

MASTER PLAN FOR DELHI

1957

*Prepared by the Delhi Development Authority
Under the Delhi Development Act, 1957*

DELHI DEVELOPMENT AUTHORITY

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Chief Commissioner,
Delhi,

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M.L. Gupta.

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National Buildings Organisation, New Delhi.
17. Radha Raman, M.P.
18. Shrimati Subhadra Joshi, M.P.
19. H.P.N. Sinha, M.P.
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Bharat Sewak Samaj, New Delhi.

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TOWN PLANNING ORGANIZATION :

Chairman; G.Mukharji.

Architect- Town Planner. Shivnath Prasad

Architect; C.S. Gupta

Associate planners; B.G.Fernandes
S.S. Shafi.
B.N. Rahalkar.
P.B. Rai.
J.P.Sah.
E.A. George Daniel.

Shri Manohar.
B.D. Kambo.
R.L. Bawa.
M.S. Mallick
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Some of the officers mentioned above are no longer in the organization.

MASTER PLAN FOR DELHI

VOLUME ONE

INTRODUCTION

To check the haphazard and unplanned growth of Delhi, following the partition of the country and the phenomenal growth in the city's population, with its sprawling residential colonies, without proper layouts and without the convenience of life and to guide the growth the city, the central government in November, 1955 set up the Delhi Development (provisional) Authority. In December, 1955, the Town planning organization was set up by the government of India, Ministry of Health, and was placed under the administrative control of the chairman, Delhi Improvement Trust to advise the Authority on all matters relating to planning in the National Capital.

2. The Town Planning Organization, in September, 1956, produced the interim General Plan, which was intended to provide an outline for planned development during a period of two to three years, i.e. until a comprehensive long range plan was prepared.

3. On the 30th December, 1957, the DELHI Development Authority—an 11-member body with the Administration of the Union Territory of Delhi as the ex-officer chairman, was constituted by an act of Parliament, called the Delhi Development Act, 1957, to promote and secure the development of Delhi according to plan. The Act required the Authority to carry out a civic survey of, and prepare a Master plan for Delhi.

Accordingly, the Authority with the help of the town planning Organization, and after having had such surveys conducted as were necessary, draw up a draft Master plan, consisting of numerous maps and plans embodying the studies and proposals and an explanatory text, for an estimated population of about fifty lakhs in 1981, and after seeking the advice of the Advisory Council of the Authority, released it to the public on the 8 July, 1960, for the purpose of inviting objections and suggestions. An outline of the draft plan, in three languages, namely English, Hindi and Urdu, explaining the board features of the plan, for the benefit of the public, was also prepared. A period of three months was allowed for filing objections etc., and during this period, adequate publicity was given to the draft plan by displaying the maps and charts to the press, Members of Parliament and to the general public.

4. Nearly 600 objections and suggestions were received from the public, co-operative house-building societies, asso-

ciations of industrialists, local bodies, Delhi Administration and various Ministries and Departments of the Government of India. The Authority appointed an ad-hoc Board consisting of Kumara Shanta Vashist, M.P., Shri C.K. Nair, M.P., the Commissioner, Municipal Corporation of Delhi and Sarvshri Sikandar Lal, councillor, Municipal Corporation of Delhi and Balbir Singh Saigal, Engineer-Member and this board co-opted Shri Brij Kishan Chandiwala and Dr. R.K. Bhardwaj, Members of the Advisory Council of the Authority, to go in to these objections. The Board granted a personal hearing to all objections etc., and also carried out local inspections and made its report to the Authority on the 17th March, 1961.

5. The Authority obtained the advice of the Advisory Council on this report and examined all the proposals in great detail in the course of several meetings. As a result of this scrutiny some of the proposals have been modified and some new ones incorporated.

6. The final draft has been prepared in two volumes. Volume one contains the Land use plan and the zoning and sub-division Regulations, together with a Note on Industries and a Summary of Recommendations, and the Land use Map, which is the basis Map of the plan of six other connected maps, and constitutes the operative part of the plan.

Volume Two contains the studies on the various aspects of the plan. It is in three parts, together with the appendices in a separate part. The maps other than those included in volume one are in a separate cover. The maps of the interim General Plan are also placed in the same cover as a supplement to the master plan.

7. Given below are a few of the important recommendations made in the plan.

It was felt that the redevelopment of the old city by way of large scale clearance and reconstruction was not immediately practicable, and it has therefore been suggested that after assessing the requirements of schools, dispensaries, parks, etc. sites of dilapidated houses or of those demolished by the Municipal Corporation of Delhi might be acquired at suitable places for the location of the community facilities. Similarly, as it was not practicable to widen all the roads in the Old City, only the major roads should be widened in the first stage to

the minimum extent considered necessary. It has been proposed that the Mata Sundari area should be reserved for housing the evictees from Delhi Ajmer Gate Extension scheme and also to take the overspill or population from the Old city. To meet the problem of settlement of low income group people - about 70,000 in number, who migrate to Delhi from rural areas every year, the Authority has proposed to earmark suitable sites in servile zones where these very low income group people may be able to put up cheap houses but the layouts would have to be according to slanted. The squatters in basis are to be relocated in various parts of the urban area so that they are integrated in to the neighbourhood community. It is of the utmost importance that physical plans should avoid stratification on income or occupation basis. The residential density patterns have been functionally related to the work centers, recreation areas and community facilities. Hence, a more rational distribution of densities is proposed by a gradual thinning of the density in the old city and by increasing the density in New Delhi and in Civil Lines. An integral part of the plan is the sub-division Regulations which, by laying down standards for streets and community facilities will guide new development and the zoning regulations which indicate the land use permissible in the various zones and the density, coverage, floor area ratio and setbacks for various types of development. They also define the period of which incompatible land uses like obnoxious industries are to be relocated.

To meet the increasing need of commercial space in central areas, it is recommended that the Connaught place commercial area be extend up to Keeling Road and the proposed over-bridge over the railway. It is also proposed to have 15 district shopping centers to decentralise commercial activity and to make each Division of the city self-contained. New sites for location of Government offices have also been proposed in the various planning Divisions into which the city has been divided. Several new areas are proposed for industrial development and the total area of the land earmarked for this purpose is about 5800. This would include flat factories, which are multi-storeyed structures located near residential areas, for the use of small scale non-nuisance industries.

In addition to subzimandi, two wholesale fruit and vegetables markets have been recommended, one near the Okhla Railway Station and the other near the Daya Basti Railway Station near sarai Rohilla. Godowns for the storage of food grains will be located in areas marked for the purpose, and only the offices of whole-salers and retail food grains shops would be allowed in the two congested areas of Naya Bazaar and G.B. Road. Similarly, godowns for timber will be located in ware-housing areas and the presently congested areas of Teliwara and Deshbandhu Gupta Road with deal only in

retail timber trade. A 15 acre site on the Mehrauli Road near the intersection of this Road with the railway line has been purposed for a general market. Additional land for oil storages depots, which are at present located on Rohtak Road, and will continue there, has been earmarked near Nangloi Railway Station and also near Palam Railway Station and in Shahdara.

A university centre in the south near the junction of Kitchner Road and Ring Road has been proposed. Twenty two new colleges, each covering an area of about 15 acres and 5 additional university centers of about 30 to 40 acres each to serve a group of 4 or 5 collages, have been earmarked in the plan. Twenty additional 500-bedded hospitals each 15 to 25 acres have also been proposed. An area of about 600 acres has been reserved south-west of the new engineering collages, for a new university and for social and cultural institutions. A 45 acres sites in the neighbored hood of Siri village area has been earmarked for on all-India cultural centers. This is an addition to the area earmarked on the central vista east of Janpath, near Sapru House and in the proposed civic centre which will serve as social and cultural institutions for Delhi. District parks for recreation, local open spaces for play grounds and community centers and local shopping areas to serve each neighborhood have been recommended in the plan.

In view of the large scale development proposed for Shahdara, which is expected to have a population of about 7 lakhs in 1981, the plan provides a large commercial area and four road bridge in addition to the existing road-cum-railway bridge. Two more major road links between Old Delhi and New Delhi have been recommended as over passes over the railway line- one connecting circular road to parliament street and other connecting Mathura road to collages Road and Ferozeshah Road. An inner Ring Road and a Ring railway have been recommended to avoid traffic congestion and facilitate quick flow of traffic in the urban core in addition to the Ring Road which has already been constructed. Reservations for new railway stations on the Ring Road, expansion of the existing railway stations, on the Ring Road, expansion of the existing railway stations, widening of major arterial roads, improvement of road intersections and grade separation, arterial cycle tracks separate from the carriageway are some of the recommendations to make a good traffic circulations system. Bus stations are proposed to be located in different parts of the city. The central bus station which is at present located at the Delhi main railway station would be shifted to a 10 acre site near kashmeri Gate. An idle parking area of about 200 acres is earmarked east of Bela Road and north of the sanitary drain, for inter-state buses and trucks. Parking and servicing stations are proposed to be near located near Id Gah Road and in Shahdara with several idle parking and servicing areas for

trucks.

The plan recommends a one mile inviolable green belt around the 1981 urbanisable limits and has made proposals to provide schools, roads shopping centers, etc. for the rural areas and for the setting up of urban villages to strengthen the rural economy.

The plan has also assumed the needs of the Capital in power, water supply and sewerage and has made provisions for location of water works, power houses and sewage treatment plants.

8. The Authority takes this opportunity of acknowledging the very valuable help rendered by the Town planning organization who conducted comprehensive surveys to collect the factual data and also prepared a draft of the master plan for submission to the Authority . They assisted both the screening Board and the Delhi Development Authority with their technical advice and have gives a final shape to the plan in accordance with the decisions of the Authority.

The Authority also gratefully acknowledges the help and guidance received from the team of consultants made available by the Ford Foundation in conducting the surveys. tabulation of data and in the preparation of the draft master plan.

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printing the various maps and the text of the Draft plan.

10. The plan has been prepared finally today by the Delhi Development Authority vide their Resolution no.387for submission to the Government of India, and in token there of, we, the members of the Authority do here by affix our signature her under :

- | | |
|--------------------------|------------------------|
| 1. Bhagwan Sahay | Chairman. |
| 2. G.Mukarji | Vice- Chairman. |
| 3. Kumari Shanta Vashist | Member. |
| 4. C. Krishna Nair | “ |
| 5. Sikandra Lal | “ |
| 6. Shiv Charan | “ |
| 7. R.R. Bahi | “ |
| 8. A.R.Malhotra | “ |
| 9. B.S. srikantiah | “ |
| 10. Bishan Chand | “ |
| 11. Balvir Singh Saigal | “ |

Delhi Development Authority,
Regal Buildings,
New Delhi, *the 30th November, 1961*

CHAPTER - I

THE LAND USE PLAN

1. Land uses plans of Delhi Metropolitan Area.
2. Land Use plan for Urban Delhi
 - (a) Major policy decisions
 - (b) Planning synthesis
3. Government offices.
4. Commercial Areas.
5. Industry & Manufacturing.
6. Residential Areas.
7. Development zones.
8. Traffic & Transportation.
9. Community Facilities and Services.
10. Need of review and Revision.
11. Proposed right of way in Old City.
12. Staging of Development.

CHAPTER II

Zoning and sub-division Regulations

APPENDICES

- I. A note on Industries
- II. Summary of Recommendations

MAPS

THE LAND USE PLAN

Land use plans for Delhi Metropolitan Area

The Delhi Metropolitan Area of about 800 sq. miles, which has been defined after careful study, comprises the Union Territory of Delhi and the ring towns of Loni and Ghaziabad in U.P Faridabad, Ballabgarh, Bahadurgarh and Gurgaon and Punjab and Narela in Delhi territory. To achieve a rational growth of Delhi which has been expending in a most haphazard way, it is necessary to plan this whole area as a composite unit and have an integrated and balanced overall programmed of development. The metropolitan area has a good deal of homogeneity and physical, socio-economic and cultural unity. This factor makes planning less difficult inspite of political and administrative hurdles . The Ring Towns must be developed not only to deflect some of the population that would otherwise come in to Delhi and jeopardize the planned growth of Delhi

but also to help these towns to grow in a planned way. What is visualized is a compact orderly growth on urban Delhi, with six Ring Towns, self contained in matters of work and residential places but with strong economic, social and cultural ties with the central city. This is the only way to prevent the increasing urban sprawl which is threatening to grow in to one giant urban mass with its long and senseless commuting to work, substandard services and lack of social cohesion.

The development of the ring towns can be ensured by strengthening their economic base. This has to be done by planning industrial development and locating governmental offices in these towns. Besides these positive measures of development, their will also have to be the same degree of control of

development as there would be in Delhi, so that uniform standers are obtained throughout the area.

The proposals made in various chapters for the Ring Towns is summarized in Table no.1 and the land requirements have been indicated. In 1951 the total population of these six Ring Towns was 1,25,000 and the projected population for 1981 is 8,42,000. The total requirement of land is 21.300 acres. The projected industrial employment for 1981 is 1,14,000 and the land requirement for industries is estimated at 4430 acres. Similarly, the employment in government offices for 1981 is 50,000 for which 230 acres are required. However, the precise quantities will be determined by the state Governments concerned when they work out detailed plans for the areas within their jurisdiction.

LAND REQUIREMENTS IN RING TOWNS 1981

TABLE NO. 1

Ring Towns	Population in 1000's		Manufacturing Employment & land - 1981			Government Employment & land - 1981			Total Requirements 1981	
	1951	1981	Total Workers	Employment density per acre.	Land acres	Total workers	Employment density per acre.	Land acres	Gross	Land acres
1. Ghaziabad	44	357	50,000	25	2000	20,000	200	100	45	8,000
2. Faridabad	31	285	40,000	30	1330	15,000	250	60	40	7,150
Ballabgarh	6	29	3,000	20	150	-	-	-	40	750
3. Gurgaon	19	48	5,000	20	250	5,000	250	20	30	1,600
4. Bahadurgarh	11	29	4,000	20	200	-	-	-	-	1,000
5. Loni	4	23	2,000	20	100	-	-	-	30	800
6. Narela	10	71	10,000	25	400	10,000	200	50	35	2,000
Total	125	842	114,000		4430	50,000		230		21,300

NOTE:- Sonapat in the Punjab and Baghpat in U.P. will also require be developed adequately in relation to the Delhi Metropolitan Area.

GHAZIBABAD;

The U.P. Government has published a draft plan for Ghaziabad as well as for area in U.P. contiguous to Delhi Shahdara. The latter has been incorporated in the Land use plan for Delhi urban Area. The plan for Ghaziabad prepared by the U.P. Government is in general agreement with proposals for the Delhi Metropolitan Area indicated here.

Ghaziabad is envisaged as an industrial town with 50,000 workers engaged in manufacturing out of a total population of about 3,57,000 in 1981. It is also proposed to diversify the economic base with an employment of 20,000 in government offices. The land allocations are 2,000 acres and 200 acres respectively. The total area to be urbanized with adequate land for residential, commercial, parks and other public and semi-public use is about 8,000 acres.

Faridabad – Ballabgarh;

Ballabgarh is only 3 miles from the new town of Faridabad. Nearly is also the old town of Faridabad. All the three are in the Punjab, and the Government of Punjab will have to draw up a master plan for this area. On either side of the Mathura Road which runs through the area, industries are springing up like mushroom. A master plan to regulate and guide development is long over-due. The Town planning organization had drawn up a tentative plan for the area which can form a guide for the Punjab to follow up and prepare a master plan. It is suggested that Faridabad and Ballabgarh should have an integrated plan. Like Ghaziabad, Faridabad too will have a strong industrial base with about 43,000 workers engaged in manufacturing, out of a total population of 3, 14,000 in 1981. It is also recommended that enough government offices be established here for some 15,000 employs. The total land requirement will be about 7,900 acres while the allocation for manufacturing will be about 1,500 acres and for Government offices about 60 acres. The town can be served by tube wells since it has good under ground water potential.

Gurgaon;

This District town in Punjab is handicapped for want of good water source and only a modest growth is contemplated. It is proposed to have 5,000 industrial workers out of a total population of 48,000 in 1981. A small industrial estate of 250 acres and another 20 acres to locate Government offices with 5,000 workers would suffice. The total area required for the township is 1,600 acres. No plan has been prepared for this town. The Punjab Government should undertake this work.

Bahadurgarh ;

This town has no source of good water supply. It is

expected to have a population of 29,000 in 1981 with a land area of about 1,000 acres. About 200 acres would be required for industrial employment for about 4,000 workers. For this town too, the Punjab Government should prepare a master plan.

Loni ; This small town of just over 4,000 in U.P. is proposed to be developed for a population of 23,000 in 1981. Water can be made available from tube wells. An industrial estate of 100 acres with 2,000 workers will provide the economic base. The U.P. Government has already published a master plan , which is in general agreement with the proposals given here.

Narela;

The proposals to develop Nerela as one of the Ring Towns around Delhi forms a part of the recommendations the Master plan for the Delhi Metropolitan Area. It is within the union Territory of Delhi., near the northern border.

This township is proposed to be developed to absorb 60,000 people by 1981 in addition to its existing 11,000. The development proposals provide for government offices and industry to make the town a self-contained unit.

The existing settlement of Narela lies about 18 miles north of Delhi and is studied on the Delhi-Ambala Railway, off the Grand Trunk Road. It has good underground water potential.

Important Features;

Narela has the following important features;

1. It has established wholesale mandi dealing in grains, Sugar, chili, Jaggery, cotton and oil-seeds.
This Mandi requires remodeling to cope with the business activities of the growing town.
2. It has a floorings manufacturing industry of person wheels and agricultural implements which find a market in U.P. and Punjab.
3. It has large oil crushing mills and the products there of are sold all over India.
4. It has a medium-size vegetable and fruit market.

Area and population;

The Municipal town of Narela together with the adjacent village of Mamur pur has an area of 3,372 acres approximately. The settled area of Narela Town has an area of 83 acres. There is also a refugee colony some four furlongs to the south of the main town which has been planned by the Ministry of Rehabilitation. The Ministry has acquired an area of 40 acres for the colony. The town extends from north to south to about 3/8 mile and from east to west to a distance of about

½ mile. The existing town had a population of 9,597 persons according to the 1951 census. The present population is estimated to be more than 11,000 persons.

Proposals;

The proposed land use plan for Narela takes in to consideration the topographical features., existing road pattern, the built-up area and the existing land uses. The natural features of the low lying belt has been used form a recreational track through the neighborhood pattern. The green space to the east of the existing settlement will accommodate active community recreation and the social activities of the town. High schools on the basis of one per 15,000 population have been allocated. Local shopping has been placed within easy access of each sector.

The industrial sector is proposed to be linked by a spur connection to the main railway line. The highway pattern has been planned to provide easy ingress and egress for the materials and products form the industrial area. Additional land has been reserved to allow for future expansion of industry. Sectors adjoining industry will houses the industrial workers.

The density pattern for the residential areas would meet the varying needs of the immigrant population. The seven sectors provide a grass residential density at 50 to 60 persons per acre.

The sector for government offices is placed centrally to reduce commutation to the minimum. A peripheral network of roads this sector will permit free flow of traffic.

Besides the wholesale business in the mandi, Narela will have a central business district where all the commodities could be purchased.

PROPOSED LAND USE PLAN - ACREAGE ;

Broadly the proposed land use includes the following;

		Acres.
1	Gross residential area	1167
	(existing residential area)	83
2	Large open areas	268
3	Industrial areas	225
4	Reservation (future industrial)	150
5	Government offices	50
6	Commercial business	35
Population in 1981		— 71,000 persons.

When the urbanization of Delhi reaches its optimum limit

in 1981. Narela township will be an ideal place for suburban living.

LAND USE PLAN FOR URBAN DELHI

Characteristics of the plan;

While the portion of the Master plan relating to the Metropolitan area will ensure the success of the urban plan by positive development in the Ring Towns and regulatory measures in the intermediate areas, the Land use plan for urban Delhi has been conceived to find solution for the entire complex of inter- related urban problems viz. social, economic and government. It may rightly be called a comprehensive plan. Since it aims at balanced and integrated development to take care of present and future growth up to 1981, it is also a long range plan. It has been kept in scale with the economic needs of its citizens and the finical resources of the nation whose capital it is. By means of public hearings and participation of the people in the making of the plan, it has been drawn up in keeping with community sentiments.

It gives an integrated picture of the future city by combining the future Land use pattern with a long range programmer of community facilities and services, heaving kept in view the objective of making these functionally related, economically sound and socially desirable.

The Land use plan is general. But by the nature of the legislation under which it has been prepared it carries legal sanction and has a certain amount of rigidity ,through it can be amended according to w from time to time. There is provision to revise the plan when considered necessary after publication and public hearing. The zoning Regulations are also embodied in the plan. These should be strictly enforced in regard to each kind of development and the proposals in this report are subject to these stipulations. Space standers for community facilities and services stipulated in the master plan will govern zonal and sub- division plans . since the land requirement for the next ten years or so has been notified for acquisition by the Delhi Administration, all future land use can be regulated by the Master plan and land sub-division controlled by zonal development plans.

Present Reality Basis of plan;

The Land Use plan is in essence the translation in to physical form of the planning policies and principles. The policies have been based on the realities of the present dynamic but rather unregulated and chaotic conditions obtaining in the Metropolis

To sum up the present situation, haphazard and sub standers development in the metropolitan area is going on at

a rapid rate, especially on the highways leading to the capital and to a lesser extent in the ring towns. In Delhi, itself. There is great disparity in

Residential density in the various areas (ranging from 1,000 persons to as low as 15 to the acre) with social, economic and physical barriers between old and New Delhi. The city has grown rapidly to the south and went making it functionally unbalanced. This has stretched the lines of communication and also made the provision of municipal services and other facilities, which are so essential for urban living, difficult. There is an acute shortage of housing resulting in extreme overcrowding, congestion and insanitary conditions. This is particularly bad in the old city where there is almost an absence of community facilities and only sub-standard services are available. There are an estimated 50,000 dwelling units in busters scattered all over the city. Even the new rehabilitation colonies are fast deteriorating. There is concentration of government employment centers and shopping areas which has related in traffic bottlenecks. At present housing is not related to employment centers and people have to travel long distances to their places of work, The position is aggravated by the absence of an adequate and cheap transpiration system. Industry is dotted all over the crowded old city where it is a source of nuisance. There are also large noxious industries like the slaughter house and fire hazard trades, like the timber depots, in congested residential areas. There is an undesirable mixing of land uses almost everywhere in the city; residential with shopping and industry; wholesale with retail; business with service industry; Delhi, as a whole, is acutely deficient in parks, schools, other community facilities and municipal services.

MAJOR POLICY DECISIONS ;

One of the major policy decisions, viz, considering urban Delhi as the core of the larger metropolitan complex has been stated and the necessity of planning and developing. The ring towns with a sound industrial base and employment in Government offices, with regulatory measures in the intermediate rural areas, has been explained .

The other major policies are stated here. Delhi will continue to be a major government centre. The present central secretariat complex has little room for expansion. Therefore, new sites of adequate size within urban Delhi must be found to locate the government offices which have to be essentially in Delhi in order to be in close touch with the ministries. Adequate housing must be made available related to these offices within reasonable distances.

It would be undesirable to increase the proportion of government employment in the occupational structure of the

city. what is required is a balanced economic base for which purpose it would be necessary to encourage the development of permissible industries. It would, however, be unwise to locate large and heavy industries in Delhi, which would, besides posing problems of air pollution, waste disposal, traffic congestion etc., also give an industrial bias to the city which would be undesirable in a national capital. Moreover, Delhi does not have enough water supply and power to sustain large industries.

Because of its location, Delhi will continue to be a major financial, business, commercial and distribution centre and with the growth of population there would be a proportionate increase in the people employed in trade and commerce which would provide the necessary diversity to the economy. The land requirements for this increasing growth must be provided for in the plan.

There is heavy concentration of population in the old city which is also closely built up. Since large scale clearance and reconstruction is ruled out as an immediate capacity of the people to pay rent, at least the minimum community facilities and services and reasonable means of communication will have to be provided here, which will in a way remove congestion from the area. Employment centers like flatted (multi-storied) factories will be set up selected areas to house such small industries as will not cause nuisance to the residential areas, but noxious industries like slaughter house and village like occupations like dairies, potteries etc. will have to be removed from here. Certain areas like the Mata Sundari area which is near the Old City. Similarly, the very low density areas of New Delhi like Gole Market area, York place area etc. must be replanted at higher density to make more intensive use of valuable land in the core of the city. Due care must be taken to preserve the most pleasant and unique residential character of these areas.

To meet the large deficit in housing, a programme of development has to be launched in a big way. The present busti dwellers will be provided for in tenements. There will be increasing number of house built for government employee and developed land will be made available for both low income and higher income people. To counteract against squatting in busters, it is proposed to earmark reasonable areas in several zones for the low income group people who migrate to Delhi throughout the year from rural areas. Considering their economic condition. They should be permitted to construct reservations very cheap houses on a proper layout will all the necessary reservations of sites and the minimum of municipal services provided by public agencies.

Planned growth in the past has been much hampered by

lack of developed land and speculation in land. The stock of land built up by government when New Delhi was planned proved to be a great stand-by, particularly in settling the large number of displaced people. Very little of that is left now. As a result the prices of developed land have soared up in recent years and the low and middle income group have resorted to unauthorized house construction in the absence of developed land within their means. Recognizing this and also as a matter of major policy, the Government of India has notified for acquisition about 35,000 acres of land around the present built up area, which will be sufficient for the growth of Delhi according to plan for the next 10 years or so. Steps are also being taken to develop land for industry, commerce, residential uses and community facilities. All this land will remain under public ownership and developed plots or undeveloped land will be leased out to individuals and co-operative societies on an equitable basis, so that the benefit of planned growth accrues to the man common man and the Government can also have a share of the future rise in the price of such land. The ownership of land by Government makes planning and the implementation of plans easier and is imperative if slum clearance, redevelopment and subsidized housing and provision of community facilities according to accepted standards have to be undertaken, as, indeed, they must be in Delhi, in a determined way.

These are the planning policies on which the plan is based. These decisions have been arrived at by the planning authority as a result of the physical and socio-economic studies conducted in preparing the plan. In translating these board policies in to physical form, which would be workable in the Delhi situation. Applying certain space standards for allocation to the various land uses, a land use pattern was evolved, which is a synthesis of the planning principles, to arrive at a comprehensive plan best suited for present needs and the future growth of the capital.

Planning Synthesis ;

One of the major principles is that in order to secure balanced development and minimize frictions, decentralization of places of employment and their right relationship with residential areas is necessary.

With this objective, the city has been divided in to eight planning divisions which are self-contained in the matter of employment, residential places, recreational areas, shopping and others requirements. These are fictional units reflecting their own pattern of development and land use, heaving certain individual physical characteristics, and social and cultural values. While the old city is a present a chaotic mix up of incompatible land uses, New Delhi is lacking in compactness

and social cohesion. The plan has allocated land for industry, commerce, living, play and other major types of urban land use in the most appropriate location for each use and inter-related to each other so as to produce orderliness and smooth functioning.

A city is a living organism. To create conditions conducive to healthy social living, the hierarchy of city structure is built from the bottom upwards. The housing cluster is built round the nursery school and the tot lot. The primary school, the high school the community centre and the District centre are the order of the functional tiers around which the community structure is built up. The central business district, major educational recreational, cultural and civic centers with provide the integrating and unifying common interests. Only in a healthy environment life for the common man can become varied, rich and satisfying in the future Metropolis.

While guiding development in new area along desirable lines. Those area that already have a healthy, organic pattern must be conserved by protecting them from encroachment of undesirable and conflicting land uses. There are certain other area which must be rehabilitated by improved environmental hygiene and by reconstructing certain deteriorated pockets which will open up areas for providing open spaces and community facilities. Demolition of unusable buildings and making a new and improved layout may be resorted to in the redevelopment areas. The identification of the areas as conservation rehabilitation and redevelopment, is to be done as a result of physical and socio-economic survey. These steps are necessary to preserve and enlarge the total capacity of existing housing. Concentrating on new housing, without taking these steps to improve the existing ones and protecting new developments is like missing the wood for the tress.

Residential densities in the heart of the city have to be rationalized by eliminating disparities. In developing areas the layout pattern should be efficient to provide for adequate internal circulation and municipal services. Though traffic should not be permitted to penetrate in to residential areas. Adequate areas must be earmarked within close proximity for community facilities like schools, parks, playgrounds, health centers, shopping and other services. The residential areas should be protected from the invasion of non-residential uses and should be free from smoke, noise, odor and other nuisances.

The new sites to house government officers are so located that they have adequate housing nearby, directly accessible from the major traffic arteries and must be well served by the public transport system.

To secure further decentralization of employment,

planned industrial districts are located in right relationship with residential areas. These industries are provided with enough water and power and well served with means of communication like major highways and railroads for efficient movement of goods and workers. Just as residential areas the protected from the harmful effects of industrial and other conflicting land should have enough space for further expansion. The industrial areas should have high design and desirable performance standers.

The existing central business districts of Connaught place and chandni chowk- khari Baoli- sadar Bazar must be made more functional with adequate off-street parking and loading and unloading facilities and by traffic regulations. To avoid a ribbon pattern of commercial development and to serve the large increasing population, several district shopping centers have been proposed so as to be within easy reach of each district. These have composite retail and commercial areas with services industries, flatted factories and Government offices to provide employment centers. As already stated, there would be other shopping at lower leaves to cater for the day to day needs of the people.

Self-contained division and decentralization of employment centers are necessary if traffic is not to increase to such an extent at the urban core that in the years to come, it would completely paralyses city life necessitating large investment on costly new transportation lines. Thus, the more rational and functional land use pattern proposed, together with a coordinated approach to the traffic problem will result in an improvement of the circulation system. Off-street parking and terminal facilities, grade separation at rail level crossings, improvements of intersections and enlargement of railway stations., widening some of the existing roads, express cycle tracks and a system of highways linking up Delhi more effectively with the metropolitan area and the region are necessary to handle the increasing traffic

A system of linked open spaces and district parks has been worked out for the entire urban area of Delhi related to the proposed pattern of residential densities. These district parks are for the higher secondary school age group and for adults. The local parks are for primary school age children and should be within walking distance. Places of historical interest, natural beauty spots, existing orchard and fruits gardens have to the developed and interconnected by green linkages and smaller local parks penetrating through residential and work areas. Certain natural features like the river front and the ridge will have to be developed, together with other regional parks to provide active recreation to the people of the whole area.

Similarly, other community facilities like school, collages,

hospitals etc. should be provided and rationally distributed in the urban area according to the proposed pattern of residential densities.

It is essential to provide and inviolable green belt of agricultural land around the urbanizable land of 1981 to limit the physical growth and to prevent the over spilling of Delhi and its merging with the nearby cities to form one huge conurbation. This will also preserve land under intensive agriculture, unspoiled by undesirable or premature urban growth.

Harmonious growth and orderly functioning are the first steps in evolving an attractive city. But what will stamp it as a beautiful city is its pleasing architecture. This should not be confined to monumental civic and cultural centers but should pervade the design of all public and private buildings. Modern industrial buildings in attractively landscaped grounds, pleasing shopping centers, simple and beautifully designed schools and homes and well laid parks can go a long way to raise the city above the minimum of brick and mortar put together. Well-designed and clean street furniture, with minimum of poles, wires and signs/ will add to the general sense of attractiveness and spaciousness. If these things are kept in mind, then the appearance of Delhi., as the plan progress, may well symbolize the life and aspiration of the people who will live there in the coming decades.

PROPOSED WORK CENTRES;-

The principle of decentralization of work centers and its location in functional relationship with housing has been kept in mind in making the Land use plan. The allocation of land for the employment centers has been made on the basis of the percentage of the working force that would be in the various occupational groups in the projected population of 1981, and the standers for providing working space, parking etc. for the people engaged in industry, commerce, government offices etc.

GOVERNMENT OFFICES;

It is estimated that there would be 2,62,500 persons working in government offices by 1981 in Urban Delhi ,and about 50,000 in the Ring towns of the Delhi Metropolitan Area. The estimated requirement for land for the letter has been indicated earlier in the chapter. In urban Delhi at present the central secretariat complex and parliament street is the main center of Government offices. Indraprastha Estate on Mathura Road and Old Secretariat in Civil Lines re scattered areas. The total area under this use in 1981 will be 912 acres, including 60 acres in District Centers.

UNIT SPACE STANDERS;

The standard for the development of government offices* has been worked out on a floor area ratio of 150 i.e. for every 100 sq. ft. land, 150 sq. ft. of floor space will be available. At present most new government offices are 6 storey high. The maximum coverage should be 20% including 5% of coverage parking. Another 5% of additional coverage may be allowed if the total space for covered parking is kept at 10% of the plot area. Out of the remaining 75% parking, leaving the rest of the 50% to be devoted to land scalping, lawns and the necessary set backs from the roads and the adjoining let lines.

The standard of 50 sq. ft. of carpet area per person followed by the Central public works Department has been adopted. Carpet area includes conference room & canteen etc. In most government offices buildings. The carpet area is half of the total floor area since efficiency is only 50 per cent, the other 50 per cent being in corridors, bath rooms, stores etc. Hence the gross floor area per person is 100 sq. ft. This means that in one area of land, with a floor area ratio of 150

and at 100 sq. ft. of floor space per persons, about 50 persons can be accommodated. But as discussed in the chapter on Government, there is likelihood of higher standards of space utilization when work becomes more mechanized and productivity of government employees increases. This may be only partially offset by more efficient building design. Conserving these factor, it is proposed that the employment on central or suburban location.

PARKING STANDARS ;

Parking standards are based on the present situation and may require modification when the pattern of the modes of travel changes. Now 8% of the total number of employees come by car, 2% by motor cycle 7 sectors, 60% by cycles and regaining 30% by public vehicles. Space for parking,** is based on this break up, which means that a building with a carpet area of 1,00,000 sq.ft. accommodating 2,000 presence at 50 sq.ft./ persons will require 1.25 acres of parking space to hold 160 cars, 40 motor cycles and 1,560 bicycles. Thus the ratio of carpet area to parking area work out to 100; 54.

LAND ALLOCATION :

The following sites which have government offices will be developed to their optimum capacity.

	LOCATION	ACRES.
1	Central Secretariat Complex	201
2	Parliament Street	36
3	U.P.S.C. On Shahjahan Road	10
4	Indraprastha Estate	61
5	Old Secretariat Site	87
6	Delhi Administration offices& new course	36
7	Super me court and circuit High court	26
8	N.D.M.C. Offices	5
9	Railway offices near New Delhi Railway Station	4
10	Corporation offices in chandhi chowk	8
TOTAL:		474

The following new location are proposed for government offices and should be developed early to cope with the relocation and expansion of offices.

	LOCATION	ACRES.
1	Lodi Road (two sites)	141
2	West of Medical Enclave near safdarjang Hospital	34
3	Ring Road District Centre (1100 acre project)	10

* The F.A.R. is 200 for the Central Secretariat complex and maximum coverage 30% including 5% covered parking.

** Semi-basement will be allowed for parking, serving and storage and 10% of the plot may be allotted for covered parking. Under Zoning Regulations, F.A.R. coverage, parking, set-back etc. are fully given.

LOCATION		ACRES.
4	Kalkaji District centers	10
5	North Shahdara	26
6	South Shahdara	96
7	West Delhi/District Centre (Ring Road/Najafgarh Road)	15
8	North-west Delhi District Centre (Ring Road)	25
9	New civic Centre on circular Road	15
10	State Government offices in Chanakyaपुरी	8
11	Site near Shalimar Garden	58
TOTAL:		438

PROPOSAL :

Central Secretariat Complex will ultimately have 201 acres under Government offices.

Very little area is now available for new Government offices on Parliament Street.

Indraprastha Estate too has been built up almost to its maximum capacity.

Old Secretariat site must be redeveloped to its optimum capacity. At present it has single storeyed office accommodation.

It is proposed to expend the Delhi Administration offices in Civil Lines to a total of 10 Acres. The new Courts at Tik Hazari are almost fully developed.

Land has been allocated for a Circuit Bench of the High Court near the Supreme Court which is already functioning near Harding Bridge.

The Office of the New Delhi Municipal Committee will continue at its present site on Parliament Street, where additional area has been earmarked to provide land for its expanding activities.

The headquarters of the Municipal Corporation will be housed in a 15 acre site forming the new Civic Centre. This is opposite the Ram Lila grounds on Circular Road and Minto Road. The zonal offices of the Corporation will be in the District Centers.

A large number of Government offices located in barracks, chiefly on Shahjahan Road, have to be relocated in the new sites listed above, which will also have new offices. The areas where they stand at present have to be redeveloped for housing

since they are basically good residential area. These measures will bring more employees to live nearer the central Secretariat and take other Government offices near the place of residence of the employees.

The Union Public Service Commission offices will continue on Shahjahan Road and some more land has been earmarked for its expansion as shown in plan.

Foreign Missions are located in Chanakyaपुरी. Some State Government have their offices and guest houses in this area.

COMMERCIAL

General Business and Commercial :

Chandni Chowk - Fhari Baoli - Sadar Bazar will continue to be the central Business District of Delhi. General business and commercial activity will in fact extend to the whole complex which includes, Nai Sarak, Chawri Bazar, Kashmiri Gate, Faiz Bazar and Asaf Ali Road. Some of these areas will undergo gradual redevelopment in order to be able to retain their present supreme position commercial activity of the Delhi metropolitan area. This redevelopment, which will also involve at least temporary displacement of many families living in these areas, should form part of the overall redevelopment proposals of the old city. The precise location of commercial areas in the old city will be shown when detailed re-development plans are made.

Connaught Place is the other central business district of the capital. Commercial development as taken place along Parliament Street in recent years. It has been found that the commercial area available is not sufficient to meet the growing need for central location of offices and retail trade. Hence, it is recommended to extend the commercial area up to Keeling Road and the proposed over bridge over the railway. No piecemeal commercial development should be allowed in this area but should be part of an overall detailed plan, to ensure adequate traffic circulation, parking requirements, water, drainage, power and other facilities.

Commercial land is also reserved on Minto Road and Ranjit Singh Road, so as to form a link with the commercial area on Asaf Ali Road and the old city. Due to the unfavorable location of Kamla Market (it is also poorly planned.) it is suggested that the commercial establishment be shifted to the proposed commercial area on Minto Road and the site should ultimately be converted into a recreational area. The Ram Lila Grounds will then stretch from Delhi Gate to Ajmere Gate and will be a major lung for the old city.

A sub-central Business District is already functioning along Ajmal Khan Road and Gaffer Market in Karol Bagh. It

is proposed to extend that commercial area to have altogether 42 acres, as show the plan. East of Ajmal khan Road the exiting retail trade will be retained.

Another sub-central Business District that needs developing is in Shahdara which, in 1981, will have more than 7,00,000 population. Hence it is recommended that a 157 acre site south of old Shahdara town be provided. This should have a separate wholesale area, transport terminals and other facilities which should be carefully worked out in a detailed plan.

DISTRICT CENTRES :

In order to decentralize commercial activity, it is proposed to develop 15 District Centers in the outlying planning Divisions. These will provide within easy traveling distance all the facilities for every 1.5 to 2.5 lakhs of population. They are composite centers and will have retail shopping, general business, commercial and professional offices, forwarding and booking and local Government offices, cinemas, restaurants and other places of entertainment. They will have work-cum-industrial centers (flatted) with small scale and light manufacturing, repair shops and service industries. Some of the District centers will also have central Government offices. All of these will have to be part of a phased development according to detailed plans which will also take care of all kinds of transport facilities. Hospitals, colleges centers so that each district is self-contained for most facilities and amenities.

In addition to District centers, 13 sub-district centers are shown. Some of them are existing at present like Gole Market, Khan Market etc., which are mostly retail character areas these are located near railway stations and road cosigns which are natural sites for the growth of such activity.

The land allocation for central and sub-central Business District, District and sub-District centers is given below:

CENTRAL BUSINESS DISTRICT

LOCATION	ACRES.
In Old City	114
Asaf Ali Road, Minto Road and Ranjit Singh Road	41
Connaught place and extension Including janpath	198
Parliament street	16
Indraprastha Estate	12
TOTAL:	381

SUB-CENTRAL BUSINESS DISTRICT

LOCATION	ACRES.
Karol Bagh	42
*Shahdara	157
TOTAL:	199

DISTRICT CENTRES

	Location	+ Commercial including service industries (acres)	Work-cum-Industrial centres (flatted)(acres)	Govt. offices (acres)	Total (acres)
1	Pusa Road	23	-	-	23
2	Khyber Pass	16	5	-	21
3	Shahdara (North Bund area)	16	-	-	16
4	Loni Road (North Shahdara)	32	-	-	32
++5	Dilshad (Shahdara)	14	-	-	14
6	South (Shahdara)	32	-	-	32
7	Kalkaji	57	15	10	82
8	Malviya Nagar	48	-	-	48
9	1100 acres scheme (South of Ring Road)	38	10	10	58
10	West Delhi, Ring Road/Najafgarh Road	31	10	15	56

Cont'd...

* Includes wholesale and transport facilities.

+ Area required for repair shops and service garages is included in the commercial area.

++ The entire District Centre will, naturally, be considerably more than 14 acres, the rest being in U.P.

	Location	+ Commercial including service industries (acres)	Work-cum-Industrial centres (flatted)(acres)	Govt. offices (acres)	Total (acres)
11	New Jail area (Najafgarh Road)	37	-	-	37
12	Nangloi area (South of Rohtak Road)	32	-	-	32
13	Shakurbasti area	40	-	-	40
14	Wazirpur area (Ring Road)	50	-	25	75
15	Shalimar Garden area	25	-	-	25
TOTAL:		491	40	60	591

Sub-District Centres

LOCATION		Acres.
1	Gole Market	10
2	Khan Market	13
3	Vinay Nagar	16
4	Gokhle Market	10
5	Kashmere Gate (two sites)	14
6	Lajpat Rai Market (two sites)	18
7	Malka ganj (two sites)	12
8	Azadpur/G.T.Road	6
9	Jhilmila Area	13
10	Tihar	10
11	Fruit, vegetable and general Market near I.N.A. Colony	16
12	Jhandewalan	36
13	Tilak Nagar area	6
TOTAL:		180 acres

Commercial near Railway Stations and other areas.

LOCATION	Acres.
New Jail Road	10
Rohtak Road	10
Azadpur/Ring Road	8
New Delhi Station	6
Panchkuin Road	5
TOTAL:	39 acres

Other Commercial areas

LOCATION	Acres.
Ashoka Hotel	40
Hotel (near Golf Course)	6
TOTAL:	46 acres

Wholesale Market:

There is a need to relocate some of the wholesale markets and generally to separate wholesaling from retailing activity. The wholesale markets must be well planned to avoid the chaotic traffic conditions now prevailing these markets.

1. Fruit and vegetable Markets.

The market for wholesaling of fruits and vegetables may be reconstructed in due course at the present subzi mandi site and the trade retail markets all over the city. Another site for wholesale business in fruits and vegetable should be located near the Basti Railway Station in sarai Rohilla. A third is recommended near Okhla railway station.

LOCATION	ACRES.
Subzi mandi	10
Sarai Rohilla	6
Okhala	19
TOTAL:	35 acres

2. Food Grain Market.

Offices of wholesale dealers in food grains may continue on the G.B. Road and in Naya Bazar. But some of these may also be located in the Teliwara area when it is properly re-developed. However, storage of food grains should take place only in areas earmarked for the purpose in the plan. Retail traders in food grains may continue in Naya Bazar and G.B. Road.

3. Fodder Market.

This is retained near Daya Basti on Najafgarh Road.

4. Cloth Market.

Wholesaling of this community, must be rehoused in a modernized market in about a 10 acres, west of church Mission Road. Then, some of the trade now housed in Katras elsewhere in and around Chandhi Chowk can also be accommodated here.

5. Bicycle Market

Wholesaling in this commodity in the Jama Masjid area should be relocated in the jhandwalan commercial area. The present site should be cleared of this trade and the road access between Chandhi chowk and Jama Masjid.

6. Dry Fruit Market.

This will continue in its present location off Church Mission Road and may be adequately enlarged.

7. Hosiery and General Market:

This will continue in Sadar Bazar- Old Bahadurgarh Road. It needs improvement and floor space has to be substantially increased for the expansion of the wholesale trade. Land allocation for wholesale market is as follows:

Whole sale Markets*	Acres
Fruit and vegetable	35
Food grain	15
Cloth	10
Dry fruit	2
Hosiery and general	61
Fodder Market	6
TOTAL:	129 acres

Timber, cement, iron& building material and oil wholesaling storage.

The timber trade now located on either side of Desh Bandhu Gupta Road (original road) and in Tableware should be removed as it constitutes a fire hazard and causes traffic bottlenecks. Timber yards and depots should be relocated in west Delhi adjacent to the railway line to Rewari in about a 50 acre site. However, retail trade in bamboos, wooden scantlings for charpoy etc. required for daily use may be allowed in Teliwara and Desh Bandhu Gupta Road subject to limited stocks.

Further, in order to decentralize the trade dealing with iron and steel, suitable sites may be earmarked in each of the large industrial zones. Some of the junk and scrap metal dealers using a large amount of space should be relocated in one of the

iron and steel trade areas in the industrial zone stated above. Only about 15 acres of land should be allotted in the Motia Khan area for reorganizing some of the small scrap metal and junk dealers now spread out in this area.

Similarly, four sites of about 50 acres each may be allotted for the building material trade and storage in the industrial zone. This is in addition to that reserved for the iron and steel trade.

Some area along Mathura Road has been earmarked for small warehouses.

OIL STORAGE DEPOTS:

These are located on Rohtak Road and will continue there. Additional land has been earmarked near Nangloi railway station. Sites have also been indicated near Palam railway station and in Shahdara.

Grain Storage;

Storage of grain will take place in the storage areas shown in the plan.

Mineral siding:

Sites for mineral sidings of the railways have been shown in the storage areas near the marshalling yard and near Azadpur. One large mineral siding has been proposed in U.P., contiguous to Shahdara to serve the whole of the urban area to the east of Yamuna. The proposed sites are so located that they will conveniently serve all parts of the urban area.

Total Commercial land allocation:

Type	Acres
1. Central Business Districts	381
2. Sub Central Business Districts	199
3. District Centres	491
4. Sub- District Centres	180
5. Other commercial areas	85
6. Wholesale markets	129
+7. Storage & warehousing	751
8. Mineral sidings (railway)	243
TOTAL:	2,459 acres

* The bicycle wholesale market has not been shown separately as wholesale commercial market in the plan but forms part of the commercial area in jhandwalan.

+ This does not include sites required for iron and steel trade and building materials trade, which will take in all 400 acres in industrial zones. Also not included is the 15 acre site in Motia Khan reserved for a junk market.

Local Shopping:

Only District Centre and sub-District Centers are shown in the Land use plan. Shopping facilities would also have to be provided at various tiers of the residential area. These should be shown in the local development plans. The standards of one shop for 150 persons has been adopted for the Entire urban population and then distributed at various levels as below. In doing so, an estimate has been made of this amount of money the community will spend in the purchase of commodities in the different classes of business centers. Roughly speaking, about 20% will be spent in the District Centres, 30% in community centers, 18% in the residential planning Area centers and about 15% in the Convenience shopping, in the Residential Units. The balance, it is estimated, will be spent in the central and sub-central Business Districts. These latter will, naturally, also cater for areas outside Delhi.

Location	Population and Sale	No. of shops
Central Business Districts sub-Central Business Districts.	Entire urban population.	Not estimated
1. District Centres	1.5 to 2.5 lakh population.	one centre of 200 to 350 shops each.
2. Community centres	40,000 to 50,000 population.	80 to 100 shops each
3. Residential Planning Area centres	12,000 to 15,000 population.	15 to 20 shops each
4. Residential units (convenience shopping)	3,500 to 5,000 population.	4 to 6 shops each

Land Allocation for commercial Use:

The quantity of land allocated for commercial centers at local level for various densities is given in the sub-Division regulations.

On an average 1% of the residential land is required for retail and commercial establishment at the local level, which means less than 0.5% of the total area since residential use is only 40% of the total. The major commercial areas, excluding ware-housing and mineral sidings, occupy 1.4% of the total area, giving a total of 1.9% of the total area under all commercial activities.

INDUSTRY AND MANUFACTURING:

The component of the working force that will be engaged in industry and manufacturing in 1981 is estimated at 4,40,300 in Urban Delhi and 1,14,700 in the Ring Towns of the Delhi

Metropolitan Area. Land allocation for the latter has been made as stated in the first part of this chapter. Here proposals for industry in the urban area are made.*

There are only two existing planned industrial districts in Delhi. One is along the Najafgarh road developed by the erstwhile Delhi Improvement Trust. This has both extensive type of manufacturing units like D.C.M. CHEMIBLE and intensive industries like the Hindustan Breakfast Food factory. The other is a small scale industrial estate near Okhla developed by the near Government of India. The rest of the existing industries are scattered all over the city as described in the industries of Land Use Survey and Analysis. Most of these industries require relocation.

FLATTED FACTORIES;

In order to provide work centers within walking distance of the existing concentration of population in the central areas, it is proposed to have flatted factories. These are multi-storeyed building with high density employment ratio which can house many of the small industries that at present operate in commercial areas, as in Kamla Market.

UNIT SPACE STANDARD:

The standard for the development of flatted factories has been worked out on the basis of 200 to 300 workers per acre. The floor space per worker has been taken on an average of 150 sq. ft. per employee. It is recommended that a floor area ratio of 150, building efficiency of 65%, and a maximum coverage of 40% of the plot area is should be adopted. The of the rest area is available for parking, loading, unloading and for landscaping the site. The structures should not exceed six storages. Basement will be permitted for parking, servicing and storage only.

PROPOSALS:

Areas are suggested below for the location of flatted factories in the central area of Delhi, the number depending upon local factors in each area No site should be less than one acre in areas.

Areas	Acres.
+ Ajmere Gate	10
Thompson Road	16

cont'd...

* Floor area ratio, coverage, set-back etc. for various types of industries are given in detail under the zoning Regulations.

+ These sites have not been shown in the Land use plan but they should be carefully selected and located while working out the detailed plans for these areas.

Areas	Acres.
Motia Khan	43
D.C.M. Site	27
Roshanara Road	13
Birla Mill Site on G.T. Road	40
* G.B.Road	10
Mori Gate	2
Connaught Place near Shankar Market	10
Sarai Rohilla	11
Near Gulabi Bagh	10
Total	192

Thompson Road site:

First priority should be given here for the small industries located at present in Kamal Market.

Motia Khan site:

First priority will have to be given to the industries now located haphazardly in this area.

D.C.M. Sites:

The Delhi cloth Mills have to move out of this congested area to the extensive industries districts according to the time schedules given for non-conforming uses. The present site should be developed for flatted factories in gradual stages to relocate the industries now located in Ahata kidara and other area.

Roshanara Road Area:

The area should be developed over a period of a years. A beginning can be made one or two sites.

Birla Mill site:

Birla Mill will have to move out according to time schedule for non-conforming uses. This site too should be developed for flatted factory in stages.

Mori Gate site:

This site should be developed to relocated the small industries now near kashmere Gate and Mori Gate.

Site near Shankar Market:

Part of this is now residential. First priority may be given to

* These sites have not been shown in the Land use plan but they should be carefully selected and located while working out the detailed plans for these areas.

the industries in Shankar Market and Connaught place where they are it present causing nuisance.

Sarai Rohilla:

This may be developed to house the scattered industries in the residential areas.

Site near Gulabi Bagh:

First priority may be given to the industries in Rana Pratap Bagh and Shakti Nagar..

In all sites, First priority must also be given to those small industries which have to be relocated from the old city where the problem of nuisance and congestion is most acute.

B-INDUSTRIAL-CUM-WORK CENTRES:

(In District centers and in outlying areas listed below).

While the flatted factories will be located in central areas, the work centers will be outlying residential areas. These will be mostly in community centers and district centers . No nuisance industries will be allowed and the intensity of use will be less than in flatted factories. The idea is to provide for house-hold manufacturing units which otherwise would spoil the residential character of the neighborhood. The concept of flatted factories as well as of work centers is fully discussed in the chapter on **INDUSTRY & MANUFACTURING**.

UNIT SPACE STANDARD:

A standard of 200 workers for acre with about 200 sq. ft. of floor space per worker, maximum number of storeys limited to ten, with a floor area ratio of 120 and a maximum coverage of 33-1/3% should be attempted. Suitable areas must be reserved for parking, loading and unloading.

PROPOSALS:

The following land allocation has been made for the work-cum-industrial centre's.

LOCATION	ACRES
* Eleven hundred acre housing scheme Dostrict centre	10
* Kalkaji District Centre	15
* West Delhi District Centre (North of Rajouri Garden)	10
* Khyber pass District Centre	5
** Ranjit Nagar Scheme	10
Ring Road - Mathura Road- Railway line triangle	16
** Kotla Mubarakpur	4

cont'd...

LOCATION	ACRES
* Shahdara Central Business District	15
Shahdara between G.T. Road and Railway line	18
Okhla	45
** Jhilmila	5
North of tehar Jail	15
Total	168

The site comprising the triangle formed by Ring Road Mathura Road and Railway line is at present occupied sub-standard residences. This is a very good site for an industrial centre and should be developed at a convenient date.

C-SPECIAL INDUSTRIES:

An areas of 103 acres has been shown south of the Engineering collage for such industries which will assemble precision instruments without causing any nuisance (like smoke, noise , foul odour,etc.) Research and training facilities should also be permitted.

D-LIGHTINDUSTRIES AND SERVICE INDUSTRIES:

These are generally small scale, non-nuisance industries that can operate near built-up area with rigid enforcement of factory regulations. Their location is such that if proper performance standards are not enforced, the dust and smoke emitting from the industries are likely to cause nuisance to the residential areas because of the prevailing wind direction. Land is allocated for these industries also in the north and west because of the need of providing work place and service industries in all the planning divisions even though the prevailing wind direction is unfavorable. This makes it necessary to have only such industries for which it is possible to enforce a high performance standard. An illustrative list of the industries is given in this report.

While areas have been earmarked for various kinds of industries uses, it appears necessary that in some of these areas some public authority should develop land itself and construct industrial estates where work space can be rented out to the smaller units who may otherwise find it beyond their means to take out on lease even the minimum size plot in the various

* These sites are an integral part of the District centers and have not been separately shown as industrial centers in the Land use plan.

** These sites are part of the residential neighborhood and should be located in community centers while making zonal plans of the areas.

The other sites are shown in the Land Use Plan.

* Service industries.

industrial areas and put up constructions of their own there. This is the only way in which those small industries which are unsuitable for operation in flatted factories can be suitable re-located in the process of elimination of non- conforming uses in the city and new small industries helped to establish themselves. It is obvious that if assistance to the needy ones has to be effective in this matter, these estate should be built up in comparatively central areas .

UNIT SPACE STANDARDS:

The optimum use of the space will be possible if an employment density of 30 to 50 per gross acre and a building efficiency of 80% is achieved and not more than 25% of the area is kept under streets and 10% is kept in common facilities.

The plot area should not be less than 400 sq.yds. with a maximum of 2 acres. In special cases, larger plots up to 7 acres may be allowed. The floor area ratio and coverage is given in the zoning Regulations.

Proposals:

The following allocation is made for light industry and service industry:

LOCATION	ACRES
* Hindustan Housing Factory	54
Okhla Industrail area (two sites)	164
Kalkaji (two sites)	8
On Mathura Road (three sites)	169
* West of Pusa Institute	279
Delhi Milk Supply	20
Site near Anand Parbat	60
* Roshanara Road	11
Sarai Rohilla	32
* North-west of Wazirpur	27
Lawrence Road - Nangal Sub Station area	279
Area south of Ring Road and G.T. Road in north-west	333
Shahdara between G.T. Road and Railway	113
* Near Moti Nagar	13
* Near Tilak Nagar	5
Najafgarh Road	16
Total	1,583

The area to be developed near Anand parbat, off New Rohtak Road, should be reserved for the industries to be relocated from the area to be cleared on New Rohtak Road. If this area is insufficient, some of the industries may be accommodated

in the industrial areas in saria Rohilla and on Lawrence Road. Industries which have to be re-located, either because they are non-conforming in their present sites or for some other reason, should be allowed to establish themselves in an area meant for light and extensive industries, provided they are not obnoxious. The latter will have to be located in areas specifically designated for the purpose.

E-EXTENSIVE INDUSTRIES:

As a matter of general policy, large scale and heavy industries should not be encouraged in urban Delhi. This matter has been fully discussed in the chapter on industry and manufacturing. All the noxious industries which are now located in the residential areas should be relocated in areas meant for extensive industries. It has already been recommended that the slaughter house and all its ancillary trades now located in the old city should be shifted to a new site on Rohtak Road beyond the oil store depot, adjacent to Multan Nagar.

Unit Space Standards:

The number of workers proposed is 25 to 30 workers per gross acre. An attempt should be made to ensure that twenty-five per cent of the project area is an streets and common facilities, and a building efficiency of 80% is achieved. Development will be mostly in single story and coverage and floor area ratio are given in the zoning Regulations.

Industries using less than an acre can by no means be termed extensive. But certain industries even if they are small scale, will have to go into areas for extensive industries because they should not be located near residential areas.

Proposals;

The following sites should be used for extensive industries.

LOCATION	ACRES
1. South of Okhla near Marshalling Yard	908
2. Najafgarh Road area.	369
3. Between Rly. to Rewari and new Industrial road	331
4. Between Rohtak Road and Rly. to Rohtak	194
5. North of Rly. line to Rohtak	469
6. Azadpur north of Ring Road	410
7. Shahdara between new Rly. line and New highway	919
Total	3,600

All the major industrial areas have been located keeping

in view rail and road facilities. They are mostly separated from residential area and have scope for some expansion, if required, after the plan period.

F-EXTRACTIVE AND ALLIED INDUSTRIES:

Mining and pottery area:

The area near Mehpalpur is rich in pottery clay and a site of 357 acres has been earmarked for mining. It is also recommended that pottery factories utilizing local raw material may be allowed to be set up in the special area marked in the Land use plan. Sanction to layout etc. will have to be taken from the Delhi Municipal Corporation, which in the according the sanction may impose such conditions as might be considered necessary in the interest of the proper development of the areas. This will be of the extensive type and is about 106 acres.

Lime and brick kilns:

It is not desirable to have these within the areas to be urbanized in the future. Hence it is recommended that these be located half a mile away from the urbanisable limits of 1981; Also the removal of clay should be controlled. There should be no excavation at all for this purpose within half a mile of the green belt from the urbanisable limit but beyond it, excavations might be allowed up to a depth of 8 feet.

Stone quarries and crushing:

These should be beyond a distance of one mile from the urbanizable limits of 1981;

Stone quarrying in the Anand parbat areas may continue till may 1964, under controlled condition as non-conforming uses. This is to give time for the authorities to provide cheap housing for the labour (that would be displaced as a result of discontinuing their operation) in residential areas not very far removed from the quarrying sites in about and north Delhi. The crushers should be removed from the Anand parbat Area as they cause a great deal of nuisance.

WAREHOUSING AND STORAGE FOR INDUSTRY :

The proposal regarding commercial warehousing is given fully under commercial. Suffice it to mention here that in every large industrial zone, approximately 50 acres of land should be reserved for the storage and fabrication of iron and steel and another 50 acres for the storage of building materials, in order to decentralize these activities.

Case of industries outside the urbanizable limit :-

It is recommended to spot zone two industries located outside the urbanizable limits of 1981, one is the Hindustan

wagon Factory near Nangloi of about 12.5 acres. The other on Mathura Road on the Delhi-Punjab border is the Hindustan pipe corporation of 2.3 acres. These may continue but should not be extend existing area.

Total Land Allocation fore industries and Manufacturing:

LOCATION	ACRES
1. Flatted factories	192
2. Work-cum-industrial centres	169
3. Special industries	103
4. Light manufacturing & service industries	1,583
5. Extensive industries	3,600
6. Pottery industry	106
Total	5,753

The land under existing industries of all kinds is less than 1,000 acres at present, whereas in the plan, a total area of about 5,800acres has been provided . There will of course, be. an additional. area of about 2,800 acres under industries in U.P. to the east of Shahdara. In addition to all this, land for industries, altogether about 1,000 acres, has also been provided in Narela and other rural areas of Delhi Territory.

Thus about 5% of the total developed area of urban Delhi in 1981 is allocated for industrial use. This is an recognition of the place of industry in the balanced economy of Delhi. At present only about 1.6% of the total area is under industries and it is scattered all over the city, beside in one or two organized industrial districts. The quantity of industrial land available has been totally inadequate and the manner of their location highly objectionable. The new area must be efficiently developed and the non-conforming units in densely populated areas speedily relocated in these planned industrial zones. In this way working conditions which are hopelessly acute will greatly improve.

Residential:

One of the main objective of the plan is to relate residential areas to the centers of employment of Government offices, industrial and commercial areas, so that the journey to work and back is kept to the minimum within the bounds of healthy living. With this in view, a rational pattern of residential densities* is pro posed which will correct the present disparities and imbalance. Higher densities are proposed nearer to the work areas so as to have the maximum number of people living around them. Lower densities are suggested as

* Zoning Regulations and sub- Division Regulations in chapter - II will secure these densities in a desirable manner.

the city extends towards its outer limits. Development during the last two decades has apparently been, on the opposite principal resulting in traffic problems, inconvenience to the low income groups and congestion in presently central areas.

The old city of Shahjhanabad has t present a gross density of about 350 persons per acre with narrow streets and hardly and community facilities. This has led to unhealthy living conditions and functional obsolescence. While for various reasons, large scale clearance and reconstruction may not be possible in the immediate future, the winding of some of the more crucial roads has been proposed so as to facilities easier flow of traffic. This will require demolition of buildings and the displaced families will have to be rehoused elsewhere but not too far away from the present location. Vacant plots as well as dilapidated structures will have to be acquired and the minimum of community facilities like schools, parks ,healthy centers ,etc. will have to be relocated. Village like trades and industries(viz. keeping milch cattl e,pottery tannery etc.) will also be moved out of the city to urban villages.

New Darya Ganj which has been developed at a density of about 200 persons per acre needs conservation measures to preserve its good residential character. The other parts of the old city require rehabilitation and redevelopment in order to preserve and improve the present housing at a gross residential density of 250 persons per acre. The same measures are in fact required for areas like Malkaganj Aryapura , Sadar Bazar, Manak pura, Qadam sharif and pahar Ganj which will have a gross residential density of 200-250 persons per acre as shown in the plan.

In order achieve to this density in the above mentioned areas, it becomes essential to earmark certain other areas ,which are present ripe for redevelopment, for the relocation of persons displaced from their present homes. One such area is the Mata Sundari area, which is between the congested old city and the important commercial area of Connaught place and its proposed future extension. It has at present a density of about 40 persons per acre. This area should be comprehensively redeveloped with the necessary services to serve a density of 200 persons per acre to rehouse the people presently living here as well as the surplce population of the old city. Sarai Rohilla and Shadipur- khampur area to present under sub- standard development. These two acres should also be redeveloped at 200 persons per acre for similar reasons.

Some of the other low density areas in the core of the city are Curzon Road, parliament Street, and Gole Market planning areas, where the present density ranges from 50 to 75 persons per acre. This is one of the most valuable residential areas located in proximity to the important and major employment

centers of central Secretariat, parliament street, Connaught place and Indraprastha Estate. Population pressure, traffic and transportation considerations, land value etc. point to the fact that these areas should be put to more intensive use. The Gole Market Area is ripe for redevelopment. Hence it is strongly recommended that these areas be comprehensively redeveloped to an optimum desirable residential density of 150 persons per acre.

South of the central vista, in the Akbar Road area, the density is at present 20 to 25 persons per acre with large bungalow plots. This is a most pleasant area but uneconomical to maintain.

It is recommended that without in any way spoiling the most desirable features of this area, the density should be raised to 75 persons per acre. This can be done by judicious planning of some high rise apartment houses and the provision of sites for schools, health centers etc.

In the area bounded by Pandora Road and Shahjahan Road the density proposed is also 75 persons per acre since this is the present pattern of development on Pandora Road. It is recommended that the temporary hutments along Shahjahan Road be demolished, thus making available additional area for residential development near the work centre and central secretariat. Care should be taken to meet the entire requirements of community facilities for the neighborhood. (All offices in this area except those of the Union Public Service Commission area to be shifted as detailed under the Section on Government). In the Ratendone Road, Lodi Estate, Golf Links, Kaka Nagar and Sundar Nagar areas, the existing densities 50 to 60 persons per acre are retained and so indicated in the plan.

Between the inner Ring Road and the Ring Road the existing densities are about 75 to 100 persons per acre and should be so maintained. South of the Ring Road also the same pattern of 75 to 100 persons is recommended; however, north of Badarpur Road which is the Urban limits of 1981, a lower density of 60 persons per acre is suggested. Near Kalkaji, however, higher densities of 100 to 150 persons per acre have been proposed since it is nearest to the Okhla industrial Area. It is proposed to keep the 25 persons per acre density west of Mathura Road in friend colony, whereas for the area east of Mathura Road a density of 50 persons per acre is proposed. No residential development should take place south of Okhla Sewage farm since it is undesirable to have a residential area there.

Another low density residential area is the Teen Murti Area near the prime Minister house, where the existing pattern of persons per acre should be maintained. Chankyapuri, Kitchner

Road, Moti Bagh I (north of Ring Road) are already being developed at 50 persons per acre though Moti Bagh II (south of Ring Road) has been developed at 100 persons per acre. The Government is developing the 1,100 acres scheme south of Ring Road on densities of 75 to 100 persons per acre. The area south of it, which is at the southern end of the urban limit of 1981, should be developed at a lower density 50 to 75 persons per acre.

In Civil Lines, it is essential to preserve the pleasant character of Rajpur Road and Alipur Road areas. Hence by judicious planning, the densities may be raised from 25 persons to 50-75 persons per acre as shown in the plan, with adequate areas earmarked for community facilities. There should be an overall plan for this area piecemeal sub-division should be not allowed. The recently developed areas of Shakti Nagar, Roop Nagar, Kamla Nagar, Jawahar Nagar etc. have an average density of 150 persons per acre and the same may be maintained. Similarly, for Rana Pratap Bagh, Vijay Nagar and Model Town the existing pattern of 100 persons per acre in nearby new areas. Kingsway Camp area has been proposed to be redeveloped at a density of 125 persons per acre. All other areas north of mall Road and east of G.T. Road are proposed as the National Highway bypass is approached. The northern portion of this is subject to water logging and should be developed only after adequate drainage arrangements have been carried out.

In the north-west, at present almost the entire area is rural in character with some good orchards. It is proposed to have intensive development for areas that are nearest to the city as they are not more than 4 miles from the densely populated old city and should help in relieving some of the congestion there. The densities proposed are 150 persons near Anand Mughal, and 125 to 100 persons on both sides of the Ring Road. More open development with densities ranging from 75 to 50 persons is proposed in the outer periphery. However, areas nearer the railway lines to Rohtak and Ambala will have higher densities, so that the maximum number of people will travel minimum distance to get to work. Many of the large existing orchards have been retained as District parks and may be preserved and maintained as orchards by public agencies or leased to cooperatives and individuals. Also in making detailed layout plans care should be taken to include as much as possible of the existing orchards a park with trees, it is essential to make the best use of these trees.

In the west, Karol Bagh has reached the limits of its development and has 200 persons per acre. Dev Nagar and Rajinder Nagar have been developed at 150 persons per acre. In East and West Patel Nagar and New Rajinder Nagar the existing densities of 100 to 150 persons per acre are to be maintained.

The density is between 100 to 150 persons per acre west of Delhi- jaipur railway line and near the industrial area. It is proposed to have lower densities of 100 to 75 persons per acre along the Najafgarh Road as the development extends further from the major employment centre. This reduce to 60 on the periphery of the urban limits. Again, along Rohtak Road proportionately higher densities of 100 to 75 persons per acre are proposed since it is closer to the proposed Rohtak Road industrial Area, but this density is gradually reduced to 50 persons per acre further out.

Across the Yamuna, Shahdara is proposed to be developed as a complete new city of over 7,00,000 population. At present Shahdara has very bad drainage and though only 2 or 3 miles from both the crowded old city and New Delhi, has only the railway-cum-Road bridge as a connecting link. This is a traffic bottleneck. Taking advantage of the wazirabad barrage in the north over which a road is being constructed, and the proposed highway bridge opposite Humayun tomb and the proposed Railway bridge opposite purana Qila, it is proposed to have a more or less self contained development in Shahdara its industries, commercial and Government offices area and the component of residential areas. The marginal bunds both in the north and south along the Yamuna should be considerably strengthened so that there is no danger of floods from the river. Also it cannot be overemphasized that an overall irainage system should be worked out before any large scale development is attempted, to avoid the danger of water logging that any piecemeal development will entail. Adequate drainage arrangements must be made while building the proposed railway and the national highways in Shahdara.

High densities of 125 to 150 persons are proposed in south shahdara in proximity to the proposed industrial and commercial areas. In other areas 100 to 75 densities are proposed. North of G.T.R oad, 100 persons per acre is recommended for areas adjoining the road. As the development reaches the Delhi-U.P. border and the northern highway bypass, the densities proposal are 75 to 60 persons per acre.

All the densities are indicated in the Land Use Plan. All new developments will, take place according to the lenities shown. But as a general rule where developments have taken place completely or partially, the existing pattern of densities are to be maintainel except where redevelopment and increase in densities have been specifically recommended above.

PLANNING DIVISIONS:

In the Chapter "Land use servey AND Analysis" it has been fully discussed why for planning purposes urban Delhi up to its proposed 1981 limits, has been divided in to eight planning

Divisions. These are envisaged ,more or less, as self-contained areas as regards work places, residential accommodation, recreation, shopping etc. The population and residential areas for each Division by 1981 is proposed to be as follows:

Planning Divisions		Proposed 1981 population	Residential area (acres)
A	Old City	3,22,600	1,370
B	City Extension	3,98,200	2,590
C	Civil Lines	3,55,200	3,480
D	New Delhi	6,34,100	6,930
E	Shahdara	7,44,100	7,890
F	South Delhi	7,81,100	9,400
G	West Delhi*	7,44,300	8,240
H	West Yamuna Canal or North West	6,06,200	7,460
Total**		45,85,800	47,360

Development Zones:

For purposes of collection and analysis of socio-economic and physical data for the built up area, the urban area was further sub-divided into Planning Areas and Planning Units. These were tested to find out the size of a workable unit. As a result of this study, it was found that whereas in the Old City due to the intensive development and the enormous nature of the planning problems, such as conservation, rehabilitation and redevelopment, it is necessary to take similar workable areas for planning purposes; in other; areas: like New Delhi, South Delhi etc. large areas could be taken. In virgin land still larger areas have to be taken. Many considerations have gone into, the delimitation of the boundaries of these units. The result has been the drawing up of 136 Development zones for the whole of urban Delhi as shown in the map Development Zones. The manner of their development for newly developing areas is laid down in Chapter II under "Sub-Division-Regulations" and all new developments shall take place according to zonal Development Plans.

Zonal Development Plans for the Old city:

While the problem of preparation of zonal development plans for new areas is comparatively easy, much study and data collection will be required in the case of plans for the old and built up areas of the city. Development plans for these

* The figures against West Delhi do not include the Cantonment Areas. It is estimated that the population of the Cantonment Area would be around 1,00,000 in 1981.

** It is estimated that a population of about 50,000 will be living in commercial areas also.

areas should form part of a comprehensive urban renewal and redevelopment programme as outlined in a separate chapter. This will take some time to prepare. In the meantime, for the Old City it has been decided that community facilities may be provided on an adhoc basis (which will be incorporated in the Development plans to be prepared) for a gross residential density of 250 persons: per acre. Since most of these areas presently have higher gross densities, it is recommended that vacant plots and plots on which dangerous structures are being demolished each year, must be acquired by the Municipal Corporation. These together with such other plots that may be acquired, must be utilized for locating community facilities. These will have to be on a lower standard which has been indicated under the sub division regulations.

Realising that in the immediate future, there cannot be large scale demolition, due to the financial burden involved on public bodies, the low rent paying capacity of the slum dwellers and the need for keeping them nearer the work places, it is recommended that a major effort be made in the immediate future only to improve the slums rather than demolition and redevelopment. One of the major recommendations is to improve the circulation in the Old City by a system of streets that will involve minimum widening but will at the same time ensure smooth flow of traffic. Through traffic is kept to the periphery of the Old City and the traffic generated inside the city is channelled to flow in and out. Some of the existing alleys will be used for cycle paths and pedestrian ways whereas vehicular traffic will skirt the residential pockets. There will be enough parking areas so that these pockets are accessible to vehicles but these will not go through them. These are shown in the Traffic Circulation Plan for the Old City and table 4 indicates the proposed right of way of the roads.

Another measure intended to relieve the inhuman conditions in the slum areas is the recommendation that basic amenities like water, drainage and electricity etc. may be immediately made available even though certain areas are earmarked for redevelopment.

Under the zoning regulations' it has been recommended that uses that do not conform to the land use shown in the Land Use Plan may be shifted to their respective use zones according to a time schedule. Among the first to be shifted are the noxious and nuisance industries and firehazard trades which abound in the Old City at present, causing congestion and injurious health conditions. It is also recommended that village like trades viz. keeping of milch cattle, be removed to urban villages. This will not only strengthen the rural economy but also cheap milk collected through milk chilling centres will become available to the urban areas. Since the success of the removal of the dairies from the city depends on the speed

with which the Delhi Milk Supply Scheme is able to meet the major demand of the city for milk, it is strongly recommended that the capacity of the milk scheme be increased for the purpose and a determined effort made to relocate the dairies as a matter of major health measure.

Zonal Development Plans for New Areas:

The Municipal Corporation has drawn up a scheme for the relocation of the busti squatters in suitable areas not too far away from major work centres. It is recommended that while the structures and facilities may be below standard in order to keep down the cost and rents, the space standards for schools, parks, streets etc. should be as for any other area given in the Sub-Division Regulations. Moreover, these should be integrated with a larger neighbourhood where there is a mixture of different social and income groups, as well as housing types. In addition, it is also recommended that reasonable areas, should be earmarked in several zones for the low income group who migrate to Delhi on account of the relentless "push" from the rural areas. As in the relocation of the busti squatters, sub-standard development and construction may be permitted but the space standards for the facilities should be those given for the density on which the layout is planned. It is recommended that building by-laws should be considerably relaxed in such cases not only to permit sub-standard development but also to enable the construction of low cost cheap houses. This will keep down the cost for the present and will enable public authorities to bring this development upto standard in the not too distant future. Otherwise these will develop in to slum.

It is also recommended that any village or abadi which is overtaken by urban development should not be left as such, as otherwise, the city will be pock marked with the type of slum such as Kotla Mubarakpur but should be redevelopment and integrated into the neighbourhood. New development will follow the zonal Development Plans and the sanctioning authority should ensure that all developments take place with proper layout and adequate community facilities and in accordance with the desirable and optimum densities prescribed in the Master Plan. It is equally necessary to set up a firm administrative machinery for effective enforcement of planning standards and community wide inspection of services and prevention of squatting and encroachment. It is also necessary to adopt a comprehensive system of building, sanitary and other codes which prescribe adequate minimum standards of health, sanitation and safety. These can be enforced only if the maximum amount of citizen participation is secured as fully discussed in the chapter on "Urban Renewal and Redevelopment."

TRANSPORTATION SYSTEM:

The rational and function land use pattern envisaged in this Plan, which has taken in to consideration the physical inter-relationship of the various land use on the principle of relative self-containment of each Planning Divisions, will obviate the necessity of costly new transportation lines. But with increasing traffic even at the present time, certain basic requirements for smooth and efficient flow of traffic will have to be implemented, and long term measures planned to keep traffic within the bounds of the proposed transportation system. These are fully discussed in the Chapter on "Traffic and Transportation". The major recommendations are given here and are shown in detail in the Land Use Plan.

RAILWAYS:

In order to bypass Delhi Main Railway Station for through traffic, the Railway are planning a goods avoiding line which must be made to serve as a ring railway for local suburban traffic movement. Hence it will be necessary to have new railway stations at suitable places; and improved and expand the existing railway stations with more platform and passenger facilities, together with the provision for parking vehicles, for which land provisions is made.

In order to reduce intracity traffic load, it is also essential to effect substantial improvements to some of the smaller railway stations both for passenger and goods. Improvements to Sahibabad goods stations facilities are in progress. Okhla, Nizamuddin, Subzi mandi, Azadpur, Badli, Shahdara, Shakurbasti and Nangloi Railway Stations require substantial improvement and extension.

The Marshalling Yard the New Delhi in Railway Station will be shifted to Tughlakabad on the Agra line. Also, Mineral and goods sidings are proposed near the Marshalling Yard at Tughlakabad, on the Ambala line near Azadpur, and U.P. contiguous to Shahdara. There is a railway siding already in Shakurbasti for oil etc. Suitable goods sidings should be made available to all the large industrial zones.

The meter gauge railway should be extended upto New Delhi Station which will be connected to the main Lucknow line at Sahibabad by a new bridge over the Yamuna opposite Purana Qila. Because of these and the moving out of the Marshalling Yard, a redesigning of the New Delhi Railway Station will be necessary. Some land reservation is made outside the Station for Parking etc.

The redesigning and modernization of the Delhi Main Railway Station is in progress. The planning should not only take into consideration the growing railway traffic but also the requirements of parking facilities which are at present wholly

inadequate. The railway authorities should acquire more land for this purpose in accordance with the proposals in the Plan.

The jurisdiction of the Northern railway should be extended upto Mathura junction so that the Development of the railway in the National Capital Region will get a coordinated approach and will facilitate the growth of the Ring town of Faridabad which at present is in the Central Railway Line.

There is also the task of coordinating passenger transport operation within this Region, with bus and truck transport systems. Joint team work is necessary to eliminate uneconomic duplication and improvement of services. It is recommended that the frequency of railway services in the Region should be increased.

Serious consideration should be given to the future electrification of the Delhi terminal area as far as Ghaziabad, Meerut, Faridabad and Sonapat. Until this becomes feasible, quick turning and relatively smokeless diesel rail cars must be brought into operation.

ROADS:

In order to avoid congestion in the urban core, certain by-pass routes are recommended. The Ring Road which has been constructed in most parts must be quickly completed. The right-of-way should be 250 ft. It is recommended that in the built-up areas Rajouri Garden and Lajpat Nagar, the land should be acquired and the road widened immediately. If this cannot be done immediately, the acquisition of land and the widening of the road should be undertaken in these two stretches only when the necessity arises from the traffic point of view.

The Inner Ring Road requires links at some places and the widening of the right-of-way upto 150 ft. Grade separation should be provided where it crosses main arterial roads. Both the Inner Ring Road and the Main Ring Road should have accesses at not less than approximately 1/4 to 1/2 mile intervals.

The National Highways bypass, as shown in the Plan from Badarpur village in the south along the Yamuna River upto Wazirabad pumping station and then to meet the Grand Trunk Road, has to be completed. This has already been constructed from the Ring Road in the south upto Metcalf House. The right-of-way should be 300 ft.

Two more major road links between Old and New Delhi are recommended. These will be overpasses over the railway line. One connects Circular Road to Parliament Street, following the alignment of existing Ranjit Singh Road, School Lane and Keeling Road; the other connects Mathura Road to

College Road and Ferozeshah Road.

It is recommended that Rohtak Road should be diverted along the south side of the Western Yamuna Canal (north of the existing alignment) to join the proposed Inner Ring Road.

With large scale development proposed for Shahdara, four bridge links are proposed in addition to the improvement that should be made to the existing Road-cum-railway bridge, north of Red Fort. In the north, the Wazirabad Barrage will have a road, with a cantilever adequate in width for pedestrian movement and cycle tracks. This road proposed over the barrage will connect the National by pass near Wazirabad pumping station to Grand Trunk Road near Sahibabad. Another road across the Yamuna near Humayun's Tomb in the south will connect Delhi to Ghaziabad across the River Hindon. Both these roads will have a right-of-way of 300 ft. In between these two major links, are proposed two road bridges across the Yamuna (subject to engineering feasibility) as shown in the Plan.

All the five National Highways which converge on Delhi will have a 300 ft. right-of-way outside the urban limits and will be designed according to highway standards. The arterial and sub-arterial roads shown in the Plan should have a right-of-way of 200 ft. and 150 ft., respectively and major roads of 100 ft.

Many of the existing important roads require widening of the right-of-way as shown in the Plan. Notable among them are Lothian Road, Elgin Road, Mathura Road, Patel Road, Shankar Road, Park Street, Talkatora Road, Queen Victoria Road, Chelmsford Road, Qutab Road, Panchkuian Road, Rohtak Road and Church Mission Road in Old Delhi. A system of "minimum" streets for the Old City has already been recommended earlier in this Chapter and a details list and a map has been provided. Roads with less than 100 ft. right-of-way will be shown in Zonal Development Plan and Other detailed plans.

ARTERIAL CYCLE TRACKS:

In addition to improvements of the existing road-marginal cycle tracks, the following arterial cycle tracks entirely separate from the carriageway, as shown in the Plan, are essential to avoid traffic bottlenecks. Two essential to avoid traffic bottlenecks.

Two cycle tracks going south from the Central Secretariat with 25 feet right-of-way, one to Vinay Nagar and another through Lodi Colony to Sewa Nagar recommended. The route in the westerly direction runs parallel to Patel Road, Shankar Road, thence through an underpass across the

Upper Ridge Road to Talkatora Road and the Secretariat. Another runs north along Queen Mary's Avenue, Market Road, Ramakrishna Ashram Marg, Chitragupta Road and Mundhewalan Road.

A cantilever pedestrian-cum-cycle track on the existing Yamuna Bridge has been proposed, which will link with the proposed cycle track to Chandni Chowk and the other to the Secretariat and to Connaught Place.

Parking for cycle at Government and other officers is assured by the floor area ratio and maximum coverage prescribed in the Zoning Regulations.

Road Grade Separation with Railways;

The hold-up of road traffic at railway Level crossings calls for under or overpasses at Rohtak Road, Patel Road, Link Road between New and Old Rohtak Roads and the approach Road to the Okhla Industrial Estate. The proposal for two new link roads between Minto and Hardinge bridges as overpasses has already been stated. So, too, Queen Victoria Road joining the National Bypass requires a grade separation with the railway line. When Safdarjang airport is shifted, Mehrauli Road must have grade separation. with the railway line.

Road Intersection Improvements;

At every major intersection at grade, channelisation of traffic by the use of pavement markings, raised islands or other suitable means are necessary. The ones at Minto Road and Connaught Place, Queen's Road and Kauriya Pul Road, Ajmere Gate, and Mathura Road - Wellesley Road crossing are the most pressing. Also many of the roundabouts with insufficient turning radius should be gradually replaced by intersections with traffic light.

Road transport terminals;

Interstate passenger bus terminal and Sparking:

Three suitable sites of about 10 acres each, depending upon requirements, for loading and discharge of passengers, luggage and parcels idle parking of buses when not engaged in active operations, are recommended at the following locations.

1. South of Idgah near Jhandewalan.
2. North of Central Road Research Institute on Mathura Road.
3. Near Shahdara Railway between Railway line and G.T. Road.

One more terminal of 10 acres is proposed outside kashmere Gate. This will have in addition a separate site of 21 acres for idle parking east of the sanitary drain between the

National bypass and the Western Bund of the Yamuna River. This idle parking site will also provide for truck parking and servicing of buses and trucks.

Goods parcel terminal and parking:

A site of suitable dimension, as a well planned terminal in the Motia Khan areas, south of Idgah Road, with offices and godowns of the booking and forwarding agencies is recommended. Another truck terminal site of 50 acres is proposed in the Shahdara area, west of the proposed airport road and north of the proposed National Highway. This will also have idle parking for trucks between trips.

Three suitable sites of adequate size of about 10 acres each are proposed for truck idle parking, servicing and all the incidental facilities that may be required with it. These sites are as follows:

1. Near Azadpur Police Station on Grand Trunk Road to Ambala.
2. Between Ring Road and Lawrence Road and North of Rohtak Road in the vicinity of Nangal power station.
3. Near Okhla Industrial Estate on Mathura Road.

D.T.U. Bus Terminal:

It is Proposed to develop two terminals, one in the Connaught Place extension and the other near the Minto Bridge area as loading points for passengers and also to serve as places for accumulating, extra rush hour bus requirements. These terminal in order to be self-supporting should be development for multi-purpose use including shopping and office space etc.

To handle peak hour loads at Central Secretariat, Old Delhi Main Railway Station, Red Fort and Kashmere Gate, similar off Street loading stations and bus accumulation areas are recommended. Also, in all the proposed District Centres and in the Central Business District of Shahdara bus terminals may be developed as an integral part of these schemes. High density residential areas such as Vinay Nagar in the south and Karol Bagh in the west should be provided with off-street loading points for handling morning peak hour traffic. The bus service should be speeded up by establishing fewer, but better curb spaces in heavy loading areas and by strict enforcement measures to keep these stations clear of interference. A number of bus depots distributed over the urban area are shown in the plan.

Future Mass Transit:

The proposal to have an electrified sub-way should be explored for the future when a substantial increase in traffic

will justify an expenditure of Rs. 4 crore pr mile, but it is obviously not a short range project. For the present, the ring railway recommended, with local bus service, should furnish the mass transit.

Department of traffic:

The traffic problems of urban Delhi Require continuous attention to a large number of miscellaneous items like intersection, traffic control, law enforcement, traffic education, pedestrian control, traffic signs and signals, street lighting and other matters. There are also capital works like planning of terminals, budgeting and financing of capital improvements. To deal with all these matters in a comprehensive manner it is recommended that a Traffic Department be set up under a trained traffic engineer and the enforcement of traffic may continue to be the responsibility of the police, with proper liaison between the two.

Staggering of work hours:

An important measure recommended for improving peak hour traffic conditions, is the staggering of work hours so as to distribute peak hour traffic load over a longer period.

Regional Highway proposals:

It is recommended that in order to relieve the pressure on the Yamuna Bridge and the congested Delhi Area, Peripheral all weather communications should be provided by converting the existing boat bridges into concrete structures. A bridge at Baghpat will give a connection to sonapat - Mehrauli, while the bridge at Jewar will link Palwal to Khurja and Aligarh.

Similarly, in order to encourage peripheral movement of traffic between the towns lying within the Delhi Metropolitan Area, a perimeter road connecting Ghaziabad, Faridabad, Gurgaon, Bahadurgarh and Narela should be developed. The proposed bridge opposite Humayun's Tomb will connect Ghaziabad with Faridabad and the Barrage-cum-road at Wazirabad will connect Ghaziabad to the north.

The Ring Towns of the Delhi Metropolitan Area lie on the National Highways. With their proposed rapid growth, bypass roads are essential. For this purpose the right-of-way should be earmarked for the bypass immediately, instead of resorting to costly land acquisition later when urban development has taken place. Ribbon development along National Highways must be prevented by Zoning Regulations.

Airport:

It is recommended that the International Civil Airport be continued at Palam with suitable runways and terminal facilities for increased jet traffic. For this purpose the existing

airport acreage has been doubled. If, however, for security reasons, the Air forced Station cannot be removed from Palam, the International Civil Airport can be located at Pasaunda in U.P. it is a good site and within easy reach of Delhi. The site has, therefore, been marked on the Plan. What is of the utmost importance is an early decision on this matter as it may not be possible to keep the Pasaunda site vacant indefinitely. Palam is undoubtedly best suited for a civil airport and should be given up only for over-riding defence reasons.

The airport at Safdarjang is in the midst of heavily built-up residential areas. It cannot, therefore, be extended to meet the requirements of modern air-craft in regard to line of flight and length of runway. The airport continues to be a source of hazard and nuisance to the areas surrounding it. It is, therefore, recommended that it should ultimately be removed - possibly to join up with the ultimate International Civil Airport for Delhi. The Flying Club which is functioning at the same site these days should also be shifted at that time. The present site, when vacated, should be used for recreational purposes and the Plan has, therefore, shown it for ultimate recreational use

COMMUNITY FACILITIES & SERVICES

Recreation:

A system of District Parks has been worked out for the entire urban of Delhi related to the proposed to pattern of residential densities. The proposals will enable every one of all age groups to enjoy active and passive recreation. In selecting the locations, due cognizance was given to the existing physical features, special spot of beauty or interest, places of historical or architectural value, existing orchards etc.

Local parks and playgrounds:

These are to be shown in zonal development plan and detailed plan and must cater for all age groups. These range from 2.00 to 0.81 acres per thousand population for residential densities varying from 25 to 250 persons per acre as detailed under Sub-Divisions Regulations. However, for the Old City where a density of 200 to 250 has been proposed, the standard proposed, the standard proposed is 0.30 acres per thousand populations for the simple reason that space is just not available. The area proposed will provide tot lots, playground space for primary and secondary school age children and local neighbourhood parks within walking distance of the neighbourhood which they cater for.

District Parks:

These are proposed on an overall basis of about 3 acres per thousand population and distributed all over the urban area. Each District Centre has a district park nearby. Most of

the parks are inter-connected by a system park nearby. Most of the Parks are inter-connected by a system of green ways which penetrate through and between residential and work areas to provide an efficient system of direct pedestrian and cycle tracks for circulation between different residential neighbourhoods safe from vehicular traffic. In the first stage financial limitations will limit the development of organised parks to only a small portion of the area allocated in the Plan and the rest would remain in a natural state, so that a disproportionate amount of the municipal budget will not be spent for such amenities. But within 20 to 25 years from now, all the park area should be developed to serve the increased demand. The total area earmarked for District Parks is about 17,940 acres including semi-public recreational areas of about 890 acres.

The Old City Divisions:

The existing parks are the Parade Grounds in front of Red Fort and Jama Masjid, Rajghat and Queen's Gardens. The proposed parks are: the river front south of Yamuna Bridge, qadam Sharif around the graveyard area and the Idgah. It is proposed that all areas receive major improvements in the Third Five Year Plan. It is in this area of the Old City that the greatest population is concentrated and the greatest need for parks exists.

Karol Bagh Division:

The existing parks are Ajmal Khan Park and in Anand Parbat. The former is fully developed and the latter partially and should be developed as a district park. the ridge area east of pusa Road (on which sites for a college and schools have also been earmarked) should be immediately developed as a park, since the entire congested area is without adequate park facilities. The other park proposed is near Naraina Village.

Civil Lines Division:

The University ridge is in a Semi-developed stage as also the area around the Coronation pillar. It is proposed that parts of these areas be taken up for immediate development. The other existing parks are Roshanara to develop parks at the junction of Mall Road and G.T. Road, Magazine Road in Timarpur, north of Kingsway Camp and north of M Odal Town, and north of Rana Pratap Bagh.

New Delhi Division:

The existing parks and open spaces are the Central Vista, the Hexagon near India Gate, Lodi Garden, Ramlila Grounds, Talkatora Grounds, Vijay Chowk, Feroze Shah kotla Grounds, area around Safdarjang Tomb, Connaught Place, Gurdwara Park and Lady Hardinge Ground. Also the Zoological gardens and the Buddha Memorial Park have been partially developed.

Area in the Diplomatic Enclave, area west of Lodi Colony, the Safdarjang Airport area and the River front (for an Olympic Grounds are some of the proposed parks. Beyond expanding the Zoological gardens & the Buddha Memorial Park and the Olympic grounds, it may not be desirable to develop other areas until the Old City, West Delhi, South Delhi and Shahdara have adequate recreational areas.

Shahdara Division:

This has hardly any park. Here the largest park proposed is along the river Yamuna. Parks are proposed also near the proposed Central Business District and District Centres.

South Delhi Division:

Hauz khas which is partially developed, Siri and area near the industrial zone east and north of Kalkaji, Tughlakabad and the rocky outcrop to its north-west are the proposed parks. Only small portions of these may be developed until the residential areas are more fully developed.

North-Western Division:

This division is at present mostly under agricultural use. There are, besides, a number of orchards, some of them quite old and not in a good state of preservation. Park areas have been shown in the Plan at several places in this division, one particularly large one has been suggested north of Sarai Rohilla across the canal. It has also been proposed that some of the orchards should be retained and properly developed and maintained. They will also provide quite a considerable amount of greenery and open space to the area.

West Delhi Division;

The proposed parks are located mainly along the Najafgarh Nala and near District Centres.

Picnic Spots;

The existing picnic spots in Delhi are inadequate to meet the increasing demand of the population for such facility. The proposed spots are named in the chapter on Recreation and some of these should be developed immediately. So, too, some of the hunting, fishing and sailing areas, like Najafgarh Jhil and Okhla, should be developed for these sports.

Regional Parks:

The most important of these is the Upper Ridge which should be reserved for a regional park. It should not be allowed to be dissipated by small undesirable uses but should be gradually developed as a central public park in Delhi, comparable to Hyde Park in London, Bois de-Boulogne in Paris or Central Park in New York. For the present, small

portions of it may be developed like the Buddha Memorial Park and the rest may remain in a natural state with the undergrowth cleared to facilitate hiking.

The other area is near the Qutab Minar which should be enlarged and part of it developed as a Botanical Garden.

The Southern Ridge is also a potential Regional Park and must be properly developed, in the course of years.

The total area shown under Regional Parks is 8,220 acres.

Some of the other potential regional parks are outside the Union Territory of Delhi and are indicated in the chapter on Recreation.

Agricultural Green Belt:

This is mostly a one mile depth inviolable green belt of agricultural land around the 1981 urbanizable limits, which will be kept in intensive agricultural uses by Zoning Regulations, which allow only farm, houses and agricultural uses. This will prevent premature urban growth and the overspilling of development during the plan period.

EDUCATION:

Standards for pre-primary, basic primary and higher secondary schools for various residential densities are given in the Sub-Division Regulations and locations will be shown in Zonal Development Plans and detailed Plans. The sizes for higher secondary schools vary from 5 to 10 acres; for basic, primary from 1.5 to 2.5 acres and for pre-primary, from 0.2 to 0.75 acres, for residential densities varying from 200 to 50' persons per acre.

There is a huge back log in all the three stages of schools, which is fully dealt with in the chapter on Education. Urgent steps will have to be taken to build schools at an adequate pace so as to be able to meet all the requirements.

University and College Education:

There are at present 26 colleges affiliated to the Delhi University (of which 10 are in and around the University Campus), with over 14,000 students in 1960. All the colleges are over-crowded and are unable to cope with the increasing demand for college education. Moreover, the students have to travel long distances from the far-flung colonies.

It is proposed to expand the existing university campus to have a total of 385 acres. A university centre in the south is proposed near the junction of Kitchner Road and Ring Road. This centre will have several colleges.

It is also proposed to have a number of colleges within easy reach of the residential areas each to serve a population of about 1,50,000. Land measuring 15 acres has been proposed for each college, which will suffice for the teaching building, staff quarters and playgrounds, with land left over for future expansion. It is proposed that only a few of these colleges would have hostel and dormitory facilities, as most of the students served by the colleges would come from the surrounding residential areas. In addition to the existing (1960) 26 colleges, sites for 22 new colleges have been earmarked in the Plan. Out of these, there are 4 existing professional colleges and an Engineering College has been located

south of Hauz Khas.

It is further proposed that for every four or five colleges, a University Centre should also be provided. Such a Centre would contain comprehensive library facilities and research laboratories; and in addition serve as a general campus for evening cultural activities for the entire Planning Division. The Plan provides for 6 such centres with as much as 30 to 40 acres each. The total area earmarked in the Plan is about 1,400 acres for colleges and University Campus and centres.

TABLE NO: 2
DISTRIBUTION OF COLLEGES AND UNIVERSITY CENTRES
BY PLANNING DIVISIONS.

Planning Division	Colleges			University Campus & Centres		
	Existing	Proposed	Total	Existing	Proposed	Total
Old Delhi	2	-	2	-	-	-
Karol Bagh	2	3	5	-	-	-
Civil Lines	12	1	13	1	-	1
New Delhi	9	2	11	-	1	1
Shahdara	-	4	4	-	2	2
South Delhi	1	4	5	-	1	1
West Delhi	-	5	5	-	1	1
North Western	-	3	3	-	1	1
Total:	26	22	48	1	6	7

Research Institutions:

Land has been allotted for the expansion of the Jamia Millia educational centre near Okhla and for the Pusa Agriculture Research institute near Patel Kagar. Reservation of land has also been made for institutional use north of Badarpur Road. The All India Institute of Medical Sciences on Mehrauli Road and the Central Road Research Institute on Mathura Road and the National Physical Laboratory near the Pusa Institute, are being developed to their optimum capacity.

Other Educational Institutes:

An area of about 600 acres has been earmarked for Educational and Cultural purposes south-west of the new Engineering College. Out of this a suitable amount of land may be allotted for a new University and other educational institutes which subserve the needs of the urban area and provide for research, higher education and train educational personnel at an advanced level. Total land allocated in the Plan for Research, and institutional uses is about 2,900 acres.

Hospitals:

There are at present 7 general hospitals and a number of private hospitals and maternity hospitals These are inadequate even for the needs of the present population. There are also two T.B. hospitals, one Infectious Diseases Hospital and one Mental Hospital. It is proposed to have 20 additional hospitals as shown in the Plan, calculated on the basis of one hospital of 500 beds to serve 1,25,000 people. The area proposed is about 15 acres. It is also proposed that in each Planning Divisions at least one hospital will have about 25 acres, so that it can offer specialised services not available in other hospitals, Land has been reserved in the Plan for the expansion of some of the existing hospitals.

Planning Divisions	General Hospital		
	Existing	Proposed	Total
Old City	1	Nil	1
Karol Bagh	Nil	1	1
Civil Lines	1	1	2

Cont'd...

...Cont'd

Planning Divisions	General Hospital		
	Existing	Proposed	Total
New Delhi	3	1	4
Shahdara	Nil	6	6
South Delhi	2	2	4
West Delhi	Nil	5	5
North West Delhi	Nil	4	4
Total	7	20	27

It is proposed to locate three more Infectious Diseases Hospitals one each in the south, west & north. The total area under Hospitals in the Plan is 953 acres.

Other Community Facilities

Police Station:

Police Lines and a few large police stations, both existing and proposed, are shown in the Plan. These are distributed all over urban Delhi. Others will be shown in Zonal Development Plans.

Health Centres, Fire Stations, Electricity Sub-stations, Post and Telegraph Offices, Telephone Exchanges, Community Halls, community and neighbourhood shopping centres etc. will have to be shown in zonal development plans and detailed plans. Standards for these are given in the Sub-Division Regulations.

Public utilities and services:

In the chapter on utilities and services, the total quantum of water and power required for the future growth of Delhi and measures for augmenting the present supply have been pointed out. Active steps have to be taken well in advance to secure the sources of water and power which are so supplement power has also been suggested for consideration.

Water:

Additional land to the extent of about 20 acres has been earmarked for the expansion of the Chandrawal purification plant. Also, 40 acres of additional land has been reserved for the Wazirabad Headworks. The other waterworks is in Okhla which has sufficient land. water supply to Shahdara will be from tube wells and only a pumping station will be required. Additional land for pumping Stations and reservoirs may be from residential areas and the extensive park areas of the ridge.

Power:

The existing power house, being too near Rajghat, will

continue till such time as the machinery becomes obsolete, so that the Rajghat site will be completely open to the river. A new site has been earmarked for the location of a big thermal plant south of the present site as it will need constant and large supplies of water from the river and also a railway siding for coal. Land for housing the essential staff and for the future expansion of the plant has also been provided at the new site. Shahdara may require a thermal station to meet the increasing demand of power and a site near the river will have to be selected in due course.

Sewerage:

Proposals to discontinue sewage overflows into the Yamuna will have to be executed soon. Adequate land has been reserved for the treatment plant, at Okhla in the south, Coronation Pillar in the north, and near Keshopur in the west. A site for a new treatment plant has been reserved in South Shahdara to serve the whole of the proposed urban area across the Yamuna.

Wireless and radio transmitting stations:

Sites for the essential wireless and radio transmitting stations have been earmarked. It has been recommended that some of the additional sites required for such stations that have to be in urban Delhi may be located in the park areas of Siri and Anand Parbat. Others must be located in the Rural Zone, as they take up a lot of valuable urban land.

Cremation and burial grounds:

The existing Nigambodh Ghat has to be redeveloped with more bathing ghats and parks. Two and three storeyed houses should be built for the dwelling of those connected with the cremation rites and bathing ghats should be properly developed. Shops should be provided for the stacking of fire-wood etc. near the ghats. The rest of the Jamuna Bazaar squatters should be relocated in the area to be developed across the bund on the G.T. Road to Shahdara and elsewhere according to Plan.

A site near the Yamuna bridge has been recommended for an electric crematorium which is so essential for a big city like Delhi. Thirteen other sites for cremation grounds have been earmarked in the plan so that they are within two or three mile radius of the residential areas. these should be properly developed with trees all around the cremation ground in order not to spoil the amenity of the surrounding areas. The existing cremation grounds like the one on Panchkuin Road which is in the midst of the urban areas should be speedily relocated.

The Muslim burial grounds at Kotla are almost full. two

new sites have been proposed. One between the National Bypass and the railway line from Mathura, south of the proposed railway bridge and the other across the Yamuna.

A Christian burial ground and a Parsi Cemetery already exist in the city.

Dumping grounds and sanitary fills:

The main dumping grounds for night soil are at badli beyond the urbanizable limits. In the chapter on utilities it has been strongly recommended that chapter on utilities it has been strongly recommended that presently cut up and low lying land may be reclaimed by hygienically conducted sanitary earth fills of garbage. This will not only reduce the mileage for trucks carrying garbage long distance away from urban areas, but in the long run will make available valuable lands (which are now water-logged) for essential urban purposes like parks etc.

Social and Cultural Institutes:

Delhi has been sometimes described as a city without much social and cultural life. While this may be partly true of New Delhi and the new colonies, which had to grow up under stress when much thought was not given to providing these facilities compared to providing shelter. But the Old City of Delhi has a rich tradition of social and cultural life, which too may die a slow death of the necessary impetus is not forthcoming. Recognizing this, it has been strongly recommended that multi-purpose community centers be provided so that a framework may be built up within which the whole fabric of social activities can be inter-woven in such a way that the anonymity of city life does not stifle cultural life of the citizens. This is fully discussed in the chapter on Education, Health and Recreation.

The plan has also provided land reservations for charitable, social and educational institutions for the handicapped and under privileged. These are in the south-west near Tehar jail and in the north-west near Azadpur. As already stated, 600 acre land reservation has been made in the south for educational, social and cultural institutions.

Another major centre to meet the long standing aspiration for a richer cultural life, is the site stretching on either side of the Central vista starting from Jan path and ending at the National Stadium and the purana Qila beyond. This will be the new heart of the Metropolis with the four major national buildings; viz. the National Archives, the National Theatre, the National Library and the National Museum. Vigyan Bhavan, an assembly and conference hall, is already functioning on Maulana Azad Road. New social and cultural buildings like conference halls, public auditoriums, theatres and state guest

houses may be built in this area.

Another cultural, social and institutional centre proposed is near sapru House as shown in the plan. A large area is earmarked for the purpose where the Tagore Memorial Theatre has already come up.

A third cultural area proposed will be the new civic centre, planned around the proposed Municipal Corporation buildings opposite Ram Lila Grounds. This centre, it is hoped, will bring about the social and cultural integration of Old Delhi and New Delhi by providing common facilities and new centres of interest.

Yet a fourth cultural centre is proposed in about 45 acres of land in the first area in the south. This will have an integrated plan for the social and cultural activities of the various states that constitute the Indian union. The idea is give to a fillip to such activities in the National capital so that the people of different states can enrich themselves through the medium of song drama, 'dance and other fine arts. This, it is hoped, will help in the emotional and cultural integration of the Indian people.

The total area under social and cultural use in the plan is about 380 acres.

To sum up. The urbanizable area up to 1981 cover about 1,10,500 acres. The detailed distribution of land uses in the plan is given in the chapter on "Land use survey and Analysis".

NEED OF REVIEW AND REVISION

It will be seen that land allocation for various uses emerge from an assessment of the needs of the estimated population in 1981 in various directions—housing, employment, education, health, recreation, transport, community facilities and public utilities. While a reasonable long-range plan is necessary in order to give a proper perspective, it has to be within the realm of possibility. The outlines of growth during a period of two decades or so can be drawn with a fair amount of accuracy; the passage of time cannot cause any overwhelming aberrations if constant review enables timely reassessment and modification. On the other hand, these proposals are not intended to provide a rigid delineation of the pattern of growth until 1981. The year 1981 is no annus in the history of Delhi. That year gives only a working range and no more. The city and the region will continue to grow after that-grow not merely in the narrow sense of population but in the range and variety of its activities. Many things are bound to happen during this period. Such is the dynamic quality of an urban concentration and Delhi, more than many cities, displays a vitality that gives it a character of its own. Not only,

therefore, will the plan require constant review so as to keep pace with the rapidly changing pattern of growth, investigation and research must go on all along the line so that the chance of a hiatus being created are avoided.

The periodical revisions of the plan in the intervening period should anticipate and fulfil, on the basis of a rational scientific study, the needs of the community for the period after 1981. The persons of planning is as continuous as the growth of towns; it is not a "fitful fever".

One thing a certain, whether plans are made or not, and that is that many new demands shall be made by the growing city in the years to come. The strengthening of the economic base

of the country through the determines efforts of the national five years plans and the numerous social welfare activities undertaken by Government will produce an impact on the physical aspects of living and these will have to be catered for. If plans are prepared in anticipation of such situations, many frictions can be avoided, growth regulated along pre-determined lines and over-heads caused by belated action avoided. Indeed, if the imperatives had been realized earlier, the enormous backlogs and formidable problem which face the city today would not have existed in their present form. The labor involved in making the initial comprehensive plan is undoubtedly great but it facilities the whole process of development thereafter. That is a rich enough reward but one cannot rest on one's laurels.

TABLE NO: 4

LIST INDICATING PROPOSED RIGHT-OF-WAY OF ROADS IN THE OLD CITY

Sl. No.	Name of Road	From	To	Approximate length	R/W in ft. recommended	REMARKS
1	2	3	4	5	6	7
1	Machli Bazar Road	Junction of Faiz Bazar Road.	Jama Masjid	2,000	80	
2	Esplanade Road	Chandni Chowk	Jama Masjid	1,700	80	
3	Matia Mahal Road	Jama Masjid	Chitli Kabar Road	800	36	
4	Chitli Kabar Delhi Gate.	Delhi Gate	Jama Masjid	3,000	36	
5	Bazar Sita Ram	Hauz Khas	Turkman	3,100	(i) Chaurasi Ghanta to Turkman Gate... 36 ft. (ii) Hauz Kazi to Chaurasi Ghanta... 45 ft.	
6	Bazar Ajmere Gate	Hauz Kazi	Ajmere Gate	1,250	60	
7	Chawri Bazar	Hauz Kazi	Jama masjid	1,800	60	
8	Lal Kuan	Hauz Kazi	Chowk Naya Bans & Katra Bariyan	2,600	60	
9	Katra Bariya	Fateh Puri	Chowk Naya Bans & Katra Bariyan	750	50	Enforcement of one way traffic on this road is recommended.
10	Khari Baoli	FatehPuri	Lahori Gate	1,300	100	
11	Nai Sarak	Chandni Chowk	Bar Shabula	2,300	50	In this connection the widening of the link between Queen's Road and Chandni Chowk Road is recommended.
12	Church Mission Road	Khari Baoli	Queens Road	1,150	60	

Sl. No.	Name of Road	From	To	Approximate length	R/W in ft. recommended	REMARKS
1	2	3	4	5	6	7
13	G.B. Road	Ajmere Gate	Lahori Gate	3,400	(i) for built up portion...80 (ii) for unbuilt portion..100	If the Rly. Authorities agree to give another 20' of land then width of the road in the built up portion also might be 100 ft.
14	Naya Bazar	Kabli Gate (Queens Road junction).	Lahori Gate	1,800	100	
15	Chandni Chowk	Old Clock Tower Chowk.	Elgin Road	2,800	110	The Corporation's chabootras may also be taken for widening of the road.
16	Fateh Puri Masjid	Old Clock Tower Chowk.		1,200	110	
17	Queen's Road	T.B. Clinic	Elgin Road	6,300	120	

Outside the City wall

Sl. No.	Name of Road	From	To	Approximate length	R/W in ft. recommended	REMARKS
1	2	3	4	5	6	7
1	New Rohtak Road	Faiz Road	Junction of Najafgarh Road	13,000 Rft. (2.5 miles)	120	
2	G.T.Road (Karnal)	Fruit & Vegetable Market	Gur ki Mandi	8,000 Rft. (1.83 miles)	100	From the Fruit and Vegetable Market to the Clock Tower the proposed widening should be done to the left of the Road in view of the existing service lane behind the Road (south side).
3	Rani Jhansi Road	Junction of link Road..	Pul Bangash	9,500 Rft. (1.83 miles)	100	
4	Roshanara Road	Clock Tower Subzimandi.	Pul Bangash	5,400 Rft. (1.1 miles)	100	

1. As regards other roads in the Old City not include in this statement, it is recommended that in the built up area the existing road width should remain except where is scope for widening.
2. It is also recommended that the construction of colonades and projections on all roads be prohibited.

STATING OF DEVELOPMENT

Section 7(2) (a) of the Delhi Development Act of 1957, enjoins that the Authority shall not only prepare the Master plan, but also indicate the stage by which any such development shall be carried out.

It will be appreciated that any attempt at staging of the development programme can possibly be done only after duly considering and assessing various factors among which the most important ones are the financial and administrative resources of the plan implementing authorities. Obviously, it is not quite possible to assess such and any other imponderable factors a long period, which extends up to 1981, so as to relate precisely the physical targets with the resources that may be available in future from time to time.

The two broad stages worked out in the accompanying statement put together in the first or the second stage, as the case may be, items of contemporaneous activity, i.e., the work

in the first and only thereafter the work in the second stage to be tackled. In putting the various items in the first of the second stage as good an assessment as possible has been made of the needs of the community and the priority that each need deserves. For instance, it will be unrealistic to expect full recreational facilities to be available immediately and therefore, the bulk of the programme under this item finds a place only in the second stage. On the other hand, certain programmes like augmentation of water and power supply figure more prominently in the first stage itself. This is so because by its very nature the bulk provision of services has to be somewhat ahead of the needs. As regards the provision of community facilities, internal distribution system roads, re-housing and re-development, these are parts of the programme of residential and industrial development and will follow the standards laid down in the plan. As the developmental programme goes on getting implemented, the staging itself will have to be subjected to review and revision.

TABLE NO: 5

STAGING OF DEVELOPMENT FOR DELHI MASTER PLAN

Sl. No.	Acquisition of Land & Development:	Area in acres		Total	REMARKS
		I Stage	II Stage		
1	Acquisition of Land & Development:				
	(a) Residential	17,000	13,000	30,000	As regards provision of major roads, community facilities, rehousing and redevelopment, these will form a part of the land development programme.
	(b) Commercial	1,160	740	1,900	
	(c) Industrial+	3,360	1,440	4,800	
	(d) Government	300	200	500	
	(e) District & Regional Parks @	6,250	18,750	25,500	
Total:		28,070	34,130	62,200*	
2	Public Utilities:				
	(a) <u>Water supply</u> Bulk supply and distribution	100 M.G.D.	60 M.G.D.	60 M.G.D.	Provision of Trunk Sewers only to cover the acreages given.
	(b) Sewerage	26,040 acres	11,160 acres	37,200 acres	
	(c) Sewage Disposal	90 M.G.D.	52 M.G.D.	142 M.G.D.	
	(d) Electricity	2,74,800 kw.	1,83,200 kw.	4,58,000 kw.	

* This does not include land covered by "Institutional Use", University and College, Hospital, Cultural centres and Major Roads.

+ The exact area which will be under commercial use in the heavily built up areas like the Old City, Subzimandi, Karol Bagh, etc. will be known when detailed redevelopment plans are made for these areas.

@ This includes the Ridge which has an area of about 8,000 acres and also the River Front on either side of the Yamuna from Wazirabad to Okhla.

CHAPTER II

A. ZONING REGULATIONS.

Nature of regulations:

In order to promote public health, safety, and the general moral and social welfare of the community, it is necessary to apply reasonable limitations on the use of land and buildings. This is to ensure that the most appropriate, economical and healthy development of the city takes place in accordance with the land use plans and its continued maintenance over the years. For this purpose the city has been divided into a number of use zones, such as residential, commercial industrial, Recreational etc. Each use zone has its special regulations because a single set of regulations cannot be applied to the entire city, as the different use zones vary in their character and function. In this respect, zoning regulations differ from building codes or buildings of like use and character wherever they may be located in the community. zoning regulations are not to be used to accomplish and kind of human segregation like excluding certain communities, or income groups from certain areas.

Zoning protects residential areas from the harmful invasions of commercial and industrial uses while it also promotes business and industry by the very nature of the planned and orderly development that it ensures. By requiring the spacing of buildings it provides adequate light, air, protection from fire etc. it prevents over-crowding in buildings and land and thus facilitates the provision and continued adequacy of water sewage, transportation, schools, parks and other facilities'

It should also be understood that zoning is not ordinarily a retroactive measure that is. it does not prohibit uses of lands and buildings that were lawfully established prior to the coming in to effect of the zoning regulations. If these uses are designated as non-conforming uses. The provision under this head will gradually eliminate nonconforming uses without inflicting unreasonable hardships upon the property owner.

Thus zoning regulations and their administration are a major tool in carrying out the land use part of the master plan of which it is an integral part.

Establishment of use zones

For the purpose of these Regulations, the union territory of Delhi has been divided into 24 use zones designated as follows:

1.	R - 25	Residential
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2.	R - 50	Residential
3.	R - 60	Residential
4.	R - 75	Residential
5.	R - 100	Residential
6.	R - 125	Residential
7.	R - 150	Residential
8.	R - 200	Residential
9.	R - 250	Residential
10.	A - 1	Agricultural Green Belt
11.	A - 2	Rural
12.	C - 1	Retail shopping.
13.	C - 2	General business and Commercial (Central and Sub-Central business district, District Centres).
14.	C - 3	Wholesale
15.	M - 1	Flatted factory
16.	M - 2	Work-cum-Industrial Centre.
17.	M - 3	Special Industry
18.	M - 4	Light industrial and service industry.
19.	M - 5	Extensive manufacturing.
20.	M - 6	Extractive industry, mining, brick kilns, stone quarrying etc.
21.	W	Warehousing, storage & depots.
22.	G	Government and semi-government offices.
23.	P	Recreation.
24.	F	Public and semi-public facilities.

The land use plan shows the various use zones. In the case of District centers where no separate areas have been marked for retail shopping, work centers or flatted factory and government offices but are indicated in the text of the land use plan, then such demarcations will be shown in detailed plans. The land use plan does not show local shopping, local parks, schools etc. Hence, in built up areas, the local municipal authorities may allow such uses, based on quick surveys and on an ad-hoc basis, until Zonal Development plans are prepared. The latter, when prepared, will incorporate the land use proposal prepared by the local authorities. In new areas development shall take place only on the basis of type zonal development plans.

Non-conforming uses:

The provision regarding these will come in to effect with respect to industrial non-conforming uses and such other uses specifically mentioned below. For the rest of the non-conforming uses the provision will come in to effect only after the preparation of the zonal development plans since only these will determine the sitting of local facilities like shops etc. mentioned above.

DISCONTINUANCE OF NON-CONFORMING USES:

A. Industrial non-conforming uses;

Such industrial uses that do not conform to the land use shown in the Master plan, will have to be shifted in gradual stages to industrial areas earmarked in the plan. In allocating new industrial sites, the demands of the non-conforming uses will have to be given priority by the authorities and if possible other inducements may have to be given for expediting the shifting. This can be in the shape of providing extra land needed for expansion by the industry at the new site, allowing the present owner to develop land from which they are shifting in accordance with the land use shown in the plan, providing a loan etc. It should also be noted that the shifting of industry according to plan will be possible only if suitable land for the purpose is available.

While it is agreed that the non-conforming industries should be given suitable time to shift from their present site, it is necessary to have a uniform policy on which to lay down a time schedule for their shifting. It is recognized that this process must be largely governed by the fact that there should be the minimum amount of dislocation of production and the industries and workers should not be put to undue hardship.

Time-schedule:

- (1) Noxious industries must be the first to go from their present location. A three year period may be stipulated within which they have to be shifted with additional time if the capital value exceeds one lakh rupees.
- (2) Industries which are not noxious but are causing nuisance should be given up to four years for shifting.

However, additional time limit as per table, up to a maximum 10 years may be given to nuisance industries on a sliding scale on the following criteria;

- (a) The capital value of land, structure and machinery allowing for depreciation; more time is given to industry with higher capital value.
 - (b) The registered employment of industry, More time given to industries employing more workers.
 - (c) The production floor space per worker. More time if the industry has more floor space per worker which is computed by dividing the total production floor space in square feet by the total registered industrial employment.
- (3) Non-nuisance industries will get more time on each of the counts up to a maximum of 20 years.
 - (4) A non-conforming use tax will be levied if the industry wants to stay after the moratorium period has lapsed and it is considered by the competent Authority that such permission should be given. In such cases, the extension, should not exceed ten years.

TIME SCHEDULE FOR NON-CONFORMING - USES

INDUSTRIAL USES

Condition for Moratorium	Noxious Industries.	Nuisance Industries	Nonnuisance Industries
	No. of yeras.	No. of yeras.	No. of yeras.
1	2	3	4
Industries with No. of registered employees 1 to 19, with production floor space per worker 50 sq.ft. and below and capital value less than one lakh.	3	4	6
No. of registered employees between 20 to 99 (additional years).	-	1	2
No. of registered employees 100 and above (additional years).	-	1	2

Cont'd...

...Cont'd

Condition for Moratorium	Noxious Industries.	Nuisance Industries	Nonnuisance Industries
	No. of yeras.	No. of yeras.	No. of yeras.
1	2	3	4
Production floor spaces per worker between 51 to 100 sq.ft. (additional years)	-	1	2
Production floor space per worker of over 100 sq.ft. (additional years).	-	1	2
Capital value between one and five lakhs (additional years).	-	1	2
Capital value above five lakhs (additional years).	-	1	4
Maximum No. of years	5	10	20

Note:

1. Time is given on each count listed in table and is cumulative in the order given in Table.
2. Noxious and hazardous industry is that “which is or may be dangerous to life or injurious to health or property”* caused by fumes, effluent, or smoke or by producing or storing inflammable materials.
3. Nuisance industry is that “which causes or is likely to cause injury, danger, annoyance or offence to the sense of sight, smell or hearing or disturbance to rest or sleep”*.
4. Capital value is cost of land, structure and machinery allowing for depreciation on the date of sanctioned Master Plan.
5. The employment noted in table is for industry using power. For industry not using power the employment is to be taken as double.

**As defined in 2(33) of Chapter I of the Delhi Municipal Corporation Act, 1957.*

B. RESIDENTIAL NON-CONFORMING-USES

Time Schedule:

Land Use	No. of years.	Remarks.
Residential use in Industrial areas	10	May be converted to industrial use provided layout plan and structure are approved.
Residential use in commercial areas	10	May be converted to commercial use if layout plan and structure are approved. Residential use can continue in first and higher floors.
Residential use in public recreational areas	10	Except in the case of existing villages

C. COMMERCIAL NON-CONFORMING-USES

Time Schedule:

Land Use	No. of years.	Remarks.
Commercial use in Industrial area	10	May be converted to industrial use provided layout plan and structure are approved.
Commercial use in residential areas	10	Local commercial areas will have to be shown in zonal plans.
Commercial use in public and semi-public use areas including recreational areas.	10	-

IMPROVMENTS AND ALTERATIONS PERMISSIBLE IN NON-CONFORMING USES:

If an undertaking is given by such non-conforming uses that no compensation will be claimed, then improvements to buildings, or machinery as stated below may be allowed:

1. Repairs, replacement modernization of reform in any manner to improve productivity, efficiency and economy of the existing power plant and workshop and other auxiliary departments connected with the carrying on of the activities of the existing equipment.
2. Any re-origination ,alteration, or repairs of building that house such planet and equipment.
3. Alteration reorganization, extensions and addition to the existing office ,buildings, residential houses, amenities, gates, tanks, platforms, wells, roads, drains, another structure in order to maintain and improve the efficiency, productivity and economy of the existing manufacturing activities.
4. Repairs, alteration or rebuilding of god owns on an industrial plot stocking raw materials, machinery parts and spares, finished products, building materials etc.

Non-confirming non-industrial uses will not be allowed to make additions to buildings in any case.

In the case of industrial non-conforming use. Additions either to building or machinery in extension of existing work-space should not be allowed.

The setting up of new machinery for a new line of manufacture on existing site should not be permitted. But the use of existing machinery and buildings with requisite

alterations, if necessary, for a different line of manufacture may be permitted , provided it is not noxious.

The period of moratorium will be reckoned from the date of legalization of the master plan and not from the date of the new use'

RESUMING AFTER DISCONTINUANCE OF A NON – CONFORMING USE:

If a non – conforming use is discontinued for more than one year, any further use of the building and premises shall be conformity with the master plan.

REBUILDING AFTER DAMAGE OF DESTRUCTION OF A NON – CONFORMING USE:

Any non-conforming building or structure which is damaged to an extant exceeding fifty pre cent of its reproduction value, exclusive of foundations, by fire ,floods, explosion, art-quake ,war riot or an act of god, may not be restored ,reconstructed and used for any other than a purpose permitted in the master plan for the area in which the building or structure is located.

TEMPORARY PERMIT:

Competent authority may allow for temporary use with a time limit, a use other than the use stipulated in the master plan, like tents for workers to live while constructing an industrial estate or where on area is undeveloped and the property owner wishes to continue agriculture or in developed areas to make temporary use of the land in some other way then shown in the master plan with definite time limit and on a specific permit.

PROVIOUS REGARDING USES IN USE ZONES

Residential

1 to 3. Use zones- R25, R50 and R60

Uses Permitted.

Residences, hotels and boarding houses with density limitations, nurseries, kindergartens and schools, clinics, social and cultural institutions with adequate parking facilities; public utilities and building expect service and storage yards; non-commercial farms, agricultural gardens, nurseries and green houses ; any neighborhood recreational uses; accessory uses clearly incidental to residential use (expect retail shops and services uses) which will not create a nuisance or hazard.

Uses permissible if allowed by competent authority after special appeal;

Temples, mosques, churches and other places of worship; professional office or home/occupations when situated in the same dwelling as the one occupied by the professional man or woman or when located in local shopping centre; commercial offices, service uses and retail shops of a neighborhood character when located in local shopping centers or in concentrated location or as shown in zonal plan when prepared; hotels; motels hospital and sanatoria not treating contagious diseases or mental patients, provided the set back and coverage of plots are such, as not to constitute nuisance to the residential areas; colleges and research institutions not to be operated for the production of goods or other materials for sale provided there is no nuisance created and no part of the building is located less than 50 feet from any plot line, municipal, state and central Government offices raising of poultry or cattle for non commercial uses provided that no bird or animal is housed closer than 50 feet of a dwelling or a property line; removal of graves, clay sand or stone for development of site which will not result in the stagnation of water or causes other nuisance; bus depots, railway passenger and freight stations; petrol filling stations on roads of 100 feet right of way and above; services and storage yard, taxi and sector stands.

Uses prohibited:

All uses not specially permitted here in.

Residential:

4 to 6. Use Zones R75, R100 and R125.

Uses permitted:

All uses permitted in R25 to R60 use zones.

Uses permissible if allowed by competent Authority after special appeal:

All Uses permissible in R25 to R60 use zones.

Uses prohibited

All uses not specifically permitted herein.

Residential:

7 and 8. Use zones-R150 and R200

Uses permitted:

All uses permissible in R75 to R 125 use zones

Uses prohibited:

All uses not specifically permitted herein.

Residential:

9. use zones –R250 Uses permitted:

All uses permitted in R200 use zones.

Uses permissible if allowed by competent Authority after special appeal

All Uses permissible in R200 use zone.

Uses prohibited:

All uses not specifically permitted herein.

Agricultural Green Belt :

10. Use Zone A.1

Uses permitted:

Agriculture horticulture; dairy and poultry farming, milk chilling centers, farms houses and their accessory building and uses within the plot area limitation of minimum 3 acre plot: uses specifically shown or stated in the land uses plan, like urban village, Brick kilns are removal of clay up to 8ft. depth beyond a distance of half a mile from the urbanizable limits of 1981.

Uses permissible if allowed by competent authority after special appeal

Places of worship etc. schools; libraries, and educational and cultural buildings; parks and other public and semi-public recreational use not conducted for profit: storage, processing and sale a farm products on the property where produced; the servicing and repair of farm machinery and the sale of agricultural supplies; public utility and buildings.

Uses prohibited:

All uses not specifically permitted herein.

Rural:

11. Use zone A.2

Uses permitted:

All uses permitted in Agricultural Green Belt use zone.

Uses permissible if allowed by competent authority after special appeal:

Retail shops and service uses to be located in shopping centre; milk chilling stations and pasteurization plants; cottage industry and such light industry which use agricultural and rural produce and not causing nuisance: rural collages, boarding houses and hotels, scientific and industrial research laboratories, not to be operated for the production of goods or other materials for sale except as may be produced by a small pilot plant provided there is no nuisance caused and no part of the structure is placed closer than 100 feet from any dwelling or an adjoining premises or from any property or line or road; excavation of clay, gravel, top soil and other earths and materials up to 8 feet depth; stone quarrying: bus, or railway passenger and freight stations: landing fields for planes and their necessary appurtenances utilities and buildings; area needed for Defense purpose, wireless transmitting and receiving stations.

Uses prohibited:

Uses not specifically permitted herein.

Retail shopping:

12. Use zone c.1

Uses permitted:

Retail shops; business and professional offices; service uses like barbers and tailors; laundry and drycleaner, shops etc. restaurants and entertainment places; residence, social and welfare institutions provided they are located in first and higher floors; clinics meat; fish and fruit market; roofed storages for legitimate retail business; public and semi-public recreational uses; public utilities and buildings. Parking area requirements for all uses must be approved.

Uses permissible if allowed by competent authority after special appeal:

Social and welfare institutions, petrol filling stations, coal, wood or timber yards, service garages; light manufacturing without nuisance or hazard and employing not more than 4 persons with or without power provided the goods manufactured are sold on the premises in retail; taxi and scooter stand, bus terminal. Parking area requirement for all uses must be approved.

Uses prohibited:

All uses not specifically permitted herein.

General Business and Commercial, District Centre, sub-district centre:

13. Use zone – c.2

Uses permitted:

All uses permitted in C.1 use zone; also hostels and boarding houses; collages, research institutions; services garages, warehousing and covered storage, local and central government offices. Parking area requirements for all uses must be approved.

Uses permissible if allowed by competent authority after special appeal:

All uses allowed with special appeal in c.1 zone; In addition, newspaper and printing presses. The following may also be allowed in specific areas under detailed plans or zonal plans of the shopping centre; light manufacturing and services industries without nuisance or hazard and not employing more than 10 persons with or without power, junk yards, parking area requirements for all uses must be provided.

Uses prohibited:

All uses not specially permitted herein.

Wholesale:

14. Use zone c.3

Uses permitted:

Wholesale and retail shops storage for wholesale uses except when specifically prohibited, business offices; restaurants and residences provided they are located in first and higher floors; public utilities and buildings, parking, loading and unloading requirement must be approved for all uses.

Uses permissible if allowed by competent authority after special appeal:

Truck terminal and parking: schools, clinics, social and cultural institutions; recreational uses, storage and markets dealing with meat and fish. Parking, loading and unloading area requirements must be provided for all uses.

Uses prohibited:

Storage of petroleum and other inflammable materials; storage of any material causing dust and colors; junk yards. All

uses not specifically permitted herein.

*Flatted Factory:

15. Use zone M.1

Use permitted:

Industries conforming to performance standards as given in illustrative list, which would not cause excessive injurious or obnoxious noise, vibration, smoke, gas fume, odour, dust, effluent or other objectionable conditions and employing not more than 20 workers with power or 40 without power, covered storage for industry. Public utilities and buildings; parking, loading and unloading requirements must be approved for all uses.

Uses permissible if allowed by compliant authority after special appeal:

Bus and truck terminals, railway passenger and freight terminals; petrol filling stations, taxi and scooter stands, junk yards. Dwellings for watch and ward staff, canteen and recreation facilities for the employee.

Uses prohibited:

General residential retail and commercial business unless incidental to and on the same site with an industry. All uses not specifically permitted herein.

Work-cum-industrial centers:

16. Use zone M.2

Uses permitted:

Same as in M.1 use zone.

Uses permissible if allowed by competent authority after special appeal:

Same as in M.1 use zone except that F.A.R. and coverage etc. are different as given later on.

Uses prohibited:

All uses not specifically permitted herein.

Special industry:

17. use zone M.3

Uses permission if allowed by competent authority after special appeal:

Only such industries as given in the illustrative list that do not create nuisance of any type will be allowed. Canteen, recreation and residences to employees provided the density is not more than 25 persons per acre on the site.

Uses prohibited:

All uses not specifically permitted herein.

Light industrial and Services industries:

18. use zone M.4

Uses permitted:

All industries permitted in M.1, M.2 use zones and others given in the list of industries and employing not more than 50 workers with power and 100 without power, service industries; warehousing and storage: public utilities and buildings and agricultural use in existing agricultural land until the area is required for development. Parking, loading and unloading area requirements must be approved for all uses.

Uses permissible if allowed by competent authority after special appeal:

All uses allowed with special appeal in M.1 zone, in addition such light and services industries named in schedule which in the opinion of the competent authority will constitute light industry by performance standards even though it employs more than 50 people: Junk Yards: petrol filling stations: farm house in existing agricultural land provided guarantee is given that it would be demolished when the area are required for development. Parking, loading and unloading requirements must be provided.

Use prohibited:

Same as in M.1 use zone.

Extensive Manufacturing use zone:

19. use zone M.3

Uses permitted:

All uses permitted in M.4 use zone.

Uses permissible if allowed by competent authority after special appeal:

All uses allowed with special appeal in M.4 zone. All industries mentioned in schedule subject to standards stipulated on smoke, odour, fumes and noise produced in the working of the industry.

Uses prohibited:

Same as in M. 4 use zone.

**Illustrative list of permissible industries with conditions to be fulfilled is given in schedule of industries for each of the use zones.*

Extractive industrial use zone.

20. use zone. M.6

Uses permitted:

Removal of gravel, earth, sand etc. extraction of minerals. With and conditions imposed by competent authority; agricultural and uses-incidental to agricultural.

Uses permissible if allowed competent authority after special appeal;

Nil

Uses prohibited:

All uses not specifically permitted herein.

Ware-housing, storage and depot use zone.

21. use zone w

Uses permitted:

Warehousing, storage and depot for non-perishable and non-inflammable commodities and incidental use. Parking, loading and unloading area requirements must be approved for all uses.

Uses permissible if allowed by competent authority after special appeal:

Warehousing of perishable and inflammable commodities. Dwellings for watch and ward staff. Parking, loading and unloading requirements must be provided.

Uses prohibited:

All Uses not specifically permitted herein.

Government offices:

22. Use zone G.

Uses permitted;

Local, state and central government offices and use for Defense purpose; research institutions; social and cultural purpose; institutions, bus and railway passenger terminals, public utility and buildings, local municipal facilities, uses incidental to government offices and for their use. Parking requirements must be approved.

Uses permissible if allowed by competent authority after special appeal:

Nil

Uses prohibited:

All these not specifically permitted herein.

23. Recreational:

Use zone p.

Uses permitted:

All public and semi-public recreational uses including parks. Play grounds, park way and boulevards; special recreation areas and special educational and recreational areas; bus and railway passenger terminals and car parking area. Parking area requirements must be approved in all cases.

Uses permissible if allowed by competent authority after special appeal:

Out door theaters and drive-in-cinemas, restaurants and sealing of eatable; public utility and municipal facilities; uses clearly incidental to recreational use which will not create nuisance of hazard. Dwelling for watch and ward staff. Parking area requirements must be provided.

Uses prohibited:

Uses not specifically permitted herein.

Public and semi-public facilities:

24. Use zone F.

Uses permitted:

Local and zonal municipal offices; educational and research institutions, social and cultural institutions; monuments and religious institutions; local municipal and community facility; public utilities and buildings; radio transmitter and wireless stations; cremation grounds and cemeteries. Parking area requirements must be approved for all uses.

Uses permissible if allowed by competent authority after special appeal;

Residences and other uses incidental to main use and in no way causing any nuisance or hazard.

Uses prohibited:

All uses not specifically permitted herein.

PROVISION REGARDING REQUIREMENTS IN USE ZONES:

Density, coverage, floor area ratio, Set back and other requirements of use zones.

Residential use zones:

GENERAL- For purpose of calculating density (which is indicated by a suffix like R 50 in the text or as 50 in the Land

Use plan for a density of 50 persons per acre) in the residential zones, one dwelling unit will have 4.5 persons.

A variation up to 10% of the gross density either way may be allowed in a layout plan. For example, for a density of 50, variation allowed is from 45 to 55.

In calculating gross density all local facilities and local streets and half the residential roads on the periphery of a layout plan (but not a major street of 100 ft. and above) will be taken in to account.

One servant quarter per plot should be provided in all detached and semi- detached house plots of 300 sq. Yards and more. Each servant quarter will be taken as one family in density calculation. Garages and one more servant quarter per plot are optional.

Good planning practices for designs of residential areas should include.

- (i) Light and air in the buildings.
- (ii) Protection against noise, dust and local hazards.
- (iii) Open space for various family needs;
- (iv) Easy circulation and access, safety from accidents;
- (v) As far as possible regular shape of plots; and
- (vi) An logical arrangement of residential plots by sizes and shapes

The translation of these requirements in to actual planning practices would vary with design relations and density patterns.

Individual plots:

(Row houses, detached and semi-detached houses.)

(a) Minimum plot size;

For a single family dwelling unit the minimum size of the plot should be 125 square Yards. The unit may be double storied.

For a two storey, two family dwelling, the minimum plot size should be 200 square Yards.

In the case of low cost housing for low income groups and slum rehousing and minimum plot size could be 80 square Yards but not less.

(b) Plot coverage:

On third of the area of the plot on all floors for plots having areas of 900 square Yards and over.

Forty per cent of the area on all floors for plot having areas

from 600 square Yards to 900 sq. Yards..

Fifty per cent of the area for ground floor and forty percent for the first floor per plots having areas from 300 square Yards. In case the ground floor coverage is reduced to 45%,the first floor can be up to 45%.

Fifty per cent of the area for all floors for plots having areas from 200to300 square Yards.

Fifty –six per cent of the area of the plot on ground and first floor on plots up to 200 square Yards.

The area to be covered need in no case be less than the permissible covered area for the largest size plot in the lower category. For example, the area to be covered on a 930 square yards plot can be 40 per cent of 900 square Yards i.e., 360 square Yards and not 1/3 of 930 square Yards which is only 310 square Yards

(c) Floors:

In individual residential plots, normally only two storied buildings may be allowed plus an optional provision of Barsati floor at the top. In plots of 500 square Yards and above, a building raised on stilts with one family unit each in first and second floor, and 2 garage and up to 2 one- roomed servant quarters on the ground floor may be permitted, in lieu of separate garages and servant quarters. Coverage and barsati are like for any other plot.

Where barsati is permitted, not more than 25 per cent of the covered area on the ground floor or the floor immediately below the barsati or 500 square feet, whichever is less, should be allowed to be covered including the area covered by a staircase leading to the barsati. The barsati may be enclosed.

In individual plots of 500 square Yards and above, which front on roads or right of way of 80 feet and above, full 3 storey construction may be allowed. No barsati will be allowed but a mumti (staircase) to the roof may be permitted. The coverage is like any other plot but the second floor coverage shall not exceed that of the first floor.

(d) Frontage of plots.

Each individual plot should provide a minimum frontage of 25 feet on the access road. The ratio of depth to frontage should normally range between 3.0 to 2.0 to 1.0.

(e) Set back links:

The following are back lines are recommended depending upon the depth of plot for individual plots.

Cont'd...

...Cont'd

Depth of plot in feet.	Minimum set back required from plot line in feet.
60 - 79	15
80 - 119	20
120 - 149	25
150 - 199	30
200 - above	40

(i) Front set back

(ii) Rear set back line:

Besides the front set back line, set back should also be provided at the rear of the plots according to municipal bye-law subject to height restrictions to allow sufficient light and air circulation.

(iii) side set back line:

Side set backs of at least 10 feet plot line on each side should be left on detached plots.

In semi-detached plots side set back on one side should be at least 10-0 from the plot line to the building line.

For row housing, corner plots should be suitably set back from the road right of way, according to traffic requirements.

(f) Service Lanes:

It is not necessary to have in the case of detached, and semi-detached housing. If provided, it should have a minimum of 15 feet right of way.

In the case of row and terraced housing, service lanes may be provided. It should have a minimum right of way of 15 feet. In case the length of the lane is more than 500 feet, the minimum right of way should be 20 feet.

Where garages are to be provided, in order to allow for easy turn of motor vehicles, the garages should be set back 15 feet from the centre line of the service lane.

Group Housing:

Group Housing development (two and multi storey apartments or low cost housing schemes) which will not be sub- divided in to the customary streets and plots, will be governed by good design standards to ensure open spaces and community facilities. The intensity of use and the net density in these are intended to be higher than that stipulated in the plan, provided the average gross residential density of the area under development of which the density requirements of

the plan .Also, no limits on the number of floors is stipulated expect those that may be imposed in areas near monuments, air ports, etc. Access to dwelling could be provided by walk ways and pedestrian paths and their idea would also be governed by design requirements. Adequate provision has to be made for parking and servicing and the walkways should open on a residential street of at least 45 feet or cul- de-sac or loop street or at least 30 feet.

In case of group housing having more than two storey, steps must be taken to ensure water in the higher floors. For this purpose booster pumps and stair-cases should be provided for more than 4 storey high buildings. Also open balconies for open air sleeping or air conditioning must be provided. In order to encourage higher storey development which will provided more open spaces by having lesser coverage, a higher floor area ratio is allowed. The minimum plot size for this sort of development is one acre. Set back and the arrangement of blocks, garages etc. will have to be approved in each case so that a healthy development is ensured. The following Coverage and floor area ratio for various densities are purposed (low cost group housing subsidized by public agencies is not covered by this).

Gross residential density (persons per acre)	Maximum coverage%	F.A.R*
25	25	75
50	25	75
60	25	75
75	30	125
100	33 1/3	150
125	33 1/3	150
150	35	150
200	35	175
250	35	175

“Agricultural Green Belt” and “Rural” use zones:

In order to preserve these zones in agricultural use certain restrictions on the size of the dwelling units should be imposed. They are as follows:-

Size of farm	Maximum coverage of dwelling unit	Maximum height of dwelling unit.
(1) 1 to 3 acres	250 sq.ft.	single storey maximum height 20 ft.
(2) 3 to 5 acres	1200 sq.ft.	-do-
(3) Above 5 acres	1500 sq.ft.	-do-

* F.A.R of floor area ratio $\frac{\text{floor area}}{\text{plot area}} \times 100$

- N.B.** (1) Set back for dwelling house should be 50 feet from any boundary line of the property.
- (2) where the property abuts an urban road, the dwelling building should be set-back from the centre line of that road by 200 ft. where the property abuts a village road, the building set back from the center line of that should be 100 feet.
- (3) No dwelling unit should be built within two furlongs of the right of way of any National highway.

Floor area is defined as plinth area on all floors unless specifically excluded.

Government offices:

(a) The Central Secretariat complex.

In order to achieve architectural composition and intensive use, the following provision are stipulated.

F.A.R.	200
Maximum ground Floor coverage Including 5% For covered Parking	25%

Another 5% may be allowed for covered garages for car and cycle parking. This area for parking on the ground floor will not be taken in to consideration for calculating F.A.R., but the offices space above it in first and upper floors will be counted. The total ground coverage including covered parking will not exceed 30%.

Semi-basement will be allowed for parking, servicing and storage and will not be taken in for F.A.R. calculation. It shall not exceed the ground floor coverage. Up to 50 per cent of the open area may be utilized for open parking and roads and the rest may be landscaped.

(b) All other location including those in District centers:

F.A.R.	150
Maximum ground Coverage including 5% For covered parking	20%
Extra covered parking	5%

Semi-basement and open parking as above.

Commercial and Retail:

(a) Connaught Place and Extensions, Minto Road and Ranjit Singh Road:

The size of plot will naturally depend on the layout of the commercial area but any further sub-division of plots in the Connaught place and its proposed extension area is not desirable.

F.A.R.	400
Maximum ground floor coverage	50%
Covered garages For car & cycle	5%
First floor coverage	50%
Coverage for second Floor and above.	35%

Semi basement, covering not more than the ground floor coverage, will be allowed for parking, servicing and storage and will not be taken in to F.A.R. calculations. Up to 50% of the open area may be utilized for open parking and roads and the rest may be landscaped.

There is no limit on the number of floors but will be subject to air and light planes.

Minimum set back:	For plots fronting 150 feet wide road.	For plots fronting 100 feet wide road and less.
front	50 feet	40 feet
Rear	20 feet	20 feet
Sides	15 feet	15 feet

Service lane, if provided, should have a minimum right of way of 30 feet. In case there is a service lane on the side or rear, then the set back for ground and first floor is optional but should not be less than 20 feet for second floor and above.

(b) Chandni Chowk Asaf Ali Road and Commercial areas in the Old City shown in Plan:

F.A.R.	300
Maximum ground floor coverage	65%
First floor coverage	65%
For Second floor and above	50%

District Centres and proposed Central Business District in Shahdara and Karol Bagh:

The F.A.R and maximum coverage for flatted factory and Government offices in District Centres have been

stated separately. The provisions below apply to the retail, commercial and service industrial areas which should be worked out as a composite scheme. The coverage is for the whole commercial area and not for plots.

F.A.R.	150
District Centres upto 25 acres.	Maximum coverage 30% on ground floor including covered parking.
District Centres more than 25 acres	Maximum coverage 25% on ground floor including covered parking.

Semi basement for parking, servicing and storage may be permitted. This should not exceed ground floor coverage, but should not be taken in to consideration in F.A.R. calculation.

Community Centres and retail centres shown in the Plan:

F.A.R.	100
Maximum coverage on ground floor	35%

Neighborhood shopping centers:

F.A.R.	100
Maximum coverage on ground floor	40%

Wholesaling:

F.A.R.	150
Maximum coverage floor coverage	50%

Basement allowed as in commercial and retail areas.

Minimum set back:

Front	25 feet
Rear	15 feet
Sides	15 feet

General warehousing, storage etc.

F.A.R.	150
Maximum ground floor coverage	60%

Minimum set back:

	For plots below ¼ acre.	For plots ¼ to 1 acre.	For plots above 1 acre.
front	15 feet	25 feet	50 feet

Rear	15 feet	15 feet	25 feet
Sides	Optional	15 feet	15 feet.

Basement allowed for parking, servicing and storage and should not exceed ground floor coverage. Not counted for F.A.R. calculations.

Special consideration for F.A.R. coverage, set backs, parking etc. Will be specified for special trades like grains, oil, timber and other building materials.

Flatted Factory (in central areas):

Minimum plot area	one acre
Maximum No. of floors	6
Maximum coverage	40%
F.A.R.	150

The minimum number of floors allowed is two. A basement, not exceeding ground floor coverage, is allowed for storage and servicing only and will not be taken into floor area ratio calculations.

Minimum set back:

Front	50 feet
Rear	50 feet
Sides	20 feet

Industrial-cum-work centre:

(In District Centres and in outlying areas).

Minimum plot area	two acre
Maximum No. of floors	10
Maximum coverage	33 ⅓
Floor area ratio	120

The minimum number of floors allowed is two. A basement, not exceeding ground floor coverage, is allowed for storage and servicing only and will not be the taken into account in floor area ratio calculations.

Minimum set backs as for flatted factory above:

Special industry:

Minimum plot area	two acres
Maximum coverage	15%
Maximum height	60 feet
Floor area ratio	25

Basement allowed as in flatted factory.

Minimum set back:

Front	100 feet
Rear	50 feet
Sides	20 feet

Light Industries:

Minimum plot area	400 sq. yards
Minimum frontage	40 feet
Maximum plot area	two acres (May be relaxed in special case upto 7 acres).

The following sliding scale of coverage and floor area ratios are

Plot area in acres	Maximum plot coverage	F.A.R
0.25 and below	50%	60
0.25 to 0.50	45%	60
0.50 to 1.00	40%	60
1.00 to 2.00	30%	60
2.00 to 7.00	30%	50

recommended. A basement allowed as in flatted factory.

	For plots ¼ acre and above.	For plots below ¼ acre.
Front	25 feet	15 feet
Rear	25 feet	15 feet
Sides	15 feet	Optional.

Minimum set back:

Service Industry:

Same regulations as for light industry.

Extensive Industry:

Minimum plot area - one acre

However, for the relocation of existing industry the plot area may be reduced to 0.5 acre but not less.

The following sliding scale of coverage's and floor areas ratios are recommended. A basement allowed as in flatted

Plot area in acres.	Maximum plot coverage.	F.A.R
0.50 to 1.00	35%	35
1.00 to 5.00	30%	35
5.00 to 10.00	25%	25
Above 10.00	20%	20

factory.

	For plots size upto one acre	For plots size above one acre
Front	25 feet	50 feet
Rear	25 feet	50 feet
Sides	15 feet	20 feet.

	For plots size upto 2 acres.	For plots size above 2 acres.
Maximum coverage including covered parking.	33⅓%	25%

Minimum set back:

INSTITUTIONAL USES:*

B. SUB-DIVISION REGULATIONS

Nature of Regulations:

The purpose of these regulations is to guide the development of the now areas in accordance with the Land Use Plan. As long as this is done along sound planning principles with adequate space standards, the future of the city is assured. This will obviate the necessity of costly corrective measures which would be necessary if sub-standard growth is allowed to take place. While the requirements regarding of streets, street lighting etc. will be governed by municipal bye-laws, the sub-division regulations here will be confined to standards for street widths and community facilities which are laid down as a sliding scale according to the density.

Development Zones :

For Planning purposes Delhi has been divided into eight Planning Divisions. These are bases on the physical features, historical growth, character of development, intensity of land use and the circulation pattern. The purpose in making these divisions is to have more or less self-contained units for purposes of living, employment and recreation. The Division boundaries overlap municipal boundaries.

These Divisions are too large an area for which to prepare development plans. Portions of it may not be developed for the next 10 to 15 years. Hence to obtain workable units, the planning divisions have been further sub-divided into 136 development zones as shown in the accompanying map. Change in land use, existing physical features, railway lines

**F.A.R. will be determined on the merits of each individual case depending upon the location and the nature of use.*

and major arteries act as boundaries for the zones. Municipal boundaries, election and census wards have also been taken into consideration in drawing up these boundaries though they have not been the decisive factor in their delimitation. The “Development Zone” are not to be confused with “Use Zones” referred to earlier.

	Planning Divisions.	No. of Development zones.
A	Old City	28
B	City Extension	7
C	Civil Lines	20
D	New Delhi	21
E	Shahdara	16
F	South Delhi	19
G	West Delhi	17
H	West Yamuna Canal or North West Delhi.	8
	Total:	136

Zonal Development Plans:

After the Master Plan is sanctioned all new developments shall take place according to Zonal Development Plans. This is to insure that the future development is a healthy one, with provision made for community facilities and services. Only by providing these will the community function and grow up in a manner that will help avoid future and social imbalances.

Community structures:

The Pattern of Self-contained planning divisions has been conceived from the bottom upwards. The lowest tier in the urban complex will be the “housing cluster” containing 750 to 1000 populations. These clusters roughly correspond to the traditional “Mohallas” or Kuchas” in the old city and, in fact, is found in the rudimentary form in almost all of the Indian cities and towns. It will have as its nucleus a nursery school with a tot lot. These housing clusters or “Mohallas”grouped together around a primary school and convenience stores with a small park will form a “residential unit” Containing a population of between 3500 to 5000 people.

However, for purpose of a wider range of community activities, the “residential planning area” of 12,000 to 15,000 population (containing roughly 3000 families) is envisaged, which will have for the focal point a high school and a community hall with adequate neighborhood shopping for the day to day needs. For the provision of additional facilities such as a health centre, Library, cinema, better shopping and recreation centers, three residential planning areas have been grouped to form what is called a community with a Community Centre”.

Several of these communities have been grouped to form a District with a “District Centre” . This is a composite retail shopping centre with commercial and service uses. In some cases they will have a small area for development Offices and an industrial work centre to provide employment. This will serve a populations ranging from 150,000 to 250,000.

URBAN DELHI	
Eight Planning Divisions	(each 300,000 to 750,000) population
3 central Business Districts and 15 District Centres.	(each District Centres serves 150,000 to 250,000 population.
Community Centre	for 40,000 to 50,000 population.
Residential Planning Areas	(each 12,000 to 15,000)
Residential Units	(each 3500 to 5, 000 population)
Housing Clusters	(each 750 to 1,000 population).

The District centers have been shown in the Land use plan .In the zonal development plans, the community centers will have to shown as also the residential planning area centre. Also, high school, residential planning area parks and primary schools have to be shown. The other facilities listed in the standards will have to be shown in detailed layout plans.

Standards for 15,000 population.

The basis on which the standards have been arrived at is fully discussed in the chapters on education ,Recreation etc. and housing and Neighborhood. Here only the standards are given. Standards for the old city are given separately.

Pre-primary schools:

Sites will have to be reserved for 10 pre-primary schools varying from 0.2 to 0.75 acre each, according to density varying from 200 to 50 persons per acre. Optimum size of schools is 75 students.

Basic primary school.

There will be 4 schools for the age group 6 to 14, the optimum size being about 600 students. The size will vary from 1.5 to 2.5 acres for densities varying from 200 to 50 persons acre. Total covered area is about 15,000 sq. ft.

Higher secondary school.

This will have over lapping age –groups with basis primary school viz. 11 to 14. . so the students attending this will be in the age group 11to 17. tShe optimum size being about 1,000 students. There will be one school of size varying from 5 to 10 acres for densities varying from 200 to 50 p.p.a. Total covered area is about 35,000 sq. ft.

TABLE NO: 1

STANDARDS FOR SIZE OF SCHOOLS (EXCEPT IN OLD CITY)

Gross Residential density.	Higher Secondary School for 1,000 pupils.		Basic Primary school for 600 pupils.		Pre-primary School for 75 pupils	
	Persons per acre	Acres	Storeys	Acres	Storeys	Acres
*25	12.00	1 to 2	4.0	1	1.0	1
50	10.00	1 to 2	2.5	1	0.75	1
60	10.00	1 to 2	2.5	1 to 2	0.75	1
75	8.0	2 to 3	2.5	1 to 2	0.50	1
100	7.0	2 to 3	2.0	1 to 2	0.50	1
125	6.0	3 to 4	2.0	2 to 3	0.25	1
150	6.0	3 to 4	2.0	2 to 3	0.25	1
200	5.0	4	1.5	3	0.20	1

**There are no new areas under a density of 25 p.p.a. and the standards given above pertain to existing areas, which may, at a later stage be redeveloped.*

Parks and open space:

District parks have been shown in the Land use plan. In addition, local park and playgrounds have to be shown in zonal and detailed plans. The standards are on a sliding Scale and vary with density.

TABLE NO: 2

Standards for parks and playgrounds for 15,000 population (except in Old City).

Gross residential density.	Parks	Playground	Tot lots	Total open space.
persons per acre	acres	acres	acres	acres
25	19.50	9.00	1.50	30.0
50	16.50	9.00	1.50	27.0
60	14.50	9.00	1.50	25.0
75	14.50	7.00	1.25	23.20
100	14.25	5.00	1.25	21.5
125	10.25	5.00	1.25	17.5
150	10.00	4.00	1.00	15.0
200	9.00	2.50	0.75	12.25

Note: Area under parks will be shown in Zonal Development Plans whereas playground and tot lots will be shown in detailed layout plan.

Shopping:

District Centers have been shown in the Land use plan and will have 200 to 350 shops for 1.5 lakhs to 2.5 lakhs population. A few community centers which serve 40,000 to 50,000 population have also been shown. Others will have to be shown in zonal Development plans. These will

have 80 to 100 shops. The next level is local shopping at the Residential planning area centers of about 15 to 20 shops to cater for 12,000 to 15,000 population. Then there would be 4 to 6 shops called "convenience shopping" for 3,500 to 5,000 population. Table No. 3 gives the various shopping centres.

TABLE NO: 3

SHOPPING & OTHER FACILITIES AT THE VARIOUS TIERS OF PLANNING AREAS.

Pop. 1,50,000 - 2,50,000	Pop. 40,000 - 50,000	Pop. 12,000 - 15,000	Pop. 3,500 - 5,000	Pop.750 - 1000
Shopping 200 to 350 shops, flatted factories and service industry & Govt. offices.	No. of shops 80 to 100 Library Religious Building. Cinema Petrol Pump (Service Garage) Shopping and service industry professional offices, Health Centre, Post Office and Telegraph office, Telephone Exchange, Police Station, Fire Station and Electric and Sub-Station.	Local shopping 15 to 20 retail shops, plus service shops, professional offices. Community Hall High School Parks.	Convenience shopping. No. of shops 4 to 6 Primary school. Playgrounds.	Tot lots. Nursery School

TABLE NO: 4.

SHOWING DISTRIBUTION OF RETAIL SHOPPING AREAS IN ZONAL DEVELOPMENT PLANS.

Gross residential density	Community centre (Including shopping, service industry and garages, community facilities.		Residential Planning Area centre or Local shopping (including community Hall).		Convenience shopping in residential units (only shopping)	
	p.p.a.	Acres	No. of shops.	Acres	No. of shops.	Acres
25	15.0	80 to 100	1.75	15 to 20	0.50	4 to 6
50	13.0	-do-	1.50	-do-	0.50	-do-
60	12.0	-do-	1.40	-do-	0.50	-do-
75	10.0	-do-	1.30	-do-	0.40	-do-
100	8.0	-do-	1.10	-do-	0.30	-do-
125	7.5	-do-	1.00	-do-	0.30	-do-
150	7.0	-do-	0.90	-do-	0.30	-do-
200	6.0	-do-	0.80	-do-	0.20	-do-

TABLE NO: 5.

STANDARDS FOR OTHER COMMUNITY FACILITIES

Description		Standard	Remarks.
1.	Post & Telegraph office with delivery and booking	6,000 sq.ft. floor Space and 4 staff quarters one for 100,000 population.	To be located in one out of every two community centre.
1B.	Telephone Exchange its of 10,000 lines.	Half acre	To be located in community centres in specific locations.

2.	Electric sub-station.	Aplot 40* 40 with storage space	In shopping centres.
3.	Health centre. Out patients + 15 beds +staff quarters.	One acre for 22,000 population.	May be located in District or community centres or
4.	Police stations with staff quarters.	1.5 to 2.5 acres for 75,000 to 100,000 population. Size of plot depends on density and number of storeys.	To be located in District Centres or in one out of two community centres.
5.	Cinemas	One no.for 50,000 population size varying from 0.50 to 0.75 acres for 500 capacity with essential parking facilities. For larger capacity more area is required.	To be located in District and community centres.
6.	Fire station with staff quarters.	1.5 to 2.5 acres with in 3 mile distance.	To be located in District or community centres.
7.	Religious Building	Half an acre for 15,000 population.	In residential planning area centres.
8.	Community Hall and Library.	For 15,000 population	In residential planning area centres
9.	Petrol pumps, service industry and service garages.	With suitable parking areas.	In District and community centre.

STREETS:

The amount of land required for streets will depend on the type of housing developed proposed in the detailed layout plans. To guide these along desirable lines the percentage of dwelling units or community service persons, detached and semi-detached plots, row housing and multi-family apartment housing, various densities have been given in Table 9. The

percentage of land in streets can be reduced considerably by having larger areas in group housing and multi-family apartments rather than in individual plots. Hence, two sets of percentage have been given in Table no.8, for streets and for area available for residential use. The more area is used for streets, the less is available for residential use, The following standards for streets are laid down in Table 6.

TABLE NO: 6.

STREETS IN RESIDENTIAL AREAS

1.	Cul-de-sac	30 ft. rt. of way	Maximum length 500 ft with sufficient turning radius.
1a.	Loop street	30 ft. rt. of way	Maximum length 1500 ft.
2.	Service lane	20 ft. rt. of way	Maximum length 1000 ft. Upto 500 ft. length.
3.	Residential streets	45 ft. rt. of way	
4.	Collection street	60 ft. rt. of way	
5.	Feeder	80 ft. rt. of way	

SPECIAL SPACE STANDARDS:

In view of the extreme difficulty in finding enough land for community facilities space standards are relaxed for the Old City. Table No. 7 gives the space standards. school etc. may be started by the Municipal Corporation on an ad-hoc basis until

zonal development plans are prepared for types areas. Also construction of school building may be started on such areas is immediately available and the area increased subsequently to the standard laid down, as and when it become practicable.

TABLE NO: 7

SPECIAL SPACE STANDARDS FOR THE OLD CITY

Description	Standard for 1st stage.	Ultimate size	REMARKS.
Higher Secondary	1.0 acres	1.5 acres	This standard is for a school of 1000 students to serve 15,000 population. Covered area 35,000 sq.ft. in 4 floors. Built up area 1000 sq. yards with 33-1/3% coverage as per byelaw, minimum plot area required 3000 sq. yds. with a minimum of play space provided. Total plot area recommended is 1.0 acre. The school may be used as a community centre also.
Primary School.	0.5	0.75 acres	This standard is for a school of 600 students to serve 3750 population. Covered area 15,000 sq.ft. in 3 floors. Built up area 560 sq.yds. Minimum plot area 1680 sq. yards with a minimum of play space provided. Total plot area recommended is 0.5 acre. It may also have a nursery school attached.
Open space	0.25 acres per 1000 population	0.30 acres per 1000 population.	The open spaces should, –as far as possible, be provided near schools. Minimum plot area of an open space should be 200 sq.yards.
Health Centre	300 sq.yds.per 22,000 population	300 sq.yds.	100sq. yards of built up area 3 storeys. Total covered area 300 sq. yards.
Police Station	1.5 acres per 75,000	1.5 acres	
Fire Station	1.5 acres per 100,000	1.5 acres	

**SUGGESTED UNIT REQUIREMENTS FOR RESIDENTIAL PLANNING AREA
RESIDENTIAL PLANNING AREA OF POPULATION 15,000 WITH
ONE HIGHER SECONDARY SCHOOL**

Gross Residential Density (persons per acre).	Total Area Required.		Higher Secondary Schools (one).		Basic Primary schools (4 Nos.)		Nursery 10 Nos.		Sub-Total		Parks and Play grounds.	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
25	300.0	100.0	12.0	2.0	16.0	2.7	10.0	1.6	38.0	6.3	30.0	5.0
50	300.0	100.0	10.0	3.3	10.0	3.3	7.5	2.5	27.5	9.2	27.0	9.0
75	200.0	100.0	8.0	4.0	10.0	5.0	5.0	2.5	23.0	11.5	23.0	11.5
100	150.0	100.0	7.0	4.7	8.0	5.3	5.0	3.3	20.0	13.3	21.5	14.0
150	100.0	100.0	6.0	6.0	8.0	8.0	2.5	2.5	16.5	16.5	15.0	15.0
200	75.0	100.0	5.0	6.7	6.0	8.0	2.0	2.7	13.0	17.3	12.2	16.4

Cont'd...

Shops & other Commercial establishments.		Other Community Services.		Total community Facilities and services.		Street and roads.		Area under residential plots.		Average plot area per family (sq. yds.).
Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	
2.9	0.5	3.7	0.6	74.5	12.4	90.0	15.0	435.5	72.6	632

Cont'd...

Shops & other Commercial establishments.		Other Community Services.		Total community Facilities and services.		Street and roads.		Area under residential plots.		Average plot area per family (sq. yds.).
Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	
2.5	0.8	3.5	1.2	60.5	20.2	30.0	10.0	209.5	69.8	304
						60.0	20.0	179.5	59.8	261
2.0	1.0	3.0	1.5	51.0	25.5	24.0	12.0	125.0	62.5	182
						45.0	22.5	104.0	52.0	151
1.5	1.0	2.5	1.7	45.5	30.3	18.0	12.0	86.5	57.7	126
						33.7	22.5	70.8	47.2	103
1.5	1.5	2.0	2.0	35.0	35.0	15.0	15.0	50.0	50.0	73
						25.0	25.0	40.0	40.0	58
1.3	1.6	1.5	2.0	28.0	37.3	11.3	15.0	35.7	47.6	52
						18.8	25.0	28.2	37.6	41

TABLE NO: 9.

SUGGESTED HOUSING TYPE FOR VARIOUS DENSITIES WITH IN A RESIDENTIAL PLANNING AREA (15,000 population)

In Areas with Gross residential density (persons per acre).	Percentage of housing units to be provided for			
	Service personnel family housing e.g., Dhobis, janitors, Jamadars, Malis, domestic service.	Detached and semidetached housing.	Row Housing	Multi-family Apartments.
25	5%	80%	10%	5%
50	5%	70%	15%	10%
60	5%	52%	30%	15%
75	5%	35%	40%	20%
100	5%	25%	45%	25%
125	5%	25%	45%	25%
150	5%	15%	40%	40%
200	5%	10%	25%	60%
Above 200	5%	5%	15%	75%

NOTE: Wherever areas have been earmarked for low income group housing or for the “jhuggi and jhonpre” scheme, they should be integrated with the neighbourhood and the community facilities provided should take them in to account.

APPENDIX - I

NOTE ON INDUSTRIES:

This note presents the general background – ground some factors which have a significant bearing on formulating a policy on the provision and location of industries in Delhi Region.

I. Existing Situation:

According to 1951 Census approximately one-sixth of the economically active population of Delhi was engaged in manufacturing as a principal occupation. Since that time manufacturing employment in medium and large scale industries has increased by about 40 percent and on the basis of the National Sample Survey of the small scale industries in 1954, it may tentatively be concluded that there has been a similar increase in small scale and handicraft employment.

Due to an abnormal influx of population immediately after the partition of the country, and subsequent increase in Central Government activities, there is a considerable number (estimated to be nearly one lakh) of people engaged in building construction. The latest reports from the Bureau of Economic and Statistics, Delhi State, show that there are, in all 783 factories; of these only 6 factories employ more than 1,00 workers and these are only 67 firms which employ more than 100 workers.

Compared with other metropolitan centers, Delhi organized industry is relatively small. The major sources of employment are government, trade and services, and to a considerable extent, manufacturing employment is in trades which serve the local population. There is, however, a large unorganized industry sector which serves a market larger than Delhi has also been growing steadily in recent years.

There is every likelihood that considerable further growth may be expected in the governmental, professional services industries sector in Delhi. As a national capital, the city is certain to attract more cultural professional activities, and as type major commercial centre in north, west India, Delhi is likely to expand and improve its trading sector. Many of these activities will attract relatively high income people to Delhi and this, in turn will stimulate retail trade and a multitude of personal services.

It is, however, desirable to prevent too rapid a growth of Delhi since this would increasingly tax public utilities, water supply & sewage system, electric power supply, and other community facilities such as schools, parks, playgrounds which are already in short supply.

During the next two decades, however, the increase in population is bound to generate the need for certain essential services, additional consumer goods, and industries required to maintain a big metropolitan centre like Delhi. Considering the relatively low proportion of 17.3 percent people engaged in occupations related to industries at present, a certain amount of industrialization is, however, desirable.

At present there is considerable unemployment, and with the easing up of the unusual building activity in the next ten or fifteen years. It is likely that unemployment may further increase unless other avenues of employment for the building workers are opened.

Delhi is now third largest urban centre in India, and since it is the National Capital, and a centre for many specialized business, cultural and educational activities, the level of average income in Delhi is probably somewhat higher than in most other Indian cities. This consequently means that there is a relatively greater demand for a variety of consumer goods in Delhi. Since, in many consumer goods industries, the cost of shipping of finished products is considerably higher than the cost of shipping the raw materials, it may be economical to establish certain industries, the products of which are mainly consumed in Delhi.

On the basis of these considerations it may be said that a certain degree of industrialization would be desirable both economically and socially. Even if the percentage of people engaged in industry would increase to 25 per cent, it would not change the basic character of the city. It would not be desirable to plan Delhi as a major industrial center, but it can be said that 25 percent of working population in industries properly planned and located would not spoil the pleasantness and dignity of a National capital. Quite aside from any increase in the percentage of industrial workers, it may be expected that the manufacturing employment in Delhi will increase very substantially as a result of the increase in population.

*A study of 77 largest Indian cities reveals that a city tends to show predominantly industrial character when more than 30% of its working population becomes engaged in industrial production.

It should further be noted that in the past only a small portion of the industrial working force has been employed in large scale industry. Probably not more than 20 Per cent of all persons all livelihood classes are in relatively large plants. The rest being accommodated in small and even minute enterprises ' policies with respect to the provision of industrial land may ' there for, be based on the expectation that small and medium sized industries will grow ' and in time the bulk of manufacturing employment will be shifted out of handicraft and very small shops in to the organized sector of manufacturing. In this case there need not be any growth of very large manufacturing plants employing over 500 employees in the immediate urban area.

II. Considerations for future industrialization:

Having decided that a certain amount of industries would be feasible in Delhi, the second question is to examine the considerations which should govern the policy of industrial establishment and location. Following are some of the major points.

- 1 (a) Existing industries should not be discouraged or expelled; attempts should be made for their better and more efficient officers.
- (b) In case of objectionable industries or those located in residential or congested areas, special attempt should be made to induce them to move out from congested areas in to specified industrial areas.
2. In allowing new industries, preference should be given to industries preference should be given to industrial which are essential for either feeding ' servicing or maintaining Delhi' s population.
3. The relatively high level of income in Delhi would make it economical that certain type of consumer goods that are mainly consumed in Delhi may be produced in or around the city.
4. Industries associated with administrative ,educational and cultural activities of Delhi may also be encouraged to a point (for example printing and publishing firms.)
5. A good proportion of Delhi industrial population possesses some highly developed skills, and in some cases, they have already established small scale plants which require highly skilled workers in such fields as metal working machinery, building, jewellery, wood-work, printing etc. some of these plants also provide training for apprentices, and there seems to be a growing tradition of skilled occupations. There is every reason to preserve this, and expend this valuable resource of the country; such industries should be encouraged which demand special skills which are available in Delhi and produce commodities of high unit value.
6. Delhi is known for some of its traditional arts and crafts; many of them now unfortunately are still being done on cottage and domestic scale in miserable conditions. There should be no objection to their increase for they provide an additional income to the families. Such industries should be encouraged on cooperative lines.
7. Especially since partition Delhi has become a centre of industrial development based largely on industries employing under 500 people and on very vigorous individual initiative. This growing industry makes a strong contribution to national economic development . In allocating space for industries, preference should be given to those firms which are now inadequately housed in congested locations and which need room for adequate growth. Provision should also be made for rehousing very small industries presently in mixed land uses in the old city.
8. Present plans for water supply and electricity supply by the Delhi Municipal corporation indicate a provable continued shortage of these two basic services. It follows ,therefore, that unless the water and power situation improves ,industries using large amounts of power and water should be discouraged from locating in Delhi.
9. In general ,Delhi is not a suitable location for heavy industries and for large self-contained industries employing thousands of people. It is also undesirable to locate within the city industries creating problem of waste disposal, smoke fumes, water pollution ,etc.
10. The location in Delhi of new industries employing then 500 workers should be carefully considered and it may be advisable to limit them to the Ring towns and the National Capital Region. The availability of industrial land in Delhi being limited, industries requiring large areas should also be excluded.
11. It is desirable that industries should provide adequate housing to its employees and the related community facilities.

III. Creation of Employment Opportunities Around Delhi.

At present Delhi is the largest population centre in north west India, and therefore ,is a powerful magnet for attracting

people from various parts of the country and particularly from the adjoining states. There is natural tendency of migration from rural areas and mostly it is unskilled labour. Some studies done by the Delhi school of Economics and other show that migration to Delhi is to establish employment opportunities around Delhi in the Rajasthan and Southern Punjab them from west U.P. or Northern Punjab. A feasible way to discourage excessive migration to Delhi is to establish

employment opportunities around Delhi in the Ring towns especially in the directions where most of the people come from.

IV. The following are illustrative lists of industries that may be allowed in the various zone of urban Delhi. It has also lists of large scale of obnoxious industries that need to be kept out of urban Delhi. It may be pointed out that conditions indicated in each case are for general guidance.

SCHEDULE OF INDUSTRIES

‘Use Zone’ in MASTER PALN	Location	Type of Industries	Conditions to be fulfilled
1	2	3	4
I. “Flatted” Factories and “work-cum-industrial centres”.	In the areas shown in the Master Plan in the urban core and District centres as listed in the chapter “Land Use Plan” and other specific sites metioned therein.	<ol style="list-style-type: none"> 1. Bread and bakeris 2. Confectionary, Candies and sweets 3. Biscuit making. 4. Ice, ice-cream and creamery 5. Cold storage (small scale) 6. Aerated water and Fruit beverages 7. “Atta chakkies” with power. 8. Tailoring and garment making 9. Handlooms 10. Hats, caps, turbans including embriodries. 11. Hosiery including knitted garments. 12. Gold and silver thread, Kalabattu, zari work. 13. Shoe lace. 14. Toy making (earthen, paper, wooden plastic, metal and tin). 15. Cotton and silk cordages, twine thread and silk cordages, twine thread and threadball making. 16. Velvet embriodered shoes 17. webbing (narrow fabrics) embroidery, lace manufacturing. 18. Ivory carving 19. Artwares, and silk screen printing and batik work. 20. Jewellery, gold ornaments and silverwares. 21. wood and stone carving 22. Electroplating, minaplating, engraving. 	<p>Only small scale industries are allowed employing not more than 20 workers with power of 10 H.P. or 40 workers without power. Some of the industries, like foundries in repair workshops and metal works should be allowed only in ground floors so as to avoid nuisance to other industries in the same building.</p> <p>Each industry to be permitted is subject to its performance characteristics, namely:</p> <ol style="list-style-type: none"> 1. noise 2. Vibration 3. smoke 4. dust 5. odour 6. effluent 7. general nuisance.

'Use Zone' in MASTER PALN	Location	Type of Industries	Conditions to be fulfilled
1	2	3	4
		23. Photographs, painting (including sign board painting)	
		24. Mirrors and photo frames	
		25. Umbrella assembly.	
		26. Bamboo and cane products.	
		27. Sports goods.	
		28. Cardboard box and paper products including paper mache.	
		29. Stationery items including educational and school drawing instruments.	
		30. Furniture making (wooden and steel).	
		31. Cotton and silk printing.	
		32. Printing, book, binding, embossing, photogramme etc.	
		33. Small domestic appliances and Gadgets (Room heaters, coolers Hot-plates, Irons, Lamps etc.).	
		34. Zip Fastners.	
		35. Musical instruments.	
		36. Optical lense grinding, watch & pen repairing.	
		37. Rubber stamps.	
		38. Manufacturing of trunks and metal boxes, suit-cases and small containers.	
		39. Steel wire products.	
		40. Sheet metals works.	
		41. Metal polishing.	
		42. Laboratory poreclain & dental poreclain wares.	
		43. Radio assembly and parts (small scale)	
		44. Fluorescent light fittings including neon signs.	
		45. Electric lamps, shades fixtures etc.	
		46. Automobile, scooter and cycle service and repair workshop.	
		47. Laundry and dry cleaners.	
		48. General jobbinmg and machine shops.	
		49. Iron foundries (only when related to other industries).	
		50. Brushes (house-hold, sanitary and toilet).	
		51. Shoe making and repairing.	
		52. Leather goods.	
		53. Rings and eyelets.	

'Use Zone' in MASTER PALN	Location	Type of Industries	Conditions to be fulfilled	
1	2	3	4	
II. "Special Industry"	Near Engineering College in South Delhi.	1. Scientific educational & industrial precision instruments.	Only 'assembly' of the components will be allowed. Strict performance standards should be enforced. Smoke, noise, fumes or effluent of any kind should not be allowed. Extensive landscaping with attractive building design are quite essential. The industry should preferably have research laboratories and training facilities. Minimum site = 2 acres for details of FAR, coverage etc. see Zoning Regulations.	
		2. Clocks and watches, photographic equipment.		
		3. Typewriters		
		4. Electronic instruments (includes Transisters)		
		5. Calculating machines (small machines only).		
III. "Service Industry"	Area west of Pusa Institute and near Cantonment.	1. Bread and Bakeries	Service industries listed here should be given preference. Industries listed under 'Flattedfactory' and 'Light Industry' may also be allowed. In all cases the upper limit is industry employing not more than 50 workers with power 100 workers without power. Maximum plot size 2 acres Minimum plot area 400 sq. yards.	
		2. Confectionary, candies and sweets.		
		3. Biscuit making		
	Roshanara Road	4. Ice and ice cream and creamery		
		5. Cold Storage, Refrigeration		
		6. Aerated water and fruit beverages.		
	Area near Moti Nagar.	7. Atta chakkies with power		
		8. automobile, scooter and cycle service and repair workshops.		
	Area near Tilak Nagar. Area north of Wazirpur.	9. General jobbing and machine shops.		
		10. Blacksmithy		
	Area in the District Centres.	11. Iron foundries in specific locations within the service \angle and subject to their 'performance characteristics'.		\angle area
		12. Furniture (wooden and steel).		
		13. Printing, book binding, embossing etc.		
		14. Laundry, dry cleaning and dyeing facilities.		
		15. Household utensil repair, welding, soldering, patching and polishing (Kalai)		
		16. Electropolating, monaplating & engraving		
		17. Photographs, painting (including sign boards painting).		
		18. Metal polishing.		
		19. Vulcanizing and tyre retreading.		
IV. "Light Industry"	Okhla Small scale industries.	1. Fruit canning and preservation		
	Industrial area on Mathura Road including Housing factory, area.	2. Blower fans		
		3. Brushes and brooms		
	Lawrence Road area.	4. Cement products		

'Use Zone' in MASTER PALN	Location	Type of Industries	Conditions to be fulfilled
1	2	3	4
	<p>Area between Ring Road and goods avoiding railway line in N.W. Delhi. Area between G.T. Karnal Road and Rly. line South of Ring Road.</p> <p>Area between G.T. Ghaziabad Road and Rly. line near Jhilmila Area west of Anand Parbat.</p> <p>Sarai Rohilla Najafgarh Road.</p>	<p>5. Candle and wax products</p> <p>6. Chalk, Crayon, Artist's colour</p> <p>7. Tobacco products (cigarettes and bidis)</p> <p>8. Cosmetic and Hair oils</p> <p>9. Copper ware and utensils</p> <p>10. Cutlery</p> <p>11. Cycle parts and accessories</p> <p>12. Door and window fittings</p> <p>13. Drugs and medicines</p> <p>14. Lantern, torches and flash-lights</p> <p>15. Alumimium wares, cake and pastry moulds</p> <p>16. Padlock and pressed locks</p> <p>17. Rope making (vegetable fibre)</p> <p>18. Mathematical instruments</p> <p>19. Household kitchen appliances</p> <p>20. Builders hardware</p> <p>21. Tin products</p> <p>22. Optical frames</p> <p>23. Buttons, clips</p> <p>24. Shoe grindery</p> <p>25. Wax polishes</p> <p>26. Upholstery springs and other springs</p> <p>27. Precision instruments of all kinds</p> <p>28. Watch and clock parts.</p> <p>29. Razor blades</p> <p>30. Safety pins</p> <p>31. Sewing machines</p> <p>32. Sanitary fittings (not sanitary wares)</p> <p>33. Screws bolts and nuts, pulleys, chains and gears.</p> <p>34. Automobile parts and accessories</p> <p>35. Couduit pipe fabrication (not exceeding 2" dia)</p> <p>36. Electrial appliances (Room Heaters, Irons and Room aur coolers, small transformer, electric fans and fractional H.P. motors, cooking ranges, water heaters etc.).</p> <p>37. Iron foundarires (small)</p> <p>38. Electrical accessories</p>	<p>All uses allowed in Flatted Factory Special industry or in Service industry may be allowed in this zione. Type of industries listed here and employing not more than 50 workers without power or 100 workers without power may be allowed. Maximum plot area 2 acrs. Minimum plot area 400 sq. Yards. The industry should not be of thentype that is likely to require rapid expansion of plant in the near future. It should not produce excessive smoke and fame nuisance. Maximum plot area in special cases may be up to 7acres.</p>

'Use Zone' in MASTER PALN	Location	Type of Industries	Conditions to be fulfilled
1	2	3	4
V. Extensive Industry	North of Rohtak Road	<ol style="list-style-type: none"> 1. Slaughter House and ancillary industries 2. Footware 3. Leather upholstery 4. Other leather goods 5. Edible oils and fats (Medium Scale) 6. Cattle feed. 7. Flour mills 8. Toilet soap 9. Agricultural appliances and implements (Medium Scale). 	All industries allowed in the above areas may be allowed here. Since the Slaughter House is proposed to be located in this area, its ancillary industries may be given preference.
Extensive Industry.	Okhla Industrial area (south of small scale industries).	<ol style="list-style-type: none"> 1. Acids and chemicals (small scale) 2. Steel re-rolling mills (small scale) 3. Textile mills (medium scale) 4. Disinfectant and insecticides (small scale) 5. Rubber and rubber goods (small scale). 6. Dyeing, bleaching, finishing and processing cloth (including mercerising, calendaring glazing etc.). 7. Printing inks 8. Ceramics and potteries 9. Concrete and mosaic products 10. Plastic industries 11. Glass Factories (small scale) 12. Iron foundries (medium) 13. Electric motors, transformers, generators 14. Enamel ware 15. Steel joining 16. Builder's hardware 17. Cycles, scooter parts and accessories 18. Paints and varnishes. 19. Iron pipes (small size) 20. Hume pipes (small size) 21. Centrifugal pumps and small turbines) 22. Tarpaulin and tent cloth. 23. Galvanized buckets. 24. Fuel gases including by products. 	All industries allowed in other areas may be allowed here.
			Some of the industries listed here are noxious but may be allowed as long as they are not formance standards to keep nuisance to a minimum.
Extensive Industry	South Shahdara	All the above industries.	To enable relocation of existing noxious industries in this area restrictions are relaxed.

'Use Zone' in MASTER PALN	Location	Type of Industries		Conditions to be fulfilled
1	2	3		4
Extensive Industry	Mehpapur Road as show in Plan.	1.	Processing of clay and other earths	Industries using largely local materials will be allowed.
		2.	Pottery and ceramics	
VI. Mining and Extractive Industry.	Mining area is shown in the Plan.		Mining of chalk, clay and other earths including processing.	No Manufacture will be allowed. Mining is subject to any restriction stipulated in other Acts.
Lime and Brick kilns.	Beyond half a mile of the 1981 urbanizable limits.		Excavation of pit sand, lime & clay and lime and brick kilns.	The excavation shall not exceed 8 feet.
Stone quarries and crushing.	Beyond one mile of the 1981 urbanizable limits.		Stone quarries and crushing	Subject to any restrictions under any other Act.

UNDESIRABLE INDUSTRIES IN URBAN DELHI

'Use Zone' in MASTER PALN	Location	Type of Industries		Conditions to be fulfilled
1	2	3		4
Heavy and Large Scale Industries.		1.	Agricultural implements (large scale)	These should not be allowed to be located in urban Delhi. Some of these industries may be located in the Ring Towns and others in the towns of the National Capital Region.
		2.	Structural Steel Fabrication (Large scale)	
		3.	Diesel Engines.	
		4.	Electric wore and cable (large scale)	
		5.	Refractories	
		6.	Borax	
		7.	Optical glass	
		8.	Sugar	
		9.	Vegetable (hydrogenated) oils (large scale)	
		10.	Cement	
		11.	Glass (sheet)	
		12.	Cotton textiles (large scale)	
		13.	Wollen textiles (large scale)	
		14.	Blast furnance steel works, and rolling and re-rolling mills.	
		15.	Bicycles (large scale)	
		16.	Sewing machine (large scale)	
		17.	Hume pipes	
		18.	Automobiles and coach building	
		19.	Locomotives and wagon manufacturing	
		20.	Aircraft Building	
		21.	General Industrial machinery (such as hydraulic equipment, drilling equipment, boilers, etc.)	
		22.	Special industrial machinery	

'Use Zone' in MASTER PALN	Location	Type of Industries	Conditions to be fulfilled
1	2	3	4
		23. Under frames and chasses.	
		24. Sluice gates and gearings.	
		25. Cranes and hoists.	
		26. Lifts	
		27. Steel pipes and tubes	
		28. Wire ropes	
		29. Steel chains	
		30. Electrical Steel sheets and stampings	
		31. Stram Engines	
		32. Power Driven pumps and Pumping equipment.	
		33. Tractors & Agricultural machinery (power driven)	
		34. Industrial trucks, trailers, stackers, etc.	
		35. Earth moving machinery.	
		36. Air and gas compressors	
		37. Conveyors & conveying equipment.	
		38. Motor-cycles and scooters	
		39. Heavy Iron and Steel scooters	
		40. Foundries (heavy)	
		41. Other primary metal industries e.g. cold rolled sheets, alloy steel etc.	
		42. Telephone equipment.	
		43. Water turbines.	

PROHIBITED INDUSTRIES IN URBAN DELHI.

Nature of Industries	Location	Type of Industries	Conditions to be fulfilled
1	2	3	4
Obnoxious and hazardous industries.		1. Bone meal, bone and bone powder	These industries on a large scale are associated with undesirable features such as stenth, smoke unpleasant or injurious fumes, effluents and other hazards to the health and safety of the people residing in the neighbourhood. Hence, they should be kept out of Delhi Urban Area.
		2. Leather tanning.	
		3. Glue and gelatine	
		4. Animal fats	
		5. Carbon black, bone black and lamp black	
		6. Dye-stuffs and dye intermediates	
		7. Reclamation of rubber	
		8. Manufacture of industrial synthetic rubber	
		9. Manufacture of industrial rubber goods.	

Nature of Industries	Location	Type of Industries	Conditions to be fulfilled
1	2	3	4
		10. Distilleries and breweries	
		11. Power and industrial alcohol.	
		12. Acids and fertilisers	
		13. Alkaline Chemicals	
		14. Industrial gases	
		15. Bye products of petroleum (extensive)	
		16. Wood seasoning and curing.	
		17. Paper, pulp and paper board (including straw boards).	
		18. Manufacture of newsprint.	
		19. Printing ink	
		20. Manufacture of fire works	
		21. Manufacture of explosives and ammunition	
		22. Disinfectants and isecticides (large scale).	

APPENDIX - II

SUMMARY OF RECOMMENDATIONS

1. Union Territory of Delhi : The population of the Union Territory of Delhi which registered substantial growth in the last three decades is expected to be about 55 lakhs in 1981 it left to itself. It will, However, not be desirable to provided for such a big urban concentration. It is proposed to deflect some of the population in to the Ring Towns so that the population in Delhi can be kept to a manageable limit, which would be in the neighborhood of 46 lakhs for urban Delhi and about 50 lakhs for the Union Territory of Delhi.

2. The Delhi Metropolitan Area: The population of the Delhi Metropolitan Area, comprising the Union Territory of Delhi and the Ring Towns of Ghaziabad, Faridabad, Ballabhgarh, Grugaon, Bahdurgarh and Loni and certain rural areas, which was somewhat less than 21 lakhs in 1951, is expected to be close to 60 lakhs in 1981, of which 7,71,000 would be in the Ring Towns mentioned above, and 71,000 would be in Narela which is in the Union Territory of Delhi.

3. The National Capital Region: The population in the area designated as the National Capital Region., comprising the Union Territory of Delhi and the 8 adjoining Tehsils and 3 additional Tehsils of Meerut, Hapur and Bullandshahr, was 54 lakhs in 1951; it is expected to increase by more than 2.3 times and will, in 1981, contain a population of about 125 lakhs.

4. Ring Towns: In order to plan for the balanced and integrated development of the Delhi Metropolitan Area and to control the growth of urban Delhi, it has been suggested that a number of towns located within a ring of about 25 miles from Delhi should be developed to their optimum capacity by 1981. The population estimates for these towns (Narela, Ghaziabad, Faridabad, Ballabhgarh, Gurgaon, Bahadurgarh and Loni) have been worked out on the basis of allocating a portion of Delhi projected working force in manufacturing and Union Government employment to these towns. It may be possible to deflect roughly about 1,15,000 workers in manufacturing and 50,000 Union Government employees, which will provide an attractive economic base for the development of self-contained communities in these town-ships; in this way it may be possible to divert at least 4 lakh people from coming in to the Delhi Urban Area. Under the general frame-work of development of various land uses suggested in the plan, the Government of U.P. and Punjab, in which the Ring Towns are

located, will have to prepare Master Plans for each of these towns. Detailed proposals have been made in the plan for the town of Narela which is in the territory of Delhi.

Proposed Land Use-Urban Delhi:

5. Urbanisable Limits: The topography of Delhi and other natural features limit the expansion of Delhi which can grow only towards the north-west and Shahdara, and to a limited extent towards the south. The proposed urban sable limit of 1981 provides about 1,10,500 acres of land as against the present (1958-59) urbanized area of 42,700 acres.

6. The distribution of the total land available has been made keeping in view the future population and the activities for which space has to be provided. The functional relationship between the various land uses has been maintained and residential land requirements have been related to work areas, shopping recreation, circulation etc.

7. The entire urban sable area by 1981 has ,for planning purposes, been divided in to eight planning division. Each planning division has been so selected that it reflected its own character, physical, social and cultural ,as well as the pattern of land use. Each division is intended to be self-contained with a number of district centers and major work centers, community facilities and an adequate system of circulation. The proposed District Centers will have a collage, a general hospital and a district parks in its vicinity.

The eight planning Division are sum- divided in to 136 Development zones in order to have workable area for purpose of detailed planning.

8. Rational and healthy development: The pressure of population and consequent haphazard and sub-standard development of Delhi is to be relived by strengthening the economic base of the Ring towns by planning industrial development and location of government offices thee. Within Delhi the densities in the old city are as high as 1,000 per acre while in other areas, namely in some parts of New Delhi, it is as low as 15 to the acre. A more rational distribution of densities is proposed through a gradual thinking of the former and by increasing the density through redevelopment of areas in New Delhi, viz., Mata sundari Road, York place and Gole Market. Density patterns are to be functionally related to the work centers, recreation areas and community

facilities. In order to ensure healthy development, zoning and sub-division Regulations have been set down. These embody space standards for community facilities and services, and provisions regarding land use: density, coverage, floor area ratio, setback and other requirements. The regulations should be strictly enforced in regard to each kind of development and all the proposals in the plan are subject to those stipulations.

9. Government offices: The future of Delhi is envisaged as a major government centre but the increase in the proportion of government employment in the total employment is considered undesirable. The total acreage of the government offices is to be 900 acres by 1981. The Central Secretariat Complex is to be developed to its maximum capacity of about 200 acres to accommodate about 80 thousand temporary barracks are proposed.

10. Manufacturing & Industry: A total area of about 5,800 acres is recommended for industrial use by 1981. Of this 3,600 acres will be for extensive manufacturing and are distributed at the following locations, namely south of Okhla near the Marshalling Yard, Najafgarh Road area, between the railway line to Rewari and new industrial Road, between Rohtak Road and the railway to Rohtak and north of railway line to Rohtak, between G.T. (Karnal) Road and railway line, Shahdara between new railway line and new Highway to Ghaziabad.

11. A total area of about 1,600 acres is proposed for light and service industries which would be generally small non- nuisance industries that can operate near built-up areas with rigid enforcement of factory regulations. Development of small scale industries, of the type of the one at Okhla, should be encouraged in these areas. The major locations of these are at Lawrence Road, areas south of Ring Road and G.T.Road in the north-west, in Shahdara between G.T.Road and railway line, in sarai Rohilla, on Mathura Road, areas to the west of pusa Institute and near Anand parbat.

12. An area of about 100 acres has been earmarked, near the proposed institutional areas in the south, for such special industries which will assemble precision instruments without causing any nuisance whatsoever. Research and training facilities should be encouraged in this area.

13. Industrial-cum-work Centers are proposed at District Centers and at a few outlying areas. The total acreage is about 170 acres. These will be intensively developed, with three to four storey buildings, for locating small industries. Intensive use in flatted factories has been suggested within the core of the urban area, in such localities as Motia Khan Jhandewalan, Thompson Road, Ajmeri Gate, G.B.Road, and Shankar Market area. The total acreage is about 190 acres.

14. An area of about 350 acres has been earmarked for mining in the Mehpalpur area which is rich in pottery clay. Also a site of about 100 acres is recommended near the above maintained site for pottery factor is utilizing this local raw material.

15. Lime and brick kilns and the removal of clay should be located beyond half a mile of the urban limits of 1981. The stone quarrying and crushing area, however, should be located beyond one mile of the Urbanisable limits.

16. Storage of buildings materials like iron, steel, timber, cement has been allocated about 400 acres of land in the major industrial areas.

17. Commercial: Major commercial areas account for about 1,500 acres, excluding local shopping areas which are not shown in the plan but will be shown in detailed plans.

18. Chandi chowk – khari baoli – sadar bazar will continue to be the Central business district of Delhi. The existing hosiery and general markets north of South Bazar and the existing wholesale markets and dry fruits in Phatak Habash Khan to be retained but improved through proper planning and enlargement. It is recommended to redevelop the wholesale fruit and vegetable market in Subzimandi and in addition two more new sites, one near the Daya Basti Railway Station and the other near Okhla Railway Station have been earmarked for this purpose. The existing wholesale grain market in Naya Bazar and G.B. Road are to continue but storage of food-grains is to be shifted to the warehousing areas shown in the plan. A new area for wholesaling of grain has been in the Tailwara area is to be redeveloped after the relocation of the timber storage in the warehousing area. A wholesale cloth market will have to be redeveloped near the existing Krishna Market and Katra Neel, off Church Mission Road. The Connaught Place shopping centers is to be enlarged towards the east and south to have a total area of about 200 acres for general business and commerce and for retail trade as a central Business District. In order to centralise commercial activity, 15 District centers and 13 sub-District Centers have been proposed in the plan in addition to some small retail centers also shown in the plan.

19. Warehousing & Mineral sidings: A total of about 750 acres has been earmarked in the plan for warehousing and depots. The timber trade now being carried on in the old city should be relocated in West Delhi adjunct to the Railway Line to Rewari. The grain storage will also be in this area. Three additional sites have been shown for all storage, one on Rohtak Road, the second near the Palam Railway Station and the third in Shahdara. About 250 acres of land has been earmarked for the mineral sidings of the Railways near the

Marshalling Yard in the south and near Azad pur in the north. One large railway siding has been proposed in U.P. contiguous to Shahdara to serve the whole of the urban area to the east of the YAMUNA.

20. Residential: There will be about 47,400 acres of residential land in Delhi to house the 1981 population of about 46 lakhs at an average residential density of 97 persons per acre. Large scale clearance and reconstruction is ruled out as an immediate possibility in the old city because of the lack of resources and the low capacity of the people to pay rent. But the minimum community facilities and services and reasonable means of communication will have to be provided in this area. This will improve the locality and gradually help reduce congestion so as to serve a density of about 250 persons per acre. The Mata Sundari area will have to be redeveloped at a density of 200 persons per area and the Gole Market area at a density of 150 persons per acre. Other very low density areas in New Delhi like Yark place in Civil Lines will have to be judiciously planned to take more population without destroying the pleasant character of the areas. In the developing areas the densities range between 60 to 150 persons per acre., Higher densities having been proposed near employment centers and lower densities on the periphery of the urban area.

21. A housing programme in a big way will have to be launched to meet the growing demand as well as some of the large back log. The present Basti dwellers will be provided for in developing areas where they will be integrated with the neighborhood community. To counteract against squatting in Bastis, it is proposed to earmark reasonable Ares in several zones for the low income people group people who migrate to Delhi from rural areas throughout the Year. In view of their economic condition, they should be permitted to construct very cheap house on a proper layout with all the necessary reservations of site. The municipal services, which will naturally be the minimum, will have to be provided by public agencies.

22. Land acquisition by Government on a large scale has been recommended. The ownership of land be Government makes planning and the implementation of plan easier and is imperative if slum clearance, redevelopment, subsidized housing and provision of community facilities according to accepted standards have to be undertaken, as, indeed they must be, in Delhi, in a determined way.

Community facilities and services

23. Recreation: A system of linked open spaces and district parks has been worked out for the urban area of Delhi related to the proposed pattern of residential densities certain

natural features like river front and the ridge will have to be delayed in the course of years. ' Land under district parks will be about 18'000 acres ' in the attrition there would be on an average 1'6 acres of local parks and playgrounds which are not shown in the plan ' an Ares of about 8'200 acres in recommended for regional parks and reservation which need is recommended for regional parks and reservations which need not be intensively developed at present but should be preserved as green areas.

24. in order to preserve land under intensive agricultural and to prevent the over spilling of premature urban growth, an inviolable green belt of agricultural land should the urbanizable limit of 1981 has been recommended in the plan.

25. Education: A university centre in the south is proposed near the junction of kitchner Road and Ring Road. Twenty two sites of about 15 acres each, suitably distributed in developing areas, have been proposed for collage to serve a population of 1.5 lakhs. It is further proposed that for every 4 or 5 collages a university centre should also be provided, for which 30 to 40 acres have been reserved. The total area earmarked in the plan for education is 1,400 acres.

26. Research & Education Institutes: Land has been reserved for the expansion of pusa Agricultural Research institute and the Jamia Milla. Also a large area for on engineering collage has been reserved. An area of about 600 acres has been earmarked in the south for educational and cultural purposes south-west of this collage. Similarly, another reservation of land of about 120 acres has been made north of research and institutional use is about 2,900 acres.

27. A standard of one primary school for 1,500 population and one primary school for a population of 3,750 and one higher secondary school for 15,000 has been recommended. The size of school sites vary for different densities.

28. Land has been reserved for 20 additional hospitals of about 15 acres each with 500 beds to serve 1,25,000 people. It is also proposed that in each planning division at least one hospital will have about 25 acres instead of 15 acres, so that it can offer specialised services not available in other hospitals.

29. police stations, health centres, fire stations, electric sub-stations, post and telegraph offices, telephone exchanges, community halls, community and neighbourhood shopping centre etc., for which standards have been prescribed in the Master plan, will have to be shown in zonal plans and detailed plans. Recognizing the important social and cultural activities, multi-purpose community centres have been recommended to provide a framework within which the whole fabric of social activities may be inter-woven in the neighbourhoods so that

the impersonal character of city life does not stifle the cultural life of the citizens. In addition, reservations of sites for social and cultural buildings like conference and assembly halls, art galleries, convention halls, public auditoriums, theatres and state guest houses has been made in an area stretching on either side of the central vista starting from Janpath. Other land reservation for cultural, propose have been made near Sapru House and near the proposed Municipal Corporation buildings opposite Ram Lila Grounds. Yet another cultural center is proposed in the Siri area where the State Governments state may build cultural buildings in order to give a fillip to the song, dance drama and other fine arts of the various States, which will help in the emotional and cultural integration of the Indian people.

30. Public utilities and services: Active steps will have to be taken well-in-advance to secure the secures of water and power which are essential for the continuing growth of the metropolis. Ways and means have been suggested for securing this and land reservation have been made for the expansion of the existing water works and for a new power houses. Proposals to discontinue sewage overflows into the Yamuna have been recommended and adequate land has been reserved for treatment plants and different part of the city.

31. Fifteen cremation grounds have been earmarked in the plans so that they are within a three mile radius of the residential areas. Sites for Muslim burial grounds have also been reserved.

32. it is recommended that presently cut up and low-lying land may be reclaimed by hygienically sanitary earth fills of garbage.

Traffic & Transport:

33. International Civil Airport: The international Civil Airport should be continued at palam with suitable runways and terminal facilities for increased jet traffic unless Government decides to set up a separate airport. A site at pasaunda in u.p. is recommended that the Safdarjang Airport which is in the midst of heavily built up areas should ultimately be removed to join up with the ultimate international Civil Airport for Delhi. The Flying club which is functioning on this site these days should also be shifted at that time.

34. Railway Transport Recommendation: (i) it is recommended to shift the marshalling Yards from New Delhi to Tughlakabad on the Agra line and connect these Yards by a new bridge over the Yamuna River to the main line at shahibabad. (ii) The metre gauge should be extended to new Delhi railway station which should be expended and provide with engine turn and round and stabling facilities.

(iii) The Railways should provide more frequent and speedy regional services and encourage a system of bus feeder routes in coordination with road services. New railway station have been proposed at suitable place and it has been recommended that the existing railway station should be expended with more platform and passenger facilities, and adequate provision for parking. In order to reduce the inter-state traffic load, the expansion of smaller railway stations both for passengers and goods is recommended. (iv) Future electrification of the Terminal Area as far as Ghaziabad, Meerut, Faridabad and sonapat should be anticipated. Until such time the problem of more passenger platforms at Delhi Main could be alleviated by the use of more double-ended diesel rail-cars to cut down platform occupancy time.

35. Regional High-way Network Proposals: peripheral all weather communication should be provided by converting the existing boat-bridge in to concrete structures at Bagpat (between sonpat and Meerut) and Jewar (between palwal and khurja) to relive pressure o the existing Yamuhna Bridge. (ii) Additional links will be available with the completion of the proposed road bridges across the Yamuna near Humayan Tomb and the Barrage-cum-Road at Wazirabad. (iii) In order to constrct by-pass roads to satellite towns the right-of -ways should be reserved now.

36. Urban Road & Highway Development Proposals:

(i) To foster the movement of fact and unobstructed traffic around the congested core of the city, the inner Ring Road has been recommended with a right-of-way of 150.complete Grade separation is recommended where the inner Ring Road crosses the main arterials. Access to inner Ring Road is restricted to a minimum of a quarter or half a mile distance.

(ii) The construction of an east-west connection between Queen Mary Road and the National Bye-pass with 200 right -of- way is recommended to provide better access to the Tis Hazari Courts.

(iii) A new road from Circular Road following the alignment of Ranjit singh Road, school Lane, and keeling Road up to parliament street is recommended to augment limited access between old and New Delhi. One more link connects Mathura Road to collage Road and Ferozeshah Road.

(iv) Rohtak Road should be diverted along the southern banks of the western Yamuna canal, and north of the existing alignment to join the proposed Inner Ring Road.

(v) The proposed road over wazirabad Barrage with a cantilever, adequate in with for pedestrian movement and cycle tracks, should be extended to the east to meet G.T. Road near sahibabad and towards the west to meet G. T. Road near

Badli .

(vi) Another road across the Yamuna near Humayun's Tomb will connect Delhi to Ghaziabad across the river Hindon.

(vii) Many of the existing important roads requiring widening of the right-of-way may have been shown in the plan .

(viii) A system of streets in the old city with minimum widening has been recommended and a detailed list and a map have been provided.

37. Arterial cycle Tracks: In addition to the improvement of the existing road marginal cycle tracks, arterial cycle tracks entirely separate from the carriage way have been recommended to avoid bottlenecks. They proceed from the central Secretariat towards the south-east, south-west, north and westerly directions.

38. Elimination of traffic bottlenecks:

(i) Grade separations are recommended at railway road level crossings on important roads such as Rohatak Road, Patel Road, Link Road between new and old Rohtak Road and the Approach Road to the Okhla Industrial Estate. Queen Victoria Road joining the National Bypass and Mehrauli Road crossing the railway also require grade separation.

(ii) At every major intersection at grade, channelisation of traffic and traffic lights to replace inadequate roundabouts are recommended.

39. Road-Transport Terminals: Suitable sites for bus passenger terminals and parking have been recommended south of Idgah, north of Central Road Research Institute . near Shahdara Railway Station and outside Kashmiri Gate . An idle vehicle parking site between the National Bypass and the western Bund of the Yamuna River has also been recommended.

40. Goods parcel Terminal & parking: Suitable sites for truck terminals in the Motia Khan area and in Shahdara are recommended . suitable sites for idle parking and servicing of trucks are recommended near Azadpur Police Station . near Nangal Power Station and near Okhla Industrial Estate.

41. D.T.U. Bus Terminal: Two terminals, one near Connaught Place Extension and the other near Minto Bridge are recommended for passenger buses. Off street loading stations and bus accumulation areas are recommended near important places like the Central Secretariat, Delhi Main Station, etc. and in District Centres and central Business Districts.

42. Future Mass Transit: Proposal to have an electric sub-

way should be explored in the future. For the present the Ring Railway recommended with the local bus service should meet this demand for mass transit.

43. Department of Traffic: The traffic problems of urban Delhi require a traffic department to deal with all matters in a comprehensive manner and to effect proper liaison between the traffic department and the police who will be in charge to enforcement of traffic regulation.

44. Staggering of work hours: An important measure recommended for improvement in peak hour traffic in Delhi is staggering of work hours so as to distribute peak hour traffic load over a longer period.

45. Urban Renewal & Redevelopment: (i) The major recommendation in this respect limits itself to giving only a sense of direction. It is conceived as a comprehensive activity to counteract functional obsolescence or the urban structure and of parts and elements of it.

(ii) As a result of socio-economic study the built-up areas should be identified as "conservation", "rehabilitation" and "redevelopment" areas. This can be the basis of a system of priorities for action based upon scientific analysis rather than on ad hoc municipal action.

(iii) In order to relocate Basti dwellers, areas have been recommended so that they are an integral part of a neighbourhood. Also, in order to counteract against squatting in Bastis, as mentioned earlier, areas will be earmarked in newly developing colonies where sub-standard development will be permitted and cheap housing will be encouraged for which purpose building bye-laws have been recommended to be relaxed. In addition, certain areas requiring redevelopment near the congested parts of the old City like the Mata Sundari area are reserved for the relocation of slum dwellers.

(iv) It is recommended that a systematic weeding out of obnoxious industries and Village like trades should be undertaken. In the zoning regulations a time schedule for the removal of "non-conforming uses" stipulates the gradual elimination of these uses.

(v) Space standards for schools, open areas, etc. have been considerably lowered in order that there may be minimum dislocation of people and that existing available spaces may be made use of for such purposes. It is recommended to adopt a comprehensive system of building, health and other codes which prescribe adequate minimum standard of health, sanitation and safety. These have to be enforced with citizen participation to the fullest possible extent.

(vi) Further basic amenities like water, latrines and

electricity, lacking in many of the areas. should be provided immediately on short-term basis even if the area qualifies for redevelopment.

46. Rural Delhi: Proposals have been made in detail for the rural areas for the provision of schools, roads, district shopping and other basic needs of the rural population. The setting up of a number of urban villages for the relocation of milch cattle and dairymen new operating in the urban area and other

village like trades and industries has been recommended.

The report is only preliminary in nature and attempts only broadly to formulate proposals for the provision of services and utilities in the rural areas. It will be necessary later to make comprehensive master plan for the village also, indicating various kinds of land uses suggesting improvement of village abadis and with a view to strengthening the economic base of the rural areas.

MAPS

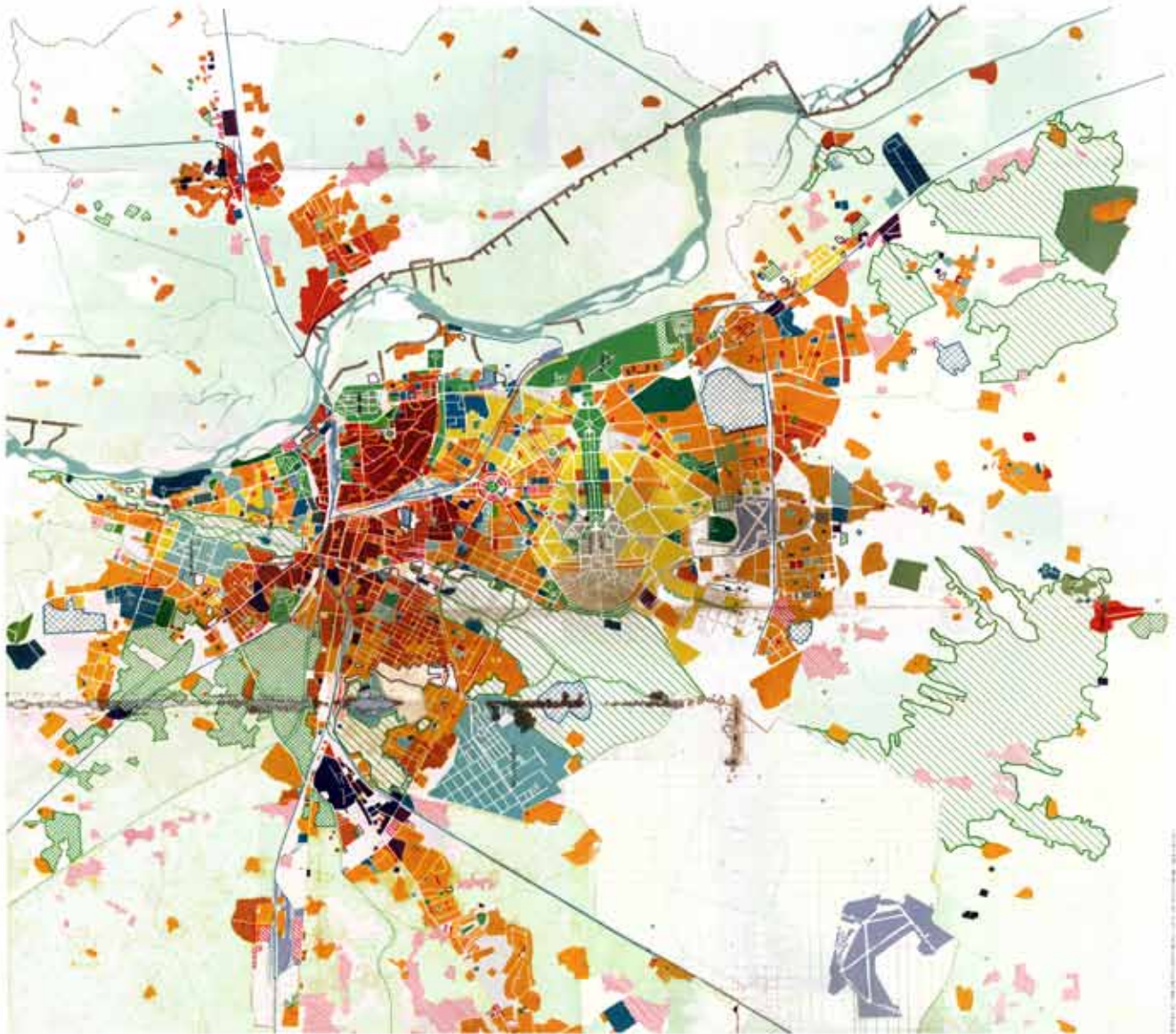
1. Land
2. Urban Delhi- Existing Land Use.
3. Zonal Map.
4. Existing Land Use- Walled City.
5. Condition of structure- walled city.
6. Identification of Areas-Old City.
7. Proposed Circulation Pattern-Walled city.



URBAN DELHI

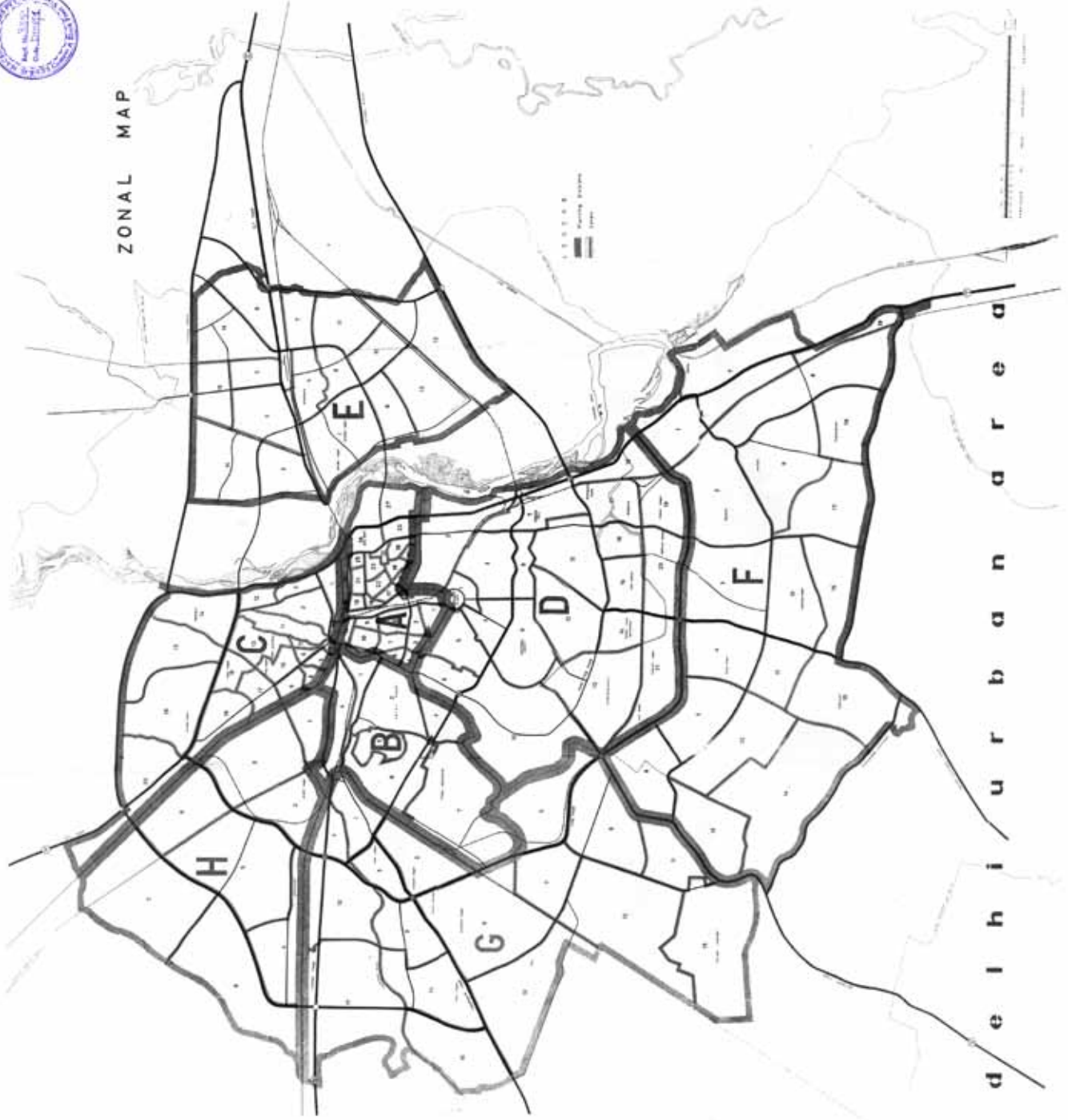
EXISTING LAND USE

- RESIDENTIAL**
 - Low Density: 10-20 units per acre, residential area
 - Medium Density: 20-40 units per acre, residential area
 - Medium High Density: 40-70 units per acre, residential area
 - High Density: 70-100 units per acre, residential area
 - Plot
 - Foreign Enclave
- COMMERCIAL**
 - Retail Business
 - Wholesale & Storage
- INDUSTRIAL**
 - Manufacturing, Storage & Distribution
 - Light Manufacturing & Service Industries
 - Medium Manufacturing
 - Large Manufacturing
 - Extractive Industries
- GOVERNMENT**
 - Parliament Buildings & Central Govt. Offices
 - State Administration & Municipal Offices
 - Local Urban Services
- RECREATIONAL**
 - Direct Parks, Playgrounds & Open Spaces
 - Rings & Public Reservations
 - Semi-Public Reservations
- PUBLIC & SEMI-PUBLIC FACILITIES**
 - Education & Research
 - Municipal & Community Facilities
 - Historical Monuments & Religious Buildings
 - Cemeteries & Crematorium Grounds
 - Public Offices
 - Railway Stations
- AGRICULTURAL**
 - Citruses, Groceries & Turf
 - Open Land
 - Pasture & Agricultural Land
 - Barren
- CIRCULATION**
 - Highway Lanes & Roadways
 - Inter-city Flyovers, Choke Points, Station, Bus & Truck Terminals
 - Road & Approaches





ZONAL MAP





EXISTING LAND USE WALLED CITY - DELHI

RESIDENTIAL

- Medium Density 75,100 & 150
- Medium High Density 150,175 & 200
- Very High Density 225 & Above
- Basilla
- Foreign

COMMERCIAL

- Retail
- General Business
- Wholesale & Storage

INDUSTRIAL

- Warehousing, Storage & Depots
- Light Manufacturing & Service Industry
- Medium Manufacturing
- Large Manufacturing

GOVERNMENT

- Central Government Offices
- District Administration & Municipal Office
- Land Under Setback

RECREATIONAL

- District Parks, Play Ground & Public Open Spaces
- Ridge & Public Reservations
- Semi-public Reservations

PUBLIC & SEMI PUBLIC FACILITIES

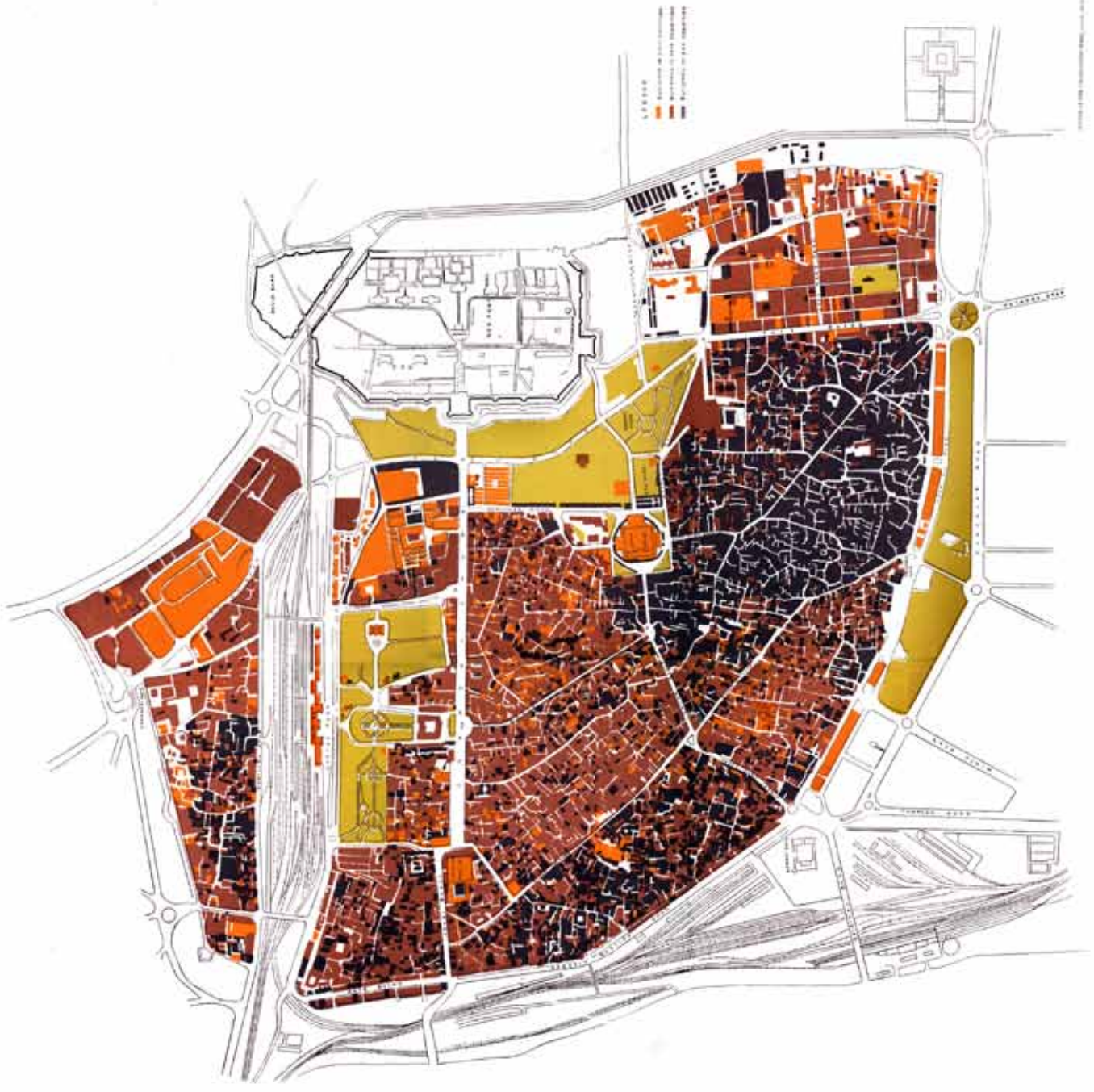
- Education & Research
- Municipal & Community Facilities
- Historical Monuments & Religious
- Cemeteries & Cremation
- Public Utilities

AGRICULTURE

- Orchard & Nurseries
- Dairies

TRANSPORTATION

- Railway Land, Terminal & Yards
- Truck & Bus Terminal & Taxi Stand



LEGENDA
Zona di Interesse Culturale
Zona di Interesse Urbanistico
Zona di Interesse Ambientale

-  CLEARANCE
-  REHABILITATION
-  CONSERVATION

WALLED CITY ZONE

- 1 kashmere gate
- 2 moon gate
- 3 phatak habash khan
- 4 katra nati
- 5 chandni chowk
- 6 naya banis
- 7 balimaran charhewalan
- 8 maliwara daribakdan
- 9 farash khana
- 10 kucha paltram
- 11 lai darwaza
- 12 matia mahal
- 13 sui walan
- 14 daryaganj
- 15 juma bash

MOTIA KHAN ZONE

- 16 bara hindu rao pul bangash
- 17 deputy ganj pul bangash
- 18 manakpura
- 19 casabpura sadar bazar
- 20 jhandewala
- 21 motia khan
- 22 cadam sharif
- 23 pahar ganj

KAROL BAGH ZONE

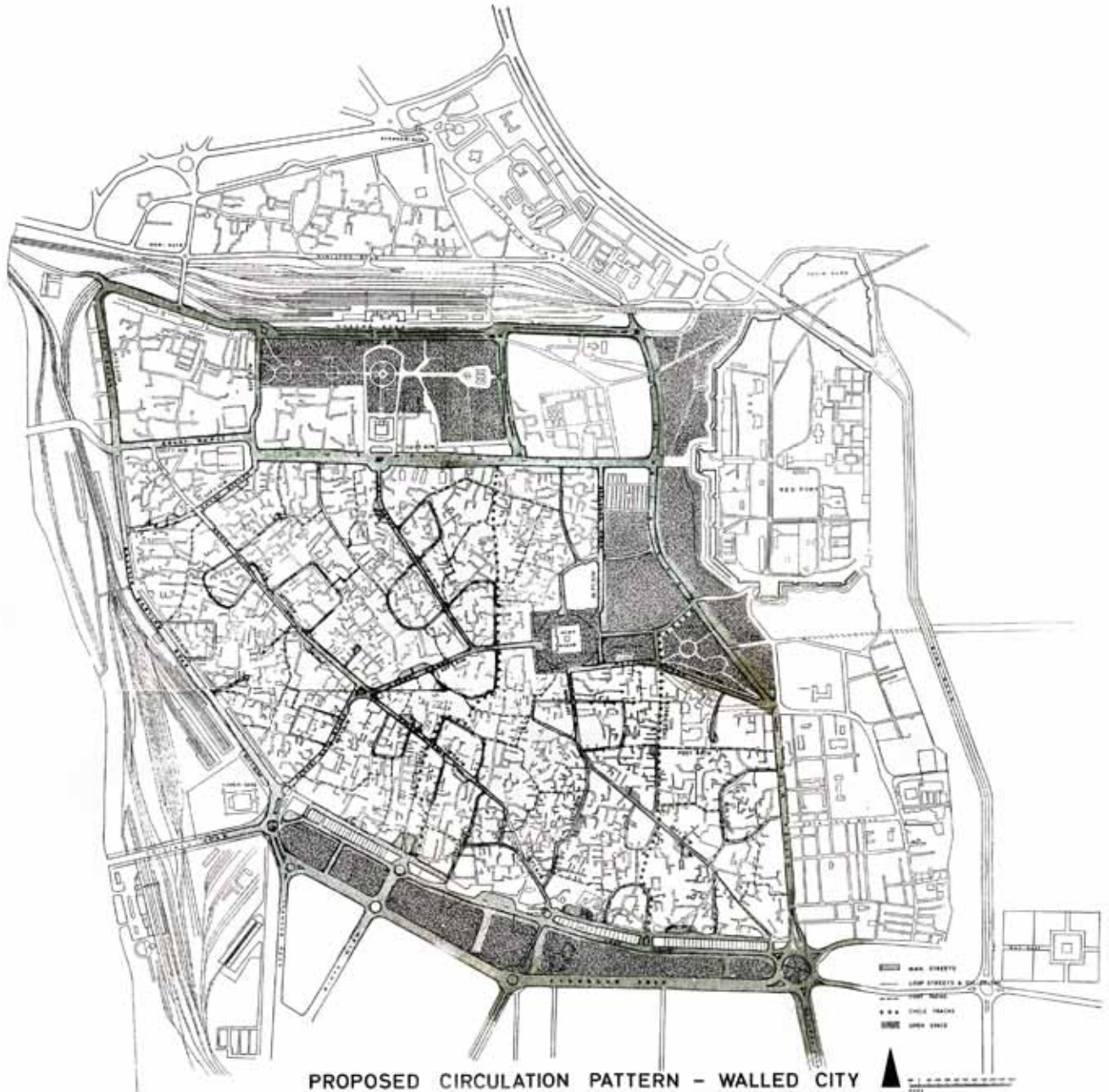
- 24 north of rohial road
- 25 prahlad market
- 26 tibbia college
- 27 dev nagar
- 28 regharpura
- 29 nai wala
- 30 pusa road western extension area
- 31 bhapa nagar anand parbat

SUBZIMANDI ZONE

- 32 kamla nagar jawaharnagar
- 33 shaktinagar
- 34 maikaganj sohanganj
- 35 arjapura
- 36 andha mughal
- 37 sarai rohilla
- 38 railway colony



IDENTIFICATION OF AREAS OLD DELHI



PROPOSED CIRCULATION PATTERN - WALLED CITY