

M A S T E R P L A N F O R A L A N D U R

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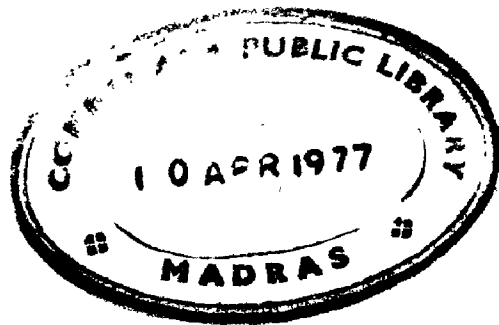


MADRAS METROPOLITAN

DEVELOPMENT AUTHORITY

URBAN NODE DIVISION

DECEMBER 1973



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A N N E X U R E

M A P S

Land use		1972
Land use - Two Alternatives		1991

Phasing of Development

C R E D I T S

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CHAPTER - I

PREFACE

1-01 Urbanisation, as a corollary to industrialisation and economic advancement, has been taking place at a fast rate in this country, since Independence. The developmental activities undertaken as a result of the several Five Year Plans have contributed not a little to this phenomenon. The attendant migration into cities and towns in search of employment, to avail better social facilities and other urban conveniences has swelled the urban population beyond expectations.

1-02 The sad result of this trend has been overcrowding in the urban centres, strain on physical infrastructure, increase in ~~traffic~~ ~~con-~~ ~~gestion~~, ~~severe~~ pressure on social services and a general and rapid deterioration in living conditions leading to discomfort, lack of safety and a general lowering of living standards.

1-03 The concentration of industries in and around the existing urban centres without much thought being given to their location or to the consequences which such haphazard location may entail, has acted to further worsen the situation.

1-04 Demographers have predicted that the world population is likely to increase by 100% in the next 30 years but the increase in the urban content would be of the order of 300%. A study by the U.N.O. predicts deterioration in the level and adequacy of the basic services including power, water supply, sewerage, housing, health and education in the urban areas and stresses the urgent need to prevent further deterioration in the coming decades. The report further pinpoints the fact that unsatisfactory land use and qualitative deterioration in urban environment are wholly due to unplanned urbanisation and pollution.

1-05 Madras City is no exception to this universal phenomenon. Its population has increased from 0.9 million in 1941 to 1.4 million in 1951 and 2.5 million in 1971. This population increase has taken place not merely due to the fact that Madras is the seat of the State Government but also due to its geographical location, its being a major port and a centre for heavy and medium industries and large scale business activity. However, this City, the fourth largest in India, fortunately has not as yet reached the point of no return and a serious effort at this stage could still retrieve the situation.

1-06 The Tamil Nadu Government, very much aware of the situation, took earnest steps to have a detailed study of the problem made and to formulate an Interim Land Use Plan (1967) for the Madras Metropolitan Area followed by a perspective Plan (1970).

1-07 The Plan spells out a three - tiered strategy of physical development and spatial distribution of population in the Madras Metropolitan Area (450 sq. miles). The strategy as such will involve limiting the population of Madras city to 3.0 million, developing a number of urban nodes within the Metropolitan Region to accommodate another 2.3 million people and three urban centres, outside the Metropolitan Area to serve as Satellite Towns for the Metropolis, each accommodating in 1991, a population of 0.1 million.

1-08 While the Madras Interim Plan (1967) had suggested the general land use disposition for the Madras Urban Area, it had given only tentative and schematic proposals so far as the Urban Nodes in the Metropolitan Area are concerned. These proposals were definite only to the extent that they related to the physical location and population assigned. The Perspective Plan 1971 for its part

had stipulated the perspectives and priorities in addition to the strategy of development and dealt with in detail the financial implications besides the programmes for implementation in every phase of the 20 year development. As such, it is necessary to follow through with detailed proposals in respect of each of the urban nodes identified in the Plans. This document Master Plan for Alandur - is the second of such reports in the series intended to be brought out for every Urban Node and explains the rationale behind the proposals contained in the Development Plan for Alandur.

CHAPTER II.

THE PROFILE

a) Growth

2.01 Alandur, a Panchayat town till 1964- gained the status of a Municipal town when adjoining areas comprising Adambakkam, Nanganallur, Palavanthargal and Talaikanancheri Village Panchayats, were annexed and constituted into a Municipality with a total extent of 6.64 sq.km. (2.6 sq. miles). Alandur in the southern borders of Madras City, is close to Adyar, Guindy and Saidapet in the City. It is contiguous also to St. Thomas Mount Cantonment, most of whose population depend on the proximate, but inadequately developed commercial infra-structure available in Alandur for their day-to-day needs. The founding of several industrial establishments in Velacheri to the east of Alandur and across the railway, the Guindy Industrial Estate and the Teleprinter and Surgical Instruments establishments in Guindy and Nandambakkam respectively, accelerated the growth in the population. This growth was aided by the fact that the G.S.T. Road and the suburban electric

train service pass through Alandur. These facts and the vast extent of vacant or cultivated land on the east of the railway were a sure invitation to housing development to occur here first, rather than elsewhere. Such land suited specifically those who wanted to be close to the City but could not afford the high land values within the City, even if it meant compromising on other amenities like properly made streets, street lights, water supply, sewerage etc., And so the process started with housing co-operatives for Government Servants, which snow-balled as years passed. To-day Alandur, for all practical purposes, is a dormitory suburb. All this occurred within the last decade or may be 12 years.

b) Physiography

i) Location

2.02 Alandur is about 12 k.m. from the Central Area of the City and lies within Saidapet Taluk. It abuts St. Thomas Mount Cantonment, on the north and Madras City on the north-east. Agricultural land surrounds it on the east and the south. Pallavapuram Municipal town abuts in on the south west and Meenambakkam airport on the west.

Alandur Planning Area covers, Alandur Municipal area besides St. Thomas Mount Cantonment and includes 7 villages (viz.) Meenambakkam, Nandambakkam, Thirusulam, Ullagaram, Moovarasanpattu, Paruthivakkam and Madipakkam and extends over 30 sq.km. (12 sq.m.). Contiguity, compactness, the present spread, physical constraints like Adyar river, administrative convenience, present day equations in respect of living and shopping and future requirements determine the size and shape of this Planning Area.

ii) Soil and topography.

2.03 The soil within the confines of the Alandur Planning Area is generally clayey with red loam and gravel occurring here and there. The St. Thomas Mount and the Thirusulam hillock are the only relieving features, on the otherwise plain configuration of the Planning Area which gently slopes towards east. The land is practically flat and drains well. River Adyar traverses the site at its northern extremity. The town is devoid of any other water courses. The town elevation is 10.67 metres (35 ft.) above M.S.L.

C. Population

i) Growth

2.04 The growth of population in the town, in the Cantonment and the village within the Planning Area is as follows:

TABLE 2.1 - Growth of population

Year	Alandur Town	Percentage increase	Other villages within the Planning Area.	Percentage increase
1.	2.	3.	4.	5.
1951	22,700	..	6,357	...
1961	32,584	45	7,443	17
1971	65,039	99.6	15,830	112

Cantonment area.	Percentage increase	Alandur Planning Area	Percentage increase
6.	7.	8.	9.
15,125 *	..	44,182	...
15,790	4	55,817	26
27,407	74	108,276	95

(Source: Census 1951, 1961 & 1971)

2.05 It may be seen that there has been a phenomenal growth of population in this town and the reasons have been explained earlier. This growth in the population has not seen, however, a matching increase in the infra-structure - both utility and social - nor has there been any significant change in the character or image of the town in the content of the work-force employed in the primary and secondary sectors. It cannot be termed a balanced growth in as much as it has not made the town in any way a more self sustaining and economically viable unit. The following Table indicates the increase in number of houses and households over the past decade.

TABLE 2.2 - Number of Houses and Households

Year	No. of houses	No. of households
1951	5,620	8,558
1961	8,197	11,226
1971	15,780	21,156

(Sources: Census 1951, 1961 & 1971)

That both these increases in houses and households have been at the same rate is indicative of the fact that the town continues to be a predominantly residential suburb still.

ii) Density

2.06 The overall density as per 1971 census works out to 98 persons per hectare (40 persons per acre) within the town. In respect of rest of the Planning Area it is 20 persons per hectare (8 persons per acre). The reason for a lower overall density in the Planning Area may be attributed to the town's expansive development rather than a cohesive and compact development.

iii) Sex ratio

2.07 There were 913 females per 1,000 males in the town area while the corresponding figure in respect of rest of the Planning Area was 900 females per 1,000 males.

iv) Occupational pattern

2.08 It is interesting to note that the 1971 census has classified Alandur in the functional category of 'industry-cum-services' while it was classified as 'Services-cum-industry', in the 1961 Census. That is to say, the emphasis has shifted from services to industrial employment. The disposition of workers among the broad categories is as indicated below:

TABLE 2.3 -- Employment Characteristics

		1961			
Category		Alandur		Rest of the Planning Area	
1.		2.		3.	
1. Primary activities	0	437	5.1%	1,405	8.1%
2. Secondary activities	0	2,754	32.2%	5,441	31.2%
3. Tertiary	2	5,360	62.7%	10,579	60.7%

		1971			
		Alandur		Rest of the Planning Area	
		4.		5.	
		294	1.7%	849	5.9%
		9,900	57.0%	6,500	44.3%
		7,166	41.3%	7,339	49.8%

(Source: Census 1961 & 1971)

2.09 The participation ratio in the year 1971 for Alandur Town works out to 1:3.7 compared to 1:3.8 in 1961. Since, there is no industry within the Planning Area except the Surgical Instruments factory, which provides large scale

employment, it is gathered that most of the population of the town work in the City and live in the town. This aspect is not reflected in the above Table because the count is only about their nature of employment and not where that employment is - whether it is within the town or outside it. This can be assessed only with reference to actual employment, within the town, which when surveyed reveals that the Census category 'industry-cum-service' is true to the extent of reflecting the town's population and not in characterising the town itself.

d) Land use

2.10 The table below gives the land use disposition in Alandur Town and rest of the Planning Area.

TABLE 2.4 - Land use 1972.

USE	Alandur Town		Rest of the Planning Area		Percentage to developed area.
	In hectares.	In Acres	In hectares	In acres	
Residential	288	714	229	568	19.6
Business	7	18	5	14	1.5
Industrial	3	7	97	239	8.3
Institutional	24	60	294	729	24.0
Transportation	124	307	464	1148	39.5
Utilities	..	..	1	2	0.1
Recreational	..	..	..	..	..
Vacant	199	491	88	205	7.0
Total developed Area	645	1597	1178	2905	100.0
Non-urban	40	97	1120	2784	..
GRAND TOTAL	685	1694	2298	5689	..

1) Residential

2.11 Within the incorporated area (Alandur Municipal area) 288 hectares (714 acres) account for residential use. The percentage to total developed area is of the order of 43.7. This is not very surprising, since this town is more or less a residential suburb of the City. The residential density works out to 225 persons per hectare (91 persons per acre) in the town and 188 persons per hectare (75 persons per acre) in rest of the planning Area. Though this cannot be said to be on the high side, yet the older parts (i.e.) the market area or long M.K.N. Road and its surroundings to have a comparatively high density of 375 to 750 p.p.h. (150 to 300 p.p.a.). The Central part of the town needs to be decongested or even converted to uses other than residential. On the other hand the newly developed areas have a low density and could be more intensively used.

2.12 In the rest of the planning Area residential use accounts for 229 hectares (568 acres). There has been an increasing demand for housing in and around Alandur and agricultural lands are being gradually converted into housing estates.

ii) Business

2.13. The commercial use in total constitutes 12 hectares (32 acres) or 2.6% of the developed area. Alandur is known for a fairly large scale paddy market. A number of rice godowns are located along M.K.N. Road, the road along which most of the commercial activities in the town are concentrated and as a consequence of which there is heavy traffic on the road causing inconvenience all round. Convenient shopping centres are no doubt available in the Area and they are expected to serve the local residents, but they are inadequate in no. and are not distributed in a well balanced manner over the geographical area. A town centre or a shopping centre is conspicuous by its absence.

iii) Industrial

2.14 Except for the Surgical Instruments Factory at the northern extremity of the Planning Area and a few other small industrial units, there is no industry with any sizeable employment. The 1971 census indicates 57.0% of the total workers within the town and 44% in rest of the Planning

Area to be in the secondary sector activities. There is no industrial activity within the Planning Area which can account for this much of participation. It is therefore to be gathered that the percentage refers to those employed elsewhere but residing in the town. This use in total accounts for 100 hectares (246 acres) or 8.7% of the developed area.

iv) Transportation

2.15 The G.S.T. Road, one of the three transportation corridors in the Metropolitan Area, passes through this town from north east to south west. M.K.N. Road, a loop off the G.S.T. Road, serves the town as the main artery at present. Madipakkam road proceeding south is an inter town road in the Planning Area. Butt Road radiating towards north west to Nandambakkam through the Cantonment is yet another inter-town road and leads on to Poonamallee. The operational standards of these roads however, leave very much to be desired.

v) Community facilities

2.16 There were 6 high schools, 5 higher secondary schools and 29 elementary schools within

the Planning Area in 1971. Their number is inadequate for the present population. For instance at the rate of 1 high school for a population of 10,000 it would be desirable to have 11 high schools as against the present 6. It is perhaps fortunate that the Jain College is located within the Planning Area and this could be said to meet the present requirements. On the whole the Planning Area is better off educational facilities wise, when compared to medical facilities when we realise that the Government Police Hospital situated within the town and the military Hospital serving the Cantonment besides a few clinics and dispensaries scattered over the Planning Area are the only medical facilities available now.

vi) Non-urban uses

2.17 The Adambakkam tank, Madipakkam tank and the Ullagaram tank are the irrigation sources for the agricultural activities that are carried on in the villages of Adambakkam and Ullagaram in the Planning Area. There are a few rock out crops close to Thirusulam hillock around which are also situated several quarries.

CHAPTER - III

DEVELOPMENT IMPERATIVES, STANDARDS AND PROPOSALS

3.01 The town, located as it is, adjoining the City and on one of the radial corridors, has a high potential for rapid development. In fact that is what has been happening in the past 12 years as may be seen from the census figures and on a look at the present development against what it was a decade ago. The population has grown by nearly 100% during the last ten years. The Metropolitan Plan after assessing this Urban centres' potential in the context of the development of the entire Metropolitan Area, has suggested an ultimate population of 200,000 in this town to be reached in 1991. There is every possibility of exceeding this figure, considering the present figure of about 108,000, if things are allowed to take their own course. The population is deliberately sought to be kept down for various reasons explained in the Metropolitan Plan and particularly because of its contiguity to the City as well as its proximity to Pallavapuram and Tambaram.

3.02 The Planning Area is bifurcated by the railway. Little land is available for any major development on the northern side of the

railway. Not far away from Alandur on the south west the Pallavapuram - Tambaram Urban Node has been identified because of which a respectable buffer has to be organised on that side. As was mentioned earlier, the problem in respect of this town lies not in the accretion of population but in closing the yawning gap between requirements and actuals in regard to utility services and social infrastructure and in the provision of service industries, besides organising an efficient and effective transportation network. The approach adopted in planning for this town has therefore been to strive and achieve a balanced and orderly distribution of landuses. For obvious reasons the intention of this Plan is not that it should help to provide employment opportunities for the entire population, within this centre itself, but that a major part of the population engaged in population - supportive activities at least, should not commute from elsewhere.

3.03 Any Development Plan aims at providing a better standard of living for every citizen in every respect within the context of available resources. The Development Plan for Alandur therefore seeks to fulfil the following goals:-

- i) Choice - the individual should have a reasonable and readily available variety in terms of services and facilities.
- ii) Personal interaction and participation - it should be possible to provide maximum degree of neighbourliness consistent with privacy.
- iii) Comfort.
- iv) Imageability - it should be a well knit and a well-structured town with easily recognisable and inter-related component parts.
- v) Economic viability - it should be amenable to minimum first cost and minimum operating cost.
- vi) Circulation pattern - conducive to efficient movement of men and material.

The Plan indicates the broad disposition of major landuses and the generalised transportation network which inter-links them. As such it is schematic in respect of other details below that of the town level. It is essential therefore that this Plan is followed up with Area Development Plans immediately hereafter, for its implementation-enforcement and development - in all its practical aspects.

a) Population:

3.04 The rate of growth of population for the town during the last decade was of the order of 99%. The same in respect of the Planning Area was 95%. The growth rate has been phenomenal and demands immediate attention. The causes leading to this have been explained in the preceding Chapter.

3.05 The town as a single identifiable entity was constituted only in April 1964 and hence its growth rate over the previous decades could not be judged. Consequently the sophisticated methods of population projection could not be tried. Moreover, such an exercise is not called for, since the strategy of development adopted for the entire Metropolitan Area, necessitated projecting the latter's total population and distributing it between the different urban centres, which is precisely what has been done in the Metropolitan Plan itself. As such the envisaged growth in population is not the result of natural increase and migration alone, but is the end-result of conscious and deliberate measures to achieve a pre-planned population content.

3.06 The Metropolitan Plan has assigned a population of 2 lakhs for this town in the above context. It is proposed to accommodate the future population anticipated for the Metropolitan Area in this and other such Urban Nodes and Satellite Towns and work the strategy through a well organised inter-action among these. The standards adopted for the Satellite Towns and those specified in the Metropolitan Plan also have been arrived at after a detailed study of the various factors involved. Therefore, no need was felt for making a further deep study into these aspects of development and the same standards have been adopted in this Plan.

3.07 However, to achieve a balanced development, to keep pace with the development of the rest of the Metropolitan Area as spelt out in the Metropolitan Plan and to arrive at a convenient and workable scheme, the population content of the Planning Area at different periods of time has been suggested to be as below:

By the Year	Total population	Increase in population.
1971	108,276	••
1976	120,000	11,724
1981	137,000	17,000
1986	163,000	26,000
1991	200,000	37,000

3.08 study of the characteristics of this population content by age group, composition of work force etc. has not been attempted for the reason that Metropolitan Plan itself, while discussing the strategy of development and assigning the population to each Urban Centre, has indicated the requirements in respect of a unit population and the standards therefor

b) Density

3.09 This is a deciding factor in arriving at the size, shape and contents of the developments in a town. An overall density of 50 persons per acre (125 persons per hectare) has been adopted both for Manali, another Urban Node within the Metropolitan Area, and also for Maraimalai Nagar, one of the Satellite Towns for Madras. There is no reason for changing this figure and accordingly the same density has been adopted. Thus we require an area of 4,000 acres (1,600 hectare) for a population of 200,000. The gross residential density in individual neighbourhoods however varies from 125 persons per hectare to 500 persons per hectare. (50 persons per acre to 200 persons per acre).

c) Industry

3.10 It is a common phenomenon that an urban centre gets newly founded, grows in stature or grows more rapidly with the advent of industries. Alandur has been an exception to this. It is not the location of the Surgical Instruments factory or for that matter the few other light industries located along the G.S.T. Road, which was the primary cause of growth in the area. The rapid growth was prompted by the desire of a large number of people engaged in occupation within Madras City, but who could not afford the high cost of land and therefore the heavy investment on housing. Such persons at the same time wanted to reside near the city, availing of the service facilities and conveniences it offers. Alandur adjoining the City and well connected to it was an ideal centre for them to live in. The influx which started thus, gained momentum with the rapid growth in employment both within the City as well as in other urban centres in the Metropolitan Area. In view of this, we find that the industries in Alandur at present do not occupy as much areas as they would in a normal situation. Usually a standard of 2 hectares per 1,000 population

5 acres per 1,000) is adopted for fixing the extent for industries. The Master Plan for Alandur, however, proposes an extent of 175 hectares or thereabouts for industrial activity as against a normal requirement of 400 hectares for a population figure of 200,000. The reasoning behind this proposal is that, if the currently observed trends in urbanisation in this area are to continue they will in themselves bring about a population growth beyond the projected figure of 200,000 in the year 1991. It is therefore felt that no special impetus be given to industrial growth within the planning area lest it should strengthen the forces of urban growth. What require to be done is to initiate activity in such a way as to correct the present imbalances which if left uncontrolled would make the Planning Area more of a dormitory suburb than it is to-day. In this context it is thought adequate if rigid landuse control is imposed and sufficient provision made for service industries and warehousing facilities.

d) Residential landuse

3.11 The residential land use in any town occupies a predominant percentage of the

developed area. The proportion normally varies between 40 and 50%. This town has already developed to a large extent in this category and the development has also been expansive in the sense that an extensive area has developed with low density. Not very much more extent is required for accommodating the 2 lakh population anticipated. What is needed is a judicious distribution of this use vis-a-vis other uses and organisation of this use into suitable density zones with the creation of only a few new neighbourhoods to accommodate the envisaged increase in population. As of now, there is a low density extensive development in the town and there is no chance of any denser development in the areas which have come up already as open developed plots with mostly single storeyed and scattered 2 storeyed units. With this in view the following proportion among the three density ranges has been envisaged.

Low density	:	50 persons per acre (125 persons per hec.)	∅ ∅ 40%
Medium density	:	100 persons per acre (250 persons per hec.)	∅ ∅ 40%
High density	:	200 persons per acre (500 persons per hec.)	∅ ∅ 20%

while the presently existing neighbourhoods are sought to be provided with the minimum requirements in terms of facilities which are non-existent now, the new neighbourhoods will contain all the neighbourhood facilities.

e) Town centre

3.12 The day-to-day shopping needs of the inhabitants will be served by the neighbourhood shopping centres. The major and seasonal or occasional shopping needs along with major social facilities however, are accommodated in the Town centre. The Town centre as such, is one of the most important elements of the town. It constitutes the chief administrative, business, entertainment and cultural centre of the town as a whole and incidentally serves as the common meeting place of the town. Because of these reasons, the town centre ought to be located in a place easily and equally accessible from all parts of the town. However, in the case of Alandur, though much of the new development is suggested south of the railway, yet it is to be remembered that quite a sizeable part of the town - population wise and extent wise - is north of the railway. Hence the town centre facilities to an equal detail as in the south, if not to

the same degree, has to be thought of for the north. More so because the railway will inhibit the free flow of traffic between the northern and the southern portion. It has therefore been suggested that a full fledged town centre should be created on the southern part. Yet that portion of the town centre which serves the purpose of business and administrative activities will be split between the two. The area requirements of the Town centre have been estimated on the basis of 0.4 hectare (1 acre) per 1,000 population.

f) Community facilities

3.13 In the case of community facilities the town has to be self sufficient so as not to strain the facilities in the City and also to arrest avoidable travel of people of the town to and from these facilities. Accordingly, facilities for education, health and recreation services are to be provided adequately. The neighbourhood facilities will be accounted for in the area development plans and only town level facilities have been accounted for in the Master Plan.

Educational services

3.14 The facility at the town level is only the colleges. The Jain College is located within the Planning Area. Normal standards require 2 Colleges for a population of 2 lakhs. There is another college (Gurunanak College) in Velacheri, just outside the Planning Area, which could easily serve this town also, without creating a movement of scholars problem. In these circumstances, no provision has been made for another college.

Health services

3.15 The Metropolitan Plan has adopted a standard of 4 beds per 1,000 population. At the same standard 800 beds are required for this town. Although, there is a Military hospital, its services cannot be availed of by the public. Therefore 2 hospitals of an aggregate bed strength of 800 - the one in the south being larger - have been provided for to meet the situation. The area requirements for both would be the order of 20 hectares (50 acres).

Recreational requirements

3.16 There is no organised recreational space or activity within the town. There are 4 small parks within the Municipal limits, but these

are mere neighbourhood facilities. Even the newly developed areas are conspicuous by the absence of any large scale and well maintained open space. The Metropolitan Plan has suggested 4 acres per 1,000 population. Such facilities can be provided only by Public Agencies, as with prohibitive land cost, it is feared, this standard, if adopted may result in heavy investments. The Regional recreational area and Beach in the city and Tiruvanmiyur can be utilised by the populace. Hence the standard of 0.4 hectare (1 acre) per 1,000 population for recreational requirements has been adopted.

g) Transportation and Communication

3.17 The roads have been classified under 3 categories designated as:

- i) Arterial Roads.
- ii) Sub-arterial Road.
- iii) Major Roads.

3.18 The Arterial Roads will be 200 ft (65 metre) wide with service roads while sub-arterial roads will be 120 ft. (40 metres) wide again with service roads. The Major roads will be 80 ft. (25 metres) wide.

b) Utility services

Water Supply

3.19 The town has no protected Water Supply scheme at present. The town's population depends on wells for water requirements. The Madras Metropolitan Plan has suggested that the water supply requirements in the Metropolitan Area is to be met at 55 g.p.c.d. by 1981 and 65 g.p.c.d by 1991 including the component intended for industries. The total supply required for this Urban Centre would be 13 m.g.d. at the end of 20 years. A combined water supply scheme for Alandur, Pallavapuram and Tambaram is already under execution by the Tamil Nadu Water Supply and Drainage Board for which the per capita supply has been calculated at 20 g.p.c.d. This has to be suitably increased to 65 g.p.c.d. The Metropolitan Plan document has discussed in detail the probable sources that could be tapped to achieve this target. The Madras Metropolitan Development Authority has also requested the Tamil Nadu Water Supply and Drainage Board to initiate dialogue with Andhra Pradesh Government regarding the supply of water from Krishna-Pennar complex.

Sewerage

3.20 There is no sewerage system in the town. A system of open drains, collected in cess-pools and removed by carts is in vogue. However, the provision of a sewerage system is under investigation. The Metropolitan Plan has suggested also a comprehensive sewerage system for each Urban Centre.

Electricity

3.21 The generation of electric power has been entrusted to the State Electricity Board and non-else is allowed to generate electricity. It is expected that enough power would be made available for consumption by new industries and domestic use of the magnitude anticipated in this Urban Centre.

CHAPTER - IV

THE PLAN EXPLAINED

4.01 The Development Plan for Alandur has been drawn up incorporating the planning principles and standards discussed in the preceding Chapter. The design has been so conceived that when actually implemented, the form of development would wear a better look, afford a comfortable living, result in smooth functioning and would be conducive for a totally rewarding urban environment. The form of development was decided after careful consideration of the following constraints and factors:

- i) The Urban Centre is divided into two, by a physical barrier. (viz.) the railway. So it is essential that the facilities are distributed between the two. Similarly a street or road pattern has developed over the past, which cannot be ignored and which inhibits free organisations of future development with the result that the future form of the town is partly dictated by the already existent physical constraints particularly in the shape of roads.
- ii) The town is very near Madras City and is surrounded by other equally fast developing urban centres and a respectable buffer may have to be maintained.

- iii) The growth of population has been phenomenal and this growth has to be deliberately ordered to fit into a well thought out programme of development.
- iv) The character of the town is the consequence of such a historical development that any change in that character would be not only not necessary but it may not lend itself to any forced change that can only result in aberrations, avoidable and counter productive. That is to say, the character is much too crystallised and stabilised to admit of any radical change.
- v) There is fairly adequate housing for the present population but lack of corresponding and commensurate facilities.

4.02 The provision under different uses against this background is discussed below. It has however to be noted that the discussion confines itself to town level facilities and provisions, on the assumption that those at the neighbourhood level would be a matter of detail that need to be accounted for and explained at the stage of preparation of Area Development Plans, as and when they are taken up.

a) Residential use

4.03 The areas suggested for new development have been organised as neighbourhoods, to house a pre-set population figure. These would

have all basic facilities pertaining to the neighbourhood. The existing developments have also been schematically divided into so many sectors as to make up for the back log of amenities. The sectors have been so arranged that any one of the following densities would be the average in each sector. (i) Low density - 125 persons per hectare (50 persons per acre) (ii) Medium density - 250 p.p.h. (100 p.p.a.) and (iii) High density - 500 p.p.h. (200 p.p.a.). The high density areas have been suggested near the places of intense activity, while low density areas are along the periphery of the town.

b) Commercial use

4.04 This includes day-to-day shopping major shopping and wholesale trade activities, the former coming under the category of neighbourhood facility and the latter under town level facility. The Town Centre would provide for major shopping and other commercial uses, administrative uses and cultural activities like library, museum art gallery and such other facilities.

c) Industrial use

4.05 For reasons stated earlier, no provision has been made for any major industries.

However, requisite space has been set apart for service industries and nominal and minimum space for light industries.

d) Institutional use

4.06 This category will cater for public offices, educational, medical and cultural institutions. The locations for colleges and hospitals alone have been specified not only because they are town-level facilities but their location has to be determined with reference to the development of the urban centre as a whole as well as other extra-territorial considerations. The others are capable of being accommodated while Area Development Plans are drawn up.

e) Recreational use

4.07 In as much as most of the "ayacut" of the several tanks distributed all over the Planning Area is proposed to be converted into urban uses, the need for maintaining the tanks themselves as such may not longer be there. With this in view, a good number of them are proposed to be used for either public, or recreational uses. Such recreational uses have been suitably dispersed all over the Planning Area.

f) Transportation

4.08 Arterial roads have been suggested for traffic passing through and that originating from and proceeding outside this Urban Centre. The Sub-arterial roads serve the through traffic within the town, while major roads collect the traffic from or distribute them to, neighbourhoods. Based on the above considerations, 2 alternative forms of development have been worked out. The highlights of these two forms are briefly discussed below:

Alternative - I

4.09 This is an informal design consisting of 18 neighbourhoods. The Madipakkam road with improved standards and a modification in its present alignment in the northern portion would be the main sub-artery of the town. Another sub-arterial road hugs the development on both sides of Madipakkam road. The alignment of the ring-railway having been determined already in the context of development of the entire Metropolitan Area, has been incorporated in, toto Butt Road, Velacheri Road and M.K.N. Road with improved status would serve as other main roads. The parade ground of the Cantonment is a major existing recreational facility and enlarged functions are

envisaged for it. It is hoped that the Cantonment authorities would be able to co-operate in this regard and allow for the use of this facility by the general public subject to whatever conditions they may wish to stipulate. Other open spaces have been so distributed that each serves approximately equal catchments. One of the Town Centres and a major park are suggested to be located in the Adambakkam tank site. **The one located along M.K.N. Road** would be a commercial centre with warehousing facilities. In the third, along Butt Road, commercial uses would predominate, whereas in the first it would be a judicious mixture of commercial, administrative and cultural uses. The area in between the railway and G.S.T. Road, contiguous to the Guindy Industrial Estate, has been set apart for industries of the light and service variety.

Alternative - II

4.10 This is also an informal design containing 14 neighbourhoods. In this also the importance of Madipakkam road as the main sub-artery has been maintained. The Town Centre, public buildings and the major recreational spot are all located on this road. The neighbourhoods

have been so conceived that each is an identifiable entity, but at the same time are inter-linked and also connected to the Main artery of the town. The Town Centre has been provided in three places, the function assigned to each being the same as explained in the foregoing alternative. The industrial area has also been split and provided in both the parts of the town.

4.11 The land use that would be obtained in 1991 is given in Table 4.1.

LAND 4-1 - Landuse Break-up - 1991

Use (1)	Alternative - I to		Percentage developed area. (4)
	Extent in hectares. (2)	Extent in acres (3)	
1. Residential	1175	2910	49.2
2. Industrial	175	435	7.3
3. Business	85	210	4.1
4. Institutional	53	130	2.2
5. Recreational	70	180	2.8
6. Transport & Communication	830	2050	34.4
7. Total developed area	2388	5915	100.0
Non-urban uses	595	1468	--
GRAND TOTAL	2983	7383	..

Alternative - II		Percentage to developed area.
Extent in hectares.	Extent in acres	
5.	6.	7.
1180	2920	48.9
185	460	7.7
85	210	3.5
53	130	2.2
81	200	3.4
828	2050	34.3
-----	-----	-----
2412	5970	100.0
571	1413	..
-----	-----	-----
2983	7383	..
-----	-----	-----

CHAPTER - V

FINANCE, PHASING AND ADMINISTRATION

Finance

5.01 Any Plan is as good as it is financially viable and to the extent it examines and justifies fully the outlay contemplated. It is not as though special funds are required to implement these proposals, but what is sought to be achieved is a proper distribution and utilisation of funds on priority schemes which yield quicker results and also by and large fulfil the objectives of the Plan. The benefits on the other hand have to be viewed in a broader perspective, in as much as, the result of these investments may not be explicit and also incapable of being assessed strictly in terms of monetary cost or benefits alone. Therefore we ought to include in the calculations, the social benefits as well. However, so, the developments have to reflect reasonable economical viability.

5.02 In so far as the town under discussion is concerned, it has grown in population and size without matching infrastructure - both utility and social. That is to say, the missing gap in respect of the infrastructure for the existing

population has to be closed before we go on to provide for the anticipated increase in population.

5.03 It has therefore been proposed, that the Madras Metropolitan Development Authority would provide that necessary infrastructure but which is missing now, first. Those at present engaged in the development of this town (mostly private) have failed to provide, if not adequate, even the minimum requirements, in terms of commercial and social facilities. Therefore all the lands required for institutional uses and major commercial uses at the town level, like Colleges, Hospitals and Town or Shopping Centres are proposed to be acquired and developed by the Development Authority. Be that as it may, the financial constraints are such that the financing of the foregoing programme necessarily has to start with only a small initial investment. To realise the larger objectives with this limited investment, the technique of the revolving fund is proposed to be employed. The technique consists - in a small amount being utilised to fulfil a comparatively larger investment programme, by reinvesting or ploughing back the returns into successive investments. This way, a whole development programme can

be completed with an initial investment, considerably smaller than what will be required if the programme is attempted at a single stretch. For this purpose a quick turn-over is essential and investment is to be phased suitably into a number of cycles.

Phasing

5.04 The population of Alandur Planning Area in 1971 was 108,000. The population of 2 lakhs anticipated in 1991 is expected to be reached as follows:

i)	I	Phase	(74-76)	...	1,20,000
ii)	II	Phase	(76-81)	...	1,37,000
iii)	III	Phase	(81-86)	...	1,63,000
iv)	IV	Phase	(86-91)	...	2,00,000

5.05 The phasing, programming and other details are indicated below:

By the year	Population		Area required in hectares (in acres)	
	Cumulative total	Increase in population.	Residential use	Other than residential use.
1.	2.	3.	4.	5.
1976	1,20,000	12,000	480 (1200)	480 (1200)
1981	1,37,000	17,000	550 (1375)	550 (1375)
1986	1,63,000	26,000	650 (1630)	650 (1630)
1991	2,00,000	37,000	800 (2000)	800 (2000)

Total	Area already available	
	Residential	Other than residential
6.	7.	8.
960 (2400)	515 (1290)	*425 (1070)
1100 (2740)	515 (1290)	480 (1200)
1300 (3260)	550 (1375)	550 (1375)
1600 (4000)	650 (1630)	650 (1630)

Total	Area to be developed				
	Residential	Other than residential			
9.	10.	11.			
940	(2360)	Nil	55	(130)	
995	(2490)	35	(85)	70	(175)
1100	(2750)	100	(225)	100	(225)
1300	(3260)	150	(370)	150	(370)

- Note: (*)
- i) This excludes special category of uses like air port, firing - range etc.,
 - ii) In the first phase, land need be developed only for infrastructure facilities for the corresponding population content since there is enough residential area to accommodate that population content.

Seed capital

5.06 The seed capital required for operating the scheme will be as follows:-

i)	Year	1974-75	...	5	lakhs
ii)	Year	1975-76	...	30	lakhs
iii)	Year	1976-77	...	18	lakhs
iv)	Year	1977-78	...	17	lakhs
v)	Year	1978-79	...	18	lakhs

				88	lakhs

- i) (a) Land price has been assumed at Rs.30,000/- acre on an average.
- (b). Cost of development of areas other than industrial is put at Rs.20,000/- per acre.
- ii) It is assumed that 60% of the extent developed would be available for disposal, the remaining being absorbed by roads and reservations for public uses which are categorised as land investment on which, would not fetch any returns and the capital also cannot be amortised.
- iii) (a) The developed land will be sold at Rs.10,000/- per ground.
- (b) The sale proceeds will be recovered in one lumpsum at the time of allotment.

Planning and Administration

5.07. It is not as if we have a well-knit and competent organisation to-day, which will be able to work the above programme successfully. This agency should have the capacity to implement faithfully the strategy and the proposals contemplated in the Plan. The agency will be responsible for the following:

- i) Land acquisition and development;
- ii) Preparation of Area Development Plans indicating details of circulation and land use, including organisation of utility and social services;

- iii) Phased development, so that growth in population can be correspondingly matched by facilities for meeting the needs of that population.
- iv) Capital budgeting.
- v) Control of fringe development; and
- vi) Civic administration including planning control and maintenance of services.

5.08 The Madras Metropolitan Development Authority, constituted under the Tamil Nadu Town and Country Planning Act, 1971 will have to undertake all the above responsibilities, except the last, which can be entrusted to the local government body of that area.

Land Policy

5.09 As land is a relatively scarce commodity its use or misuse affects the community closely. As such there is an imperative need to evolve a land policy which recognises that affectation and provides for meeting its suitably. Also, the value of land soars with provision of amenities, especially out of public funds, at any rate out of funds which were not directly contributed by the abutting property owners. It may not therefore be unfair if a portion of it is skimmed off

by means of a suitable taxation or levy to public coffer, so that the agency can carry out its civic obligations. Land development, at present, by private agencies stops with the development of land for housing alone, the infrastructure facilities being completely ignored.

5.10 The land policy, therefore, should ensure the following:

- i) planned development of the land to facilitate economic growth and to promote a healthier and better life for the community;
- ii) elimination of conditions of scarcity of land (particularly developed or serviced land) to facilitate quick execution of housing and other works;
- iii) curbing undue rise in land values and prevention of speculation by interests motivated by other than public welfare considerations;
- iv) utilisation of the gains of socially generated surpluses in real-estate values for the common good; and
- v) creation of conditions in which the weaker sections of the community get a fair deal in the matter of housing and enjoyment of the common physical environment.

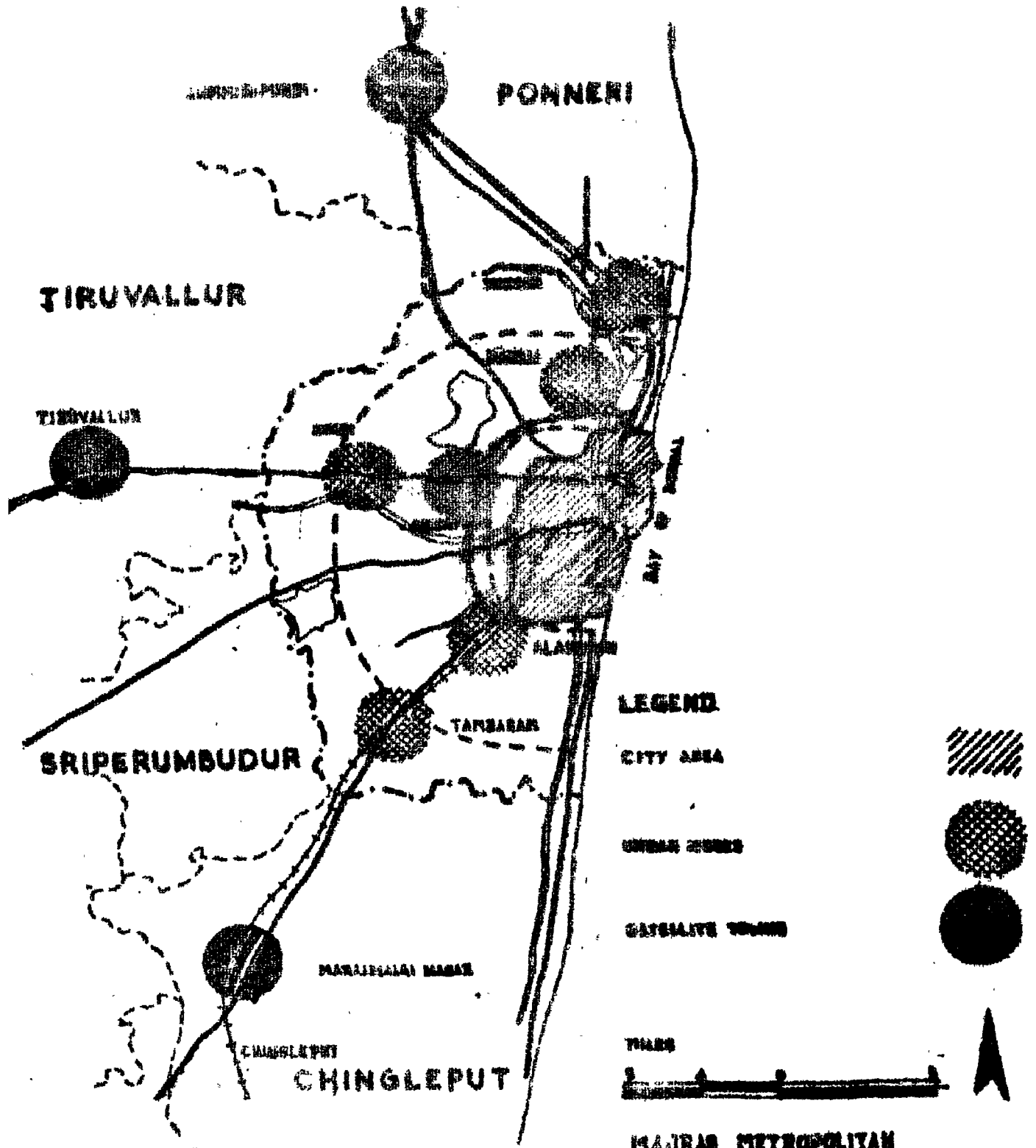
5.11 Against this background, the land policy in regard to this urban centre would be as

follows: Land required for provision of infrastructure facilities at town level including commercial use would be acquired and developed by the Development Authority. As there is enough development in so far as housing is concerned, the Authority is not required to embark upon development of this category of land. The commercial sites, after development of the land, would be sold by auction to the prospective users. Construction on these sites and letting them out by the Development Authority itself would be considered separately, later. The surplus generated out of this, would be utilised for providing social and community facilities. The other developers would also be permitted to join in on the total effort, the only condition being that their development should conform to the Plan.

Conclusion.

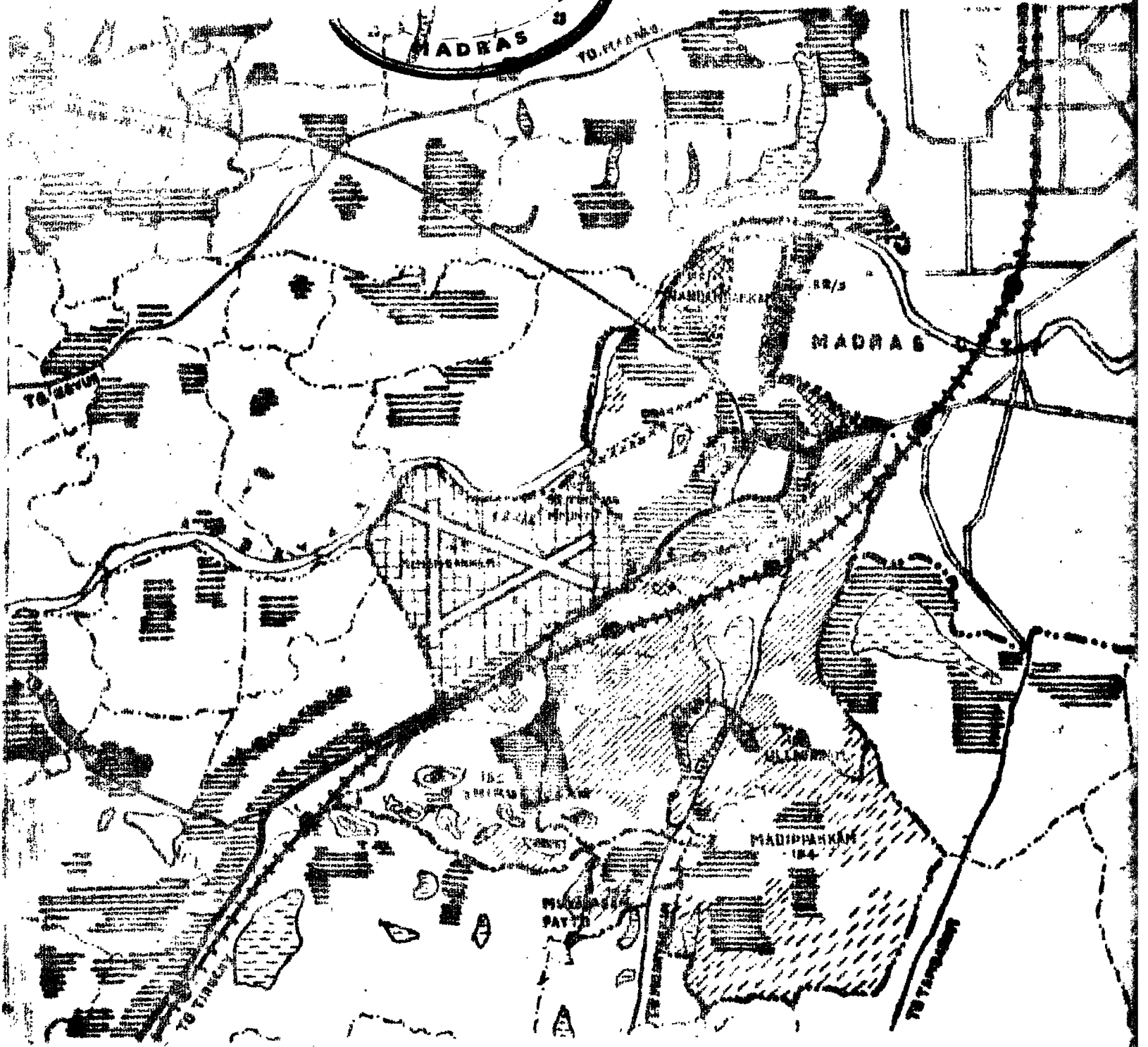
5.12 This Plan, as has been stated earlier, scrupulously follows the strategy and policies laid down in the Metropolitan Plan document and adheres to the general framework enunciated therein. The development of this Urban Node keeps in step with the overall development contemplated for the entire Metropolitan Area.

13.13 However, the broad generalisations for the town in regard to land use and circulation pattern have to be followed up with Area Development Plans, indicative of the sectorwise detailed developments. These will serve as the immediate guide for the implementation of this Plan. In this context, it is absolutely essential that the corporation of the various Departments involved in the developmental activities is ensured and co-ordination of all efforts is effected so as to achieve the objective of planned development with utmost efficiency consistent with economy.


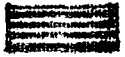


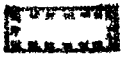

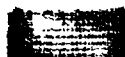
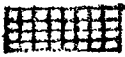
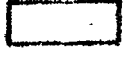

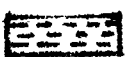
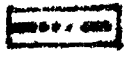





STRATEGY FOR DEVELOPMENT
MADRAS METROPOLITAN PLAN

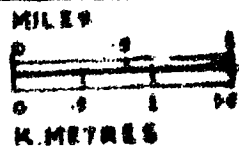
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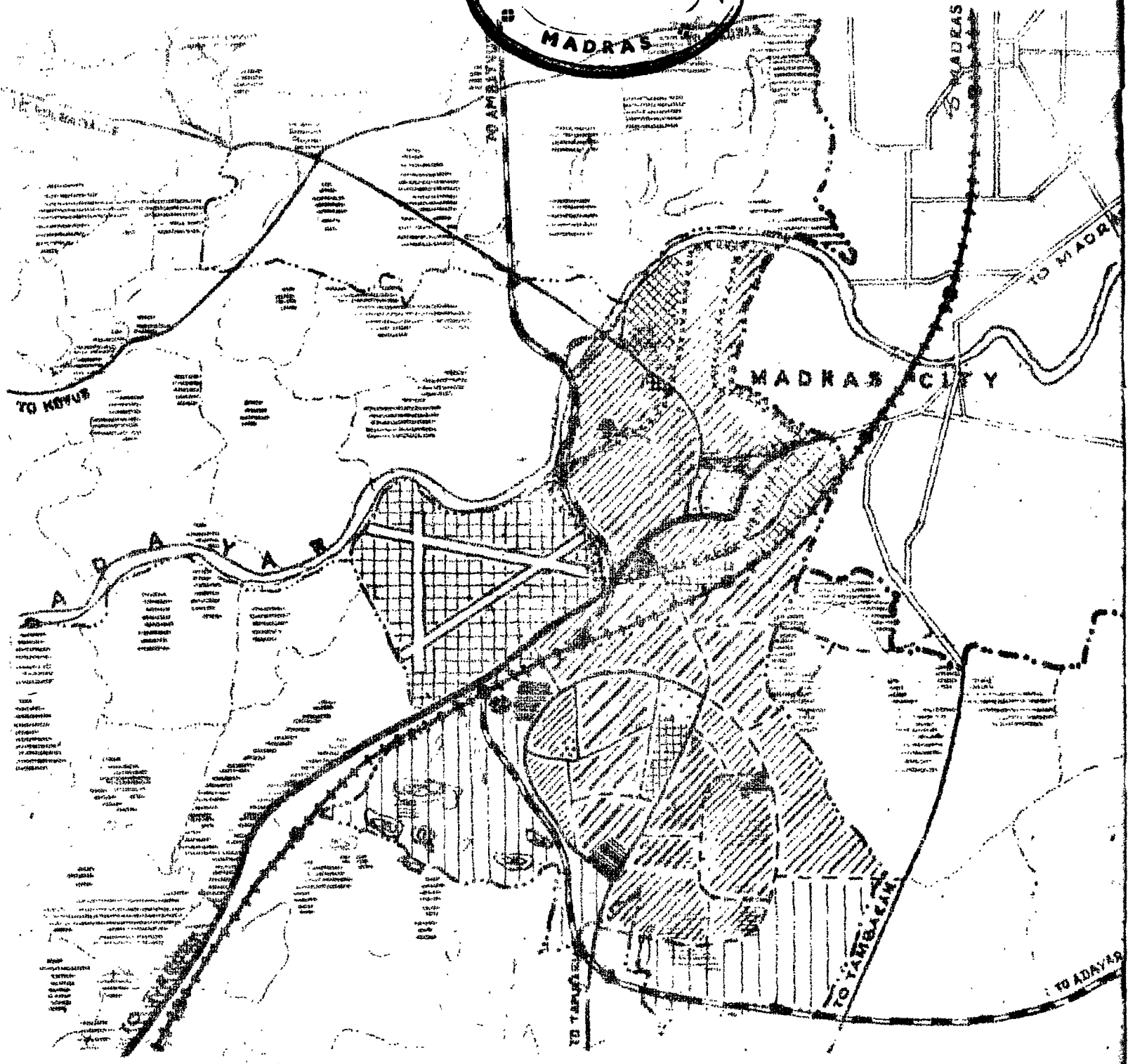
LEGEND

	RESIDENTIAL		SETTLEMENT		WETLAND
	BUSINESS		DEFENCE		DRYLAND
	INSTITUTIONAL		AIRPORT		VACANT
	INDUSTRY		WATERBODY		PLANNING AREA LIM
	HILLOCK		CANTONMENT LIMIT		MUNICIPAL LIMIT

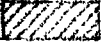
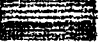
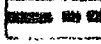

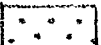
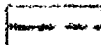


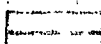
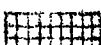
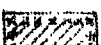
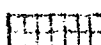

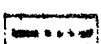

LAND USE — 1972
MASTER PLAN FOR ALANDUR



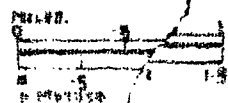
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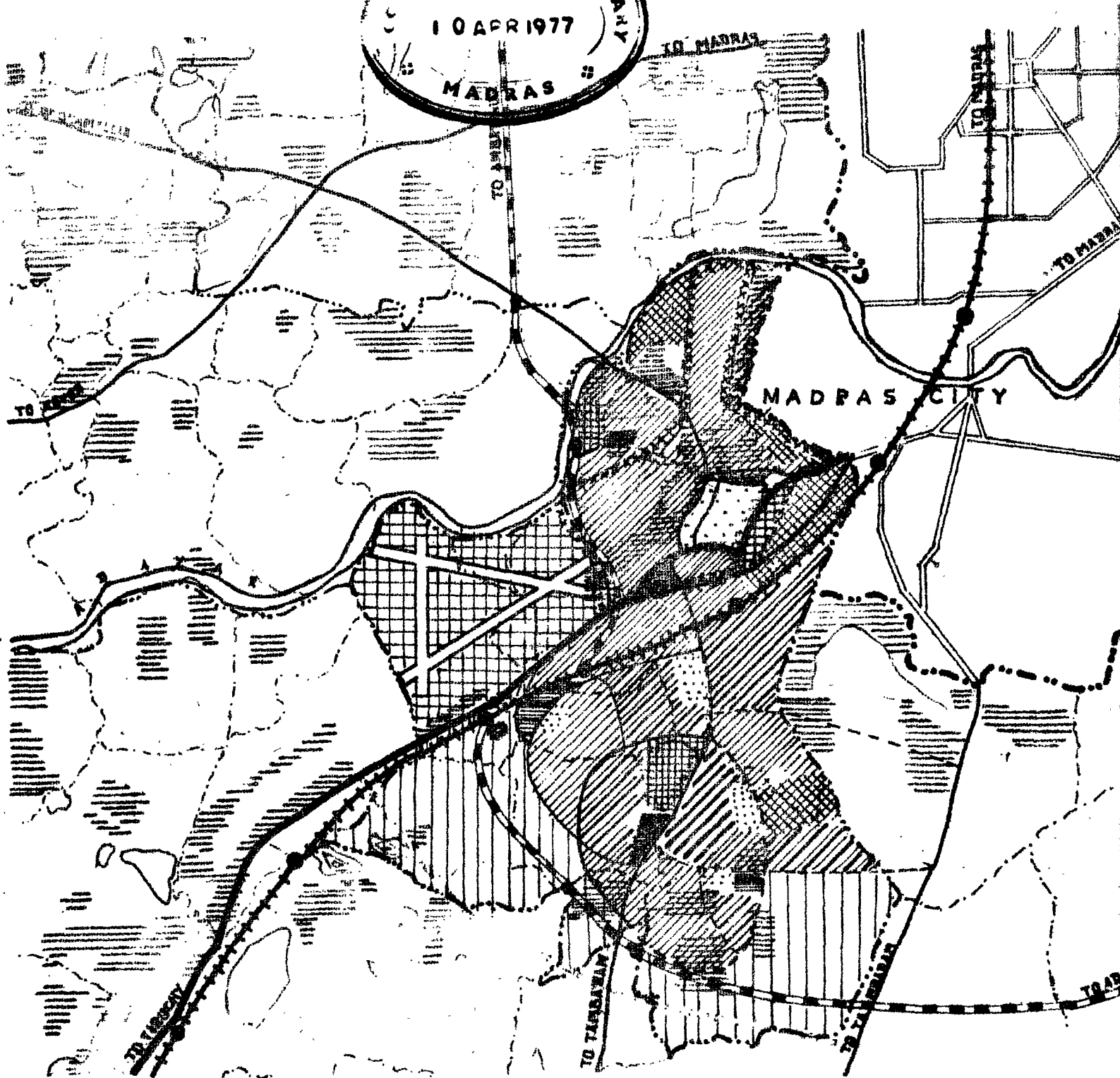
LEGEND

- | | | |
|--|---|---|
|  RESIDENTIAL LOW DENSITY |  INSTITUTIONAL |  ARTERIAL ROAD |
|  RESIDENTIAL MEDIUM DENSITY |  RECREATIONAL |  SUB-ARTERIAL ROAD |
|  RESIDENTIAL HIGH DENSITY |  NON URBAN |  MAJOR ROAD |
|  BUSINESS |  CANTONMENT |  AIRPORT |
|  INDUSTRY |  PLANNING AREA LIMIT |  PROPOSED RAILWAY |


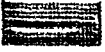


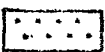
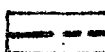


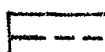
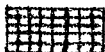

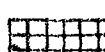

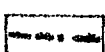
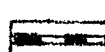
LAND USE - 1991 ALTERNATIVE - I
MASTER PLAN FOR ALANDUR



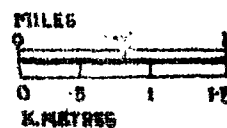
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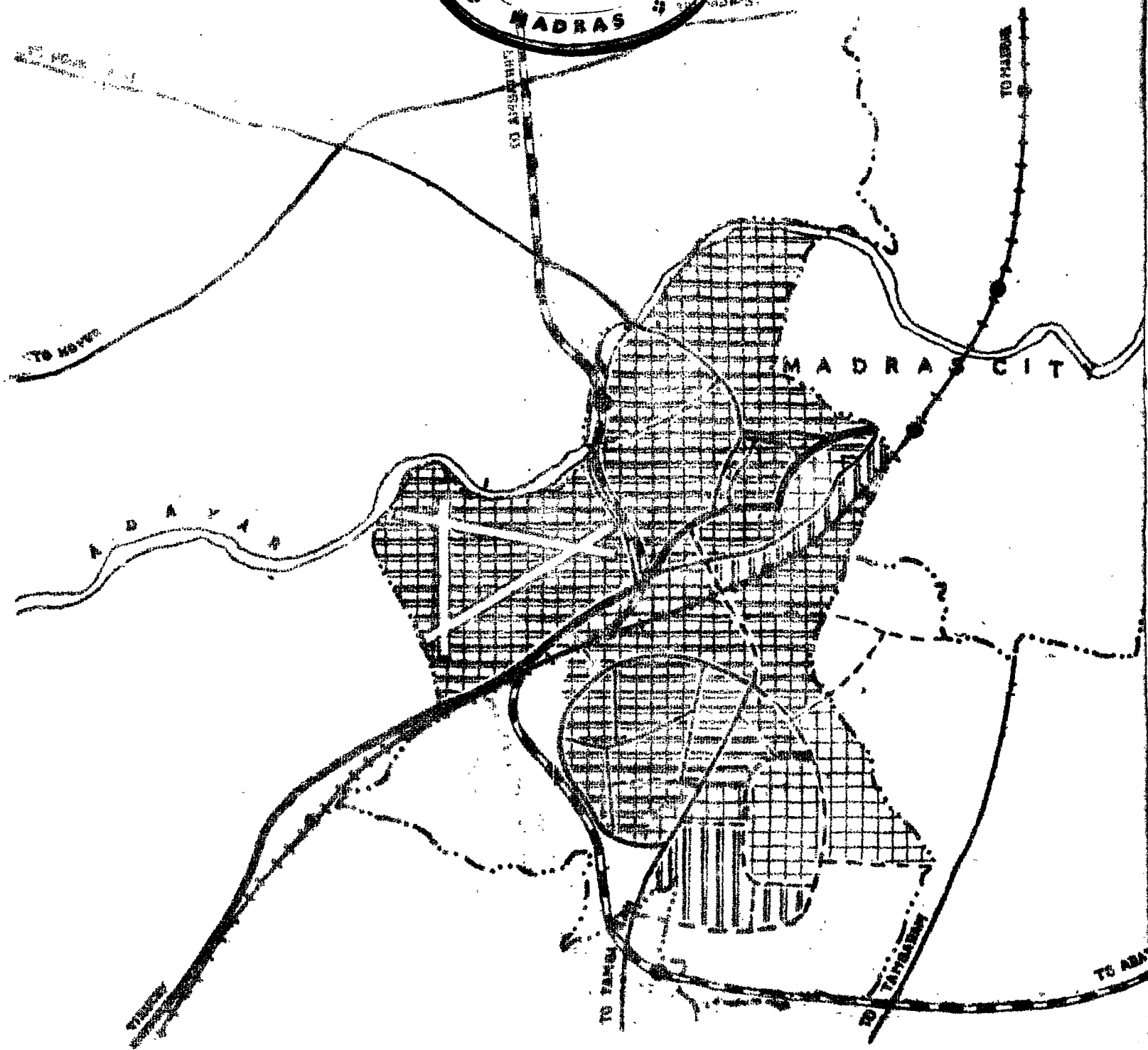
L E G E N D

- | | | | | | |
|---|-------------------------------|---|---------------------|---|-------------------|
|  | RESIDENTIAL
LOW DENSITY |  | INSTITUTIONAL |  | ARTERIAL ROAD |
|  | RESIDENTIAL
MEDIUM DENSITY |  | RECREATIONAL |  | SUB-ARTERIAL ROAD |
|  | RESIDENTIAL
HIGH DENSITY |  | NON URBAN |  | MAJOR ROAD |
|  | BUSINESS |  | CANTONMENT |  | AIRPORT |
|  | INDUSTRY |  | PLANNING AREA LIMIT |  | RAILWAY PROPOSED |

LAND USE 1991 ALTERNATIVE - II
 MASTER PLAN FOR ALANDUR

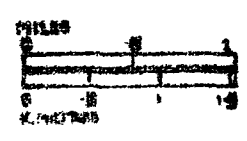


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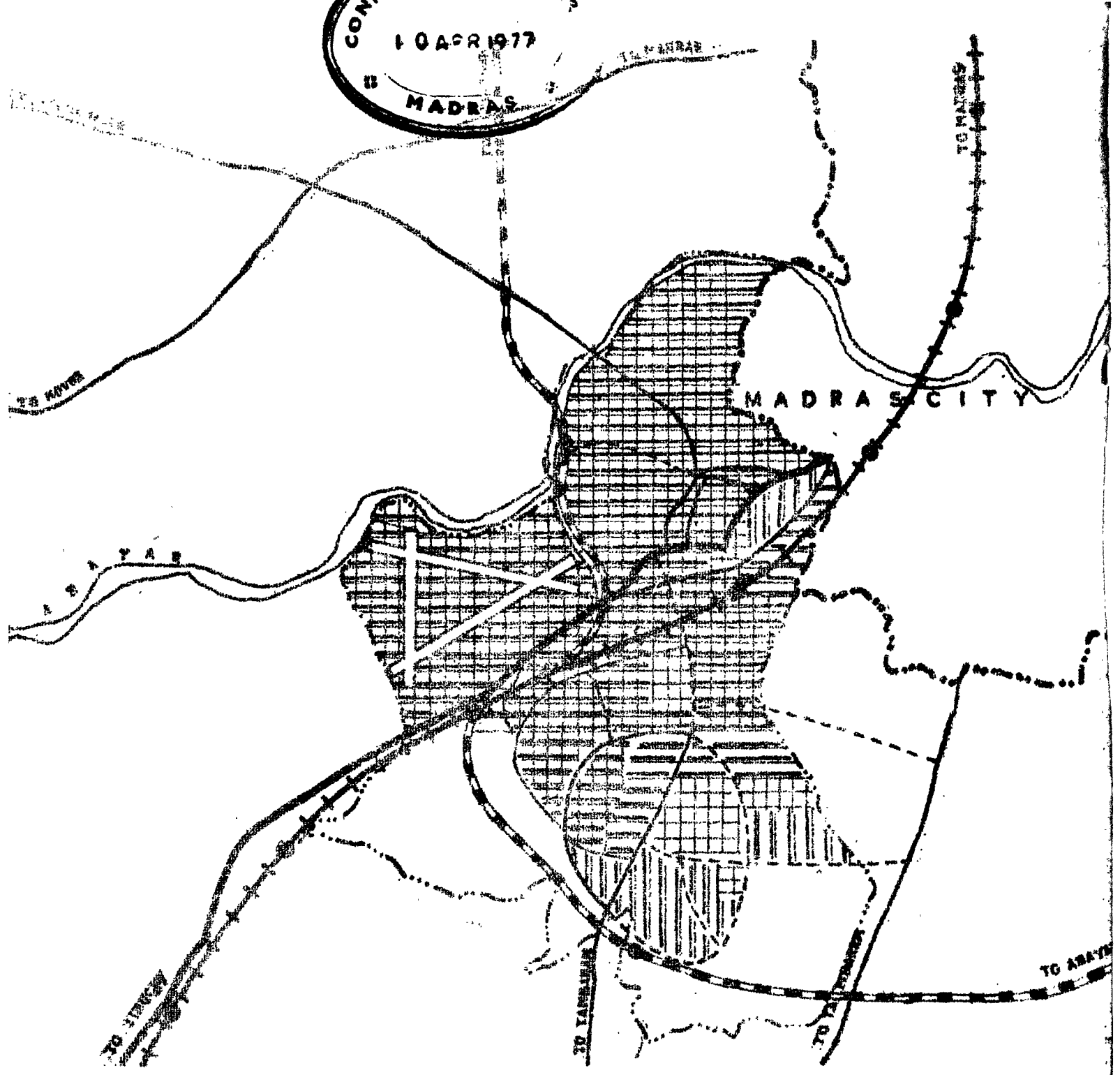


PHASE I		ARTERIAL ROAD	
PHASE II		SUB-ARTERIAL ROAD	
PHASE III		MAJOR ROAD	
PHASE IV		PLANNING AREA LIMIT	

PHASING OF DEVELOPMENT
MASTER PLAN FOR ALANDUR



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PHASE I		ARTERIAL ROAD	
PHASE II		SUB-ARTERIAL ROAD	
PHASE III		MAJOR ROAD	
PHASE IV		PLANNING AREA LIMIT	

**PHASING OF DEVELOPMENT
 MASTER PLAN FOR ALANDUR**

