84	3,262	12,564,702	
10	S-Industry	12,337.34	3,473	42,847,581	
11	M-Industry	2,423.50	3,843	9,313,510	
15	M-Industry	1,676.72	3,710	6,220,631	
16	M-Industry	3,762.42	3,698	13,913,429	
24	Commerce	545.00	5,433	2,960,985	
28	Commerce	6,890.00	5,324	36,682,360	
30	Commerce	5,900.00	5,324	31,411,600	
31	Commerce	5,900.00	5,324	31,411,600	
32	Commerce	3,280.00	5,324	17,462,720	
35	Commerce	19,254.00	5,567	107,187,018	
70	Commerce	4,015.00	4,872	19,561,080	
80	Terrace	1,974.27	2,320	4,580,306	
91	S-Detached	1,531.34	2,552	3,907,979	
96	Commerce	6,456.00	5,104	32,951,424	
102	Medical Welfare	40,407.00	1,740	70,308,180	
105	Medical Welfare	7,712.00	1,856	14,313,472	
111	Detached	18,120.00	2,552	46,242,240	
113	S-Industry	3,615.23	3,308	11,959,180	
114	S-Industry	3,538.50	3,308	11,705,358	
116	S-Industry	2,419.64	3,430	8,299,365	
118	S-Industry	2,515.32	3,710	9,331,837	
119	S-Industry	4,248.62	3,584	15,227,054	
120	M-Industry	2,084.40	3,625	7,555,950	
124	M-Industry	2,169.93	3,388	7,351,722	
125	Commerce	4,861.00	5,565	27,051,465	
126	M-Industry	3,674.12	3,710	13,630,985	
126	M-Industry	2,000.00	3,388	6,776,000	
126	M-Industry	2,343.00	3,509	8,221,587	
127	M-Industry	1,988.49	3,248	6,458,615	
143	M-Industry	6,418.40	3,248	20,846,963	
Total		204,673.84	3,503	717,057,492	

CHAPTER 3 REPLOTTING DESIGN IN KG. KUANTAN PROJECT AREA

3.1 Preparatory Work

1) Assumptions

Assumptions made in this exercise are similar to those made in Kg. Seri Subang. Without any statutory plan, it is assumed that the area is declared under the rural growth center project of the Government. It is also assumed that land use zoning as well as location of replots are the results of consultations with landowners and adjustment process.

2) Physical Conditions

Physical conditions in the project area were investigated as shown in Figure 3.1. There is a road of 10m width running from east to west, and most of the lots are facing it. Thus, the road serves residents as a local road, and through-traffic as a trunk road. Most of the private lands are agriculture and some buildings stand sparsely.

3) Present Land Rights

Present land rights in the project area are summarized in Table 3.1. The area is declared under the Malay reservation area; there are private lands of freehold status and are issued Final Titles (F.T.). Since F.T. is considered to be accurate in terms of acreage, the registered figure is treated as the basis area for replotting design.

4) Map Preparation

To undertake the process of replotting design work accurately and efficiently, the following maps were prepared:

- cadastral map (scale 1:1,000),
- topographic map (scale 1:1,000),
- future block design (scale 1:1,000), and
- some overlays of the above maps

Figure 3.2 shows the cadastral map and Figure 3.3 shows the overlay of the three kinds of maps.

3.2 Land Valuation

The lands were valued according to the same method applied for Kg. Seri Subang project. Also, a similar internal regulation was assumed to be established in the LR committee for that particular purpose.

Figure 3.1
Present Condition of Kg. Kuantan Project Area

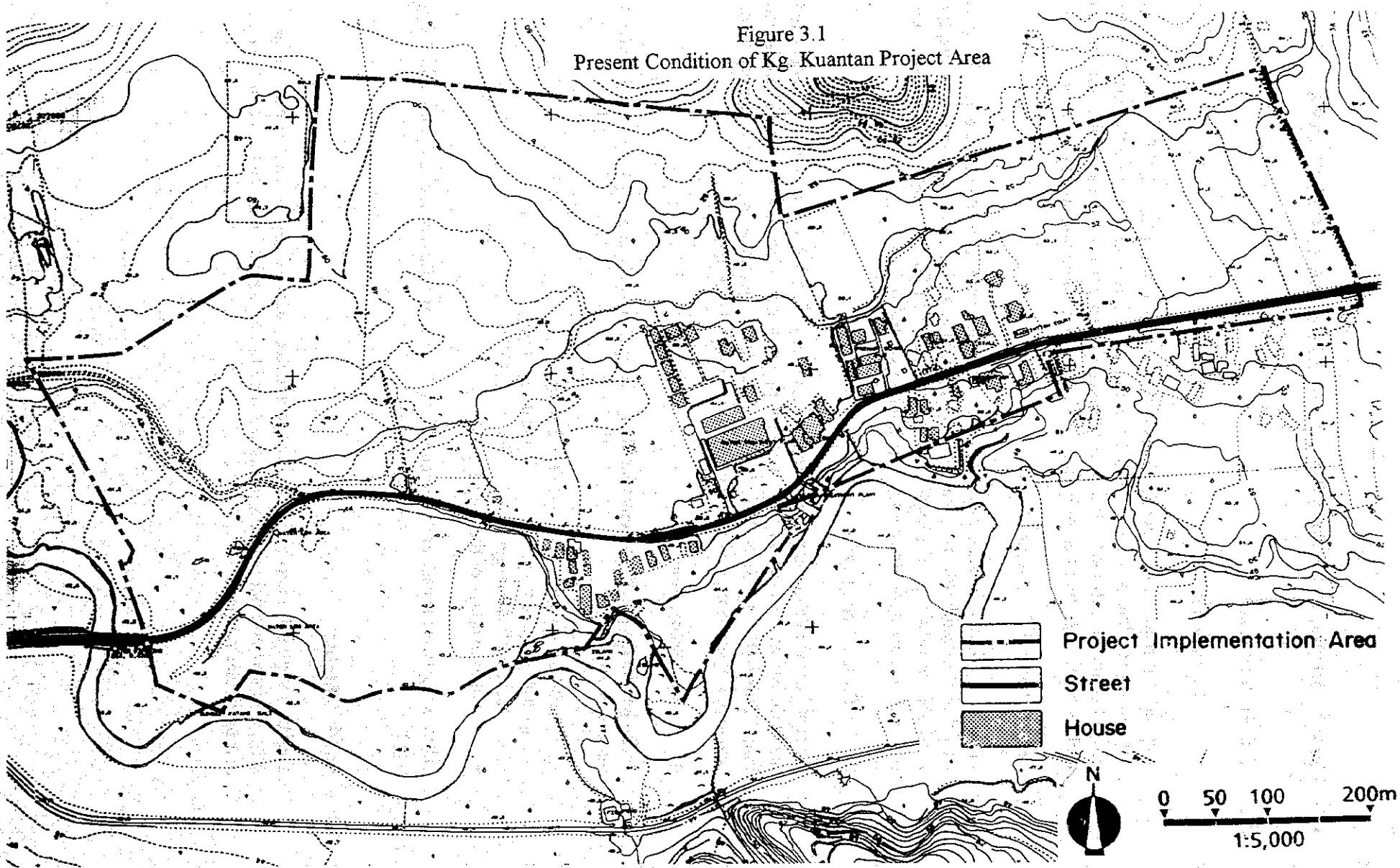


Table 3.1
Summary of Registered Land Titles

Lot No.	Totle No.	Type	Area (acre)	Area (m2)	Ownership Status	Annual Rent(RM)	Land Use Category	No.of Landowners	Restriction in Interest	Remarks
794	EMR 2401	F. T	2.25000	9,105.42	Freehold	15.8	Agriculture	1	Malay Reservation	
795	EMR 2402	F. T	2.09375	8,473.10	Freehold	15.8	Agriculture	3	Malay Reservation	
803	MG 63	F. T	2.31250	9,358.35	Freehold	8.8	Agriculture	1	Malay Reservation	
808	EMR 2424	F. T	2.75000	11,128.85	Freehold	1.7		1	Malay Reservation	School
874	EMR 2470	F. T	3.03125	12,267.02	Freehold	22.8	Agriculture	1	Malay Reservation	
875	EMR 2471	F. T	3.21875	13,025.81	Freehold	22.8	Agriculture	1	Malay Reservation	
876	EMR 4151	F. T	3.03125	12,267.02	Freehold	22.8	Agriculture	3	Malay Reservation	
877	EMR 2473	F. T	3.34375	13,531.67	Freehold	24.5	Agriculture	2	Malay Reservation	
878	EMR 4213	F. T	3.03125	12,267.02	Freehold	22.8	Agriculture	2	Malay Reservation	
879	E 2475	F. T	0.81875	3,313.36	Freehold	7.0	Agriculture	2	Malay Reservation	
880	E 2476	F. T	1.90625	7,714.31	Freehold	14.0	Agriculture	2	Malay Reservation	
890	E 2493	F. T	2.34375	9,484.81	Freehold	17.5	Agriculture	7	Malay Reservation	
905	E 2522	F. T	3.34375	13,531.67	Freehold	6.1	Agriculture	1	Malay Reservation	
1164	E 2651	F. T	1.84375	7,461.38	Freehold	14.0	Agriculture	2	Malay Reservation	
1165	E 2652	F. T	0.61250	2,478.69	Freehold	14.0	Agriculture	1	Malay Reservation	Caveat
1166	GN 2804	F. T		4,688.43				1	Malay Reservation	Cemetery
1438	EMR 3151	F. T	2.40625	9,737.74	Freehold	17.5	Agriculture	1	Malay Reservation	
1439	MG 4821	F. T	0.50000	2,023.42	Freehold	8.0	Agriculture	5	Malay Reservation	
2737	GN 2131	F. T		11,238.95				1	Malay Reservation	Cemetery
2758	E 2447	F. T	3.18750	12,899.35	Freehold	22.8	Agriculture	2	Malay Reservation	
2759	E 2431	F. T	3.40625	13,784.59	Freehold	12.8	Agriculture	3	Malay Reservation	
2760	E 4225	F. T	2.06250	8,346.63	Freehold	22.8	Agriculture	1	Malay Reservation	
2761	E 3549	F. T	3.86875	15,656.27	Freehold	28.0	Agriculture	4	Malay Reservation	
2762	E 2468	F. T	4.45625	18,033.79				1	Malay Reservation	
2763			3.04100	12,306.48				1	Malay Reservation	Community Hall
2764	EMR 4221	F. T	2.87494	11,634.46	Freehold	21.0	Agriculture	15	Malay Reservation	
2764			0.03131	126.70				1		Acquisition
2765	HSM 762	Q. T	2.41250	9,763.03	Freehold	56.8	Agriculture	1	Malay Reservation	Caveat
2766	E 2836	F. T	0.27313	1,105.31	Freehold	2.6	Agriculture	1	Malay Reservation	
2766			3.78937	15,335.03				1		Acquisition
2767	E 4200	F. T	3.57500	14,467.50	Freehold	26.3	Agriculture	2	Malay Reservation	
2767			0.17500	708.19				1		Acquisition
2768	MG 7	F. T	3.21875	13,025.81				1	Malay Reservation	
2769	MG 6	F. T	3.40250	13,769.42	Freehold	26.3	Agriculture	2	Malay Reservation	
2769			0.16000	647.49				1		Acquisition
2770	MG 187	F. T	3.09375	12,519.95	Freehold	11.4	Agriculture	2	Malay Reservation	Caveat
2771	E 2818	F. T	2.49438	10,094.39	Freehold	19.3	Agriculture	6	Malay Reservation	
2771			0.06812	275.67				1		Acquisition
2772	E 2819	F. T	0.59625	2,412.93	Freehold	7.0	Agriculture	3	Malay Reservation	
2772			0.21625	875.13				1		Acquisition
2773 2778	E 2403	F. T	1.72750	6,990.94	Freehold	14.0	Agriculture	1	Malay Reservation	
2778			0.21000	849.83				1		Acquisition
2774 2777	E 2404	F. T	2.21000	8,943.54	Freehold	15.8	Agriculture	1	Malay Reservation	
2777			0.04000	161.87				1		Acquisition
2779	E 4150	F. T	2.15063	8,703.28	Freehold	21.0	Agriculture	24	Malay Reservation	
2779			0.66187	2,678.49				1		Acquisition
2868	E 2420	F. T	2.00000	8,093.71	Freehold	7.9	Agriculture	3	Malay Reservation	
2868			0.06250	252.92				1		Acquisition
Total				397,559.72				122		

Note) Acquisition : The lots were compulsorily acquired presumably for road improvement in 1960s.

Figure 3.2
Current Cadastral Map

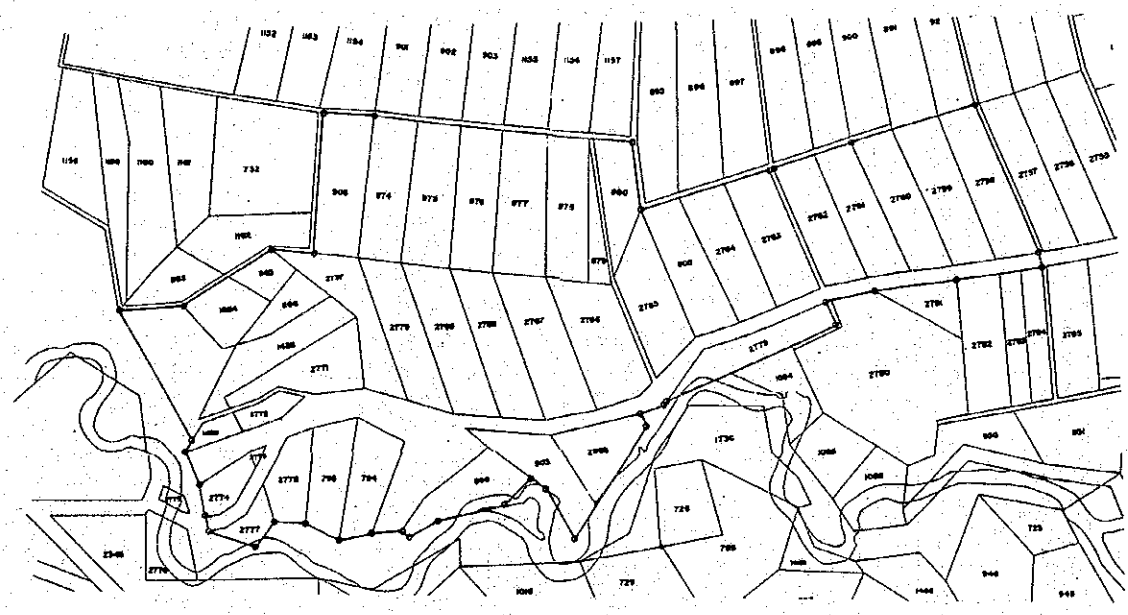


Figure 3.3
Overlay of Topographic, Cadastral and Future Block Design